MEMORANDUM

TO: Andrew Bouchard, U.S. EPA/OAQPS/SPPD – EPA Office of Air Quality Planning and Standards

FROM: Eastern Research Group, Inc. (ERG)

DATE: March 2023

SUBJECT: Proposed Regulation Edits for 40 CFR Part 63 Subparts F, G, H, and I: National Emission Standards for Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

---

The attachments to this memorandum, for the convenience of interested parties, present the redline/strikeout (RLSO) version of National Emission Standards for Hazardous Air Pollutants (NESHAP) subparts F, G, H, and I (more commonly referred to as the Hazardous Organic NESHAP or HON). These amendments are associated with the proposed action titled *New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry*.

Attachments:
RLSO of 40 CFR 63, Subpart F
RLSO of 40 CFR 63, Subpart G
RLSO of 40 CFR 63, Subpart H
RLSO of 40 CFR 63, Subpart I

For the reasons set out in the preamble, the Environmental Protection Agency proposes to amend title 40, chapter I, part 63 of the Code of Federal Regulations as follows:

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

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

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

Subpart F—National Emission Standards for ~~Organic~~ Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

Contents

§63.100 Applicability and designation of source.

(a) This subpart provides applicability provisions, definitions, and other general provisions that are applicable to subparts G and H of this part. This subpart also provides requirements for certain heat exchange systems, maintenance wastewater, and flares.

(b) Except as provided in paragraphs (b)(4) and (c) of this section, the provisions of subparts F, G, and H of this part apply to chemical manufacturing process units that meet all the criteria specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section:

(1) Manufacture as a primary product one or more of the chemicals listed in paragraphs (b)(1)(i) or (b)(1)(ii) of this section.

(i) One or more of the chemicals listed in table 1 of this subpart; or

(ii) One or more of the chemicals listed in paragraphs (b)(1)(ii)(A) or (b)(1)(ii)(B) of this section:

(A) Tetrahydrobenzaldehyde (CAS Number 100-50-5); or

(B) Crotonaldehyde (CAS Number 123-73-9).

(2) Use as a reactant or manufacture as a product, or co-product, one or more of the organic hazardous air pollutants listed in table 2 of this subpart;

(3) Are located at a plant site that is a major source as defined in section 112(a) of the Act.

(4) The owner or operator of a chemical manufacturing processing unit is exempt from all requirements of subparts F, G, and H of this part until not later than April 22, 1997 if the owner or operator certifies, in a notification to the appropriate EPA Regional Office, not later than May 14, 1996, that the plant site at which the chemical manufacturing processing unit is located emits, and will continue to emit, during any 12-month period, less than 10 tons per year of any

individual hazardous air pollutants (HAP), and less than 25 tons per year of any combination of HAP.

(i) If such a determination is based on limitations and conditions that are not federally enforceable (as defined in subpart A of this part), the owner or operator shall document the basis for the determination as specified in paragraphs (b)(4)(i)(A) through (b)(4)(i)(C) and comply with the recordkeeping requirement in 63.103(f).

(A) The owner or operator shall identify all HAP emission points at the plant site, including those emission points subject to and emission points not subject to subparts F, G, and H;

(B) The owner or operator shall calculate the amount of annual HAP emissions released from each emission point at the plant site, using acceptable measurement or estimating techniques for maximum expected operating conditions at the plant site. Examples of estimating procedures that are considered acceptable include the calculation procedures in §63.150 of subpart G, the early reduction demonstration procedures specified in §§63.74 (c)(2), (c)(3), (d)(2), (d)(3), and (g), or accepted engineering practices. If the total annual HAP emissions for the plant site are annually reported under Emergency Planning and Community Right-to-Know Act (EPCRA) section 313, then such reported annual emissions may be used to satisfy the requirements of §63.100(b)(4)(i)(B).

(C) The owner or operator shall sum the amount of annual HAP emissions from all emission points on the plant site. If the total emissions of any one HAP are less than 10 tons per year and the total emissions of any combination of HAP are less than 25 tons per year, the plant site qualifies for the exemption described in paragraph (b)(4) of this section, provided that emissions are kept below these thresholds.

(ii) If such a determination is based on limitations and conditions that are federally enforceable (as defined in subpart A of this part), the owner or operator is not subject to the provisions of paragraph (b)(4) of this section.

(c) The owner or operator of a chemical manufacturing process unit that meets the criteria specified in paragraphs (b)(1) and (b)(3) of this section but does not use as a reactant or manufacture as a product or co-product, any organic hazardous air pollutant listed in table 2 of this subpart shall comply only with the requirements of §63.103(e) of this subpart. To comply with this subpart, such chemical manufacturing process units shall not be required to comply with the provisions of subpart A of this part.

(d) The primary product of a chemical manufacturing process unit shall be determined according to the procedures specified in paragraphs (d)(1), (d)(2), (d)(3), and (d)(4) of this section.

(1) If a chemical manufacturing process unit produces more than one intended chemical product, the product with the greatest annual design capacity on a mass basis determines the primary product of the process.

(2) If a chemical manufacturing process unit has two or more products that have the same maximum annual design capacity on a mass basis and if one of those chemicals is listed in table 1 of this subpart, then the listed chemical is considered the primary product and the chemical manufacturing process unit is subject to this subpart. If more than one of the products is listed in table 1 of this subpart, then the owner or operator may designate as the primary product any of the listed chemicals and the chemical manufacturing process unit is subject to this subpart.

(3) For chemical manufacturing process units that are designed and operated as flexible operation units producing one or more chemicals listed in table 1 of this subpart, the primary

product shall be determined for existing sources based on the expected utilization for the five years following April 22, 1994 and for new sources based on the expected utilization for the first five years after initial start-up. Owners and operators must also comply with paragraphs (d)(3)(iii) and (d)(3)(iv) of this section.

(i) If the predominant use of the flexible operation unit, as described in paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section, is to produce one or more chemicals listed in table 1 of this subpart, then the flexible operation unit shall be subject to the provisions of subparts F, G, and H of this part.

(A) If the flexible operation unit produces one product for the greatest annual operating time, then that product shall represent the primary product of the flexible operation unit.

(B) If the flexible operation unit produces multiple chemicals equally based on operating time, then the product with the greatest annual production on a mass basis shall represent the primary product of the flexible operation unit.

(ii) The determination of applicability of this subpart to chemical manufacturing process units that are designed and operated as flexible operation units shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(iii) Beginning no later than the compliance dates specified in §63.100(k)(10), once per year the owner or operator of each flexible operation unit that is not designated as a chemical manufacturing process unit, but that has produced a product specified in paragraphs (b)(1)(i) or (b)(1)(ii) of this section, or met the criteria specified in paragraph (b)(2) of this section 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 (d)(3)(iii)(A) through (d)(3)(iii)(C) of this section. However, an owner or operator that does not intend to produce any of the products specified in paragraphs (b)(1)(i) or (b)(1)(ii) of this section in the future, is not required to perform the evaluation described in paragraphs (d)(3)(iii)(A) through (d)(3)(iii)(C) of this section.

(A) 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.

(B) 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.

(C) If the primary product identified in paragraph (d)(3)(iii)(B) of this section is a product specified in paragraphs (b)(1)(i) or (b)(1)(ii) of this section, the flexible operation unit shall be designated as a chemical manufacturing process unit. The owner or operator shall notify the Administrator no later than 45 days after determining that the flexible operation unit is a chemical manufacturing process unit, and shall comply with the requirements of this subpart for the flexible operation unit.

(iv) Beginning no later than the compliance dates specified in §63.100(k)(10), whenever changes in production occur that could reasonably be expected to change the primary product of a chemical manufacturing process unit that is operating as a flexible operation unit from a product specified in paragraphs (b)(1)(i) or (b)(1)(ii) of this section 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 a chemical manufacturing process unit in accordance with paragraphs (d)(3)(iv)(A) through (C) of this section.

(A) 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.

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

(C) If the conditions in (d)(3)(iv)(C)(*1*) through (*3*) of this section are met, the flexible operation unit shall no longer be designated as a chemical manufacturing process unit 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 (d)(3)(iv)(C)(*1*) through (*3*) of this section are not met, the flexible operation unit shall continue to be considered a chemical manufacturing process unit and subject to the requirements of this subpart.

(*1*) The product identified in (d)(3)(iv)(A) of this section is not a product specified in paragraphs (b)(1)(i) or (b)(1)(ii) of this section; and

(*2*) The production of the product identified in (d)(3)(iv)(B) of this section is subject to another subpart of this part; and

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

(4) Notwithstanding the provisions of paragraph (d)(3) of this section, for chemical manufacturing process units that are designed and operated as flexible operation units producing a chemical listed in paragraph (b)(1)(ii) of this section, the primary product shall be determined for existing sources based on the expected utilization for the five years following May 12, 1998 and for new sources based on the expected utilization for the first five years after initial start-up.

(i) The predominant use of the flexible operation unit shall be determined according to paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section. If the predominant use is to produce one of the chemicals listed in paragraph (b)(1)(ii) of this section, then the flexible operation unit shall be subject to the provisions of this subpart and subparts G and H of this part.

(ii) The determination of applicability of this subpart to chemical manufacturing process units that are designed and operated as flexible operation units shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(e) The source to which this subpart applies is the collection of all chemical manufacturing process units and the associated equipment at a major source that meet the criteria specified in paragraphs (b)(1) through (3) of this section. The source includes the process vents; storage vessels; transfer racks; waste management units; maintenance wastewater; heat exchange systems; equipment identified in §63.149; and pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers that are associated with that collection of chemical manufacturing process units. The source also includes equipment required by, or utilized as a method of compliance with, subparts F, G, or H of this part which may include control devices and recovery devices.

(1) This subpart F applies to maintenance wastewater and heat exchange systems within a source that is subject to this subpart; and also applies to flares used to reduce organic HAP emissions from a source.

(2) This subpart F and subpart G of this part apply to process vents, storage vessels, transfer racks, equipment identified in §63.149 of subpart G of this part, and wastewater streams and associated treatment residuals within a source that is subject to this subpart.

(3) This subpart F and subpart H of this part apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers within a source that is subject to this subpart. Subpart H of this part also contains fenceline monitoring requirements that apply to all emission sources (i.e., maintenance wastewater, heat exchange systems, process vents, storage vessels, transfer racks, equipment identified in §63.149 of subpart G of this part, wastewater streams and associated treatment residuals within a source, and pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers within a source). If specific items of equipment, comprising part of a chemical manufacturing 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 chemical manufacturing process unit within the source for all purposes under subpart H of this part, providing there is no delay in the applicable compliance date in §63.100(k).

(f) The source includes the emission points listed in paragraphs (f)(1) through (f)(11) of this section, but those emission points are not subject to the requirements of this subpart F and subparts G and H of this part. This subpart does not require emission points that are listed in paragraphs (f)(1) through (f)(11) of this section to comply with the provisions of subpart A of this part.

(1) Equipment that is located within a chemical manufacturing process unit that is subject to this subpart but the equipment does not contain organic hazardous air pollutants.

(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) Except for storage vessels in ethylene oxide service, ~~V~~vessels storing organic liquids that contain organic hazardous air pollutants only as impurities;

(9) Loading racks, loading arms, or loading hoses that only transfer liquids containing organic hazardous air pollutants as impurities;

(10) Loading racks, loading arms, or loading hoses that vapor balance during all loading operations; and

(11) Equipment that is intended to operate in organic hazardous air pollutant service, as defined in §63.~~161~~ 101 of ~~subpart H of this part~~this subpart, for less than 300 hours during the calendar year.

(g) The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(4) of this section to determine whether a storage vessel is part of the source to which this subpart applies.

(1) Where a storage vessel is dedicated to a chemical manufacturing process unit, the storage vessel shall be considered part of that chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the storage vessel is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the storage vessel is not part of the source to which this subpart applies.

(2) If a storage vessel is not dedicated to a single chemical manufacturing process unit, then the applicability of this subpart F and subpart G of this part shall be determined according to the provisions in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

(i) If a storage vessel is shared among chemical manufacturing process units and one of the process units has the predominant use, as determined by paragraph (g)(2)(i)(A) and (g)(2)(i)(B) of this section, then the storage vessel is part of that chemical manufacturing process unit.

(A) If the greatest input into the storage vessel is from a chemical manufacturing process unit that is located on the same plant site, then that chemical manufacturing process unit has the predominant use.

(B) If the greatest input into the storage vessel is provided from a chemical manufacturing process unit that is not located on the same plant site, then the predominant use is the chemical manufacturing process unit on the same plant site that receives the greatest amount of material from the storage vessel.

(ii) If a storage vessel is shared among chemical manufacturing process units so that there is no single predominant use, and at least one of those chemical manufacturing process units is subject to this subpart, the storage vessel shall be considered to be part of the chemical manufacturing process unit that is subject to this subpart. If more than one chemical manufacturing process unit is subject to this subpart, the owner or operator may assign the storage vessel to any of the chemical manufacturing process units subject to this subpart.

(iii) If the predominant use of a storage vessel varies from year to year, then the applicability of this subpart shall be determined according to the criteria in paragraphs (g)(2)(iii)(A) and (g)(2)(iii)(B) of this section, as applicable. This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(A) For chemical manufacturing process units that produce one or more of the chemicals listed in table 1 of this subpart and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the 12-month period preceding April 22, 1994.

(B) For chemical manufacturing process units that produce one or more of the chemicals listed in paragraph (b)(1)(ii) of this section and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the 12-month period preceding May 12, 1998.

(iv) If there is a change in the material stored in the storage vessel, the owner or operator shall reevaluate the applicability of this subpart to the vessel.

(3) Where a storage vessel is located at a major source that includes one or more chemical manufacturing 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 F and subpart G of this part shall be determined according to the provisions in paragraphs (g)(3)(i) through (g)(3)(iv) of this section.

(i) The storage vessel may only be assigned to a chemical manufacturing 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 chemical manufacturing process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the chemical manufacturing process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the chemical manufacturing 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 chemical manufacturing process unit at the major source that meets the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, this subpart F and subpart G of this part do not apply to the storage vessel.

(iii) If there is only one chemical manufacturing process unit at the major source that meets the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that chemical manufacturing process unit. Applicability of this subpart F and subpart G to this part to the storage vessel shall then be determined according to the provisions of paragraph (b) of this section.

(iv) If there are two or more chemical manufacturing process units at the major source that meet the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those chemical manufacturing process units according to the provisions of paragraph (g)(2) of this section. The predominant use shall be determined among only those chemical manufacturing process units that meet the criteria of paragraph (g)(3)(i) of this section. Applicability of this subpart F and subpart G of this part to the storage vessel shall then be determined according to the provisions of paragraph (b) of this section.

(4) If the storage vessel begins receiving material from (or sending material to) another chemical manufacturing process unit, or ceases to receive material from (or send material to) a chemical manufacturing process unit, or if the applicability of this subpart F and subpart G of this part to a storage vessel has been determined according to the provisions of paragraphs

(g)(2)(i) and (g)(2)(ii) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel.

(h) The owner or operator shall follow the procedures specified in paragraphs (h)(1) and (h)(2) of this section to determine whether the arms and hoses in a loading rack are part of the source to which this subpart applies.

(1) Where a loading rack is dedicated to a chemical manufacturing process unit, the loading rack shall be considered part of that specific chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section and the loading rack does not meet the criteria specified in paragraphs (f)(9) and (f)(10) of this section, then the loading rack is considered a transfer rack (as defined in §63.101 of this subpart) and is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading rack is not considered a transfer rack (as defined in §63.101 of this subpart) and is not a part of the source to which this subpart applies.

(2) If a loading rack is shared among chemical manufacturing process units, then the applicability of this subpart F and subpart G of this part shall be determined at each loading arm or loading hose according to the provisions in paragraphs (h)(2)(i) through (h)(2)(iv) of this section.

(i) Each loading arm or loading hose that is dedicated to the transfer of liquid organic hazardous air pollutants listed in table 2 of this subpart from a chemical manufacturing process unit to which this subpart applies is part of that chemical manufacturing process unit and is part of the source to which this subpart applies unless the loading arm or loading hose meets the criteria specified in paragraphs (f)(9) or (f)(10) of this section.

(ii) If a loading arm or loading hose is shared among chemical manufacturing process units, and one of the chemical manufacturing process units provides the greatest amount of the material that is loaded by the loading arm or loading hose, then the loading arm or loading hose is part of that chemical manufacturing process unit.

(A) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading arm or loading hose is part of the source to which this subpart applies unless the loading arm or loading hose meets the criteria specified in paragraphs (f)(9) or (f)(10) of this section.

(B) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading arm or loading hose is not part of the source to which this subpart applies.

(iii) If a loading arm or loading hose is shared among chemical manufacturing process units so that there is no single predominant use as described in paragraph (h)(2)(ii) of this section and at least one of those chemical manufacturing process units is subject to this subpart, then the loading arm or hose is part of the chemical manufacturing process unit that is subject to this subpart. If more than one of the chemical manufacturing process units is subject to this subpart, the owner or operator may assign the loading arm or loading hose to any of the chemical manufacturing process units subject to this subpart.

(iv) If the predominant use of a loading arm or loading hose varies from year to year, then the applicability of this subpart shall be determined according to the criteria in paragraphs (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section, as applicable. This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(A) For chemical manufacturing process units that produce one or more of the chemicals listed in table 1 of this subpart and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the 12-month period preceding April 22, 1994.

(B) For chemical manufacturing process units that produce one or more of the chemicals listed in paragraph (b)(1)(ii) of this section and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the year preceding May 12, 1998.

(3) If a loading rack that was dedicated to a single chemical manufacturing process unit begins to serve another chemical manufacturing process unit, or if applicability was determined under the provisions of paragraphs (h)(2)(i) through (h)(2)(iii) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the loading rack, loading arm, or loading hose.

(i) Except as provided in paragraph (i)(4) of this section, the owner or operator shall follow the procedures specified in paragraphs (i)(1) through (i)(3) and (i)(5) of this section to determine whether the vent(s) from a distillation unit is part of the source to which this subpart applies.

(1) Where a distillation unit is dedicated to a chemical manufacturing process unit, the distillation column shall be considered part of that chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the distillation unit is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the distillation unit is not part of the source to which this subpart applies.

(2) If a distillation unit is not dedicated to a single chemical manufacturing process unit, then the applicability of this subpart and subpart G of this part shall be determined according to the provisions in paragraphs (i)(2)(i) through (i)(2)(iv) of this section.

(i) If the greatest input to the distillation unit is from a chemical manufacturing process unit located on the same plant site, then the distillation unit shall be assigned to that chemical manufacturing process unit.

(ii) If the greatest input to the distillation unit is provided from a chemical manufacturing process unit that is not located on the same plant site, then the distillation unit shall be assigned to the chemical manufacturing process unit located at the same plant site that receives the greatest amount of material from the distillation unit.

(iii) If a distillation unit is shared among chemical manufacturing process units so that there is no single predominant use as described in paragraphs (i)(2)(i) and (i)(2)(ii) of this section, and at least one of those chemical manufacturing process units is subject to this subpart, the distillation unit shall be assigned to the chemical manufacturing process unit that is subject to this subpart. If more than one chemical manufacturing process unit is subject to this subpart, the owner or operator may assign the distillation unit to any of the chemical manufacturing process units subject to this subpart.

(iv) If the predominant use of a distillation unit varies from year to year, then the applicability of this subpart shall be determined according to the criteria in paragraphs (i)(2)(iv)(A) and (i)(2)(iv)(B), as applicable. This determination shall be included as part of an operating permit application or as otherwise specified by the permitting authority.

(A) For chemical manufacturing process units that produce one or more of the chemicals listed in table 1 of this subpart and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the year preceding April 22, 1994.

(B) For chemical manufacturing process units that produce one or more of the chemicals listed in paragraph (b)(1)(ii) of this section and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the year preceding May 12, 1998.

(3) If the chemical manufacturing process unit to which the distillation unit is assigned is subject to this subpart, then each vent from the individual distillation unit shall be considered separately to determine whether it is a process vent (as defined in §63.101 of this subpart). Each vent that is a process vent is part of the source to which this subpart applies.

(4) If the distillation unit is part of one of the chemical manufacturing process units listed in paragraphs (i)(4)(i) through (i)(4)(iii) of this section, then each vent from the individual distillation unit shall be considered separately to determine whether it is a process vent (as defined in §63.101 of this subpart). Each vent that is a process vent is part of the source to which this subpart applies:

(i) The Aromex unit that produces benzene, toluene, and xylene;

(ii) The unit that produces hexane; or

(iii) The unit that produces cyclohexane.

(5) If a distillation unit that was dedicated to a single chemical manufacturing process unit, or that was part of a chemical manufacturing unit identified in paragraphs (i)(4)(i) through (i)(4)(iii) of this section, begins to serve another chemical manufacturing process unit, or if applicability was determined under the provisions of paragraphs (i)(2)(i) through (i)(2)(iii) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the distillation unit.

(j) The provisions of subparts F, G, and H of this part do not apply to the processes specified in paragraphs (j)(1) through (j)(6) of this section. Subparts F, G, and H do not require processes specified in paragraphs (j)(1) through (j)(6) to comply with the provisions of subpart A of this part.

(1) Research and development facilities, regardless of whether the facilities are located at the same plant site as a chemical manufacturing process unit that is subject to the provisions of subparts F, G, or H of this part.

(2) Petroleum refining process units that are subject to either subpart CC or UUU of this part, regardless of whether the units supply feedstocks that include chemicals listed in table 1 of this subpart to chemical manufacturing process units that are subject to the provisions of subparts F, G, or H of this part.

(3) Ethylene ~~process~~production units that are subject to subpart YY of this part, regardless of whether the units supply feedstocks that include chemicals listed in table 1 of this subpart to chemical manufacturing process units that are subject to the provisions of subpart F, G, or H of this part.

(4) Batch process vents within a chemical manufacturing process unit.

(5) Chemical manufacturing process units that are located in coke by-product recovery plants.

(6) Solvent reclamation, recovery, or recycling operations at hazardous waste TSDF facilities requiring a permit under 40 CFR part 270 that are separate entities and not part of a SOCMI chemical manufacturing process unit.

(k) Except as provided in paragraphs (l), (m), and (p) of this section, sources subject to subparts F, G, or H of this part are required to achieve compliance on or before the dates specified in paragraphs (k)(1) through (k)(8), and (k)(10) and (k)(11) of this section.

(1)(i) New sources that commence construction or reconstruction after December 31, 1992, but before August 27, 1996 shall be in compliance with this subpart F, subparts G and H of this part upon initial start-up or by April 22, 1994, whichever is later, as provided in §63.6(b) of subpart A of this part, and further, where start-up occurs before January 17, 1997 shall also be in compliance with this subpart F and subparts G and H of this part (as amended on January 17, 1997) by January 17, 1997, except that, with respect to all new sources that commenced construction or reconstruction after December 31, 1992, and before August 27, 1996:

(A) Heat exchange systems and maintenance wastewater, that are part of a new source on which construction or reconstruction commenced after December 31, 1992, but before August 27, 1996, shall be in compliance with this subpart F no later than initial start-up or 180 days after January 17, 1997, whichever is later;

(B) Process wastewater streams and equipment subject to §63.149, that are part of a new source on which construction or reconstruction commenced after December 31, 1992, but before August 27, 1996, shall be in compliance with this subpart F and subpart G of this part no later than initial start-up or 180 days after January 17, 1997, whichever is later; and

(ii) New sources that commence construction after August 26, 1996 shall be in compliance with this subpart F, subparts G and H of this part upon initial start-up or by January 17, 1997, whichever is later.

(2) Existing sources shall be in compliance with this subpart F and subpart G of this part no later than the dates specified in paragraphs (k)(2)(i) and (k)(2)(ii) of this section, unless an extension has been granted by the Administrator as provided in §63.151(a)(6) of subpart G of this part or granted by the permitting authority as provided in §63.6(i) of subpart A of this part.

(i) Process vents, storage vessels, and transfer racks at an existing source shall be in compliance with the applicable sections of this subpart and subpart G of this part no later than April 22, 1997.

(ii) Heat exchange systems and maintenance wastewater shall be in compliance with the applicable sections of this subpart, and equipment subject to §63.149 and process wastewater streams shall be in compliance with the applicable sections of this subpart and subpart G of this part no later than April 22, 1999, except as provided in paragraphs (k)(2)(ii)(A) and (k)(2)(ii)(B) of this section.

(A) If a process wastewater stream or equipment subject to §63.149 is subject to the control requirements of subpart G of this part due to the contribution of nitrobenzene to the total annual average concentration (as determined according to the procedures in §63.144(b) of subpart G of this part), the wastewater stream shall be in compliance no later than January 18, 2000.

(B) If a process wastewater stream is used to generate credits in an emissions average in accordance with §63.150 of subpart G of this part, the process wastewater stream shall be in compliance with the applicable sections of subpart G of this part no later than April 22, 1997.

(3) Existing sources shall be in compliance with subpart H of this part no later than the dates specified in paragraphs (k)(3)(i) through (k)(3)(v) of this section, except as provided for in paragraphs (k)(4) through (k)(8) of this section, unless an extension has been granted by the Administrator as provided in §63.182(a)(6) of this part or granted by the permitting authority as provided in §63.6(i) of subpart A of this part. The group designation for each process unit is indicated in table 1 of this subpart.

(i) Group I: October 24, 1994.

(ii) Group II: January 23, 1995.

(iii) Group III: April 24, 1995.

(iv) Group IV: July 24, 1995.

(v) Group V: October 23, 1995.

(4) Existing chemical manufacturing process units in Groups I and II as identified in table 1 of this subpart shall be in compliance with the requirements of §63.164 of subpart H no later than May 10, 1995, for any compressor meeting one or more of the criteria in paragraphs (k)(4)(i) through (k)(4)(iv) of this section, if the work can be accomplished without a process unit shutdown, as defined in §63.~~161~~ 101~~in subpart H~~.

(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 must be modified to permit connecting the compressor to a closed vent system.

(5) Existing chemical manufacturing process units shall be in compliance with the requirements of §63.164 in subpart H no later than 1 year after the applicable compliance date specified in paragraph (k)(3) of this section, for any compressor meeting the criteria in paragraphs (k)(5)(i) through (k)(5)(iv) of this section.

(i) The compressor meets one or more of the criteria specified in paragraphs (k)(4) (i) through (iv) of this section;

(ii) The work can be accomplished without a process unit shutdown as defined in §63.~~161~~101 of ~~subpart H~~this subpart;

(iii) 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 a request to the appropriate EPA Regional Office at the addresses listed in §63.13 of subpart A of this part no later than 45 days before the applicable compliance date in paragraph (k)(3) of this section, but in no event earlier than May 10, 1995. The request shall include the information specified in paragraphs (k)(5)(iv)(A) through (k)(5)(iv)(E) of this section. Unless the EPA Regional Office objects to the request within 30 days after receipt, the request shall be deemed approved.

(A) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(B) The name, address, and telephone number of a contact person for further information;

(C) An identification of the chemical manufacturing process unit, and of the specific equipment for which additional compliance time is required;

(D) The reason compliance can not reasonably be achieved by the applicable date specified in paragraphs (k)(3)(i) through (k)(3)(v) of this section; and

(E) The date by which the owner or operator expects to achieve compliance.

(6)(i) If compliance with the compressor provisions of §63.164 of subpart H of this part can not reasonably be achieved without a process unit shutdown, as defined in §63.~~161~~ 101 of ~~subpart H~~this subpart, the owner or operator shall achieve compliance no later than April 22, 1996, except as provided for in paragraph (k)(6)(ii) of this section. The owner or operator who elects to use this provision shall comply with the requirements of §63.103(g) of this subpart.

(ii) If compliance with the compressor provisions of §63.164 of subpart H of this part can not be achieved without replacing the compressor or recasting the distance piece, the owner or operator shall achieve compliance no later than April 22, 1997. The owner or operator who elects to use this provision shall also comply with the requirements of §63.103(g) of this subpart.

(7) Existing sources shall be in compliance with the provisions of §63.170 of subpart H no later than April 22, 1997.

(8) If an owner or operator of a chemical manufacturing process unit subject to the provisions of subparts F, G, and H of part 63 plans to implement pollution prevention measures to eliminate the use or production of HAP listed in table 2 of this subpart by October 23, 1995, the provisions of subpart H do not apply regardless of the compliance dates specified in paragraph (k)(3) of this section. The owner or operator who elects to use this provision shall comply with the requirements of §63.103(h) of this subpart.

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

(i) Notwithstanding time periods specified in this subpart F or subpart G of this part 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.

(ii) 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 (k)(9)(ii)(A) or (k)(9)(ii)(B) of this section, as appropriate.

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

(B) 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.

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

(10) All affected sources that commenced construction or reconstruction on or before [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER],

must be in compliance with the requirements listed in paragraphs (k)(10)(i) through (k)(10)(viii) of this section upon initial startup or on [INSERT date 3 years after date of publication of final rule in the Federal Register], whichever is later. All affected sources that commenced construction or reconstruction after [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must be in compliance with the requirements listed in paragraphs (k)(10)(i) through (k)(10)(viii) of this section upon initial startup, or on [INSERT date 60 days after date of publication of final rule in the Federal Register], whichever is later.

(i) The general requirements specified in paragraphs (d)(3)(iii), (d)(3)(iv), and (q)(4)(iii) of this section, §§63.102(e) and (f), §§63.103(b)(1), (b)(3)(ii), and (c)(2)(iv), §63.107(h)(9)(ii), §63.108, §§63.110(h)(2) and (j)(1) of subpart G of this part, and §§63.148(f)(4), (i)(3)(iii), and (j)(4) of subpart G of this part.

(ii) For heat exchange systems, the requirements specified in §§63.104(g), (h), (i), (j), and (l).

(iii) For process vents, the requirements specified in §§63.113(a)(4), (a)(5), (k), and (l) of subpart G of this part, §§63.114(a)(5)(v) and (d)(3) of subpart G of this part, §63.115(g) of subpart G of this part, §63.116(g) of subpart G of this part, §63.117(g) of subpart G of this part, and §§63.118(f)(7) and (n) of subpart G of this part.

(iv) For storage vessels, the requirements specified in §63.119(a)(6) of subpart G of this part, §63.119(b)(5)(ix) through (b)(5)(xii) of subpart G of this part, §63.119(b)(7) of subpart G of this part, §63.120(d)(1)(iii) of subpart G of this part, and footnotes b and c of Table 5 to subpart G of this part. For pressure vessels, the requirements specified in §63.119(a)(7) of subpart G of this part, §63.122(j) of subpart G of this part, and §63.123(b) of subpart G of this part.

(v) For transfer operations, the requirements specified in §63.126(h)(1) of subpart G of this part, §§63.127(b)(4) and (d)(3) of subpart G of this part, and §§63.130(a)(2)(iv), (b)(3), and (d)(7) of subpart G of this part.

(vi) For process wastewater, the requirements specified in §§63.132(a)(2)(i)(C) and (b)(3)(i)(C) of subpart G of this part, §63.135(b)(4) of subpart G of this part, §63.139(d)(5) of subpart G of this part, and §63.145(a)(10) of subpart G of this part.

(vii) For equipment leaks and pressure relief devices, the requirements specified in §§63.165(a) and (e) of subpart H of this part, §63.170(b) of subpart H of this part, §63.172(j)(4) of subpart H of this part, §63.181(g)(3)(iii) of subpart H of this part, and §63.182(d)(2)(xix) of subpart H of this part.

(viii) The other notification, reports, and records requirements specified in §63.152(c)(2)(ii)(F) of subpart G of this part, Table 3 to subpart G of this part, item 3 in column 3 for presence of flow and monthly inspections of sealed valves for all control devices, Table 7 to subpart G of this part, item 3 in column 3 for presence of flow and monthly inspections of sealed valves for all control devices and vapor balancing systems, and Table 20 to subpart G of this part, item (8)(iii).

(11) All affected sources that commenced construction or reconstruction on or before [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must be in compliance with the ethylene oxide requirements in §63.104(k), §63.109, §63.113(j) of subpart G of this part, §63.119(a)(5) of subpart G of this part, §63.120(d)(9) of subpart G of this part, §63.124 of subpart G of this part, §63.163(a)(1)(iii), (b)(2)(iv), (c)(4), and (e)(7) of subpart H of this part, §63.168(b)(2)(iv) and (d)(5) of subpart H of this part, §63.171(f) of subpart H of this part, and §63.174(a)(3), (b)(3)(vi), (b)(5), and (g)(3) of subpart H of this part,

upon initial startup or on [INSERT date 2 years after date of publication of final rule in the Federal Register], whichever is later. All affected sources that commenced construction or reconstruction after [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must be in compliance with the ethylene oxide requirements listed in §63.104(k), §63.109, §63.113(j) of subpart G of this part, §63.119(a)(5) of subpart G of this part, §63.120(d)(9) of subpart G of this part, §63.124 of subpart G of this part, §63.163(a)(1)(iii), (b)(2)(iv), (c)(4), and (e)(7) of subpart H of this part, §63.168(b)(2)(iv) and (d)(5) of subpart H of this part, §63.171(f) of subpart H of this part, and §63.174(a)(3), (b)(3)(vi), (b)(5), and (g)(3) of subpart H of this part, upon initial startup or on [INSERT date 60 days after date of publication of final rule in the Federal Register], whichever is later.

(12) All affected sources that commenced construction or reconstruction on or before [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must commence fenceline monitoring according to the requirements in §63.184 by no later than [INSERT date 1 year after date of publication of final rule in the Federal Register], however requirements for corrective actions are not required until on or after [INSERT date 3 years after date of publication of final rule in the Federal Register]. All affected sources that commenced construction or reconstruction after [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], must be in compliance with the fenceline monitoring requirements listed in §63.184 upon initial startup, or on [INSERT date 60 days after date of publication of final rule in the Federal Register], whichever is later.

(l)(1) If an additional chemical manufacturing process unit meeting the criteria specified in paragraph (b) of this section is added to a plant site that is a major source as defined in section

112(a) of the Act, the addition shall be subject to the requirements for a new source in subparts F, G, and H of this part if:

(i) It is an addition that meets the definition of construction in §63.2 of subpart A of this part;

(ii)(A) Such construction commenced after December 31, 1992 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in table 1 of this subpart;

(B) Such construction commenced after August 22, 1997 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraph (b)(1)(ii) of this section; and

(iii) The addition 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's, unless the Administrator establishes a lesser quantity.

(2) If any change is made to a chemical manufacturing process unit subject to this subpart, the change shall be subject to the requirements of a new source in subparts F, G, and H of this part if:

(i) It is a change that meets the definition of reconstruction in §63.2 of subpart A of this part; and

(ii)(A) Such reconstruction commenced after December 31, 1992 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in table 1 of this subpart; and

(B) Such construction commenced after August 22, 1997 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraph (b)(1)(ii) of this section.

(3) If an additional chemical manufacturing process unit is added to a plant site or a change is made to a chemical manufacturing process unit and the addition or change is determined to be subject to the new source requirements according to paragraph (l)(1) or (l)(2) of this section:

(i) The new or reconstructed source shall be in compliance with the new source requirements of subparts F, G, and H of this part upon initial start-up of the new or reconstructed source or by April 22, 1994, whichever is later; and

(ii) The owner or operator of the new or reconstructed source shall comply with the reporting and recordkeeping requirements in subparts F, G, and H of this part that are applicable to new sources. The applicable reports include, but are not limited to:

(A) The application for approval of construction or reconstruction which shall be submitted by the date specified in §63.151(b)(2)(ii) of subpart G of this part, or an Initial Notification as specified in §63.151(b)(2)(iii) of subpart G of this part;

(B) Changes that meet the criteria in §63.151(j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

(C) The Notification of Compliance Status as required by §63.152(b) of subpart G of this part for the new or reconstructed source;

(D) Periodic Reports and Other Reports as required by §63.152(c) and (d) of subpart G of this part;

(E) Reports required by §63.182 of subpart H of this part; and

(F) Reports and notifications required by sections of subpart A of this part that are applicable to subparts F, G, and H of this part, as identified in table 3 of this subpart.

(4) If an additional chemical manufacturing process unit is added to a plant site, or if an emission point is added to an existing chemical manufacturing process unit, or if another deliberate operational process change creating an additional Group 1 emission point(s) is made to an existing chemical manufacturing process unit, or if a surge control vessel or bottoms receiver becomes subject to §63.170 of subpart H, or if a compressor becomes subject to §63.164 of subpart H, and if the addition or change is not subject to the new source requirements as determined according to paragraph (l)(1) or (l)(2) of this section, the requirements in paragraphs (l)(4)(i) through (l)(4)(iii) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph and paragraph (m) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status required by §63.152(b) of subpart G of this part.

(i) The added emission point(s) and any emission point(s) within the added or changed chemical manufacturing process unit are subject to the requirements of subparts F, G, and H of this part for an existing source;

(ii) The added emission point(s) and any emission point(s) within the added or changed chemical manufacturing process unit shall be in compliance with subparts F, G, and H of this part by the dates specified in paragraph (l)(4)(ii) (A) or (B) of this section, as applicable.

(A) If a chemical manufacturing process unit is added to a plant site or an emission point(s) is added to an existing chemical manufacturing process unit, the added emission point(s) shall be in compliance upon initial start-up of the added chemical manufacturing process unit or emission point(s) or by 3 years after April 22, 1994, whichever is later.

(B) If a deliberate operational process change to an existing chemical manufacturing process unit causes a Group 2 emission point to become a Group 1 emission point, if a surge control vessel or bottoms receiver becomes subject to §63.170 of subpart H, or if a compressor becomes subject to §63.164 of subpart H, the owner or operator shall be in compliance upon initial start-up or by 3 years after April 22, 1994, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (m)(1) through (m)(3) of this section to establish a compliance date.

(iii) The owner or operator of a chemical manufacturing process unit or emission point that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements of subparts F, G, and H of this part that are applicable to existing sources, including, but not limited to, the reports listed in paragraphs (l)(4)(iii) (A) through (E) of this section. A change to an existing chemical manufacturing process unit shall be subject to the reporting requirements for existing sources, including but not limited to, the reports listed in paragraphs (l)(4)(iii)(A) through (E) of this section if the change meets the criteria specified in §63.118(g), (h), (i), or (j) of subpart G of this part for process vents or the criteria in §63.155(i) or (j) of subpart G of this part. The applicable reports include, but are not limited to:

(A) Reports specified in §63.151(i) and (j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

(B) The Notification of Compliance Status as required by §63.152(b) of subpart G of this part for the emission points that were added or changed;

(C) Periodic Reports and other reports as required by §63.152 (c) and (d) of subpart G of this part;

(D) Reports required by §63.182 of subpart H of this part; and

(E) Reports and notifications required by sections of subpart A of this part that are applicable to subparts F, G, and H of this part, as identified in table 3 of this subpart.

(m) If a change that does not meet the criteria in paragraph (l)(4) of this section is made to a chemical manufacturing process unit subject to subparts F and G of this part, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in §63.~~111~~ 101 of ~~subpart G of this part~~this subpart), then the owner or operator shall comply with the requirements of subpart G of this part for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

(1) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(2) The compliance schedule shall be submitted with the report required in §63.151(i)(2) of subpart G of this part for emission points included in an emissions average or §63.151(j)(1) or subpart G of this part for emission points not in an emissions average, unless the compliance schedule has been submitted in an operating permit application or amendment.

(3) The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

(n) *Rules stayed for reconsideration.* Notwithstanding any other provision of this subpart, the effectiveness of subpart F is stayed from October 24, 1994, to April 24, 1995, only as applied to those sources for which the owner or operator makes a representation in writing to the Administrator that the resolution of the area source definition issues could have an effect on the compliance status of the source with respect to subpart F.

(o) *Sections stayed for reconsideration.* Notwithstanding any other provision of this subpart, the effectiveness of §§63.164 and 63.170 of subpart H is stayed from October 28, 1994, to April 24, 1995, only as applied to those sources subject to §63.100(k)(3) (i) and (ii).

(p) *Compliance dates for chemical manufacturing process units that produce crotonaldehyde or tetrahydrobenzaldehyde.* Notwithstanding the provisions of paragraph (k) of this section, chemical manufacturing process units that meet the criteria in paragraphs (b)(1)(ii), (b)(2), and (b)(3) of this section shall be in compliance with this subpart and subparts G and H of this part by the dates specified in paragraphs (p)(1) and (p)(2) of this section, as applicable.

(1) If the source consists only of chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraph (b)(1)(ii) of this section, new sources shall comply by the date specified in paragraph (p)(1)(i) of this section and existing sources shall comply by the dates specified in paragraphs (p)(1)(ii) and (p)(1)(iii) of this section.

(i) Upon initial start-up or May 12, 1998, whichever is later.

(ii) This subpart and subpart G of this part by May 14, 2001, unless an extension has been granted by the Administrator as provided in §63.151(a)(6) or granted by the permitting authority as provided in §63.6(i) of subpart A of this part. When April 22, 1994 is referred to in this subpart and subpart G of this part, May 12, 1998 shall be used as the applicable date for that provision. When December 31, 1992 is referred to in this subpart and subpart G of this part, August 22, 1997 shall be used as the applicable date for that provision.

(iii) Subpart H of this part by May 12, 1999, unless an extension has been granted by the Administrator as provided in §63.151(a)(6) or granted by the permitting authority as provided in §63.6(i) of subpart A of this part. When April 22, 1994 is referred to in subpart H of this part, May 12, 1998 shall be used as the applicable date for that provision. When December 31, 1992 is referred to in subpart H of this part, August 22, 1997 shall be used as the applicable date for that provision.

(2) If the source consists of a combination of chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraphs (b)(1)(i) and (b)(1)(ii) of this section, new chemical manufacturing process units that meet the criteria in paragraph (b)(1)(ii) of this section shall comply by the date specified in paragraph (p)(1)(i) of this section and existing chemical manufacturing process units producing crotonaldehyde and/or tetrahydrobenzaldehyde shall comply by the dates specified in paragraphs (p)(1)(ii) and (p)(1)(iii) of this section.

(q) If the owner or operator of a process vent, or of a gas stream transferred subject to §63.113(i), is unable to comply with the provisions of §§63.113 through 63.118 by the applicable compliance date specified in paragraph (k),(l), or (m) of this section for the reasons stated in paragraph (q)(1),(3), or (5) of this section, the owner or operator shall comply with the applicable provisions in §§63.113 through 63.118 as expeditiously as practicable, but in no event later than the date approved by the Administrator pursuant to paragraph (q)(2), (4), or (6) of this section, respectively. For requests under paragraph (q)(1) or (3) of this section, the date approved by the Administrator may be earlier than, and shall not be later than, the later of January 22, 2004 or 3 years after the transferee~~'~~’s refusal to accept the stream for disposal. For requests submitted under paragraph (q)(5) of this section, the date approved by the Administrator may be earlier than, and shall not be later than, 3 years after the date of publication of the amendments to this subpart or to subpart G of this part which created the need for an extension of the compliance.

(1) If the owner or operator has been sending a gas stream for disposal as described in §63.113(i) prior to January 22, 2001, and the transferee does not submit a written certification as described in §63.113(i)(2) and ceases to accept the gas stream for disposal, the owner or operator shall comply with paragraph (q)(2) of this section.

(2)(i) An owner or operator directed to comply with paragraph (q)(2) of this section shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(ii) The compliance schedule and justification shall be submitted no later than 90 days after the transferee ceases to accept the gas stream for disposal.

(iii) The Administrator shall approve the compliance schedule or request changes within 120 days of receipt of the compliance schedule and justification.

(3) Except as specified in paragraph (q)(4)(iii) of this section, ~~I~~if the owner or operator has been sending the gas stream for disposal as described in §63.113(i) to a transferee who had submitted a written certification as described in §63.113(i)(2), and the transferee revokes its written certification, the owner or operator shall comply with paragraphs (q)(4)(i) and (q)(4)(ii) of this section. During the period between the date when the owner or operator receives notice of revocation of the transferee~~'~~’s written certification and the compliance date established under paragraph (q)(4) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes

of this paragraph (q)(3), the term "excess emissions" means emissions in excess of those that would have occurred if the transferee had continued managing the gas stream in compliance with the requirements in §§63.113 through 63.118 of subpart G of this part. The measures to be taken shall be identified in the applicable startup, shutdown, and malfunction plan. If the measures that can be reasonably taken will change over time, so that a more effective measure which could not reasonably be taken initially would be reasonable at a later date, the Administrator may require the more effective measure by a specified date (in addition to or instead of any other measures taken sooner or later than that date) as a condition of approval of the compliance schedule.

(4)(i) An owner or operator directed to comply with this paragraph (q)(4) shall submit to the Administrator for approval the documents specified in paragraphs (q)(4)(i)(A) through (E) of this section no later than 90 days after the owner or operator receives notice of revocation of the transferee's written certification.

(A) A request for determination of a compliance date.

(B) A justification for the request for determination of a compliance date.

(C) A compliance schedule.

(D) A justification for the compliance schedule.

(E) A description of the measures that will be taken to minimize excess emissions until the new compliance date, and the date when each measure will first be implemented. The owner or operator shall describe how, and to what extent, each measure will minimize excess emissions, and shall justify any period of time when measures are not in place.

(ii) The Administrator shall approve or disapprove the request for determination of a compliance date and the compliance schedule, or request changes, within 120 days after receipt of the documents specified in paragraphs (q)(4)(i)(A) through (E) of this section. Upon approving the request for determination and compliance schedule, the Administrator shall specify a reasonable compliance date consistent with the introductory text in paragraph (q) of this section.

(iii) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(10), paragraph (q)(3) of this section no longer applies.

(5) If the owner's or operator's inability to meet otherwise applicable compliance deadlines is due to amendments of this subpart or of subpart G of this part published on or after January 22, 2001 and neither condition specified in paragraph (q)(1) or (3) of this section is applicable, the owner or operator shall comply with paragraph (q)(6) of this section.

(6)(i) An owner or operator directed to comply with this paragraph (6)(i) shall submit to the Administrator for approval, a request for determination of a compliance date, a compliance schedule, a justification for the determination of a compliance date, and a justification for the compliance schedule.

(ii) The documents required to be submitted under paragraph (q)(6)(i) of this section shall be submitted no later than 120 days after publication of the amendments of this subpart or of subpart G of this part which necessitate the request for an extension.

(iii) The Administrator shall approve or disapprove the request for a determination of a compliance date, or request changes, within 120 days after receipt of the request for determination of a compliance date, the compliance schedule, and the two justifications. If the request for determination of a compliance date is disapproved, the compliance schedule is disapproved and the owner or operator shall comply by the applicable date specified in paragraph (k),(l), or (m) of this section. If the request for the determination of a compliance date is approved, the Administrator shall specify, at the time of approval, a reasonable compliance date consistent with the introductory text in paragraph (q) of this section.

§63.101 Definitions.

(a) The following terms as used in subparts F, G, and H of this part shall have the meaning given them in subpart A of this part: Act, actual emissions, Administrator, affected source, approved permit program, commenced, compliance date, construction, continuous monitoring system, continuous parameter monitoring system, effective date, emission standard, emissions averaging, EPA, equivalent emission limitation, existing source, Federally enforceable, fixed capital cost, hazardous air pollutant, lesser quantity, major source, malfunction, new source, owner or operator, performance evaluation, performance test, permit program, permitting authority, reconstruction, relevant standard, responsible official, run, standard conditions, State, and stationary source.

(b) All other terms used in this subpart and subparts G and H of this part shall have the meaning given them in the Act and in this section. If the same term is defined in subpart A of this part and in this section, it shall have the meaning given in this section for purposes of subparts F, G, and H of this part.

Air oxidation reactor means a device or vessel in which air, or a combination of air and oxygen, is used as an oxygen source in combination with one or more organic reactants to produce one or more organic compounds. Air oxidation reactor includes the product separator and any associated vacuum pump or steam jet.

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) of subpart G of this part.

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) of subpart G of this part.

Automated monitoring and recording system means any means of measuring values of monitored parameters and creating a hard copy or computer record of the measured values that does not require manual reading of monitoring instruments and manual transcription of data values. Automated monitoring and recording systems include, but are not limited to, computerized systems and strip charts.

Batch operation means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a unit operation within a chemical manufacturing process unit and processed at one time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh batch is started.

Batch process means a process in which the equipment is fed intermittently or discontinuously. Processing then occurs in this equipment after which the equipment is generally emptied. Examples of industries that use batch processes include pharmaceutical production and pesticide production.

Batch process vent means gaseous venting to the atmosphere from a batch operation.

Batch product-process equipment train means the collection of equipment (e.g., connectors, reactors, valves, pumps, etc.) configured to produce a specific product or intermediate by a batch process.

Bench-scale batch process means a batch process (other than a research and development facility) that is operated on a small scale, such as one capable of being located on a laboratory bench top. This bench-scale equipment will typically include reagent feed vessels, a small reactor and associated product separator, recovery and holding equipment. These processes are only capable of producing small quantities of product.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator. Boiler also means any industrial furnace as defined in 40 CFR 260.10.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

Breakthrough means the time when the level of HAP or TOC, measured at the outlet of the first bed, has been detected is at the highest concentration allowed to be discharged from the adsorber system and indicates that the adsorber bed should be replaced.

By compound means by individual stream components, not carbon equivalents.

By-product means a chemical that is produced coincidentally during the production of another chemical.

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

Chemical manufacturing process unit or CMPU means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. A chemical manufacturing process unit consists of more than one unit operation. For the purpose of this subpart, chemical manufacturing process unit includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels and pressure vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems. A chemical manufacturing process unit is identified by its primary product.

Closed biological treatment process means a tank or surface impoundment where biological treatment occurs and air emissions from the treatment process are routed to either a control device by means of a closed vent system or to a fuel gas system by means of hard-piping. The tank or surface impoundment has a fixed roof, as defined in this section, or a floating flexible membrane cover that meets the requirements specified in §63.134 of subpart G of this part.

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

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

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

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

Compliance date means the dates specified in §63.100(k) or §63.100(l)(3) of subpart F of this part for process units subject to subpart F of this part; the dates specified in §63.190(e) of subpart I of this part for process units subject to subpart I of this part. For sources subject to other subparts in 40 CFR part 63 that reference this subpart, compliance date will be defined in those subparts. However, the compliance date for §63.170 of subpart H of this part shall be no later than 3 years after the effective date of those subparts unless otherwise specified in such other subparts.

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are not inaccessible, glass, or glass-lined as described in §63.174(h) of subpart H of this part.

Container, as used in the wastewater provisions, means any portable waste management unit that has a capacity greater than or equal to 0.1 m^3 in which a material is stored, transported, treated, or otherwise handled. Examples of containers are drums, barrels, tank trucks, barges, dumpsters, tank cars, dump trucks, and ships.

Continuous 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 §63.152(f) or §63.152(g) of subpart G of this part.

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

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

Continuous vapor processing system means a vapor processing system that treats total organic compound vapors collected from tank trucks or railcars on a demand basis without intermediate accumulation in a vapor holder.

Control device means any combustion device, recovery device, or recapture device. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For process vents~~ (as defined in this section)~~, recapture devices are considered control devices but recovery devices are not considered control devices~~.~~ ~~For a steam stripper, a primary condenser is not considered a control device.~~, and for a steam stripper, a primary condenser is not considered a control device.

Co-product means a chemical that is produced during the production of another chemical.

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

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

Distillate receiver means overhead receivers, overhead accumulators, reflux drums, and condenser(s) including ejector-condenser(s) associated with a distillation unit.

Distillation unit means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they approach equilibrium within the distillation unit. Distillation unit includes the distillate receiver, reboiler, and any associated vacuum pump or steam jet.

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

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

Emission point means an individual process vent, storage vessel, transfer rack, wastewater stream, or equipment leak.

Enhanced biological treatment system or enhanced biological treatment process means an aerated, thoroughly mixed treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than

1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation. A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit.

Equipment leak means emissions of organic hazardous air pollutants from a connector, pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, surge control vessel, bottoms receiver, or instrumentation system in organic hazardous air pollutant service as defined in ~~§63.161~~this section.

Equipment means 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 this subpart.

~~*Ethylene process* or *ethylene process unit* means a chemical manufacturing process unit in which ethylene and/or propylene are produced by separation from petroleum refining process streams or by subjecting hydrocarbons to high temperatures in the presence of steam. The ethylene process unit includes the separation of ethylene and/or propylene from associated streams such as a C_4 product, pyrolysis gasoline, and pyrolysis fuel oil. The ethylene process does not include the manufacture of SOCMI chemicals such as the production of butadiene from the C_4 stream and aromatics from pyrolysis gasoline.~~

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

Fill or *filling* means the introduction of organic hazardous air pollutant into a storage vessel or the introduction of a wastewater stream or residual into a waste management unit, but not necessarily to complete capacity.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in §63.180 (b) and (c) of subpart H of this part, as appropriate, to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

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

Flame zone means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

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

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

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

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in in-process combustion equipment such as furnaces and gas turbines either singly or in combination.

Group 1 process vent means, before [INSERT date 3 years after date of publication of final rule in the Federal Register], a process vent for which the vent stream 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 according to §63.115 of subpart G of this part, is less than or equal to 1.0. On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], Group 1 process vent means a process vent that emits greater than or equal to 1.0 pound per hour of total organic HAP.

Group 1 storage vessel means a storage vessel that meets the criteria for design storage capacity and stored-liquid maximum true vapor pressure specified in table 5 of subpart G of this part for storage vessels at existing sources, and in table 6 of subpart G of this part for storage vessels at new sources.

Group 1 transfer rack means a transfer rack that annually loads greater than or equal to 0.65 million liter of liquid products that contain organic hazardous air pollutants with a rack weighted average vapor pressure greater than or equal to 10.3 kilopascals.

Group 1 wastewater stream means a wastewater stream consisting of process wastewater as defined in this section at an existing or new source that meets the criteria for Group 1 status in §63.132(c) of subpart G of this part for Table 9 compounds and/or a wastewater stream consisting of process wastewater at a new source that meets the criteria for Group 1 status in §63.132(d) of subpart G of this part for Table 8 compounds.

Group 2 process vent means, before [INSERT date 3 years after date of publication of final rule in the Federal Register], a process vent for which the vent stream 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 of subpart G of this part, is greater than 1.0. On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], Group 2 process vent means a process vent that emits less than 1.0 pound per hour of total organic HAP.

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

Group 2 transfer rack means a transfer rack that does not meet the definition of Group 1 transfer rack.

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

Halogenated vent stream or *halogenated stream* means a vent stream from a process vent or transfer operation determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures presented in §63.115(d)(2)(v) of subpart G of this part.

Halogens and *hydrogen halides* means hydrogen chloride (HCl), chlorine (Cl_2), hydrogen bromide (HBr), bromine (Br_2), and hydrogen fluoride (HF).

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as American National Standards Institute (ANSI) B31-3.

Heat exchange system means ~~any cooling tower system or once-through cooling water system (e.g., river or pond water). A heat exchange system can include more than one heat exchanger and can include an entire recirculating or once-through cooling system.~~ a device or collection of devices used to transfer heat from process fluids to water without intentional direct contact of the process fluid with the water (i.e., non-contact heat exchanger) and to transport and/or cool the water in a closed-loop recirculation system (cooling tower system) or a once-through system (e.g., river or pond water). For closed-loop recirculation systems, the heat exchange system consists of a cooling tower, all CMPU heat exchangers that are in organic HAP service, as defined in this subpart, serviced by that cooling tower, and all water lines to and from these process unit heat exchangers. For once-through systems, the heat exchange system consists of all heat exchangers that are in organic HAP service, as defined in this subpart, servicing an individual CMPU and all water lines to and from these heat exchangers. Sample coolers or pump seal coolers are not considered heat exchangers for the purpose of this definition and are not part of the heat exchange system. Intentional direct contact with process fluids results in the formation of a wastewater.

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

In ethylene oxide service means the following:

(1) For equipment leaks, any equipment that contains or contacts a fluid (liquid or gas) that is at least 0.1 percent by weight of ethylene oxide. If information exists that suggests ethylene oxide could be present in equipment, the equipment is considered to be "in ethylene oxide service" unless sampling and analysis is performed as specified in §63.109 to demonstrate

that the equipment does not meet the definition of being “in ethylene oxide service”. Examples of information that could suggest ethylene oxide could be present in equipment, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(2) For heat exchange systems, any heat exchange system in a process that cools process fluids (liquid or gas) that are 0.1 percent or greater by weight of ethylene oxide. If knowledge exists that suggests ethylene oxide could be present in a heat exchange system, then the heat exchange system is considered to be “in ethylene oxide service” unless sampling and analysis is performed as specified in §63.109 to demonstrate that the heat exchange system does not meet the definition of being “in ethylene oxide service”. Examples of information that could suggest ethylene oxide could be present in a heat exchange system, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(3) For process vents, each Group 1 and Group 2 process vent in a process that, when uncontrolled, contains a concentration of greater than or equal to 1 ppmv undiluted ethylene oxide, and when combined, the sum of all these process vents would emit uncontrolled, ethylene oxide emissions greater than or equal to 5 lb/yr (2.27 kg/yr). If information exists that suggests ethylene oxide could be present in a Group 1 or Group 2 process vent, then the Group 1 or Group 2 process vent is considered to be “in ethylene oxide service” unless an analysis is performed as specified in §63.109 to demonstrate that the Group 1 or Group 2 process vent does not meet the definition of being “in ethylene oxide service”. Examples of information that could suggest ethylene oxide could be present in a Group 1 or Group 2 process vent, include calculations based

on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(4) For storage vessels, storage vessels of any capacity and vapor pressure storing a liquid that is at least 0.1 percent by weight of ethylene oxide. If knowledge exists that suggests ethylene oxide could be present in a storage vessel, then the storage vessel is considered to be “in ethylene oxide service” unless sampling and analysis is performed as specified in §63.109 to demonstrate that the storage vessel does not meet the definition of being “in ethylene oxide service”. The exemption for “vessels storing organic liquids that contain organic hazardous air pollutants only as impurities” listed in the definition of “storage vessel” in this section does not apply for storage vessels that may be in ethylene oxide service. Examples of information that could suggest ethylene oxide could be present in a storage vessel, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(5) For wastewater streams, any wastewater stream that contains total annual average concentration of ethylene oxide greater than or equal to 1 parts per million by weight at any flow rate. If knowledge exists that suggests ethylene oxide could be present in a wastewater stream, then the wastewater stream is considered to be “in ethylene oxide service” unless sampling and analysis is performed as specified in §63.109 to demonstrate that the wastewater stream does not meet the definition of being “in ethylene oxide service”. Examples of information that could suggest ethylene oxide could be present in a wastewater stream, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

In food/medical service means that a piece of equipment in organic hazardous air pollutant service contacts a process stream used to manufacture a Food and Drug Administration regulated product where leakage of a barrier fluid into the process stream would cause any of the following: (1) A dilution of product quality so that the product would not meet written specifications, (2) An exothermic reaction which is a safety hazard, (3) The intended reaction to be slowed down or stopped, or (4) An undesired side reaction to occur.

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

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

In light liquid service means that a piece of equipment in organic hazardous air pollutant service contains a liquid that meets the following conditions: (1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20 °C, (2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20 °C is equal to or greater than 20 percent by weight of the total process stream, and (3) The fluid is a liquid at operating conditions. NOTE: Vapor pressures may be determined by the methods described in 40 CFR 60.485(e)(1).

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

In organic hazardous air pollutant or *in organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of §63.180(d) of subpart H of this part. The provisions of §63.180(d) of subpart H of this part also specify how to determine that a piece of equipment is not in organic HAP service.

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

In volatile organic compound or *in VOC service* means, for the purposes of subpart H of this part, that: (1) The piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight (see 40 CFR 60.2 for the definition of VOC, and 40 CFR 60.485(d) to determine whether a piece of equipment is not in VOC service); and (2) The piece of equipment is not in heavy liquid service as defined in 40 CFR 60.481.

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

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

Initial start-up means the first time a new or reconstructed source begins production, or, for equipment added or changed as described in §63.100 (l) or (m), the first time the equipment is put into operation. Initial start-up does not include operation solely for testing equipment. For purposes of subpart G of this part, initial start-up does not include subsequent start-ups (as defined in this section) of chemical manufacturing process units following malfunctions or shutdowns or following changes in product for flexible operation units or following recharging of equipment in batch operation. For purposes of subpart H of this part, initial start-up does not include subsequent start-ups (as defined in §63.161 of subpart H of this part) of process units (as defined in §63.161 of subpart H of this part) following malfunctions or process unit shutdowns.

In-situ sampling systems means nonextractive samplers or in-line samplers.

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

Intermittent vapor processing system means a vapor processing system that employs an intermediate vapor holder to accumulate total organic compound vapors collected from tank trucks or railcars, and treats the accumulated vapors only during automatically controlled cycles.

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

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

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

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

Loading cycle means the time period from the beginning of filling a tank truck or railcar until flow to the control device ceases, as measured by the flow indicator.

Loading rack means a single system used to fill tank trucks and railcars at a single geographic site. Loading equipment and operations that are physically separate (i.e, do not share common piping, valves, and other equipment) are considered to be separate loading racks.

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

Maximum true vapor pressure means the equilibrium partial pressure exerted by the total organic HAP's in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored or transferred at the ambient temperature, as determined: (1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss From External Floating-Roof Tanks (incorporated by reference as specified in §63.14 of subpart A of this part); or (2) As obtained from standard reference texts; or (3) As determined by the American Society for Testing and Materials Method D2879-83 or 96 (incorporated by reference as specified in §63.14 of subpart A of this part); or (4) Any other method approved by the Administrator.

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

Non-automated monitoring and recording system means manual reading of values measured by monitoring instruments and manual transcription of those values to create a record. Non-automated systems do not include strip charts.

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

Oil-water separator or *organic-water separator* means a waste management unit, generally a tank used to separate oil or organics from water. An oil-water or organic-water separator consists of not only the separation unit but also the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit. Examples of an oil-water or organic-water separator include, but are not limited to, an American Petroleum Institute separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.

On-site or *On site* means, with respect to records required to be maintained by this subpart, that the 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 chemical manufacturing process unit to which the records pertain, or storage in central files elsewhere at the major source.

Open biological treatment process means a biological treatment process that is not a closed biological treatment process as defined in this section.

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

Operating permit means a permit required by 40 CFR part 70 or 71.

Organic hazardous air pollutant or *organic HAP* means one of the chemicals listed in table 2 of this subpart.

Organic monitoring device means a unit of equipment used to indicate the concentration level of organic compounds exiting a recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity.

~~*Petroleum refining process,* also referred to as a *petroleum refining process unit,* means a process that for the purpose of producing transportation fuels (such as gasoline and diesel fuels), heating fuels (such as fuel gas, distillate, and residual fuel oils), or lubricants separates petroleum or separates, cracks, or reforms unfinished derivatives. Examples of such units include, but are~~

~~not limited to, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, and thermal processes.~~

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

Point of determination means each point where process wastewater exits the chemical manufacturing process unit. NOTE TO DEFINITION FOR POINT OF DETERMINATION: The regulation allows determination of the characteristics of a wastewater stream (1) at the point of determination or (2) downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of Table 8 or Table 9 compounds as determined in §63.144 of subpart G of this part. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy hazardous air pollutants.

Point of transfer means: (1) If the transfer is to an off-site location for control, the point where the conveyance crosses the property line; or (2) If the transfer is to an on-site location not owned or operated by the owner or operator of the source, the point where the conveyance enters the operation or equipment of the transferee.

Polymerizing monomer means a molecule or compound usually containing carbon and of relatively low molecular weight and simple structure (e.g., hydrogen cyanide, acrylonitrile, styrene), which is capable of conversion to polymers, synthetic resins, or elastomers by combination with itself due to heat generation caused by a pump mechanical seal surface, contamination by a seal fluid (e.g., organic peroxides or chemicals that will form organic peroxides), or a combination of both with the resultant polymer buildup causing rapid mechanical seal failure.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device. This release can be one release or a series of releases over a short time period.

Pressure relief device or valve means a valve, rupture disk, or similar device used only to release an unplanned, nonroutine discharge of gas from process equipment in order to avoid safety hazards or equipment damage. A pressure relief device discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause. Such devices include conventional, spring-actuated relief valves, balanced bellows relief valves, pilot-operated relief valves, rupture disks, and breaking, buckling, or shearing pin devices. Devices that are actuated either by a pressure of less than or equal to 2.5 pounds per square inch gauge or by a vacuum are not pressure relief devices.

Pressure-assisted multi-point flare means a flare system consisting of multiple flare burners in staged arrays whereby the vent stream pressure is used to promote mixing and smokeless operation at the flare burner tips. Pressure-assisted multi-point flares are designed for smokeless operation at velocities up to Mach = 1 conditions (i.e., sonic conditions), can be elevated or at ground level, and typically use cross-lighting for flame propagation to combust any flare vent gases sent to a particular stage of flare burners.

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

Primary fuel means the fuel that provides the principal heat input to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

Process heater means a device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water.

Process unit means a chemical manufacturing process unit as defined in subpart F of this part, a process subject to the provisions of subpart I of this part, or a process subject to another subpart in 40 CFR part 63 that references this subpart.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be effected. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a process unit shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown, is not a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit shutdowns.

Process vent means the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in §63.107(b) through (h), or meets the criteria specified in §63.107(i). For purposes of §§63.113 through 63.118 of subpart G of this part, all references to the characteristics of a process vent (e.g., flow rate, total HAP concentration, or TRE index value) shall mean the characteristics of the gas stream.

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

Process wastewater stream means a stream that contains process wastewater.

Product means a compound or chemical which is manufactured as the intended product of the chemical manufacturing process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Product separator means phase separators, flash drums, knock-out drums, decanters, degassers, and condenser(s) including ejector-condenser(s) associated with a reactor or an air oxidation reactor.

Product tank drawdown means any material or mixture of materials discharged from a product tank for the purpose of removing water or other contaminants from the product tank.

Product tank, as used in the wastewater provisions, means a stationary unit that is designed to contain an accumulation of materials that are fed to or produced by a process unit, and is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. This term has the same meaning as a product storage vessel.

Rack-weighted average partial pressure means the throughput weighted average of the average maximum true vapor pressure of liquids containing organic HAP transferred at a transfer rack. The rack-weighted average partial pressure shall be calculated using the equation below:

$$P = \frac{\sum P_i G_i}{\sum G_i}$$

Where:

P	=	Rack-weighted average partial pressure, kilopascals.
P_i	=	Individual HAP maximum true vapor pressure, kilopascals, = X_i*P, where X_i is the mole fraction of compound i in the liquid.
G_i	=	Yearly volume of each liquid that contains organic HAP that is transferred at the rack, liters.
I	=	Each liquid that contains HAP that is transferred at the rack.

Reactor means a device or vessel in which one or more chemicals or reactants, other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed. Reactor includes the product separator and any associated vacuum pump or steam jet.

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include 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 purposes of the monitoring, recordkeeping, and reporting requirements of subparts G and H of this part, recapture devices are considered recovery devices.

Reference control technology for process vents means a combustion device or recapture device used to reduce organic hazardous air pollutant emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume.

Reference control technology for storage vessels means an internal floating roof meeting the specifications of §63.119(b) of subpart G of this part, an external floating roof meeting the specifications of §63.119(c) of subpart G of this part, an external floating roof converted to an internal floating roof meeting the specifications of §63.119(d) of subpart G of this part, or a closed-vent system to a control device achieving 95-percent reduction in organic HAP emissions. For purposes of emissions averaging, these four technologies are considered equivalent.

Reference control technology for transfer racks means a combustion device, recapture device, or recovery device used to reduce organic hazardous air pollutants emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume; or a vapor balancing system.

Reference control technology for wastewater means the use of: (1) Controls specified in §63.133 through §63.137 of subpart G of this part; (2) A steam stripper meeting the specifications of §63.138(d) of subpart G of this part or any of the other alternative control measures specified in §63.138(b), (c), (e), (f), (g), or (h) of subpart G of this part; and (3) A control device to reduce by 95 percent (or to an outlet concentration of 20 parts per million by volume for combustion devices or for noncombustion devices controlling air emissions from waste management units other than surface impoundments or containers) the organic hazardous air pollutants emissions in the vapor streams vented from wastewater tanks, oil-water separators, containers, surface impoundments, individual drain systems, and treatment processes (including the design steam stripper) managing wastewater.

Relief valve means a type of pressure relief device that is designed to re-close after the pressure relief.

Repaired means that equipment: (1) Is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of subpart H of this part, and (2) Unless otherwise specified in applicable provisions of subpart H of this part, is monitored as specified in §63.180 (b) and (c) of subpart H of this part, as appropriate, to verify that emissions from the equipment are below the applicable leak definition.

Research and development facility means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products for commercial sale, except in a *de minimis* manner.

Residual means any liquid or solid material containing Table 9 compounds that is removed from a wastewater stream by a waste management unit or treatment process that does not destroy organics (nondestructive unit). Examples of residuals from nondestructive wastewater management units are: the organic layer and bottom residue removed by a decanter or organic-water separator and the overheads from a steam stripper or air stripper. Examples of materials which are not residuals are: silt; mud; leaves; bottoms from a steam stripper or air stripper; and sludges, ash, or other materials removed from wastewater being treated by destructive devices such as biological treatment units and incinerators.

Routed to a process or route to a process means the emissions are conveyed by hard-piping or a closed vent system to any enclosed portion of a process unit where the emissions are predominately recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not organic hazardous air pollutants; and/or incorporated into a product; and/or recovered.

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

Screwed connector means a threaded pipe fitting where the threads are cut on the pipe wall and the fitting requires only two pieces to make the connection (i.e., the pipe and the fitting).

Secondary fuel means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat in addition to the heat provided by the primary fuel.

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

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

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

Shutdown means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of a chemical manufacturing process unit or a reactor, air oxidation reactor, distillation unit, waste management unit, equipment required or used to comply with this subpart F, subparts G, or H of this part or the emptying and degassing of a storage vessel. Shutdown does not include the routine rinsing or washing of equipment in batch operation between batches.

Simultaneous loading means, for a shared control device, loading of organic HAP materials from more than one transfer arm at the same time such that the beginning and ending times of loading cycles coincide or overlap and there is no interruption in vapor flow to the shared control device.

Single-seal system means a floating roof having one continuous seal that completely covers the space between the wall of the storage vessel and the edge of the floating roof. This seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.

Source means the collection of emission points to which this subpart applies as determined by the criteria in §63.100 of this subpart. For purposes of subparts F, G, and H of this part, the term *affected source* as used in subpart A of this part has the same meaning as the term *source* defined here.

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

Start-up means the setting into operation of a chemical manufacturing process unit or a reactor, air oxidation reactor, distillation unit, waste management unit, or equipment required or used to comply with this subpart F, subpart G, or H of this part or a storage vessel after emptying and degassing. Start-up includes initial start-up, operation solely for testing equipment, the recharging of equipment in batch operation, and transitional conditions due to changes in product for flexible operation units.

Start-up, shutdown, and malfunction plan means the plan required under §63.6(e)(3) of subpart A of this part. This plan details the procedures for operation and maintenance of the source during periods of start-up, shutdown, and malfunction. For each source as defined in this section, this definition no longer applies on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].

Steam jet ejector means a steam nozzle which discharges a high-velocity jet across a suction chamber that is connected to the equipment to be evacuated.

Storage vessel means a tank or other vessel that is used to store organic liquids that contain one or more of the organic HAP~~'~~s listed in table 2 of this subpart and that has been assigned, according to the procedures in §63.100(g) of this subpart, to a chemical manufacturing process unit that is subject to this subpart. Storage vessel does 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;~~[Reserved]

(3) Vessels with capacities smaller than 38 cubic meters;

(4) Except for storage vessels in ethylene oxide service, ~~V~~vessels storing organic liquids that contain organic hazardous air pollutants only as impurities;

(5) Bottoms receiver tanks;

(6) Surge control vessels; or

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

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

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within a chemical manufacturing process unit when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

Table 8 compound means a compound listed in table 8 of subpart G of this part.

Table 9 compound means a compound listed in table 9 of subpart G of this part.

Temperature monitoring device means a unit of equipment used to monitor temperature and having a minimum accuracy of (a) ±1 percent of the temperature being monitored expressed in degrees Celsius ((°C) or (b) ±0.5 degrees (°C), whichever is greater.

The 33/50 program means a voluntary pollution prevention initiative established and administered by the EPA to encourage emissions reductions of 17 chemicals emitted in large volumes by industrial facilities. The EPA Document Number 741-K-92-001 provides more information about the 33/50 program.

Total organic compounds or *TOC,* as used in the process vents provisions, means those compounds measured according to the procedures of Method 18 of 40 CFR part 60, appendix A-6. The ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) may be used in lieu of Method 18 of 40 CFR part 60, appendix A-6, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

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 process vent stream, based on vent stream flow rate, emission rate of organic HAP, net heating value, and corrosion properties (whether or not the vent stream contains halogenated compounds), as quantified by the equations given under §63.115 of subpart G of this part.

Transfer operation means the loading, into a tank truck or railcar, of organic liquids that contain one or more of the organic hazardous air pollutants listed in table 2 of this subpart from a transfer rack (as defined in this section). Transfer operations do not include loading at an operating pressure greater than 204.9 kilopascals. For each source as defined in this section, the greater than 204.9 kilopascals exemption in this definition no longer applies on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are assigned to a chemical manufacturing process unit subject to this subpart according to the procedures specified in §63.100(h) of this subpart and are used to fill tank trucks and/or railcars with organic liquids that contain one or more of the organic hazardous air pollutants listed in table 2 of this subpart. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves. Transfer rack does not include:

(1) Racks, arms, or hoses that only transfer liquids containing organic hazardous air pollutants as impurities;

(2) Racks, arms, or hoses that vapor balance during all loading operations; or

(3) Racks transferring organic liquids that contain organic hazardous air pollutants only as impurities.

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

Unit operation means one or more pieces of process equipment used to make a single change to the physical or chemical characteristics of one or more process streams. Unit operations include, but are not limited to, reactors, distillation units, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

Vapor balancing system means a piping system that is designed to collect organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading; and to route the collected organic hazardous air pollutants vapors to the storage vessel from which the liquid being loaded originated, or to another storage vessel connected by a common header or to compress and route to a process or a fuel gas system the collected organic hazardous air pollutants vapors.

Vapor collection system, as used in the transfer provisions, means the equipment used to collect and transport organic HAP vapors displaced during the loading of tank trucks or railcars. This does not include the vapor collection system that is part of any tank truck or railcar vapor collection manifold system.

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

Vent stream, as used in the process vent provisions, means the gas stream flowing through the process vent.

Waste management unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: Wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is used for recovery then it is part of a chemical manufacturing process unit and is not a waste management unit.

Wastewater means water that:

(1) Contains either:

(i) An annual average concentration of Table 9 compounds (as defined in ~~§63.111 of subpart G of this part~~this section) 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 Table 9 compounds (as defined in ~~§63.111 of subpart G~~this section) of at least 10,000 parts per million by weight at any flow rate, and that

(2) Is discarded from a chemical manufacturing process unit that meets all of the criteria specified in §63.100 (b)(1) through (b)(3) of this subpart. Wastewater is process wastewater or maintenance wastewater.

Wastewater stream means a stream that contains only wastewater.

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

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

§63.102 General standards.

(a) Except as specified in paragraph (e) of this section, ~~O~~owners and operators of sources subject to this subpart shall comply with the requirements of subparts G and H of this part as specified in paragraphs (a)(1) through (4) of this section.

(1) The provisions set forth in this subpart F and subpart G of this part shall apply at all times except during periods of start-up or shutdown (as defined in §63.101 of this subpart), malfunction, or non-operation of the chemical manufacturing process unit (or specific portion thereof) resulting in cessation of the emissions to which this subpart F and subpart G of this part apply. However, if a start-up, shutdown, malfunction or period of non-operation of one portion of a chemical manufacturing process unit does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of this subpart F and subpart G of this part during the start-up, shutdown, malfunction or period of non-operation. For example, if there is an overpressure in the reactor area, a storage vessel in the chemical manufacturing process unit would still be required to be controlled in accordance with §63.119 of subpart G of the part. Similarly, the degassing of a storage vessel would not affect the ability of a process vent to meet the requirements of §63.113 of subpart G of this part.

(2) The provisions set forth in subpart H of this part shall apply at all times except during periods of start-up or shutdown, as defined in §63.101(b) of this subpart, malfunction, process

unit shutdown (as defined in §63.~~161~~101~~of subpart H of this part~~), or non-operation of the chemical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which subpart H of this part applies.

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with the provisions of this subpart F, subpart G or H of this part 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 F, subpart G or H of this part applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning, or if the owner or operator must shut down the equipment to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the chemical manufacturing process unit or portion thereof.

(4) During start-ups, shutdowns, and malfunctions when the requirements of this subpart F, subparts G and/or H of this part do not apply pursuant to paragraphs (a)(1) through (a)(3) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether 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 (including the startup, shutdown, and malfunction plan required in

§63.6(e)(3)), review of operation and maintenance records, and inspection of the source. The measures to be taken may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the source. Back-up control devices are not required, but may be used if available.

(b) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in organic HAP emissions at least equivalent to the reduction in organic HAP emissions from that source achieved under any design, equipment, work practice, or operational standards in subpart G or H of this part, the Administrator will publish in the **Federal Register** a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(1) The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(2) Any notice under paragraph (b) of this section shall be published only after public notice and an opportunity for a hearing.

(3) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

(c) Each owner or operator of a source subject to this subpart shall obtain a permit under 40 CFR part 70 or part 71 from the appropriate permitting authority by the date determined by 40 CFR part 70 or part 71, as appropriate.

(1) If the EPA has approved a State operating permit program under 40 CFR Part 70, the permit shall be obtained from the State authority. If the State operating permit program has not been approved, the source shall apply to the EPA Regional Office.

(2) [Reserved]

(d) The requirements in subparts F, G, and H of this part are Federally enforceable under section 112 of the Act on and after the dates specified in §63.100(k) of this subpart.

(e) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(10), paragraph (a) of this section does not apply. Instead, owners and operators of sources as defined in §63.101 shall comply with the requirements in this subpart and subparts G and H of this part at all times, except during periods of nonoperation of the source (or specific portion thereof) resulting in cessation of the emissions to which this subpart or subpart G or H of this part applies.

(f) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(10), at all times, owners and operators must operate and maintain any source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require owners and operators to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

§63.103 General compliance, reporting, and recordkeeping provisions.

(a) Table 3 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of sources subject to subparts F, G, and H of this part.

(b) ~~Initial p~~Performance tests and initial compliance determinations shall be required only as specified in subparts G and H of this part.

(1) Initial p~~P~~erformance tests and compliance determinations shall be conducted according to the schedule and procedures in §63.7(a) of subpart A of this part and the applicable sections of subparts G and H of this part. Beginning no later than the compliance dates specified in §63.100(k)(10), except as outlined in subpart H of this part, conduct subsequent performance tests no later than 60 calendar months after the previous performance test.

(2) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 calendar days before the performance test is scheduled to allow the Administrator the opportunity to have an observer present during the test.

(3) Performance tests shall be conducted as specified in paragraph (b)(3)(i) or (b)(3)(ii) of this section.

(i) Except as specified in paragraph (b)(3)(ii) of this section, ~~P~~performance tests shall be conducted according to the provisions of §63.7(e) of subpart A of this part, except that performance tests shall be conducted at maximum representative operating conditions for the process. During the performance test, an owner or operator may operate the control or recovery device at maximum or minimum representative operating conditions for monitored control or recovery device parameters, whichever results in lower emission reduction.

(ii) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(10), paragraph (b)(3)(i) of this section no longer applies and instead the owner or operator may not conduct performance tests during periods of malfunction. Owners and operators must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, owners and operators must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(4) 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 of appendix A of this part.

(5) Performance tests may be waived with approval of the Administrator as specified in §63.7(h)(2) of subpart A of this part. Owners or operators of sources subject to subparts F, G, and H of this part who apply for a waiver of a performance test shall submit the application by the dates specified in paragraph (b)(5)(i) of this section rather than the dates specified in §63.7(h)(3) of subpart A of this part.

(i) If a request is made for an extension of compliance under §63.151(a)(6) of subpart G or §63.6(i) of subpart A of this part, the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested, the application for a waiver of an initial performance test shall be submitted no later than 90 calendar days before the Notification of Compliance Status required in §63.152(b) of subpart G of this part is due to be submitted.

(ii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the required test.

(6) The owner or operator of a flexible operation unit shall conduct all required compliance demonstrations during production of the primary product. The owner or operator is not required to conduct compliance demonstrations for operating conditions during production of a product other than the primary product. Except as otherwise provided in this subpart or in subpart G or subpart H of this part, as applicable, the owner or operator shall operate each control device, recovery device, and/or recapture device that is required or used for compliance, and associated monitoring systems, without regard for whether the product that is being produced is the primary product or a different product. Except as otherwise provided in this subpart, subpart G and/or subpart H of this part, as applicable, operation of a control device, recapture device and/or recovery device required or used for compliance such that the daily average of monitored parameter values is outside the parameter range established pursuant to §63.152(b)(2), or such that the monitoring data show operation inconsistent with the monitoring plan established pursuant to §63.120(d)(2) or §63.181(g)(1)(iv), shall constitute a violation of the required operating conditions.

(c) Each owner or operator of a source subject to subparts F, G, and H of this part shall keep copies of all applicable reports and records required by subparts F, G, and H of this part for at least 5 years; except that, if subparts G or H require records to be maintained for a time period different than 5 years, those records shall be maintained for the time specified in subpart G or H of this part. If an owner or operator submits copies of reports to the applicable 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)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(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 provides access within 2 hours after a request. The remaining four 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 paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) The owner or operator subject to subparts F, G, and H of this part shall keep the records specified in this paragraph, as well as records specified in subparts G and H.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment or continuous monitoring systems used to comply with this subpart F, subpart G, or H of this part during which excess emissions (as defined in §63.102(a)(4)) occur. For each source as defined in §63.101, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies; however, for historical compliance purposes, a copy of these records must be retained and available on-site for at least five years after the date of occurrence.

(ii) For each start-up, shutdown, and malfunction during which excess emissions (as defined in §63.102(a)(4)) occur, records that the procedures specified in the 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 (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must 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. For each source as defined in §63.101, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies; however, for historical compliance purposes, a copy of the plan and these records must be retained and available on-site for five years after [INSERT date 3 years after date of publication of final rule in the Federal Register].

(iii) For continuous monitoring systems used to comply with subpart G of this part, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(iv) Beginning no later than the compliance dates specified in §63.100(k)(10), the manufacturer's specifications specified in paragraph (c)(2)(iii) of this section must include a schedule for calibrations, preventative maintenance procedures, a schedule for preventative maintenance, and corrective actions to be taken if a calibration fails. If a continuous monitoring system calibration fails, the continuous monitoring system is considered to be inoperative until the owner or operator takes corrective action and the system passes calibration. The owner or operator must record the nature and cause of instances when the continuous monitoring system is inoperative and the corrective action taken.

(3) Records of start-up, shutdown and malfunction and continuous monitoring system calibration and maintenance are not required if they pertain solely to Group 2 emission points, as defined in §63.~~111~~ 101 of ~~subpart G of this part~~this subpart, that are not included in an emissions average. For each source as defined in §63.101, on and after [INSERT date 3 years after date of

publication of final rule in the Federal Register], the phrase "start-up, shutdown and malfunction and" in this paragraph no longer applies.

(d) Unless required to be submitted electronically via the EPA's CEDRI, ~~A~~all reports required under subparts F, G, and H of this part ~~shall~~ must be sent to the Administrator at the addresses listed in §63.13 of subpart A of this part, except that requests for permission to use an alternative means of compliance as provided for in §63.102(b) of this subpart and application for approval of a nominal efficiency as provided for in §63.150 (i)(1) through (i)(6) of subpart G of this part ~~shall~~ must be submitted to the Director of the EPA Office of Air Quality Planning and Standards rather than to the Administrator or delegated authority.

(1) Wherever subpart A of this part specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(e) The owner or operator of a chemical manufacturing process unit which meets the criteria of §63.100(b)(1) and §63.100(b)(3), but not the criteria of §63.100(b)(2), shall comply with the requirements of either paragraph (e)(1) or (e)(2) of this section.

(1) Retain information, data, and analysis used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product or co-product any organic hazardous air pollutant. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(2) When requested by the Administrator, demonstrate that the chemical manufacturing process unit does not use as a reactant or manufacture as a product or co-product any organic hazardous air pollutant.

(f) To qualify for the exemption specified in §63.100(b)(4) of this subpart, the owner or operator shall maintain the documentation of the information required pursuant to §63.100(b)(4)(i), and documentation of any update of this information requested by the EPA Regional Office, and shall provide the documentation to the EPA Regional Office upon request. The EPA Regional Office will notify the owner or operator, after reviewing such documentation, if the source does not qualify for the exemption specified in §63.100(b)(4) of this section. In such cases, compliance with subpart H shall be required no later than 90 days after expiration of the applicable compliance date in §63.100(k)(3), but in no event earlier than 90 days after the date of such notification by the EPA Regional Office. Compliance with this subpart F and subpart G of this part shall be no later than April 22, 1997, or as otherwise specified in §63.100(k)(2)(ii) of this subpart, unless an extension has been granted by the EPA Regional Office or permitting authority as provided in §63.6(i) of subpart A of this part.

(g) An owner or operator who elects to use the compliance extension provisions of §63.100(k)(6)(i) or (ii) shall submit a compliance extension request to the appropriate EPA Regional Office no later than 45 days before the applicable compliance date in §63.100(k)(3), but in no event is submittal required earlier than May 10, 1995. The request shall contain the information specified in §63.100(k)(5)(iv) and the reason compliance can not reasonably be achieved without a process unit shutdown, as defined in 40 CFR 63.~~161~~ 101 or without replacement of the compressor or recasting of the distance piece.

(h) An owner or operator who elects to use the compliance extension provisions of §63.100(k)(8) shall submit to the appropriate EPA Regional Office a brief description of the process change, identify the HAP eliminated, and the expected date of cessation of use or production of HAP. The description shall be submitted no later than May 10, 1995, or with the Notice of Compliance Status as required in §63.182(c) of subpart H, whichever is later.

§63.104 Heat exchange system requirements.

(a) Unless one or more of the conditions specified in paragraphs (a)(1) through (a)(6) or paragraph (l) of this section are met, owners and operators of sources subject to this subpart shall monitor each heat exchange system used to cool process equipment in 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, according to the provisions in either paragraph (b) or (c) of this section, and if applicable, paragraph (g) of this section. Whenever a leak is detected, the owner or operator shall comply with the requirements in paragraph (d) of this section, and if applicable, paragraphs (h) through (j) of this section. Owners and operators of heat exchange systems in a chemical manufacturing process unit meeting the conditions of §63.100 (b)(1) through (b)(3) must also comply with paragraph (k) of this section.

(1) The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(2) There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the

intervening fluid is not sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

(3) The once-through heat exchange system is subject to a National Pollution Discharge Elimination System (NPDES) permit with an allowable discharge limit of 1 part per million or less above influent concentration or 10 percent or less above influent concentration, whichever is greater.

(4) The once-through heat exchange system is subject to an NPDES permit that:

(i) Requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water;

(ii) Specifies or includes the normal range of the parameter or condition;

(iii) Requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first six months and quarterly thereafter; and

(iv) Requires the owner or operator to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

(5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart.

(6) The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 9 of subpart G of this part.

(b) The owner or operator who elects to comply with the requirements of paragraph (a) of this section by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section.

The cooling water shall be monitored for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system.

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.

(2)(i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of this subpart.

(ii) For once-through heat exchange systems, the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 9 of subpart G of this part.

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers.

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.

(ii) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units.

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers.

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in paragraph (b)(4) of this section. The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.

(c) The owner or operator who elects to comply with the requirement of paragraph (a) of this section by monitoring using a surrogate indicator of heat exchange system leaks shall comply with the requirements specified in paragraphs (c)(1) through (c)(3) of this section. Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity or other representative indicators.

(1) The owner or operator shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. The plan

shall require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of this section. The plan shall include the information specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.

(ii) The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated.

(iii) The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks.

(iv) The records that will be maintained to document compliance with the requirements of this section.

(2) If a substantial leak is identified by methods other than those described in the monitoring plan and the method(s) specified in the plan could not detect the leak, the owner or operator shall revise the plan and document the basis for the changes. The owner or operator shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) The owner or operator shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on-site, or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. If the monitoring plan is superseded, the owner or operator shall retain the most recent

superseded plan at least until 5 years from the date of its creation. The superseded plan shall be retained on-site (or accessible from a central location by computer or other means that provides access within two hours after a request) for at least 6 months after its creation.

(d) If a leak is detected according to the criteria of paragraph (b) or (c) of this section, the owner or operator shall comply with the requirements in paragraphs (d)(1) and (d)(2) of this section, except as provided in paragraph (e) of this section.

(1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the owner or operator receives results of monitoring tests indicating a leak. The leak shall be repaired unless the owner or operator demonstrates that the results are due to a condition other than a leak.

(2) Once the leak has been repaired, the owner or operator shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.

(e) Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in paragraph (e)(1) or (e)(2) of this section is met. All time periods in paragraphs (e)(1) and (e)(2) of this section shall be determined from the date when the owner or operator determines that delay of repair is necessary.

(1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required.

(2) If a shutdown is not expected within the next 2 months, the owner or operator may delay repair as provided in paragraph (e)(2)(i) or (e)(2)(ii) of this section. Documentation of a

decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.

(i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the owner or operator may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The owner or operator shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section.

(A) The owner or operator shall calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of total hazardous air pollutants listed in table 4 of this subpart in the cooling water from the leaking heat exchanger by the flowrate of the cooling water from the leaking heat exchanger by the expected duration of the delay. The owner or operator may calculate potential emissions using total organic carbon concentration instead of total hazardous air pollutants listed in table 4 of this subpart.

(B) The owner or operator shall determine emissions from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair.

(ii) If repair is delayed for reasons other than those specified in paragraph (e)(2)(i) of this section, the owner or operator may delay repair up to a maximum of 120 calendar days. The owner shall demonstrate that the necessary parts or personnel were not available.

(f)(1) *Required records.* The owner or operator shall retain the records identified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section, and if applicable, paragraph (f)(3) of this section, as specified in §63.103(c)(1).

(i) Monitoring data required by this section indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination;

(ii) Records of any leaks detected by procedures subject to paragraph (c)(2) of this section and the date the leak was discovered;

(iii) The dates of efforts to repair leaks; and

(iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.

(2) *Reports.* If an owner or operator invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next semi-annual periodic report required by §63.152(c) of subpart G of this part. If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported. In addition, if an owner or operator is complying with paragraph (g) or (l) of this section, then the semi-annual periodic report must include the information specified in paragraph (f)(2)(vi) of this section.

(i) The owner or operator shall report the presence of the leak by identifying the heat exchange system and the date that the leak was detected.

(ii) The owner or operator shall report whether or not the leak has been repaired.

(iii) The owner or operator shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in paragraph (e)(2) of this section, documentation of emissions estimates must also be submitted.

(iv) If the leak remains unrepaired, the owner or operator shall report the expected date of repair.

(v) If the leak is repaired, the owner or operator shall report the date the leak was successfully repaired.

(vi) For each heat exchange system subject to paragraph (g) or (l) of this section, the following information must be submitted in each semi-annual periodic report required by §63.152(c) of subpart G of this part.

(A) The number of heat exchange systems at the plant site subject to the monitoring requirements in paragraph (g) or (l) of this section during the reporting period.

(B) The number of heat exchange systems subject to the monitoring requirements in paragraph (g) or (l) of this section at the plant site found to be leaking during the reporting period.

(C) For each monitoring location where a leak was identified during the reporting period, identification of the monitoring location (*e.g.*, unique monitoring location or heat exchange system ID number), the measured total strippable hydrocarbon concentration (in ppmv as methane) or total hydrocarbon mass emissions rate (in kg/hr as methane) (if complying with paragraph (g) of this section) or the measured concentration of the monitored substance(s) (in ppmv) (if complying with paragraph (l) of this section), the date the leak was first identified, and, if applicable, the date the source of the leak was identified;

(D) For leaks that were repaired during the reporting period (including delayed repairs), identification of the monitoring location associated with the repaired leak, the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate (if complying with paragraph (g) of this section) or the measured concentration of the monitored substance(s) (if complying with paragraph (l) of this section) measured during re-monitoring to verify repair, and the re-monitoring date (*i.e.*, the effective date of repair); and

(E) For each delayed repair, identification of the monitoring location associated with the leak for which repair is delayed, the date when the delay of repair began, the date the repair was completed or is expected to be completed (if the leak is not repaired during the reporting period), the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate (if complying with paragraph (g) of this section) or the measured concentration of the monitored substance(s) (if complying with paragraph (l) of this section) and date of each monitoring event conducted on the delayed repair during the reporting period, and an estimate in pounds of the potential total hydrocarbon emissions or monitored substance(s) emissions over the reporting period associated with the delayed repair.

(3) *Additional records.* For each heat exchange system subject to paragraph (g) or (l) of this section, owners and operators must also keep records in paragraphs (f)(3)(i) through (f)(3)(iv) of this section.

(i) Monitoring data required by paragraph (g) or (l) of this section that indicate a leak, the date the leak was detected, or, if applicable, the basis for determining there is no leak.

(ii) The dates of efforts to repair leaks.

(iii) The method or procedures used to confirm repair of a leak and the date the repair was confirmed.

(iv) Documentation of delay of repair as specified in paragraphs (f)(3)(iv)(A) through (f)(3)(iv)(D) of this section.

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

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

(C) The date and concentration or mass emissions rate of the leak as first identified and the results of all subsequent monitoring events during the delay of repair.

(D) An estimate of the potential total hydrocarbon emissions (if monitoring the cooling water for leaks according to paragraph (g)(1) of this section) or monitored substance(s) emissions (if monitoring the cooling water for leaks according to paragraph (l) of this section) from the leaking heat exchange system or heat exchanger for each required delay of repair monitoring interval following the procedures in paragraphs (f)(3)(iv)(D)(*1*) through (f)(3)(iv)(D)(*4*) of this section.

(*1*) If an owner or operator complies with the total strippable hydrocarbon concentration leak action level, as specified in paragraph (g)(4) of this section, then the owner or operator must calculate the mass emissions rate by complying with the requirements of paragraph (g)(3)(ii) of this section or by determining the mass flow rate of the cooling water at the monitoring location where the leak was detected. If the monitoring location is an individual cooling tower riser, determine the total cooling water mass flow rate to the cooling tower. Cooling water mass flow rates may be determined using direct measurement, pump curves, heat balance calculations, or other engineering methods. If an owner or operator determines the mass flow rate of the cooling water, calculate the mass emissions rate by converting the stripping gas leak concentration (in ppmv as methane) to an equivalent liquid concentration, in parts per million by weight (ppmw), using equation 7-1 from "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" (incorporated by reference—see §63.14) and multiply the equivalent liquid concentration by the mass flow rate of the cooling water.

(*2*) For delay of repair monitoring intervals prior to repair of the leak, calculate the potential total hydrocarbon emissions or monitored substance(s) emissions for the leaking heat exchange system or heat exchanger for the monitoring interval by multiplying the mass emissions rate, determined in paragraph (g)(3)(ii) or paragraph (f)(3)(iv)(D)(*1*) or (f)(3)(iv)(D)(*4*) of this section, by the duration of the delay of repair monitoring interval. The duration of the delay of repair monitoring interval is the time period starting at midnight on the day of the previous monitoring event or at midnight on the day the repair would have had to be completed if the repair had not been delayed, whichever is later, and ending at midnight of the day the of the current monitoring event.

(*3*) For delay of repair monitoring intervals ending with a repaired leak, calculate the potential total hydrocarbon emissions or monitored substance(s) emissions for the leaking heat exchange system or heat exchanger for the final delay of repair monitoring interval by multiplying the duration of the final delay of repair monitoring interval by the mass emissions rate determined for the last monitoring event prior to the re-monitoring event used to verify the leak was repaired. The duration of the final delay of repair monitoring interval is the time period starting at midnight of the day of the last monitoring event prior to re-monitoring to verify the leak was repaired and ending at the time of the re-monitoring event that verified that the leak was repaired.

(*4*) If an owner or operator monitors the cooling water for leaks according to paragraph (l) of this section, then the owner or operator must calculate the mass emissions rate by determining the mass flow rate of the cooling water at the monitoring location where the leak was detected. Cooling water mass flow rates may be determined using direct measurement, pump curves, heat balance calculations, or other engineering methods. Once determined, multiply the mass flow rate of the cooling water by the concentration of the measured substance(s).

(g) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(10), owners and operators must monitor the cooling water for the presence of total strippable hydrocarbons that indicate a leak according to paragraph (g)(1) of this section, and if an owner or operator detects a leak pursuant to the procedures in this paragraph, then the owner or operator must repair it according to paragraphs (h) and (i) of this section, unless repair is delayed according to paragraph (j) of this section. The requirements in this paragraph do not apply to heat exchange systems that have a maximum cooling water flow rate of 10 gallons per minute or less.

(1) For each recirculating heat exchange system subject to the requirements of paragraph (g) of this section, owners and operators must collect and analyze a sample from the location(s) described in either paragraph (g)(1)(i) or (ii) of this section.

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

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

(2) For each once-through heat exchange system, owners and operators must collect and analyze a sample from the location(s) described in paragraph (g)(2)(i) of this section. The owner or operator may also elect to collect and analyze an additional sample from the location(s) described in paragraph (g)(2)(ii) of this section.

(i) Selected heat exchanger exit line(s), so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s). The selected monitoring location may be at a point where discharges from multiple heat exchange systems are combined provided that the combined cooling water flow rate at the monitoring location does not exceed 40,000 gallons per minute.

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

(3) If an owner or operator complies with the total strippable hydrocarbon concentration leak action level as specified in paragraph (g)(4) of this section, then the owner or operator must comply with the requirements in paragraph (g)(3)(i) of this section. If an owner or operator complies with the total hydrocarbon mass emissions rate leak action level as specified in paragraph (g)(4) of this section, then the owner or operator must comply with the requirements in paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) Owners and operators must determine the total strippable hydrocarbon concentration (in parts per million by volume (ppmv) as methane) at each monitoring location using the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" (incorporated by reference —see §63.14) using a flame ionization detector (FID) analyzer for on-site determination as described in Section 6.1 of the Modified El Paso Method.

(ii) Owners and operators must convert the total strippable hydrocarbon concentration (in ppmv as methane) to a total hydrocarbon mass emissions rate (as methane) using the calculations in Section 7.0 of "Air Stripping Method (Modified El Paso Method) for Determination of

Volatile Organic Compound Emissions from Water Sources" (incorporated by reference—see §63.14).

(4) Except as specified in paragraph (g)(6) of this section, for each heat exchange system, owners and operators must initially monitor monthly for 6-months beginning upon startup and monitor quarterly thereafter using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv or, for heat exchange systems with a recirculation rate of 10,000 gallons per minute or less, the owner or operator may monitor quarterly using a leak action level defined as a total hydrocarbon mass emissions rate from the heat exchange system (as methane) of 0.18 kg/hr. If a leak is detected as specified in paragraph (g)(5) of this section, then owners and operators must monitor monthly until the leak has been repaired according to the requirements in paragraph (h) or (i) of this section. Once the leak has been repaired according to the requirements in paragraph (h) or (i) of this section, quarterly monitoring for the heat exchange system may resume. The monitoring frequencies specified in this paragraph also apply to the inlet water feed line for a once-through heat exchange system, if monitoring of the inlet water feed is elected as provided in paragraph (g)(2)(ii) of this section.

(5) *Leak definition.* A leak is defined as described in paragraph (g)(5)(i) or (ii) of this section, as applicable.

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

(ii) For all other heat exchange systems, a leak is detected if a measurement value of the sample taken from a location specified in paragraph (g)(1)(i), (g)(1)(ii), or (g)(2)(i) of this section equals or exceeds the leak action level.

(6) For heat exchange systems in ethylene oxide service, as defined in §63.101, the monitoring frequency is weekly.

(h) If a leak is detected using the methods described in paragraph (g) of this section, owners and operators must repair the leak to reduce the concentration or mass emissions rate to below the applicable leak action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in paragraph (h)(6) or (j) of this section. Repair must include re-monitoring at the monitoring location where the leak was identified according to the method specified in paragraph (g)(3) of this section to verify that the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is below the applicable leak action level. Repair may also include performing the additional monitoring in paragraph (i) of this section to verify that the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is below the applicable leak action level. Actions that can be taken to achieve repair include but are not limited to:

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

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

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

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

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

(6) For heat exchange systems in ethylene oxide service, as defined in §63.101, paragraph (j) of this section does not apply, and owners and operators must repair the leak to reduce the concentration or mass emissions rate to below the applicable leak action level as soon as practicable, but no later than 15 days after the sample was collected.

(i) If an owner or operator detects a leak when monitoring a cooling tower return line under paragraph (g)(1)(i) of this section, then the owner or operator may conduct additional monitoring of each heat exchanger or group of heat exchangers associated with the heat exchange system for which the leak was detected, as provided in paragraph (g)(1)(ii) of this section. If no leaks are detected when monitoring according to the requirements of paragraph (g)(1)(ii) of this section, the heat exchange system is considered to have met the repair requirements through re-monitoring of the heat exchange system, as provided in paragraph (h) of this section.

(j) Owners and operators may delay repair when one of the conditions in paragraph (j)(1) or (2) of this section is met and the leak is less than the delay of repair action level specified in paragraph (j)(3) of this section. Owners and operators must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.

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

(2) If the necessary equipment, parts, or personnel are not available and the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is initially and remains less than the delay of repair action level for all monitoring periods during the delay of repair, then the owner or operator may delay the repair for a maximum of 120 calendar days. Owners and operators must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monitoring, the delay of repair action level is exceeded, then owners and operators must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

(3) The delay of repair action level is a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv or, for heat exchange systems with a recirculation rate of 10,000 gallons per minute or less, the delay of repair action level is a total hydrocarbon mass emissions rate (as methane) of 1.8 kg/hr. The delay of repair action level is assessed as described in paragraph (j)(3)(i) or (ii) of this section, as applicable.

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

(B) For all other heat exchange systems, the delay of repair action level is exceeded if a measurement value of the sample taken from a location specified in paragraph (g)(1)(i), (ii), or (g)(2)(i) of this section equals or exceeds the delay of repair action level.

(k) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(11), owners and operators must not inject water into or dispose of water through any heat exchange system in a chemical manufacturing process unit meeting the conditions of §63.100(b)(1) through (b)(3) if the water contains any amount of ethylene oxide, has been in contact with any process stream containing ethylene oxide, or the water is considered wastewater as defined in §63.101.

(l) If 99 percent by weight or more of the organic compounds that could leak into the heat exchange system are water soluble and have a Henry's Law Constant less than 5.0E-6 at 25 degrees Celsius (atmospheres-cubic meters/mol), beginning no later than the compliance dates specified in §63.100(k)(10), owners and operators may monitor the cooling water for leaks according to the requirements in paragraph (b) of this section in lieu of using the Modified El Paso Method. If an owner or operator detects a leak according to paragraph (b) of this section, then the owner or operator must repair it according to paragraph (l)(1) of this section, unless repair is delayed according to paragraph (l)(2) of this section.

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

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

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

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

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

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

(2) The owner or operator may delay repair when the conditions in paragraph (e) of this section are met.

§63.105 Maintenance wastewater requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the requirements of paragraphs (b) through (e) of this section for maintenance wastewaters containing those organic HAP's listed in table 9 of subpart G of this part.

(b) The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:

(1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.

(2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and

(3) Specify the procedures to be followed when clearing materials from process equipment.

(c) The owner or operator shall modify and update the information required by paragraph (b) of this section as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

(d) The owner or operator shall incorporate the procedures described in paragraphs (b) and (c) of this section as part of the startup, shutdown, and malfunction plan required under §63.6(e)(3). For each source as defined in §63.101, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(e) The owner or operator shall maintain a record of the information required by paragraphs (b) and (c) of this section as part of the start-up, shutdown, and malfunction plan required under §63.6(e)(3) of subpart A of this part. For each source as defined in §63.101, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "as part of the start-up, shutdown, and malfunction plan required under §63.6(e)(3) of subpart A of this part" in this paragraph no longer applies.

§63.106 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to requirements in §§63.100, 63.102, and 63.104. Where these standards reference another subpart, the cited provisions will be delegated 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.

§63.107 Identification of process vents subject to this subpart.

(a) The owner or operator shall use the criteria specified in this §63.107 to determine whether there are any process vents associated with an air oxidation reactor, distillation unit, or reactor that is in a source subject to this subpart. A process vent is the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in paragraphs (b) through (h) of this section, or meets the criteria specified in paragraph (i) of this section.

(b) Some, or all, of the gas stream originates as a continuous flow from an air oxidation reactor, distillation unit, or reactor during operation of the chemical manufacturing process unit.

(c) The discharge to the atmosphere (with or without passing through a control device) meets at least one of the conditions specified in paragraphs (c)(1) through (3) of this section.

(1) Is directly from an air oxidation reactor, distillation unit, or reactor; or

(2) Is from an air oxidation reactor, distillation unit, or reactor after passing solely (i.e., without passing through any other unit operation for a process purpose) through one or more recovery devices within the chemical manufacturing process unit; or

(3) Is from a device recovering only mechanical energy from a gas stream that comes either directly from an air oxidation reactor, distillation unit, or reactor, or from an air oxidation reactor, distillation unit, or reactor after passing solely (i.e., without passing through any other unit operation for a process purpose) through one or more recovery devices within the chemical manufacturing process unit.

(d) The gas stream contains greater than 0.005 weight percent total organic HAP at the point of discharge to the atmosphere (or at the point of entry into a control device, if any).

(e) The air oxidation reactor, distillation unit, or reactor is part of a chemical manufacturing process unit that meets the criteria of §63.100(b).

(f) The gas stream is in the gas phase from the point of origin at the air oxidation reactor, distillation unit, or reactor to the point of discharge to the atmosphere (or to the point of entry into a control device, if any).

(g) The gas stream is discharged to the atmosphere either on-site, off-site, or both.

(h) The gas stream is not any of the items identified in paragraphs (h)(1) through (9) of this section.

(1) A relief valve discharge.

(2) A leak from equipment subject to subpart H of this part.

(3) A gas stream going to a fuel gas system as defined in §63.101.

(4) A gas stream exiting a control device used to comply with §63.113.

(5) A gas stream transferred to other processes (on-site or off-site) for reaction or other use in another process (i.e., for chemical value as a product, isolated intermediate, byproduct, or coproduct, or for heat value).

(6) A gas stream transferred for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse.

(7) A storage vessel vent or transfer operation vent subject to §63.119 or §63.126.

(8) A vent from a waste management unit subject to §§63.132 through 63.137.

(9) A gas stream exiting an analyzer.

(i) Except as specified in paragraph (j) of this section, t~~T~~he gas stream would meet the characteristics specified in paragraphs (b) through (g) of this section, but, for purposes of avoiding applicability, has been deliberately interrupted, temporarily liquefied, routed through any item of equipment for no process purpose, or disposed of in a flare that does not meet the criteria in §63.11(b), or an incinerator that does not reduce emissions of organic HAP by 98 percent or to a concentration of 20 parts per million by volume, whichever is less stringent.

(j) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(10), the phrase “disposed of in a flare that does not meet the criteria in §63.11(b)” in paragraph (h)(9)(i) of this section is replaced with “disposed of in a flare that does not meet the criteria in §63.108”.

§63.108 Flare requirements.

(a) For any flare that is used to reduce organic HAP emissions from a chemical manufacturing process unit, the owner or operator may elect to comply with the requirements in this section in lieu of the requirements of §63.11(b) of subpart A of this part and the requirements referenced therein. The owner or operator may also elect to comply with the requirements in this section pursuant to the overlap provisions provided in §63.110(j) of subpart G of this part. However, for each source as defined in §63.101 and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10), the provisions specified in paragraphs (a)(1) through (a)(22) of this section no longer apply. Instead, if an owner or operator reduces organic HAP emissions from a chemical manufacturing process unit by venting emissions through a closed-vent system to a steam-assisted, air-assisted, non-assisted, or pressure-assisted multi-point flare, then the owner or operator must meet the applicable requirements for flares as specified in §§63.670 and 63.671 of subpart CC of this part, including the provisions in Tables 12 and 13 to subpart CC of this part, except as specified in paragraphs (b) through (o) of this section. This requirement also applies to any flare using fuel gas from a fuel gas system, of which 50 percent or more of the fuel gas is derived from a chemical manufacturing process unit, as determined on an annual average basis. For purposes of compliance with this paragraph, the following terms are defined in §63.641 of subpart CC: Assist air, assist steam, center steam, combustion zone, combustion zone gas, flare, flare purge gas, flare supplemental gas, flare sweep gas, flare vent gas, lower steam, net heating value, perimeter assist air, pilot gas, premix assist air, total steam, and upper steam.

(1) §63.107(h)(9)(i) related to criteria in §63.11(b) of subpart A of this part;

(2) §63.113(a)(1) of subpart G of this part;

(3) §63.114(a)(2) of subpart G of this part;

(4) §§63.116(a)(1) through (a)(3) of subpart G of this part;

(5) §§63.117(a)(5)(i) through (a)(5)(iii) of subpart G of this part;

(6) §63.118(f)(5) of subpart G of this part;

(7) The last sentence in §63.119(e)(1) of subpart G of this part related to flares;

(8) §§63.120(e)(1) through (e)(6) of subpart G of this part;

(9) §§63.122(c)(2) and (g)(3) of subpart G of this part;

(10) §63.126(b)(2)(i) of subpart G of this part;

(11) §63.127(a)(2) of subpart G of this part;

(12) §§63.128(b)(1) through (b)(3) of subpart G of this part;

(13) §§63.129(a)(5)(i) through (a)(5)(iii) of subpart G of this part;

(14) §§63.130(a)(2)(i), (c), and (d)(5) of subpart G of this part;

(15) §§63.139(c)(3) and (d)(3) of subpart G of this part

(16) §§63.145(j)(1) through (j)(3) of subpart G of this part;

(17) §§63.146(b)(7)(i)(A) through (b)(7)(i)(C) of subpart G of this part;

(18) §63.147(d)(1) of subpart G of this part;

(19) §§63.172(d) of subpart H of this part;

(20) §§63.180(e)(1) through (e)(3) of subpart H of this part;

(21) §63.181(g)(1)(iii) of subpart H of this part; and

(22) The phrase "including periods when a flare pilot light system does not have a flame" in §63.181(g)(2)(i) of subpart H of this part.

(b) When determining compliance with the pilot flame requirements specified in § 63.670(b) and (g) of subpart CC of this part, substitute "pilot flame or flare flame" for each occurrence of "pilot flame."

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

(d) Instead of complying with paragraph (o)(2)(i) of §63.670 of subpart CC of this part, owners and operators must develop and implement the flare management plan no later than the compliance dates specified in §63.100(k)(10).

(e) Instead of complying with paragraph (o)(2)(iii) of §63.670 of subpart CC of this part, if required to develop a flare management plan and submit it to the Administrator, then owners and operators must also submit all versions of the plan in portable document format (PDF) to the EPA following the procedure specified in §63.9(k), except any medium submitted through mail must be sent to the attention of the Hazardous Organic Chemical Manufacturing Sector Lead.

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

(g) Substitute "chemical manufacturing process unit" for each occurrence of "petroleum refinery."

(h) Each occurrence of "refinery" does not apply.

(i) If a pressure-assisted multi-point flare is used as a control device, then owners and operators must meet the following conditions:

(1) The owner or operator is not required to comply with the flare tip velocity requirements in paragraph (d) and (k) of §63.670 of subpart CC of this part;

(2) Owners and operators must substitute “800” for each occurrence of “270” in paragraph (e) of §63.670 of subpart CC of this part;

(3) Owners and operators must determine the 15-minute block average NHVvg using only the direct calculation method specified in in paragraph (l)(5)(ii) of §63.670 of subpart CC of this part;

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

(5) Unless the owner or operator chooses to conduct a cross-light performance demonstration as specified in this paragraph, owners and operators must ensure that if a stage of burners on the flare uses cross-lighting, that the distance between any two burners in series on that stage is no more than 6 feet when measured from the center of one burner to the next burner. A distance greater than 6 feet between any two burners in series may be used provided the owner or operator conducts a performance demonstration that confirms the pressure-assisted multi-point

flare will cross-light a minimum of three burners and the spacing between the burners and location of the pilot flame must be representative of the projected installation. The compliance demonstration must be approved by the permitting authority and a copy of this approval must be maintained onsite. The compliance demonstration report must include: a protocol describing the test methodology used, associated test method QA/QC parameters, the waste gas composition and NHVcz of the gas tested, the velocity of the waste gas tested, the pressure-assisted multi-point flare burner tip pressure, the time, length, and duration of the test, records of whether a successful cross-light was observed over all of the burners and the length of time it took for the burners to cross-light, records of maintaining a stable flame after a successful cross-light and the duration for which this was observed, records of any smoking events during the cross-light, waste gas temperature, meteorological conditions (e.g., ambient temperature, barometric pressure, wind speed and direction, and relative humidity), and whether there were any observed flare flameouts; and

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

(7) If a pressure-assisted multi-point flare is operating under the requirements of an approved alternative means of emission limitations, owners and operators must either continue to comply with the terms of the alternative means of emission limitations or comply with the provisions in paragraphs (i)(1) through (i)(6) of this section.

(j) If an owner or operator chooses to determine compositional analysis for net heating value with a continuous process mass spectrometer, then the owner or operator must comply with the requirements specified in paragraphs (j)(1) through (j)(7) of this section.

(1) Owners and operators must meet the requirements in §63.671(e)(2) of subpart CC of this part. The owner or operator may augment the minimum list of calibration gas components found in §63.671(e)(2) of subpart CC of this part with compounds found during a pre-survey or known to be in the gas through process knowledge.

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

(3) For unknown gas components that have similar analytical mass fragments to calibration compounds, the owner or operator may report the unknowns as an increase in the overlapped calibration gas compound. For unknown compounds that produce mass fragments that do not overlap calibration compounds, the owner or operator may use the response factor for the nearest molecular weight hydrocarbon in the calibration mix to quantify the unknown component's NHVvg.

(4) The owner or operator may use the response factor for n-pentane to quantify any unknown components detected with a higher molecular weight than n-pentane.

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

(6) Owners and operators must meet applicable requirements in Performance Specification 9 of 40 CFR part 60, appendix B, for continuous monitoring system acceptance including, but not limited to, performing an initial multi-point calibration check at three concentrations following the procedure in Section 10.1 and performing the periodic calibration

requirements listed for gas chromatographs in Table 13 to subpart CC of this part, for the process mass spectrometer. The owner or operator may use the alternative sampling line temperature allowed under Net Heating Value by Gas Chromatograph in Table 13 to subpart CC of this part.

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

$$CE = \frac{C_m - C_a}{C_a} x\, 100 \qquad \text{(Eq. 1)}$$

Where :

Cm = Average instrument response (ppm)

Ca = Certified cylinder gas value (ppm)

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

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

Where:

$NHV_{measured}$ = Average instrument response (Btu/scf)

NHV_a = Certified cylinder gas value (Btu/scf)

(l) Instead of complying with paragraph (q) of §63.670 of subpart CC of this part, owners and operators must comply with the reporting requirements specified in paragraphs (l)(1) and (l)(2) of this section.

(1) The initial notification requirements specified in §63.152(b)(7) of subpart G of this part.

(2) The Periodic Report required by §63.152(c) of subpart G of this part must include the items specified in paragraphs (l)(2)(i) through (vi) of this section.

(i) Records as specified in paragraph (m)(1) of this section for each 15-minute block during which there was at least one minute when regulated material is routed to a flare and no pilot flame or flare flame is present. Include the start and stop time and date of each 15-minute block.

(ii) Visible emission records as specified in paragraph (m)(2) of this section for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes. Indicate the date and start and end times for each period.

(iii) The periods specified in paragraph (m)(6) of this section. Indicate the date and start and end times for each period, and the net heating value operating parameter(s) determined following the methods in §63.670(k) through (n) of subpart CC of this part as applicable.

(iv) For flaring events meeting the criteria in §63.670(o)(3) of subpart CC of this part and paragraph (f) of this section:

(A) The start and stop time and date of the flaring event.

(B) The length of time in minutes for which emissions were visible from the flare during the event.

(C) For steam-assisted, air-assisted, and non-assisted flares, the start date, start time, and duration in minutes for periods of time that the flare tip velocity exceeds the maximum flare tip velocity determined using the methods in §63.670(d)(2) of subpart CC of this part and the maximum 15-minute block average flare tip velocity in ft/sec recorded during the event.

(D) Results of the root cause and corrective actions analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(v) For pressure-assisted multi-point flares, the periods of time when the pressure monitor(s) on the main flare header show the burners operating outside the range of the manufacturer's specifications. Indicate the date and start and end times for each period.

(vi) For pressure-assisted multi-point flares, the periods of time when the staging valve position indicator monitoring system indicates a stage should not be in operation and is or when a stage should be in operation and is not. Indicate the date and start and end times for each period.

(m) Instead of complying with paragraph (p) of §63.670 of subpart CC of this part, owners and operators must keep the flare monitoring records specified in paragraphs (m)(1) through (14) of this section.

(1) Retain records of the output of the monitoring device used to detect the presence of a pilot flame or flare flame as required in §63.670(b) of subpart CC of this part and the presence of a pilot flame as required in paragraph (i)(4) of this section for a minimum of 2 years. Retain records of each 15-minute block during which there was at least one minute that no pilot flame or flare flame is present when regulated material is routed to a flare for a minimum of 5 years.

For a pressure-assisted multi-point flare that uses cross-lighting, retain records of each 15-minute block during which there was at least one minute that no pilot flame is present on each stage when regulated material is routed to a flare for a minimum of 5 years. The owner or operator may reduce the collected minute-by-minute data to a 15-minute block basis with an indication of whether there was at least one minute where no pilot flame or flare flame was present.

(2) Retain records of daily visible emissions observations as specified in paragraphs (m)(2)(i) through (iv) of this section, as applicable, for a minimum of 3 years.

(i) To determine when visible emissions observations are required, the record must identify all periods when regulated material is vented to the flare.

(ii) If visible emissions observations are performed using Method 22 of 40 CFR part 60, appendix A-7, then the record must identify whether the visible emissions observation was performed, the results of each observation, total duration in minutes of observed visible emissions, and whether it was a 5-minute or 2-hour observation. Record the date and start time of each visible emissions observation.

(iii) If a video surveillance camera is used pursuant to § 63.670(h)(2) of subpart CC of this part, then the record must include all video surveillance images recorded, with time and date stamps.

(iv) For each 2 hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, then the record must include the date and start and end time of the 2 hour period and an estimate of the cumulative number of minutes in the 2 hour period for which emissions were visible.

(3) The 15-minute block average cumulative flows for flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under §63.670(i)

of subpart CC of this part, along with the date and time interval for the 15-minute block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, then retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, then retain records of the 15-minute block average temperature, pressure, and molecular weight of the flare vent gas or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years.

(4) The flare vent gas compositions specified to be monitored under §63.670(j) of subpart CC of this part. Retain records of individual component concentrations from each compositional analysis for a minimum of 2 years. If an NHVvg analyzer is used, retain records of the 15-minute block average values for a minimum of 5 years.

(5) Each 15-minute block average operating parameter calculated following the methods specified in §63.670(k) through (n) of subpart CC of this part, as applicable.

(6) All periods during which operating values are outside of the applicable operating limits specified in §63.670(d) through (f) of subpart CC of this part and paragraph (i) of this section when regulated material is being routed to the flare.

(7) All periods during which the owner or operator does not perform flare monitoring according to the procedures in §63.670(g) through (j) of subpart CC of this part.

(8) For pressure-assisted multi-point flares, if a stage of burners on the flare uses cross-lighting, then a record of any changes made to the distance between burners.

(9) For pressure-assisted multi-point flares, all periods when the pressure monitor(s) on the main flare header show burners are operating outside the range of the manufacturer's specifications. Indicate the date and time for each period, the pressure measurement, the stage(s) and number of burners affected, and the range of manufacturer's specifications.

(10) For pressure-assisted multi-point flares, all periods when the staging valve position indicator monitoring system indicates a stage of the pressure-assisted multi-point flare should not be in operation and when a stage of the pressure-assisted multi-point flare should be in operation and is not. Indicate the date and time for each period, whether the stage was supposed to be open, but was closed or vice versa, and the stage(s) and number of burners affected.

(11) Records of periods when there is flow of vent gas to the flare, but when there is no flow of regulated material to the flare, including the start and stop time and dates of periods of no regulated material flow.

(12) Records when the flow of vent gas exceeds the smokeless capacity of the flare, including start and stop time and dates of the flaring event.

(13) Records of the root cause analysis and corrective action analysis conducted as required in §63.670(o)(3) of subpart CC of this part and paragraph (f) of this section, including an identification of the affected flare, the date and duration of the event, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §63.670(o)(5)(i) of subpart CC of this part.

(14) For any corrective action analysis for which implementation of corrective actions are required in §63.670(o)(5) of subpart CC of this part, a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already

completed, a schedule for implementation, including proposed commencement and completion dates.

(n) The owner or operator may elect to comply with the alternative means of emissions limitation requirements specified in paragraph (r) of §63.670 of subpart CC of this part in lieu of the requirements in paragraphs (d) through (f) of §63.670 of subpart CC of this part, as applicable. However, instead of complying with paragraph (r)(3)(iii) of §63.670 of subpart CC of this part, owners and operators must also submit the alternative means of emissions limitation request to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (C404-02), Attention: Hazardous Organic Chemical Manufacturing Sector Lead, 4930 Old Page Rd., Durham, NC 27703.

(o) The referenced provisions specified in paragraphs (o)(1) through (o)(4) of this section do not apply when demonstrating compliance with this section.

(1) §63.670(o)(4)(iv) of subpart CC of this part.

(2) The last sentence of §63.670(o)(6) of subpart CC of this part.

(3) The phrase “that were not caused by a force majeure event” in §63.670(o)(7)(ii) of subpart CC of this part.

(4) The phrase “that were not caused by a force majeure event” in §63.670(o)(7)(iv) of subpart CC of this part.

(p) For each source as defined in §63.101, beginning no later than the compliance dates specified in §63.100(k)(11), the maximum amount of ethylene oxide that can be sent to all flares combined from an affected source is 20 tons in any consecutive 12-month period. The owner or operator must keep monthly records of the quantity in tons of ethylene oxide sent to each flare at the affected source and include a description of the method used to estimate this quantity.

§63.109 Procedures for determining whether process vents, storage vessels, equipment, wastewater, and heat exchange systems are in ethylene oxide service.

This section applies beginning no later than the compliance dates specified in §63.100(k)(11). To determine if process vents, storage vessels, equipment leaks, wastewater, and heat exchange systems are in ethylene oxide service, as defined in §63.101, owners and operators must comply with the requirements in paragraphs (a) through (e) of this section, as applicable.

(a) For each Group 1 and Group 2 process vent stream, owners and operators must measure the flow rate and concentration of ethylene oxide of each process vent as specified in paragraphs (a)(1) through (5) of this section.

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

(2) Measurements may be made on the combined vent streams at a chemical manufacturing process unit or for each separate vent stream.

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

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

(5) Except as specified in paragraph (a)(6) of this section, the concentration of ethylene oxide must be determined using Method 18 of 40 CFR part 60, appendix A-6, or Method 320 of appendix A to this part.

(6) You may elect to use ASTM D6348–12e1 (incorporated by reference, § 63.14) in lieu of Method 320 of appendix A to this part as specified in paragraph (a)(5) of this section. To comply with this paragraph, the test plan preparation and implementation in the Annexes to ASTM D6348–03 (incorporated by reference, see § 63.14) Sections Al through A8 are mandatory; the percent (%) R must be determined for each target analyte using Equation A5.5 of ASTM D6348–03 Annex A5 (Analyte Spiking Technique); and in order for the test data to be acceptable for a compound, the %R must be 70% ≥ R ≤ 130%. If the %R value does not meet this criterion for a target compound, then the test data is not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

Reported Results = (Measured Concentration in the Stack × 100)/%R.

(b) For storage vessels, owners and operators must determine the concentration of ethylene oxide of the fluid stored in the storage vessels by complying with the requirements in paragraph (b)(1) or (b)(2) of this section.

(1) The owner or operator must measure concentration of ethylene oxide of the fluid stored in the storage vessel using Method 624.1 of 40 CFR part 136, appendix A or preparation by Method 5031 or Method 5030B and analysis by Method 8260D (incorporated by reference, see §63.14) in the SW-846 Compendium. The owner or operator may not use a preservative in the collected sample; the owner or operator must store the sample with minimal headspace as cold as possible and at least below 4 degrees C; and the owner or operator must analyze the sample as soon as possible, but in no case longer than 7 days from the time the sample was

collected. If owners and operators collect a sample from a pressure vessel, then the owner or operator must maintain the sample under pressure both during and following sampling.

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

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

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

at least below 4 degrees C; and the owner or operator analyzes the sample as soon as possible, but in no case longer than 7 days from the time the sample was collected.

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

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

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

(d) For wastewater, owners and operators must determine the concentration of ethylene oxide of each wastewater stream using Method 624.1 of 40 CFR part 136, appendix A or preparation by either Method 5031 or Method 5030B and analysis by Method 8260D (incorporated by reference, see §63.14) in the SW-846 Compendium. The owner or operator may not use a preservative in the collected sample; the owner or operator must store the sample with minimal headspace as cold as possible and at least below 4 degrees C; and the owner or operator must analyze the sample as soon as possible, but in no case longer than 7 days from the time the sample was collected.

(e) For heat exchange systems, determine the concentration of ethylene oxide of the process fluid cooled by the heat exchange system using Method 624.1 of 40 CFR part 136, appendix A or preparation by either Method 5031 or Method 5030B and analysis by Method

8260D (incorporated by reference, see §63.14) in the SW-846 Compendium. The owner or operator may not use a preservative in the collected sample; the owner or operator must store the sample with minimal headspace as cold as possible and at least below 4 degrees C; and the owner or operator must analyze the sample as soon as possible, but in no case longer than 7 days from the time the sample was collected. soon as possible, but in no case longer than 7 days from the time the sample was collected.

Table 1 to Subpart F of Part 63—Synthetic Organic Chemical Manufacturing Industry Chemicals

Chemical name[a]	CAS No.[b]	Group
Acenaphthene	83329	V
Acetal	105577	V
Acetaldehyde	75070	II
Acetamide	60355	II
Acetanilide	103844	II
Acetic acid	64197	II
Acetic anhydride	108247	II
Acetoacetanilide	102012	III
Acetone	67641	I
Acetone cyanohydrin	75865	V
Acetonitrile	75058	I
Acetophenone	98862	I
Acrolein	107028	IV
Acrylamide	79061	I
Acrylic acid	79107	IV
Acrylonitrile	107131	I
Adiponitrile	111693	I
Alizarin	72480	V
Alkyl anthraquinones	008	V
Allyl alcohol	107186	I

Allyl chloride	107051	IV
Allyl cyanide	109751	IV
Aminophenol sulfonic acid	0010	V
Aminophenol (p-)	123308	I
Aniline	62533	I
Aniline hydrochloride	142041	III
Anisidine (o-)	90040	II
Anthracene	120127	V
Anthraquinone	84651	III
Azobenzene	103333	I
Benzaldehyde	100527	III
Benzene	71432	I
Benzenedisulfonic acid	98486	I
Benzenesulfonic acid	98113	I
Benzil	134816	III
Benzilic acid	76937	III
Benzoic acid	65850	III
Benzoin	119539	III
Benzonitrile	100470	III
Benzophenone	119619	I
Benzotrichloride	98077	III
Benzoyl chloride	98884	III
Benzyl acetate	140114	III
Benzyl alcohol	100516	III
Benzyl benzoate	120514	III
Benzyl chloride	100447	III
Benzyl dichloride	98873	III
Biphenyl	92524	I
Bisphenol A	80057	III
Bis(Chloromethyl) Ether	542881	I

Bromobenzene	108861	I
Bromoform	75252	V
Bromonaphthalene	27497514	IV
Butadiene (1,3-)	106990	II
Butanediol (1,4-)	110634	I
Butyl acrylate (n-)	141322	V
Butylene glycol (1,3-)	107880	II
Butyrolactone	96480	I
Caprolactam	105602	II
Carbaryl	63252	V
Carbazole	86748	V
Carbon disulfide	75150	IV
Carbon tetrabromide	558134	II
Carbon tetrachloride	56235	I
Carbon tetrafluoride	75730	II
Chloral	75876	II
Chloroacetic acid	79118	II
Chloroacetophenone (2-)	532274	I
Chloroaniline (p-)	106478	II
Chlorobenzene	108907	I
2-Chloro-1,3-butadiene (Chloroprene)	126998	II
Chlorodifluoroethane	25497294	V
Chlorodifluoromethane	75456	I
Chloroform	67663	I
Chloronaphthalene	25586430	IV
Chloronitrobenzene	121733	I
(m-).		
Chloronitrobenzene	88733	I
(o-).		
Chloronitrobenzene	100005	I

(p-).		
Chlorophenol (m-)	108430	II
Chlorophenol (o-)	95578	II
Chlorophenol (p-)	106489	II
Chlorotoluene (m-)	108418	III
Chlorotoluene (o-)	95498	III
Chlorotoluene (p-)	106434	III
Chlorotrifluoromethane	75729	II
Chrysene	218019	V
Cresol and cresylic acid (m-)	108394	III
Cresol and cresylic acid (o-)	95487	III
Cresol and cresylic acid (p-)	106445	III
Cresols and cresylic acids (mixed)	1319773	III
Cumene	98828	I
Cumene hydroperoxide	80159	I
Cyanoacetic acid	372098	II
Cyclohexane	110827	I
Cyclohexanol	108930	I
Cyclohexanone	108941	I
Cyclohexylamine	108918	III
Cyclooctadienes	29965977	II
Decahydronaphthalene	91178	IV
Diacetoxy-2-Butene (1,4-)	0012	V
Diaminophenol hydrochloride	137097	V
Dibromomethane	74953	V
Dichloroaniline (mixed isomers)	27134276	I
Dichlorobenzene (p-)	106467	I
Dichlorobenzene (m-)	541731	I
Dichlorobenzene (o-)	95501	I
Dichlorobenzidine	91941	I

(3,3′-).		
Dichlorodifluoromethane	75718	I
Dichloroethane (1,2-) (Ethylenedichloride) (EDC)	107062	I
Dichloroethyl ether (bis(2-chloroethyl)ether)	111444	I
Dichloroethylene (1,2-)	540590	II
Dichlorophenol (2,4-)	120832	III
Dichloropropene (1,3-)	542756	II
Dichlorotetrafluoro-	1320372	V
ethane.		
Dichloro-1-butene (3,4-)	760236	II
Dichloro-2-butene (1,4-)	764410	V
Diethanolamine (2,2′-Iminodiethanol)	111422	I
Diethyl sulfate	64675	II
Diethylamine	109897	IV
Diethylaniline (2,6-)	579668	V
Diethylene glycol	111466	I
Diethylene glycol dibutyl ether	112732	I
Diethylene glycol diethyl ether	112367	I
Diethylene glycol dimethyl ether	111966	I
Diethylene glycol monobutyl ether acetate	124174	I
Diethylene glycol monobutyl ether	112345	I
Diethylene glycol monoethyl ether acetate	112152	I
Diethylene glycol monoethyl ether	111900	I
Diethylene glycol monohexyl ether	112594	V
Diethylene glycol monomethyl ether acetate	629389	V
Diethylene glycol monomethyl ether	111773	I
Dihydroxybenzoic acid (Resorcylic acid)	27138574	V
Dimethylbenzidine	119937	II
(3,3′-).		
Dimethyl ether	115106	IV

Dimethylformamide (N,N-)	68122	II
Dimethylhydrazine	57147	II
(1,1-).		
Dimethyl sulfate	77781	I
Dimethyl terephthalate	120616	II
Dimethylamine	124403	IV
Dimethylaminoethanol (2-)	108010	I
Dimethylaniline (N,N′)	121697	III
Dinitrobenzenes (NOS)[c]	25154545	I
Dinitrophenol (2,4-)	51285	III
Dinitrotoluene (2,4-)	121142	III
Dioxane (1,4-) (1,4-Diethyleneoxide)	1239	11I
Dioxolane (1,3-)	646060	I
Diphenyl methane	101815	I
Diphenyl oxide	101848	I
Diphenyl thiourea	102089	III
Diphenylamine	122394	III
Dipropylene glycol	110985	I
Di-o-tolyguanidine	97392	III
Dodecanedioic acid	693232	I
Dodecyl benzene (branched)	123013	V
Dodecyl phenol (branched)	121158585	V
Dodecylaniline	28675174	V
Dodecylbenzene (n-)	121013	I
Dodecylphenol	27193868	III
Epichlorohydrin (1-chloro-2,3-epoxypropane)	106898	I
Ethanolamine	141435	I
Ethyl acrylate	140885	II
Ethylbenzene	100414	I
Ethyl chloride (Chloroethane)	75003	IV

Ethyl chloroacetate	105395	II
Ethylamine	75047	V
Ethylaniline (N-)	103695	III
Ethylaniline (o-)	578541	III
Ethylcellulose	9004573	V
Ethylcyanoacetate	105566	V
Ethylene carbonate	96491	I
Ethylene dibromide (Dibromoethane)	106934	I
Ethylene glycol	107211	I
Ethylene glycol diacetate	111557	I
Ethylene glycol dibutyl ether	112481	V
Ethylene glycol diethyl ether	629141	I
(1,2-diethoxyethane).		
Ethylene glycol	110714	I
dimethyl ether		
Ethylene glycol monoacetate	542596	V
Ethylene glycol monobutyl ether	112072	I
acetate.		
Ethylene glycol monobutyl ether	111762	I
Ethylene glycol monoethyl ether	111159	I
acetate.		
Ethylene glycol monoethyl ether	110805	I
Ethylene glycol monohexyl ether	112254	V
Ethylene glycol monomethyl ether acetate	110496	I
Ethylene glycol monomethyl ether	109864	I
Ethylene glycol monooctyl ether	002	V
Ethylene glycol monophenyl ether	122996	I
Ethylene glycol monopropyl ether	2807309	I
Ethylene oxide	75218	I
Ethylenediamine	107153	II

Ethylenediamine tetraacetic acid	60004	V
Ethylenimine (Aziridine)	151564	II
Ethylhexyl acrylate (2-isomer)	103117	II
Fluoranthene	206440	V
Formaldehyde	50000	I
Formamide	75127	II
Formic acid	64186	II
Fumaric acid	110178	I
Glutaraldehyde	111308	IV
Glyceraldehyde	367475	V
Glycerol	56815	II
Glycine	56406	II
Glyoxal	107222	II
Hexachlorobenzene	118741	II
Hexachlorobutadiene	87683	II
Hexachloroethane	67721	II
Hexadiene (1,4-)	592450	II
Hexamethylene-	100970	I
tetramine.		
Hexane	110543	V
Hexanetriol (1,2,6-)	106694	IV
Hydroquinone	123319	I
Hydroxyadipaldehyde	141311	V
Isobutyl acrylate	106638	V
Isobutylene	115117	V
Isophorone	78591	IV
Isophorone nitrile	0017	V
Isophthalic acid	121915	III
Isopropylphenol	25168063	III
Linear alkylbenzene	____ d	I

Maleic anhydride	108316	I
Maleic hydrazide	123331	I
Malic acid	6915157	I
Metanilic acid	121471	I
Methacrylic acid	79414	V
Methanol	67561	IV
Methionine	63683	I
Methyl acetate	79209	IV
Methyl acrylate	96333	V
Methyl bromide (Bromomethane)	74839	IV
Methyl chloride (Chloromethane)	74873	IV
Methyl ethyl ketone (2-butanone)	78933	V
Methyl formate	107313	II
Methyl hydrazine	60344	IV
Methyl isobutyl carbinol	108112	IV
Methyl isobutyl ketone (Hexone)	108101	IV
Methyl isocyanate	624839	IV
Methyl mercaptan	74931	IV
Methyl methacrylate	80626	IV
Methyl phenyl carbinol	98851	II
Methyl tert-butyl ether	1634044	V
Methylamine	74895	IV
Methylaniline (N-)	100618	III
Methylcyclohexane	108872	III
Methylcyclohexanol	25639423	V
Methylcyclohexanone	1331222	III
Methylene chloride (Dichloromethane)	75092	I
Methylene dianiline (4,4′-isomer)	101779	I
Methylene diphenyl diisocyanate (4,4′-) (MDI)	101688	III
Methylionones (a-)	79696	V

Methylpentynol	77758	V
Methylstyrene (a-)	98839	I
Naphthalene	91203	IV
Naphthalene sulfonic acid (a-)	85472	IV
Naphthalene sulfonic acid (b-)	120183	IV
Naphthol (a-)	90153	IV
Naphthol (b-)	135193	IV
Naphtholsulfonic acid (1-)	567180	V
Naphthylamine sulfonic acid (1,4-)	84866	V
Naphthylamine sulfonic acid (2,1-)	81163	V
Naphthylamine (1-)	134327	V
Naphthylamine (2-)	91598	V
Nitroaniline (m-)	99092	II
Nitroaniline (o-)	88744	I
Nitroanisole (o-)	91236	III
Nitroanisole (p-)	100174	III
Nitrobenzene	98953	I
Nitronaphthalene (1-)	86577	IV
Nitrophenol (p-)	100027	III
Nitrophenol (o-)	88755	III
Nitropropane (2-)	79469	II
Nitrotoluene (all isomers)	1321126	III
Nitrotoluene (o-)	88722	III
Nitrotoluene (m-)	99081	III
Nitrotoluene (p-)	99990	III
Nitroxylene	25168041	V
Nonylbenzene (branched)	1081772	V
Nonylphenol	25154523	V
Octene-1	111660	I
Octylphenol	27193288	III

Paraformaldehyde	30525894	I
Paraldehyde	123637	II
Pentachlorophenol	87865	III
Pentaerythritol	115775	I
Peracetic acid	79210	II
Perchloromethyl mercaptan	594423	IV
Phenanthrene	85018	V
Phenetidine (p-)	156434	III
Phenol	108952	III
Phenolphthalein	77098	III
Phenolsulfonic acids (all isomers)	1333397	III
Phenyl anthranilic acid (all isomers)	91407	III
Phenylenediamine (p-)	106503	I
Phloroglucinol	108736	III
Phosgene	75445	IV
Phthalic acid	88993	III
Phthalic anhydride	85449	III
Phthalimide	85416	III
Phthalonitrile	91156	III
Picoline (b-)	108996	II
Piperazine	110850	I
Propiolactone (beta-)	57578	I
Propionaldehyde	123386	IV
Propionic acid	79094	I
Propylene carbonate	108327	V
Propylene dichloride (1,2-dichloropropane)	78875	IV
Propylene glycol	57556	I
Propylene glycol monomethyl ether	107982	I
Propylene oxide	75569	I
Pyrene	129000	V

Pyridine	110861	II
p-tert-Butyl toluene	98511	III
Quinone	106514	III
Resorcinol	108463	I
Salicylic acid	69727	III
Sodium methoxide	124414	IV
Sodium phenate	139026	III
Stilbene	588590	III
Styrene	100425	I
Succinic acid	110156	I
Succinonitrile	110612	I
Sulfanilic acid	121573	III
Sulfolane	126330	II
Tartaric acid	526830	I
Terephthalic acid	100210	II
Tetrabromophthalic anhydride	632791	III
Tetrachlorobenzene (1,2,4,5-)	95943	I
Tetrachloroethane (1,1,2,2-)	79345	II
Tetrachloroethylene (Perchloroethylene)	127184	I
Tetrachlorophthalic-	117088	III
anhydride.		
Tetraethyl lead	78002	IV
Tetraethylene glycol	112607	I
Tetraethylene-	112572	V
pentamine.		
Tetrahydrofuran	109999	I
Tetrahydronapthalene	119642	IV
Tetrahydrophthalic anhydride	85438	II
Tetramethylene-	110601	II
diamine.		

Tetramethylethylenediamine	110189	V
Tetramethyllead	75741	V
Toluene	108883	I
Toluene 2,4 diamine	95807	II
Toluene 2,4 diisocyanate	584849	II
Toluene diisocyanates (mixture)	26471625	II
Toluene sulfonic acids	104154	III
Toluenesulfonyl chloride	98599	III
Toluidine (o-)	95534	II
Trichloroaniline-	634935	III
(2,4,6-).		
Trichlorobenzene (1,2,3-)	87616	V
Trichlorobenzene (1,2,4-)	120821	I
Trichloroethane	71556	II
(1,1,1-)		
Trichloroethane (1,1,2-) (Vinyl trichloride)	79005	II
Trichloroethylene	79016	I
Trichlorofluoromethane	75694	I
Trichlorophenol	95954	I
(2,4,5-).		
(1,1,2-) Trichloro	76131	I
(1,2,2-) trifluoroethane.		
Triethanolamine	102716	I
Triethylamine	121448	IV
Triethylene glycol	112276	I
Triethylene glycol	112492	I
dimethyl ether.		
Triethylene glycol monoethyl ether	112505	V
Triethylene glycol monomethyl ether	112356	I
Trimethylamine	75503	IV

Trimethylcyclohexanol	933482	IV
Trimethylcyclo-	2408379	IV
hexanone.		
Trimethylcyclo-	34216347	V
hexylamine.		
Trimethylolpropane	77996	I
Trimethylpentane (2,2,4-)	540841	V
Tripropylene glycol	24800440	V
Vinyl acetate	108054	II
Vinyl chloride (Chloroethylene)	75014	I
Vinyl toluene	25013154	III
Vinylcyclohexene (4-)	100403	II
Vinylidene chloride	75354	II
(1,1-dichloroethylene).		
Vinyl(N-)-pyrrolidone(2-)	88120	V
Xanthates	140896	V
Xylene sulfonic acid	25321419	III
Xylenes (NOS)[c]	1330207	I
Xylene (m-)	108383	I
Xylene (o-)	95476	I
Xylene (p-)	106423	I
Xylenols (Mixed)	1300716	V
Xylidene	1300738	III

[a] Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives.

[b] CAS Number = Chemical Abstract Service number.

[c] NOS = not otherwise specified.

[d] No CAS number assigned.

Table 2 to Subpart F of Part 63—Organic Hazardous Air Pollutants

Chemical name[a b]	CAS No.[c]

Acenaphthene	83329
Acetaldehyde	75070
Acetamide	60355
Acetonitrile	75058
Acetophenone	98862
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Alizarin	72480
Allyl chloride	107051
Aniline	62533
Anisidine (o-)	90040
Anthracene	120127
Anthraquinone	84651
Benzene	71432
Benzotrichloride	98077
Benzyl chloride	100447
Biphenyl	92524
Bis(chloromethyl)ether	542881
Bromoform	75252
Bromonaphthalene	27497514
Butadiene (1,3-)	106990
Carbon disulfide	75150
Carbon tetrachloride	56235
Chloroacetic acid	79118
Chloroacetophenone (2-)	532274
Chlorobenzene	108907
2-Chloro-,1,3-butadiene (Chloroprene)	126998
Chloroform	67663

Chloronaphthalene	25586430
Chrysene	218019
Cresols and cresylic acids (mixed)	1319773
Cresol and cresylic acid (o-)	95487
Cresol and cresylic acid (m-)	108394
Cresol and cresylic acid (p-)	106445
Cumene	98828
Dichlorobenzene (p-)	106467
Dichlorobenzidine (3,3′-)	91941
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107062
Dichloroethylether (Bis(2-chloroethyl)ether)	111444
Dichloropropene (1,3-)	542756
Diethanolamine (2,2′-Iminodiethanol)	111422
Dimethylaniline (N,N-)	121697
Diethyl sulfate	64675
Dimethylbenzidine (3,3′-)	119937
Dimethylformamide (N,N-)	68122
Dimethylhydrazine (1,1-)	58147
Dimethylphthalate	131113
Dimethylsulfate	77781
Dinitrophenol (2,4-)	51285
Dinitrotoluene (2,4-)	121142
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911
1,2-Diphenylhydrazine	122667
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106898
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl chloride (Chloroethane)	75003
Ethylene dibromide (Dibromoethane)	106934
Ethylene glycol	107211

Ethylene oxide	75218
Ethylidene dichloride (1,1-Dichloroethane)	75343
Fluoranthene	206440
Formaldehyde	50000
Glycol ethers[d]	
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	110543
Hydroquinone	123319
Isophorone	78591
Maleic anhydride	108316
Methanol	67561
Methylbromide (Bromomethane)	74839
Methylchloride (Chloromethane)	74873
Methyl hydrazine	60344
Methyl isobutyl ketone (Hexone)	108101
Methyl isocyanate	624839
Methyl methacrylate	80626
Methyl tert-butyl ether	1634044
Methylene chloride (Dichloromethane)	75092
Methylene diphenyl diisocyanate (4,4′-) (MDI)	101688
Methylenedianiline (4,4′-)	101779
Naphthalene	91203
Naphthalene sulfonic acid (α)	85472
Naphthalene sulfonic acid (β)	120183
Naphthol (α)	90153
Naphthol (β)	135193
Naphtholsulfonic acid (1-)	567180
Naphthylamine sulfonic acid (1,4-)	84866

Naphthylamine sulfonic acid (2,1-)	81163
Naphthylamine (1-)	134327
Naphthylamine (2-)	91598
Nitronaphthalene (1-)	86577
Nitrobenzene	98953
Nitrophenol (p-)	100027
Nitropropane (2-)	79469
Phenanthrene	85018
Phenol	108952
Phenylenediamine (p-)	106503
Phosgene	75445
Phthalic anhydride	85449
Propiolactone (beta-)	57578
Propionaldehyde	123386
Propylene dichloride (1,2-Dichloropropane)	78875
Propylene oxide	75569
Pyrene	129000
Quinone	106514
Styrene	100425
Tetrachloroethane (1,1,2,2-)	79345
Tetrachloroethylene (Perchloroethylene)	127184
Tetrahydronaphthalene	119642
Toluene	108883
Toluene diamine (2,4-)	95807
Toluene diisocyanate (2,4-)	584849
Toluidine (o-)	95534
Trichlorobenzene (1,2,4-)	120821
Trichloroethane (1,1,1-) (Methyl chloroform)	71556
Trichloroethane (1,1,2-) (Vinyl trichloride)	79005
Trichloroethylene	79016

Trichlorophenol (2,4,5-)	95954
Triethylamine	121448
Trimethylpentane (2,2,4-)	540841
Vinyl acetate	108054
Vinyl chloride (Chloroethylene)	75014
Vinylidene chloride (1,1-Dichloroethylene)	75354
Xylenes (NOS)	1330207
Xylene (m-)	108383
Xylene (o-)	95476
Xylene (p-)	106423

[a] For all Listings above containing the word "Compounds," the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic) as part of that chemical's infrastructure.

[b] Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives.

[c] CAS No. = Chemical Abstract Service number.

[d] Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH_2 CH_{2n}-OR where:

n = 1, 2, or 3;

R = alkyl or aryl groups; and

R″ = R, H or groups which, when removed, yield glycol ethers with the structure:

R-(OCH_2 CH_{2n}-OH

Polymers are excluded from the glycol category.

Table 3 to Subpart F of Part 63—General Provisions Applicability to Subparts F, G, and H[a] to Subpart F

Reference	Applies to subparts F, G, and H	Comment
63.1(a)(1)	Yes	Overlap clarified in §63.101, §63.111, §63.161.
63.1(a)(2)	Yes	
63.1(a)(3)	Yes	§63.110 and §63.160(b) of subparts G and H identify which standards are overridden.

63.1(a)(4)	No	Subpart F specifies applicability of each paragraph in subpart A to subparts F, G, and H.
63.1 (a)(5)-(a)(9)	No	
63.1(a)(10)	No	Subparts F, G, and H specify calendar or operating day.
63.1(a)(11)	No	Subpart F §63.103(d) specifies acceptable methods for submitting reports.[a]
63.1 (a)(12)-(a)(14)	Yes	
63.1(b)(1)	No	Subpart F specifies applicability.
63.1(b)(2)	Yes	
63.1(b)(3)	No	
63.1(c)(1)	No	Subpart F specifies applicability.
63.1(c)(2)	No	Area sources are not subject to subparts F, G, and H.
63.1(c)(3)	No	
63.1(c)(4)	Yes	
63.1(c)(5)	No	Subparts G and H specify applicable notification requirements.
63.1(c)(6)	Yes	
63.1(d)	No	
63.1(e)	No	Subparts F, G, and H established before permit program.
63.2	Yes	Subpart F §63.101(a) specifies those subpart A definitions that apply to the HON. Subpart F definition of "source" is equivalent to subpart A definition of "affected source."
63.3	No	Units of measure are spelled out in subparts F, G, and H.
63.4 (a)(1)-(a)(3)	Yes	
63.4(a)(4)	No	This is a reserved paragraph in subpart A of part 63.
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” in §63.5(a)(1) should be interpreted as having the same meaning as “affected source.”
63.5(a)(2)	Yes	
63.5(b)(1)	Yes	Except §63.100(l) defines when construction or reconstruction is subject to standards for new sources.
63.5(b)(2)	No	This is a reserved paragraph in subpart A of part 63.
63.5(b)(3)	Yes	
63.5(b)(4)	Yes	Except the cross reference to §63.9(b) is limited to §63.9(b) (4) and (5). Subpart F overrides §63.9 (b)(1) through (b)(3).
63.5(b)(5)	Yes	
63.5(b)(6)	Yes	Except §63.100(l) defines when construction or reconstruction is subject to standards for new sources.
63.5(c)	No	This is a reserved paragraph in subpart A of part 63.
63.5(d)(1)(i)	No	For subpart G, see §63.151(b) (2)(ii) and (2)(iii) for the applicability and timing of this submittal; for subpart H, see §63.182(b) (2)(ii) and (b)(2)(iii) for applicability and timing of this submittal.
63.5(d)(1)(ii)	Yes	Except §63.5(d)(1)(ii)(H) does not apply.
63.5(d)(1)(iii)	No	Subpart G requires submittal of the Notification of Compliance Status in §63.152(b); subpart H specifies requirements in §63.182(c).
63.5(d)(2)	No	
63.5(d)(3)	Yes—subpart G No—subpart H	Except §63.5(d)(3)(ii) does not apply to subpart G.
63.5(d)(4)	Yes	
63.5(e)	Yes	

63.5(f)(1)	Yes	
63.5(f)(2)	Yes	Except the cross-reference to §63.5(d)(1) is changed to §63.151(b)(2)(ii) of subpart G and to §63.182(b)(2)(ii) of subpart H. The cross-reference to §63.5(b)(2) does not apply.
63.6(a)	Yes	
63.6(b)(1)	No	Subparts F and H specify compliance dates for sources subject to subparts F, G, and H.
63.6(b)(2)	No	
63.6(b)(3)	Yes	
63.6(b)(4)	No	May apply when standards are proposed under Section 112(f) of the Clean Air Act.
63.6(b)(5)	No	Subparts G and H include notification requirements.
63.6(b)(6)	No	
63.6(b)(7)	No	
63.6(c)(1)	No	Subpart F specifies the compliance dates for subparts G and H.
63.6(c)(2)	No	
63.6(c)(3)	No	
63.6(c)(4)	No	
63.6(c)(5)	Yes	
63.6(d)	~~No~~[Reserved]	
63.6(e)	Yes[c]	Except as otherwise specified for individual paragraphs. Does not apply to Group 2 emission points unless they are included in an emissions average.[b,c]
63.6(e)(1)(i)	No	This is addressed by §63.102(a)(4) and (f) of subpart F.
63.6(e)(1)(ii)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3	

	years after date of publication of final rule in the Federal Register].	
63.6(e)(1)(iii)	Yes	
63.6(e)(2)	~~Yes~~[Reserved]	
63.6(e)(3)(i)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	~~For subpart H, the startup, shutdown, and malfunction plan requirement of §63.6(e)(3)(i) is limited to control devices subject to the provisions of subpart H and is optional for other equipment subject to subpart H. The startup, shutdown, and malfunction plan may include written procedures that identify conditions that justify a delay of repair.~~
63.6(e)(3)(i)(A)	No	This is addressed by §63.102(a)(4).
63.6(e)(3)(i)(B)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.6(e)(3)(i)(C)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.6(e)(3)(ii)	~~Yes~~[Reserved]	
63.6(e)(3)(iii)	No	Recordkeeping and reporting are specified in §63.103(c)(2) of subpart F and §63.152(d)(1) of subpart G.
63.6(e)(3)(iv)	No	Recordkeeping and reporting are specified in §63.103(c)(2) of subpart F and §63.152(d)(1) of subpart G.
63.6(e)(3)(v)	No	Records retention requirements are specified in §63.103(c).

63.6(e)(3)(vi)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.6(e)(3)(vii)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
~~63.6(e)(3)(vii)(A)~~	~~Yes~~	
~~63.6(e)(3)(vii)(B)~~	~~Yes~~	~~Except the plan must provide for operation in compliance with §63.102(a)(4).~~
~~63.6(e)(3)(vii)(C)~~	~~Yes~~	
63.6(e)(3)(viii)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.6(e)(3)(ix)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.6(f)(1)	No	§63.102(a) and (e) of subpart F specifies when the standards apply.
63.6(f)(2)(i)	Yes	

63.6(f)(2)(ii)	Yes—subpart G No—subpart H	§63.152(c)(2) of subpart G specifies the use of monitoring data in determining compliance with subpart G.
63.6(f)(2)(iii) (A), (B), and (C)	Yes	
63.6(f)(2)(iii)(D)	No	
63.6(f)(2)(iv)	Yes	
63.6(f)(2)(v)	Yes	
63.6(f)(3)	Yes	
63.6(g)	No	Procedures specified in §63.102(b) of subpart F.
63.6(h)	No	
63.6(i)(1)	Yes	
63.6(i)(2)	Yes	
63.6(i)(3)	No	For subpart G, §63.151(a)(6) specifies procedures; for subpart H, §63.182(a)(6) specifies procedures.
63.6(i)(4)(i)(A)	Yes	
63.6(i)(4)(i)(B)	No	Dates are specified in §63.151(a)(6)(i) of subpart G and §63.182(a)(6)(i) of subpart H.
63.6(i)(4)(ii)	No	
63.6(i) (5)-(14)	Yes	
63.6(i)(15)	No	
63.6(i)(16)	Yes	
63.6(j)	Yes	
63.7(a)(1)	No	Subparts F, G, and H specify required testing and compliance demonstration procedures.
63.7(a)(2)	No	For subpart G, test results must be submitted in the Notification of Compliance Status due 150 days after compliance date, as specified in §63.152(b); for subpart H, all test results subject to reporting are reported in periodic reports.

63.7(a)(3)	Yes	
63.7(a)(4)		Yes.
63.7(b)	No	
63.7(c)	No	
63.7(d)	Yes	
63.7(e)(1)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	See §63.103(b)(3).
63.7(e)(2)	Yes	
63.7(e)(3)	No	Subparts F, G, and H specify test methods and procedures.
63.7(e)(4)	Yes	
63.7(f)	No	Subparts F, G, and H specify applicable methods and provide alternatives.
63.7(g)	No	Performance test reporting specified in §63.152(b) of subpart G: Not applicable to subpart H because no performance test required by subpart H.
63.7(h)(1)	Yes	
63.7(h)(2)	Yes	
63.7(h)(3)	No	§63.103(b)(5) of subpart F specifies provisions for requests to waive performance tests.
63.7(h)(4)	No	
63.7(h)(5)	Yes	
63.8(a)(1)	Yes	
63.8(a)(2)	No	
63.8(a)(3)	~~No~~[Reserved]	
63.8(a)(4)	Yes, except for flares subject to §63.108.	

63.8(b)(1)	Yes	
63.8(b)(2)	No	Subparts G and H specify locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)(i)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.8(c)(1)(ii)	No	For subpart G, submit as part of periodic report required by §63.152(c); for subpart H, retain as required by §63.181(g)(2)(ii).
63.8(c)(1)(iii)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	Subpart G specifies monitoring frequency by kind of emission point and control technology used (e.g., §63.111, §63.120(d)(2), §63.143, and §63.152(f)); subpart H does not require use of continuous monitoring systems.
63.8 (c)(5)-(c)(8)	No	
63.8(d)	No	
63.8(e)	No	
63.8 (f)(1)-(f)(3)	Yes	
63.8(f)(4)(i)	No	Timeframe for submitting request specified in §63.151(f) or (g) of subpart G; not applicable to subpart H because

		subpart H specifies acceptable alternative methods.
63.8(f)(4)(ii)	Yes	
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	Subparts G and H do not require continuous emission monitoring.
63.8(g)	No	Data reduction procedures specified in §63.152(f) and (g) of subpart G; not applicable to subpart H.
63.9(a)	Yes	
63.9(b)(1)	No	Specified in §63.151(b)(2) of subpart G; specified in §63.182(b) of subpart H.
63.9(b)(2)	No	Initial Notification provisions are specified in §63.151(b) of subpart G; in §63.182(b) of subpart H.
63.9(b)(3)	No	
63.9(b)(4)	Yes	Except that the notification in §63.9(b)(4)(i) shall be submitted at the time specified in §63.151(b)(2)(ii) of subpart G; in §63.182(b)(2) of subpart H.
63.9(b)(5)	Yes	Except that the notification in §63.9(b)(5) shall be submitted at the time specified in §63.151(b)(2)(ii) of subpart G; in §63.182 (b)(2) of subpart H.
63.9(c)	Yes	
63.9(d)	Yes	
63.9(e)	No	
63.9(f)	No	
63.9(g)	No	
63.9(h)	No	§63.152(b) of subpart G and §63.182 (c) of subpart H specify Notification of Compliance Status requirements.

63.9(i)	Yes	
63.9(j)	Yes	Only as related to change to major source status.
63.9(k)	Yes	~~Only as specified in §63.9(j).~~
63.10(a)	Yes	
63.10(b)(1)	No	§63.103(c) of subpart F specifies record retention requirements.
63.10(b)(2)	No	§63.103(c) of subpart F specifies required records.
63.10(b)(3)	No	
63.10(c)	No	
63.10(d)(1)	No	
63.10(d)(2)	No	§63.152(b) of subpart G specifies performance test reporting; not applicable to subpart H.
63.10(d)(3)	No	
63.10(d)(4)	Yes	
63.10(d)(5)	Yes, before [INSERT date 3 years after date of publication of final rule in the Federal Register]. No, beginning on and after [INSERT date 3 years after date of publication of final rule in the Federal Register].	Except that, before [INSERT date 3 years after date of publication of final rule in the Federal Register], reports required by §63.10(d)(5) shall be submitted at the time specified in §63.152(d) of subpart G and in §63.182(d) of subpart H.
63.10(e)	No	
63.10(f)	Yes	
63.11-63.15	Yes, except 63.11(b) does not apply to flares subject to §63.108.	

[a] Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not necessarily required.

[b] Except as specified in footnote c of this table, ~~T~~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.

[c] On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], footnote b of this table does not apply and the row for the “63.6(e)” entry of this table is no longer applicable.

Table 4 to Subpart F of Part 63—Organic Hazardous Air Pollutants Subject to Cooling Tower Monitoring Requirements in §63.104

Chemical name	CAS Number[a]
Acetaldehyde	75070
Acetonitrile	75058
Acetophenone	98862
Acrolein	107028
Acrylonitrile	107131
Allyl chloride	107051
Aniline	62533
Anisidine (o-)	90040
Benzene	71432
Benzyl chloride	100447
Biphenyl	92524
Bromoform	75252
Butadiene (1,3-)	106990
Carbon disulfide	75150
Carbon tetrachloride	56235
Chloroacetophenone (2-)	532274
Chlorobenzene	108907
2-Chloro-1,3-butadiene (Chloroprene)	126998
Chloroform	67663
Cresol and cresylic acid (o-)	95487
Cresol and cresylic acid (m-)	108394
Cresol and cresylic acid (p-)	106445
Cumene	98828
Dichlorobenzene (p-)	106467

Dichlorobenzidine (3,3″-)	91941
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107062
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111444
Dichloropropene (1,3-)	542756
Diethylene glycol diethyl ether	112367
Diethylene glycol dimethyl ether	111966
Diethyl sulfate	64675
Dimethylaniline (N,N-)	121697
Dimethylhydrazine (1,1-)	57147
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dinitrophenol (2,4-)	51285
Dinitrotoluene (2,4-)	121142
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106898
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl chloride (Chloroethane)	75003
Ethylene dibromide (Dibromoethane)	106934
Ethylene glycol dimethyl ether	110714
~~Ethylene glycol monobutyl ether~~	~~111762~~
Ethylene glycol monobutyl ether acetate	112072
Ethylene glycol monoethyl ether acetate	111159
Ethylene glycol monoethyl ether	110805
Ethylene glycol monomethyl ether	109864
Ethylene glycol monomethyl ether acetate	110496
Ethylene glycol monopropyl ether	2807309
Ethylene oxide	75218
Ethylidene dichloride (1,1-Dichloroethane)	75343
Formaldehyde	50000

Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	110543
Isophorone	78591
Methanol	67561
Methyl bromide (Bromomethane)	74839
Methyl chloride (Chloromethane)	74873
Methyl hydrazine	60344
Methyl isobutyl ketone (Hexone)	108101
Methyl methacrylate	80626
Methyl tert-butyl ether	1634044
Methylene chloride (Dichloromethane)	75092
Methylenedianiline (4,4″-)	101779
Naphthalene	91203
Nitrobenzene	98953
Nitropropane (2-)	79469
Phenol	108952
Phenylenediamine (p-)	106503
Phosgene	75445
Propionaldehyde	123386
Propylene dichloride (1,2-Dichloropropane)	78875
Propylene oxide	75569
Quinone	106514
Styrene	100425
Tetrachloroethane (1,1,2,2-)	79345
Tetrachloroethylene (Perchloroethylene)	127184
Toluene	108883
Toluidine (o-)	95534
Trichlorobenzene (1,2,4-)	120821

Trichloroethane (1,1,1-) (Methyl chloroform)	71556
Trichloroethane (1,1,2-) (Vinyl trichloride)	79005
Trichloroethylene	79016
Trichlorophenol (2,4,5-)	95954
Triethylamine	121448
Trimethylpentane (2,2,4-)	540841
Vinyl acetate	108054
Vinyl chloride (chloroethylene)	75014
Vinylidene chloride (1,1-Dichloroethylene)	75354
Xylene (m-)	108383
Xylene (o-)	95476
Xylene (p-)	106423

[a] CAS Number = Chemical Abstract Service number.

For the reasons set out in the preamble, the Environmental Protection Agency proposes to amend title 40, chapter I, part 63 of the Code of Federal Regulations as follows:

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

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

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

Subpart G—National Emission Standards for ~~Organic~~ Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater

Contents

Tables to Subpart G

§63.110 Applicability.

(a) This subpart applies to all process vents, storage vessels, transfer racks, wastewater streams, and in-process equipment subject to §63.149 within a source subject to subpart F of this part.

(b) *Overlap with other regulations for storage vessels.* (1) After the compliance dates specified in §63.100 of subpart F of this part, a Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart Kb is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in §63.100 of subpart F of this part, a Group 1 storage vessel that is also subject to the provisions of 40 CFR part 61, subpart Y is required to comply only with the provisions of this subpart.

(3) Except as specified in paragraph (j) of this section, ~~A~~after the compliance dates specified in §63.100 of subpart F of this part, a Group 2 storage vessel that is also subject to the provisions of 40 CFR part 61, subpart Y is required to comply only with the provisions of 40 CFR part 61, subpart Y. The recordkeeping and reporting requirements of 40 CFR part 61, subpart Y will be accepted as compliance with the recordkeeping and reporting requirements of this subpart.

(c) *Overlap with other regulations for transfer racks.* (1) After the compliance dates specified in §63.100 of subpart F of this part, a Group 1 transfer rack that is also subject to the provisions of 40 CFR part 61, subpart BB is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in §63.100 of subpart F of this part, a Group 2 transfer rack that is also subject to the provisions of 40 CFR part 61, subpart BB is required to comply with the provisions of either paragraph (c)(2)(i) or (c)(2)(ii) of this subpart.

(i) Except as provided in paragraph (j) of this section, ~~I~~if the transfer rack is subject to the control requirements specified in §61.302 of 40 CFR part 61, subpart BB, then the transfer rack is required to comply with the control requirements of §61.302 of 40 CFR part 61, subpart BB. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 61, subpart BB or with the testing, monitoring, recordkeeping, and reporting requirements specified in this subpart for Group 1 transfer racks. The owner or operator shall indicate this decision in either the Notification of

Compliance Status specified in §63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the transfer rack is subject only to reporting and recordkeeping requirements under 40 CFR part 61, subpart BB, then the transfer rack is required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 transfer racks and is exempt from the reporting and recordkeeping requirements in 40 CFR part 61, subpart BB.

(d) *Overlap with other regulations for process vents.* (1) After the compliance dates specified in §63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60, subpart III is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60, subpart III shall determine requirements according to paragraphs (d)(2)(i) and (d)(2)(ii) of this section. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60, subpart III, the process vent is required to comply with the provisions in paragraphs (d)(2)(i)(A) through (d)(2)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart III for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart III for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in §60.612 of 40 CFR part 60, subpart III. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60, subpart III or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in §63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60, subpart III, the process vent is required to comply only with the provisions specified in paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart III for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart III for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60, subpart III require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60, subpart III require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60, subpart III for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(3) After the compliance dates specified in 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart III elects to control the process vent to the levels required in §63.113 (a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in §63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60, subpart III. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(4) After the compliance dates specified in §63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60, subpart NNN is required to comply only with the provisions of this subpart.

(5) After the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60, subpart NNN shall determine requirements according to paragraphs (d)(5)(i) and (d)(5)(ii) of this section. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60, subpart NNN, the process vent is required to comply with the provisions in paragraphs (d)(5)(i)(A) through (d)(5)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in §60.662 of 40 CFR part 60, subpart NNN. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60, subpart NNN or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in §63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60, subpart NNN, the process vent is required to comply only with the provisions specified in paragraphs (d)(5)(ii)(A) through (d)(5)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60, subpart NNN require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60, subpart NNN require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60, subpart NNN for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(6) After the compliance dates specified in §63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart NNN elects to control the process vent to the levels required in §63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in §63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60, subpart NNN. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(7) After the compliance dates specified in §63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60, subpart RRR is required to comply only with the provisions of this subpart.

(8) After the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60,

subpart RRR shall determine requirements according to paragraphs (d)(8)(i) and (d)(8)(ii) of this section. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60, subpart RRR, the process vent is required to comply with the provisions in paragraphs (d)(8)(i)(A) through (d)(8)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in §60.702 of 40 CFR part 60, subpart RRR. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60, subpart RRR or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in §63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60, subpart RRR, the process vent is required to comply only with the provisions specified in paragraphs (d)(8)(ii)(A) through (d)(8)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60, subpart RRR require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60, subpart RRR require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60, subpart RRR for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(9) After the compliance dates specified in §63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart RRR elects to control the process vent to the levels required in §63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in §63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60, subpart RRR. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(10) As an alternative to the requirements of paragraphs (d)(2), (d)(3), (d)(5), (d)(6), (d)(8), and/or (d)(9) of this section as applicable, if a chemical manufacturing process unit has

equipment subject to the provisions of this subpart and equipment subject to the provisions of 40 CFR part 60, subpart III, NNN, or RRR, the owner or operator may elect to apply this subpart to all such equipment in the chemical manufacturing process unit. If the owner or operator elects this method of compliance, all total organic compounds minus methane and ethane, in such equipment shall be considered for purposes of applicability and compliance with this subpart, as if they were organic hazardous air pollutants. Compliance with the provisions of this subpart, in the manner described in this paragraph, shall be deemed to constitute compliance with 40 CFR part 60, subpart III, NNN, or RRR, as applicable.

(e) *Overlap with other regulations for wastewater.* (1) Except as specified in paragraph (j) of this section, ~~A~~after the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR part 61, subpart FF is required to comply with the provisions of both this subpart and 40 CFR part 61, subpart FF. Alternatively, the owner or operator may elect to comply with the provisions of paragraphs (e)(1)(i) and (e)(1)(ii) of this section, which shall constitute compliance with the provisions of 40 CFR part 61, subpart FF.

(i) Comply with the provisions of this subpart; and

(ii) For any Group 2 wastewater stream or organic stream whose benzene emissions are subject to control through the use of one or more treatment processes or waste management units under the provisions of 40 CFR part 61, subpart FF on or after December 31, 1992, comply with the requirements of this subpart for Group 1 wastewater streams.

(2) After the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of any Group 1 or Group 2 wastewater stream that is also subject to provisions in 40

CFR parts 260 through 272 shall comply with the requirements of either paragraph (e)(2)(i) or (e)(2)(ii) of this section.

(i) For each Group 1 or Group 2 wastewater stream, the owner or operator shall comply with the more stringent control requirements (e.g., waste management units, numerical treatment standards, etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272. The owner or operator shall keep a record of the information used to determine which requirements were the most stringent and shall submit this information if requested by the Administrator; or

(ii) The owner or operator shall submit, no later than four months before the applicable compliance date specified in §63.100 of subpart F of this part, a request for a case-by-case determination of requirements. The request shall include the information specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) Identification of the wastewater streams that are subject to this subpart and to provisions in 40 CFR parts 260 through 272, determination of the Group 1/Group 2 status of those streams, determination of whether or not those streams are listed or exhibit a characteristic as specified in 40 CFR part 261, and determination of whether the waste management unit is subject to permitting under 40 CFR part 270.

(B) Identification of the specific control requirements (e.g., waste management units, numerical treatment standards, etc.) and testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272.

(f) *Overlap with the Vinyl Chloride NESHAP.* (1) After the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of any Group 1 process vent that is also subject to the provisions of 40 CFR part 61, subpart F shall comply only with the provisions of this subpart.

(2) Except as specified in paragraph (j) of this section, a~~A~~fter the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of any Group 2 process vent that is also subject to the provisions of 40 CFR part 61, subpart F shall comply with the provisions specified in either paragraph (f)(2)(i) or (f)(2)(ii) of this subpart.

(i) If the process vent is already controlled by a combustion device meeting the requirements of 40 CFR part 61, subpart F, then the owner or operator shall comply with either the associated testing, monitoring, reporting, and recordkeeping provisions for Group 1 process vents in this subpart or the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 61, subpart F. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in §63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the process vent is not already controlled by a combustion device, then the owner or operator shall comply with the provisions of both this subpart and 40 CFR part 61, subpart F.

(3) After the compliance dates specified in §63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 61, subpart F elects to control the process vent to the levels required in §63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in §63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be

exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 61, subpart F. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(4) Except as specified in paragraph (j) of this section, ~~A~~after the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR part 61, subpart F shall comply with the provisions of either paragraph (f)(4)(i) or (f)(4)(ii) of this section.

(i) The owner or operator shall comply with the provisions of both this subpart and 40 CFR part 61, subpart F or

(ii) The owner or operator may submit, no later than four months before the applicable compliance date specified in §63.100 of subpart F of this part, information demonstrating how compliance with 40 CFR Part 61, subpart F, will also ensure compliance with this subpart. The information shall include a description of the testing, monitoring, reporting, and recordkeeping that will be performed.

(g) *Rules stayed for reconsideration.* Notwithstanding any other provision of this subpart, the effectiveness of subpart G is stayed from October 24, 1994, to April 24, 1995, only as applied to those sources for which the owner or operator makes a representation in writing to the Administrator that the resolution of the area source definition issues could have an effect on the compliance status of the source with respect to subpart G.

(h) *Overlap with other regulations for monitoring, recordkeeping, or reporting with respect to combustion devices, recovery devices, or recapture devices.*—(1) Except as specified in paragraph (h)(2) of this section, ~~A~~after the compliance dates specified in §63.100 of subpart F of this part, 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 §63.152(b).

(2) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraph (h)(1) of this section no longer applies.

(i) *Alternative means of compliance*— For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies. (1) *Option to comply with part 65.* Owners or operators of CMPU that are subject to §63.100 may choose to comply with the provisions of 40 CFR part 65 for all Group 1 and Group 2 process vents, Group 1 storage vessels, Group 1 transfer operations, and equipment that are subject to §63.100, that are part of the CMPU. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1. Group 1 and Group 2 wastewater streams, Group 2 transfer operations, Group 2 storage vessels, and in-process streams are not eligible to comply with 40 CFR part 65 and must continue to comply with the requirements of this subpart and subpart F of this part.

(i) For Group 1 and Group 2 process vents, 40 CFR part 65, subpart D, satisfies the requirements of §§63.102, 63.103, 63.112 through 63.118, 63.148, 63.151, and 63.152.

(ii) For Group 1 storage vessels, 40 CFR part 65, subpart C, satisfies the requirements of §§63.102, 63.103, 63.112, 63.119 through 63.123, 63.148, 63.151, and 63.152.

(iii) For Group 1 transfer racks, 40 CFR part 65, subpart E, satisfies the requirements of §§63.102, 63.103, 63.112, 63.126 through 63.130, 63.148, 63.151, and 63.152.

(iv) For equipment, comply with §~~65~~63.160(g) of subpart H to this part.

(2) *Part 63, subpart A.* Owners or operators who choose to comply with 40 CFR part 65 must also comply with the applicable general provisions of this part 63 listed in table 1A of this subpart. All sections and paragraphs of subpart A of this part that are not mentioned in table 1A of this subpart do not apply to owners or operators who choose to comply with 40 CFR part 65, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with a subpart of 40 CFR part 65 must comply with 40 CFR part 65, subpart A.

(j) *Overlap with other regulations for flares.* (1) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, flares used as a control device to comply with the overlap provisions in either paragraph (b)(3), (c)(2)(i), (e)(1), (f)(2)(i), (f)(2)(ii), (f)(4)(i), or (f)(4)(ii) of this section must comply with the provisions specified in §63.108 of subpart F of this part and are no longer subject to any flare related provisions of 40 CFR part 61, subparts F, Y, BB, and FF, or §60.18 of subpart A.

(2) Owners and operators of flares that are subject to the flare related requirements of this subpart and flare related requirements of any other part 60, 61, or 63 rule, may elect to comply with the requirements in §63.108 of subpart F of this part in lieu of all flare related requirements in any other part 60, 61, or 63 rule.

§63.111 Definitions.

All terms used in this subpart shall have the meaning given them in the Act~~,~~ and in subpart F of this part~~, and in this section, as follows~~.

~~*Air oxidation reactor* means a device or vessel in which air, or a combination of air and oxygen, is used as an oxygen source in combination with one or more organic reactants to produce one or more organic compounds. Air oxidation reactor includes the product separator and any associated vacuum pump or steam jet.~~

~~*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) 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).~~

~~*Automated monitoring and recording system* means any means of measuring values of monitored parameters and creating a hard copy or computer record of the measured values that does not require manual reading of monitoring instruments and manual transcription of data values. Automated monitoring and recording systems include, but are not limited to, computerized systems and strip charts.~~

~~*Batch operation* means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a unit operation within a chemical manufacturing process unit and~~

~~distilled or reacted at one time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh batch is started.~~

~~*Boiler* means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator. Boiler also means any industrial furnace as defined in 40 CFR 260.10.~~

~~*By compound* means by individual stream components, not carbon equivalents.~~

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

~~*Chemical manufacturing process unit* means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. A chemical manufacturing process unit consists of more than one unit operation. For the purpose of this subpart, chemical manufacturing process unit includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems. A chemical manufacturing process unit is identified by its primary product.~~

~~*Closed biological treatment process* means a tank or surface impoundment where biological treatment occurs and air emissions from the treatment process are routed to either a control device by means of a closed vent system or to a fuel gas system by means of hard-piping. The tank or surface impoundment has a fixed roof, as defined in §63.111 of this subpart, or a floating flexible membrane cover that meets the requirements specified in §63.134 of this subpart.~~

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

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

~~*Container,* as used in the wastewater provisions, means any portable waste management unit that has a capacity greater than or equal to 0.1 m^3 in which a material is stored, transported, treated, or otherwise handled. Examples of containers are drums, barrels, tank trucks, barges, dumpsters, tank cars, dump trucks, and ships.~~

~~*Continuous 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 §63.152(f) or §63.152(g) of this subpart.~~

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

~~*Continuous seal* means a seal that forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the floating roof. A continuous seal~~

~~may be a vapor-mounted, liquid-mounted, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.~~

~~*Continuous vapor processing system* means a vapor processing system that treats total organic compound vapors collected from tank trucks or railcars on a demand basis without intermediate accumulation in a vapor holder.~~

~~*Control device* means any combustion device, recovery device, or recapture device. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For process vents, recapture devices are considered control devices but recovery devices are not considered control devices, and for a steam stripper, a primary condenser is not considered a control device.~~

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

~~*Distillate receiver* means overhead receivers, overhead accumulators, reflux drums, and condenser(s) including ejector-condenser(s) associated with a distillation unit.~~

~~*Distillation unit* means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they~~

~~approach equilibrium within the distillation unit. Distillation unit includes the distillate receiver, reboiler, and any associated vacuum pump or steam jet.~~

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

~~*Enhanced biological treatment system or enhanced biological treatment process* means an aerated, thoroughly mixed treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation. A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit.~~

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

~~*Fill* or *filling* means the introduction of organic hazardous air pollutant into a storage vessel or the introduction of a wastewater stream or residual into a waste management unit, but not necessarily to complete capacity.~~

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

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

~~*Flame zone* means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.~~

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

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

~~*Fuel gas* means gases that are combusted to derive useful work or heat.~~

~~*Fuel gas system* means the offsite and onsite piping and control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices, or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.~~

~~*Group 1 process vent* means a process vent for which the vent stream 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 according to §63.115, is less than or equal to 1.0.~~

~~*Group 2 process vent* means a process vent for which the vent stream 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 that meets the criteria for design storage capacity and stored-liquid maximum true vapor pressure specified in table 5 of this subpart for~~

~~storage vessels at existing sources, and in table 6 of this subpart for storage vessels at new sources.~~

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

~~*Group 1 transfer rack* means a transfer rack that annually loads greater than or equal to 0.65 million liter of liquid products that contain organic hazardous air pollutants with a rack weighted average vapor pressure greater than or equal to 10.3 kilopascals.~~

~~*Group 2 transfer rack* means a transfer rack that does not meet the definition of Group 1 transfer rack.~~

~~*Group 1 wastewater stream* means a wastewater stream consisting of process wastewater as defined in §63.101 of subpart F at an existing or new source that meets the criteria for Group 1 status in §63.132(c) of this subpart for Table 9 compounds and/or a wastewater stream consisting of process wastewater at a new source that meets the criteria for Group 1 status in §63.132(d) of this subpart for Table 8 compounds.~~

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

~~*Halogenated vent stream* or *halogenated stream* means a vent stream from a process vent or transfer operation determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures presented in §63.115(d)(2)(v) of this subpart.~~

~~*Halogens* and *hydrogen halides* means hydrogen chloride (HCl), chlorine (Cl_2), hydrogen bromide (HBr), bromine (Br_2), and hydrogen fluoride (HF).~~

~~*Hard-piping* means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as American National Standards Institute (ANSI) B31-3.~~

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

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

~~*Intermittent vapor processing system* means a vapor processing system that employs an intermediate vapor holder to accumulate total organic compound vapors collected from tank trucks or railcars, and treats the accumulated vapors only during automatically controlled cycles.~~

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

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

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

~~*Loading cycle* means the time period from the beginning of filling a tank truck or railcar until flow to the control device ceases, as measured by the flow indicator.~~

~~*Loading rack* means a single system used to fill tank trucks and railcars at a single geographic site. Loading equipment and operations that are physically separate (i.e., do not share common piping, valves, and other equipment) are considered to be separate loading racks.~~

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

~~(1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss From External Floating-Roof Tanks (incorporated by reference as specified in §63.14 of subpart A of this part); or~~

~~(2) As obtained from standard reference texts; or~~

~~(3) As determined by the American Society for Testing and Materials Method D2879-83 or 96 (incorporated by reference as specified in §63.14 of subpart A of this part); or~~

~~(4) Any other method approved by the Administrator.~~

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

~~*Non-automated monitoring and recording system* means manual reading of values measured by monitoring instruments and manual transcription of those values to create a record. Non-automated systems do not include strip charts.~~

~~*Oil-water separator* or *organic-water separator* means a waste management unit, generally a tank used to separate oil or organics from water. An oil-water or organic-water separator consists of not only the separation unit but also the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit. Examples of an oil-water or organic-water separator include, but are not limited to, an American Petroleum Institute separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.~~

~~*Open biological treatment process* means a biological treatment process that is not a closed biological treatment process as defined in this section.~~

~~*Operating permit* means a permit required by 40 CFR part 70 or part 71.~~

~~*Organic hazardous air pollutant* or *organic HAP* means any of the chemicals listed in table 2 of subpart F of this part.~~

~~*Organic monitoring device* means a unit of equipment used to indicate the concentration level of organic compounds exiting a recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity.~~

~~*Point of determination* means each point where process wastewater exits the chemical manufacturing process unit.~~

~~NOTE TO DEFINITION FOR POINT OF DETERMINATION: The regulation allows determination of the characteristics of a wastewater stream (1) at the point of determination or (2) downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of Table 8 or Table 9 compounds as determined in §63.144 of this subpart. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy hazardous air pollutants.~~

~~*Point of transfer* means:~~

~~(1) If the transfer is to an off-site location for control, the point where the conveyance crosses the property line; or~~

~~(2) If the transfer is to an on-site location not owned or operated by the owner or operator of the source, the point where the conveyance enters the operation or equipment of the transferee.~~

~~*Primary fuel* means the fuel that provides the principal heat input to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.~~

~~*Process heater* means a device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water.~~

~~*Process unit* has the same meaning as *chemical manufacturing process unit* as defined in this section.~~

~~*Process wastewater stream* means a stream that contains process wastewater as defined in §63.101 of subpart F of this part.~~

~~*Product separator* means phase separators, flash drums, knock-out drums, decanters, degassers, and condenser(s) including ejector-condenser(s) associated with a reactor or an air oxidation reactor.~~

~~*Product tank,* as used in the wastewater provisions, means a stationary unit that is designed to contain an accumulation of materials that are fed to or produced by a process unit, and is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. This term has the same meaning as a product storage vessel.~~

~~*Product tank drawdown* means any material or mixture of materials discharged from a product tank for the purpose of removing water or other contaminants from the product tank.~~

~~*Rack-weighted average partial pressure* means the throughput weighted average of the average maximum true vapor pressure of liquids containing organic HAP transferred at a transfer rack. The rack-weighted average partial pressure shall be calculated using the equation below:~~

$$\cancel{P = \frac{\sum P_i G_i}{\sum G_i}}$$

~~Where:~~

~~P = Rack-weighted average partial pressure, kilopascals.~~

~~P_i = Individual HAP maximum true vapor pressure, kilopascals, = X_i*P, where X_i is the mole fraction of compound i in the liquid.~~

~~G_i = Yearly volume of each liquid that contains organic HAP that is transferred at the rack, liters.~~

~~i = Each liquid that contains HAP that is transferred at the rack.~~

~~*Reactor* means a device or vessel in which one or more chemicals or reactants, other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed. Reactor includes the product separator and any associated vacuum pump or steam jet.~~

~~*Recapture device* means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a~~

~~recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.~~

~~*Recovery device* means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include 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 purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.~~

~~*Relief valve* means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.~~

~~*Reference control technology for process vents* means a combustion device or recapture device used to reduce organic hazardous air pollutant emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume.~~

~~*Reference control technology for storage vessels* means an internal floating roof meeting the specifications of §63.119(b) of this subpart, an external floating roof meeting the specifications of §63.119(c) of this subpart, an external floating roof converted to an internal floating roof meeting the specifications of §63.119(d) of this subpart, or a closed-vent system to a control device achieving 95-percent reduction in organic HAP emissions. For purposes of emissions averaging, these four technologies are considered equivalent.~~

~~*Reference control technology for transfer racks* means a combustion device, recapture device, or recovery device used to reduce organic hazardous air pollutants emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume; or a vapor balancing system.~~

~~*Reference control technology for wastewater* means the use of:~~

~~(1) Controls specified in §63.133 through §63.137;~~

~~(2) A steam stripper meeting the specifications of §63.138(d) of this subpart or any of the other alternative control measures specified in §63.138(b), (c), (e), (f), (g), or (h) of this subpart; and~~

~~(3) A control device to reduce by 95 percent (or to an outlet concentration of 20 parts per million by volume for combustion devices or for noncombustion devices controlling air emissions from waste management units other than surface impoundments or containers) the organic hazardous air pollutants emissions in the vapor streams vented from wastewater tanks, oil-water separators, containers, surface impoundments, individual drain systems, and treatment processes (including the design steam stripper) managing wastewater.~~

~~*Residual* means any liquid or solid material containing Table 9 compounds that is removed from a wastewater stream by a waste management unit or treatment process that does not destroy organics (nondestructive unit). Examples of residuals from nondestructive wastewater management units are: the organic layer and bottom residue removed by a decanter or organic-water separator and the overheads from a steam stripper or air stripper. Examples of materials which are not residuals are: silt; mud; leaves; bottoms from a steam stripper or air stripper; and sludges, ash, or other materials removed from wastewater being treated by destructive devices such as biological treatment units and incinerators.~~

~~*Secondary fuel* means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat in addition to the heat provided by the primary fuel.~~

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

~~*Simultaneous loading* means, for a shared control device, loading of organic HAP materials from more than one transfer arm at the same time such that the beginning and ending times of loading cycles coincide or overlap and there is no interruption in vapor flow to the shared control device.~~

~~*Single-seal system* means a floating roof having one continuous seal that completely covers the space between the wall of the storage vessel and the edge of the floating roof. This seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.~~

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

~~*Steam jet ejector* means a steam nozzle which discharges a high-velocity jet across a suction chamber that is connected to the equipment to be evacuated.~~

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

~~*Surge control vessel* means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within a chemical manufacturing process unit when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.~~

~~*Table 8 compound* means a compound listed in table 8 of this subpart.~~

~~*Table 9 compound* means a compound listed in table 9 of this subpart.~~

~~*Temperature monitoring device* means a unit of equipment used to monitor temperature and having a minimum accuracy of (a) ±1 percent of the temperature being monitored expressed in degrees Celsius ((°C) or (b) ±0.5 degrees (°C), whichever is greater.~~

~~*The 33/50 program* means a voluntary pollution prevention initiative established and administered by the EPA to encourage emissions reductions of 17 chemicals emitted in large volumes by industrial facilities. The EPA Document Number 741-K-92-001 provides more information about the 33/50 program.~~

~~*Total organic compounds* or *TOC,* as used in the process vents provisions, means those compounds measured according to the procedures of Method 18 of 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 process vent stream, based on vent stream flow rate, emission rate of organic HAP, net heating value, and corrosion properties (whether or not the vent stream contains halogenated compounds), as quantified by the equations given under §63.115 of this subpart.~~

~~*Treatment process* means a specific technique that removes or destroys the organics in a wastewater or residual stream such as a steam stripping unit, thin-film evaporation unit, waste incinerator, biological treatment unit, or any other process applied to wastewater streams or~~

~~residuals to comply with §63.138 of this subpart. Most treatment processes are conducted in tanks. Treatment processes are a subset of waste management units.~~

~~*Vapor collection system,* as used in the transfer provisions, means the equipment used to collect and transport organic HAP vapors displaced during the loading of tank trucks or railcars. This does not include the vapor collection system that is part of any tank truck or railcar vapor collection manifold system.~~

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

~~*Vent stream,* as used in the process vent provisions, means the gas stream flowing through the process vent.~~

~~*Waste management unit* means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: Wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is used for recovery, then it is part of a chemical manufacturing process unit and is not a waste management unit.~~

~~*Wastewater stream* means a stream that contains only wastewater as defined in §63.101 of subpart F of this part.~~

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

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

§63.112 Emission standard.

(a) The owner or operator of an existing source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the following equation:

$$E_A = 0.02\Sigma\ EPV_1 + \Sigma\ EPV_2 + 0.05\Sigma\ ES_1 + \Sigma\ ES_2 + 0.02\Sigma\ ETR_1 + \Sigma\ ETR_2 + \Sigma\ EWW_{1C} + \Sigma\ EWW_2$$

where:

E_A	=	Emission rate, megagrams per year, allowed for the source.
$0.02\Sigma\ EPV_1$	=	Sum of the residual emissions, megagrams per year, from all Group 1 process vents, as defined in §63.111 of this subpart.
$\Sigma\ EPV_2$	=	Sum of the emissions, megagrams per year, from all Group 2 process vents as defined in §63.111 of this subpart.
$0.05\Sigma\ ES_1$	=	Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in §63.111 of this subpart.
$\Sigma\ ES_2$	=	Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in §63.111 of this subpart.
$0.02\Sigma\ ETR_1$	=	Sum of the residual emissions, megagrams per year, from all Group 1 transfer racks, as defined in §63.111 of this subpart.
$\Sigma\ ETR_2$	=	Sum of the emissions, megagrams per year, from all Group 2 transfer racks, as defined in §63.111 of this subpart.

$\Sigma\ EWW_{1C}$ = Sum of the residual emissions from all Group 1 wastewater streams, as defined in §63.111 of this subpart. This term is calculated for each Group 1 stream according to the equation for EWW_{1C} in §63.150(g)(5)(i) of this subpart.

$\Sigma\ EWW_{2}$ = Sum of emissions from all Group 2 wastewater streams, as defined in §63.111 of this subpart.

The emissions level represented by this equation is dependent on the collection of emission points in the source. The level is not fixed and can change as the emissions from each emission point change or as the number of emission points in the source changes.

(b) The owner or operator of a new source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the equation in paragraph (a) of this section.

(c) The owner or operator of an existing source shall demonstrate compliance with the emission standard in paragraph (a) of this section by following the procedures specified in paragraph (e) of this section for all emission points, or by following the emissions averaging compliance approach specified in paragraph (f) of this section for some emission points and the procedures specified in paragraph (e) of this section for all other emission points within the source.

(d) The owner or operator of a new source shall demonstrate compliance with the emission standard in paragraph (b) of this section only by following the procedures in paragraph (e) of this section. The owner or operator of a new source may not use the emissions averaging compliance approach.

(e) The owner or operator of an existing or new source may comply with the process vent provisions in §§63.113 through 63.118 of this subpart, the storage vessel provisions in §§63.119 through 63.123 of this subpart, the transfer operation provisions in §§63.126 through 63.130 of this subpart, the wastewater provisions in §§63.131 through 63.147 of this subpart, the leak inspection provisions in §63.148, and the provisions in §63.149 of this subpart.

(1) The owner or operator using this compliance approach shall also comply with the requirements of §63.151 and §63.152 of this subpart, as applicable.

(2) The owner or operator using this compliance approach is not required to calculate the annual emission rate specified in paragraph (a) of this section.

(3) When emissions of different kinds (e.g., emissions from process vents, transfer operations, storage vessels, process wastewater, and/or in-process equipment subject to §63.149 of this subpart) 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 shall comply with the requirements of either paragraph (e)(3)(i) or paragraph (e)(3)(ii) of this section.

(i) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the requirements in §§63.113 through 63.118 of this subpart G for process vents, and the requirements of §§63.126 through 63.130 for transfer operations); or

(ii) Comply with the first set of requirements identified in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) 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 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 (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section constitutes compliance with all other requirements in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section applicable to other types of emissions in the combined stream.

(A) The requirements of this subpart for Group 1 process vents, including applicable monitoring, recordkeeping, and reporting;

(B) The requirements of this subpart for Group 1 transfer racks, including applicable monitoring, recordkeeping, and reporting;

(C) The requirements of §63.119(e) for control of emissions from Group 1 storage vessels, including monitoring, recordkeeping, and reporting;

(D) The requirements of §63.139 for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting; or

(E) The requirements of §63.139 for closed vent systems for control of emissions from in-process equipment subject to §63.149, including applicable monitoring, recordkeeping, and reporting.

(f) The owner or operator of an existing source may elect to control some of the emission points within the source to different levels than specified under §§63.113 through 63.148 of this subpart by using an emissions averaging compliance approach as long as the overall emissions for the source do not exceed the emission level specified in paragraph (a) of this section. The owner or operator using emissions averaging must meet the requirements in paragraphs (f)(1) and (f)(2) of this section.

(1) Calculate emission debits and credits for those emission points involved in the emissions average as specified in §63.150 of this subpart; and

(2) Comply with the requirements of §63.151 and §63.152 of this subpart, as applicable.

(g) A State may restrict the owner or operator of an existing source to using only the procedures in paragraph (e) of this section to comply with the emission standard in paragraph (a) of this section.

(h) Where the provisions of this subpart require a performance test, waiver of that requirement shall be addressed only as provided in §63.103(b)(5) of subpart F of this part.

§63.113 Process vent provisions—reference control technology.

(a) The owner or operator of a Group 1 process vent as defined in this subpart shall comply with the requirements of paragraph (a)(1), (a)(2), (a)(3), or (a)(~~3~~4) of this section, and paragraph (a)(5) of this section. The owner or operator who transfers a gas stream that has the characteristics specified in §63.107 (b) through (h) or meets the criteria specified in §63.107(i) to an off-site location or an on-site location not owned or operated by the owner or operator of the source for disposal shall comply with the requirements of paragraph (i) of this section.

(1) Reduce emissions of organic HAP using a flare.

(i) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~T~~the flare shall comply with the requirements of §63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in §63.111 of this subpart, shall not be vented to a flare.

(2) Reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen, and compliance can be determined by measuring either organic hazardous air pollutants or total organic carbon using the procedures in §63.116 of this subpart.

(i) Compliance with paragraph (a)(2) of this section may be achieved by using any combination of combustion, recovery, and/or recapture devices, except that a recovery device may not be used to comply with paragraph (a)(2) of this section by reducing emissions of total organic hazardous air pollutants by 98 weight-percent, except as provided in paragraph (a)(2)(ii) of this section.

(ii) An owner or operator may use a recovery device, alone or in combination with one or more combustion or recapture devices, to reduce emissions of total organic hazardous air pollutants by 98 weight-percent if all the conditions of paragraphs (a)(2)(ii)(A) through (a)(2)(ii)(D) of this section are met.

(A) The recovery device (and any combustion device or recapture device which operates in combination with the recovery device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent) was installed before the date of proposal of the subpart of this part 63 that makes this subpart G applicable to process vents in the chemical manufacturing process unit.

(B) The recovery device that will be used to reduce emissions of total organic hazardous air pollutants by 98 weight-percent is the last recovery device before emission to the atmosphere.

(C) The recovery device, alone or in combination with one or more combustion or recapture devices, is capable of reducing emissions of total organic hazardous air pollutants by 98 weight-percent, but is not capable of reliably reducing emissions of total organic hazardous air pollutants to a concentration of 20 parts per million by volume.

(D) If the owner or operator disposed of the recovered material, the recovery device would comply with the requirements of this subpart for recapture devices.

(3) Except as specified in paragraph (a)(4) of this section, ~~A~~achieve and maintain a TRE index value greater than 1.0 at the outlet of the final recovery device, or prior to release of the vent stream to the atmosphere if no recovery device is present. If the TRE index value is greater

than 1.0, the process vent shall comply with the provisions for a Group 2 process vent specified in either paragraph (d) or (e) of this section, whichever is applicable.

(4) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the provisions specified in paragraphs (a)(4)(i) through (a)(4)(xv) of this section no longer apply. Instead, an owner or operator of a Group 1 process vent as defined in §63.101 of subpart F of this part must comply with the requirements of paragraph (a)(1) or (a)(2) of this section; and an owner or operator of a Group 2 process vent as defined in §63.101 of subpart F of this part must comply with the requirements of paragraph (e), (f), or (g) of this section.

(i) Paragraphs (a)(3), (d), and (e) of this section;

(ii) §§63.114(b) and (c)(2);

(iii) §63.115(d);

(iv) The following phrases in §63.115(e): “TRE index value”, “changes that are within the range on which the original TRE calculation was based”, and “the recalculated TRE index value is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0”;

(v) The following phrases in §63.115(f): “TRE index value”, and “regardless of the TRE index value determined at the location specified in §63.115(a)”;

(vi) The last two sentences in §63.115(f)(2): “If the combined vent stream is a Group 2 process vent as determined by the previous sentence, but one or more of the HON streams, or combinations of HON streams, has a TRE index value greater than 1 but less than or equal to 4, the combined vent stream is a process vent with a TRE index value greater than 1 but less than or equal to 4. In this case, the owner or operator shall monitor the combined vent stream as required by §63.114(b).”;

(vii) The phrase in §63.117(a): "or the provisions for Group 2 process vents with a TRE index value greater than 1.0 but less than or equal to 4.0 in §63.113(d)";

(viii) The phrase in §63.117(a)(3): "TRE determinations or";

(ix) §§63.117(a)(7) and (b);

(x) §§63.118(b), (c), (d)(3), (e)(3), (h), (i), (j), and (k)(4);

(xi) The following phrase in §63.118(g)(2): "and TRE index value";

(xii) The last sentence in §63.150(g)(2)(iii)(B)(2);

(xiii) The phrase in §63.150(m)(2)(i): "and TRE index value";

(xiv) The last sentence in §63.151(d)(6)(i); and

(xv) Table 4 to subpart G of this part.

(5) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, an owner or operator of a Group 1 process vent as defined in §63.101 of subpart F of this part that is a halogenated vent stream must reduce emissions of dioxins and furans (toxic equivalency basis) to a concentration of 0.054 nanograms per standard cubic meter on a dry basis corrected to 3 percent oxygen.

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

(c) Halogenated vent streams from Group 1 process vents that are combusted shall be controlled according to paragraph (c)(1) or (2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2) of this section for a halogenated vent stream, then the gas stream exiting the combustion device shall be conveyed to a halogen reduction device, such as a scrubber, before it is discharged to the atmosphere.

(i) Except as provided in paragraph (c)(1)(ii) of this section, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in §63.111 of this subpart, by 99 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilogram per hour, whichever is less stringent.

(ii) If a scrubber or other halogen reduction device was installed prior to December 31, 1992, the device shall reduce overall emissions of hydrogen halides and halogens, as defined in §63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A halogen reduction device, such as a scrubber or other technique, may be used to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour prior to any combustion control device, and thus make the vent stream nonhalogenated; the vent stream must comply with the requirements of paragraph (a)(1) or (a)(2) of this section.

(d) Except as specified in paragraph (a)(4) of this section, ~~T~~the owner or operator of a Group 2 process vent having a flow rate greater than or equal to 0.005 standard cubic meter per minute, a HAP concentration greater than or equal to 50 parts per million by volume, and a TRE index value greater than 1.0 but less than or equal to 4.0 shall maintain a TRE index value greater than 1.0 and shall comply with the monitoring of recovery device parameters in §63.114(b) or (c) of this subpart, the TRE index calculations of §63.115 of this subpart, and the applicable reporting and recordkeeping provisions of §§63.117 and 63.118 of this subpart. Such owner or operator is not subject to any other provisions of §§63.114 through 63.118 of this subpart.

(e) Except as specified in paragraph (a)(4) of this section, ~~T~~the owner or operator of a Group 2 process vent with a TRE index value greater than 4.0 shall maintain a TRE index value greater than 4.0, comply with the provisions for calculation of a TRE index value in §63.115 and the reporting and recordkeeping provisions in §§63.117(b) and 63.118(c) and (h), and is not subject to monitoring or any other provisions of §§63.114 through 63.118.

(f) Except as specified in paragraph (l) of this section, ~~T~~the owner or operator of a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute shall maintain a flow rate less than 0.005 standard cubic meter per minute; comply with the Group determination procedures in §63.115 (a), (b), and (e) of this subpart; and the reporting and recordkeeping requirements in §63.117(c) of this subpart, §63.118(d) of this subpart, and §63.118(i) of this subpart; and is not subject to monitoring or any other provisions of §§63.114 through 63.118 of this subpart.

(g) Except as specified in paragraph (l) of this section, ~~T~~the owner or operator of a Group 2 process vent with a total organic HAP concentration less than 50 parts per million by volume shall maintain a total organic HAP concentration less than 50 parts per million by volume; comply with the Group determination procedures in §63.115(a), (c), and (e); the reporting and recordkeeping requirements in §§63.117(d) and 63.118(e) and (j); and is not subject to monitoring or any other provisions of §§63.114 through 63.118.

(h) The owner or operator of a process vent complying with paragraph (a)(1) or (a)(2) of this section is not required to perform the group determination described in §63.115 of this subpart.

(i) *Off-site control or on-site control not owned or operated by the source.* This paragraph (i) applies to gas streams that have the characteristics specified in §63.107(b) through (h) or meet the criteria specified in §63.107(i); that are transferred for disposal to an on-site control device (or other compliance equipment) not owned or operated by the owner or operator of the source generating the gas stream, or to an off-site control device or other compliance equipment; and that have the characteristics (e.g., flow rate, total organic HAP concentration, or TRE index value as applicable) of a Group 1 process vent, determined at the point of transfer.

(1) The owner or operator transferring the gas stream shall:

(i) Comply with the provisions specified in §63.114(d) for each gas stream prior to transfer.

(ii) Notify the transferee that the gas stream contains organic hazardous air pollutants that are to be treated in accordance with the provisions of this subpart. The notice shall be submitted to the transferee initially and whenever there is a change in the required control.

(2) The owner or operator may not transfer the gas stream unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any gas stream transferred under this paragraph (i) and received from a source subject to the requirements of this subpart in accordance with the requirements of either §§63.113 through 63.118, or §63.102(b), or subpart D of this part if alternative emission limitations have been granted the transferor in accordance with those provisions. The certifying entity may revoke the written certification by sending a written statement to EPA and the owner or operator giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions listed in this paragraph (i). Upon expiration of the

notice period, the owner or operator may not transfer the gas stream to the transferee. Records retained by the transferee shall be retained in accordance with §63.103(c).

(3) By providing this written certification to EPA, the certifying entity accepts responsibility for compliance with the regulatory provisions listed in paragraph (i)(2) of this section with respect to any transfer covered by the written certification. Failure to abide by any of those provisions with respect to such transfers may result in enforcement action by EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of these provisions by owners or operators of sources.

(4) Written certifications and revocation statements to EPA from the transferees of such gas streams shall be signed by a responsible official of the certifying entity, provide the name and address of the certifying entity, and be sent to the appropriate EPA Regional Office at the addresses listed in §63.13. Such written certifications are not transferable by the transferee.

(j) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, if the Group 1 or Group 2 process vent contains ethylene oxide such that it is considered to be in ethylene oxide service, as defined in §63.101 of subpart F of this part, then the owner or operator must comply with the requirements of paragraphs (j)(1) or (j)(2) of this section in addition to all other applicable requirements specified elsewhere in this section.

(1) Reduce emissions of ethylene oxide by venting emissions through a closed vent system to a flare; or

(2) Reduce emissions of ethylene oxide by venting emissions through a closed vent system to a control device that reduces ethylene oxide by greater than or equal to 99.9 percent by weight, or to a concentration less than 1 ppmv for each process vent or to less than 5 pounds per

year for all combined process vents. If a combustion device is used, the ethylene oxide concentration of 1 ppmv must be corrected to 3 percent oxygen.

(k) Except as specified in paragraph (k)(4) of this section, for each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, an owner or operator may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. The owner or operator must comply with the applicable requirements in paragraphs (k)(1) through (k)(3) of this section for each maintenance vent. Any vent designated as a maintenance vent is only subject to the maintenance vent provisions in this paragraph (k) and the associated reporting and recordkeeping requirements in §§63.118(f)(9) and (m), respectively. The owner or operator does not need to designate a maintenance vent as a Group 1 or Group 2 process vent nor identify maintenance vents in a Notification of Compliance Status report.

(1) Prior to venting to the atmosphere, remove process liquids from the equipment as much as practical and depressurize the equipment to either: A flare meeting the requirements of §63.108 of subpart F of this part, as applicable, or using any combination of a non-flare combustion, recovery, and/or recapture device meeting the requirements in paragraph (a)(2) of this section until one of the following conditions, as applicable, is met.

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

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

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

(iv) If, after applying best practices to isolate and purge equipment served by a maintenance vent, none of the applicable criterion in paragraphs (k)(1)(i) through (k)(1)(iii) of this section can be met prior to installing or removing a blind flange or similar equipment blind, then the pressure in the equipment served by the maintenance vent must be reduced to 2 psig or less before installing or removing the equipment blind. During installation or removal of the equipment blind, active purging of the equipment may be used provided the equipment pressure at the location where purge gas is introduced remains at 2 psig or less.

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

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

(4) For process vents in ethylene oxide service, subject to the requirements of §63.124, the requirements in paragraphs (k)(1) through (k)(3) of this section do not apply. Instead, owners and operators may not release more than 1.0 tons of ethylene oxide from all maintenance vents combined per any consecutive 12-month period. The owner or operator must keep monthly records of the quantity in tons of ethylene oxide released from each maintenance vent and include a description of the method used to estimate this quantity.

(l) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (f) and (g) of this section no longer apply. Instead, the owner or operator of a Group 2 process vent with a total organic HAP mass flow rate less than 1.0 pound per hour shall maintain a total organic HAP mass flow rate less than 1.0 pound per hour; comply with the Group determination procedures in §63.115(g); and the reporting and recordkeeping requirements in §63.117(g) and §63.118(n); and is not subject to monitoring or any other provisions of §§63.114 through 63.118.

§63.114 Process vent provisions—monitoring requirements.

(a) Each owner or operator of a process vent that uses a combustion device to comply with the requirements in §63.113(a)(1), ~~or~~ (a)(2), or (a)(5) of this subpart, or that uses a recovery device or recapture device to comply with the requirements in §63.113(a)(2) of this subpart, shall install monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), (a)(4), ~~or~~ (a)(5), or (a)(6) of this section, depending on the type of device used. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(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, a 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, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, except as specified in paragraph (a) of §63.108 of subpart F of this part, the following monitoring equipment is required: 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.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, the following monitoring equipment is required: a temperature monitoring device in the firebox equipped with a continuous recorder. This requirement does not apply to gas streams that are introduced with primary fuel or are used as the primary fuel.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in the case of halogenated vent streams, the following monitoring equipment is required for the scrubber.

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas flow rate shall be determined using one of the procedures specified in paragraphs (a)(4)(ii)(A) through (C) of this section.

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

(B) If the scrubber is subject to rules 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 specified in §63.100(k), the owner or operator may determine gas flow rate by the method that had been utilized to comply with those rules. 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 flow rate determination plan that documents an appropriate method which will be used to determine the gas flow rate. The plan shall require determination of gas flow rate by a method which will at least provide a value for either a representative or the highest gas flow rate anticipated in the scrubber during representative operating conditions other than startups, shutdowns, or malfunctions. 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 flow rate, and a description of the records that will be maintained to document the determination of gas flow rate. The owner or operator shall maintain the plan as specified in §63.103(c). For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "other than startups, shutdowns, or malfunctions" in this paragraph no longer applies.

(5) Where a recovery device or recapture device is used to comply with the requirements of §63.113(a)(2) or (a)(5) of this subpart, the owner or operator shall utilize the appropriate monitoring device identified in paragraph ~~(b), (b)(1), (b)(2), or (b)(3)~~ (a)(5)(i), (a)(5)(ii),

(a)(5)(iii), (a)(5)(iv), or (a)(5)(v) of this section. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(i) Install either an organic monitoring device equipped with a continuous recorder;

(ii) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder shall be used;

(iii) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used;

(iv) Except as specified in paragraph (a)(5)(v) of this section, where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow 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 shall be used.

(v) Beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, if the owner or operator vents emissions through a closed vent system to an adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then the owner or operator must install a system of two or more adsorber units in series and comply with the requirements specified in paragraphs (a)(5)(v)(A) through (a)(5)(v)(C) of this section.

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

(B) Monitor the HAP or total organic compound (TOC) concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (a)(5)(v)(C)(*2*) of this section. The owner or operator must measure the concentration of HAP or TOC using either a portable analyzer, in accordance with Method 21 of 40 CFR part 60, appendix A–7 using methane, propane, isobutylene, or the primary HAP being controlled as the calibration gas or Method 25A of 40 CFR part 60, appendix A–7 using methane, propane, or the primary HAP being controlled as the calibration gas.

(C) Comply with paragraph (a)(5)(v)(C)(*1*) of this section, and comply with the monitoring frequency according to paragraph (a)(5)(v)(C)(*2*) of this section.

(*1*) The first adsorber in series must be replaced immediately when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph, ‘‘immediately’’ means within 8 hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons. The owner or operator must monitor at the outlet of the first adsorber within 3 days of replacement to confirm it is performing properly.

(*2*) Based on the adsorber bed life established according to paragraph (a)(5)(v)(A) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than 2 months of life remaining, at least weekly if the adsorbent has between 2 months and 2 weeks of life remaining, and at least daily if the adsorbent has 2 weeks or less of life remaining.

(6) Where sorbent injection is used, the following monitoring equipment is required for the sorbent injection system:

(i) A sorbent injection rate monitoring device (e.g., weigh belt, weigh hopper, hopper flow measurement device) installed in a position that provides a representative measurement equipped with a continuous recorder to monitor the sorbent injection rate; and

(ii) A flow measurement device equipped with a continuous recorder to monitor the carrier gas flow rate.

(b) Except as specified in §63.113(a)(4), ~~E~~each owner or operator of a process vent with a TRE index value greater than 1.0 as specified under §§63.113(a)(3) or 63.113(d) of this subpart that uses one or more recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. Monitoring is not required for process vents with TRE index values greater than 4.0 as specified in §63.113(e) of this subpart.

(1) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder shall be used;

(2) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used;

(3) Where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow 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 shall be used.

(c) An owner or operator of a process vent may request approval to monitor parameters other than those listed in paragraph (a) or (b) of this section. The request shall be submitted according to the procedures specified in §63.151(f) or §63.152(e) of this subpart. Approval shall be requested if the owner or operator:

(1) Uses a combustion device other than an incinerator, boiler, process heater, or flare; or

(2) Except as specified in §63.113(a)(4), ~~M~~maintains a TRE greater than 1.0 but less than or equal to 4.0 without a recovery device or with a recovery device other than the recovery devices listed in paragraphs (a) and (b) of this section; or

(3) Uses one of the combustion or recovery or recapture devices listed in paragraphs (a) and (b) of this section, but seeks to monitor a parameter other than those specified in paragraphs (a) and (b) of this section.

(d) The owner or operator of a process vent shall comply with paragraph (d)(1) or (d)(2), and (d)(3) of this section for any bypass line between the origin of the gas stream (i.e., at an air oxidation reactor, distillation unit, or reactor as identified in §63.107(b)) and the point where the gas stream reaches the process vent, as described in §63.107, that could divert the gas stream directly to the atmosphere. Except as specified in paragraph (d)(3)(ii) of this section, ~~E~~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 §63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert the gas stream 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 gas stream is not diverted through the bypass line.

(3) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part:

(i) The use of a bypass line at any time on a closed vent system to divert emissions (subject to the emission standards in §63.112) to the atmosphere or to a control device not meeting the requirements specified in this subpart is an emissions standards violation.

(ii) The last sentence in paragraph (d) of this section no longer applies. Instead, the exemptions specified in paragraphs (d)(3)(ii)(A) and (d)(3)(ii)(B) of this section apply.

(A) Except for pressure relief devices subject to §63.165(e)(4) of subpart H of this part, equipment such as low leg drains and equipment subject to the requirements of subpart H of this part are not subject to this paragraph (d) of this section.

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

(e) The owner or operator shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a), (b), and (c) of this section based on the results of the most recent performance test. In order to establish the range, the information required in §63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range 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 an initial performance test under §63.116 of this subpart, if the prior performance test was conducted using the same methods specified in §63.116 and either no 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. Subsequent performance tests must be conducted according to §63.103(b)(1) of subpart F of this part.

§63.115 Process vent provisions—methods and procedures for process vent group determination.

(a) For purposes of determining vent stream flow rate, total organic HAP or total organic carbon concentration or TRE index value as applicable, as specified under paragraph (b), (c), or (d) of this section, the sampling site shall be after the last recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present and prior to release to the atmosphere.

(1) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling site.

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

(b) Except as specified in paragraph (g) of this section, ~~T~~to demonstrate that a vent stream flow rate is less than 0.005 standard cubic meter per minute in accordance with the Group 2 process vent definition of this subpart, the owner or operator shall measure flow rate by the following procedures:

(1) The sampling site shall be selected as specified in paragraph (a) of this section.

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

(c) Except as specified in paragraph (g) of this section, ~~E~~each owner or operator seeking to demonstrate that a vent stream has an organic HAP concentration below 50 parts per million by volume in accordance with the Group 2 process vent definition of this subpart shall measure either total organic HAP or TOC concentration using the following procedures:

(1) The sampling site shall be selected as specified in paragraph (a) of this section.

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

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

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

(ii) The concentration of either TOC (minus methane and ethane) or organic HAP shall be calculated according to paragraph (c)(3)(ii)(A) or (c)(3)(ii)(B) of this section as applicable.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \frac{\sum_{i=1}^{x}\left(\sum_{j=1}^{n} C_{ji}\right)}{X}$$

where:

C_{TOC}	=	Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.
C_{ji}	=	Concentration of sample component j of the sample i, dry basis, parts per million by volume.
n	=	Number of components in the sample.
x	=	Number of samples in the sample run.

(B) The total organic HAP concentration (C_{HAP}) shall be computed according to the equation in paragraph (c)(3)(ii)(A) of this section except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

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

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

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

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

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

(v) Use of Method 25A of 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.

(vi) The owner or operator shall demonstrate that the concentration of TOC including methane and ethane measured by Method 25A of 40 CFR part 60, appendix A is below 25 parts per million by volume to be considered a Group 2 vent with an organic HAP concentration below 50 parts per million by volume and to qualify for the low concentration exclusion in §63.113(g) of this subpart.

(d) Except as specified in §63.113(a)(4), ~~T~~to determine the TRE index value, the owner or operator shall conduct a TRE determination and calculate the TRE index value according to the procedures in paragraph (d)(1) or (d)(2) of this section and the TRE equation in paragraph (d)(3) of this section.

(1) Engineering assessment may be used to determine vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value.

(i) If the TRE value calculated using such engineering assessment and the TRE equation in paragraph (d)(3) of this section is greater than 4.0, then the owner or operator is not required to perform the measurements specified in paragraph (d)(2) of this section.

(ii) If the TRE value calculated using such engineering assessment and the TRE equation in paragraph (d)(3) of this section is less than or equal to 4.0, then the owner or operator is required to perform the measurements specified in paragraph (d)(2) of this section for group determination or consider the process vent a Group 1 vent and comply with the emission reduction specified in §63.113(a) of this subpart.

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

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

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

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

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

(*1*) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations, (*2*) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities,

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

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

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

(2) Except as provided in paragraph (d)(1) of this section, vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate shall be measured and calculated according to the procedures in paragraphs (d)(2)(i) through (v) of this section and used as input to the TRE index value calculation in paragraph (d)(3) of this section.

(i) The vent stream volumetric flow rate (Q_s), in standard cubic meters per minute at 20 degrees Celcius, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. If the vent stream tested passes through a final steam jet ejector and is not condensed, the vent stream volumetric flow shall be corrected to 2.3 percent moisture.

(ii) The molar composition of the vent stream, which is used to calculate net heating value, shall be determined using the following methods:

(A) Method 18 of 40 CFR part 60, appendix A to measure the concentration of each organic compound.

(B) American Society for Testing and Materials D1946-77 to measure the concentration of carbon monoxide and hydrogen.

(C) Method 4 of 40 CFR part 60, appendix A, to measure the moisture content of the vent stream.

(iii) The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1\left(\sum_{j=1}^{n} C_j H_j\right)(1 - B_{ws})$$

where:

H_T	=	Net heating value of the sample, megaJoule per standard cubic meter, where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to one mole is 20 °C, as in the definition of Q_s (vent stream flow rate).
K_1	=	Constant, 1.740×10^{-7} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (megaJoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.
B_{ws}	=	Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final steam jet and is not condensed, it shall be assumed that $B_{ws} = 0.023$ in order to correct to 2.3 percent moisture.
C_j	=	Concentration on a dry basis of compound j in parts per million, as measured for all organic compounds by Method 18 of 40 CFR part 60, appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials D1946-77 as indicated in paragraph (d)(2)(ii) of this section.
H_j	=	Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25 °C and 760 millimeters mercury. The heats of combustion of vent stream components shall be determined using American Society for Testing and Materials D2382-76 if published values are not available or cannot be calculated.

(iv) The emission rate of TOC (minus methane and ethane) (E_{TOC}) and the emission rate of total organic HAP (E_{HAP}) in the vent stream shall both be calculated using the following equation:

$$E = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

where:

E	=	Emission rate of TOC (minus methane and ethane) or emission rate of total organic HAP in the sample, kilograms per hour.
K_2	=	Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.
C_j	=	Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A as indicated in paragraph (d)(2)(ii) of this section. If the TOC emission rate is being calculated, C_j includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds listed in table 2 in subpart F of this part are included.
M_j	=	Molecular weight of organic compound j, gram/gram-mole.
Q_s	=	Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20 °C.

(v) In order to determine whether a vent stream is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated.

(A) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume, by compound) shall be determined based on the following procedures:

(*1*) Process knowledge that no halogen or hydrogen halides are present in the process, or

(*2*) Applicable engineering assessment as discussed in paragraph (d)(1)(iii) of this section, or

(*3*) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, or

(*4*) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(B) The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 Q \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j * L_{ji} * M_{ji} \right)$$

where:

E	=	mass of halogen atoms, dry basis, kilogram per hour.
K_2	=	Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 °C.
C_j	=	Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.
M_{ji}	=	Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.
L_{ji}	=	Number of atoms of halogen i in compound j of the gas stream.
Q	=	Flow rate of gas stream, dry standard cubic meters per minute, determined according to paragraph (d)(1) or (d)(2)(i) of this section.
j	=	Halogenated compound j in the gas stream.
i	=	Halogen atom i in compound j of the gas stream.
n	=	Number of halogenated compounds j in the gas stream.
m	=	Number of different halogens i in each compound j of the gas stream.

(3) The owner or operator shall calculate the TRE index value of the vent stream using the equations and procedures in this paragraph.

(i) The equation for calculating the TRE index for a vent stream controlled by a flare or incinerator is as follows:

$$TRE = \frac{1}{E_{HAP}} \left[a + b(Q_s) + c(H_T) + d(E_{TOC}) \right]$$

where:

TRE	=	TRE index value.
E_{HAP}	=	Hourly emission rate of total organic HAP, kilograms per hour, as calculated in paragraph (d)(1) or (d)(2)(iv) of this section.
Q_s	=	Vent stream flow rate, standard cubic meters per minute, at a standard temperature of 20 °C, as calculated in paragraph (d)(1) or (d)(2)(i) of this section.
H_T	=	Vent stream net heating value, megaJoules per standard cubic meter, as calculated in paragraph (d)(1) or (d)(2)(iii) of this section.
E_{TOC}	=	Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated in paragraph (d)(1) or (d)(2)(iv) of this section.
a,b,c,d	=	Coefficients presented in table 1 of this subpart, selected in accordance with paragraphs (d)(3)(ii) and (iii) of this section.

(ii) The owner or operator of a nonhalogenated vent stream shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0 percent heat recovery, and a thermal incinerator with 70 percent heat recovery and shall select the lowest TRE index value. The owner or operator shall use the applicable coefficients in table 1 of this subpart for nonhalogenated vent streams located within existing sources and the applicable coefficients in table 2 of this subpart for nonhalogenated vent streams located within new sources.

(iii) The owner or operator of a halogenated vent stream shall calculate the TRE index value based on the use of a thermal incinerator with 0 percent heat recovery, and a scrubber. The owner or operator shall use the applicable coefficients in table 1 of this subpart for halogenated vent streams located within existing sources and the applicable coefficients in table 2 of this subpart for halogenated vent streams located within new sources.

(e) Except as specified in §63.113(a)(4), ~~T~~the owner or operator of a Group 2 process vent shall recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or

Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original TRE calculation was based.

(1) The TRE index value, flow rate, or organic HAP concentration shall be recalculated based on measurements of vent stream flow rate, TOC, and organic HAP concentrations, and heating values as specified in §63.115 (a), (b), (c), and (d) of this subpart, as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in paragraph (d)(1) of this section.

(2) Where the recalculated TRE index value is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the recalculated flow rate is greater than or equal to 0.005 standard cubic meter per minute, or the recalculated concentration is greater than or equal to 50 parts per million by volume, the owner or operator shall submit a report as specified in §63.118 (g), (h), (i), or (j) of this subpart and shall comply with the appropriate provisions in §63.113 of this subpart by the dates specified in §63.100 of subpart F of this part.

(f) Except as specified in §63.113(a)(4), ~~N~~notwithstanding any other provisions of this subpart, in any case where a process vent includes one or more gas streams that are not from a source subject to this subpart (hereafter called "non-HON streams" for purposes of this paragraph), and one or more gas streams that meet the criteria in §63.107(b) through (h) or the criteria in §63.107(i) (hereafter called "HON streams" for purposes of this paragraph), the owner or operator may elect to comply with paragraphs (f)(1) through (3) of this section.

(1) The owner or operator may determine the characteristics (flow rate, total organic HAP concentration, and TRE index value) for each HON stream, or combination of HON streams, at a representative point as near as practical to, but before, the point at which it is combined with one or more non-HON streams.

(2) If one or more of the HON streams, or combinations of HON streams, has the characteristics (determined at the location specified in paragraph (f)(1) of this section) associated with a Group 1 process vent, the combined vent stream is a Group 1 process vent. Except as specified in paragraph (f)(3) of this section, if none of the HON streams, or combinations of HON streams, when determined at the location specified in paragraph (f)(1) of this section, has the characteristics associated with a Group 1 process vent, the combined vent stream is a Group 2 process vent regardless of the TRE index value determined at the location specified in §63.115(a). If the combined vent stream is a Group 2 process vent as determined by the previous sentence, but one or more of the HON streams, or combinations of HON streams, has a TRE index value greater than 1 but less than or equal to 4, the combined vent stream is a process vent with a TRE index value greater than 1 but less than or equal to 4. In this case, the owner or operator shall monitor the combined vent stream as required by §63.114(b).

(3) Paragraphs (f)(1) and (2) of this section are not intended to apply instead of any other subpart of this part. If another subpart of this part applies to one or more of the non-HON streams contributing to the combined vent stream, that subpart may impose emission control requirements such as, but not limited to, requiring the combined vent stream to be classified and controlled as a Group 1 process vent.

(g) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (b) and (c) of this section no longer apply. Instead, to demonstrate that a vent stream total organic HAP mass flow rate is less than 1.0 pound per hour in accordance with the Group 2 process vent definition of this subpart, the owner or operator must use the following procedures:

(1) The sampling site must be selected as specified in paragraph (a) of this section.

(2) Method 18 or Method 25A of 40 CFR part 60, appendix A must be used to measure concentration. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(3) Where Method 18 of 40 CFR part 60, appendix A is used, the following procedures must be used to calculate the total organic HAP mass flow rate:

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

(ii) The mass rate of total organic HAP for each run must be computed using the following equation:

$$E_{HAP} = KQ\sum_{j=1}^{n} C_j M_j$$

where:

E_{HAP}	=	Emission rate of total organic HAP, lb/hr.
K	=	1.675 X 10^{-7} (parts per million)$^{-1}$ (lb-mole per standard cubic feet) (minutes per hour), where standard temperature is 68°F (20°C).
Q	=	Flowrate of gas stream, dry standard cubic feet per minute), where standard temperature is 68°F (20°C).

C_j	=	Concentration of organic compound j in the gas stream as measured by Method 18 of 40 CFR part 60, appendix A, ppmv dry basis, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part).
M_j	=	Molecular weight of organic compound j, lb/lb-mole.
j	=	Individual organic HAP compound in the gas stream. The list of organic HAPs is provided in table 2 of subpart F of this part.
n	=	Number of organic HAP compounds j in the gas stream.

(iii) The owner or operator must demonstrate that the emission rate of total organic HAP is less than 1.0 pound per hour for the vent stream to be considered a Group 2 process vent.

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

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

(A) This organic HAP must be used as the calibration gas for Method 25A of 40 CFR part 60, appendix A.

(B) Use of Method 25A of 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) The span value for Method 25A of 40 CFR part 60, appendix A must be equal to approximately twice the expected concentration of TOC in the gas stream.

(iii) The minimum sampling time for each run must be 1 hour. The results must be corrected to a dry basis. You must use Method 4 of 40 CFR part 60, appendix A to convert the Method 25A results to a dry basis.

(iv) The mass rate of TOC for each run must be computed using the following equation:

$$E_{TOC} = KCMQ$$

where:

E_{TOC} = Emission rate of TOC, lb/hr.

K = 1.675×10^{-7} (parts per million)$^{-1}$ (lb-mole per standard cubic feet) (minutes per hour), where standard temperature is 68°F (20°C).

C = Concentration of TOC in the gas stream as measured by Method 25A of 40 CFR part 60, appendix A, ppmv dry basis.

M = Molecular weight of the organic HAP used as the calibration gas, lb/lb-mole.

Q = Flowrate of gas stream, dry standard cubic feet per minute), where standard temperature is 68°F (20°C).

(v) The owner or operator must demonstrate that the emission rate of TOC is less than 1.0 pound per hour for the vent stream to be considered a Group 2 process vent.

§63.116 Process vent provisions—performance test methods and procedures to determine compliance.

(a) When a flare is used to comply with §63.113(a)(1), the owner or operator shall comply with paragraphs (a)(1) through (3) of this section except as specified in paragraph (a) of §63.108 of subpart F of this part. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(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).

(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.

(b) An owner or operator is not required to conduct a performance test when any control device specified in paragraphs (b)(1) through (b)(5) of this section is used.

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

(2) A boiler or process heater into which the gas 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 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 is not required to conduct an initial performance test. Subsequent performance tests must be conducted according to §63.103(b)(1) of subpart F of this part.

(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; ~~.~~

(iii) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements of subpart EEE of this part; or

(iv) Complies with subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(5) A hazardous waste incinerator for which the owner or operator:

(i) ~~h~~Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;

~~, or~~(ii) ~~h~~Has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

(iii) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements subpart EEE of this part; or

(iv) Complies with the requirements subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(c) Except as provided in paragraphs (a) and (b) of this section, an owner or operator using a control device to comply with the organic HAP concentration limit or percent reduction efficiency requirements in §63.113(a)(2) of this subpart shall conduct ~~a~~ performance tests using the procedures in paragraphs (c)(1) through (c)(4) of this section according to the schedule in §63.103(b)(1) of subpart F of this part. The organic HAP concentration and percent reduction may be measured as either total organic HAP or as TOC minus methane and ethane according to the procedures specified.

(1) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites.

(i) For determination of compliance with the 98 percent reduction of total organic HAP requirement of §63.113(a)(2) of this subpart, sampling sites shall be located at the inlet of the control device as specified in paragraphs (c)(1)(i)(A) and (c)(1)(i)(B) of this section, and at the outlet of the control device.

(A) The control device inlet sampling site shall be located after the final product recovery device.

(B) If a 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, 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 vent streams and primary and secondary fuels introduced into the boiler or process heater.

(ii) For determination of compliance with the 20 parts per million by volume total organic HAP limit in §63.113(a)(2) of this subpart, the sampling site shall be located at the outlet of the control device.

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

(3) To determine compliance with the 20 parts per million by volume total organic HAP limit in §63.113(a)(2) of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A to measure either TOC minus methane and ethane or total organic HAP. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part, may be used. The following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

(i) 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.

(ii) The concentration of either TOC (minus methane or ethane) or total organic HAP shall be calculated according to paragraph (c)(3)(ii)(A) or (c)(3)(ii)(B) of this section.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{i=1}^{x} \frac{\left(\sum_{j=1}^{n} C_{ji}\right)}{x}$$

where:

C_{TOC}	=	Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.
C_{ji}	=	Concentration of sample components j of sample i, dry basis, parts per million by volume.
n	=	Number of components in the sample.
x	=	Number of samples in the sample run.

(B) The total organic HAP concentration (C_{HAP}) shall be computed according to the equation in paragraph (c)(3)(ii)(A) of this section except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iii) The concentration of TOC or total organic HAP shall be corrected to 3 percent oxygen if a combustion device is the control device.

(A) Method 3A~~The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B~~ of 40 CFR part 60, appendix A, or the manual method in ANSI/ASME PTC 19-10-1981—Part 10 (Incorporated by reference, see § 60.17 of Subpart A of this part) shall be used to determine the oxygen concentration ($\%O_{2d}$). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic HAP samples are taken.

(B) The concentration corrected to 3 percent oxygen (C_c) shall be computed using the following equation:

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right)$$

Where:

C_c	=	Concentration of TOC or organic HAP corrected to 3 percent oxygen, dry basis, parts per million by volume.
C_m	=	Concentration of TOC (minus methane and ethane) or organic HAP, dry basis, parts per million by volume.
$\%0_{2d}$	=	Concentration of oxygen, dry basis, percent by volume.

(4) To determine compliance with the 98 percent reduction requirement of §63.113(a)(2) of this subpart, the owner or operator shall use Method 18 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 of appendix A of this part may be used. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method. The following procedures shall be used to calculate percent reduction efficiency:

(i) 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.

(ii) The mass rate of either TOC (minus methane and ethane) or total organic HAP (E_i, E_o) shall be computed.

(A) The following equations shall be used:

$$E_i = K_2\left(\sum_{j=1}^{n} C_{ij} M_{ij}\right) Q_i$$

$$E_o = K_2\left(\sum_{j=1}^{n} C_{oj} M_{oj}\right) Q_o$$

where:

C_{ij}, C_{oj}	=	Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.
E_i, E_o	=	Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.
M_{ij}, M_{oj}	=	Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.
Q_i, Q_o	=	Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.
K_2	=	Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

(B) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by Method 18 of 40 CFR part 60, appendix A or ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) are summed using the equation in paragraph (c)(4)(ii)(A) of this section.

(C) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using the equation in paragraph (c)(4)(ii)(A) of this section. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iii) The percent reduction in TOC (minus methane and ethane) or total organic HAP shall be calculated as follows:

$$R = \frac{E_i - E_o}{E_i}(100)$$

where:

R	=	Control efficiency of control device, percent.
E_i	=	Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the control device as calculated under paragraph (c)(4)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.
E_o	=	Mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the control device, as calculated under paragraph (c)(4)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

(iv) If the vent stream 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 (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total organic HAP in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total organic HAP exiting the combustion device, respectively.

(d) An owner or operator using a combustion device followed by a scrubber or other halogen reduction device to control halogenated vent streams in compliance with §63.113(c)(1) shall conduct ~~a~~ performance tests to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens according to the schedule in §63.103(b)(1) of subpart F of this part.

(1) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an owner or operator determining compliance with the less than 0.45 kilogram per hour outlet emission limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to any releases to the atmosphere.

(2) Except as provided in paragraph (d)(5) of this section, Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in milligrams per dry standard cubic meter, of total hydrogen halides and halogens that may be present in the vent stream. The mass emissions of each hydrogen halide and halogen compound shall be calculated from the measured concentrations and the gas stream flow rate.

(3) To determine compliance with the percent removal efficiency, 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 the compounds present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(4) To demonstrate compliance with the less than 0.45 kilogram per hour outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the scrubber or other halogen reduction device is below 0.45 kilogram per hour.

(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 of appendix A of this part.

(e) An owner or operator using a scrubber or other halogen reduction device to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour prior to a combustion control device in compliance with §63.113(c)(2) of this subpart shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in §63.115(d)(2)(v) of this subpart.

(f) To demonstrate compliance with the emission limits and work practice standards specified in §63.113(j) for process vents in ethylene oxide service, owners and operators must meet the requirements specified in §63.124.

(g) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, an owner or operator using a recapture device to comply with the organic HAP concentration limit or percent reduction efficiency requirements in §63.113(a)(2) shall conduct a performance test using the same procedures specified in paragraph (c), except the term "recapture device" is substituted for "control device."

(h) To demonstrate compliance with the dioxins and furans emission limit specified in §63.113(a)(5), owners and operators must conduct performance tests using the procedures in paragraphs (h)(1) through (h)(6) of this section according to the schedule in §63.103(b)(1) of subpart F of this part.

(1) The performance test must consist of three test runs. Collect at least 3 dry standard cubic meters of gas per test run.

(2) Use Method 1 or 1A of 40 CFR part 60, appendix A-1 to select the sampling sites at the sampling location. The sampling location must be at the outlet of the final control device.

(3) Determine the gas volumetric flowrate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A-2.

(4) Use Method 4 of 40 CFR part 60, appendix A-3 to convert the volumetric flowrate to a dry basis.

(5) Measure the concentration of each tetra- through octa-chlorinated dioxin and furan congener emitted using Method 23 at 40 CFR part 60, appendix A-7.

(i) For each dioxin and furan congener, multiply the congener concentration by its corresponding toxic equivalency factor specified in table 38 of this subpart. For determination of toxic equivalency, zero may be used for congeners with a concentration less than the estimated detection limit (EDL). For congeners with estimated maximum pollutant concentration (EMPC) results, if the value is less than the EDL, zero may be used. Otherwise, the EMPC value must be used in the calculation of toxic equivalency.

(ii) Sum the products calculated in accordance with paragraph (h)(5)(i) of this section to obtain the total concentration of dioxins and furans emitted in terms of toxic equivalency.

(6) The concentration of dioxins and furans shall be corrected to 3 percent oxygen. Use Method 3A of 40 CFR part 60, appendix A, or the manual method in ANSI/ASME PTC 19-10-1981—Part 10 (Incorporated by reference, see § 60.17 of Subpart A of this part) to determine the oxygen concentration ($\%O_{2d}$). The oxygen concentration must be determined concurrently with Method 23 of 40 CFR part 60, appendix A-7. The concentration corrected to 3 percent oxygen (C_c) shall be computed using the following equation:

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right)$$

Where:

C_c = Concentration of dioxins and furans corrected to 3 percent oxygen, dry basis, nanograms per standard cubic meter.

C_m = Concentration of dioxins and furans, dry basis, nanograms per standard cubic meter.

$\%O_2d$ = Concentration of oxygen, dry basis, percent by volume.

§63.117 Process vent provisions—reporting and recordkeeping requirements for group and TRE determinations and performance tests.

(a) Except as specified in §63.113(a)(4), ~~E~~each owner or operator subject to the control provisions for Group 1 process vents in §63.113(a) or the provisions for Group 2 process vents with a TRE index value greater than 1.0 but less than or equal to 4.0 in §63.113(d) shall:

(1) Keep an up-to-date, readily accessible record of the data specified in paragraphs (a)(4) through (a)~~(8)~~(10) of this section, as applicable, and

(2) Include the data in paragraphs (a)(4) through (a)~~(8)~~(10) of this section in the Notification of Compliance Status report as specified in §63.152(b) of this subpart.

(3) Except as specified in §63.113(a)(4), ~~I~~if any subsequent TRE determinations or performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) through (a)~~(8)~~(10) of this section in the next Periodic Report as specified in §63.152(c) of this subpart.

(4) Record and report the following when using a combustion device to achieve a 98 weight percent reduction in organic HAP or an organic HAP concentration of 20 parts per million by volume, as specified in §63.113(a)(2) of this subpart:

(i) The parameter monitoring results for incinerators, catalytic incinerators, boilers or process heaters specified in table 3 of this subpart, and averaged over the same time period of the performance testing.

(ii) For an incinerator, the percent reduction of organic HAP or TOC achieved by the incinerator determined as specified in §63.116(c) of this subpart, or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in §63.116(c) of this subpart at the outlet of the incinerator on a dry basis corrected to 3 percent oxygen.

(iii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(iv) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC, or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in §63.116(c) at the outlet of the combustion device on a dry basis corrected to 3 percent oxygen.

(5) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~R~~record and report the following when using a flare to comply with §63.113(a)(1) of this subpart:

(i) 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 §63.116(a) of this subpart; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(6) Record and report the following when using a scrubber following a combustion device to control a halogenated vent stream:

(i) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens as specified in §63.116(d) of this subpart;

(ii) The pH of the scrubber effluent; and

(iii) The scrubber liquid to gas ratio.

(7) Except as specified in §63.113(a)(4), ~~R~~record and report the following when achieving and maintaining a TRE index value greater than 1.0 but less than 4.0 as specified in §63.113(a)(3) or §63.113(d) of this subpart:

(i) The parameter monitoring results for absorbers, condensers, or carbon adsorbers, as specified in table 4 of this subpart, and averaged over the same time period of the measurements of vent stream flow rate and concentration used in the TRE determination (both measured while the vent stream is normally routed and constituted), and

(ii) The measurements and calculations performed to determine the TRE index value of the vent stream.

(8) Record and report the halogen concentration in the vent stream determined according to the procedures specified in §63.115(d)(2)(v).

(9) When using a recapture device to achieve a 98 weight percent reduction in organic HAP or an organic HAP concentration of 20 parts per million by volume, as specified in §63.113(a)(2), record and report the parameter monitoring results for absorbers, condensers, or carbon adsorbers, as specified in table 3 of this subpart, and averaged over the same time period of the performance testing.

(10) Record and report the following when using a control device, recapture device, or recovery device to meet the dioxins and furans emissions limit.

(i) The parameter monitoring results, as specified in table 3 of this subpart, for the applicable device and averaged over the same time period of the performance testing.

(ii) The dioxins and furans concentration on a toxic equivalency basis (nanograms per standard cubic meter on a dry basis corrected to 3 percent oxygen) determined as specified in §63.116(h) of this subpart.

(b) Except as specified in §63.113(a)(4), ~~T~~the owner or operator of a Group 2 process vent with a TRE index greater than 4.0 as specified in §63.113(e) of this subpart, shall maintain records and submit as part of the Notification of Compliance Status specified in §63.152 of this subpart, measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in §63.115(d)(1) of this subpart.

(c) Except as specified in paragraph (g) of this section, ~~E~~each owner or operator who elects to demonstrate that a process vent is a Group 2 process vent based on a flow rate less than 0.005 standard cubic meter per minute must submit to the Administrator the flow rate measurement using methods and procedures specified in §63.115 (a) and (b) of this subpart with the Notification of Compliance Status specified in §63.152 of this subpart.

(d) Except as specified in paragraph (g) of this section, ~~E~~each owner or operator who elects to demonstrate that a process vent is a Group 2 process vent based on organic HAP or TOC concentration less than 50 parts per million by volume must submit to the Administrator an organic HAP or TOC concentration measurement using the methods and procedures specified in §63.115 (a) and (c) of this subpart with the Notification of Compliance Status specified in §63.152 of this subpart.

(e) If an owner or operator uses a control or recovery device other than those listed in tables 3 and 4 of this subpart or requests approval to monitor a parameter other than those specified in tables 3 and 4 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under §63.151(f) or §63.152(e) of this subpart. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(f) For each parameter monitored according to tables 3 or 4 of this subpart or paragraph (e) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control or recovery device. In order to establish the range, the information required in §63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

(g) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (c) and (d) of this section no longer apply. Instead, each owner or operator demonstrating that a process vent is a Group 2 process vent based on total organic HAP mass flow rate less than 1.0 pound per hour must submit to the Administrator a total organic HAP measurement using the methods and procedures specified in §63.115(g) with the Notification of Compliance Status specified in §63.152.

§63.118 Process vent provisions—periodic reporting and recordkeeping requirements.

(a) Each owner or operator using a control device to comply with §63.113(a)(1), ~~or~~ (a)(2), or (a)(5) of this subpart shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under §63.114(a) of this subpart and listed in table 3 of this subpart or specified by the Administrator in accordance with §63.114(c) and §63.117(e) of this subpart. For flares, the

hourly records and records of pilot flame outages specified in table 3 of this subpart shall be maintained in place of continuous records.

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in §63.152(f). For flares complying with §63.11(b) of subpart A of this part, records of the times and duration of all periods during which all pilot flames are absent shall be kept rather than daily averages. For flares complying with §63.108 of subpart F of this part, the owner or operator must comply with the recordkeeping requirements specified therein.

(3) Hourly records of whether the flow indicator specified under §63.114(d)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the gas stream is diverted to the atmosphere or the monitor is not operating.

(4) Where a seal mechanism is used to comply with §63.114(d)(2) of this subpart, hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanism has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

(5) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63. 63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (a)(1) through (a)(4) of this section. For each flow event from a bypass line subject to the requirements in §63.114(d), the owner or operator must maintain records sufficient to determine whether or

not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in this subpart, the owner or operator must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(b) Except as specified in §63.113(a)(4), ~~E~~each owner or operator using a recovery device or other means to achieve and maintain a TRE index value greater than 1.0 but less than 4.0 as specified in §63.113(a)(3) or §63.113(d) of this subpart shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under §63.114(b) of this subpart and listed in table 4 of this subpart or specified by the Administrator in accordance with §63.114(c) of this subpart and §63.114(e) of this subpart and

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in §63.152(f). If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 4 of this subpart shall be kept instead of the daily averages.

(c) Except as specified in §63.113(a)(4), ~~E~~each owner or operator subject to the provisions of this subpart and who elects to demonstrate compliance with the TRE index value greater than 4.0 under §63.113(e) of this subpart or greater than 1.0 under §63.113(a)(3) or §63.113(d) of this subpart shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in §63.115(e) of this subpart; and

(2) Any recalculation of the TRE index value pursuant to §63.115(e) of this subpart.

(d) Except as specified in paragraph (n) of this section, ~~E~~each owner or operator who elects to comply by ~~maintining~~maintaining a flow rate less than 0.005 standard cubic meter per minute under §63.113(f) of this subpart, shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in §63.115(e) of this subpart that increase the vent stream flow rate,

(2) Any recalculation or measurement of the flow rate pursuant to §63.115(e) of this subpart, and

(3) Except as specified in §63.113(a)(4), ~~I~~if the flow rate increases to 0.005 standard cubic meter per minute or greater as a result of the process change, the TRE determination performed according to the procedures of §63.115(d) of this subpart.

(e) Except as specified in paragraph (n) of this section, ~~E~~each owner or operator who elects to comply by maintaining an organic HAP concentration less than 50 parts per million by volume organic HAP concentration under §63.113(g) of this subpart shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in §63.115(e) that increase the organic HAP concentration of the vent stream,

(2) Any recalculation or measurement of the concentration pursuant to §63.115(e) of this subpart, and

(3) Except as specified in §63.113(a)(4), ~~I~~if the organic HAP concentration increases to 50 parts per million by volume or greater as a result of the process change, the TRE determination performed according to the procedures of §63.115(d) of this subpart.

(f) Each owner or operator who elects to comply with the requirements of §63.113 of this subpart shall submit to the Administrator Periodic Reports of the following recorded information according to the schedule in §63.152 of this subpart.

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under paragraphs (a) and (b) of this section were outside the ranges established in the Notification of Compliance Status or operating permit, including the date that the parameter was outside the range.

(2) For Group 1 points, reports of the duration (in hours) of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in §63.152(c)(2)(ii)(A) of this subpart, including the start date of such periods.

(3) Reports of the times and durations of all periods recorded under paragraph (a)(3) of this section when the gas stream is diverted to the atmosphere through a bypass line and if applicable, the information in paragraph (f)(7) of this section. Include the start date, start time and duration in hours of each period.

(4) Reports of all periods recorded under paragraph (a)(4) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out and if applicable, the information in paragraph (f)(7) of this section. Include the start date, start time and duration in hours of each period.

(5) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~R~~reports of the times and durations of all periods recorded under paragraph (a)(2) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (b)(2)(v) of this section were outside the ranges established in the Notification

of Compliance Status or operating permit. Include the identification of the carbon bed, the monitored parameter that was outside the established range, and the start date, start time and duration in hours of the regeneration cycle.

(7) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (f)(3) and (f)(4) of this section. For bypass lines subject to the requirements in §63.114(d), the Periodic Report must include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(8) For process vents in ethylene oxide service subject to the requirements of §63.124, the Periodic Report must include the records for periods specified in paragraph (l)(2) of this section. Indicate the start date and time and end date and time for each period.

(9) For any maintenance vent release exceeding the applicable limits in §63.113(k)(1), the compliance report must include the information specified in paragraphs (f)(9)(i) through (f)(9)(iv) of this section. For the purposes of this reporting requirement, if an owner or operator complies with §63.113(k)(1)(iv) then the owner or operator must report each venting event conducted under those provisions and include an explanation for each event as to why utilization of this alternative was required.

(i) Identification of the maintenance vent and the equipment served by the maintenance vent.

(ii) The date and time the maintenance vent was opened to the atmosphere.

(iii) The lower explosive limit in percent, vessel pressure in psig, or mass in pounds of VOC in the equipment, as applicable, at the start of atmospheric venting. If the 5 psig vessel pressure option in §63.113(k)(1)(ii) was used and active purging was initiated while the lower explosive limit was 10 percent or greater, also include the lower explosive limit of the vapors at the time active purging was initiated.

(iv) An estimate of the mass in pounds of organic HAP released during the entire atmospheric venting event.

(g) Whenever a process change, as defined in §63.115(e) of this subpart, is made that causes a Group 2 process vent to become a Group 1 process vent, the owner or operator shall submit a report within 180 calendar days after the process change as specified in §63.151(j) of this subpart. The report shall include:

(1) A description of the process change;

(2) Except as specified in §63.113(a)(4), ~~T~~the results of the recalculation of the flow rate, organic HAP concentration, and TRE index value required under §63.115(e) of this subpart and recorded under paragraph (c), (d), or (e) of this section; and

(3) A statement that the owner or operator will comply with the provisions of §63.113 of this subpart for Group 1 process vents by the dates specified in subpart F of this part.

(h) Except as specified in §63.113(a)(4), ~~W~~whenever a process change, as defined in §63.115(e) of this subpart, is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the TRE index value required under §63.115(e) of this subpart and recorded under paragraph (c) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in §63.113(d) of this subpart.

(i) Except as specified in §63.113(a)(4), ~~W~~whenever a process change, as defined in §63.115(e) of this subpart, is made that causes a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute to become a Group 2 process vent with a flow rate of 0.005 standard cubic meter per minute or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the flow rate and the TRE determination required under §63.115(e) of this subpart and recorded under paragraph (d) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in §63.113(d) of this subpart.

(j) Except as specified in §63.113(a)(4), ~~W~~whenever a process change, as defined in §63.115(e) of this subpart, is made that causes a Group 2 process vent with an organic HAP concentration less than 50 parts per million by volume to become a Group 2 process vent with an organic HAP concentration of 50 parts per million by volume or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the organic HAP concentration and the TRE determination required under §63.115(e) of this subpart and recorded under paragraph (e) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in §63.113(d) of this subpart.

(k) The owner or operator is not required to submit a report of a process change if one of the conditions listed in paragraph (k)(1), (k)(2), (k)(3), or (k)(4) of this section is met.

(1) The process change does not meet the definition of a process change in §63.115(e) of this subpart, or

(2) The vent stream flow rate is recalculated according to §63.115(e) of this subpart and the recalculated value is less than 0.005 standard cubic meter per minute, or

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

(4) Except as specified in §63.113(a)(4), ~~T~~the TRE index value is recalculated according to §63.115(e) of this subpart and the recalculated value is greater than 4.0.

(l) For process vents in ethylene oxide service subject to the requirements of §63.124, owners and operators must keep the records specified in paragraphs (l)(1) and (l)(2) of this section in addition to those records specified elsewhere in this section.

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

(2) If emissions are vented through a closed-vent system to a non-flare control device, then the owner or operator must keep records of all periods during which operating values are outside of the applicable operating limits specified in §63.124(b)(4) through (6) when regulated material is being routed to the non-flare control device. The record must specify the identification of the control device, the operating parameter, the applicable limit, and the highest (for maximum operating limits) or lowest (for minimum operating limits) value recorded during the period.

(m) For each maintenance vent opening subject to the requirements of §63.113(k), owners and operators must keep the applicable records specified in paragraphs (m)(1) through (m)(5) of this section.

(1) Owners and operators must maintain standard site procedures used to deinventory equipment for safety purposes (e.g., hot work or vessel entry procedures) to document the procedures used to meet the requirements in §63.113(k). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of §63.113(k)(1)(i), and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(3) If complying with the requirements of §63.113(k)(1)(ii), and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent

opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of §63.113(k)(1)(iii), records of the estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the deinventory procedures specified in paragraph (m)(1) of this section are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this paragraph (m)(4), records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

(5) If complying with the requirements of §63.113(k)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and lower explosive limit of the vapors in the equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during the blind installation or removal process, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

(n) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (d) and (e) of this section no longer apply. Instead, each owner or operator demonstrating that a process vent is a Group 2 process vent based on total organic HAP mass flow rate less than 1.0 pound per hour under §63.113(l), shall keep up-to-date, readily accessible records of:

(1) Any process changes that increase the vent stream mass flow rate, and

(2) Any recalculation or measurement of the mass flow rate pursuant to §63.115(g).

§63.119 Storage vessel provisions—reference control technology.

(a) For each storage vessel to which this subpart applies, the owner or operator shall comply with the requirements of paragraphs (a)(1), (a)(2), (a)(3), ~~and~~ (a)(4), (a)(5), and (a)(6) of this section according to the schedule provisions of §63.100 of subpart F of this part. For each pressure vessel to which this subpart applies, the owner or operator must comply with the requirements of paragraph (a)(7) of this section.

(1) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 of the subpart for new sources) storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce hazardous air pollutants emissions to the atmosphere either by operating and maintaining a fixed roof and internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, a closed vent system and control device, routing the emissions to a process or a fuel gas system, or vapor balancing in accordance with the requirements in paragraph (b), (c), (d), (e), (f), or (g) of this section, or equivalent as provided in §63.121 of this subpart.

(2) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 of this subpart for new sources) storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is greater than or equal to 76.6 kilopascals, the owner or operator shall operate and maintain a closed vent system and control device meeting the requirements specified in paragraph (e) of this section, route the emissions to a process or a fuel gas system as specified in paragraph (f) of this section, vapor balance as specified in paragraph (g) of this section, or equivalent as provided in §63.121 of this subpart.

(3) For each Group 2 storage vessel that is not part of an emissions average as described in §63.150 of this subpart, the owner or operator shall comply with the recordkeeping requirement in §63.123(a) of this subpart and is not required to comply with any other provisions in §§63.119 through 63.123 of this subpart.

(4) For each Group 2 storage vessel that is part of an emissions average, the owner or operator shall comply with the emissions averaging provisions in §63.150 of this subpart.

(5) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, if the storage vessel (of any capacity and vapor pressure) stores liquid containing ethylene oxide such that the storage vessel is considered to be in ethylene oxide service, as defined in §63.101 of subpart F of this part, then the owner or operator must comply with the requirements of paragraphs (a)(5)(i) or (a)(5)(ii) of this section in addition to all other applicable requirements specified elsewhere in this section.

(i) Reduce emissions of ethylene oxide by venting emissions through a closed vent system to a flare; or

(ii) Reduce emissions of ethylene oxide by venting emissions through a closed vent system to a control device that reduces ethylene oxide by greater than or equal to 99.9 percent by weight, or to a concentration less than 1 ppmv for each storage vessel vent.

(6) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, for each storage vessel subject to paragraph (a)(1) or (a)(2) of this section, the owner or operator must comply with paragraphs (a)(6)(i) through (a)(6)(iv) of this section during storage vessel shutdown operations (i.e., emptying and degassing of a storage vessel) until the vapor space concentration in the storage vessel is less than 10 percent of the LEL. The owner or operator must determine the LEL using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(i) Remove liquids from the storage vessel as much as practicable.

(ii) Comply with one of the following:

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

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

(C) Reduce emissions of total organic HAP by routing emissions to a fuel gas system or process and meet the requirements specified in paragraph (f) of this section.

(iii) Maintain records necessary to demonstrate compliance with the requirements in §63.102(f) of subpart F of this part including, if appropriate, records of existing standard site procedures used to empty and degas (deinventory) equipment for safety purposes.

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

(7) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, for each pressure vessel as defined in §63.101 of subpart F of this part, you must operate and maintain the pressure vessel, as specified in paragraphs (a)(7)(i) through (a)(7)(v) of this section.

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

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

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

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

(v) Whenever total organic hazardous air pollutants are in the pressure vessel, you must operate the pressure vessel as a closed system that vents through a closed vent system to a control device as specified in paragraph (e) of this section, as applicable. For purposes of compliance with this paragraph, a release of total organic hazardous air pollutants through a pressure vessel's pressure relief device to the atmosphere is a deviation.

(b) The owner or operator who elects to use a fixed roof and an internal floating roof, as defined in §63.111 of this subpart, to comply with the requirements of paragraph (a)(1) of this section shall comply with the requirements specified in paragraphs (b)(1) through (b)~~(6)~~(7) of this section.

Note: The intent of paragraphs (b)(1) and (b)(2) of this section is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.

(1) The internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) During the initial fill.

(ii) After the vessel has been completely emptied and degassed.

(iii) When the vessel is completely emptied before being subsequently refilled.

(2) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(3) Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. Except as provided in paragraph (b)(3)(iv) of this section, the closure device shall consist of one of the devices listed in paragraph (b)(3)(i), (b)(3)(ii), or (b)(3)(iii) of this section.

(i) A liquid-mounted seal as defined in §63.111 of this subpart.

(ii) A metallic shoe seal as defined in §63.111 of this subpart.

(iii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor- mounted, but both must be continuous seals.

(iv) If the internal floating roof is equipped with a vapor-mounted seal as of December 31, 1992, the requirement for one of the seal options specified in paragraphs (b)(3)(i), (b)(3)(ii), and (b)(3)(iii) of this section does not apply until the earlier of the dates specified in paragraphs (b)(3)(iv)(A) and (b)(3)(iv)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(4) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(5) Except as provided in paragraph (b)(5)(viii) of this section, each internal floating roof shall meet the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of this section, and (b)(5)(ix) through (b)(5)(xii) of this section.

(i) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface.

(ii) Except as specified in paragraph (b)(5)(ix) of this section, ~~E~~each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket.

(iii) Each penetration of the internal floating roof for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(iv) Each automatic bleeder vent shall be gasketed.

(v) Each rim space vent shall be gasketed.

(vi) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(vii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(viii) If the internal floating roof does not meet any one of the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of this section as of December 31, 1992, the requirement for meeting those specifications does not apply until the earlier of the dates specified in paragraphs (b)(5)(viii)(A) and (b)(5)(viii)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(ix) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraph (b)(5)(i) of this section no longer applies. Instead, each opening in the internal floating roof except those for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and deck drains shall be equipped with a deck cover. The deck cover shall be equipped with a gasket between the cover and the deck.

(x) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, each opening for an unslotted guidepole shall be equipped with a pole wiper, and each unslotted guidepole shall be equipped with a gasketed cap on the top of the guidepole.

(xi) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, each opening for a slotted guidepole shall be equipped with one of the control device configurations specified in paragraphs (b)(5)(xi)(A) and (b)(5)(xi)(B) of this section.

(A) A pole wiper and a pole float. The wiper or seal of the pole float shall be at or above the height of the pole wiper.

(B) A pole wiper and a pole sleeve.

(xii) Each unslotted guidepole cap shall be closed at all times except when gauging the liquid level or taking liquid samples.

(6) Each cover or lid on any opening in the internal floating roof shall be closed (i.e., no visible gaps), except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(7) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, owners and operators that use a sweep, purge, or inert blanket between the internal floating roof and fixed roof must route emissions through a closed vent system and control device and comply with paragraph (e) of this section.

(c) The owner or operator who elects to use an external floating roof, as defined in §63.111 of this subpart, to comply with the requirements of paragraph (a)(1) of this section shall comply with the requirements specified in paragraphs (c)(1) through (c)(4) of this section.

(1) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge.

(i) Except as provided in paragraph (c)(1)(iv) of this section, the closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal.

(ii) Except as provided in paragraph (c)(1)(v) of this section, the primary seal shall be either a metallic shoe seal or a liquid-mounted seal.

(iii) Except during the inspections required by §63.120(b) of this subpart, both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion.

(iv) If the external floating roof is equipped with a liquid-mounted or metallic shoe primary seal as of December 31, 1992, the requirement for a secondary seal in paragraph (c)(1)(i) of this section does not apply until the earlier of the dates specified in paragraphs (c)(1)(iv)(A) and (c)(1)(iv)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(v) If the external floating roof is equipped with a vapor-mounted primary seal and a secondary seal as of December 31, 1992, the requirement for a liquid-mounted or metallic shoe primary seal in paragraph (c)(1)(ii) of this section does not apply until the earlier of the dates specified in paragraphs (c)(1)(v)(A) and (c)(1)(v)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(2) Each external floating roof shall meet the specifications listed in paragraphs (c)(2)(i) through (c)(2)(xii) of this section.

(i) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the noncontact external floating roof shall provide a projection below the liquid surface except as provided in paragraph (c)(2)(xii) of this section.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal or lid which is to be maintained in a closed position (i.e., no visible gap) at all times except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed.

(iii) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(iv) Rim space vents are to be set to open only when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(v) Automatic bleeder vents and rim space vents are to be gasketed.

(vi) Each roof drain that empties into the stored liquid is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(vii) Each unslotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.

(viii) Each unslotted guide pole shall have on the end of the pole a gasketed cap which is closed at all times except when gauging the liquid level or taking liquid samples.

(ix) Each slotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.

(x) Each slotted guide pole shall have a gasketed float or other device which closes off the liquid surface from the atmosphere.

(xi) Each gauge hatch/sample well shall have a gasketed cover which is closed at all times except when the hatch or well must be open for access.

(xii) If each opening in a noncontact external floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents does not provide a projection below the liquid surface as of December 31, 1992, the requirement for providing these projections below the liquid surface does not apply until the earlier of the dates specified in paragraphs (c)(2)(xii)(A) and (c)(2)(xii)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

NOTE: The intent of paragraphs (c)(3) and (c)(4) of this section is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.

(3) The external floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (c)(3)(i) through (c)(3)(iii) of this section.

(i) During the initial fill.

(ii) After the vessel has been completely emptied and degassed.

(iii) When the vessel is completely emptied before being subsequently refilled.

(4) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(d) The owner or operator who elects to use an external floating roof converted to an internal floating roof (i.e., fixed roof installed above external floating roof) to comply with paragraph (a)(1) of this section shall comply with paragraphs (d)(1) and (d)(2) of this section.

(1) Comply with the requirements for internal floating roof vessels specified in paragraphs (b)(1), (2), and (3) of this section; and

(2) Comply with the requirements for deck fittings that are specified for external floating roof vessels in paragraphs (c)(2)(i) through (c)(2)(xii) of this section.

(e) The owner or operator who elects to use a closed vent system and control device, as defined in §63.111 of this subpart, to comply with the requirements of paragraph (a)(1) or (a)(2) of this section, or the owner or operator who meets the requirements specified in paragraph (b)(7) of this section, shall comply with the requirements specified in paragraphs (e)(1) through (e)~~(5)~~(7) of this section.

(1) Except as provided in paragraph (e)(2) of this section, the control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. Except as specified in paragraph (a) of §63.108 of subpart F of this part, i~~I~~f a flare is used as the control device, it shall meet the specifications described in the general control device requirements of §63.11(b) of subpart A of this part.

(2) If the owner or operator can demonstrate that a control device installed on a storage vessel on or before December 31, 1992 is designed to reduce inlet emissions of total organic

HAP by greater than or equal to 90 percent but less than 95 percent, then the control device is required to be operated to reduce inlet emissions of total organic HAP by 90 percent or greater.

(3) Except as specified in (e)(7) of this section, ~~P~~periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraph (e)(1) or (e)(2) of this section, as applicable, shall not exceed 240 hours per year.

(4) Except as specified in (e)(7) of this section, ~~T~~the specifications and requirements in paragraphs (e)(1) and (e)(2) of this section for control devices do not apply during periods of planned routine maintenance.

(5) Except as specified in (e)(7) of this section, ~~T~~the specifications and requirements in paragraphs (e)(1) and (e)(2) of this section for control devices do not apply during a control system malfunction.

(6) An owner or operator may use a combination of control devices to achieve the required reduction of total organic hazardous air pollutants specified in paragraph (e)(1) of this section. An owner or operator may use a combination of control devices installed on a storage vessel on or before December 31, 1992 to achieve the required reduction of total organic hazardous air pollutants specified in paragraph (e)(2) of this section.

(7) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (e)(3) through (e)(5) of this section no longer apply. Instead, whenever gases or vapors containing total organic HAP are routed from a storage vessel through a closed vent system connected to a control device used to comply with the requirements of paragraph (e)(1) or (e)(2) of this section, the control device must be operating, except the control device may only be bypassed for the purpose of performing planned routine maintenance of the control device. When the control

device is bypassed, the owner or operator must comply with paragraphs (e)(7)(i) through (e)(7)(iii) of this section.

(i) The control device may only be bypassed when the planned routine maintenance cannot be performed during periods that storage vessel emissions are vented to the control device.

(ii) On an annual basis, the total time that the closed-vent system or control device is bypassed to perform planned routine maintenance shall not exceed 240 hours per each calendar year.

(iii) The level of material in the storage vessel shall not be increased during periods that the closed vent system or control device is bypassed to perform planned routine maintenance.

(f) The owner or operator who elects to route emissions to a fuel gas system or to a process, as defined in §63.111 of this subpart, to comply with the requirements of paragraph (a)(1) or (a)(2) of this section shall comply with the requirements in paragraphs (f)(1) through (f)(3) of this section, as applicable.

(1) If emissions are routed to a fuel gas system, there is no requirement to conduct a performance test or design evaluation. If emissions are routed to a process, the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section. The owner or operator shall comply with the compliance demonstration requirements in §63.120(f).

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

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(2) If the emissions are conveyed by a system other than hard-piping, any conveyance system operated under positive pressure shall be subject to the requirements of §63.148 of this subpart.

(3) The fuel gas system or process shall be operating at all times when organic hazardous air pollutants emissions are routed to it except as provided in §63.102(a)(1) of subpart F of this part and in paragraphs (f)(3)(i) through (f)(3)(iii) of this section. Whenever the owner or operator by~~-~~passes the fuel gas system or process, the owner or operator shall comply with the recordkeeping requirement in §63.123(h) of this subpart. Bypassing is permitted if the owner or operator complies with one or more of the conditions specified in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

(i) The liquid level in the storage vessel is not increased;

(ii) The emissions are routed through a ~~closed-vent~~closed vent system to a control device complying with §63.119(e) of this subpart; or

(iii) The total aggregate amount of time during which the emissions by~~-~~pass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except start-ups/shutdowns/malfunctions or product changeovers of flexible operation units and periods when the storage vessel has been emptied and degassed), does not exceed 240 hours. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(g) The owner or operator who elects to vapor balance to comply with the requirements of paragraphs (a)(1) and (2) of this section shall comply with paragraphs (g)(1) through (7) of this section and the recordkeeping requirements of §63.123(i).

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

(2) Tank trucks and railcars must have a current certification in accordance with the U.S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars. Barges must have a current certification of vapor-tightness through testing in accordance with 40 CFR 63.565.

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

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

(5) Pressure relief devices must be set to no less than 2.5 psig at all times to prevent breathing losses. Pressure relief devices may be set at values less than 2.5 psig if the owner or operator provides rationale in the notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times. The owner or operator shall comply with paragraphs (g)(5)(i) through (iii) of this section for each pressure relief valve.

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

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

(iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of §63.181(d)(1) through (4).

(6) Railcars, tank trucks, or barges that deliver HAP to a storage ~~tank~~ vessel must be reloaded or cleaned at a facility that utilizes the control techniques specified in paragraph (g)(6)(i) or (ii) of this section.

(i) The railcar, tank truck, or barge must be connected to a ~~closed-vent~~closed vent system with a control device that reduces inlet emissions of HAP by 95 percent by weight or greater.

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

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

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

(ii) If complying with paragraph (g)(6)(i) of this section, comply with the requirements for closed vent system and control device specified in §§63.119 through 63.123. The notification and reporting requirements in §63.122 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(iii) If complying with paragraph (g)(6)(ii) of this section, keep the records specified in §63.123(i)(3).

(iv) After the compliance dates specified in §63.100(k) at an offsite reloading or cleaning facility subject to paragraph (g) of this section, compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 constitutes compliance with the monitoring, recordkeeping, and reporting provisions of paragraph (g)(7)(ii) or paragraph (g)(7)(iii) of this section. You must identify in your Notification of Compliance Status report required by §63.152(b), the subpart to the part 63 with which the owner or operator of the reloading or cleaning facility complies.

§63.120 Storage vessel provisions—procedures to determine compliance.

(a) To demonstrate compliance with §63.119(b) of this subpart (storage vessel equipped with a fixed roof and internal floating roof) or with §63.119(d) of this subpart (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(7) of this section.

(1) The owner or operator shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in paragraphs (a)(2) and (a)(3) of this section.

(2) For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this section.

(i) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in §63.100 of subpart F of this part.

(ii) Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every 10 years after the compliance date specified in §63.100 of subpart F of this part.

(3) For vessels equipped with a double-seal system as specified in §63.119(b)(3)(iii) of this subpart, the owner or operator shall perform either the inspection required in paragraph (a)(3)(i) of this section or the inspections required in both paragraphs (a)(3)(ii) and (a)(3)(iii) of this section.

(i) The owner or operator shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least once every 5 years after the compliance date specified in §63.100 of subpart F of this part; or

(ii) The owner or operator shall visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in §63.100 of subpart F of this part, and

(iii) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every 10 years after the compliance date specified in §63.100 of subpart F of this part.

(4) If during the inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of this section, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(5) Except as provided in paragraph (a)(6) of this section, for all the inspections required by paragraphs (a)(2)(ii), (a)(3)(i), and (a)(3)(iii) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present.

(6) If the inspection required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this section is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel, the owner or operator shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made

in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling.

(7) If during the inspections required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this section, the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with organic HAP.

(b) To demonstrate compliance with §63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section.

(1) Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the primary seal shall be performed during the hydrostatic testing of the vessel or by the compliance date specified in §63.100 of subpart F of this part, whichever occurs last, and at least once every 5 years thereafter.

(ii) For an external floating roof vessel equipped with a liquid-mounted or metallic shoe primary seal and without a secondary seal as provided for in §63.119(c)(1)(iv) of this subpart, measurements of gaps between the vessel wall and the primary seal shall be performed by the compliance date specified in §63.100 of subpart F of this part and at least once per year thereafter, until a secondary seal is installed. When a secondary seal is installed above the primary seal, measurements of gaps between the vessel wall and both the primary and secondary seals shall be performed within 90 calendar days of installation of the secondary seal, and according to the frequency specified in paragraphs (b)(1)(i) and (b)(1)(iii) of this section thereafter.

(iii) For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the secondary seal shall be performed by the compliance date specified in §63.100 of subpart F of this part and at least once per year thereafter.

(iv) If any storage vessel ceases to store organic HAP for a period of 1 year or more, or if the maximum true vapor pressure of the total organic HAP's in the stored liquid falls below the values defining Group 1 storage vessels specified in table 5 or table 6 of this subpart for a period of 1 year or more, measurements of gaps between the vessel wall and the primary seal, and gaps between the vessel wall and the secondary seal shall be performed within 90 calendar days of the vessel being refilled with organic HAP.

(2) Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described in paragraphs (b)(2)(i) through (b)(2)(iii) of this section.

(i) Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports.

(ii) Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where an 0.32 centimeter (⅛ inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. The circumferential distance of each such location shall also be measured.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance.

(3) The owner or operator shall add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 3.81 centimeters.

(4) The owner or operator shall add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 1.27 centimeters. These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by paragraph (b)(1)(i) and (b)(1)(ii) of this section.

(5) The primary seal shall meet the additional requirements specified in paragraphs (b)(5)(i) and (b)(5)(ii) of this section.

(i) Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters above the stored liquid surface.

(ii) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(6) The secondary seal shall meet the additional requirements specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section.

(i) The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall except as provided in paragraph (b)(4) of this section.

(ii) There shall be no holes, tears, or other openings in the seal or seal fabric.

(7) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in paragraphs (b)(1) and (b)(2) of this section or to inspect the vessel to determine compliance with paragraphs (b)(5) and (b)(6) of this section because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner or operator shall comply with the requirements in either paragraph (b)(7)(i) or (b)(7)(ii) of this section.

(i) The owner or operator shall measure the seal gaps or inspect the storage vessel no later than 30 calendar days after the determination that the roof is unsafe, or

(ii) The owner or operator shall empty and remove the storage vessel from service no later than 45 calendar days after determining that the roof is unsafe. If the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the vessel will be emptied as soon as practical.

(8) The owner or operator shall repair conditions that do not meet requirements listed in paragraphs (b)(3), (b)(4), (b)(5), and (b)(6) of this section (i.e., failures) no later than 45 calendar days after identification, or shall empty and remove the storage vessel from service no later than 45 calendar days after identification. If during seal gap measurements required in paragraph (b)(1) and (b)(2) of this section or during inspections necessary to determine compliance with paragraphs (b)(5) and (b)(6) of this section a failure is detected that cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(9) The owner or operator shall notify the Administrator in writing at least 30 calendar days in advance of any gap measurements required by paragraph (b)(1) or (b)(2) of this section to afford the Administrator the opportunity to have an observer present.

(10) The owner or operator shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with organic HAP.

(ii) Except as provided in paragraph (b)(10)(iii) of this section, for all the inspections required by paragraph (b)(10) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(iii) If the inspection required by paragraph (b)(10) of this section is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP, the owner or operator shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(c) To demonstrate compliance with §63.119(d) of this subpart (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements of paragraph (a) of this section.

(d) To demonstrate compliance with §63.119(e) of this subpart (storage vessel equipped with a closed vent system and control device) using a control device other than a flare, the owner or operator shall comply with the requirements in paragraphs (d)(1) through (d)(7) of this section, except as provided in paragraphs (d)(8) and (d)(9) of this section.

(1) Except as provided in paragraph (d)(1)(iii) of this section, ~~T~~the owner or operator shall either prepare a design evaluation, which includes the information specified in paragraph

(d)(1)(i) of this section, or submit the results of a performance test as described in paragraph (d)(1)(ii) of this section.

(i) The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during reasonably expected maximum filling rate. This documentation is to include a description of the gas stream which enters the control device, including flow and organic HAP content under varying liquid level conditions, and the information specified in paragraphs (d)(1)(i)(A) through (d)(1)(i)(E) of this section, as applicable.

(A) If the control device receives vapors, gases or liquids, other than fuels, from emission points other than storage vessels subject to this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(B) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C is used to meet the emission reduction requirement specified in §63.119 (e)(1) or (e)(2), as applicable, documentation that those conditions exist is sufficient to meet the requirements of paragraph (d)(1)(i) of this section.

(C) Except as provided in paragraph (d)(1)(i)(B) of this section, for thermal incinerators, the design evaluation shall include the autoignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature.

(D) For carbon adsorbers, the design evaluation shall include the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(E) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream.

(ii) If the control device used to comply with §63.119(e) of this subpart is also used to comply with §63.113(a)(2), §63.126(b)(1), or §63.139(c) of this subpart, the performance test required by §63.116(c), §63.128(a), or §63.139(d)(1) of this subpart is acceptable to demonstrate compliance with §63.119(e) of this subpart. The owner or operator is not required to prepare a design evaluation for the control device as described in paragraph (d)(1)(i) of this section, if the performance tests meets the criteria specified in paragraphs (d)(1)(ii)(A) and (d)(1)(ii)(B) of this section.

(A) 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 (e)(2) of this subpart, as applicable; and

(B) The performance test is submitted as part of the Notification of Compliance Status required by §63.151(b) of this subpart. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with §63.152(h), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(iii) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, if the owner or operator vents emissions through a closed vent system to an adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then the owner or operator must install a system of two or more adsorber units in series and comply with the requirements specified in paragraphs (d)(1)(iii)(A) through (d)(1)(iii)(C) of this section.

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

(B) Monitor the HAP or total organic compound (TOC) concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (d)(1)(iii)(C)(*2*) of this section. The owner or operator must measure the concentration of HAP or TOC using either a portable analyzer, in accordance with Method 21 of 40 CFR part 60, appendix A–7 using methane, propane, isobutylene, or the primary HAP being controlled as the calibration gas or Method 25A of 40 CFR part 60, appendix A–7 using methane, propane, or the primary HAP being controlled as the calibration gas.

(C) Comply with paragraph (d)(1)(iii)(C)(*1*) of this section, and comply with the monitoring frequency according to paragraph (d)(1)(iii)(C)(*2*) of this section.

(*1*) The first adsorber in series must be replaced immediately when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph, ‘‘immediately’’ means within 8 hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons. The owner or operator must monitor at the outlet of the first adsorber within 3 days of replacement to confirm it is performing properly.

(*2*) Based on the adsorber bed life established according to paragraph (d)(1)(iii)(A) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than 2 months of life remaining, at least weekly if the adsorbent has between 2 months and 2 weeks of life remaining, and at least daily if the adsorbent has 2 weeks or less of life remaining.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by §63.151 (b) of this subpart, a monitoring plan containing the information specified in paragraph (d)(2)(i) of this section and in either (d)(2)(ii) or (d)(2)(iii) of this section.

(i) 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); and either

(ii) The documentation specified in paragraph (d)(1)(i) of this section, if the owner or operator elects to prepare a design evaluation; or

(iii) The information specified in paragraph (d)(2)(iii) (A) and (B) of this section if the owner or operator elects to submit the results of a performance test.

(A) Identification of the storage vessel and control device for which the performance test will be submitted, and

(B) Identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

(3) The owner or operator shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the information specified in paragraphs (d)(3)(i) and, if applicable, (d)(3)(ii) of this section.

(i) The operating range for each monitoring parameter identified in the monitoring plan. The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(ii) Results of the performance test described in paragraph (d)(1)(ii) of this section. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with §63.152(h), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(4) The owner or operator shall demonstrate compliance with the requirements of §§63.119(e)(3) and (e)(7) of this subpart (planned routine maintenance of a control device, during which the control device does not meet the specifications of §63.119 (e)(1) or (e)(2) of this subpart, as applicable, shall not exceed 240 hours per year) by including in each Periodic Report required by §63.152(c) of this subpart the information specified in §63.122(g)(1) of this subpart.

(5) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in §63.152(b) of this subpart or in the operating permit and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status.

(6) Except as provided in paragraph (d)(7) of this section, each closed vent system shall be inspected as specified in §63.148 of this subpart. The initial and annual inspections required by §63.148(b) of this subpart shall be done during filling of the storage vessel.

(7) For any fixed roof tank and closed vent system that are operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(8) A design evaluation or performance test is not required, if the owner or operator uses a combustion device meeting the criteria in paragraph (d)(8)(i), (d)(8)(ii), (d)(8)(iii), or (d)(8)(iv) of this section.

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

(ii) 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;~~.~~

(C) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements of subpart EEE of this part; or

(D) Complies with subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(iii) A hazardous waste incinerator for which the owner or operator:

(A) ~~h~~Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;~~, or~~

(B) ~~h~~Has certified compliance with the interim status requirements of 40 CFR part 265, subpart O;

(C) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements subpart EEE of this part; or

(D) Complies with the requirements subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

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

(9) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, paragraph (d)(1)(i) of this section no longer applies to storage vessels in ethylene oxide service, as defined in §63.101 of subpart F of this part.

(e) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~T~~to demonstrate compliance with §63.119(e) of this subpart (storage vessel equipped with a closed vent system and control device) using a flare, the owner or operator shall comply with the requirements in paragraphs (e)(1) through (e)(6) of this section.

(1) The owner or operator shall perform the compliance determination specified in §63.11(b) of subpart A of this part.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the information specified in paragraphs (e)(2)(i) through (e)(2)(iii) of this section.

(i) 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 paragraph (e)(1) of this section; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(3) The owner or operator shall demonstrate compliance with the requirements of §§63.119(e)(3) and (e)(7) of this subpart (planned routine maintenance of a flare, during which the flare does not meet the specifications of §63.119(e)(1) of this subpart, shall not exceed 240 hours per year) by including in each Periodic Report required by §63.152(c) of this subpart the information specified in §63.122(g)(1) of this subpart.

(4) The owner or operator shall continue to meet the general control device requirements specified in §63.11(b) of subpart A of this part.

(5) Except as provided in paragraph (e)(6) of this section, each closed vent system shall be inspected as specified in §63.148 of this subpart. The inspections required to be performed in accordance with §63.148(c) of this subpart shall be done during filling of the storage vessel.

(6) For any fixed roof tank and closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(f) To demonstrate compliance with §63.119(f) of this subpart (storage vessel routed to a process), the owner or operator shall prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the ends specified in §63.119(f)(1)(i) through (f)(1)(iv) are being met. The owner or operator shall submit the design evaluation as part of the Notification of Compliance Status required by §63.152(b) of this subpart.

(g) To demonstrate compliance with the emission limits and work practice standards specified in §63.119(a)(5) for storage vessels in ethylene oxide service, owners and operators must meet the requirements specified in §63.124.

§63.121 Storage vessel provisions—alternative means of emission limitation.

(a) Determination of equivalence to the reduction in emissions achieved by the requirements of §63.119 (b), (c), or (d) of this subpart will be evaluated according to §63.102(b) of subpart F of this part.

(b) The determination of equivalence referred to in paragraph (a) of this section will be based on the application to the Administrator which shall include the information specified in either paragraph (b)(1) or (b)(2) of this section.

(1) Actual emissions tests that use full-size or scale-model storage vessels that accurately collect and measure all organic HAP emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(2) An engineering analysis that the Administrator determines is an accurate method of determining equivalence.

§63.122 Storage vessel provisions—reporting.

(a) For each Group 1 storage vessel, the owner or operator shall comply with the requirements of paragraphs (a)(1) through (a)(5) of this section.

(1) The owner or operator shall submit an Initial Notification as required by §63.151(b) of this subpart.

(2) [Reserved]

(3) The owner or operator shall submit a Notification of Compliance Status as required by §63.152(b) of this subpart and shall submit as part of the Notification of Compliance Status the information specified in paragraph (c) of this section.

(4) The owner or operator shall submit Periodic Reports as required by §63.152(c) of this subpart and shall submit as part of the Periodic Reports the information specified in paragraphs (d), (e), (f), ~~and~~ (g), and (i) of this section.

(5) The owner or operator shall submit, as applicable, other reports as required by §63.152(d) of this subpart, containing the information specified in paragraph (h) of this section.

(b) An owner or operator who elects to comply with §63.119(e) of this subpart by using a closed vent system and a control device other than a flare shall submit, as part of the Monitoring Plan, the information specified in §63.120(d)(2)(i) of this subpart and the information specified in either §63.120(d)(2)(ii) of this subpart or §63.120(d)(2)(iii) of this subpart.

(c) An owner or operator who elects to comply with §63.119(e) of this subpart by using a closed vent system and a control device shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the information specified in either paragraph (c)(1) or (c)(2) of this section. An owner or operator who elects to comply with §63.119(f) of this subpart by routing emissions to a process or to a fuel gas system shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the information specified in paragraph (c)(3) of this section.

(1) If a control device other than a flare is used, the owner or operator shall submit the information specified in §63.120(d)(3)(i) and, if applicable, (d)(3)(ii) of this subpart.

(2) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~I~~if a flare is used, the owner or operator shall submit the information specified in §63.120(e)(2)(i), (e)(2)(ii), and (e)(2)(iii) of this subpart.

(3) If emissions are routed to a process, the owner or operator shall submit the information specified in §63.120(f). If emissions are routed to a fuel gas system, the owner or operator shall submit a statement that the emission stream is connected to the fuel gas system and whether the conveyance system is subject to the requirements of §63.148.

(d) An owner or operator who elects to comply with §63.119(b) of this subpart by using a fixed roof and an internal floating roof or with §63.119(d) of this subpart by using an external floating roof converted to an internal floating roof shall submit, as part of the Periodic Report required under §63.152(c) of this subpart, the results of each inspection conducted in accordance with §63.120(a) of this subpart in which a failure is detected in the control equipment.

(1) For vessels for which annual inspections are required under §63.120 (a)(2)(i) or (a)(3)(ii) of this subpart, the specifications and requirements listed in paragraphs (d)(1)(i) through (d)(1)(iii) of this section apply.

(i) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.

(ii) Except as provided in paragraph (d)(1)(iii) of this section, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.

(iii) If an extension is utilized in accordance with §63.120(a)(4) of this subpart, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in §63.120(a)(4) of this subpart; and describe the date the storage vessel was emptied and the nature of and date the repair was made.

(2) For vessels for which inspections are required under §63.120 (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this subpart, the specifications and requirements listed in paragraphs (d)(2)(i) and (d)(2)(ii) of this section apply.

(i) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under §63.152(c) of this subpart shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(e) An owner or operator who elects to comply with §63.119(c) of this subpart by using an external floating roof shall meet the periodic reporting requirements specified in paragraphs (e)(1), (e)(2), and (e)(3) of this section.

(1) The owner or operator shall submit, as part of the Periodic Report required under §63.152(c) of this subpart, documentation of the results of each seal gap measurement made in accordance with §63.120(b) of this subpart in which the requirements of §63.120 (b)(3), (b)(4), (b)(5), or (b)(6) of this subpart are not met. This documentation shall include the information specified in paragraphs (e)(1)(i) through (e)(1)(iv) of this section.

(i) The date of the seal gap measurement.

(ii) The raw data obtained in the seal gap measurement and the calculations described in §63.120 (b)(3) and (b)(4) of this subpart.

(iii) A description of any condition specified in §63.120 (b)(5) or (b)(6) of this subpart that is not met.

(iv) A description of the nature of and date the repair was made, or the date the storage vessel was emptied.

(2) If an extension is utilized in accordance with §63.120(b)(7)(ii) or (b)(8) of this subpart, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in §63.120(b)(7)(ii) or (b)(8) of this subpart, as applicable; and describe the date the vessel was emptied and the nature of and date the repair was made.

(3) The owner or operator shall submit, as part of the Periodic Report required under §63.152(c) of this subpart, documentation of any failures that are identified during visual inspections required by §63.120(b)(10) of this subpart. This documentation shall meet the specifications and requirements in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under §63.152(c) of this subpart shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The periodic report shall also describe the nature of and date the repair was made.

(f) An owner or operator who elects to comply with §63.119(d) of this subpart by using an external floating roof converted to an internal floating roof shall comply with the periodic reporting requirements of paragraph (d) of this section.

(g) An owner or operator who elects to comply with §63.119(e) of this subpart by installing a closed vent system and control device shall submit, as part of the next Periodic Report required by §63.152(c) of this subpart, the information specified in paragraphs (g)(1) through (g)~~(3)~~(4) of this section.

(1) As required by §63.120(d)(4) and §63.120(e)(3) of this subpart, the Periodic Report shall include the information specified in paragraphs (g)(1)(i) ~~and~~ through (g)(1)~~(ii)~~(iii) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of §63.119 (e)(1) or (e)(2) of this subpart, as applicable.

(i) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(ii) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of §63.119 (e)(1) or (e)(2) of this subpart, as applicable, due to planned routine maintenance.

(iii) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, for each storage vessel for which planned routine maintenance was performed during the previous 6 months, report the identification of the storage vessel and the height of the liquid in the storage vessel at the time the control device is bypassed to conduct the planned routine maintenance and at the time the control device is placed back in service after completing the routine maintenance. These reports shall include the date and time the liquid height was measured.

(2) If a control device other than a flare is used, the Periodic Report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with §63.120(d)(3)(i) of this subpart. The description shall include the information specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) Identification of the control device for which the measured parameters were outside of the established ranges, the date, and the parameter that was outside of the established ranges, and

(ii) Cause for the measured parameters to be outside of the established ranges.

(3) Except as specified in paragraph (a) of §63.108 of subpart F of this part, i~~I~~f a flare is used, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in §63.11(b) of subpart A of this part and shall include the information specified in paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) Identification of the flare which does not meet the general requirements specified in §63.11(b) of subpart A of this part, and

(ii) Reason the flare did not meet the general requirements specified in §63.11(b) of subpart A of this part.

(4) For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.120(d)(1)(iii), the owner or operator must report the date of each instance when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber and the adsorber is not replaced according to §63.120(d)(1)(iii)(C)(*1*) and an identification of the adsorber for which breakthrough was detected.

(h) An owner or operator who elects to comply with §63.119 (b), (c), or (d) of this subpart shall submit, as applicable, the reports specified in paragraphs (h)(1) and (h)(2) of this section.

(1) In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of a storage vessel that has been emptied and degassed.

(i) If the storage vessel is equipped with an internal floating roof as specified in §63.119(b) of this subpart, the notification shall meet the requirements of either §63.120 (a)(5) or (a)(6) of this subpart, as applicable.

(ii) If the storage vessel is equipped with an external floating roof as specified in §63.119(c) of this subpart, the notification shall meet the requirements of either §63.120 (b)(10)(ii) or (b)(10)(iii) of this subpart, as applicable.

(iii) If the storage vessel is equipped with an external floating roof converted into an internal floating roof as specified in §63.119(d) of this subpart, the notification shall meet the requirements of either §63.120 (a)(5) or (a)(6) of this subpart, as applicable.

(2) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof as specified in §63.119(c) of this subpart shall notify the Administrator of any seal gap measurements. This notification shall meet the requirements of §63.120(b)(9) of this subpart.

(i) For pressure vessels subject to the requirements of §63.119(a)(7), if you obtain an instrument reading greater than 500 ppmv of a leak when monitoring a pressure vessel in accordance with §63.119(a)(7)(ii), then the Periodic Report must include an identification of the pressure vessel and a copy of the records specified in §63.123(b)(2).

§63.123 Storage vessel provisions—recordkeeping.

(a) Each owner or operator of a Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. For each Group 2 storage vessel, the owner or operator is not required to comply with any other provisions of §§63.119 through 63.123 of this subpart other than those required by this paragraph unless such vessel is part of an emissions average as described in §63.150 of this subpart.

(b) ~~[Reserved]~~Each owner or operator of a pressure vessel subject to the requirements of §63.119(a)(7) shall keep readily accessible records as specified in paragraphs (b)(1) and (b)(2) of this section.

(1) The date of each performance test conducted according to §63.119(a)(7)(ii).

(2) The record of each performance test conducted according to §63.119(a)(7)(ii), including the following:

(i) Date each defect was detected and the instrument reading (in ppmv) during the performance test.

(ii) Date of the next performance test that shows the instrument reading is less than 500 ppmv and the instrument reading (in ppmv) during the performance test.

(iii) Start and end dates of each period after the date in paragraph (b)(2)(i) of this section when the pressure vessel was completely empty.

(iv) Estimated emissions from each defect.

(c) An owner or operator who elects to comply with §63.119(b) of this subpart shall keep a record that each inspection required by §63.120(a) of this subpart was performed.

(d) An owner or operator who elects to comply with §63.119(c) of this subpart shall keep records describing the results of each seal gap measurement made in accordance with §63.120(b) of this subpart. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in §63.120(b) (3) and (4) of this subpart.

(e) An owner or operator who elects to comply with §63.119(d) of this subpart shall keep a record that each inspection required by §63.120 (a) and (c) of this subpart was performed.

(f) An owner or operator who elects to comply with §63.119(e) of this subpart shall keep in a readily accessible location the records specified in paragraphs (f)(1) and (f)(2) of this section.

(1) A record of the measured values of the parameters monitored in accordance with §63.120(d)(5) of this subpart.

(2) A record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of §63.119 (e)(1) or (e)(2) of this subpart, as applicable, due to the planned routine maintenance.

Such a record shall include the information specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this section.

(i) The first time of day and date the requirements of §63.119 (e)(1) or (e)(2) of this subpart, as applicable, were not met at the beginning of the planned routine maintenance, and

(ii) The first time of day and date the requirements of §63.119 (e)(1) or (e)(2) of this subpart, as applicable, were met at the conclusion of the planned routine maintenance.

(g) An owner or operator who elects to utilize an extension in emptying a storage vessel in accordance with §63.120 (a)(4), (b)(7)(ii), or (b)(8) of this subpart shall keep in a readily accessible location, the documentation specified in §63.120 (a)(4), (b)(7)(ii), or (b)(8), as applicable.

(h) An owner or operator who uses the by-pass provisions of §63.119(f)(3) of this subpart shall keep in a readily accessible location the records specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The reason it was necessary to by-pass the process equipment or fuel gas system;

(2) The duration of the period when the process equipment or fuel gas system was by-passed;

(3) Documentation or certification of compliance with the applicable provisions of §63.119(f)(3)(i) through §63.119(f)(3)(iii).

(i) An owner or operator who elects to comply with §63.119(g) shall keep the records specified in paragraphs (i)(1) through (3) of this section.

(1) A record of the U.S. Department of Transportation certification required by §63.119(g)(2).

(2) A record of the pressure relief vent setting specified in §63.119(g)(5).

(3) If complying with §63.119(g)(6)(ii), keep the records specified in paragraphs (i)(3)(i) and (ii) of this section.

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

(ii) A record of each time the vapor balancing system is used to comply with §63.119(g)(6)(ii).

(j) For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.120(d)(1)(iii), the owner or operator must keep the applicable records specified in (j)(1) through (j)(3) of this section.

(1) Breakthrough limit and bed life established according to §63.120(d)(1)(iii)(A).

(2) Each outlet HAP or TOC concentration measured according to §§63.120(d)(1)(iii)(B) and (d)(1)(iii)(C).

(3) Date and time you last replaced the adsorbent.

(k) For storage vessels in ethylene oxide service, subject to the requirements of §63.124, owners and operators must keep the records specified in paragraphs (k)(1) and (k)(2) of this section in addition to those records specified elsewhere in this section.

(1) For storage vessels in ethylene oxide service, records of the concentration of ethylene oxide of the fluid stored in each storage vessel.

(2) If emissions are vented through a closed-vent system to a non-flare control device, then the owner or operator must keep records of all periods during which operating values are outside of the applicable operating limits specified in §63.124(b)(4) through (6) when regulated material is being routed to the non-flare control device. The record must specify the operating

parameter, the applicable limit, and the highest (for maximum operating limits) or lowest (for minimum operating limits) value recorded during the period.

§§63.124- Process vents and storage vessels that are in ethylene oxide service—procedures to determine compliance.

This section applies beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part. In order to demonstrate compliance with the emission limits and work practice standards specified in §63.113(j) (for process vents in ethylene oxide service) and §63.119(a)(5) (for storage vessels in ethylene oxide service), owners and operators must meet the requirements specified in paragraphs (a) and (b) of this section.

(a) For initial compliance, owners and operators must comply with paragraphs (a)(1) through (4) of this section, as applicable.

(1) If an owner or operator chooses to reduce emissions of ethylene oxide by venting emissions through a closed vent system to a flare as specified in §63.113(j)(1) or §63.119(a)(5)(i), then the owner or operator must comply with §63.148 and conduct the initial visible emissions demonstration required by §63.670(h) of subpart CC of this part as specified in §63.108 of subpart F of this part.

(2) If an owner or operator chooses to reduce emissions of ethylene oxide by venting emissions through a closed vent system to a non-flare control device that reduces ethylene oxide by greater than or equal to 99.9 percent by weight as specified in §63.113(j)(2) or §63.119(a)(5)(ii), then the owner or operator must comply with §63.148 and paragraphs (a)(2)(i) through (viii) of this section.

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

(ii) Conduct the performance test according to the procedures in §63.116(c). Except as specified in §63.109(a)(6), use Method 18 of 40 CFR part 60, appendix A-6 or Method 320 of appendix A to this part to determine the ethylene oxide concentration. Use Method 1 or 1A of 40 CFR part 60, appendix A-1 to select the sampling sites at each sampling location. Determine the gas volumetric flowrate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A-2. Use Method 4 of 40 CFR part 60, appendix A-3 to convert the volumetric flowrate to a dry basis.

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

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

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

Where:

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

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

M = Molecular weight of ethylene oxide, 44.05 grams per gram-mole.

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

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

(iv) Calculate the percent reduction from the control device using equation 3 to this paragraph. An owner or operator has demonstrated initial compliance with §63.113(j)(2) or §63.119(a)(5)(ii) if the overall reduction of ethylene oxide is greater than or equal to 99.9 percent by weight.

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

Where:

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

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

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

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

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

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

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

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

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

(viii) If an owner or operator vents emissions through a closed vent system to a control device other than a flare, scrubber with a reactant tank, or thermal oxidizer, then the owner or operator must notify the Administrator of the operating parameters that are planned to be monitored during the performance test prior to establishing operating parameter limits for the control device.

(3) If an owner or operator chooses to reduce emissions of ethylene oxide by venting emissions through a closed vent system to a non-flare control device that reduces ethylene oxide to less than 1 ppmv as specified in §63.113(j)(2) or §63.119(a)(5)(ii), then the owner or operator must comply with §63.148 and either paragraph (a)(3)(i) or (ii) of this section.

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

(ii) If the owner or operator does not install a CEMS under paragraph (a)(3)(i) of this section, then the owner or operator must comply with paragraphs (a)(3)(ii)(A) through (C) of this section.

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

(B) Conduct the performance test according to the procedures in §63.116(c). Except as specified in §63.109(a)(6), use Method 18 of 40 CFR part 60, appendix A-6 or Method 320 of appendix A to this part to determine the ethylene oxide concentration. If the non-flare control device is a combustion device, correct the ethylene oxide concentration to 3 percent oxygen according to §63.116(c)(iii)(B), except "TOC or organic HAP" and "TOC (minus methane and ethane) or organic HAP" in the Variables C_c and C_m must be replaced with "ethylene oxide". An owner or operator has demonstrated initial compliance with §63.113(j)(2) or §63.119(a)(5)(ii), if the ethylene oxide concentration is less than 1 ppmv.

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

(4) If owners and operators choose to reduce emissions of ethylene oxide by venting emissions through a closed vent system to a non-flare control device that reduces ethylene oxide to less than 5 pounds per year for all combined process vents as specified in §63.113(j)(2), then the owner or operator must comply with §63.148 and paragraphs (a)(4)(i) through (iv) of this section.

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

(ii) Conduct the performance test according to the procedures in §63.116(c). Except as specified in §63.109(a)(6), use Method 18 of 40 CFR part 60, appendix A-6 or Method 320 of appendix A to this part to determine the ethylene oxide concentration. Use Method 1 or 1A of 40 CFR part 60, appendix A-1 to select the sampling site. Determine the gas volumetric flowrate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A-2. Use Method 4 of 40 CFR part 60, appendix A-3 to convert the volumetric flowrate to a dry basis.

(iii) Calculate the mass emission rate of ethylene oxide exiting the control device using Equation 2 to paragraph (a)(2)(iii) of this section. An owner or operator has demonstrated initial compliance with §63.113(j)(2) if the ethylene oxide from all process vents (controlled and uncontrolled) is less than 5 pounds per year when combined.

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

(b) For continuous compliance, owners and operators must comply with paragraphs (b)(1) through (6) of this section, as applicable.

(1) If an owner or operator chooses to reduce emissions of ethylene oxide by venting emissions through a closed vent system to a flare as specified in §63.113(j)(1) or §§63.119(a)(5)(i), then the owner or operator must comply with §63.148 and §63.108 of subpart F of this part.

(2) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a non-flare control device that reduces ethylene oxide to less than 1 ppmv as specified in §63.113(j)(2) or §63.119(a)(5)(ii), and you choose to comply with paragraph (a)(3)(i) of this section, then continuously monitor the ethylene oxide concentration at the exit of the control device using an FTIR CEMS meeting the requirements of Performance Specification

15 of 40 CFR part 60, appendix B and §63.2450(j) of subpart FFFF of this part. If an owner or operator uses an FTIR CEMS, then the owner or operator does not need to conduct the performance testing required in paragraph (b)(3) of this section or the operating parameter monitoring required in paragraphs (b)(4) through (6) of this section.

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

(4) If an owner or operator vents emissions through a closed vent system to a scrubber with a reactant tank, then the owner or operator must comply with §63.148 and meet the operating parameter limits specified in paragraphs (b)(4)(i) through (v) of this section.

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

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

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

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

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

(5) If an owner or operator vents emissions through a closed vent system to a thermal oxidizer, then the owner or operator must comply with §63.148, and the owner or operator must meet the operating parameter limits specified in paragraphs (b)(5)(i) and (ii) of this section and the requirements in paragraph (b)(5)(iii) of this section.

(i) Minimum combustion chamber temperature, equal to the average combustion chamber temperature measured during the most recent performance test. Determine combustion chamber temperature with a temperature sensor with a minimum accuracy of at least ±1 percent over the normal range of temperature measured, expressed in degrees Celsius, or 2.8 degrees Celsius, whichever is greater. Compliance with the minimum combustion chamber temperature operating limit must be determined continuously on a 1-hour block basis.

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

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

(6) If an owner or operator vents emissions through a closed vent system to a control device other than a flare, scrubber with a reactant tank, or thermal oxidizer, then the owner or operator must comply with §63.148, and the owner or operator must monitor the operating parameters identified in paragraph (a)(2)(viii) of this section and meet the established operating parameter limits to ensure continuous compliance. The frequency of monitoring and averaging time will be determined based upon the information provided to the Administrator.

§63.125 [Reserved]

§63.126 Transfer operations provisions—reference control technology.

(a) For each Group 1 transfer rack the owner or operator shall equip each transfer rack with a vapor collection system and control device.

(1) Each vapor collection system shall be designed and operated to collect the organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading, and to route the collected hazardous air pollutants vapors to a process, or to a fuel gas system, or to a control device as provided in paragraph (b) of this section.

(2) Each vapor collection system shall be designed and operated such that organic HAP vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(3) Whenever organic hazardous air pollutants emissions are vented to a process, fuel gas system, or control device used to comply with the provisions of this subpart, the process, fuel gas system, or control device shall be operating.

(b) For each Group 1 transfer rack the owner or operator shall comply with paragraph (b)(1), (b)(2), (b)(3), or (b)(4) of this section.

(1) Use a control device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to an exit concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen. If a boiler or process heater is used to comply with the percent reduction requirement, then the vent stream shall be introduced into the flame zone of such a device. Compliance may be achieved by using any combination of combustion, recovery, and/or recapture devices.

(2) Reduce emissions of organic HAP's using a flare.

(i) Except as specified in paragraph (a) of §63.108 of subpart F of this part, t~~T~~he flare shall comply with the requirements of §63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in §63.111 of this subpart, shall not be vented to a flare.

(3) Reduce emissions of organic hazardous air pollutants using a vapor balancing system designed and operated to collect organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading; and to route the collected hazardous air pollutants vapors to the storage vessel from which the liquid being loaded originated, or to another storage vessel connected to a common header, or to compress and route to a process collected hazardous air pollutants vapors.

(4) Route emissions of organic hazardous air pollutants to a fuel gas system or to a process where the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (b)(4)(i) through (b)(4)(iv) of this section.

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

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(c) For each Group 2 transfer rack, the owner or operator shall maintain records as required in §63.130(f). No other provisions for transfer racks apply to the Group 2 transfer rack.

(d) Halogenated emission streams from Group 1 transfer racks that are combusted shall be controlled according to paragraph (d)(1) or (d)(2) of this section. Determination of whether a vent stream is halogenated shall be made using procedures in (d)(3).

(1) If a combustion device is used to comply with paragraph (b)(1) of this section for a halogenated vent stream, then the vent stream exiting the combustion device shall be ducted to a halogen reduction device, including, but not limited to, a scrubber before it is discharged to the atmosphere.

(i) Except as provided in paragraph (d)(1)(ii) of this section, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in §63.111 of this subpart, by 99 percent or shall reduce the outlet mass emission rate of total hydrogen halides and halogens to 0.45 kilograms per hour or less, whichever is less stringent.

(ii) If a scrubber or other halogen reduction device was installed prior to December 31, 1992, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in §63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A halogen reduction device, such as a scrubber, or other technique may be used to make the vent stream non-halogenated by reducing the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to any combustion control device used to comply with the requirements of paragraphs (b)(1) or (b)(2) of this section.

(3) In order to determine whether a vent stream is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated.

(i) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume by compound) shall be determined based on the following procedures:

(A) Process knowledge that no halogen or hydrogen halides are present in the process, or

(B) Applicable engineering assessment as specified in §63.115(d)(1)(iii) of this subpart, or

(C) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, ~~or~~

(D) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part, or

(E) The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(ii) The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 V_s \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j * L_{ji} * M_{ji} \right)$$

where:

E	=	Mass of halogen atoms, dry basis, kilograms per hour.
K_2	=	Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 °C.

C_j	=	Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.
M_{ji}	=	Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.
L_{ji}	=	Number of atoms of halogen i in compound j of the gas stream.
V_s	=	Flow rate of gas stream, dry standard cubic meters per minute, determined according to §63.128(a)(8) of this subpart.
j	=	Halogenated compound j in the gas stream.
i	=	Halogen atom i in compound j of the gas stream.
n	=	Number of halogenated compounds j in the gas stream.
m	=	Number of different halogens i in each compound j of the gas stream.

(e) For each Group 1 transfer rack the owner or operator shall load organic HAP's into only tank trucks and railcars which:

(1) Have a current certification in accordance with the U. S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars; or

(2) Have been demonstrated to be vapor-tight within the preceding 12 months, as determined by the procedures in §63.128(f) of this subpart. Vapor-tight means that the truck or railcar tank will sustain a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals.

(f) The owner or operator of a transfer rack subject to the provisions of this subpart shall load organic HAP's to only tank trucks or railcars equipped with vapor collection equipment that is compatible with the transfer rack's vapor collection system.

(g) The owner or operator of a transfer rack subject to this subpart shall load organic HAP's to only tank trucks or railcars whose collection systems are connected to the transfer rack's vapor collection systems.

(h) Except as specified in paragraph (h)(1) of this section, ~~T~~the owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure-relief device in the transfer rack's vapor collection system or in the organic hazardous air pollutants loading equipment of each tank truck or railcar shall begin to open during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(1) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraph (h) of this section does not apply. Instead, pressure relief devices are subject to the requirements specified in §63.165(e) of subpart H of this part.

(2) [Reserved]

(i) Each valve in the vent system that would divert the vent stream to the atmosphere, either directly or indirectly, shall be secured in a non-diverting position using a carseal or a lock-and-key type configuration, or shall be equipped with a flow indicator. Except as specified in paragraph (i)(1) of this section, ~~E~~equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief devices needed for safety purposes is not subject to this paragraph.

(1) For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the last sentence in paragraph (i) of this section no longer applies. Instead, the exemptions specified in paragraph (i)(1)(i) and (i)(1)(ii) of this section apply.

(i) Except for pressure relief devices subject to §63.165(e)(4) of subpart H of this part, equipment such as low leg drains and equipment subject to the requirements of subpart H of this part are not subject to this paragraph (i) of this section.

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

(2) [Reserved]

§63.127 Transfer operations provisions—monitoring requirements.

(a) Each owner or operator of a Group 1 transfer rack equipped with a combustion device used to comply with the 98 percent total organic hazardous air pollutants reduction or 20 parts per million by volume outlet concentration requirements in §63.126(b)(1) of this subpart shall install, calibrate, maintain, and operate according to the manufacturers' specifications (or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately) the monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) 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, a 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, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, except as specified in paragraph (a) of §63.108 of subpart F of this part, a device (including but not limited to a thermocouple, infrared sensor, or an ultra-violet beam sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater with a design heat input capacity less than 44 megawatts 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 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 the case of halogenated vent streams, the following monitoring equipment is required for the scrubber:

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter 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 (a)(4)(ii)(A) through (a)(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 specified in §63.100(k) of subpart F of this part, 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 other than start-ups, shutdowns, or malfunctions. 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 §63.103(c). For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "other than start-ups, shutdowns, or malfunctions" in this paragraph no longer applies.

(b) Each owner or operator of a Group 1 transfer rack that uses a recovery device or recapture device to comply with the 98-percent organic hazardous air pollutants reduction or 20 parts per million by volume hazardous air pollutants concentration requirements in §63.126(b)(1) of this subpart shall install either an organic monitoring device equipped with a continuous recorder, or the monitoring equipment specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, depending on the type of recovery device or recapture device used. All monitoring equipment shall be installed, calibrated, and maintained 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) Where an absorber is used, a scrubbing liquid temperature monitoring device equipped with a continuous recorder shall be used; and a specific gravity monitoring device equipped with a continuous recorder shall be used.

(2) Where a condenser is used, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used.

(3) Except as specified in paragraph (b)(4) of this section, w~~W~~here a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle shall be used.

(4) Beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, if the owner or operator vents emissions through a closed vent system to an adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then the owner or operator must install a system of two or more adsorber units in series and comply with the requirements specified in paragraphs (b)(4)(i) through (b)(4)(iii) of this section.

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

(ii) Monitor the HAP or total organic compound (TOC) concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (b)(4)(iii)(B) of this section. The owner or operator must measure the concentration of HAP or TOC using either a portable analyzer, in accordance with Method 21 of 40 CFR part 60, appendix A–7 using methane, propane, isobutylene, or the primary HAP being controlled as the calibration gas or Method 25A of 40 CFR part 60, appendix A–7 using methane, propane, or the primary HAP being controlled as the calibration gas.

(iii) Comply with paragraph (b)(4)(iii)(A) of this section, and comply with the monitoring frequency according to paragraph (b)(4)(iii)(B) of this section.

(A) The first adsorber in series must be replaced immediately when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph, ‘‘immediately’’ means within 8 hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons. The owner or operator must monitor at the outlet of the first adsorber within 3 days of replacement to confirm it is performing properly.

(B) Based on the adsorber bed life established according to paragraph (b)(4)(i) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than 2 months of life remaining, at least weekly if the adsorbent has between 2 months and 2 weeks of life remaining, and at least daily if the adsorbent has 2 weeks or less of life remaining.

(c) An owner or operator of a Group 1 transfer rack may request approval to monitor parameters other than those listed in paragraph (a) or (b) of this section. The request shall be submitted according to the procedures specified in §63.151(f) or §63.152(e) of this subpart. Approval shall be requested if the owner or operator:

(1) Seeks to demonstrate compliance with the standards specified in §63.126(b) of this subpart with a control device other than an incinerator, boiler, process heater, flare, absorber, condenser, or carbon adsorber; or

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

(d) The owner or operator of a Group 1 transfer rack using a closed vent system that contains by-pass lines that could divert a vent stream flow away from the control device used to comply with §63.126(b) of this subpart shall comply with paragraph (d)(1) or (d)(2), and (d)(3) of this section. Except as specified in paragraph (d)(3) of this section, ~~E~~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 §63.130(b) of this subpart. The flow indicator shall be installed at the entrance to any by-pass line that could divert the vent stream away from the control device to the atmosphere; or

(2) Secure the by-pass line valve in the closed position with a car-seal or a lock-and-key type configuration.

(i) 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 closed position and the vent stream is not diverted through the by-pass line.

(ii) If a car-seal has been broken or a valve position changed, the owner or operator shall record that the vent stream has been diverted. The car-seal or lock-and-key combination shall be returned to the secured position as soon as practicable but not later than 15 calendar days after the change in position is detected.

(3) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part:

(i) The use of a bypass line at any time on a closed vent system to divert emissions (subject to the emission standards in §63.112 of this subpart) to the atmosphere or to a control device not meeting the requirements specified in this subpart is an emissions standards violation.

(ii) The last sentence in paragraph (d) of this section no longer applies. Instead, the exemptions specified in paragraph (d)(3)(ii)(A) and (d)(3)(ii)(B) of this section apply.

(A) Except for pressure relief devices subject to §63.165(e)(4) of subpart H of this part, equipment such as low leg drains and equipment subject to the requirements of subpart H of this part are not subject to this paragraph (d) of this section.

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

(e) The owner or operator shall establish a range that indicates proper operation of the control device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in §63.152(b)(2) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

§63.128 Transfer operations provisions—test methods and procedures.

(a) A performance test is required for determining compliance with the reduction of total organic HAP emissions in §63.126(b) of this subpart for all control devices except as specified in paragraph (c) of this section. Performance test procedures are as follows:

(1) For control devices shared between transfer racks and process vents, the performance test procedures in §63.116(c) of this subpart shall be followed.

(2) A performance test shall consist of three runs.

(3) All testing equipment shall be prepared and installed as specified in the appropriate test methods.

(4) For control devices shared between multiple arms that load simultaneously, 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.

(5) For control devices that are capable of continuous vapor processing but do not meet the conditions in (a)(7)(i)(B) of this section.

(A) Sampling sites shall be located at the inlet and outlet of the control device, except as provided in paragraph (a)(7)(i)(B) of this section.

(B) If a 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, selection of paragraph (a)(1) or (a)(4) of this section, each run shall represent at least one complete filling period, during which liquid organic HAP's are loaded, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(6) For intermittent vapor processing systems that do not meet the conditions in paragraph (a)(1) or (a)(4) of this section, each run shall represent at least one complete control device cycle, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(7) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of sampling sites.

(i) For an owner or operator complying with the 98-percent total organic HAP reduction requirements in §63.126(b)(1) of this subpart, sampling sites shall be located as specified in paragraph (a)(7)(i)(A) or (a)(7)(i)(B) of this section.

(A) Sampling sites shall be located at the inlet and outlet of the control device, except as provided in paragraph (a)(7)(i)(B) of this section.

(B) If a 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, 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 vent streams and primary and secondary fuels introduced into the boiler or process heater. A sampling site shall also be located at the outlet of the boiler or process heater.

(ii) For an owner or operator complying with the 20 parts per million by volume limit in §63.126(b)(1) of this subpart, the sampling site shall be located at the outlet of the control device.

(8) The volumetric flow rate, in standard cubic meters per minute at 20 °C, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A as appropriate.

(9) For the purpose of determining compliance with the 20 parts per million by volume limit in §63.126(b)(1), Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure either organic compound concentration or organic HAP concentration, except as provided in paragraphs (a)(11) and (a)(12) of this section.

(i) If Method 25A of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate the concentration of organic compounds (C_T):

(A) The principal organic HAP in the vent stream shall be used as the calibration gas.

(B) The span value for Method 25A of 40 CFR part 60, appendix A shall be between 1.5 and 2.5 times the concentration being measured.

(C) Use of Method 25A of 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.

(D) The concentration of TOC shall be corrected to 3 percent oxygen using the procedures and equation in paragraph (a)(9)(v) of this section.

(ii) If Method 18 of 40 CFR part 60, appendix A is used to measure the concentration of organic compounds or ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part), the organic compound concentration (C_T) is the sum of the individual components and shall be computed for each run using the following equation:

$$C_T = \sum_{j=1}^{n} C_j$$

where:

C_T	=	Total concentration of organic compounds (minus methane and ethane), dry basis, parts per million by volume.
C_j	=	Concentration of sample components j, dry basis, parts per million by volume.
n	=	Number of components in the sample.

(iii) If an owner or operator uses Method 18 of 40 CFR part 60, appendix A or ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) to compute total organic HAP concentration rather than organic compounds concentration, the equation in paragraph (a)(9)(ii) of this section shall be used except that only organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iv) ~~The emission rate correction factor or excess air, integrated sampling and analysis procedures of~~ Method 3A ~~Method 3B~~ of 40 CFR part 60, appendix A, or the manual method in ANSI/ASME PTC 19-10-1981—Part 10 (Incorporated by reference, see § 60.17 of Subpart A of this part) shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic hazardous air pollutants or organic compound samples, and the samples shall be taken during the same time that the organic hazardous air pollutants or organic compound samples are taken.

(v) The organic compound concentration corrected to 3 percent oxygen (C_c) shall be calculated using the following equation:

$$C_c = C_T \left(\frac{17.9}{20.9 - \%O_{2d}} \right)$$

where:

C_c	=	Concentration of organic compounds corrected to 3 percent oxygen, dry basis, parts per million by volume.
C_T	=	Total concentration of organic compounds, dry basis, parts per million by volume.
$\%O_{2d}$	=	Concentration of oxygen, dry basis, percent by volume.

(10) For the purpose of determining compliance with the 98-percent reduction requirement in §63.126(b)(1) of this subpart, Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used, except as provided in paragraphs (a)(11) and (a)(12) of this section.

(i) For the purpose of determining compliance with the reduction efficiency requirement, organic compound concentration may be measured in lieu of organic HAP concentration.

(ii) If Method 25A of 40 CFR part 60, appendix A is used to measure the concentration of organic compounds (C_T), the principal organic HAP in the vent stream shall be used as the calibration gas.

(A) An emission testing interval shall consist of each 15-minute period during the performance test. For each interval, a reading from each measurement shall be recorded.

(B) The average organic compound concentration and the volume measurement shall correspond to the same emissions testing interval.

(C) The mass at the inlet and outlet of the control device during each testing interval shall be calculated as follows:

$$M_j = FKV_s\,C_T$$

where:

M_j	=	Mass of organic compounds emitted during testing interval j, kilograms.
V_s	=	Volume of air-vapor mixture exhausted at standard conditions, 20 °C and 760 millimeters mercury, standard cubic meters.
C_T	=	Total concentration of organic compounds (as measured) at the exhaust vent, parts per million by volume, dry basis.
K	=	Density, kilograms per standard cubic meter organic HAP. 659 kilograms per standard cubic meter organic HAP. (Note: The density term cancels out when the percent reduction is calculated. Therefore, the density used has no effect. The density of hexane is given so that it can be used to maintain the units of M_j.)
F	=	10^{-6} = Conversion factor, (cubic meters organic HAP per cubic meters air) * (parts per million by volume)$^{-1}$.

(D) The organic compound mass emission rates at the inlet and outlet of the control device shall be calculated as follows:

$$E_i = \frac{\sum_{j=1}^{n} M_{ij}}{T}$$

$$E_o = \frac{\sum_{j=1}^{n} M_{oj}}{T}$$

where:

E_i, E_o	=	Mass flow rate of organic compounds at the inlet (i) and outlet (o) of the combustion or recovery device, kilograms per hour.
M_{ij}, M_{oj}	=	Mass of organic compounds at the inlet (i) or outlet (o) during testing interval j, kilograms.
T	=	Total time of all testing intervals, hours.
n	=	Number of testing intervals.

(iii) If Method 18 of 40 CFR part 60, appendix A or ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) is used to measure organic compounds, the mass rates of organic compounds (E_i, E_o) shall be computed using the following equations:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} MW_{ij} \right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} MW_{oj} \right) Q_o$$

where:

C_{ij}, C_{oj}	=	Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.
MW_{ij}, MW_{oj}	=	Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.
Q_i, Q_o	=	Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.
K_2	=	Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

(iv) Where Method 18 or 25A of 40 CFR part 60, appendix A or ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) is used to measure the percent reduction in organic compounds, the percent reduction across the control device shall be calculated as follows:

$$R = \frac{E_i - E_o}{E_i}(100)$$

where:

R	=	Control efficiency of control device, percent.
E_i	=	Mass emitted or mass flow rate of organic compounds at the inlet to the combustion or recovery device as calculated under paragraph (a)(10)(ii)(D) or (a)(10)(iii) of this section, kilogram per hour.
E_o	=	Mass emitted or mass flow rate of organic compounds at the outlet of the combustion or recovery device, as calculated under paragraph (a)(10)(ii)(D) or (a)(10)(iii) of this section, kilogram per hour.

(11) The owner or operator may use any methods or data other than Method 18 or Method 25A of 40 CFR part 60, appendix A, if the method or data has been validated according to Method 301 of appendix A of this part.

(12) The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(b) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~W~~when a flare is used to comply with §63.126(b)(2), the owner or operator shall comply with paragraphs (b)(1) through (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.

(1) Conduct a visible emission test using the techniques specified in §63.11(b)(4). The observation period shall be as specified in paragraph (b)(1)(i) or (ii) of this section instead of the 2-hour period specified in §63.11(b)(4).

(i) If the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.

(ii) If additional loading cycles are initiated within the 2-hour period, then visible emission observations shall be conducted for the additional cycles.

(2) Determine the net heating value of the gas being combusted, using the techniques specified in §63.11(b)(6).

(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.

(c) An owner or operator is not required to conduct a performance test when any of the conditions specified in paragraphs (c)(1) through (c)(7) of this section are met.

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

(2) When a boiler or process heater burning hazardous waste is used 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;~~.~~

(iii) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements of subpart EEE of this part; or

(iv) Complies with subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(3) When emissions are routed to a fuel gas system or when a boiler or process heater is used and the vent stream is introduced with the primary fuel.

(4) When a vapor balancing system is used.

(5) When emissions are recycled to a chemical manufacturing process unit.

(6) When a transfer rack transfers less than 11.8 million liters per year and the owner or operator complies with the requirements in paragraph (h) of this section or uses a flare to comply with §63.126(b)(2) of this subpart.

(7) When a hazardous waste incinerator is used for which the owner or operator:

(i) ~~h~~Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;~~, or~~

(ii) ~~h~~Has certified compliance with the interim status requirements 40 CFR part 265, subpart O;

(iii) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements subpart EEE of this part; or

(iv) Complies with the requirements subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(d) An owner or operator using a combustion device followed by a scrubber or other halogen reduction device to control a halogenated transfer vent stream in compliance with

§63.126(d) of this subpart shall conduct a performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens.

(1) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an owner or operator complying with the 0.45 kilogram per hour outlet mass emission rate limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to release to the atmosphere.

(2) Except as provided in paragraph (d)(5) of this section, Method 26 or 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration in milligrams per dry standard cubic meter of the hydrogen halides and halogens that may be present in the stream. The mass emission rate of each hydrogen halide and halogen compound shall be calculated from the concentrations and the gas stream flow rate.

(3) To determine compliance with the percent emissions reduction limit, the mass emission rate for any hydrogen halides and halogens present at the scrubber inlet shall be summed together. The mass emission rate of the compounds present at the scrubber outlet shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(4) To demonstrate compliance with the 0.45 kilograms per hour mass emission rate limit, the test results must show that the mass emission rate of the total hydrogen halides and halogens measured at the scrubber outlet is below 0.45 kilograms per hour.

(5) The owner or operator may use any other method or data to demonstrate compliance if the method or data has been validated according to the protocol of Method 301 of appendix A of this part.

(e) The owner or operator shall inspect the vapor collection system and vapor balancing system, according to the requirements for vapor collection systems in §63.148 of this subpart.

(1) Inspections shall be performed only while a tank truck or railcar is being loaded.

(2) For vapor collection systems only, an inspection shall be performed prior to each performance test required to demonstrate compliance with §63.126(b)(1) of this subpart.

(3) For each vapor collection system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(f) For the purposes of demonstrating vapor tightness to determine compliance with §63.126(e)(2) of this subpart, the following procedures and equipment shall be used:

(1) The pressure test procedures specified in Method 27 of 40 CFR part 60, appendix A; and

(2) A pressure measurement device which has a precision of ~~#1B~~±2.5 millimeters of mercury or better and which is capable of measuring above the pressure at which the tank truck or railcar is to be tested for vapor tightness.

(g) An owner or operator using a scrubber or other halogen reduction device to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to a combustion device used to comply with §63.126(d)(2) shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in paragraph (d)(3) of this section.

(h) For transfer racks that transfer less than 11.8 million liters per year of liquid organic HAP's, the owner or operator may comply with the requirements in paragraphs (h)(1) through (h)(3) of this section instead of the requirements in paragraph (a) or (b) of this section.

(1) The owner or operator shall prepare, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, a design evaluation that shall document that the control device being used achieves the required control efficiency during reasonably expected maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and organic HAP content, and the information specified in paragraphs (h)(1)(i) through (h)(1)(v) of this section, as applicable.

(i) If the control device receives vapors, gases, or liquids, other than fuels, from emission points other than transfer racks subject to this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(ii) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 degrees Celsius is used to meet the 98-percent emission reduction requirement, documentation that those conditions exist is sufficient to meet the requirements of paragraph (h)(1) of this section.

(iii) Except as provided in paragraph (h)(1)(ii) of this section, for thermal incinerators, the design evaluation shall include the autoignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature.

(iv) Except as provided in §63.127(b)(4), ~~F~~for carbon adsorbers, the design evaluation shall include the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(v) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the operating range for each monitoring parameter identified for each control device. The specified operating range shall represent the conditions for which the control device can achieve the 98-percent-or-greater emission reduction required by §63.126(b)(1) of this subpart.

(3) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in §63.152(b) of this subpart or operating permit and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status, except as provided in §§63.152(c) and 63.152(f) of this subpart.

§63.129 Transfer operations provisions—reporting and recordkeeping for performance tests and notification of compliance status.

(a) Each owner or operator of a Group 1 transfer rack shall:

(1) Keep an up-to-date, readily accessible record of the data specified in paragraphs (a)(4) through (a)(8) of this section, as applicable.

(2) Include the data specified in paragraphs (a)(4) through (a)(7) of this section in the Notification of Compliance Status report as specified in §63.152(b) of this subpart. If the

performance test report is submitted electronically through the EPA's CEDRI in accordance with §63.152(h), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(3) If any subsequent performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) through (a)(7) of this section in the next Periodic Report as specified in §63.152(c) of this subpart.

(4) Record and report the following when using a control device other than a flare to achieve a 98 weight percent reduction in total organic HAP or a total organic HAP concentration of 20 parts per million by volume, as specified in §63.126(b)(1) of this subpart:

(i) The parameter monitoring results for thermal incinerators, catalytic incinerators, boilers or process heaters, absorbers, condensers, or carbon adsorbers specified in table 7 of this subpart, recorded during the performance test, and averaged over the time period of the performance testing.

(ii) The percent reduction of total organic HAP or TOC achieved by the control device determined as specified in §63.128(a) of this subpart, or the concentration of total organic HAP or TOC (parts per million by volume, by compound) determined as specified in §63.128(a) of this subpart at the outlet of the control device. For combustion devices, the concentration shall be reported on a dry basis corrected to 3 percent oxygen.

(iii) The parameters shall be recorded at least every 15 minutes.

(iv) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(5) Except as specified in paragraph (a) of §63.108 of subpart F of this part, r~~R~~ecord and report the following when using a flare to comply with §63.126(b)(2) of this subpart:

(i) 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 §63.128(b) of this subpart; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(6) Record and report the following when using a scrubber following a combustion device to control a halogenated vent stream, as specified in §63.126(d) of this subpart:

(i) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens determined according to the procedures in §63.128(d) of this subpart;

(ii) The parameter monitoring results for scrubbers specified in table 7 of this subpart, and averaged over the time period of the performance test; and

(iii) The parameters shall be recorded at least every 15 minutes.

(7) Record and report the halogen concentration in the vent stream determined according to the procedures as specified in §63.128(d) of this subpart.

(8) Report that the emission stream is being routed to a fuel gas system or a process, when complying using §63.126(b)(4).

(b) If an owner or operator requests approval to use a control device other than those listed in table 7 of this subpart or to monitor a parameter other than those specified in table 7 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under §63.151(f) or §63.152(e) of this subpart. The

Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(c) For each parameter monitored according to table 7 of this subpart or paragraph (b) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control device. In order to establish the range, the information required in §63.152(b)(2) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

(d) Each owner or operator shall maintain a record describing in detail the vent system used to vent each affected transfer vent stream to a control device. This document shall list all valves and vent pipes that could vent the stream to the atmosphere, thereby by~~-~~passing the control device; identify which valves are secured by car-seals or lock-and-key type configurations; and indicate the position (open or closed) of those valves which have car-seals. Except as specified in paragraph (d)(1) of this section, ~~E~~equipment leaks 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) For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the last sentence in paragraph (d) of this section no longer applies. Instead, the exemptions specified in paragraph (d)(1)(i) and (d)(1)(ii) of this section apply.

(i) Except for pressure relief devices subject to §63.165(e)(4) of subpart H of this part, equipment such as low leg drains and equipment subject to the requirements of subpart H of this part are not subject to this paragraph (d) of this section.

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

(2) [Reserved]

(e) An owner or operator meeting the requirements of §63.128(h) of this subpart shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the information specified in §63.128(h)(1) of this subpart.

(f) An owner or operator meeting the requirements of §63.128(h) of this subpart shall submit, as part of the Notification of Compliance Status required by §63.152(b) of this subpart, the operating range for each monitoring parameter identified for each control device.

§63.130 Transfer operations provisions—periodic recordkeeping and reporting.

(a) Each owner or operator using a control device to comply with §63.126(b)(1) or (b)(2) of this subpart shall keep the following up-to-date, readily accessible records:

(1) While the transfer vent stream is being vented to the control device, continuous records of the equipment operating parameters specified to be monitored under §63.127 of this subpart, and listed in table 7 of this subpart or specified by the Administrator in accordance with §§63.127(c) and 63.129(b). For flares complying with§63.11(b) of subpart A of this part, the hourly records and records of pilot flame outages specified in table 7 shall be maintained in place of continuous records. For flares complying with §63.108 of subpart F of this part, the owner or operator must comply with the recordkeeping requirements specified therein.

(2) Records of the daily average value of each monitored parameter for each operating day determined according to the procedures specified in §63.152(f), except as provided in paragraphs (a)(2)(i) through (a)(2)~~(iii)~~(iv) of this section.

(i) For flares, except as specified in paragraph (a) of §63.108 of subpart F of this part, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(ii) If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 7 of this subpart shall be kept instead of the daily averages.

(iii) Except as specified in paragraph (a)(2)(iv) of this section, ~~R~~records of the duration of all periods when the vent stream is diverted through by-pass lines shall be kept rather than daily averages.

(iv) For each flow event from a bypass line subject to the requirements in §63.127(d) for each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must also maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in this subpart, the owner or operator must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(3) For boilers or process heaters, records of any changes in the location at which the vent stream is introduced into the flame zone as required under the reduction of total organic HAP emissions in §63.126(b)(1) of this subpart.

(b) If a vapor collection system containing valves that could divert the emission stream away from the control device is used, each owner or operator of a Group 1 transfer rack subject to the provisions of §63.127(d) of this subpart shall keep up-to-date, readily accessible records of:

(1) Hourly records of whether the flow indicator specified under §63.127(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.

(2) Where a seal mechanism is used to comply with §63.127(d)(2), hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken, as listed in table 7 of this subpart.

(3) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (b)(1) and (b)(2) of this section. For each flow event from a bypass line subject to the requirements in §63.127(d), the owner or operator must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line

requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in this subpart, the owner or operator must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(c) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~E~~each owner or operator of a Group 1 transfer rack who uses a flare to comply with §63.126(b)(2) of this subpart shall keep up-to-date, readily accessible records of the flare pilot flame monitoring specified under §63.127(a)(2) of this subpart.

(d) Each owner or operator of a transfer rack subject to the requirements of §63.126 of this subpart shall submit to the Administrator Periodic Reports of the following information according to the schedule in §63.152(c) of this subpart:

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values were outside the range established in the Notification of Compliance Status or operating permit. Additionally, report the identification of the transfer rack, the monitored parameter out of range, and the date of such occurrences.

(2) Reports of the start date and duration (in hours) of periods when monitoring data are not collected for each excursion caused by insufficient monitoring data as defined in §63.152(c)(2)(ii)(A) of this subpart.

(3) Reports of the start date and time~~s~~ and duration (in hours) of all periods recorded under paragraph (b)(1) of this section when the vent stream was diverted from the control device, and if applicable, the information in paragraph (d)(7) of this section.

(4) Reports of ~~all~~the start date and time~~s~~ and duration (in hours) recorded under paragraph (b)(2) of this section when maintenance is performed on car-sealed valves, when the car seal is broken, when the by~~-~~pass line valve position is changed, or the key for a lock-and-key type configuration has been checked out, and if applicable, the information in paragraph (d)(7) of this section.

(5) Except as specified in paragraph (a) of §63.108 of subpart F of this part, r~~R~~eports of the times and durations of all periods recorded under paragraph (a)(2)(i) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (a)(2)~~(vi)~~(ii) of this section were outside the ranges established in the Notification of Compliance Status or operating permit. Include the identification of the carbon bed, the monitored parameter that was outside the established range, and the start date, start time, and duration (in hours) for the regeneration cycle in the report.

(7) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (d)(3) and (d)(4) of this section. For bypass lines subject to the requirements in §63.127(d), the Periodic Report must include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(e) The owner or operator of a Group 1 transfer rack shall record that the verification of DOT tank certification or Method 27 testing, required in §63.126(e) of this subpart, has been performed. Various methods for the record of verification can be used, such as: A check off on a log sheet; a list of DOT serial numbers or Method 27 data; or a position description for gate security, showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.

(f) Each owner or operator of a Group 1 or Group 2 transfer rack shall record, update annually, and maintain the information specified in paragraphs (f)(1) through (f)(3) of this section in a readily accessible location on site:

(1) An analysis demonstrating the design and actual annual throughput of the transfer rack;

(2) An analysis documenting the weight-percent organic HAP's in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations.

(3) An analysis documenting the annual rack weighted average HAP partial pressure of the transfer rack.

(i) For Group 2 transfer racks that are limited to transfer of organic HAP's with partial pressures less than 10.3 kilopascals, documentation is required of the organic HAP's (by compound) that are transferred. The rack weighted average partial pressure does not need to be calculated.

(ii) For racks transferring one or more organic HAP's with partial pressures greater than 10.3 kilopascals, as well as one or more organic HAP's with partial pressures less than 10.3

kilopascals, a rack weighted partial pressure shall be documented. The rack weighted average HAP partial pressure shall be weighted by the annual throughput of each chemical transferred.

§63.131 [Reserved]

§63.132 Process wastewater provisions—general.

(a) *Existing sources.* This paragraph specifies the requirements applicable to process wastewater streams located at existing sources. The owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(3) of this section, no later than the applicable dates specified in §63.100 of subpart F of this part.

(1) *Determine wastewater streams to be controlled for Table 9 compounds.* Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in either paragraph (a)(1)(i) or (a)(1)(ii) of this section, and comply with the requirements in paragraph (a)(1)(iii) of this section.

(i) Comply with paragraph (c) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream.

(iii) Comply with paragraph (f) of this section.

(2) *Requirements for Group 1 wastewater streams.* For wastewater streams that are Group 1 for Table 9 compounds, comply with paragraphs (a)(2)(i) through (a)(2)(iv) of this section.

(i) Comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators as specified in

§63.133 through §63.137 of this subpart, except as provided in paragraphs (a)(2)(i)(A) ~~and~~ through (a)(2)(i)~~(B)~~(C) of this section and §63.138(a)(3) of this subpart.

(A) Except as specified in paragraph (a)(2)(i)(C) of this section, ~~T~~the waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions.

(B) Except as specified in paragraph (a)(2)(i)(C) of this section, ~~T~~the pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices.

(C) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (a)(2)(i)(A) and (a)(2)(i)(B) of this section do not apply. Instead, pressure relief devices are subject to the requirements specified in §63.165(e) of subpart H of this part.

(ii) Comply with the applicable requirements for control of Table 9 compounds as specified in §63.138 of this subpart. Alternatively, the owner or operator may elect to comply with the treatment provisions specified in §63.132(g) of this subpart.

(iii) Comply with the applicable monitoring and inspection requirements specified in §63.143 of this subpart.

(iv) Comply with the applicable recordkeeping and reporting requirements specified in §§63.146 and 63.147 of this subpart.

(3) *Requirements for Group 2 wastewater streams.* For wastewater streams that are Group 2 for table 9 compounds, comply with the applicable recordkeeping and reporting requirements specified in §§63.146(b)(1) and 63.147(b)(8).

(b) *New sources.* This paragraph specifies the requirements applicable to process wastewater streams located at new sources. The owner or operator shall comply with the requirements in paragraphs (b)(1) through (b)(4) of this section, no later than the applicable dates specified in §63.100 of subpart F of this part.

(1) *Determine wastewater streams to be controlled for Table 8 compounds.* Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either paragraph (b)(1)(i) or (b)(1)(ii) of this section, and comply with the requirements in paragraph (b)(1)(iii) of this section.

(i) Comply with paragraph (d) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 8 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream for Table 8 compounds.

(iii) Comply with paragraph (f) of this section.

(2) *Determine wastewater streams to be controlled for Table 9 compounds.* Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in either paragraph (b)(2)(i) or (b)(2)(ii) of this section, and comply with the requirements in paragraph (b)(2)(iii) of this section.

(i) Comply with paragraph (c) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream.

(iii) Comply with paragraph (f) of this section.

(3) *Requirements for Group 1 wastewater streams.* For wastewater streams that are Group 1 for Table 8 compounds and/or Table 9 compounds, comply with paragraphs (b)(3)(i) through (b)(3)(iv) of this section.

(i) Comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators specified in the requirements of §63.133 through §63.137 of this subpart, except as provided in paragraphs (b)(3)(i)(A) ~~and~~ through (b)(3)(i)~~(B)~~(C) of this section and §63.138(a)(3) of this subpart.

(A) Except as specified in paragraph (b)(3)(i)(C) of this section, ~~T~~the waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions.

(B) Except as specified in paragraph (b)(3)(i)(C) of this section, ~~T~~the pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices.

(C) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraphs (b)(3)(i)(A) and (b)(3)(i)(B) of this section do not apply. Instead, pressure relief devices are subject to the requirements specified in §63.165(e) of subpart H of this part.

(ii) Comply with the applicable requirements for control of Table 8 compounds specified in §63.138 of this subpart. Alternatively, the owner or operator may elect to comply with the provisions specified in §63.132(g) of this subpart.

(iii) Comply with the applicable monitoring and inspection requirements specified in §63.143 of this subpart.

(iv) Comply with the applicable recordkeeping and reporting requirements specified in §§63.146 and 63.147 of this subpart.

(4) *Requirements for Group 2 wastewater streams.* For wastewater streams that are Group 2 for both table 8 and table 9 compounds, comply with the applicable recordkeeping and reporting requirements specified in §§63.146(b)(1) and 63.147(b)(8).

(c) *How to determine Group 1 or Group 2 status for Table 9 compounds.* This paragraph provides instructions for determining whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Total annual average concentration shall be determined according to the procedures specified in §63.144(b) of this subpart. Annual average flow rate shall be determined according to the procedures specified in §63.144(c) of this subpart.

(1) A wastewater stream is a Group 1 wastewater stream for Table 9 compounds if:

(i) The total annual average concentration of Table 9 compounds is greater than or equal to 10,000 parts per million by weight at any flow rate; ~~or~~

(ii) The total annual average concentration of Table 9 compounds is greater than or equal to 1,000 parts per million by weight and the annual average flow rate is greater than or equal to 10 liters per minute~~.~~; or

(iii) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, the wastewater stream contains ethylene oxide such that it is considered to be in ethylene oxide service, as defined in §63.101 of subpart F of this part.

(2) A wastewater stream is a Group 2 wastewater stream for Table 9 compounds if it is not a Group 1 wastewater stream for Table 9 compounds by the criteria in paragraph (c)(1) of this section.

(3) The owner or operator of a Group 2 wastewater shall re-determine group status for each Group 2 stream, as necessary, to determine whether the stream is Group 1 or Group 2 whenever process changes are made that could reasonably be expected to change the stream to a Group 1 stream. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or whenever there is a replacement, removal, or addition of recovery or control equipment. For purposes of this paragraph (c)(3), process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original determination was based.

(d) *How to determine Group 1 or Group 2 status for Table 8 compounds.* This paragraph provides instructions for determining whether a wastewater ~~sream~~stream is Group 1 or Group 2 for Table 8 compounds. Annual average concentration for each Table 8 compound shall be determined according to the procedures specified in §63.144(b) of this subpart. Annual average flow rate shall be determined according to the procedures specified in §63.144(c) of this subpart.

(1) A wastewater stream is a Group 1 wastewater stream for Table 8 compounds if:

(i) ~~t~~The annual average flow rate is 0.02 liter per minute or greater and the annual average concentration of any individual table 8 compound is 10 parts per million by weight or greater~~.~~; or

(ii) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, the wastewater stream contains ethylene oxide such that it is considered to be in ethylene oxide service, as defined in §63.101 of subpart F of this part.

(2) A wastewater stream is a Group 2 wastewater stream for Table 8 compounds if it does not meet the criteria specified in paragraph (d)(1)(ii) of this section, and the annual average flow

rate is less than 0.02 liter per minute or the annual average concentration for each individual Table 8 compound is less than 10 parts per million by weight.

(3) The owner or operator of a Group 2 wastewater shall re-determine group status for each Group 2 stream, as necessary, to determine whether the stream is Group 1 or Group 2 whenever process changes are made that could reasonably be expected to change the stream to a Group 1 stream. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or whenever there is a replacement, removal, or addition of recovery or control equipment. For purposes of this paragraph (d)(3), process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original determination was based.

(e) *How to designate a Group 1 wastewater stream.* The owner or operator may elect to designate a wastewater stream a Group 1 wastewater stream in order to comply with paragraph (a)(1) or (b)(1) of this section. To designate a wastewater stream or a mixture of wastewater streams a Group 1 wastewater stream, the procedures specified in paragraphs (e)(1) and (e)(2) of this section and §63.144(a)(2) of this subpart shall be followed.

(1) From the point of determination for each wastewater stream that is included in the Group 1 designation to the location where the owner or operator elects to designate such wastewater stream(s) as a Group 1 wastewater stream, the owner or operator shall comply with all applicable emission suppression requirements specified in §§63.133 through 63.137.

(2) From the location where the owner or operator designates a wastewater stream or mixture of wastewater streams to be a Group 1 wastewater stream, such Group 1 wastewater stream shall be managed in accordance with all applicable emission suppression requirements

specified in §§63.133 through 63.137 and with the treatment requirements in §63.138 of this part.

(f) Owners or operators of sources subject to this subpart shall not discard liquid or solid organic materials with a concentration of greater than 10,000 parts per million of Table 9 compounds (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of §63.144(b) of this subpart) from a chemical manufacturing process unit to water or wastewater, unless the receiving stream is managed and treated as a Group 1 wastewater stream. This prohibition does not apply to materials from the activities listed in paragraphs (f)(1) through (f)(4) of this section.

(1) Equipment leaks;

(2) Except as specified in paragraph (f)(5) of this sections, ~~A~~activities included in maintenance or startup/shutdown/malfunction plans;

(3) Spills; or

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

(5) For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase “or startup/shutdown/malfunction” in paragraph (f)(2) of this section does not apply.

(g) *Off-site treatment or on-site treatment not owned or operated by the source.* The owner or operator may elect to transfer a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream to an on-site treatment operation not owned or operated by the owner or operator of the source generating the wastewater stream or residual, or to an off-site treatment operation.

(1) The owner or operator transferring the wastewater stream or residual shall:

(i) Comply with the provisions specified in §§63.133 through 63.137 of this subpart for each waste management unit that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream prior to shipment or transport.

(ii) Include a notice with the shipment or transport of each Group 1 wastewater stream or residual removed from a Group 1 wastewater stream. The notice shall state that the wastewater stream or residual contains organic hazardous air pollutants that are to be treated in accordance with the provisions of this subpart. When the transport is continuous or ongoing (for example, discharge to a publicly-owned treatment works), the notice shall be submitted to the treatment operator initially and whenever there is a change in the required treatment.

(2) The owner or operator may not transfer the wastewater stream or residual unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any Group 1 wastewater stream or residual removed from a Group 1 wastewater stream received from a source subject to the requirements of this subpart in accordance with the requirements of either §§63.133 through 63.147, or §63.102(b) of subpart F, or subpart D of this part if alternative emission limitations have been granted the transferor in accordance with those provisions. The certifying entity may revoke the written certification by sending a written statement to the EPA and the owner or operator giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions listed in this paragraph. Upon expiration of the notice period, the owner or operator may not transfer the wastewater stream or residual to the treatment operation.

(3) By providing this written certification to the EPA, the certifying entity accepts responsibility for compliance with the regulatory provisions listed in paragraph (g)(2) of this

section with respect to any shipment of wastewater or residual covered by the written certification. Failure to abide by any of those provisions with respect to such shipments may result in enforcement action by the EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of these provisions by owners or operators of sources.

(4) Written certifications and revocation statements, to the EPA from the transferees of wastewater or residuals shall be signed by the responsible official of the certifying entity, provide the name and address of the certifying entity, and be sent to the appropriate EPA Regional Office at the addresses listed in 40 CFR 63.13. Such written certifications are not transferable by the treater.

§63.133 Process wastewater provisions—wastewater tanks.

(a) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of either paragraph (a)(1) or (a)(2) of this section as specified in table 10 of this subpart.

(1) The owner or operator shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged, the owner or operator shall comply with the requirements specified in paragraph (a)(2) of this section.

(2) The owner or operator shall comply with the requirements in paragraphs (b) through (h) of this section and shall operate and maintain one of the emission control techniques listed in paragraphs (a)(2)(i) through (a)(2)(iv) of this section.

(i) A fixed roof and a ~~closed-vent~~closed vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device.

(ii) A fixed roof and an internal floating roof that meets the requirements specified in §63.119(b) of this subpart;

(iii) An external floating roof that meets the requirements specified in §§63.119(c), 63.120(b)(5), and 63.120(b)(6) of this subpart; or

(iv) An equivalent means of emission limitation. Determination of equivalence to the reduction in emissions achieved by the requirements of paragraphs (a)(2)(i) through (a)(2)(iii) of this section will be evaluated according to §63.102(b) of subpart F of this part. The determination will be based on the application to the Administrator which shall include the information specified in either paragraph (a)(2)(iv)(A) or (a)(2)(iv)(B) of this section.

(A) Actual emissions tests that use full-size or scale-model wastewater tanks that accurately collect and measure all organic hazardous air pollutants emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(B) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(b) If the owner or operator elects to comply with the requirements of paragraph (a)(2)(i) of this section, the fixed roof shall meet the requirements of paragraph (b)(1) of this section, the control device shall meet the requirements of paragraph (b)(2) of this section, and the ~~closed-vent~~closed vent system shall meet the requirements of paragraph (b)(3) of this section.

(1) The fixed-roof shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in §63.148 of this subpart.

(ii) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the ~~closed-vent~~closed vent system shall be inspected in accordance with the requirements of §63.148 of this subpart.

(4) For any fixed roof tank and ~~closed-vent~~closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(c) If the owner or operator elects to comply with the requirements of paragraph (a)(2)(ii) of this section, the floating roof shall be inspected according to the procedures specified in §63.120(a)(2) and (a)(3) of this subpart.

(d) Except as provided in paragraph (e) of this section, if the owner or operator elects to comply with the requirements of paragraph (a)(2)(iii) of this section, seal gaps shall be measured according to the procedures specified in §63.120(b)(2)(i) through (b)(4) of this subpart and the wastewater tank shall be inspected to determine compliance with §63.120(b)(5) and (b)(6) of this subpart.

(e) If the owner or operator determines that it is unsafe to perform the seal gap measurements specified in §63.120(b)(2)(i) through (b)(4) of this subpart or to inspect the wastewater tank to determine compliance with §63.120(b)(5) and (b)(6) of this subpart because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner or operator shall comply with the requirements in either paragraph (e)(1) or (e)(2) of this section.

(1) The owner or operator shall measure the seal gaps or inspect the wastewater tank within 30 calendar days of the determination that the floating roof is unsafe, or

(2) The owner or operator shall empty and remove the wastewater tank from service within 45 calendar days of determining that the roof is unsafe. If the wastewater tank cannot be emptied within 45 calendar days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the wastewater tank will be emptied as soon as practical.

(f) Except as provided in paragraph (e) of this section, each wastewater tank shall be inspected initially, and semi-annually thereafter, for improper work practices in accordance with §63.143 of this subpart. For wastewater tanks, improper work practice includes, but is not limited to, leaving open any access door or other opening when such door or opening is not in use.

(g) Except as provided in paragraph (e) of this section, each wastewater tank shall be inspected for control equipment failures as defined in paragraph (g)(1) of this section according to the schedule in paragraphs (g)(2) and (g)(3) of this section.

(1) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in paragraphs (g)(1)(i) through (g)(1)(ix) of this section.

(i) The floating roof is not resting on either the surface of the liquid or on the leg supports.

(ii) There is stored liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, cracks or gaps in the rim seal or seal fabric of the floating roof.

(v) There are visible gaps between the seal of an internal floating roof and the wall of the wastewater tank.

(vi) There are gaps between the metallic shoe seal or the liquid mounted primary seal of an external floating roof and the wall of the wastewater tank that exceed 212 square centimeters per meter of tank diameter or the width of any portion of any gap between the primary seal and the tank wall exceeds 3.81 centimeters.

(vii) There are gaps between the secondary seal of an external floating roof and the wall of the wastewater tank that exceed 21.2 square centimeters per meter of tank diameter or the width of any portion of any gap between the secondary seal and the tank wall exceeds 1.27 centimeters.

(viii) Where a metallic shoe seal is used on an external floating roof, one end of the metallic shoe does not extend into the stored liquid or one end of the metallic shoe does not extend a minimum vertical distance of 61 centimeters above the surface of the stored liquid.

(ix) A gasket, joint, lid, cover, or door has a crack or gap, or is broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (g)(1)(i) through (g)(1)(viii) of this section according to the schedule specified in paragraphs (c) and (d) of this section.

(3) The owner or operator shall inspect for the control equipment failures in paragraph (g)(1)(ix) of this section initially, and semi-annually thereafter.

(h) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification. If a failure that is detected during inspections required by this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

§63.134 Process wastewater provisions—surface impoundments.

(a) For each surface impoundment that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b), (c), and (d) of this section.

(b) The owner or operator shall operate and maintain on each surface impoundment either a cover (e.g., air-supported structure or rigid cover) and a ~~closed-vent~~closed vent system that routes the organic hazardous air pollutants vapors vented from the surface impoundment to a control device in accordance with paragraph (b)(1) of this section, or a floating flexible membrane cover as specified in paragraph (b)(2) of this section.

(1) The cover and all openings shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in §63.148 of this subpart.

(ii) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the surface impoundment except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(iii) The cover shall be used at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the surface impoundment except during removal of treatment residuals in accordance with 40 CFR 268.4 or closure of the surface impoundment in accordance with 40 CFR 264.228.

(2) Floating flexible membrane covers shall meet the requirements specified in paragraphs (b)(2)(i) through (b)(2)(vii) of this section.

(i) The floating flexible cover shall be designed to float on the liquid surface during normal operations, and to form a continuous barrier over the entire surface area of the liquid.

(ii) The cover shall be fabricated from a synthetic membrane material that is either:

(A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (100 mils); or

(B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in paragraph (b)(2)(ii)(A) of this section, and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(iv) Except as provided for in paragraph (b)(2)(v) of this section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(vi) The closure devices shall be made of suitable materials that will minimize exposure of organic hazardous air pollutants to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered in designing the closure devices shall include: The effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(vii) Whenever a Group 1 wastewater stream or residual from a Group 1 wastewater stream is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position. Opening of closure devices or removal of the cover is allowed to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations and/or to remove accumulated sludge or other residues from the bottom of surface impoundment. Openings shall be maintained in accordance with §63.148 of this subpart.

(3) The control device shall be designed, operated, and inspected in accordance with §63.139 of this subpart.

(4) Except as provided in paragraph (b)(5) of this section, the ~~closed-vent~~closed vent system shall be inspected in accordance with §63.148 of this subpart.

(5) For any cover and ~~closed-vent~~closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(c) Each surface impoundment shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures in accordance with §63.143 of this subpart.

(1) For surface impoundments, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use.

(2) For surface impoundments, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a crack or gap, or is broken.

(d) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification.

§63.135 Process wastewater provisions—containers.

(a) For each container that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b) through (f) of this section.

(b) The owner or operator shall operate and maintain a cover on each container used to handle, transfer, or store a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with the following requirements:

(1) Except as provided in paragraph (d)(4) of this section, if the capacity of the container is greater than 0.42 m^3, the cover and all openings (e.g., bungs, hatches, sampling ports, and pressure relief devices) shall be maintained in accordance with the requirements specified in §63.148 of this subpart.

(2) If the capacity of the container is less than or equal to 0.42 m^3, the owner or operator shall comply with either paragraph (b)(2)(i) or (b)(2)(ii) of this section.

(i) The container must meet existing Department of Transportation specifications and testing requirements under 49 CFR part 178; or

(ii) Except as provided in paragraph (d)(4) of this section, the cover and all openings shall be maintained without leaks as specified in §63.148 of this subpart.

(3) Except as specified in paragraph (b)(4) of this section, t~~T~~he cover and all openings shall be maintained in a closed position (e.g., covered by a lid) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the container except when it is necessary to use the opening for filling, removal, inspection, sampling, or pressure relief events related to safety considerations.

(4) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, pressure relief devices are subject to the requirements specified in §63.165(e) of subpart H of this part.

(c) For containers with a capacity greater than or equal to 0.42 m^3, a submerged fill pipe shall be used when a container is being filled by pumping with a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream.

(1) The submerged fill pipe outlet shall extend to no more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled.

(2) The cover shall remain in place and all openings shall be maintained in a closed position except for those openings required for the submerged fill pipe and for venting of the container to prevent physical damage or permanent deformation of the container or cover.

(d) During treatment of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, including aeration, thermal or other treatment, in a container, whenever it is necessary for the container to be open, the container shall be located within an enclosure with a ~~closed-vent~~closed vent system that routes the organic hazardous air pollutants vapors vented from the container to a control device.

(1) Except as provided in paragraph (d)(4) of this section, the enclosure and all openings (e.g., doors, hatches) shall be maintained in accordance with the requirements specified in §63.148 of this subpart.

(2) The control device shall be designed, operated, and inspected in accordance with §63.139 of this subpart.

(3) Except as provided in paragraph (d)(4) of this section, the ~~closed-vent~~closed vent system shall be inspected in accordance with §63.148 of this subpart.

(4) For any enclosure and ~~closed-vent~~closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(e) Each container shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures in accordance with §63.143 of this subpart.

(1) For containers, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use.

(2) For containers, control equipment failure includes, but is not limited to, any time a cover or door has a gap or crack, or is broken.

(f) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification.

§63.136 Process wastewater provisions—individual drain systems.

(a) For each individual drain system that receives or manages a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b), (c), and (d) or with paragraphs (e), (f), and (g) of this section.

(b) If the owner or operator elects to comply with this paragraph, the owner or operator shall operate and maintain on each opening in the individual drain system a cover and if vented, route the vapors to a process or through a closed vent system to a control device. The owner or operator shall comply with the requirements of paragraphs (b)(1) through (b)(5) of this section.

(1) The cover and all openings shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the cover and all openings (e.g., access hatches, sampling ports) shall be maintained in accordance with the requirements specified in §63.148 of this subpart.

(ii) The cover and all openings shall be maintained in a closed position at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the drain system except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with §63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the ~~closed-vent~~closed vent system shall be inspected in accordance with §63.148 of this subpart.

(4) For any cover and ~~closed-vent~~closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in §63.148 of this subpart.

(5) The individual drain system shall be designed and operated to segregate the vapors within the system from other drain systems and the atmosphere.

(c) Each individual drain system shall be inspected initially, and semi- annually thereafter, for improper work practices and control equipment failures, in accordance with the inspection requirements specified in table 11 of this subpart.

(1) For individual drain systems, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) For individual drain systems, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a gap or crack, or is broken.

(d) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification.

(e) If the owner or operator elects to comply with this paragraph, the owner or operator shall comply with the requirements in paragraphs (e)(1) through (e)(3) of this section:

(1) Each drain shall be equipped with water seal controls or a tightly fitting cap or plug. The owner or operator shall comply with paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For each drain equipped with a water seal, the owner or operator shall ensure that the water seal is maintained. For example, a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap by a hose could be used to verify flow of water to the trap. Visual observation is also an acceptable alternative.

(ii) If a water seal is used on a drain receiving a Group 1 wastewater, the owner or operator shall either extend the pipe discharging the wastewater below the liquid surface in the water seal of the receiving drain, or install a flexible shield (or other enclosure which restricts wind motion across the open area between the pipe and the drain) that encloses the space between the pipe discharging the wastewater to the drain receiving the wastewater. (Water seals which are used on hubs receiving Group 2 wastewater for the purpose of eliminating cross ventilation to drains carrying Group 1 wastewater are not required to have a flexible cap or extended subsurface discharging pipe.)

(2) Each junction box shall be equipped with a tightly fitting solid cover (i.e., no visible gaps, cracks, or holes) which shall be kept in place at all times except during inspection and maintenance. If the junction box is vented, the owner or operator shall comply with the requirements in paragraph (e)(2)(i) or (e)(2)(ii) of this section.

(i) The junction box shall be vented to a process or through a closed vent system to a control device. The closed vent system shall be inspected in accordance with the requirements of §63.148 and the control device shall be designed, operated, and inspected in accordance with the requirements of §63.139.

(ii) If the junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level, the owner or operator may vent the junction box to the atmosphere provided that the junction box complies with the requirements in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) The vent pipe shall be at least 90 centimeters in length and no greater than 10.2 centimeters in nominal inside diameter.

(B) Water seals shall be installed and maintained at the wastewater entrance(s) to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system. The owner or operator shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.

(3) Each sewer line shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visible gaps or cracks in joints, seals, or other emission interfaces.

(f) Equipment used to comply with paragraphs (e)(1), (e)(2), or (e)(3) of this section shall be inspected as follows:

(1) Each drain using a tightly fitting cap or plug shall be visually inspected initially, and semi-annually thereafter, to ensure caps or plugs are in place and that there are no gaps, cracks, or other holes in the cap or plug.

(2) Each junction box shall be visually inspected initially, and semi-annually thereafter, to ensure that there are no gaps, cracks, or other holes in the cover.

(3) The unburied portion of each sewer line shall be visually inspected initially, and semi-annually thereafter, for indication of cracks or gaps that could result in air emissions.

(g) Except as provided in §63.140 of this subpart, when a gap, hole, or crack is identified in a joint or cover, first efforts at repair shall be made no later than 5 calendar days after identification, and repair shall be completed within 15 calendar days after identification.

§63.137 Process wastewater provisions—oil-water separators.

(a) For each oil-water separator that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (c) and (d) of this section and shall operate and maintain one of the following:

(1) A fixed roof and a closed vent system that routes the organic hazardous air pollutants vapors vented from the oil-water separator to a control device. The fixed roof, ~~closed-vent~~closed vent system, and control device shall meet the requirements specified in paragraph (b) of this section;

(2) A floating roof meeting the requirements in 40 CFR part 60, subpart QQQ §60.693-2 (a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4). For portions of the oil-water separator where it is infeasible to construct and operate a floating roof, such as over the weir mechanism, the owner or

operator shall operate and maintain a fixed roof, closed vent system, and control device that meet the requirements specified in paragraph (b) of this section.

(3) An equivalent means of emission limitation. Determination of equivalence to the reduction in emissions achieved by the requirements of paragraphs (a)(1) and (a)(2) of this section will be evaluated according to §63.102(b) of subpart F of this part. The determination will be based on the application to the Administrator which shall include the information specified in either paragraph (a)(3)(i) or (a)(3)(ii) of this section.

(i) Actual emissions tests that use full-size or scale-model oil-water separators that accurately collect and measure all organic hazardous air pollutants emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(ii) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(b) If the owner or operator elects to comply with the requirements of paragraphs (a)(1) or (a)(2) of this section, the fixed roof shall meet the requirements of paragraph (b)(1) of this section, the control device shall meet the requirements of paragraph (b)(2) of this section, and the ~~closed-vent~~closed vent system shall meet the requirements of paragraph (b)(3) of this section.

(1) The fixed-roof shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in §63.148 of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the oil-water separator contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the ~~closed-vent~~closed vent system shall be inspected in accordance with the requirements of §63.148 of this subpart.

(4) For any fixed roof and ~~closed-vent~~closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements of §63.148 of this subpart.

(c) If the owner or operator elects to comply with the requirements of paragraph (a)(2) of this section, seal gaps shall be measured according to the procedures specified in 40 CFR part 60, subpart QQQ §60.696(d)(1) and the schedule specified in paragraphs (c)(1) and (c)(2) of this section.

(1) Measurement of primary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream and once every 5 years thereafter.

(2) Measurement of secondary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream and once every year thereafter.

(d) Each oil-water separator shall be inspected initially, and semi-annually thereafter, for improper work practices in accordance with §63.143 of this subpart. For oil-water separators, improper work practice includes, but is not limited to, leaving open or ungasketed any access door or other opening when such door or opening is not in use.

(e) Each oil-water separator shall be inspected for control equipment failures as defined in paragraph (e)(1) of this section according to the schedule specified in paragraphs (e)(2) and (e)(3) of this section.

(1) For oil-water separators, control equipment failure includes, but is not limited to, the conditions specified in paragraphs (e)(1)(i) through (e)(1)(vii) of this section.

(i) The floating roof is not resting on either the surface of the liquid or on the leg supports.

(ii) There is stored liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, or other open spaces in the rim seal or seal fabric of the floating roof.

(v) There are gaps between the primary seal and the separator wall that exceed 67 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the primary seal and the separator wall exceeds 3.8 centimeters.

(vi) There are gaps between the secondary seal and the separator wall that exceed 6.7 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the secondary seal and the separator wall exceeds 1.3 centimeters.

(vii) A gasket, joint, lid, cover, or door has a gap or crack, or is broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (e)(1)(i) through (e)(1)(vi) of this section according to the schedule specified in paragraph (c) of this section.

(3) The owner or operator shall inspect for control equipment failures in paragraph (e)(1)(vii) of this section initially, and semi-annually thereafter.

(f) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification.

§63.138 Process wastewater provisions—performance standards for treatment processes managing Group 1 wastewater streams and/or residuals removed from Group 1 wastewater streams.

(a) *General requirements.* This section specifies the performance standards for treating Group 1 wastewater streams. The owner or operator shall comply with the requirements as specified in paragraphs (a)(1) through (a)(6) of this section. Where multiple compliance options are provided, the options may be used in combination for different wastewater streams and/or for different compounds (e.g., Table 8 versus Table 9 compounds) in the same wastewater streams, except where otherwise provided in this section. Once a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream has been treated in accordance with this subpart, it is no longer subject to the requirements of this subpart.

(1) *Existing source.* If the wastewater stream, at an existing source, is Group 1 for Table 9 compounds, comply with §63.138(b).

(2) *New source.* If the wastewater stream, at a new source, is Group 1 for Table 8 compounds, comply with §63.138(c). If the wastewater stream, at a new source, is Group 1 for Table 9 compounds, comply with §63.138(b). If the wastewater stream, at a new source, is Group 1 for Table 8 and Table 9 compounds, comply with both §63.138(b) and §63.138(c).

Note to paragraph (a)(2): The requirements for Table 8 and/or Table 9 compounds are similar and often identical.

(3) *Biological treatment processes.* Biological treatment processes in compliance with this section may be either open or closed biological treatment processes as defined in §63.111. An open biological treatment process in compliance with this section need not be covered and vented to a control device as required in §63.133 through §63.137 of this subpart. An open or a closed biological treatment process in compliance with this section and using §63.145(f) or §63.145(g) of this subpart to demonstrate compliance is not subject to the requirements of §63.133 through §63.137 of this subpart. A closed biological treatment process in compliance with this section and using §63.145(e) of this subpart to demonstrate compliance shall comply with the requirements of §63.133 through §63.137 of this subpart. Waste management units upstream of an open or closed biological treatment process shall meet the requirements of §63.133 through §63.137 of this subpart, as applicable.

(4) *Performance tests and design evaluations.* If design steam stripper option (§63.138(d)) or Resource Conservation and Recovery Act (RCRA) option (§63.138(h)) is selected to comply with this section, neither a design evaluation nor a performance test is required. For any other non-biological treatment process, and for closed biological treatment processes as defined in §63.111 of this subpart, the owner or operator shall conduct either a design evaluation as specified in §63.138(j), or a performance test as specified in §63.145, of this subpart. For each open biological treatment process as defined in §63.111 of this subpart, the owner or operator shall conduct a performance test as specified in §63.145 of this subpart.

Note to paragraph (a)(4): Some open biological treatment processes may not require a performance test. Refer to §63.145(h) and table 36 of this subpart to determine whether the biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(5) *Control device requirements.* When gases are vented from the treatment process, the owner or operator shall comply with the applicable control device requirements specified in §63.139 and §63.145 (i) and (j), and the applicable leak inspection provisions specified in §63.148, of this subpart. This requirement does not apply to any open biological treatment process that meets the mass removal requirements. Vents from anaerobic biological treatment processes may be routed through hard-piping to a fuel gas system.

(6) *Residuals: general.* When residuals result from treating Group 1 wastewater streams, the owner or operator shall comply with the requirements for residuals specified in §63.138(k) of this subpart.

(7) *Treatment using a series of treatment processes.* In all cases where the wastewater provisions in this subpart allow or require the use of a treatment process or control device to comply with emissions limitations, the owner or operator may use multiple treatment processes or control devices, respectively. For combinations of treatment processes where the wastewater stream is conveyed by hard-piping, the owner or operator shall comply with either the requirements of paragraph (a)(7)(i) or (a)(7)(ii) of this section. For combinations of treatment processes where the wastewater stream is not conveyed by hard-piping, the owner or operator shall comply with the requirements of paragraph (a)(7)(ii) of this section. For combinations of control devices, the owner or operator shall comply with the requirements of paragraph (a)(7)(i) of this section.

(i)(A) For combinations of treatment processes, the wastewater stream shall be conveyed by hard-piping between the treatment processes. For combinations of control devices, the vented gas stream shall be conveyed by hard-piping between the control devices.

(B) For combinations of treatment processes, each treatment process shall meet the applicable requirements of §63.133 through §63.137 of this subpart except as provided in paragraph (a)(3) of this section.

(C) The owner or operator shall identify, and keep a record of, the combination of treatment processes or of control devices, including identification of the first and last treatment process or control device. The owner or operator shall include this information as part of the treatment process description reported in the Notification of Compliance Status.

(D) The performance test or design evaluation shall determine compliance across the combination of treatment processes or control devices. If a performance test is conducted, the "inlet" shall be the point at which the wastewater stream or residual enters the first treatment process, or the vented gas stream enters the first control device. The "outlet" shall be the point at which the treated wastewater stream exits the last treatment process, or the vented gas stream exits the last control device.

(ii)(A) For combinations of treatment processes, each treatment process shall meet the applicable requirements of §63.133 through §63.137 of this subpart except as provided in paragraph (a)(3) of this section.

(B) The owner or operator shall identify, and keep a record of, the combination of treatment processes, including identification of the first and last treatment process. The owner or operator shall include this information as part of the treatment process description reported in the Notification of Compliance Status.

(C) The owner or operator shall determine the mass removed or destroyed by each treatment process. The performance test or design evaluation shall determine compliance for the combination of treatment processes by adding together the mass removed or destroyed by each treatment process.

(b) *Control options: Group 1 wastewater streams for Table 9 compounds.* The owner or operator shall comply with either paragraph (b)(1) or (b)(2) of this section for the control of Table 9 compounds at new or existing sources.

(1) *50 ppmw concentration option.* The owner or operator shall comply with paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(i) Reduce, by removal or destruction, the total concentration of Table 9 compounds to a level less than 50 parts per million by weight as determined by the procedures specified in §63.145(b) of this subpart.

(ii) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater stream is designated as a Group 1 wastewater stream as specified in §63.132(e). Dilution shall not be used to achieve compliance with this option.

(2) *Other compliance options.* Comply with the requirements specified in any one of paragraphs (d), (e), (f), (g), (h), or (i) of this section.

(c) *Control options: Group 1 wastewater streams for Table 8 compounds.* The owner or operator shall comply with either paragraph (c)(1) or (c)(2) of this section for the control of Table 8 compounds at new sources.

(1) *10 ppmw concentration option.* The owner or operator shall comply with paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) Reduce, by removal or destruction, the concentration of the individual Table 8 compounds to a level less than 10 parts per million by weight as determined in the procedures specified in §63.145(b) of this subpart.

(ii) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater stream is designated as a Group 1 wastewater stream as specified in §63.132(e). Dilution shall not be used to achieve compliance with this option.

(2) *Other compliance options.* Comply with the requirements specified in any one of paragraphs (d), (e), (f), (g), (h), or (i) of this section.

(d) *Design steam stripper option.* The owner or operator shall operate and maintain a steam stripper that meets the requirements of paragraphs (d)(1) through (d)(6) of this section.

(1) Minimum active column height of 5 meters,

(2) Countercurrent flow configuration with a minimum of 10 actual trays,

(3) Minimum steam flow rate of 0.04 kilograms of steam per liter of wastewater feed within the column,

(4) Minimum wastewater feed temperature to the steam stripper of 95 °C, or minimum column operating temperature of 95 °C,

(5) Maximum liquid loading of 67,100 liters per hour per square meter, and

(6) Operate at nominal atmospheric pressure.

(e) *Percent mass removal/destruction option.* The owner or operator of a new or existing source shall comply with paragraph (e)(1) or (e)(2) of this section for control of Table 8 and/or Table 9 compounds for Group 1 wastewater streams. This option shall not be used for biological treatment processes.

(1) *Reduce mass flow rate of Table 8 and/or Table 9 compounds by 99 percent.* For wastewater streams that are Group 1, the owner or operator shall reduce, by removal or destruction, the mass flow rate of Table 8 and/or Table 9 compounds by 99 percent or more. The removal/destruction efficiency shall be determined by the procedures specified in §63.145(c), for noncombustion processes, or §63.145(d), for combustion processes.

(2) *Reduce mass flow rate of Table 8 and/or Table 9 compounds by Fr value.* For wastewater streams that are Group 1 for Table 8 and/or Table 9 compounds, the owner or operator shall reduce, by removal or destruction, the mass flow rate by at least the fraction removal (Fr) values specified in Table 9 of this subpart. (The Fr values for Table 8 compounds are all 0.99.) The removal/destruction efficiency shall be determined by the procedures specified in §63.145(c), for noncombustion treatment processes, or §63.145(d), for combustion treatment processes.

(f) *Required mass removal (RMR) option.* The owner or operator shall achieve the required mass removal (RMR) of Table 8 compounds at a new source for a wastewater stream that is Group 1 for Table 8 compounds and/or of Table 9 compounds at a new or existing source for a wastewater stream that is Group 1 for Table 9 compounds. For nonbiological treatment processes compliance shall be determined using the procedures specified in §63.145(e) of this subpart. For aerobic biological treatment processes compliance shall be determined using the procedures specified in §63.145 (e) or (f) of this subpart. For closed anaerobic biological treatment processes compliance shall be determined using the procedures specified in §63.145(e) of this subpart. For open biological treatment processes compliance shall be determined using the procedures specified in §63.145(f) of this subpart.

(g) *95-percent RMR option, for biological treatment processes.* The owner or operator of a new or existing source using biological treatment for at least one wastewater stream that is Group 1 for Table 9 compounds shall achieve a RMR of at least 95 percent for all Table 9 compounds. The owner or operator of a new source using biological treatment for at least one wastewater stream that is Group 1 for Table 8 compounds shall achieve a RMR of at least 95 percent for all Table 8 compounds. All Group 1 and Group 2 wastewater streams entering a biological treatment unit that are from chemical manufacturing process units subject to subpart F shall be included in the demonstration of the 95-percent mass removal. The owner or operator shall comply with paragraphs (g)(1) through (g)(4) of this section.

(1) Except as provided in paragraph (g)(4) of this section, the owner or operator shall ensure that all Group 1 and Group 2 wastewater streams from chemical manufacturing process units subject to this rule entering a biological treatment unit are treated to destroy at least 95-percent total mass of all Table 8 and/or Table 9 compounds.

(2) For open biological treatment processes compliance shall be determined using the procedures specified in §63.145(g) of this subpart. For closed aerobic biological treatment processes compliance shall be determined using the procedures specified in §63.145 (e) or (g) of this subpart. For closed anaerobic biological treatment processes compliance shall be determined using the procedures specified in §63.145(e) of this subpart.

(3) For each treatment process or waste management unit that receives, manages, or treats wastewater streams subject to this paragraph, from the point of determination of each Group 1 or Group 2 wastewater stream to the biological treatment unit, the owner or operator shall comply with §§63.133 through §63.137 of this subpart for control of air emissions. When complying

with this paragraph, the term Group 1, whether used alone or in combination with other terms, in §63.133 through §63.137 of this subpart shall mean both Group 1 and Group 2.

(4) If a wastewater stream is in compliance with the requirements in paragraph (b)(1), (c)(1), (d), (e), (f), or (h) of this section before entering the biological treatment unit, the hazardous air pollutants mass of that wastewater is not required to be included in the total mass flow rate entering the biological treatment unit for the purpose of demonstrating compliance.

(h) *Treatment in a RCRA unit option.* The owner or operator shall treat the wastewater stream or residual in a unit identified in, and complying with, paragraph (h)(1), (h)(2), or (h)(3) of this section. These units are exempt from the design evaluation or performance tests requirements specified in §63.138(a)(3) and §63.138(j) of this subpart, and from the monitoring requirements specified in §63.132(a)(2)(iii) and §63.132(b)(3)(iii) of this subpart, as well as recordkeeping and reporting requirements associated with monitoring and performance tests.

(1) The wastewater stream or residual is discharged to a hazardous waste incinerator for which the owner or operator:

(i) H~~h~~as been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;~~, or~~

(ii) H~~h~~as certified compliance with the interim status requirements of 40 CFR part 265, subpart O;

(iii) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements subpart EEE of this part; or

(iv) Complies with the requirements subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(2) The wastewater stream or residual is discharged to a process heater or boiler 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;

(iii) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements of subpart EEE of this part; or

(iv) Complies with subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(3) The wastewater stream or residual is discharged to an underground injection well for which the owner or operator has been issued a final permit under 40 CFR part 270 or 40 CFR part 144 and complies with the requirements of 40 CFR part 122. The owner or operator shall comply with all applicable requirements of this subpart prior to the point where the wastewater enters the underground portion of the injection well.

(i) *One megagram total source mass flow rate option.* A wastewater stream is exempt from the requirements of paragraphs (b) and (c) of this section if the owner or operator elects to comply with either paragraph (i)(1) or (2) of this section, and complies with paragraph (i)(3) of this section.

(1) *All Group 1 wastewater streams at the source.* The owner or operator shall demonstrate that the total source mass flow rate for Table 8 and/or Table 9 compounds is less than 1 megagram per year using the procedures in paragraphs (i)(1)(i) and (i)(1)(ii) of this section. The owner or operator shall include all Group 1 wastewater streams at the source in the total source mass flow rate. The total source mass flow rate shall be based on the mass as calculated before the wastewater stream is treated. The owner or operator who meets the requirements of this paragraph (i)(1) is exempt from the requirements of §§63.133 through 63.137.

(i) Calculate the annual average mass flow rate for each Group 1 wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in §63.144(c), times the total annual average concentration of Table 8 and/or Table 9 compounds, as determined by procedures specified in §63.144(b) of this subpart. (The mass flow rate of compounds in a wastewater stream that is Group 1 for both Table 8 and Table 9 compounds should be included in the annual average mass flow rate only once.)

(ii) Calculate the total source mass flow rate from all Group 1 wastewater streams by adding together the annual average mass flow rate calculated for each Group 1 wastewater stream.

(2) *Untreated and partially treated Group 1 wastewater streams.* The owner or operator shall demonstrate that the total source mass flow rate for untreated Group 1 wastewater streams and Group 1 wastewater streams treated to levels less stringent than required in paragraph (b) or (c) of this section is less than 1 megagram per year using the procedures in paragraphs (i)(2)(i) and (i)(2)(ii) of this section. The owner or operator shall manage these wastewater streams in

accordance with paragraph (i)(2)(iii) of this section, and shall comply with paragraph (i)(3) of this section.

(i) Calculate the annual average mass flow rate in each wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in §63.144(c), times the total annual average concentration of Table 8 and/or Table 9 compounds, as determined by procedures specified in §63.144(b). (The mass flow rate of compounds in a wastewater stream that are Group 1 for both Table 8 and Table 9 compounds should be included in the annual average mass flow rate only once.) When determining the total source mass flow rate for the purposes of paragraph (i)(2)(i)(B) of this section, the concentration and flow rate shall be determined at the location specified in paragraph (i)(2)(i)(B) of this section and not at the location specified in §63.144(b) and (c).

(A) For each untreated Group 1 wastewater stream, the annual average flow rate and the total annual average concentration shall be determined for that stream's point of determination.

(B) For each Group 1 wastewater stream that is treated to levels less stringent than those required by paragraph (b) or (c) of this section, the annual average flow rate and total annual average concentration shall be determined at the discharge from the treatment process or series of treatment processes.

(C) The annual average mass flow rate for Group 1 wastewater streams treated to the levels required by paragraph (b) or (c) of this section is not included in the calculation of the total source mass flow rate.

(ii) The total source mass flow rate shall be calculated by summing the annual average mass flow rates from all Group 1 wastewater streams, except those excluded by paragraph (i)(2)(i)(C) of this section.

(iii) The owner or operator of each waste management unit that receives, manages, or treats a partially treated wastewater stream prior to or during treatment shall comply with the requirements of §§63.133 through 63.137, as applicable. For a partially treated wastewater stream that is stored, conveyed, treated, or managed in a waste management unit meeting the requirements of §§63.133 through 63.137, the owner or operator shall follow the procedures in paragraph (i)(2)(i)(B) of this section to calculate mass flow rate. A wastewater stream, either untreated or partially treated, where the mass flow rate has been calculated following the procedures in paragraph (i)(2)(i)(A) of this section, is exempt from the requirements of §§63.133 through 63.137.

(3) Wastewater streams included in this option shall be identified in the Notification of Compliance Status required by §63.152(b).

(j) *Design evaluations or performance tests for treatment processes.* Except as provided in paragraph (j)(3) or (h) of this section, the owner or operator shall demonstrate by the procedures in either paragraph (j)(1) or (j)(2) of this section that each nonbiological treatment process used to comply with paragraphs (b)(1), (c)(1), (e), and/or (f) of this section achieves the conditions specified for compliance. The owner or operator shall demonstrate by the procedures in either paragraph (j)(1) or (j)(2) of this section that each closed biological treatment process used to comply with paragraphs (f) or (g) of this section achieves the conditions specified for compliance. If an open biological treatment unit is used to comply with paragraph (f) or (g) of this section, the owner or operator shall comply with §63.145(f) or §63.145(g), respectively, of this subpart. Some biological treatment processes may not require a performance test. Refer to §63.145(h) and table 36 of this subpart to determine whether the open biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(1) A design evaluation and supporting documentation that addresses the operating characteristics of the treatment process and that is based on operation at a representative wastewater stream flow rate and a concentration under which it would be most difficult to demonstrate compliance. For closed biological treatment processes, the actual mass removal shall be determined by a mass balance over the unit. The mass flow rate of Table 8 or Table 9 compounds exiting the treatment process shall be the sum of the mass flow rate of Table 8 or Table 9 compounds in the wastewater stream exiting the biological treatment process and the mass flow rate of the vented gas stream exiting the control device. The mass flow rate entering the treatment process minus the mass flow rate exiting the process determines the actual mass removal.

(2) Performance tests conducted using test methods and procedures that meet the applicable requirements specified in §63.145 of this subpart.

(3) The provisions of paragraphs (j)(1) and (j)(2) of this section do not apply to design stream strippers which meet the requirements of paragraph (d) of this section.

(k) *Residuals.* For each residual removed from a Group 1 wastewater stream, the owner or operator shall control for air emissions by complying with §§63.133-137 of this subpart and by complying with one of the provisions in paragraphs (k)(1) through (k)(4) of this section.

(1) Recycle the residual to a production process or sell the residual for the purpose of recycling. Once a residual is returned to a production process, the residual is no longer subject to this section.

(2) Return the residual to the treatment process.

(3) Treat the residual to destroy the total combined mass flow rate of Table 8 and/or Table 9 compounds by 99 percent or more, as determined by the procedures specified in §63.145(c) or (d) of this subpart.

(4) Comply with the requirements for RCRA treatment options specified in §63.138(h) of this subpart.

§63.139 Process wastewater provisions—control devices.

(a) For each control device or combination of control devices used to comply with the provisions in §§63.133 through 63.138 of this subpart, the owner or operator shall operate and maintain the control device or combination of control devices in accordance with the requirements of paragraphs (b) through (f) of this section.

(b) Whenever organic hazardous air pollutants emissions are vented to a control device which is used to comply with the provisions of this subpart, such control device shall be operating.

(c) The control device shall be designed and operated in accordance with paragraph (c)(1), (c)(2), (c)(3), (c)(4), or (c)(5) of this section.

(1) An enclosed combustion device (including but not limited to a vapor incinerator, boiler, or process heater) shall meet the conditions in paragraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section, alone or in combination with other control devices. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(i) Reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device by 95 percent by weight or greater;

(ii) Achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume on a dry basis corrected to 3 percent oxygen. The owner or operator shall use either Method 18 of 40 CFR part 60, appendix A, ~~or~~ any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part, or the ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method; or

(iii) Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760 °C.

(2) A vapor recovery system (including but not limited to a carbon adsorption system or condenser), alone or in combination with other control devices, shall reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device of 95 percent by weight or greater or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of §63.134 or §63.135 of this subpart.

(3) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~A~~ a flare shall comply with the requirements of §63.11(b) of subpart A of this part.

(4) A scrubber, alone or in combination with other control devices, shall reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants

emissions in such a manner that 95 weight-percent is either removed, or destroyed by chemical reaction with the scrubbing liquid or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of §63.134 or §63.135 of this subpart.

(5) Any other control device used shall, alone or in combination with other control devices, reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device by 95 percent by weight or greater or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of §63.134 or §63.135 of this subpart.

(d) Except as provided in paragraphs (d)(4) and (d)(5) of this section, an owner or operator shall demonstrate that each control device or combination of control devices achieves the appropriate conditions specified in paragraph (c) of this section by using one or more of the methods specified in paragraphs (d)(1), (d)(2), or (d)(3) of this section.

(1) Performance tests conducted using the test methods and procedures specified in §63.145(i) of this subpart for control devices other than flares; or

(2) A design evaluation that addresses the vent stream characteristics and control device operating parameters specified in paragraphs (d)(2)(i) through (d)(2)(vii) of this section.

(i) For a thermal vapor incinerator, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(ii) For a catalytic vapor incinerator, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

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

(iv) For a condenser, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(v) For a carbon adsorption system that regenerates the carbon bed directly on-site in the control device such as a fixed-bed adsorber, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total regeneration stream mass or volumetric flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

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

(vii) For a scrubber, the design evaluation shall consider the vent stream composition; constituent concentrations; liquid-to-vapor ratio; scrubbing liquid flow rate and concentration; temperature; and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation shall establish the design exhaust vent stream organic compound concentration level and will include the additional information in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) of this section for trays and a packed column scrubber.

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

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

(3) For flares, except as specified in paragraph (a) of §63.108 of subpart F of this part, the compliance determination specified in §63.11(b) of subpart A of this part and §63.145(j) of this subpart.

(4) An owner or operator using any control device specified in paragraphs (d)(4)(i) through (d)(4)(iv) of this section is exempt from the requirements in paragraphs (d)(1) through (d)(3) of this section and from the requirements in §63.6(f) of subpart A of this part, and from the requirements of paragraph (e) of this section.

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

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

(iii) 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;

(C) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements of subpart EEE of this part; or

(D) Complies with subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(iv) A hazardous waste incinerator for which the owner or operator:

(A) ~~h~~Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;~~, or h~~

(B) Has certified compliance with the interim status requirements of 40 CFR part 265, subpart O;

(C) Has submitted a Notification of Compliance under §63.1207(j) of subpart EEE of this part and complies with the requirements subpart EEE of this part; or

(D) Complies with the requirements subpart EEE of this part and will submit a Notification of Compliance under §63.1207(j) of subpart EEE of this part by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(5) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, if the owner or operator vents emissions through a closed vent system to an adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then the owner or operator must install a system of two or more adsorber units in series and comply with the requirements specified in paragraphs (d)(5)(i) through (d)(5)(iii) of this section.

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

(ii) Monitor the HAP or total organic compound (TOC) concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (d)(5)(iii)(B) of this section. The owner or operator must measure the concentration of HAP or TOC using either a portable analyzer, in accordance with Method 21 of 40 CFR part 60, appendix A–7 using methane, propane, isobutylene, or the primary HAP being controlled as the calibration gas or Method 25A of 40 CFR part 60, appendix A–7 using methane, propane, or the primary HAP being controlled as the calibration gas.

(iii) Comply with paragraph (d)(5)(iii)(A) of this section, and comply with the monitoring frequency according to paragraph (d)(5)(iii)(B) of this section.

(A) The first adsorber in series must be replaced immediately when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph, ‘‘immediately’’ means within 8 hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons. The owner or operator must monitor at the outlet of the first adsorber within 3 days of replacement to confirm it is performing properly.

(B) Based on the adsorber bed life established according to paragraph (d)(5)(i) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than 2 months of life remaining, at least weekly if the adsorbent has between 2 months and 2 weeks of life remaining, and at least daily if the adsorbent has 2 weeks or less of life remaining.

(e) The owner or operator of a control device that is used to comply with the provisions of this section shall monitor the control device in accordance with §63.143 of this subpart.

(f) Except as provided in §63.140 of this subpart, if gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to covers and control devices during an inspection, a first effort to repair shall be made as soon as practical but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect.

§63.140 Process wastewater provisions—delay of repair.

(a) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the repair is technically infeasible without a shutdown, as defined in §63.101 of subpart F of this part, or if the owner or operator determines that emissions of purged material from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of this equipment shall occur by the end of the next shutdown.

(b) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the equipment is emptied or is no longer used to treat or manage Group 1 wastewater streams or residuals removed from Group 1 wastewater streams.

(c) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified is also allowed if additional time is necessary due to the unavailability of parts beyond the control of the owner or operator. Repair shall be completed as soon as practical. The owner or operator who uses this provision shall comply with the requirements of §63.147(b)(7) to document the reasons that the delay of repair was necessary.

§§63.141-63.142 [Reserved]

§63.143 Process wastewater provisions—inspections and monitoring of operations.

(a) For each wastewater tank, surface impoundment, container, individual drain system, and oil-water separator that receives, manages, or treats a Group 1 wastewater stream, a residual removed from a Group 1 wastewater stream, a recycled Group 1 wastewater stream, or a recycled residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the inspection requirements specified in table 11 of this subpart.

(b) For each design steam stripper and biological treatment unit used to comply with §63.138 of this subpart, the owner or operator shall comply with the monitoring requirements specified in table 12 of this subpart.

(c) If the owner or operator elects to comply with Item 1 in table 12 of this subpart, the owner or operator shall request approval to monitor appropriate parameters that demonstrate proper operation of the biological treatment unit. The request shall be submitted according to the procedures specified in §63.151(f) of this subpart, and shall include a ~~discription~~description of planned reporting and recordkeeping procedures. The owner or operator shall include as part of the submittal the basis for the selected monitoring frequencies and the methods that will be used. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(d) If the owner or operator elects to comply with Item 3 in table 12 of this subpart, the owner or operator shall request approval to monitor appropriate parameters that demonstrate proper operation of the selected treatment process. The request shall be submitted according to the procedures specified in §63.151(f) of this subpart, and shall include a description of planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(e) Except as provided in paragraphs (e)(4) and (e)(5) of this section, for each control device used to comply with the requirements of §§63.133 through 63.139 of this subpart, the owner or operator shall comply with the requirements in §63.139(d) of this subpart, and with the requirements specified in paragraph (e)(1), (e)(2), or (e)(3) of this section.

(1) The owner or operator shall comply with the monitoring requirements specified in table 13 of this subpart; or

(2) The owner or operator shall use an organic monitoring device installed at the outlet of the control device and equipped with a continuous recorder. Continuous recorder is defined in §63.111 of this subpart; or

(3) The owner or operator shall request approval to monitor parameters other than those specified in paragraphs (e)(1) and (e)(2) of this section. The request shall be submitted according to the procedures specified in §63.151(f) of this subpart, and shall include a description of

planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(4) For a boiler or process heater in which all vent streams are introduced with primary fuel, the owner or operator shall comply with the requirements in §63.139(d) of this subpart but the owner or operator is exempt from the monitoring requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(5) For a boiler or process heater with a design heat input capacity of 44 megawatts or greater, the owner or operator shall comply with the requirements in §63.139(d) of this subpart but the owner or operator is exempt from the monitoring requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(f) For each parameter monitored in accordance with paragraph (c), (d), or (e) of this section, the owner or operator shall establish a range that indicates proper operation of the treatment process or control device. In order to establish the range, the owner or operator shall comply with the requirements specified in §§63.146(b)(7)(ii)(A) and (b)(8)(ii) of this subpart.

(g) Monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

§63.144 Process wastewater provisions—test methods and procedures for determining applicability and Group 1/Group 2 determinations (determining which wastewater streams require control).

(a) *Procedures to determine applicability.* An owner or operator shall comply with paragraph (a)(1) or (a)(2) of this section for each wastewater stream to determine which wastewater streams require control for Table 8 and/or Table 9 compounds. The owner or operator may use a combination of the approaches in paragraphs (a)(1) and (a)(2) of this section for different wastewater streams generated at the source.

(1) *Determine Group 1 or Group 2 status.* Determine whether a wastewater stream is a Group 1 or Group 2 wastewater stream in accordance with paragraphs (b) and (c) of this section.

(2) *Designate as Group 1.* An owner or operator may designate as a Group 1 wastewater stream a single wastewater stream or a mixture of wastewater streams. The owner or operator is not required to determine the concentration or flow rate for each designated Group 1 wastewater stream for the purposes of this section.

(b) *Procedures to establish concentrations, when determining Group status under paragraph (a)(1) of this section.* An owner or operator who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the annual average concentration for Table 8 and/or Table 9 compounds according to paragraph (b)(1) of this section for existing sources or paragraph (b)(2) of this section for new sources. The annual average concentration shall be a flow weighted average representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12 month period. For flexible operation units, the owner or operator shall consider the anticipated production over the designated 12 month period and include all wastewater streams generated by the process equipment during this period. The owner/operator is not required to determine the concentration of Table 8 or Table 9 compounds that are not reasonably expected to be in the process.

(1) *Existing sources.* An owner or operator of an existing source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the flow weighted total annual average concentration for Table 9 compounds. For the purposes of this section, the term

concentration, whether concentration is used alone or with other terms, may be adjusted by multiplying by the compound-specific fraction measured (Fm) factors listed in table 34 of this subpart unless determined by the methods in §63.144(b)(5)(i)(A) and/or (B). When concentration is determined by Method 305 as specified in §63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in table 34 of this subpart. When concentration is determined by Method 25D as specified in §63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in table 34 of this subpart. Compound-specific Fm factors may be used only when concentrations of individual compounds are determined or when only one compound is in the wastewater stream. Flow weighted total annual average concentration for Table 9 compounds means the total mass of Table 9 compounds occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The total annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. The procedures specified in paragraphs (b)(3), (b)(4), and (b)(5) of this section are considered acceptable procedures for determining the annual average concentration. They may be used in combination, and no one procedure shall take precedence over another.

(2) *New sources.* An owner or operator of a new source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine both the flow weighted total annual average concentration for Table 9 compounds and the flow weighted annual average concentration for each Table 8 compound. For the purposes of this section, the term concentration, whether concentration is used alone or with other terms, may be adjusted by

multiplying by the compound-specific Fm factors listed in table 34 of this subpart unless determined by the methods in §63.144(b)(5)(i)(A) and/or (B). When concentration is determined by Method 305 as specified in §63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in table 34 of this subpart. When concentration is determined by Method 25D as specified in §63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in table 34 of this subpart. Compound-specific fraction measured factors are compound specific and shall be used only when concentration of individual compounds are determined or when only one compound is in the wastewater stream. The flow weighted annual average concentration of each Table 8 compound means the mass of each Table 8 compound occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. Flow weighted total annual average concentration for Table 9 compounds means the total mass of Table 9 compounds occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. Procedures specified in paragraphs (b)(3), (b)(4), and (b)(5) of this section are considered acceptable procedures for determining the annual average concentration. They may be used in combination, and no one procedure shall take precedence over another.

(3) *Knowledge of the wastewater.* Where knowledge is used to determine the annual average concentration, the owner or operator shall provide sufficient information to document the annual average concentration for wastewater streams determined to be Group 2 wastewater

streams. Documentation to determine the annual average concentration is not required for Group 1 streams. Examples of acceptable documentation include material balances, records of chemical purchases, process stoichiometry, or previous test results. If test data are used, the owner or operator shall provide documentation describing the testing protocol and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination.

(4) *Bench-scale or pilot-scale test data.* Where bench-scale or pilot-scale test data are used to determine the annual average concentration, the owner or operator shall provide sufficient information to document that the data are representative of the actual annual average concentration, or are reliably indicative of another relevant characteristic of the wastewater stream that could be used to predict the annual average concentration. For concentration data, the owner or operator shall also provide documentation describing the testing protocol, and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination of annual average concentration.

(5) *Test data from sampling at the point of determination or at a location downstream of the point of determination.* Where an owner or operator elects to comply with paragraph (a)(1) of this section by measuring the concentration for the relevant Table 8 or Table 9 compounds, the owner or operator shall comply with the requirements of this paragraph. For each wastewater stream, measurements shall be made either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. A minimum of three samples from each wastewater stream shall be taken. Samples may be grab samples or composite samples.

(i) *Methods.* The owner or operator shall use any of the methods specified in paragraphs (b)(5)(i)(A) through (b)(5)(i)(F) of this section.

(A) *Method 25D.* Use procedures specified in Method 25D of 40 CFR part 60, appendix A.

(B) *Method 305.* Use procedures specified in Method 305 of 40 CFR part 63, appendix A.

(C) *Methods 624 and 625.* Use procedures specified in Methods 624 and 625 of 40 CFR part 136, appendix A and comply with the sampling protocol requirements specified in paragraph (b)(5)(ii) of this section. If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed. For Method 625, make corrections to the compounds for which the analysis is being conducted based on the accuracy as recovery factors in Table 7 of the method.

(D) *Method 1624 and Method 1625.* Use procedures specified in Method 1624 and Method 1625 of 40 CFR part 136, appendix A and comply with the requirements specified in paragraph (b)(5)(ii) of this section. If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed.

(E) *Other EPA method(s).* Use procedures specified in the method and comply with the requirements specified in paragraphs (b)(5)(ii) and either paragraph (b)(5)(iii)(A) or (b)(5)(iii)(B) of this section.

(F) *Method(s) other than EPA method.* Use procedures specified in the method and comply with the requirements specified in paragraphs (b)(5)(ii) and (b)(5)(iii)(A) of this section.

(G) *Method 8260B.* Use procedures specified in Method 8260B in the SW-846 Compendium of Methods.

(H) *Method 316.* Use Method 316 to determine formaldehyde concentration.

(ii) *Sampling plan.* The owner or operator who is expressly referred to this paragraph by provisions of this subpart shall prepare a sampling plan. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity. The sample plan shall include procedures for determining recovery efficiency of the relevant hazardous air pollutants listed in table 8 or table 9 of this subpart. An example of an acceptable sampling plan would be one that incorporates similar sampling and sample handling requirements to those of Method 25D of 40 CFR part 60, appendix A. The sampling plan shall be maintained at the facility.

(iii) *Validation of methods.* The owner or operator shall validate EPA methods other than Methods 25D, 305, 624, 625, 1624, and 1625 using the procedures specified in paragraph (b)(5)(iii)(A) or (b)(5)(iii)(B) of this section. The owner or operator shall validate other methods as specified in paragraph (b)(5)(iii)(A) of this section.

(A) *Validation of EPA methods and other methods.* The method used to measure organic hazardous air pollutants concentrations in the wastewater shall be validated according to section 5.1 or 5.3, and the corresponding calculations in section 6.1 or 6.3, of Method 301 of appendix A of this part. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of Method 301 of appendix A of this part. If correction is required under section 6.3.3 of Method 301 of appendix A of this part, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 of appendix A of this part are not required. The concentrations of the individual organic hazardous air pollutants measured in the water may be corrected to their concentrations had they been measured by Method 305 of appendix A of this part, by multiplying each concentration by the compound-specific fraction measured (Fm) factor listed in table 34 of this subpart.

(B) *Validation for EPA methods.* Follow the procedures as specified in “Alternative Validation Procedure for EPA Waste Methods” 40 CFR part 63, appendix D.

(iv) *Calculations of average concentration.* The average concentration for each individually speciated Table 8 compound shall be calculated by adding the individual values determined for the specific compound in each sample and dividing by the number of samples. The total average concentration of Table 9 compounds shall be calculated by first summing the concentration of the individual compounds to obtain a total hazardous air pollutants concentration for the sample; add the sample totals and then divide by the number of samples in the run to obtain the sample average for the run. If the method used does not speciate the compounds, the sample results should be added and this total divided by the number of samples in the run to obtain the sample average for the run.

(6) *Adjustment for concentrations determined downstream of the point of determination.* The owner or operator shall make corrections to the annual average concentration or total annual average concentration when the concentration is determined downstream of the point of determination at a location where: two or more wastewater streams have been mixed; one or more wastewater streams have been treated; or, losses to the atmosphere have occurred. The owner or operator shall make the adjustments either to the individual data points or to the final annual average concentration.

(c) *Procedures to determine flow rate, when evaluating Group status under paragraph (a)(1) of this section.* An owner or operator who elects to comply with paragraph (a)(1) of this section shall determine the annual average flow rate of the wastewater stream either at the point of determination for each wastewater stream, or downstream of the point of determination with adjustment for flow rate changes made according to paragraph (c)(4) of this section. These procedures may be used in combination for different wastewater streams at the source. The annual average flow rate for the wastewater stream shall be representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12-month period. The owner or operator shall consider the total annual wastewater volume generated by the chemical manufacturing process unit. If the chemical manufacturing process unit is a flexible operation unit, the owner or operator shall consider all anticipated production in the process equipment over the designated 12-month period. The procedures specified in paragraphs (c)(1), (c)(2), and (c)(3) of this section are considered acceptable procedures for determining the flow rate. They may be used in combination, and no one procedure shall take precedence over another.

(1) *Knowledge of the wastewater.* The owner or operator may use knowledge of the wastewater stream and/or the process to determine the annual average flow rate. The owner or operator shall use the maximum expected annual average production capacity of the process unit, knowledge of the process, and/or mass balance information to either: Estimate directly the annual average wastewater flow rate; or estimate the total annual wastewater volume and then divide total volume by 525,600 minutes in a year. Where knowledge is used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(2) *Historical records.* The owner or operator may use historical records to determine the annual average flow rate. Derive the highest annual average flow rate of wastewater from historical records representing the most recent 5 years of operation or, if the process unit has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the process unit. Where historical records are used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(3) *Measurements of flow rate.* Where an owner or operator elects to comply with paragraph (a)(1) of this section by measuring the flow rate, the owner or operator shall comply with the requirements of this paragraph. Measurements shall be made at the point of determination, or at a location downstream of the point of determination with adjustments for flow rate changes made according to paragraph (c)(4) of this section. Where measurement data are used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(4) *Adjustment for flow rates determined downstream of the point of determination.* The owner or operator shall make corrections to the annual average flow rate of a wastewater stream when it is determined downstream of the point of determination at a location where two or more wastewater streams have been mixed or one or more wastewater streams have been treated. The owner or operator shall make corrections for such changes in the annual average flow rate.

§63.145 Process wastewater provisions—test methods and procedures to determine compliance.

(a) *General.* This section specifies the procedures for performance tests that are conducted to demonstrate compliance of a treatment process or a control device with the control requirements specified in §63.138 of this subpart. Owners or operators conducting a design evaluation shall comply with the requirements of paragraph (a)(1) or (a)(2) of this section. Owners or operators conducting a performance test shall comply with the applicable requirements in paragraphs (a) through (i) of this section.

(1) *Performance tests and design evaluations for treatment processes.* If design steam stripper option (§63.138(d)) or RCRA option (§63.138(h)) is selected to comply with §63.138, neither a design evaluation nor a performance test is required. For any other non-biological treatment process, the owner or operator shall conduct either a design evaluation as specified in §63.138(j), or a performance test as specified in this section. For closed biological treatment processes, the owner or operator shall conduct either a design evaluation as specified in §63.138(j), or a performance test as specified in this section. For each open biological treatment process, the owner or operator shall conduct a performance test as specified in this section.

NOTE: Some open biological treatment processes may not require a performance test. Refer to §63.145(h) and table 36 of this subpart to determine whether the biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(2) *Performance tests and design evaluations for control devices.* The owner or operator shall conduct either a design evaluation as specified in §63.139(d), or a performance test as specified in paragraph (i) of this section for control devices other than flares and paragraph (j) of this section for flares.

(3) *Representative process unit operating conditions.* Except as specified in paragraph (a)(10) of this section, ~~C~~compliance shall be demonstrated for representative operating conditions. Operations during periods of startup, shutdown, or malfunction and periods of nonoperation shall not constitute representative conditions. The owner or operator shall record the process information that is necessary to document operating conditions during the test.

(4) *Representative treatment process or control device operating conditions.* Performance tests shall be conducted when the treatment process or control device is operating at a representative inlet flow rate and concentration. If the treatment process or control device will be operating at several different sets of representative operating conditions, the owner or operator shall comply with paragraphs (a)(4)(i) and (a)(4)(ii) of this section. The owner or operator shall record information that is necessary to document treatment process or control device operating conditions during the test.

(i) *Range of operating conditions.* If the treatment process or control device will be operated at several different sets of representative operating conditions, performance testing over the entire range is not required. In such cases, the performance test results shall be supplemented with modeling and/or engineering assessments to demonstrate performance over the operating range.

(ii) *Consideration of residence time.* If concentration and/or flow rate to the treatment process or control device are not relatively constant (i.e., comparison of inlet and outlet data will not be representative of performance), the owner or operator shall consider residence time, when determining concentration and flow rate.

(5) *Testing equipment.* All testing equipment shall be prepared and installed as specified in the applicable test methods, or as approved by the Administrator.

(6) *Compounds not required to be considered in performance tests or design evaluations.* Compounds that meet the requirements specified in paragraph (a)(6)(i), (a)(6)(ii), or (a)(6)(iii) of this section are not required to be included in the performance test. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not be adjusted by the compound-specific Fm factor listed in table 34 of this subpart.

(i) Compounds not used or produced by the chemical manufacturing process unit; or

(ii) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(iii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight. The method shall be an analytical method for wastewater which has that compound as a target analyte.

(7) *Treatment using a series of treatment processes.* In all cases where the wastewater provisions in this subpart allow or require the use of a treatment process to comply with emissions limitations, the owner or operator may use multiple treatment processes. The owner or operator complying with the requirements of §63.138(a)(7)(i), when wastewater is conveyed by hard-piping, shall comply with either §§63.145(a)(7)(i) or 63.145(a)(7)(ii) of this subpart. The owner or operator complying with the requirements of §63.138(a)(7)(ii) of this subpart shall comply with the requirements of §63.145(a)(7)(ii) of this subpart.

(i) The owner or operator shall conduct the performance test across each series of treatment processes. For each series of treatment processes, inlet concentration and flow rate shall be measured either where the wastewater stream enters the first treatment process in a series of treatment processes, or prior to the first treatment process as specified in §63.145(a)(9) of this subpart. For each series of treatment processes, outlet concentration and flow rate shall be measured where the wastewater stream exits the last treatment process in the series of treatment processes, except when the last treatment process is an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in §63.145 (f) or (g) of this subpart. When the last treatment process is either an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in §63.145 (f) or (g) of this subpart, inlet and outlet concentrations and flow rates shall be measured as provided in paragraphs (a)(7)(i)(A) and (a)(7)(i)(B) of this section. The mass flow rates removed or destroyed by the series of treatment processes and by the biological treatment process are all used to calculate actual mass removal (AMR) as specified in §63.145(f)(5)(ii) of this subpart.

(A) The inlet and outlet to the series of treatment processes prior to the biological treatment process are the points at which the wastewater enters the first treatment process and exits the last treatment process in the series, respectively, except as provided in paragraph (a)(9)(ii) of this section.

(B) The inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process or the outlet from the series of treatment processes identified in paragraph (a)(7)(i)(A) of this section, except as provided in paragraph (a)(9)(ii) of this section.

(ii) The owner or operator shall conduct the performance test across each treatment process in the series of treatment processes. The mass flow rate removed or destroyed by each treatment process shall be added together to determine whether compliance has been demonstrated using §63.145 (c), (d), (e), (f), and (g), as applicable. If a biological treatment process is one of the treatment processes in the series of treatment processes, the inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process, or the inlet to the equalization tank if all the criteria of paragraph (a)(9)(ii) of this section are met.

(8) When using a biological treatment process to comply with §63.138 of this subpart, the owner or operator may elect to calculate the AMR using a subset of Table 8 and/or Table 9 compounds determined at the point of determination or downstream of the point of determination with adjustment for concentration and flowrate changes made according to §63.144(b)(6) and §63.144(c)(4) of this subpart, respectively. All Table 8 and/or Table 9 compounds measured to determine the RMR, except as provided by §63.145(a)(6), shall be included in the RMR calculation.

(9) The owner or operator determining the inlet for purposes of demonstrating compliance with §63.145 (e), (f), or (g) of this subpart may elect to comply with paragraph (a)(9)(i) or (a)(9)(ii) of this section.

(i) When wastewater is conveyed exclusively by hard-piping from the point of determination to a treatment process that is either the only treatment process or the first in a series of treatment processes (i.e., no treatment processes or other waste management units are used upstream of this treatment process to store, handle, or convey the wastewater), the inlet to the treatment process shall be at any location from the point of determination to where the wastewater stream enters the treatment process. When samples are taken upstream of the treatment process and before wastewater streams have converged, the owner or operator shall ensure that the mass flow rate of all Group 1 wastewater streams is accounted for when using

§63.138 (e) or (f) to comply and that the mass flow rate of all Group 1 and Group 2 wastewater streams is accounted for when using §63.138(g) to comply, except as provided in §63.145(a)(6).

(ii) The owner or operator may consider the inlet to the equalization tank as the inlet to the biological treatment process if all the criteria in paragraphs (a)(9)(ii)(A) through (a)(9)(ii)(C) of this section are met. The outlet from the series of treatment processes prior to the biological treatment process is the point at which the wastewater exits the last treatment process in the series prior to the equalization tank, if the equalization tank and biological treatment process are part of a series of treatment processes. The owner or operator shall ensure that the mass flow rate of all Group 1 wastewater streams is accounted for when using §63.138 (e) or (f) to comply and that the mass flow rate of all Group 1 and Group 2 wastewater streams is accounted for when using §63.138(g) to comply, except as provided in §63.145(a)(6).

(A) The wastewater is conveyed by hard-piping from either the last previous treatment process or the point of determination to the equalization tank.

(B) The wastewater is conveyed from the equalization tank exclusively by hard-piping to the biological treatment process and no treatment processes or other waste management units are used to store, handle, or convey the wastewater between the equalization tank and the biological treatment process.

(C) The equalization tank is equipped with a fixed roof and a closed vent system that routes emissions to a control device that meets the requirements of §63.133(a)(2)(i) and §63.133 (b)(1) through (b)(4) of this subpart.

(10) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the requirement

of paragraph (a)(3) of this section no longer applies. Instead, owners and operators must comply with the conditions specified in §63.103(b)(3)(ii) of subpart F of this part.

(b) *Noncombustion treatment process—concentration limits.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion treatment process with the parts per million by weight wastewater stream concentration limits at the outlet of the treatment process. This compliance option is specified in §63.138(b)(1) and §63.138(c)(1). Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.144(b)(5)(ii). Samples shall be collected and analyzed using the procedures specified in §63.144 (b)(5)(i), (b)(5)(ii), and (b)(5)(iii) of this subpart. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 may be adjusted by dividing each concentration by the compound-specific Fm factor listed in Table 34 of this subpart. Concentration measurements based on methods other than Method 305 may be adjusted by multiplying each concentration by the compound-specific Fm factor listed in table 34 of this subpart. (For wastewater streams that are Group 1 for both Table 8 and Table 9 compounds, compliance is demonstrated only if the sum of the concentrations of Table 9 compounds is less than 50 ppmw, and the concentration of each Table 8 compound is less than 10 ppmw.)

(c) *Noncombustion, nonbiological treatment process: Percent mass removal/destruction option.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion, nonbiological treatment process with the percent mass removal limits specified in §63.138(e) (1) and (2) for Table 8 and/or Table 9 compounds. The owner or operator shall comply with the requirements specified in §63.145 (c)(1) through (c)(6) of this subpart.

(1) *Concentration.* The concentration of Table 8 and/or Table 9 compounds entering and exiting the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in Table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in Table 34 of this subpart.

(2) *Flow rate.* The flow rate of the entering and exiting wastewater streams shall be determined using inlet and outlet flow measurement devices, respectively. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of mass flow rate—for noncombustion, nonbiological treatment processes.* The mass flow rates of Table 8 and/or Table 9 compounds entering and exiting the treatment process are calculated as follows.

$$QMW_a = \frac{\rho}{p * 10^6}\left(\sum_{k=1}^{p} Q_{a,k} C_{T,a,k}\right) \quad (Eqn\ WW1)$$

$$QMW_b = \frac{\rho}{p * 10^6}\left(\sum_{k=1}^{p} Q_{b,k} C_{T,b,k}\right) \quad (Eqn\ WW2)$$

Where:

QMW_a, QMW_b	=	Mass flow rate of Table 8 or Table 9 compounds, average of all runs, in wastewater entering (QMW_a) or exiting (QMW_b) the treatment process, kilograms per hour.
ρ	=	Density of the wastewater, kilograms per cubic meter.
$Q_{a,k}$, $Qb_{b,k}$	=	Volumetric flow rate of wastewater entering ($Q_{a,k}$) or exiting ($Q_{b,k}$) the treatment process during each run k, cubic meters per hour.
$C_{T,a,k}$, $C_{T,b,k}$	=	Total concentration of Table 8 or Table 9 compounds in wastewater entering ($C_{T,a,k}$) or exiting ($C_{T,b,k}$) the treatment process during each run k, parts per million by weight.
p	=	Number of runs.
k	=	Identifier for a run.
10^6	=	conversion factor, mg/kg

(4) *Percent removal calculation for mass flow rate.* The percent mass removal across the treatment process shall be calculated as follows:

$$E = \frac{QMW_a - QMW_b}{QMW_a} \times 100 \quad (Eqn\ WW3)$$

Where:

E	=	Removal or destruction efficiency of the treatment process, percent.
QMW_a, QMW_b	=	Mass flow rate of Table 8 or Table 9 compounds in wastewater entering (QMW_a) and exiting (QMW_b) the treatment process, kilograms per hour (as calculated using Equations WW1 and WW2).

(5) *Calculation of flow-weighted average of Fr values.* If complying with §63.138(e)(2), use Equation WW8 to calculate the flow-weighted average of the Fr values listed in Table 9 of

this subpart. When the term "combustion" is used in Equation WW8, the term "treatment process" shall be used for the purposes of this paragraph.

(6) *Compare mass removal efficiency to required efficiency.* Compare the mass removal efficiency (calculated in Equation WW3) to the required efficiency as specified in §63.138(e) of this subpart. If complying with §63.138(e)(1), compliance is demonstrated if the mass removal efficiency is 99 percent or greater. If complying with §63.138(e)(2), compliance is demonstrated if the mass removal efficiency is greater than or equal to the flow-weighted average of the Fr values calculated in Equation WW8.

(d) *Combustion treatment processes: percent mass removal/destruction option.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a combustion treatment process with the percent mass destruction limits specified in §63.138(e)(1) and (2) for Table 9 compounds, and/or §63.138(e)(1) for Table 8 compounds. The owner or operator shall comply with the requirements specified in §63.145 (d)(1) through (d)(9) of this subpart. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) *Concentration in wastewater stream entering the combustion treatment process.* The concentration of Table 8 and/or Table 9 compounds entering the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a

minimum of 3 runs. Concentration measurements based on Method 305 of appendix A of this part shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) *Flow rate of wastewater entering the combustion treatment process.* The flow rate of the wastewater stream entering the combustion treatment process shall be determined using an inlet flow meter. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of mass flow rate in wastewater stream entering combustion treatment processes.* The mass flow rate of Table 8 and/or Table 9 compounds entering the treatment process is calculated as follows:

$$QMW_a = \frac{\rho}{p * 10^6}\left(\sum_{k=1}^{p} Q_{a,k} * C_{T,a,k}\right) \qquad (Eqn\ WW4)$$

Where:

QMW_a	=	Mass flow rate of Table 8 or Table 9 compounds entering the combustion unit, kilograms per hour.
ρ	=	Density of the wastewater stream, kilograms per cubic meter.
$Q_{a,k}$	=	Volumetric flow rate of wastewater entering the combustion unit during run k, cubic meters per hour.
$C_{T,a,k}$	=	Total concentration of Table 8 or Table 9 compounds in the wastewater stream entering the combustion unit during run k, parts per million by weight.
p	=	Number of runs.
k	=	Identifier for a run.

(4) *Concentration in vented gas stream exiting the combustion treatment process.* The concentration of Table 8 and/or Table 9 compounds exiting the combustion treatment process in

any vented gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements shall be determined using Method 18 of 40 CFR part 60, appendix A. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part may be used.

(5) *Volumetric flow rate of vented gas stream exiting the combustion treatment process.* The volumetric flow rate of the vented gas stream exiting the combustion treatment process shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements.

(6) *Calculation of mass flow rate of vented gas stream exiting combustion treatment processes.* The mass flow rate of Table 8 and/or Table 9 compounds in a vented gas stream exiting the combustion treatment process shall be calculated as follows:

(Eqn WW5) [Reserved]

$$QMG_b = K_2\left(\sum_{i=1}^{n} CG_{b,i} MW_i\right) QG_b \qquad (Eqn\ WW6)$$

Where:

$CG_{a,i}$, $CG_{b,i}$ = Concentration of total organic compounds (TOC) (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering ($CG_{a,i}$) and exiting ($CG_{b,i}$) the control device, dry basis, parts per million by volume.

QMG_a, QMG_b = Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (QMG_a) and exiting (QMG_b) the control device, dry basis, kilograms per hour.

MW_i = Molecular weight of a component, kilogram/kilogram-mole.

QG_a,QG_b = Flow rate of gas stream entering (QG_a) and exiting (QG_b) the control device, dry standard cubic meters per hour.

K_2 = Constant, 41.57×10^{-9} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram), where standard temperature (gram-mole per standard cubic meter) is 20 °Celsius.

i = Identifier for a compound.

n = Number of components in the sample.

(7) *Destruction efficiency calculation.* The destruction efficiency of the combustion unit for Table 8 and/or Table 9 compounds shall be calculated as follows:

$$E = \frac{QMW_a - QMG_b}{QMW_a} * 100 \qquad (Eqn\ WW7)$$

Where:

E = Destruction efficiency of Table 8 or Table 9 compounds for the combustion unit, percent.

QMW_a = Mass flow rate of Table 8 or Table 9 compounds entering the combustion unit, kilograms per hour.

QMG_b = Mass flow rate of Table 8 or Table 9 compounds in vented gas stream exiting the combustion treatment process, kilograms per hour.

(8) *Calculation of flow-weighted average of Fr values.* Use Equation WW8 to calculate the flow-weighted average of the Fr values listed in table 9 of this subpart.

$$Fr_{avg} = \left[\frac{\sum_{i=1}^{n} \sum_{k=1}^{p} Fr_i * C_{i,a,k} * Q_{a,k}}{\sum_{k=1}^{p} \sum_{i=1}^{n} C_{i,a,k} * Q_{a,k}} \right] * 100 \qquad (Eqn\ WW8)$$

Where:

Fr_{avg}	=	Flow-weighted average of the Fr values.
$C_{i, a, k}$	=	Concentration of Table 8 and/or Table 9 compounds in wastewater stream entering the combustion unit, during run k, parts per million by weight.
$Q_{a, k}$	=	Volumetric flow rate of wastewater entering the combustion unit during run k, cubic meters per hour.
Fr_i	=	Compound-specific Fr value listed in table 9 of this subpart.

(9) *Calculate flow-weighted average of Fr values and compare to mass destruction efficiency.* Compare the mass destruction efficiency (calculated in Equation WW 7) to the required efficiency as specified in §63.138(e). If complying with §63.138(e)(1), compliance is demonstrated if the mass destruction efficiency is 99 percent or greater. If complying with §63.138(e)(2), compliance is demonstrated if the mass destruction efficiency is greater than or equal to the flow-weighted average of the Fr value calculated in Equation WW8.

(e) *Non-combustion treatment processes including closed biological treatment processes: RMR option.* This paragraph applies to performance tests for non-combustion treatment processes other than open biological treatment processes to demonstrate compliance with the mass removal provisions for Table 8 and/or Table 9 compounds. Compliance options for noncombustion treatment processes are specified in §63.138(f) of this subpart. Compliance options for closed aerobic or anaerobic biological treatment processes are specified in §63.138(f) and §63.138(g) of this subpart. When complying with §63.138(f), the owner or operator shall comply with the requirements specified in §63.145(e)(1) through (e)(6) of this subpart. When complying with §63.138(g), the owner or operator shall comply with the requirements specified in §63.145(e)(1) through (e)(6) of this subpart. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) *Concentration in wastewater stream.* The concentration of Table 8 and/or Table 9 compounds shall be determined as provided in this paragraph. Concentration measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for concentration change made according to §63.144(b)(6) of this subpart. Concentration measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in §63.145(a)(7) for a series of treatment processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) *Flow rate.* Flow rate measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for flow rate change made according to §63.144(c)(4) of this subpart. Flow rate measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in §63.145(a)(7) for

a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of RMR for non-combustion treatment processes including closed biological treatment processes.* When using §63.138(f) to comply, the required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated as specified in paragraph (e)(3)(i) of this section. When using §63.138(g) to comply, the required mass removal shall be calculated as specified in paragraph (e)(3)(ii) of this section.

(i) When using §63.138(f) to comply, the required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated using Equation WW9.

$$RMR = \frac{\rho}{10^9} Q \sum_{i=1}^{n} (C_i * Fr_i) \qquad (Eqn\ WW9)$$

Where:

RMR	=	Required mass removal for treatment process or series of treatment processes, kilograms per hour.
ρ	=	Density of the Group 1 wastewater stream, kilograms per cubic meter.
Q	=	Volumetric flow rate of wastewater stream at the point of determination, liters per hour.
i	=	Identifier for a compound.
n	=	Number of Table 8 or Table 9 compounds in stream.
C_i	=	Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.
Fr_i	=	Fraction removal value of a Table 8 or Table 9 compound. Fr values are listed in table 9 of this subpart.
10^9	=	Conversion factor, mg/kg * l/m^3.

(ii) When using §63.138(g) to comply, the required mass removal is 95 percent of the mass flow rate for all Group 1 and Group 2 wastewater streams combined for treatment. The required mass removal of Table 8 and/or Table 9 compounds for all Group 1 and Group 2 wastewater streams combined for treatment when complying with §63.138(g) shall be calculated using the following equation:

$$RMR = \frac{0.95\rho}{10^9} Q \sum_{i=1}^{n} (C_i) \qquad (Eqn\ WW9a)$$

Where:

RMR	=	Required mass removal for treatment process or series of treatment processes, kilograms per hour.
ρ	=	Density of the Group 1 wastewater stream, kilograms per cubic meter.
Q	=	Volumetric flow rate of wastewater stream at the point of determination, liters per hour.
i	=	Identifier for a compound.
n	=	Number of Table 8 or Table 9 compounds in stream.
C_i	=	Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.
10^9	=	Conversion factor, mg/kg * l/m^3

(4)(i) The required mass removal is calculated by summing the required mass removal for each Group 1 wastewater stream to be combined for treatment when complying with §63.138(f).

(ii) The required mass removal is calculated by summing the required mass removal for all Group 1 and Group 2 wastewater streams combined for treatment when complying with §63.138(g).

(5) *The AMR calculation procedure for non-combustion treatment processes including closed biological treatment processes.* The AMR shall be calculated as follows:

$$AMR = \left(QMW_a - QMW_b\right) \qquad (Eqn\, WW10)$$

Where:

AMR	=	Actual mass removal of Table 8 or Table 9 compounds achieved by treatment process or series of treatment processes, kilograms per hour.
QMW_a	=	Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the treatment process or first treament process in a series of treatment processes, kilograms per hour.
QMW_b	=	Mass flow rate of Table 8 or Table 9 compounds in wastewater exiting the last treatment process in a series of treatment processes, kilograms per hour.

(6) *Compare RMR to AMR.* When complying with §63.138(f), compare the RMR calculated in Equation WW9 to the AMR calculated in Equation WW10. Compliance is demonstrated if the AMR is greater than or equal to the RMR. When complying with §63.138(g), compare the RMR calculated in Equation WW-9a to the AMR calculated in Equation WW10. Compliance is demonstrated if the AMR is greater than or equal to 95-percent mass removal.

(f) *Open or closed aerobic biological treatment processes: Required mass removal (RMR) option.* This paragraph applies to the use of performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the mass removal provisions for Table 8 and/or Table 9 compounds. These compliance options are specified in §63.138(f) of this subpart. The owner or operator shall comply with the requirements specified in §63.145 (f)(1) through (f)(6) of this subpart. Some compounds may not require a performance test. Refer to §63.145(h) and table 36 of this subpart to determine which compounds may be exempt from the requirements of this paragraph.

(1) *Concentration in wastewater stream.* The concentration of Table 8 and/or Table 9 compounds shall be determined as provided in this paragraph. Concentration measurements to determine RMR shall be taken at the point of determination or downstream of the point of

determination with adjustment for concentration change made according to §63.144(b)(6) of this subpart. Concentration measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in §63.145(a)(7) for a series of treatment processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) *Flow rate.* Flow rate measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for flow rate change made according to §63.144(c)(4) of this subpart. Flow rate measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in §63.145(a)(7) for a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of RMR for open or closed aerobic biological treatment processes.* The required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated using the following equation:

$$RMR = \frac{\rho}{10^9} Q \sum_{i=1}^{n} (C_i * Fr_i) \qquad (Eqn\ WW11)$$

Where:

RMR	=	Required mass removal for treatment process or series of treatment processes, kilograms per hour.
ρ	=	Density of the Group 1 wastewater stream, kilograms per cubic meter.
Q	=	Volumetric flow rate of wastewater stream at the point of determination, liters per hour.
i	=	Identifier for a compound.
n	=	Number of Table 8 or Table 9 compounds in stream.
C_i	=	Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.
Fr_i	=	Fraction removal value of a Table 8 or Table 9 compound. Fr values are listed in table 9 of this subpart.
10^9	=	Conversion factor, mg/kg * l/m^3.

(4) The required mass removal is calculated by adding together the required mass removal for each Group 1 wastewater stream to be combined for treatment.

(5) *Actual mass removal calculation procedure for open or closed aerobic biological treatment processes.* The actual mass removal (AMR) shall be calculated using Equation WW12 as specified in paragraph (f)(5)(i) of this section when the performance test is performed across the open or closed aerobic biological treatment process only. If compliance is being demonstrated in accordance with §63.145(a)(7)(i), the AMR for the series shall be calculated using Equation WW13 in §63.145(f)(5)(ii). (This equation is for situations where treatment is performed in a series of treatment processes connected by hard-piping.) If compliance is being

demonstrated in accordance with §63.145(a)(7)(ii), the AMR for the biological treatment process shall be calculated using Equation WW12 in §63.145(f)(5)(i). The AMR for the biological treatment process used in a series of treatment processes calculated using Equation WW12 shall be added to the AMR determined for each of the other individual treatment processes in the series of treatment processes.

(i) Calculate AMR for the open or closed aerobic biological treatment process as follows:

$$AMR = QMW_a * F_{bio} \qquad (Eqn\ WW12)$$

Where:

AMR	=	Actual mass removal of Table 8 or Table 9 compounds achieved by open or closed biological treatment process, kilograms per hour.
QMW_a	=	Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the treatment process, kilograms per hour.
F_{bio}	=	Site-specific fraction of Table 8 or Table 9 compounds biodegraded. F_{bio} shall be determined as specified in §63.145(h) and appendix C of this subpart.

(ii) Calculate AMR across a series of treatment units where the last treatment unit is an open or closed aerobic biological treatment process as follows:

$$AMR = QMW_a - (QMW_b)(1 - F_{bio}) \qquad (Eqn\ WW13)$$

Where:

AMR	=	Actual mass removal of Table 8 or Table 9 compounds achieved by a series of treatment processes, kilograms per hour.
QMW_a	=	Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the first treatment process in a series of treatment processes, kilograms per hour.
QMW_b	=	Mass flow rate of Table 8 or Table 9 compounds in wastewater exiting the last treatment process in a series of treatment processes prior to the biological treatment process, kilograms per hour.

F_{bio} = Site-specific fraction of Table 8 or Table 9 compounds biodegraded. F_{bio} shall be determined as specified in §63.145(h) and appendix C of this subpart.

(6) *Compare RMR to AMR.* Compare the RMR calculated in Equation WW11 to the AMR calculated in either Equation WW12 or WW13, as applicable. Compliance is demonstrated if the AMR is greater than or equal to the RMR.

(g) *Open or closed aerobic biological treatment processes: 95-percent mass removal option.* This paragraph applies to performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the 95-percent mass removal provisions for Table 8 and/or Table 9 compounds. This compliance option is specified in §63.138(g) of this subpart. The RMR for this option is 95-percent mass removal. The owner or operator shall comply with the requirements specified in §63.145(g)(1) to determine AMR, §63.145 (e)(3)(ii) and (e)(4)(ii) to determine RMR, and (g)(2) of this subpart to determine whether compliance has been demonstrated. Some compounds may not require a performance test. Refer to §63.145(h) and table 36 of this subpart to determine which compounds may be exempt from the requirements of this paragraph. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) The owner or operator shall comply with the requirements specified in paragraphs (f)(1), (f)(2), and (f)(5) of this section to determine AMR. References to Group 1 wastewater streams shall be deemed Group 1 and Group 2 wastewater streams for the purposes of this paragraph.

(2) *Compare RMR to AMR.* Compliance is demonstrated if the AMR is greater than or equal to RMR.

(h) *Site-specific fraction biodegraded* (F_{bio}). The compounds listed in table 9 of this subpart are divided into two sets for the purpose of determining whether F_{bio} must be determined, and if F_{bio} must be determined, which procedures may be used to determine compound-specific kinetic parameters. These sets are designated as lists 1 and 2 in table 36 of this subpart.

(1) *Performance test exemption.* If a biological treatment process meets the requirements specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this section, the owner or operator is not required to determine F_{bio} and is exempt from the applicable performance test requirements specified in §63.138 of this subpart.

(i) The biological treatment process meets the definition of "enhanced biological treatment process" in §63.111 of this subpart.

(ii) At least 99 percent by weight of all compounds on table 36 of this subpart that are present in the aggregate of all wastewater streams using the biological treatment process to comply with §63.138 of this subpart are compounds on list 1 of table 36 of this subpart.

(2) F_{bio} determination. If a biological treatment process does not meet the requirement specified in paragraph (h)(1)(i) of this section, the owner or operator shall determine F_{bio} for the biological treatment process using the procedures in appendix C to part 63, and paragraph (h)(2)(ii) of this section. If a biological treatment process meets the requirements of paragraph (h)(1)(i) of this section but does not meet the requirement specified in paragraph (h)(1)(ii) of this section, the owner or operator shall determine F_{bio} for the biological treatment process using the procedures in appendix C to part 63, and paragraph (h)(2)(i) of this section.

(i) *Enhanced biological treatment processes.* If the biological treatment process meets the definition of "enhanced biological treatment process" in §63.111 of this subpart and the wastewater streams include one or more compounds on list 2 of table 36 of this subpart that do not meet the criteria in paragraph (h)(1)(ii) of this section, the owner or operator shall determine f_{bio} for the list 2 compounds using any of the procedures specified in appendix C of 40 CFR part 63. (The symbol "f_{bio}" represents the site specific fraction of an individual Table 8 or Table 9 compound that is biodegraded.) The owner or operator shall calculate f_{bio} for the list 1 compounds using the defaults for first order biodegradation rate constants (K_1) in table 37 of subpart G and follow the procedure explained in form III of appendix C, 40 CFR part 63, or any of the procedures specified in appendix C, 40 CFR part 63.

(ii) *Biological treatment processes that are not enhanced biological treatment processes.* For biological treatment processes that do not meet the definition for "enhanced biological treatment process" in §63.111 of this subpart, the owner or operator shall determine the f_{bio} for the list 1 and 2 compounds using any of the procedures in appendix C to part 63, except procedure 3 (inlet and outlet concentration measurements). (The symbol "f_{bio}" represents the site specific fraction of an individual Table 8 or Table 9 compound that is biodegraded.)

(i) *Performance tests for control devices other than flares.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a control device with the efficiency limits specified in §63.139(c). If complying with the 95-percent reduction efficiency requirement, comply with the requirements specified in paragraphs (i)(1) through (i)(9) of this section. If complying with the 20 ppm by volume requirement, comply with the requirements specified in paragraphs (i)(1) through (i)(6) and (i)(9) of this section. The 20 ppm by volume limit or 95-percent reduction efficiency requirement shall be measured as either total organic hazardous air pollutants or as TOC minus methane and ethane. Performance tests must be conducted according to the schedule in §63.103(b)(1) of subpart F of this part.

(1) *Sampling sites.* Sampling sites shall be selected using Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate. For determination of compliance with the 95 percent reduction requirement, sampling sites shall be located at the inlet and the outlet of the control device. For determination of compliance with the 20 parts per million by volume limit, the sampling site shall be located at the outlet of the control device.

(2) *Concentration in gas stream entering or exiting the control device.* The concentration of total organic hazardous air pollutants or TOC in a gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples (i.e., integrated samples). Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements shall be determined using Method 18 of 40 CFR part 60, appendix A. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part may be used.

(3) *Volumetric flow rate of gas stream entering or exiting the control device.* The volumetric flow rate of the gas stream shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements.

(4) *Calculation of TOC concentration.* The TOC concentration (CG_T) is the sum of the concentrations of the individual components. If compliance is being determined based on TOC, the owner or operator shall compute TOC for each run using the following equation:

$$CG_T = \frac{1}{m}\sum_{j=1}^{m}\left(\sum_{i=1}^{n} CGS_{i,j}\right) \qquad (Eqn\ WW14)$$

Where:

CG_T	=	Total concentration of TOC (minus methane and ethane) in vented gas stream, average of samples, dry basis, parts per million by volume.
$CGS^{i\,j}$	=	Concentration of sample components in vented gas stream for sample j, dry basis, parts per million by volume.
i	=	Identifier for a compound.
n	=	Number of components in the sample.
j	=	Identifier for a sample.
m	=	Number of samples in the sample run.

(5) *Calculation of total organic hazardous air pollutants concentration.* The owner or operator determining compliance based on total organic hazardous air pollutants concentration (C_{HAP}) shall compute C_{HAP} according to the Equation WW14, except that only Table 9 compounds shall be summed.

(6) *Percent oxygen correction for combustion control devices.* If the control device is a combustion device, comply with the requirements specified in paragraph (i)(6)(i) of this section to determine oxygen concentration, and in paragraph (i)(6)(ii) of this section to calculate the percent oxygen correction.

(i) *Oxygen concentration.* The concentration of TOC or total organic hazardous air pollutants shall be corrected to 3 percent oxygen if the control device is a combustion device.

~~The emission rate correction factor for excess air, composite sampling (i.e., integrated sampling) and analysis procedures of~~Method 3A ~~Method 3B~~ of 40 CFR part 60, appendix A, or the manual method in ANSI/ASME PTC 19-10-1981—Part 10 (Incorporated by reference, see § 60.17 of Subpart A of this part) -shall be used to determine the actual oxygen concentration ($\%0_{2d}$). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic hazardous air pollutants samples are taken.

(ii) *3 percent oxygen calculation.* The concentration corrected to 3 percent oxygen (CG_c), when required, shall be computed using the following equation:

$$CG_C = CG_T\left(\frac{17.9}{20.9 - \%0_{2d}}\right) \qquad (Eqn\,WW15)$$

Where:

CG_c	=	Concentration of TOC or organic hazardous air pollutants corrected to 3 percent oxygen, dry basis, parts per million by volume.
CG_T	=	Total concentration of TOC (minus methane and ethane) in vented gas stream, average of samples, dry basis, parts per million by volume.
$\%0_{2d}$	=	Concentration of oxygen measured in vented gas stream, dry basis, percent by volume.

(7) *Mass rate calculation.* The mass rate of either TOC (minus methane and ethane) or total organic hazardous air pollutants shall be calculated using the following equations. Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by methods specified in paragraph (i)(2) of this section are summed using Equations WW16 and WW17. Where the mass rate of total organic hazardous air pollutants is being calculated, only Table 9 compounds shall be summed using Equations WW16 and WW17.

$$QMG_a = K_2\left(\sum_{i=1}^{n} CG_{a,i}\, MW_i\right)QG_a \qquad (Eqn\,WW16)$$

$$QMG_b = K_2\left(\sum_{i=1}^{n} CG_{b,i}\ MW_i\right)QG_b \qquad (Eqn\ WW17)$$

Where:

$CG_{a,i}$, $CG_{b,i}$ = Concentration of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering ($CG_{a,i}$) and exiting ($CG_{b,i}$) the control device, dry basis, parts per million by volume.

QMG_a, QMG_b = Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (QMG_a) and exiting (QMG_b) the control device, dry basis, kilograms per hour.

MW_i = Molecular weight of a component, kilogram/kilogram-mole.

QG_a, QG_b = Flow rate of gas stream entering (QG_a) and exiting (QG_b) the control device, dry standard cubic meters per hour.

K_2 = Constant, 41.57×10^{-9} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram), where standard temperature (gram-mole per standard cubic meter) is 20 °Celsius.

i = Identifier for a compound.

n = Number of components in the sample.

(8) *Percent reduction calculation.* The percent reduction in TOC (minus methane and ethane) or total organic hazardous air pollutants shall be calculated as follows:

$$E = \frac{QMG_a - QMG_b}{QMG_a}(100\%) \qquad (Eqn\ WW18)$$

Where:

E = Destruction efficiency of control device, percent.

QMG_a, QMG_b = Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream entering and exiting (QMG_b) the control device, dry basis, kilograms per hour.

(9) *Compare mass destruction efficiency to required efficiency.* If complying with the 95 percent reduction efficiency requirement, compliance is demonstrated if the mass destruction efficiency (calculated in Equation WW18) is 95 percent or greater. If complying with the 20

parts per million by volume limit in §63.139 (c)(1)(ii) of this subpart, compliance is demonstrated if the outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration is 20 parts per million by volume, or less. For combustion control devices, the concentration shall be calculated on a dry basis, corrected to 3 percent oxygen.

(j) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~W~~when a flare is used to comply with §63.139(c), the owner or operator shall comply with paragraphs (j)(1) through (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.

(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).

(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.

§63.146 Process wastewater provisions—reporting.

(a) For each waste management unit, treatment process, or control device used to comply with §§63.138 (b)(1), (c)(1), (d), (e), (f), or (g) of this subpart for which the owner or operator seeks to monitor a parameter other than those specified in table 11, table 12, or table 13 of this subpart, the owner or operator shall submit a request for approval to monitor alternative parameters according to the procedures specified in §63.151(f) or (g) of this subpart.

(b) The owner or operator shall submit the information specified in paragraphs (b)(1) through (b)(9) of this section as part of the Notification of Compliance Status required by §63.152(b) of this subpart.

(1) *Requirements for Group 2 wastewater streams.* This paragraph does not apply to Group 2 wastewater streams that are used to comply with §63.138(g). For Group 2 wastewater streams, the owner or operator shall include the information specified in paragraphs (b)(1)(i) through (iv) of this section in the Notification of Compliance Status Report. This information may be submitted in any form. Table 15 of this subpart is an example.

(i) Process unit identification and description of the process unit.

(ii) Stream identification code.

(iii) For existing sources, concentration of table 9 compound(s) in parts per million, by weight. For new sources, concentration of table 8 and/or table 9 compound(s) in parts per million, by weight. Include documentation of the methodology used to determine concentration.

(iv) Flow rate in liter per minute.

(2) For each new and existing source, the owner or operator shall submit the information specified in table 15 of this subpart for Table 8 and/or Table 9 compounds.

(3) [Reserved]

(4) For each treatment process identified in table 15 of this subpart that receives, manages, or treats a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit the information specified in table 17 of this subpart.

(5) For each waste management unit identified in table 15 of this subpart that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit the information specified in table 18 of this subpart.

(6) For each residual removed from a Group 1 wastewater stream, the owner or operator shall report the information specified in table 19 of this subpart.

(7) For each control device used to comply with §§63.133 through 63.139 of this subpart, the owner or operator shall report the information specified in paragraphs (b)(7)(i) and (b)(7)(ii) of this section.

(i) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~F~~for each flare, the owner or operator shall submit the information specified in paragraphs (b)(7)(i)(A) through (b)(7)(i)(C) of this section.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by §63.139(c)(3) of this subpart; and

(C) Reports of the times and durations of all periods during the compliance determination when the pilot flame is absent or the monitor is not operating.

(ii) For each control device other than a flare, the owner or operator shall submit the information specified in paragraph (b)(7)(ii)(A) of this section and in either paragraph (b)(7)(ii)(B) or (b)(7)(ii)(C) of this section.

(A) The information on parameter ranges specified in §63.152(b)(2) of this subpart for the applicable parameters specified in table 13 of this subpart, unless the parameter range has already been established in the operating permit; and either

(B) The design evaluation specified in §63.139(d)(2) of this subpart; or

(C) Results of the performance test specified in §63.139(d)(1) of this subpart. Performance test results shall include operating ranges of key process and control parameters during the performance test; the value of each parameter being monitored in accordance with §63.143 of this subpart; and applicable supporting calculations. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with §63.152(h), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(8) For each treatment process used to comply with §63.138(b)(1), (c)(1), (d), (e), (f), or (g) of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(8)(i) and (b)(8)(ii) of this section.

(i) For Items 1 and 2 in table 12 of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(8)(i)(A) and (b)(8)(i)(B) of this section. An owner or operator using the design steam stripper compliance option specified §63.138(d) of this subpart does not have to submit the information specified in paragraph (b)(8)(i)(A) or (b)(8)(i)(B) of this section. However, the monitoring requirements specified in Item 2 of table 12 of this subpart still apply.

(A) The information on parameter ranges specified in §63.152(b)(2) of this subpart for the parameters approved by the Administrator, unless the parameter range has already been established in the operating permit.

(B) Results of the initial measurements of the parameters approved by the Administrator and any applicable supporting calculations.

(ii) For Item 3 in table 12 of this subpart, the owner or operator shall submit the information on parameter ranges specified in §63.152(b)(2) of this subpart for the parameters specified in Item 3 of table 12 of this subpart, unless the parameter range has already been established in the operating permit.

(9) For each waste management unit or treatment process used to comply with §63.138(b)(1), (c)(1), (e), (f), or (g), the owner or operator shall submit the information specified in either paragraph (b)(9)(i) or (ii) of this section.

(i) The design evaluation and supporting documentation specified in §63.138(j)(1) of this subpart.

(ii) Results of the performance test specified in §63.138(j)(2) of this subpart. Performance test results shall include operating ranges of key process and control parameters during the performance test; the value of each parameter being monitored in accordance with §63.143 of this subpart; and applicable supporting calculations. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with §63.152(h), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(c) For each waste management unit that receives, manages, or treats a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit as part of the next Periodic Report required by §63.152(c) of this subpart the results of each inspection required by §63.143(a) of this subpart in which a control equipment failure was identified. Control equipment failure is defined for each waste management unit in §§63.133 through 63.137 of this subpart. Each Periodic Report shall include the date of the inspection, identification of each waste management unit in which a control equipment failure was detected, description of the failure, and description of the nature of and date the repair was made.

(d) Except as provided in paragraph (f) of this section, for each treatment process used to comply with §63.138(b)(1), (c)(1), (d), (e) , (f), or (g), the owner or operator shall submit as part of the next Periodic Report required by §63.152(c) the information specified in paragraphs (d)(1), (2), and (3) of this section for the monitoring required by §63.143(b), (c), and (d).

(1) For Item 1 in table 12, the owner or operator shall submit the results of measurements that indicate that the biological treatment unit is outside the range established in the Notification of Compliance Status or operating permit. Include the identification of the biological treatment unit, the parameter that was out of range and the date that the parameter is out of range.

(2) For Item 2 in table 12, the owner or operator shall submit the monitoring results for each operating day during which the daily average value of a continuously monitored parameter is outside the range established in the Notification of Compliance Status or operating permit. Include the identification of the treatment process, the parameter that was out of range, and the date the parameter was out of range.

(3) For Item 3 in table 12 of this subpart, the owner or operator shall submit the monitoring results for each operating day during which the daily average value of any monitored parameter approved in accordance with §63.151 (f) was outside the range established in the Notification of Compliance Status or operating permit. Include the identification of the treatment process, the parameter that was out of range, and the date the parameter was out of range.

(e) Except as provided in paragraph (f) of this section, for each control device used to comply with §§63.133 through 63.139 of this subpart, the owner or operator shall submit as part of the next Periodic Report required by §63.152(c) of this subpart the information specified in either paragraph (e)(1) or (e)(2) of this section.

(1) The information specified in table 20 of this subpart, including the date of each occurrence, or

(2) If the owner or operator elects to comply with §63.143(e)(2) of this subpart, i.e., an organic monitoring device installed at the outlet of the control device, the owner or operator shall submit the date and the monitoring results for each operating day during which the daily average concentration level or reading is outside the range established in the Notification of Compliance Status or operating permit.

(f) Where the owner or operator obtains approval to use a treatment process or control device other than one for which monitoring requirements are specified in §63.143 of this subpart, or to monitor parameters other than those specified in table 12 or 13 of this subpart, the Administrator will specify appropriate reporting requirements.

(g) If an extension is utilized in accordance with §63.133(e)(2) or §63.133(h) of this subpart, the owner or operator shall include in the next periodic report the information specified in §63.133 (e)(2) or §63.133(h).

§63.147 Process wastewater provisions—recordkeeping.

(a) The owner or operator transferring a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with §63.132(g) of this subpart shall keep a record of the notice sent to the treatment operator stating that the wastewater stream or residual contains organic hazardous air pollutants which are required to be managed and treated in accordance with the provisions of this subpart.

(b) The owner or operator shall keep in a readily accessible location the records specified in paragraphs (b)(1) through (8) of the section.

(1) A record that each waste management unit inspection required by §§63.133 through 63.137 of this subpart was performed.

(2) A record that each inspection for control devices required by §63.139 of this subpart was performed.

(3) A record of the results of each seal gap measurement required by §§63.133(d) and 63.137(c) of this subpart. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in §63.120(b)(2), (3), and (4) of this subpart.

(4) For Item 1 and Item 3 of table 12 of this subpart, the owner or operator shall keep the records approved by the Administrator.

(5) Except as provided in paragraph (e) of this section, continuous records of the monitored parameters specified in Item 2 of table 12 and table 13 of this subpart, and in §63.143(e)(2) of this subpart.

(6) Documentation of a decision to use an extension, as specified in §63.133(e)(2) or (h) of this subpart, which shall include a description of the failure, documentation that alternate storage capacity is unavailable, and specification of a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(7) Documentation of a decision to use a delay of repair due to unavailability of parts, as specified in §63.140(c), shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept on site and when the manufacturer promised delivery), and the date when repair was completed.

(8) *Requirements for Group 2 wastewater streams.* This paragraph (b)(8) does not apply to Group 2 wastewater streams that are used to comply with §63.138(g). For all other Group 2

wastewater streams, the owner or operator shall keep in a readily accessible location the records specified in paragraphs (b)(8)(i) through (iv) of this section.

(i) Process unit identification and description of the process unit.

(ii) Stream identification code.

(iii) For existing sources, concentration of table 9 compound(s) in parts per million, by weight. For new sources, concentration of table 8 and/or table 9 compound(s) in parts per million, by weight. Include documentation of the methodology used to determine concentration.

(iv) Flow rate in liter per minute.

(c) For each boiler or process heater used to comply with §§63.133 through 63.139 of this subpart, the owner or operator shall keep a record of any changes in the location at which the vent stream is introduced into the flame zone as required in §63.139(c)(1) of this subpart.

(d) The owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day as specified in §63.152(f), except as provided in paragraphs (d)(1) through ~~(3)~~(4) of this section.

(1) For flares, except as specified in paragraph (a) of §63.108 of subpart F of this part, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(2) *Regenerative carbon adsorbers.* Except as specified in paragraph (d)(4) of this section, f~~F~~or regenerative carbon adsorbers, the owner or operator shall keep the records specified in paragraphs (d)(2)(i) and (ii) of this section instead of daily averages.

(i) Records of the total regeneration stream mass flow for each carbon bed regeneration cycle.

(ii) Records of the temperature of the carbon bed after each regeneration cycle.

(3) *Non-regenerative carbon adsorbers.* Except as specified in paragraph (d)(4) of this section, f~~F~~or non-regenerative carbon adsorbers using organic monitoring equipment, the owner or operator shall keep the records specified in paragraph (d)(3)(i) of this section instead of daily averages. For non-regenerative carbon adsorbers replacing the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system, the owner or operator shall keep the records specified in paragraph (d)(3)(ii) of this section instead of daily averages.

(i)(A) Record of how the monitoring frequency, as specified in table 13 of this subpart, was determined.

(B) Records of when organic compound concentration of adsorber exhaust was monitored.

(C) Records of when the carbon was replaced.

(ii)(A) Record of how the carbon replacement interval, as specified in table 13 of this subpart, was determined.

(B) Records of when the carbon was replaced.

(4) For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.139(d)(6), the owner or operator must keep the applicable records specified in (d)(4)(i) through (d)(4)(iii) of this section.

(i) Breakthrough limit and bed life established according to §63.139(d)(6)(i).

(ii) Each outlet HAP or TOC concentration measured according to §§63.139(d)(5)(ii) and (d)(5)(iii).

(iii) Date and time you last replaced the adsorbent.

(e) Where the owner or operator obtains approval to use a control device other than one for which monitoring requirements are specified in §63.143 of this subpart, or to monitor parameters other than those specified in table 12 or table 13 of this subpart, the Administrator will specify appropriate recordkeeping requirements.

(f) If the owner or operator uses process knowledge to determine the annual average concentration of a wastewater stream as specified in §63.144(b)(3) of this subpart and/or uses process knowledge to determine the annual average flow rate as specified in §63.144(c)(1) of this subpart, and determines that the wastewater stream is not a Group 1 wastewater stream, the owner or operator shall keep in a readily accessible location the documentation of how process knowledge was used to determine the annual average concentration and/or the annual average flow rate of the wastewater stream.

§63.148 Leak inspection provisions.

(a) Except as provided in paragraph (k) of this section, for each vapor collection system, ~~closed-vent~~closed vent system, fixed roof, cover, or enclosure required to comply with this section, the owner or operator shall comply with the requirements of paragraphs (b) through (j) of this section.

(b) Except as provided in paragraphs (g) and (h) of this section, each vapor collection system and ~~closed-vent~~closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (b)(1) and (b)(2) of this section and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in paragraph (b)(3) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

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

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

(ii) Conduct annual inspections according to the procedures in paragraph (c) of this section.

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

(3) For each fixed roof, cover, and enclosure, the owner or operator shall conduct initial visual inspections and semi-annual visual inspections for visible, audible, or olfactory indications of leaks as specified in §§63.133 through 63.137 of this subpart.

(c) Each vapor collection system and closed vent system shall be inspected according to the procedures specified in paragraphs (c)(1) through (c)(5) of this section.

(1) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A.

(2)(i) Except as provided in paragraph (c)(2)(ii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual volatile organic compound in the stream.

For process streams that contain nitrogen, air, or other inerts which are not organic hazardous air pollutants or volatile organic compounds, the average stream response factor shall be calculated on an inert-free basis.

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (c)(2)(i) of this section, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (c)(2)(i) of this section.

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

(4) Calibration gases shall be as follows:

(i) Zero air (less than 10 parts per million hydrocarbon in air); and

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

(5) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects to not adjust readings for background, all such instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in §§63.180(b) and (c) of subpart H of this part. The owner or operator shall subtract background reading from the maximum concentration indicated by the instrument.

(6) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance.

(d) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (e) of this section.

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

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (d)(3) of this section.

(3) For leaks found in vapor collection systems used for transfer operations, repairs shall be completed no later than 15 calendar days after the leak is detected or at the beginning of the next transfer loading operation, whichever is later.

(e) Delay of repair of a vapor collection system, closed vent system, fixed roof, cover, or enclosure for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in §63.101 of subpart F of this part, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown.

(f) For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall comply with the provisions of either paragraph (f)(1) or (f)(2), and (f)(4) of this section, except as provided in paragraph (f)(3) of this section.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in §63.118(a)(3) of this subpart. The flow indicator shall be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the closed 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 the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(3) Except as specified in paragraph (f)(4) of this section, ~~E~~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.

(4) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part:

(i) The use of a bypass line at any time on a closed vent system to divert emissions (subject to the emission suppression requirements specified in §§63.133 through 63.137) to the atmosphere or to a control device not meeting the requirements specified in this subpart is an emissions standards violation.

(ii) Paragraph (f)(3) of this section no longer applies. Instead, the exemptions specified in paragraph (f)(4)(ii)(A) and (f)(4)(ii)(B) of this section apply.

(A) Except for pressure relief devices subject to §63.165(e)(4) of subpart H of this part, equipment such as low leg drains and equipment subject to the requirements of subpart H of this part are not subject to this paragraph (f) of this section.

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

(g) Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in paragraph (i)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (b)(1), (b)(2), and (b)(3)(i) of this section if:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (b)(1), (b)(2), or (b)(3)(i) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(h) Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in paragraph (i)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (b)(1), (b)(2), and (b)(3)(i) of this section if:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(i) The owner or operator shall record the information specified in paragraphs (i)(1) through (i)(5) of this section.

(1) Identification of all parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either paragraph (i)(3)(i) or (i)(3)(ii) of this section in addition to the information specified in paragraph (i)(3)(iii) of this section.

(i) Hourly records of whether the flow indicator specified under paragraph (f)(1) of this section 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.

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

(iii) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (i)(3)(i) or (i)(3)(ii) of this section. For each flow event from a bypass line subject to the requirements in paragraph (f) of this section, the owner or operator must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in this subpart, the owner or operator must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(4) For each inspection during which a leak is detected, a record of the information specified in paragraphs (i)(4)(i) through (i)(4)(viii) of this section.

(i) The instrument identification numbers; operator name or initials; and identification of the equipment.

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

(iii) Maximum instrument reading measured by the method specified in paragraph (d) of this section after the leak is successfully repaired or determined to be nonrepairable.

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

(v) The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown.

(vi) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(vii) Dates of shutdowns that occur while the equipment is unrepaired.

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

(5) For each inspection conducted in accordance with paragraph (c) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(6) For each visual inspection conducted in accordance with paragraph (b)(1)(ii) or (b)(3)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(j) The owner or operator shall submit with the reports required by §63.182(b) of subpart H of this part or with the reports required by §63.152(c) of this subpart, the information specified in paragraphs (j)(1) through (j)(3) of this section and if applicable, the information in paragraph (j)(4) of this section.

(1) The information specified in paragraph (i)(4) of this section;

(2) Reports of the times of all periods recorded under paragraph (i)(3)(i) of this section when the vent stream is diverted from the control device through a bypass line, including the start date, start time, and duration in hours; and

(3) Reports of all periods recorded under paragraph (i)(3)(ii) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out. Include the start date, start time, and duration in hours for each period.

(4) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (j)(1) through (j)(3) of this section. For bypass lines subject to the requirements in paragraph (f) of this section, the Periodic Report must include the start date, start time, duration in hours, estimate of

the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(k) If a ~~closed-vent~~closed vent system subject to this section is also subject to §63.172 of subpart H of this part, the owner or operator shall comply with the provisions of §63.172 of subpart H of this part and is exempt from the requirements of this section.

§63.149 Control requirements for certain liquid streams in open systems within a chemical manufacturing process unit.

(a) The owner or operator shall comply with the provisions of table 35 of this subpart, for each item of equipment meeting all the criteria specified in paragraphs (b) through (d) and either paragraph (e)(1) or (e)(2) of this section.

(b) The item of equipment is of a type identified in table 35 of this subpart;

(c) The item of equipment is part of a chemical manufacturing process unit that meets the criteria of §63.100(b) of subpart F of this part;

(d) The item of equipment is controlled less stringently than in table 35 and is not listed in §63.100(f) of subpart F of this part, and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, or H of this part; and

(e) The item of equipment:

(1) is a drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of Table 9 compounds at an annual

average flow rate greater than or equal to 10 liters per minute. At 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 criteria of this paragraph are also met if the item of equipment conveys water with an annual average concentration greater than or equal to 10 parts per million by weight of any Table 8 compound at an annual average flow rate greater than or equal to 0.02 liter per minute, or

(2) Is a tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute. At 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 criteria of this paragraph are also met if the tank receives one or more streams that contain water with an annual average concentration greater than or equal to 10 parts per million by weight of any Table 8 compound at an annual average flow rate greater than or equal to 0.02 liter per minute. The owner or operator of the source shall determine the characteristics of the stream as specified in paragraphs (e)(2) (i) and (ii) of this section.

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

(ii) The characteristics shall be determined according to the procedures in §63.144 (b) and (c).

§63.150 Emissions averaging provisions.

(a) This section applies to owners or operators of existing sources who seek to comply with the emission standard in §63.112(a) of this subpart by using emissions averaging according to §63.112(f) of this subpart rather than following the provisions of §§63.113 through 63.148 of this subpart. Notwithstanding the definition of process vent in §63.101 and the sampling site designation in §63.115(a), for purposes of this section the location of a process vent shall be defined, and the characteristics of its gas stream shall be determined, consistent with paragraph (g)(2)(i) of this section.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Implementation Plan containing all of the information required in §63.151(d) of this subpart for all points to be included in an emissions average. The Implementation Plan or operating permit application shall identify all emission points to be included in the emissions average. This must include any Group 1 emission points to which the reference control technology (defined in §63.111 of this subpart) is not applied and all other emission points being controlled as part of the average.

(c) The following emission points can 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:

(1) Group 2 emission points.

(2) Group 1 emission points 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 must be submitted and approved as provided in paragraph (i) of this section.

(3) Emission points from which emissions are reduced by pollution prevention measures. Percent reductions for pollution prevention measures shall be determined as specified in paragraph (j) of this section.

(i) For a Group 1 emission point, the pollution prevention measure must reduce emissions more than the reference control technology would have had the reference control technology been applied to the emission point instead of the pollution prevention measure except as provided in paragraph (c)(3)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 emission point, the pollution prevention measure alone does not have to reduce emissions more than the reference control technology, but the combination of the pollution prevention measure and other controls must reduce emissions more than the reference control technology would have had it been applied instead.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990, unless the level of control is increased after November 15, 1990, in which case credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points that are controlled by a reference control technology, 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. For example, it is not allowable to claim that an internal floating roof meeting the specifications of §63.119(b) of this subpart applied to a storage vessel is achieving greater than 95 percent control.

(3) Emission points on shut-down process units. Process units that are shut down cannot be used to generate credits or debits.

(4) Wastewater that is not process wastewater or wastewater streams treated in biological treatment units. 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, unless the level of control has been increased after November 15, 1990 above what is required by the other State or Federal rule. Only the control above what is required by the other State or Federal rule will be credited. However, if an emission point has been used to generate emissions averaging credit in an approved emissions average, and the point is subsequently made subject to a State or Federal rule other than this subpart, the point can continue to generate emissions averaging credit for the purpose of complying with the previously approved average.

(e) For all points included in an emissions average, the owner or operator shall:

(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 for those emission points. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 or 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 average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Implementation 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 must be made under representative operating conditions. After the compliance date, actual operating data will 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 §63.152(c) of this subpart. Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by §63.152(c)(5)(iv)(B) of this subpart.

(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 from the following:

(1) More than 20 individual Group 1 or Group 2 emission points. Where pollution prevention measures (as specified in paragraph (j)(1) of this section) are used to control emission points to be included in an emissions average, no more than 25 emission points may be included

in the average. For example, if two emission points to be included in an emissions average are controlled by pollution prevention measures, the average may include up to 22 emission points.

(2) Periods of start-up, shutdown, and malfunction as described in the source's start-up, shutdown, and malfunction plan required by §63.6(e)(3) of subpart A of this part. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(3) Periods of monitoring excursions as defined in §63.152(c)(2)(ii)(A) of this subpart. For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(3)(i) through (f)(3)(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 (l) 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 reference control technology, and the emissions allowed for the Group 1 emission point. Debits shall be calculated as follows:

(1) The overall equation for calculating source-wide debits is:

$$\begin{aligned} Debits = &\sum_{i=1}^{n}\left(EPV_{iACTUAL} - (0.02)EPV_{iu}\right) + \sum_{i=1}^{n}\left(ES_{iACTUAL}\right. \\ &\left. - (0.05)ES_{iu}\right) + \sum_{i=1}^{n}\left(ETR_{iACTUAL} - (0.02)ETR_{iu}\right) \\ &+ \sum_{i=1}^{n}\left(EWW_{iACTUAL} - EWW_{ic}\right) \end{aligned}$$

where:

Debits and all terms of the equation are in units of megagrams per month, and

$EPV_{iACTUAL}$ = Emissions from each Group 1 process vent i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(2) of this section.

$(0.02) EPV_{iu}$ = Emissions from each Group 1 vent i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(2) of this section.

$ES_{iACTUAL}$ = Emissions from each Group 1 storage vessel i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(3) of this section.

$(0.05) ES_{iu}$ = Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(3) of this section.

$ETR_{iACTUAL}$ = Emissions from each Group 1 transfer rack i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(4) of this section.

$(0.02) ETR_{iu}$ = Emissions from each Group 1 transfer rack i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(4) of this section.

$EWW_{iACTUAL}$ = Emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(5) of this section.

EWW_{ic} = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. This is calculated according to paragraph (g)(5) of this section.

n = The number of emission points being included in the emissions average. The value of n is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(2) Emissions from process vents shall be calculated according to paragraphs (g)(2)(i) through (iii) of this section.

(i) The location of a process vent shall be defined, and the characteristics of its gas stream shall be determined at a point that meets the conditions in either paragraph (g)(2)(i)(A) or (B) of this section and the conditions in paragraphs (g)(2)(i)(C) through (E) of this section.

(A) The point is after the final recovery device (if any recovery devices are present).

(B) If a gas stream included in an emissions average is combined with one or more other gas streams after a final recovery device (if any recovery devices are present), then for each gas stream, the point is at a representative point after any final recovery device and as near as feasible to, but before, the point of combination of the gas streams.

(C) The point is before any control device (for process vents, recovery devices shall not be considered control devices).

(D) The point is before discharge to the atmosphere.

(E) The measurement site for determination of the characteristics of the gas stream was selected using Method 1 or 1A of 40 CFR part 60, appendix A.

(ii) The following equation shall be used for each process vent i to calculate EPV_{iu}:

$$EPV_{iu} = (2.494 \times 10^{-9})\, Qh \left(\sum_{j=1}^{n} C_j M_j \right)$$

where:

EPV_{iu}	=	Uncontrolled process vent emission rate from process vent i, megagrams per month.
Q	=	Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D of part 60, appendix A, as appropriate.
h	=	Monthly hours of operation during which positive flow is present in the vent, hours per month.
Cj	=	Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18 of part 60, appendix A, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part).
Mj	=	Molecular weight of organic HAP j, gram per gram-mole.
n	=	Number of organic HAP's.

(A) The values of Q, C_j, and M_j shall be determined during a performance test conducted under representative operating conditions as specified in §63.103(b)(3). The values of Q, C_j, and

M_j shall be established in the Notification of Compliance Status and must 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, C_j, and M_j are no longer representative, a new performance test shall be conducted to determine new representative values of Q, C_j, and M_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 $EPV_{iACTUAL}$:

(A) If the vent is not controlled by a control device or pollution prevention measure, $EPV_{iACTUAL} = EPV_{iu}$, where EPV_{iu} is calculated according to the procedures in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the vent is controlled using a control device or a pollution prevention measure achieving less than 98-percent reduction,

$$EPV_{iACTUAL} = EPV_{iu} \times \left(1 - \frac{Percent\ reduction}{100\%}\right)$$

(*1*) The percent reduction shall be measured according to the procedures in §63.116 of this subpart if a combustion control device is used. For a flare meeting the criteria in §63.116(a) of this subpart, or a boiler or process heater meeting the criteria in §63.116(b) of this subpart, the percent reduction shall be 98 percent. If a non-combustion control device is used, percent reduction 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 process vents, recovery devices shall not be considered control devices and cannot be assigned a percent reduction in calculating $EPV_{iACTUAL}$. The sampling site for measurement of uncontrolled emissions is after the final recovery device. However, as provided in §63.113(a)(3), except as specified in §63.113(a)(4), a Group 1 process vent may add sufficient recovery to raise the TRE index value above 1.0, thereby becoming a Group 2 process vent.

(*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 as follows:

(i) The following equation shall be used for each storage vessel i to calculate ES_{iu}:

$$ES_{iu} = \frac{L_B + L_W}{12}$$

where:

ES_{iu}	=	Uncontrolled emissions, defined as emissions from a fixed roof vessel having identical dimensions and vessel color as vessel i, megagrams per month.
L_B	=	Breathing loss emissions, megagrams per year, calculated according to paragraph (g)(3)(i)(A) of this section.
L_W	=	Working loss emissions, megagrams per year, calculated according to paragraph (g)(3)(i)(B) of this section.
12	=	Constant, months per year.

(A) Breathing loss emissions shall be calculated using the following equation:

$$L_B = 1.02 \times 10^{-5} M_v \left(\frac{P}{P_A - P}\right)^{0.68} D^{1.73} H^{0.51} \Delta T^{0.50} F_p C K_c$$

where:

M_v	=	Molecular weight of vapor in storage vessel, pound per pound-mole.
P_A	=	Average atmospheric pressure, pounds per square inch absolute.
P	=	True vapor pressure of the HAP at liquid storage temperature, pounds per square inch absolute. See table 21 of this subpart.
D	=	Tank diameter, feet.
H	=	Average vapor space height, feet. Use vessel-specific values or an assumed value of one-half the height.
ΔT	=	Average ambient diurnal temperature change, °F. A typical value of 20 °F may be used.
F_p	=	Paint factor, dimensionless, from table 22 of this subpart; use $F_p = 1$ for vessels located indoors.
C	=	Adjustment factor for small diameter tanks, dimensionless; use C = 1 for diameter ≥30 feet; use $C = 0.0771D - 0.0013D^2 - 0.1334$ for diameter <30 feet.
K_C	=	Product factor, dimensionless. Use 1.0 for organic HAP's.

(B) Working losses shall be calculated using the following equation:

$$L_W = 1.089 \times 10^{-8}\, M_v\, (P)(V)(N)\, (K_N)\, (K_C)$$

where:

V	=	Tank capacity, gallon.
N	=	Number of turnovers per year.
K_N	=	Turnover factor, dimensionless, and

$$K_N = \frac{180 + N}{6N} \textit{ for } \text{turnovers} > 36$$
$$K_N = 1 \text{ for turnovers} \leq 36.$$

M_v, P, and K_C as defined in paragraph (g)(3)(i)(A) of this section.

(C) The owner or operator may elect to calculate ES_{iu} in accordance with the methods described in American Petroleum Institute Publication 2518, Evaporative Loss from Fixed-Roof Tanks (incorporated by reference as specified in §63.14 of this part).

(*1*) The owner or operator who elects to use these alternative methods must use them for all storage vessels included in the emissions average as debit or credit generating points.

(*2*) The equations of paragraphs (g)(3)(i)(A) and (g)(3)(i)(B) of this section shall not be used in conjunction with the alternative methods provided under paragraph (g)(3)(i)(C) of this section.

(ii) The following procedures and equations shall be used for each fixed roof storage vessel i that is not controlled with a floating roof to calculate $ES_{iACTUAL}$:

(A) If the vessel is not controlled, $ES_{iACTUAL} = ES_{iu}$, where ES_{iu} is calculated according to the procedures in paragraph (g)(3)(i) of this section.

(B) Except as provided in paragraph (g)(3)(ii)(C) of this section, if the vessel is controlled using a control device or pollution prevention measure achieving less than 95-percent reduction,

$$ES_{iACTUAL} = ES_{iu} * \left(\frac{1 - Percent\ reduction}{100} \right)$$

(*1*) The percent reduction for a control device shall be determined through a design evaluation according to the procedures specified in §63.120(d) of this subpart.

(*2*) Procedures for calculating the percent reduction for pollution prevention measures are specified in paragraph (j) of this section.

(C) If the vessel is controlled according to the provisions of §63.119(e)(2) of this section whereby the control device is only required to achieve at least 90-percent reduction, the vessel shall not be considered to be generating debits.

(iii) The following equation shall be used for each internal floating roof vessel i that does not meet the specifications of §63.119(b) or (d) of this subpart to calculate $ES_{iACTUAL}$:

$$ES_{iACTUAL} = \frac{L_W + L_R + L_F + L_D}{12}$$

where:

L_W	=	Withdrawal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(A) of this section.
L_R	=	Rim seal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(B) of this section.
L_F	=	Fitting loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(C) of this section.
L_D	=	Deck seam loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(D) of this section.
12	=	Constant, months per year.

(A) Withdrawal loss emissions shall be calculated using the following equation:

$$L_W = \frac{1.018 \times 10^{-5} QCW_L}{D}\left[1 + \left(\frac{N_c F_c}{D}\right)\right]$$

where:

Q	=	Throughput, gallon per year; (gallon/turnover) * (turnovers per year).
C	=	Shell clingage factor, barrel per 1,000 square foot, see table 23 of this subpart.
WL	=	Average liquid density, pound per gallon.
D	=	Tank diameter, feet.
N_c	=	Number of columns, dimensionless, see table 24 of this subpart.
F_c	=	Effective column diameter, feet [column perimeter (feet) ÷ 3.1416], see table 25 of this subpart.

(B) Rim seal loss emissions shall be calculated using the following equation:

$$L_R = \frac{K_s V^n P^* D M_v K_c}{2,205}$$

where:

M_v = Molecular weight of vapor in storage vessel, pound per pound-mole.

D = Tank diameter, feet.

K_c = Product factor, dimensionless; use 1.0 for organic HAP's.

K_s = Seal factor, pound-mole per [foot (miles per hour)^n year], see table 26 of this subpart.

V = Average wind speed at the source, miles per hour. A value of 10 miles per hour may be assumed if source-specific data are not available.

n = Seal related wind speed exponent, dimensionless, see table 26 of this subpart.

2,205 = Constant, pounds per megagram.

P* = Vapor pressure function, dimensionless, and

$$P^* = \frac{\frac{P}{P_A}}{\left[1+\left(1-\frac{P}{P_A}\right)0.5\right]^2}$$

where:

P_A = Average atmospheric pressure, pounds per square inch absolute.

P = True vapor pressure at liquid storage temperature, pounds per square inch absolute.

(C) Fitting loss emissions shall be calculated using the following equation:

$$L_F = \frac{F_f P^* M_v K_c}{2,205}$$

where:

F_f = The total deck fitting loss factor, pound-mole per year, and

where:

$$F_f = \sum_{i=1}^{n}\left(N_{F_i} K_{F_i}\right) = \left[\left(N_{F_1} K_{F_1}\right) + \left(N_{F_2} K_{F_2}\right) + \ldots + \left(N_{F_n} K_{F_n}\right)\right]$$

N_{Fi} = Number of fittings of a particular type, dimensionless. N_{Fi} is determined for the specific tank or estimated from tables 24 and 27 of this subpart.

K_{Fi} = Deck fitting loss factor for a particular type fitting, pound-mole per year. K_{Fi} is determined for each fitting type from table 27 of this subpart.

n = Number of different types of fittings, dimensionless.

P*, M_v, K_c, and 2,205 as defined in paragraph (g)(3)(iii)(B) of this section.

(D) Deck seam loss emissions shall be calculated using the following equation:

$$L_D = \frac{K_D S_D D^2 P^* M_v K_c}{2,205}$$

where:

K_D = Deck seam loss factor, pound-mole per foot per year, and

K_D = 0.34 for non-welded decks.

K_D = 0 for welded decks.

S_D = Deck seam length factor, feet per square foot, see table 28 of this subpart.

D, P*, M_v, K_c, and 2,205 as defined in paragraph (g)(3)(iii)(B) of this section.

(iv) The following equation shall be used for each external floating roof vessel i that does not meet the specifications of §63.119(c) of this subpart to calculate $ES_{iACTUAL}$:

$$ES_{iACTUAL} = \frac{L_W + L_R + L_F}{12}$$

where:

L_W = Withdrawal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(A) of this section.

L_R = Rim seal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(B) of this section.

L_F = Fitting loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(C) of this section.

12 = Constant, months per year.

(A) Withdrawal loss emissions shall be calculated using the following equation:

$$L_W = \frac{4.28 * 10^{-4} QCW_L}{D}$$

where:

Q	=	Throughput, gallons per year.
C	=	Shell clingage factor, barrel per 1,000 square foot, see table 23 of this subpart.
W_L	=	Average liquid density, pound per gallon.
D	=	Vessel diameter, feet.

(B) Rim seal loss emissions shall be calculated using the following equation:

$$L_R = \frac{K_s V^N P^* D M_v K_c}{2,205}$$

where:

K_s	=	Seal factor, pound-mole per [foot (miles per hour)^N year], see table 29 of this subpart.
V	=	Average wind speed, miles per hour, at the source. A value of 10 miles per hour may be assumed if source-specific data are not available.
N	=	Seal wind speed exponent, dimensionless, see table 29 of this subpart.
P*	=	Vapor pressure function, dimensionless, as defined in paragraph (g)(3)(iii)(B) of this section.
D	=	Vessel diameter, feet.
M_V	=	Molecular weight of the HAP, pound per pound-mole.
K_c	=	Product factor, dimensionless; use 1.0 for organic HAP's.
2,205	=	Constant, pounds per megagram.

(C) Fitting loss emissions shall be calculated using the following equation:

$$L_F = \frac{F_F P^* M_v K_c}{2,205}$$

where:

F_F = The total deck fitting loss factor, pound-mole per year, and

$$F_F = \sum_{i=1}^{n} \left(N_{F_i} K_{F_i}\right) = \left[\left(N_{F_1} K_{F_1}\right) + \left(N_{F_2} K_{F_2}\right) + \ldots + \left(N_{F_n} K_{F_n}\right)\right]$$

where:

N_{Fi} = Number of fittings of a particular type, dimensionless. N_{Fi} is determined for the specific tank or estimated from tables 30 through 32 of this subpart.

K_{Fi} = Deck fitting loss factor for a particular type fitting, pound-mole per year, and

K_{Fi} = $K_{Fai} + K_{Fbi} V^{mi}$, pound-mole per year, see table 30 of this subpart for the appropriate values of K_{Fa}, K_{Fb}, and m for each fitting type.

V, P*, M_v, K_c, and 2,205 as defined in paragraph (g)(3)(iv)(B) of this section.

(4) Emissions from transfer racks shall be calculated as follows:

(i) The following equation shall be used for each transfer rack i to calculate ETR_{iu}:

$$ETR_{iu} = \left(1.20 \times 10^{-7}\right) \frac{SPMG}{T}$$

where:

ETR_{iu} = Uncontrolled transfer HAP emission rate from transfer rack i, megagrams per month.

S = Saturation factor, dimensionless (see table 33 of this subpart).

P = Weighted average rack partial pressure of organic HAP's transferred at the rack during the month, kilopascals.

M = Weighted average molecular weight of organic HAP's transferred at the transfer rack during the month, gram per gram-mole.

G = Monthly volume of organic HAP's transferred, liters per month.

T = Weighted rack bulk liquid loading temperature during the month, Kelvin (°C + 273).

(ii) The following equation shall be used for each transfer rack i to calculate the weighted average rack partial pressure:

$$P = \frac{\sum_{1}^{j=n} (P_j)(G_j)}{G}$$

where:

P_j = Maximum true vapor pressure of individual organic HAP transferred at the rack, kilopascals.

G = Monthly volume of organic HAP transferred, liters per month, and

$$G = \sum_{1}^{j=n} G_j$$

G_j = Monthly volume of individual organic HAP transferred at the transfer rack, liters per month.

n = Number of organic HAP's transferred at the transfer rack.

(iii) The following equation shall be used for each transfer rack i to calculate the weighted average rack molecular weight:

$$M = \frac{\sum_{1}^{j=n} (M_j)(G_j)}{G}$$

where:

M_j = Molecular weight of individual organic HAP transferred at the rack, gram per gram-mole.

G, G_j, and n as defined in paragraph (g)(4)(ii) of this section.

(iv) The following equation shall be used for each transfer rack i to calculate the monthly weighted rack bulk liquid loading temperature:

$$T = \frac{\sum_{1}^{j=n} (T_j)(G_j)}{G}$$

where:

T_j	=	Average annual bulk temperature of individual organic HAP loaded at the transfer rack, Kelvin ((°C + 273).

G, G_j, and n as defined in paragraph (g)(4)(ii) of this section.

(v) The following procedures and equations shall be used to calculate $ETR_{iACTUAL}$:

(A) If the transfer rack is not controlled, $ETR_{iACTUAL} = ETR_{iu}$, where ETR_{iu} is calculated using the equations specified in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(B) If the transfer rack is controlled using a control device or a pollution prevention measure achieving less than the 98-percent reduction,

$$ETR_{iACTUAL} = ETR_{iu}\left(\frac{1 - Percent\ reduction}{100\%}\right)$$

(*1*) The percent reduction for a control device shall be measured according to the procedures and test methods specified in §63.128(a) of this subpart. For a flare meeting the criteria in §63.128(b) of this subpart or a boiler or process heater meeting the criteria in §63.128(c) of this subpart, the percent reduction shall be 98 percent. If testing is not feasible, percent reduction shall be determined through a design evaluation according to the procedures specified in §63.128(h) of this subpart.

(*2*) Procedures for calculating the percent reduction for pollution prevention measures are specified in paragraph (j) of this section.

(5) Emissions from wastewater shall be calculated as follows:

(i) The following equation shall be used for each wastewater stream i to calculate EWW_{ic}:

$$EWW_{ic} = \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left(1 - Fr_m\right) Fe_m HAP_{im} + \left(0.05\right)\left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left(Fr_m HAP_{im}\right)$$

where:

EWW_{ic}	=	Monthly wastewater stream emission rate if wastewater stream i is controlled by the reference control technology, megagrams per month.
Q_i	=	Average flow rate for wastewater stream i, as determined by the procedure in §63.144(c)(3), liters per minute.
H_i	=	Number of hours during the month that wastewater stream i was generated, hours per month.
s	=	Total number of table 9 HAP in wastewater stream i.
Fr_m	=	Fraction removed of table 9 HAP m in wastewater, from table 9, dimensionless.
Fe_m	=	Fraction emitted of table 9 HAP m in wastewater, from table 34, dimensionless.
HAP_{im}	=	Average concentration of table 9 HAP m in wastewater stream i, parts per million by weight.

(A) HAP_{im} shall be determined for the point of determination or, at a location downstream of the point of determination and adjusted according as specified in §63.144(b)(6) of this subpart, by developing and using the sampling plan specified in §63.144(b)(5)(ii) of this subpart. The samples collected may be analyzed by any of the methods specified in §63.144(b)(5)(i)(B) through (b)(5)(i)(F) of this subpart. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed on table 34 of this subpart. Concentration measurements other than Method 305 shall not be adjusted by the compound-specific Fm factor listed in table 34 of this subpart.

(B) Values for Q_i, HAP_{im}, and C_{im} shall be determined during a performance test conducted under representative conditions as specified in §63.145(a)(3) and (a)(4) of this subpart. The average value obtained from three test runs shall be used. The values of Q_i, HAP_{im}, and C_{im} shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(5)(i)(C) of this section.

(C) If there is a change to the process or operation such that the previously measured values of Q_i, HAP_{im}, and C_{im} are no longer representative, a new performance test shall be conducted to determine new representative values of Q_i, HAP_{im}, and C_{im}. 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.

(ii) The following equation shall be used to calculate $EWW_{iACTUAL}$ for each wastewater stream i that is not managed according to the provisions for waste management units of §§63.133 through 63.137 of this subpart, as applicable, which specify equipment and work practices for suppressing and controlling vapors. Q_i, H_i, s, Fe_m, and HAP_{im} are as defined and determined according to paragraph (g)(5)(i) of this section.

$$EWW_{iACTUAL} = \left(6.0\times10^{-8}\right) Q_i H_i \sum_{m=1}^{s} Fe_m HAP_{im}$$

Where:

$EWW_{iACTUAL}$ = Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

(iii) The following equation shall be used to calculate $EWW_{iACTUAL}$ for each wastewater stream i that is managed according to the requirements of §§63.133 through 63.137 of this subpart, as applicable, and wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology (for the purposes of the wastewater emissions averaging provisions, the term control is used to mean treatment). Q_i, H_i, s, Fe_m, and HAP_{im} are as defined and determined according to paragraph (g)(5)(i) of this section.

$$EWW_{iACTUAL} = \left(6.0 * 10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left[Fe_m HAP_{im} \left(1 - PR_{im}\right)\right] + \left(1 - \frac{R_i}{100\%}\right) \left(6.0 * 10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left(HAP_{im} PR_{im}\right)$$

Where:

$EWW_{iACTUAL}$ = Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

PR_{im} = The efficiency of the treatment process, or series of treatment processes, which treat wastewater stream i, in reducing the emission potential of table 9 HAP m in wastewater, dimensionless, as calculated by:

$$PR_{im} = \frac{HAP_{im-in} - HAP_{im-out}}{HAP_{im-in}}$$

Where:

HAP_{im-in} = Average concentration of table 9 HAP m, parts per million by weight, as defined and determined according to paragraph (g)(5)(i) of this section, in the wastewater entering the first treatment process in the series.

HAP_{im-out} = Average concentration of table 9 HAP m, parts per million by weight, as defined and determined according to paragraph (g)(5)(i) of this section, in the wastewater exiting the last treatment process in the series.

R_i = Reduction efficiency of the device used to control any vapor streams emitted and collected from wastewater stream i during treatment, dimensionless, as determined according to the procedures in §63.145(i) or (j) of this subpart.

(h) Credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emissions from a 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) The overall equation for calculating source-wide credits is:

$$Credits = D\sum_{i=1}^{n}((0.02)\,EPV1_{iu} - EPV1_{iACTUAL}) + D\sum_{i=1}^{m}(EPV2_{iBASE} - EPV2_{iACTUAL}) + D\sum_{i=1}^{n}((0.05)\,ES1_{iu} - ES1_{iACTUAL}) + D\sum_{i=1}^{m}(ES2_{iBASE} - ES2_{iACTUAL}) + D\sum_{i=1}^{n}((0.02)\,ETR1_{iu} - ETR1_{iACTUAL}) + D\sum_{i=1}^{m}(ETR2_{iBASE} - ETR2_{iACTUAL}) + D\sum_{i=1}^{n}(EWW1_{ic} - EWW1_{iACTUAL}) + D\sum_{i=1}^{m}(EWW2_{iBASE} - EWW2_{iACTUAL})$$

where:

Credits and all terms of the equation are in units of megagrams per month, the baseline date is November 15, 1990, and:

D	=	Discount factor = 0.9 for all credit generating emission points except those controlled by a pollution prevention measure, which will not be discounted.
$EPV1_{iACTUAL}$	=	Emissions for each Group 1 process vent i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(2) of this section.
(0.02) $EPV1_{iu}$	=	Emissions from each Group 1 process vent i if the reference control technology had been applied to the uncontrolled emissions. $EPV1_{iu}$ is calculated according to paragraph (h)(2) of this section.
$EPV2_{iACTUAL}$	=	Emissions from each Group 2 process vent i that is controlled, calculated according to paragraph (h)(2) of this section.
$EPV2_{iBASE}$	=	Emissions from each Group 2 process vent i at the baseline date, as calculated in paragraph (h)(2) of this section.
$ES1_{iACTUAL}$	=	Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(3) of this section.
(0.05) $ES1_{iu}$	=	Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions. $ES1_{iu}$ is calculated according to paragraph (h)(3) of this section.
$ES2_{iACTUAL}$	=	Emissions from each Group 2 storage vessel i that is controlled, calculated according to paragraph (h)(3) of this section.

$ES2_{iBASE}$ = Emissions from each Group 2 storage vessel i at the baseline date, as calculated in paragraph (h)(3) of this section.

$ETR1_{iACTUAL}$ = Emissions from each Group 1 transfer rack i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(4) of this section.

(0.02) $ETR1_{iu}$ = Emissions from each Group 1 transfer rack i if the reference control technology had been applied to the uncontrolled emissions. $ETR1_{iu}$ is calculated according to paragraph (h)(4) of this section.

$ETR2_{iACTUAL}$ = Emissions from each Group 2 transfer rack i that are controlled, calculated according to paragraph (h)(4) of this section.

$ETR2_{iBASE}$ = Emissions from each Group 2 transfer rack i at the baseline date, as calculated in paragraph (h)(4) of this section.

$EWW1_{iACTUAL}$ = Emissions from each Group 1 wastewater stream i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(5) of this section.

$EWW1_{ic}$ = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (h)(5) of this section.

$EWW2_{iACTUAL}$ = Emissions from each Group 2 wastewater stream i that is controlled, calculated according to paragraph (h)(5) of this section.

$EWW2_{iBASE}$ = Emissions from each Group 2 wastewater stream i at the baseline date, calculated according to paragraph (h)(5) 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 process vents, storage vessels, transfer racks, and wastewater.

m = Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(i) 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)(ii) 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 (i) 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 (i) of this section.

(iii) For an emission point controlled using a pollution prevention measure, the nominal efficiency for calculating credits shall be as determined as described in paragraph (j) of this section.

(2) Emissions from process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 process vents, $EPV1_{iu}$, shall be calculated according to the procedures and equation for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 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, $EPV1_{iACTUAL}$, shall be calculated according to the following equation:

$$EPV1_{iACTUAL} = EPV1_{iu}\left(1 - \frac{\text{Nominal } \mathit{efficiency}\ \%}{100\%}\right)$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 process vents, $EPV2_{iACTUAL}$:

(A) For a Group 2 process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, if the control achieves a percent reduction less than or equal to 98 percent reduction,

$$EPV2_{iACTUAL} = EPV2_{iu} \times \left(1 - \frac{\mathit{Percent}\ \text{reduction}}{100\%}\right)$$

(*1*) $EPV2_{iu}$ shall be calculated according to the equations and procedures for EPV_{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, $EPV2_{iu}$ shall be calculated prior to that recovery device. The equation for EPV_{iu} in paragraph (g)(2)(ii) of this section shall be used to calculate $EPV2_{iu}$; 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 test at the inlet and outlet of that recovery device.

(B) For a Group 2 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,

$$EPV2_{iACTUAL} = EPV2_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right)$$

(iv) Emissions from Group 2 process vents at baseline, $EPV2_{iBASE}$, shall be calculated as follows:

(A) If the process vent was uncontrolled on November 15, 1990, $EPV2_{iBASE} = EPV2_{iu}$ and shall be calculated according to the procedures and equation for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the process vent was controlled on November 15, 1990,

$$EPV2_{iBASE} = EPV2_{iu}\left(1 - \frac{Percent\ \text{reduction}\ \%}{100\%}\right)$$

where

$EPV2_{iu}$ is calculated according to the procedures and equation for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section. 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 to a process vent as part of a pollution prevention project initiated after November 15, 1990, $EPV2_{iBASE} = EPV2_{iu}$, where $EPV2_{iu}$ is calculated according to paragraph (h)(2)(iii)(A)(*3*) of this section.

(3) Emissions from storage vessels shall be determined as follows:

(i) Uncontrolled emissions from Group 1 storage vessels, $ES1_{iu}$, shall be calculated according to the equations and procedures for ES_{iu} in paragraph (g)(3)(i) of this section.

(ii) Actual emissions from Group 1 storage vessels controlled using a technology with an approved nominal efficiency greater than 95 percent or a pollution prevention measure achieving greater than 95 percent emission reduction, $ES1_{iACTUAL}$, shall be calculated according to the following equation:

$$ES1_{iACTUAL} = ES1_{iu}\left(1 - \frac{\text{Nominal efficiency}\ \%}{100\%}\right)$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 storage vessels, $ES2_{iACTUAL}$:

(A) For a Group 2 storage vessel controlled using a control device or a pollution prevention measure (other than an internal or external floating roof) achieving a percent reduction less than or equal to 95-percent reduction,

$$ES2_{iACTUAL} = ES2_{iu} \times \left(1 - \frac{Percent\ \text{reduction}}{100\%}\right)$$

(*1*) $ES2_{iu}$ is calculated according to the equations and procedures for ES_{iu} in paragraph (g)(3)(i) of this section.

(*2*) The percent reduction shall be calculated according to the procedures in paragraphs (g)(3)(ii)(B)(*1*) and (g)(3)(ii)(B)(*2*) of this section.

(*3*) If an internal or external floating roof meeting the specifications of §63.119 (b), (c), or (d) of this subpart is used to control the vessel, the percent reduction shall be 95 percent.

(B) If a Group 2 storage vessel is controlled with an internal or external floating roof not meeting the specifications of §63.119 (b), (c), or (d) of this subpart, $ES2_{iACTUAL}$ shall be calculated as specified for $ES_{iACTUAL}$ in paragraph (g)(3)(iii) or (g)(3)(iv) of this section.

(C) For a Group 2 storage vessel controlled using a technology with an approved nominal efficiency greater than 95 percent or a pollution prevention measure achieving greater than 95 percent reduction,

$$ES2_{iACTUAL} = ES2_{iu} \left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right)$$

(iv) Emissions from Group 2 storage vessels at baseline, $ES2_{iBASE}$, shall be calculated as follows:

(A) If the fixed-roof vessel was uncontrolled on November 15, 1990, $ES2_{iBASE} = ES2_{iu}$ and shall be calculated according to the procedures and equations for ES_{iu} in paragraph (g)(3)(i) of this section.

(B) If the storage vessel was controlled on November 15, 1990:

(*1*) The equations for $ES_{iACTUAL}$ in paragraph (g)(3)(iii) of this section shall be used to calculate $ES2_{iBASE}$ for vessels controlled with an internal floating roof that does not meet the specifications of §63.119 (b) or (d) of this subpart.

(*2*) The equations for $ES_{iACTUAL}$ in paragraph (g)(3)(iv) of this section shall be used to calculate $ES2_{iBASE}$ for vessels controlled with an external floating roof that does not meet the specifications of §63.119(c) of this subpart.

(*3*) The following equations shall be used to calculate $ES2_{iBASE}$ for vessels controlled with a control device,

$$ES2_{iBASE} = ES2_{iu}\left(1 - \frac{\text{Percent reduction }\%}{100\%}\right)$$

where

$ES2_{iu}$ shall be calculated according to the equations for ES_{iu} in paragraph (g)(3)(i) of this section. The percent reduction shall be calculated according to the procedures in paragraphs (g)(3)(ii)(B)(*1*) and (g)(3)(ii)(B)(*2*) of this section.

(4) Emissions from transfer racks shall be determined as follows:

(i) Uncontrolled emissions from Group 1 transfer racks, $ETR1_{iu}$, shall be calculated according to the procedures and equations for ETR_{iu} as described in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(ii) Actual emissions from Group 1 transfer racks 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, $ETR_{iACTUAL}$, shall be calculated according to the following equation:

$$ETR1_{iACTUAL} = ETR1_{iu}\left(1 - \frac{\text{Nominal efficiency}}{100\%}\right)$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 transfer racks, $ETR2_{iACTUAL}$:

(A) For a Group 2 transfer rack controlled by a control device or a pollution prevention measure achieving a percent reduction less than or equal to 98 percent reduction,

$$ETR2_{iACTUAL} = ETR2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right)$$

(*1*) $ETR2_{iu}$ shall be calculated according to the equations and procedures for ETR_{iu} in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(*2*) The percent reduction shall be calculated according to the procedures in paragraph (g)(4)(v)(B)(*1*) and (g)(4)(v)(B)(*2*) of this section.

(B) For a Group 2 transfer rack controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction,

$$ETR2_{iACTUAL} = ETR2_{iu}\left(1 - \frac{\text{Nominal efficiency}}{100\%}\right)$$

(iv) Emissions from Group 2 transfer racks at baseline, $ETR2_{iBASE}$, shall be calculated as follows:

(A) If the transfer rack was uncontrolled on November 15, 1990, $ETR2_{iBASE} = ETR2_{iu}$ and shall be calculated according to the procedures and equations for ETR_{iu} in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(B) If the transfer rack was controlled on November 15, 1990,

$$ETR2_{iBASE} = ETR2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right)$$

where

$ETR2_{iu}$ is calculated according to the procedures and equations for ETR_{iu} in paragraphs (g)(4)(i) through (g)(4)(iv) of this section. Percent reduction shall be calculated according to the procedures in paragraphs (g)(4)(v)(B)(*1*) and (g)(4)(v)(B)(*2*) of this section.

(5) Emissions from wastewater shall be determined as follows:

(i) $EWW1_{ic}$ shall be calculated according to the equation for EWW_{ic} in paragraph (g)(5)(i) of this section.

(ii) $EWW2_{iBASE}$ shall be calculated according to the equation for $EWW_{iACTUAL}$ in paragraph (g)(5)(ii) of this section for each Group 2 wastewater stream i, which on November 15, 1990, was not managed according to the requirements of §§63.133 through 63.137 of this subpart, as applicable.

(iii) $EWW2_{iBASE}$ shall be calculated according to the equation for $EWW_{iACTUAL}$ in paragraph (g)(5)(iii) of this section for each Group 2 wastewater stream i, which on November 15, 1990, was managed according to the requirements of §§63.133 through 63.137 of this subpart, as applicable, and was uncontrolled or controlled to a level less stringent than the reference control technology.

(iv) For Group 2 wastewater streams that are managed according to the requirements of §§63.133 through 63.137 of this subpart, as applicable, $EWW2_{iACTUAL}$ shall be calculated as follows:

(A) $EWW2_{iACTUAL}$ shall be calculated according to the equation for $EWW_{iACTUAL}$ in paragraph (g)(5)(iii) of this section for each Group 2 wastewater stream i that is controlled to a level less stringent than, or equivalent to, the reference control technology.

(B) $EWW2_{iACTUAL}$ shall be calculated according to the procedures for calculating $EWW1_{iACTUAL}$ in paragraph (h)(5)(v) of this section for each Group 2 wastewater stream that is controlled to a level more stringent than the reference control technology.

(v) The following equations for EWW1iACTUAL shall be used to calculate emissions from each Group 1 wastewater stream i that is managed according to the requirements of §§63.133 through 63.137 of this subpart, as applicable, and is controlled to a level more stringent than the reference control technology.

(A) If the Group 1 wastewater stream i is controlled using a treatment process or series of treatment processes with an approved nominal reduction efficiency in the concentration of table 9 HAP for stream i greater than that of the design steam stripper specified in §63.138(d) of this subpart, and the control device used to reduce table 9 HAP emissions from the vapor stream(s) vented from the treatment process(es) achieves a percent reduction equal to 95 percent, the following equation shall be used. All terms in this equation are as defined and determined in paragraph (g)(5) of this section.

$$EWW1_{iACTUAL} = \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s}\left[Fe_m HAP_{im}\left(1-PR_{im}\right)\right] + 0.05\left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s}\left[HAP_{im} PR_{im}\right]$$

(B) If the Group 1 wastewater stream i is not controlled using a treatment process or series of treatment processes with a nominal reduction efficiency in the table 9 HAP concentration greater than that of the design steam stripper specified in §63.138(d) of this subpart, but the vapor stream(s) vented from the treatment process(es) are controlled using a device with an approved nominal efficiency greater than 95 percent, the following equation shall be used. All terms other than nominal efficiency are as defined and determined in paragraph (g)(5) of this section.

$$EWW1_{iACTUAL} = \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left[Fe_m HAP_{im} \left(1 - Fr_m\right) \right] + \left(1 - \frac{Nominal\ efficiency\ \%}{100}\right) \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left[HAP_{im} Fr_m \right]$$

(C) If the Group 1 wastewater stream i is controlled using a treatment process or series of treatment processes with an approved nominal reduction efficiency in the table 9 HAP concentration greater than that of the design steam stripper specified in §63.138(d) of this subpart, and the vapor stream(s) vented from the treatment process are controlled using a device with an approved nominal efficiency greater than 95 percent, the following equation shall be used. All terms other than nominal efficiency are as defined and determined in paragraph (g)(5) of this section.

$$EWW1_{iACTUAL} = \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left[Fe_m HAP_{im} \left(1 - PR_{im}\right) \right] + \left(1 - \frac{Nominal\ efficiency\ \%}{100}\right) \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left[HAP_{im} PR_{im} \right]$$

(i) The following procedures shall be followed to establish nominal efficiencies. 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 of this subpart.

(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 to the Director of the EPA Office of Air Quality Planning and Standards in writing:

(i) 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 of appendix A of this part. 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 calendar 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 (i)(1) of this section.

(3) The Administrator shall determine within 120 calendar 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 condition permission to take emission credits for use of the control technology on 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 information listed in paragraphs (i)(1)(i) through (i)(1)(iv) can be submitted to the permitting authority for the source for approval instead of the Administrator.

(i) In these instances, use and conditions for use of the control technology can 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 (i)(2) through (i)(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.

(ii) 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 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:

(1) A pollution prevention measure is any practice which meets the criteria of paragraphs (j)(1)(i) and (j)(1)(ii) of this section.

(i) 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.

(ii) Pollution prevention measures may include: substitution of feedstocks that reduce 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, can 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. When the term “organic HAP” is used in §63.150(j)(2) in reference to wastewater emission points, the term “table 9 HAP” shall apply for the purposes of this paragraph.

(i) For pollution prevention measures, the percent reduction used in the equations in paragraphs (g)(2) through (g)(5) of this section and paragraphs (h)(2) through (h)(5) 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) The following equation shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

$$\text{Percent reduction} = \frac{E_B - \frac{(E_{pp} \times P_B)}{P_{pp}}}{E_B} \times 100\%$$

where:

Percent reduction	=	Efficiency of pollution prevention measure (percent organic HAP reduction).
E_B	=	Monthly emissions before the pollution prevention measure, megagrams per month, determined as specified in paragraphs (j)(2)(ii)(A), (j)(2)(ii)(B), and (j)(2)(ii)(C) of this section.
E_{pp}	=	Monthly emissions after the pollution prevention measure, megagrams per month, as determined for the most recent month, determined as specified in paragraphs (j)(2)(ii)(D) or (j)(2)(ii)(E) of this section.
P_B	=	Monthly production before the pollution prevention measure, megagrams per month, during the same period over which E_B is calculated.
P_{pp}	=	Monthly production after the pollution prevention measure, megagrams per 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 paragraphs (g)(2), (g)(3), and (g)(4) of this section for process vents, storage vessels, and transfer operations.

(B) For wastewater, E_B shall be calculated as follows:

$$E_B = \sum_{i=1}^{n}\left[\left(6.0*10^{-8}\right)Q_{Bi}H_{Bi}\sum_{m=1}^{s}Fe_m HAP_{Bim}\right]$$

Where:

n	=	Number of wastewater streams.
Q_{Bi}	=	Average flow rate for wastewater stream i before the pollution prevention measure, defined and determined according to paragraph (g)(5)(i) of this section, liters per minute, before implementation of the pollution prevention measure.
H_{Bi}	=	Number of hours per month that wastewater stream i was discharged before the pollution prevention measure, hours per month.
s	=	Total number of table 9 HAP in wastewater stream i.
Fe_m	=	Fraction emitted of table 9 HAP m in wastewater of this subpart, dimensionless.
HAP_{Bim}	=	Average concentration of table 9 HAP m in wastewater stream i, defined and determined according to paragraph (g)(5)(i) of this section, before the pollution prevention measure, parts per million by weight, as measured before the implementation of the pollution measure.

(C) If the pollution prevention measure was implemented prior to April 22, 1994, 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 can be used to estimate monthly emissions from monthly production records.

(E) For wastewater, E_{pp} shall be calculated using the following equation:

$$E_{pp} = \sum_{i=1}^{n}\left[\left(6.0*10^{-8}\right)Q_{ppi}H_{ppi}\sum_{m=1}^{s}Fe_m HAP_{ppim}\right]$$

where

n, Q_{ppi}, H_{ppi}, s, Fe_m, and HAP_{ppim} are defined and determined as described in paragraph (j)(2)(ii)(B) of this section except that Q_{ppi}, H_{ppi}, and HAP_{ppim} shall be determined after the pollution prevention measure has been implemented.

(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 must be calculated.

(v) For the purposes of the equations in paragraphs (h)(2) through (h)(5) of this section, used to calculate credits for emission points controlled more stringently than the reference control technology, 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 a 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 must demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard or, at the option of the operating permit authority, greater risk to human health or the environment than if the emission points were controlled according to the provisions in §§63.113 through 63.148.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the operating permit authority.

(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 Implementation 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 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 §§63.113 through 63.148 of this subpart.

(4) A hazard or risk equivalency demonstration must:

(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.

(l) For periods of excursions, an owner or operator may request that the provisions of paragraphs (l)(1) through (l)(4) of this section be followed instead of the procedures in paragraphs (f)(3)(i) and (f)(3)(ii) of this section.

(1) The owner or operator shall notify the Administrator of excursions in the Periodic Reports as required in §63.152 of this subpart.

(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 of demonstrating compliance that are acceptable.

(3) The owner or operator shall provide documentation of the excursion and the other type 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 Group 1 or Group 2 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 §§63.113 through 63.148 of this subpart. The specific requirements for process vents, storage vessels, transfer racks, and wastewater are identified in paragraphs (m)(1) through (m)(6) of this section.

(1) The source shall implement the following testing, monitoring, recordkeeping, and reporting procedures for each process vent equipped with a flare, incinerator, boiler, or process heater.

(i) Determine, consistent with paragraph (g)(2)(i) of this section, whether the process vent is Group 1 or Group 2 according to the procedures in §63.115.

(ii) Conduct ~~initial~~ performance tests to determine percent reduction as specified in §63.116 of this subpart;

(iii) Monitor the operating parameters, keep records, and submit reports specified in §63.114, §63.117(a), and §63.118 (a), (f), and (g) of this subpart, as appropriate for the specific control device.

(2) The source shall implement the following procedures for each process vent equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device:

(i) Except as specified in §63.113(a)(4), ~~D~~determine, consistent with paragraph (g)(2)(i) of this section, the flow rate, organic HAP concentration, and TRE index value using the methods specified in §63.115;

(ii) Monitor the operating parameters, keep records, and submit reports specified in §63.114, §63.117(a), and §63.118(b), (f), and (g) of this subpart, as appropriate for the specific recovery device.

(3) The source shall implement the following procedures 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 in §63.120 of this subpart,

(ii) Perform the reporting and recordkeeping procedures in §§63.122 and 63.123 of this subpart, and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan as specified in §63.120(d) and §63.122(a)(2) and (b) of this subpart.

(4) The source shall implement the following procedures for each transfer rack controlled with a vapor balancing system, or a vapor collection system and an incinerator, flare, boiler, process heater, adsorber, condenser, or absorber, as appropriate to the control technique:

(i) The monitoring and inspection procedures in §63.127 of this subpart,

(ii) The testing and compliance procedures in §63.128 of this subpart, and

(iii) The reporting and recordkeeping procedures in §63.129 and §63.130 of this subpart.

(5) The source shall implement the following procedures for wastewater emission points, as appropriate to the control techniques:

(i) For wastewater treatment processes, conduct tests as specified in §63.138(j) of this subpart.

(ii) Conduct inspections and monitoring as specified in §63.143 of this subpart.

(iii) A recordkeeping program as specified in §63.147 of this subpart.

(iv) A reporting program as specified in §63.146 of this subpart.

(6) 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 specified in §63.114, §63.120, §63.127, or §63.143 of this subpart, the owner or operator shall submit the information specified in §63.151(f) of this subpart in the Implementation Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for five years.

(o) Initial Notifications, Implementation Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by §63.151 and §63.152 of this subpart.

§63.151 Initial notification.

(a) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section. Owners or operators requesting an extension of compliance shall also submit the report listed in paragraph (a)(6) of this section.

(1) An Initial Notification described in paragraph (b) of this section, and

(2) An Implementation Plan for new sources subject to this subpart or for emission points to be included in an emissions average, unless an operating permit application has been submitted prior to the date the Implementation Plan is due and the owner or operator has elected

to include the information specified in §63.152(e) in that application. The submittal date and contents of the Implementation Plan are specified in paragraphs (c) and (d) of this section.

(3) A Notification of Compliance Status described in §63.152 of this subpart,

(4) Periodic Reports described in §63.152 of this subpart, and

(5) Other reports described in §63.152 of this subpart.

(6) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing source up to 1 additional year to comply with section 112(d) standards.

(i) 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 as part of the Initial Notification or as a separate submittal. Requests for extensions shall be submitted no later than 120 days prior to the compliance dates specified in §63.100(k)(2), §63.100(l)(4), and §63.100(m) of subpart F of this part, except as provided for in paragraph (a)(6)(iv) of this section. The dates specified in §63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart G.

(ii) A request for an extension of compliance must include the data described in §63.6(i)(6)(i) (A), (B), and (D) of subpart A of this part.

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

(iv) An owner or operator may submit a compliance extension request after the date specified in paragraph (a)(6)(i) of this section provided the need for the compliance extension arose after that date and before the otherwise applicable compliance date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include, in addition to the information in paragraph (a)(6)(ii) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problem.

(7) The reporting requirements for storage vessels are located in §63.122 of this subpart.

(b) Each owner or operator of an existing or new source subject to subpart G shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (b)(1) of this section, according to the schedule in paragraph (b)(2) of this section. The Initial Notification provisions in §63.9(b)(2), (b)(3), and (b)(6) of subpart A shall not apply to owners or operators of sources subject to subpart G.

(1) The Initial Notification shall include the following information:

(i) The name and address of the owner or operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the kinds of emission points within the source that are subject to this subpart;

(iv) An identification of the chemical manufacturing processes subject to subpart G; and

(v) A statement of whether the source can achieve compliance by the relevant compliance date specified in §63.100 of subpart F.

(2) The Initial Notification shall be submitted according to the schedule in paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section, as applicable.

(i) For an existing source, the Initial Notification shall be submitted within 120 calendar days after the date of promulgation, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(ii) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by §63.5(d) of subpart A shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practicable before construction or reconstruction is planned to commence (but it need not be sooner than 90 calendar days after the date of promulgation of this subpart). For a new source that reclassifies to major source status after January 19, 2021 and greater than 90 days after the initial start-up, the source shall submit the initial notification required by §63.9(b) no later than 120 days after the source becomes subject to this subpart.

(iii) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Initial Notification shall be submitted within 90 calendar days after the date of promulgation of this subpart, or no later than 120 days after the source becomes subject to this subpart, whichever is later. The application for approval of construction or reconstruction described in §63.5(d) of subpart A is not required for these sources.

(c) Each owner or operator of an existing source with emission points that will be included in an emissions average or new source subject to this subpart must submit an Implementation Plan to the Administrator by the dates specified in paragraphs (c)(1) and (c)(2) of this section, unless an operating permit application accompanied by the information specified in §63.152(e) of this subpart has been submitted. The Implementation Plan for emissions averaging is subject to Administrator approval.

(1) Each owner or operator of an existing source subject to this subpart who elects to comply with §63.112 of this subpart by using emissions averaging for any emission points, and who has not submitted an operating permit application accompanied by the information specified in §63.152(e) of this subpart at least 18 months prior to the compliance dates specified in §63.100 of subpart F of this part, shall develop an Implementation Plan for emissions averaging.

For existing sources, the Implementation Plan for those emission points to be included in an emissions average shall be submitted no later than 18 months prior to the compliance dates in §63.100 of subpart F of this part.

(2) Each owner or operator of a new source shall submit an Implementation Plan by the date specified in paragraphs (c)(2)(i) or (c)(2)(ii) of this section, as applicable, unless an operating permit application containing the information in paragraph (e) of this section has been submitted by that date.

(i) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the Implementation Plan shall be submitted with the application for approval of construction or reconstruction by the date specified in paragraph (b)(2)(ii) of this section.

(ii) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Implementation Plan shall be submitted within 90 calendar days after the date of promulgation of this subpart.

(3) The Administrator shall determine within 120 calendar days whether the Implementation Plan submitted by sources using emissions averaging presents sufficient information. The Administrator shall either approve the Implementation 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 calendar days.

(d) Each owner or operator required to submit an Implementation Plan for emissions averaging shall include in the plan, for all emission points included in the emissions average, the information listed in paragraphs (d)(1) through (d)(8) of this section.

(1) The identification of all emission points in the planned emissions average and notation of whether each point is a Group 1 or Group 2 emission point as defined in §63.111 of this subpart.

(2) The projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to §63.150 of this subpart. The projected credits must be greater than the projected debits, as required under §63.150(e)(3) of this subpart.

(3) 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.

(4) The specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in §63.150(j)(1) of this subpart must be met. If the same pollution prevention measure reduces or eliminates emissions from multiple emission points in the average, the owner or operator must identify each of these emission points.

(5) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in §63.150(m), (n), and (o) of this subpart that are applicable to each emission point in the emissions average will be implemented beginning on the date of compliance.

(6) Documentation of the information listed in paragraph (d)(6)(i) through (d)(6)(v) of this section for each process vent, storage vessel, or transfer rack included in the average.

(i) The values of the parameters used to determine whether the emission point is Group 1 or Group 2. Except as specified in §63.113(a)(4), ~~W~~where TRE index value is used for process vent group determination, the estimated or measured values of the parameters used in the TRE equation in §63.115(d) of this subpart (flow rate, organic HAP emission rate, TOC emission rate, and net heating value) and the resulting TRE index value shall be submitted.

(ii) The estimated values of all parameters needed for input to the emission debit and credit calculations in §63.150 (g) and (h) of this subpart. These parameter values, or as appropriate, limited ranges for the parameter values, shall be specified in the source's Implementation Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (i)(2)(ii) of this section.

(iii) The estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the reference control technology, as defined in §63.111 of this subpart, is or will be applied to the emission point.

(iv) 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 §63.150(i) of this subpart shall be followed to apply for a nominal efficiency.

(v) The operating plan required in §63.122(a)(2) and (b) of this subpart for each storage vessel controlled with a ~~closed-vent~~closed vent system with a control device other than a flare.

(7) The information specified in §63.151(f) of this subpart shall be included in the Implementation Plan for:

(i) Each process vent or transfer rack controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in §63.114, §63.126(b)(3), or §63.127 of this subpart, and

(ii) 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.

(8) Documentation of the information listed in paragraph (d)(8)(i) through (d)(8)(iv) for each process wastewater stream included in the average.

(i) The information used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream.

(ii) The estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in §63.150 (g)(5) and (h)(5) of this subpart.

(iii) The estimated percent reduction if:

(A) A control technology that achieves an emission reduction less than or equal to the emission reduction achieved by the design steam stripper, as specified in §63.138(g) of this subpart, is or will be applied to the wastewater stream, or

(B) 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

(C) A pollution prevention measure is or will be applied.

(iv) The anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under §63.150(i) of this subpart. A nominal efficiency shall be applied for if:

(A) A control technology is or will be applied to the wastewater stream and achieves an emission reduction greater than the emission reduction achieved by the design steam stripper as specified in §63.138(g) of this subpart, or

(B) 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.

(v) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP's from wastewater and for which no monitoring parameters or inspection procedures are specified in §63.143 of this subpart, the information specified in §63.151(f) of this subpart shall be included in the Implementation Plan.

(e) An owner or operator expressly referred to this paragraph shall report, in an Implementation Plan, operating permit application, or as otherwise specified by the permitting authority, the information listed in paragraphs (e)(1) through (e)(5) of this section.

(1) A list designating each emission point complying with §§63.113 through 63.149 and whether each emission point is Group 1 or Group 2, as defined in §63.111. For each process vent within the source, provide the information listed in paragraphs (e)(1)(i) through (iv) of this section.

(i) The chemical manufacturing process unit(s) that is the origin of all or part of the vent stream that exits the process vent.

(ii) The type(s) of unit operations (i.e., an air oxidation reactor, distillation unit, or reactor) that creates the vent stream that exits the process vent.

(iii) For a Group 2 process vent, the last recovery device, if any.

(iv) For a Group 1 process vent, the control device, or other equipment used for compliance.

(2) The control technology or method of compliance that will be applied to each Group 1 emission point.

(3) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in §§63.113 through 63.149 of this subpart that are applicable to each emission point will be implemented beginning on the date of compliance.

(4) The operating plan required in §63.122(a)(2) and (b) of this subpart for each storage vessel controlled with a closed vent system with a control device other than a flare.

(5) The monitoring information in §63.151(f) of this subpart if, for any emission point, the owner or operator of a source seeks to comply through use of a control technique other than those for which monitoring parameters are specified in §63.114 for process vents, §63.127 for transfer, and §63.143 for process wastewater.

(f) The owner or operator who has been directed by any section of this subpart that expressly references this paragraph to set unique monitoring parameters or who requests approval to monitor a different parameter than those listed in §63.114 for process vents, §63.127 for transfer, or §63.143 for process wastewater of this subpart shall submit the information specified in paragraphs (f)(1), (f)(2), and (f)(3) of this section with the operating permit application or as otherwise specified by the permitting authority.

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

(2) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in §63.152(b) of this subpart, unless this information has already been included in the operating permit application.

(3) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter

value is outside the range established in the operating permit or Notification of Compliance Status will not be included in Periodic Reports required under §63.152(c) of this subpart. The rationale for the proposed monitoring, recording, and reporting system shall be included.

(g) An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in §§63.114, 63.117, and 63.118 for process vents, §§63.127, 63.129, and 63.130 for transfer operations, and §§63.143, 63.146, and 63.147 for wastewater.

(1) Requests shall be included in the operating permit application or as otherwise specified by the permitting authority and shall contain the information specified in paragraphs (g)(3) through (g)(5) of this section, as applicable.

(2) The provisions in §63.8(f)(5)(i) of subpart A shall govern the review and approval of requests.

(3) An owner or operator of a source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and generating continuous records may request approval to use a non-automated system with less frequent monitoring.

(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 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 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 device operating conditions considering typical variability of the specific process and control device operating parameter being monitored.

(4) 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 (for example once every 15 minutes) but records all values that meet set criteria for variation from previously recorded values.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes.

(B) 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) Compute daily average values of the monitored operating parameter based on recorded data.

(F) If the daily average is not an excursion, as defined in §63.152(c)(2)(ii), 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 description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria in paragraph (g)(4)(i) of this section.

(5) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in §63.8(f) of subpart A of this part.

(h) The owner or operator required to prepare an Implementation Plan, or otherwise required to submit a report, under paragraph (c), (d), or (e) of this section shall also submit a supplement for any additional alternative controls or operating scenarios that may be used to achieve compliance.

(i) The owner or operator of a source required to submit an Implementation Plan for emissions averaging under paragraphs (c) and (d) of this section shall also submit written updates of the Implementation Plan to the Administrator for approval under the circumstances described in paragraphs (i)(1) and (i)(2) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(1) The owner or operator who plans to make a change listed in paragraph (i)(1)(i) or (i)(1)(ii) of this section shall submit an Implementation Plan update at least 120 calendar days prior to making the change.

(i) Whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in §63.150 of this subpart by using a control technique other than that specified in the Implementation Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Implementation Plan.

(ii) Whenever an emission point or a chemical manufacturing process unit is added to an existing 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 Implementation Plan is to be added to an emissions average. The information in paragraph (d) of this section shall be updated to include the additional emission point.

(2) The owner or operator who has made a change listed in paragraph (i)(2)(i) or (i)(2)(ii) of this section shall submit an Implementation Plan update within 90 calendar days after the information regarding the change is known to the 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.

(i) Whenever a process change is made such that the group status of any emission point in an emissions average changes.

(ii) Whenever a value of a parameter in the emission credit or debit equations in §63.150(g) or (h) changes such that it is outside the range specified in the Implementation Plan and causes a decrease in the projected credits or an increase in the projected debits.

(3) The Administrator shall approve or request changes to the Implementation Plan update within 120 calendar days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(j) The owner or operator of a source subject to this subpart, for emission points that are not included in an emissions average, shall report to the Administrator under the circumstances described in paragraphs (j)(1), (j)(2), and (j)(3) of this section unless the relevant information has been included and submitted in an operating permit application or amendment, or as otherwise specified by the permitting authority. The information shall be submitted within 180 calendar days after the change is made or the information regarding the change is known to the source. The update may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status is due.

(1) Whenever a deliberate change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule as specified in §63.100 of subpart F of this part if the emission point becomes Group 1.

(2) Whenever an owner or operator elects to achieve compliance with this subpart by using a control technique other than that previously reported to the Administrator or to the permitting authority, or plans to monitor a different parameter, or operate a control device in a manner other than that previously reported.

(3) Whenever an emission point or a chemical manufacturing process unit is added to a source, written information specified under paragraphs (e)(1) through (e)(5) of this section, containing information on the new emission point(s) shall be submitted to the EPA regional office where the source is located.

§63.152 General reporting and continuous records.

(a) The owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section and keep continuous records of monitored parameters as specified in paragraph (f) of this section. Owners or operators requesting an extension of compliance shall also submit the report described in §63.151(a)(6) of this subpart.

(1) An Initial Notification described in §63.151(b) of this subpart.

(2) An Implementation Plan described in §63.151(c), (d), and (e) of this subpart for existing sources with emission points that are included in an emissions average or for new sources.

(3) A Notification of Compliance Status described in paragraph (b) of this section.

(4) Periodic Reports described in paragraph (c) of this section.

(5) Other reports described in paragraphs (d) and (e) of this section.

(b) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status within 150 calendar days after the compliance dates specified in §63.100 of subpart F of this part.

(1) The notification shall include the results of any emission point group determinations, performance tests, inspections, continuous monitoring system performance evaluations, values of monitored parameters established during performance tests, and any other information used to demonstrate compliance or required to be included in the Notification of Compliance Status under §63.110 (h) for regulatory overlaps, under §63.117 for process vents, §63.122 for storage vessels, §63.129 for transfer operations, §63.146 for process wastewater, and §63.150 for emission points included in an emissions average.

(i) For performance tests and group determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report 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 required in §63.117 for process vents, §63.129 for transfer, and §63.146 for process wastewater shall be submitted, but a complete test report is not required. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with paragraph (h) of this section, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(ii) 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.

(2) For each monitored parameter for which a range is required to be established under §63.114 for process vents, §63.127 for transfer, §63.143 for process wastewater, §63.150(m) for emission points in emissions averages, or §63.151(f), or §63.152(e), the Notification of Compliance Status shall include the information in paragraphs (b)(2)(i), (b)(2)(ii), and (b)(2)(iii) of this section, unless the range and the operating day definition have been established in the operating permit. The recordkeeping and reporting requirements applicable to storage vessels are located in §§63.122 and 63.123.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control device.

(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values measured during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test is not required by this subpart for a control device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(3) For emission points included in an emissions average, the Notification of Compliance Status shall include the values of all parameters needed for input to the emission credit and debit equations in §63.150 (g) and (h), calculated or measured according to the procedures in §63.150 (g) and (h) of this subpart, and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified in §63.100 of subpart F.

(4) If any emission point is subject to this subpart and to other standards as specified in §63.110 of this subpart and if the provisions of §63.110 of this subpart 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.

(5) 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.

(6) An owner or operator complying with §63.113(i) shall include in the Notification of Compliance Status, or where applicable, a supplement to the Notification of Compliance Status, the name and location of the transferee, and the identification of the Group 1 process vent.

(7) For flares subject to the requirements in §63.108 of subpart F of this part, owners and operators must also submit the information in this paragraph in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date for flare

monitoring. The supplement to the Notification of Compliance Status must include flare design (e.g., steam-assisted, air-assisted, non-assisted, or pressure-assisted multi-point); all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the initial visible emissions demonstration required by §63.670(h) of subpart CC of this part, as applicable; and all periods during the compliance determination when the pilot flame or flare flame is absent.

(8) For process vents and storage vessels subject to the requirements of §63.124, owners and operators must also submit the information in this paragraph in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date. The supplement to the Notification of Compliance Status must identify all process vents and storage vessels that are in ethylene oxide service as defined in §63.101 of subpart F of this part, the method(s) used to control ethylene oxide emissions from each process vent and storage vessel (i.e., use of a flare, scrubber, or other control device) and the information specified in paragraphs (b)(8)(i) and (b)(8)(ii) of this section, as applicable.

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

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

(9) For adsorbers subject to the requirements of §§63.114(a)(5)(v), 63.120(d)(1)(iii), 63.127(b)(4), and 63.139(d)(5), you must also submit the information listed in paragraphs (b)(9)(i) and (ii) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date.

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

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

(10) For Group 2 process vents subject to the requirements in §63.113(l), owners and operators must also submit the information in this paragraph in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date. The supplement to the Notification of Compliance Status must identify each Group 2 process vent and include the data and calculations specified in §63.115(g) that are used to demonstrate that the total organic HAP mass flow rate of each vent stream is less than 1.0 pound per hour.

(c) The owner or operator of a source subject to this subpart shall submit Periodic Reports. On and after [INSERT date three years after date of publication of final rule in the Federal Register] or once the reporting template for this subpart has been available on the CEDRI website for 1 year, whichever date is later, owners and operators must submit all subsequent reports following the procedure specified in § 63.9(k) of subpart A, except any medium submitted through mail must be sent to the attention of the Hazardous Organic Chemical Manufacturing Sector Lead. Owners and operators must use the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/cedri*) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under §63.9(i) and §63.10(a) of subpart A, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

(1) Except as specified under paragraphs (c)(5) and (c)(6) of this section, a report containing the information in paragraphs (c)(2), (c)(3), ~~and~~ (c)(4), and (c)(7) of this section shall be submitted semiannually no later than 60 calendar days after the end of each 6-month period. The first report shall be submitted no later than 8 months 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. All periodic reports must contain the company name and address (including county), as well as the beginning and ending dates of the reporting period.

(2) Except as provided in paragraph (c)(2)(iv) of this section, for an owner or operator of a source complying with the provisions of §§63.113 through 63.147 for any emission points, Periodic Reports shall include all information specified in §§63.117 and 63.118 for process vents, §63.122 for storage vessels, §§63.129 and 63.130 for transfer operations, and §63.146 for process wastewater, including reports of each excursion (i.e., each period~~s~~ when a monitored parameter~~s~~ ~~are~~is outside the~~ir~~ established range and periods of insufficient monitoring data~~s~~) using the procedures described in paragraphs (c)(2)(i) through (c)(2)(iv) of this section.

(i) ~~For each parameter or parameters required to be monitored for a control device, the owner or operator shall establish a range of parameter values to ensure that the device is being applied, operated and maintained properly. As specified in paragraph (b)(2) of this section, these parameter values and the definition of an operating day shall be approved as part of and incorporated into the source's Notification of Compliance Status or operating permit, as appropriate.~~Report the affected sources or equipment, the monitored parameter that was exceeded and the date of each excursion.

(ii) The parameter monitoring data for Group 1 emission points and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance with the required operating conditions for the monitored control devices or recovery devices. For each excursion as specified in paragraphs (c)(2)(ii)(A) through (c)(2)(ii)(E) of this section, or paragraph (g)(2)(iv) of this section, except for excused excursions described therein, the owner or operator shall be deemed to have failed to have applied the control in a manner that achieves the required operating conditions and must report the information specified in paragraph (c)(2)(ii)(F) of this section.

(A) An excursion means any of the three cases listed in paragraph (c)(2)(ii)(A)(*1*), (c)(2)(ii)(A)(*2*), or (c)(2)(ii)(A)(*3*) of this section. For a control device or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraph (c)(2)(ii)(A)(*1*), (c)(2)(ii)(A)(*2*), or (c)(2)(ii)(A)(*3*) of this section, this is considered a single excursion for the control device or recovery device.

(*1*) When the daily average value of one or more monitored parameters is outside the permitted range.

(*2*) When the period of control device or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(*3*) When the period of control device or recovery device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(*4*) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (c)(2)(ii)(A)(*2*) and (c)(2)(ii)(A)(*3*) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under

§63.151(g)(4), monitoring data are insufficient to calculate a valid hour of data if there are less than 4 data values recorded during the hour.

(B) The number of excused excursions for each control device or recovery device for each semiannual period is specified in paragraphs (c)(2)(ii)(B)(*1*) through (c)(2)(ii)(B)(*6*) of this section. This paragraph applies to 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.

(C) A monitored parameter that is outside its established range or monitoring data that are not collected are excursions. However, if the conditions in paragraph (c)(2)(ii)(C)(*1*) or (c)(2)(ii)(C)(*2*) of this section are met, these excursions are not violations and do not count toward the number of excused excursions for determining compliance.

(*1*) *Periods of startup, shutdown, or malfunction.* During periods of startup, shutdown, or malfunction when the source is operated during such periods in accordance with §63.102(a)(4). For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(*2*) *Periods of nonoperation.* During periods of nonoperation of the chemical manufacturing process unit, or portion thereof, that results in cessation of the emissions to which the monitoring applies.

(D) Nothing in paragraph (c)(2)(ii) of this section shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of subpart A, F, or G of this part.

(E) Paragraph (c)(2)(ii) of this section, except paragraph (c)(2)(ii)(C) of this section, shall apply only to emission points and control devices or recovery devices for which continuous monitoring is required by §§63.113 through 63.150.

(F) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, for each excursion that is not an excused excursion, the report must include a list of the affected sources or equipment, the monitored parameter for which there was an excursion, the date of the excursion, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, the cause of the excursion (including unknown cause, if applicable), as applicable, and the corrective action taken.

(iii) Periodic Reports shall include the daily average values of monitored parameters for both excused and unexcused excursions, as defined in paragraph (c)(2)(ii)(A) of this section. For excursions caused by lack of monitoring data, the affected equipment or source, the monitored parameter, the start date and duration in hours of periods when monitoring data were not collected shall be specified.

(iv) The provisions of paragraphs (c)(2), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section do not apply to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under §63.120(d)(2), to keep continuous records. If continuous records are required, the owner or operator shall specify, in the monitoring plan, whether the provisions of paragraphs (c)(2), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section apply.

(3) Except as specified in paragraph (c)(3)(iii) of this section, ~~I~~if any performance tests are reported in a Periodic Report, the following information shall be included:

(i) 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 (b)(1)(ii) of this section.

(ii) For additional tests performed for the same kind of emission point using the same method, results and any other information required in §63.117 for process vents, §63.129 for transfer, and §63.146 for process wastewater shall be submitted, but a complete test report is not required.

(iii) If the performance test report is submitted electronically through the EPA's CEDRI in accordance with paragraph (h) of this section, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the Periodic Report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Periodic Report is submitted.

(4) Periodic Reports shall include the information in paragraphs (c)(4)(i) through (c)(4)(iv) of this section, as applicable:

(i) For process vents, reports of process changes as required under §63.118 (g), (h), (i), and (j) of this subpart,

(ii) Any supplements required under §63.151(i) and (j) of this subpart,

(iii) Notification if any Group 2 emission point becomes a Group 1 emission point, including a compliance schedule as required in §63.100 of subpart F of this part, and

(iv) For gas streams sent for disposal pursuant to §63.113(i) or for process wastewater streams sent for treatment pursuant to §63.132(g), reports of changes in the identity of the transferee.

(5) The owner or operator of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 5 months after the compliance date specified in §63.100 of subpart F.

(ii) The quarterly reports shall include the information specified in this paragraph for all emission points included in an emissions average.

(A) The credits and debits calculated each month during the quarter;

(B) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under §63.150(e)(4) of this subpart.

(C) The values of any inputs to the credit and debit equations in §63.150 (g) and (h) of this subpart that change from month to month during the quarter or that have changed since the previous quarter;

(D) 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 (c)(3) of this section. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with paragraph (h) of this section, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the Periodic Report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Periodic Report is submitted.;

(E) Reports of daily average values of monitored parameters for both excused and unexcused excursions as defined in paragraph (c)(2)(ii)(A) of this section. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified. Include the affected sources or equipment, monitored parameter, and the date for each excursion.

(iii) Paragraphs (c)(2)(i) through (c)(2)(iii) of this section shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 points included in emissions averages. For storage vessels to which the provisions of paragraphs (c)(2)(i) through (c)(2)(iii) of this section do not apply (as specified in paragraph (c)(2)(iv) of this section), the owner or operator is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

(iv) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by §63.150(e)(3) of this subpart; and

(B) A certification of compliance with all the emissions averaging provisions in §63.150 of this subpart.

(6) The owner or operator of a source shall submit reports quarterly for particular emission points not included in an emissions average under the circumstances described in paragraphs (c)(6)(i) through (c)(6)(v) of this section.

(i) The owner or operator of a source subject to this subpart shall submit quarterly reports for a period of one year for an emission point that is not included in an emissions average if:

(A) The emission point has more excursions, as defined in paragraph (c)(2)(ii) of this section, than the number of excused excursions allowed under paragraph (c)(2)(ii)(B) of this section for a semiannual reporting period; and

(B) The Administrator requests the owner or operator to submit quarterly reports for the emission point.

(ii) The quarterly reports shall include all information in paragraphs (c)(2), (c)(3), and (c)(4) of this section applicable to the emission point(s) for which quarterly reporting is required under paragraph (c)(6)(i) of this section. Information applicable to other emission points within the source shall be submitted in the semiannual reports required under paragraph (c)(1) of this section.

(iii) Quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter.

(iv) After quarterly reports have been submitted for an emission point for one year, the owner or operator may return to semiannual reporting for the emission point unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(v) Paragraphs (c)(2)(i) through (c)(2)(iii) of this section shall govern the use of monitoring data to determine compliance for Group 1 emission points. For storage vessels to which the provisions of paragraphs (c)(2)(i) through (c)(2)(iii) of this section do not apply (as specified in paragraph (c)(2)(iv) of this section), the owner or operator is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

(7) The information specified in §63.108(l)(2) of subpart F of this part.

(d) Other reports shall be submitted as specified in subpart A of this part or in §§63.113 through 63.151 of this subpart. These reports are:

(1) Reports of start-up, shutdown, and malfunction required by §63.10(d)(5) of subpart A. The start-up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under paragraph (c) of this section instead of the schedule specified in §63.10(d)(5) of subpart A. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(2) For storage vessels, the notifications of inspections required by §63.122 (h)(1) and (h)(2) of this subpart.

(3) For owners or operators of sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in §63.150(i) of this subpart.

(4) If an owner or operator transfers for disposal a gas stream that has the characteristics specified in §63.107(b) through (h) or meets the criteria specified in §63.107(i) to an off-site location or an on-site location not owned or operated by the owner or operator of the source and the vent stream was not included in the information submitted with the Notification of Compliance Status or a previous periodic report, the owner or operator shall submit a supplemental report. The supplemental report shall be submitted no later than July 23, 2001 or

with the next periodic report, whichever is later. The report shall provide the information listed in paragraphs (d)(4)(i) through (iv) of this section.

(i) The chemical manufacturing process unit(s) that is the origin of all or part of the vent stream that exits the process vent.

(ii) The type(s) of unit operations (i.e., an air oxidation reactor, distillation unit, or reactor) that creates the vent stream that exits the process vent.

(iii) For a Group 2 process vent, the last recovery device, if any.

(iv) For a Group 1 process vent, the identity of the transferee.

(e) An owner or operator subject to this subpart shall submit the information specified in paragraphs (e)(1) through (e)(4) of this section with the operating permit application or as otherwise specified by the permitting authority. The owner or operator shall submit written updates as amendments to the operating permit application on the schedule and under the circumstances described in §63.151(j) of this subpart. Notwithstanding, if the owner or operator has an operating permit under 40 CFR part 70 or 71, the owner or operator shall follow the schedule and format required by the permitting authority.

(1) The information specified in §63.151 (f) or (g) of this subpart for any emission points for which the owner or operator requests approval to monitor a unique parameter or use an alternative monitoring and recording system, and

(2) The information specified in §63.151(d) of this subpart for points included in an emissions average.

(3) The information specified in §63.151(e) of this subpart for points not included in an emissions average.

(4) The information specified in §63.151(h) as applicable.

(f) Owners or operators required to keep continuous records by §§63.118, 63.130, 63.147, 63.150, or other sections of this subpart shall keep records as specified in paragraphs (f)(1) through (f)(7) of this section, unless an alternative recordkeeping system has been requested and approved under §63.151(f) or (g) or §63.152(e) or under §63.8(f) of subpart A of this part, and except as provided in paragraph (c)(2)(ii)(C) of this section or in paragraph (g) of this section. If a monitoring plan for storage vessels pursuant to §63.120(d)(2)(i) requires continuous records, the monitoring plan shall specify which provisions, if any, of paragraphs (f)(1) through (f)(7) of this section apply. Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either:

(i) Each measured data value; or

(ii) Block average values for 15-minute or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.

(3) If the daily average value of a monitored parameter for a given operating day is within the range established in the Notification of Compliance Status or operating permit, the owner or operator shall either:

(i) Retain block hourly average values for that operating day for 5 years and discard, at or after the end of that operating day, the 15-minute or more frequent average values and readings recorded under paragraph (f)(2) of this section; or

(ii) Retain the data recorded in paragraph (f)(2) of this section for 5 years.

(4) If the daily average value of a monitored parameter for a given operating day is outside the range established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (f)(2) of this section for 5 years.

(5) Daily average values of each continuously monitored parameter shall be calculated for each operating day, and retained for 5 years, except as specified in paragraphs (f)(6) and (f)(7) of this section.

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. 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.

(ii) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(6) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. For these operating days, the records required in paragraph (f)(3) of this section shall also be retained for 5 years.

(7) Except as specified in paragraph (f)(7)(vi) of this section ~~M~~monitoring data recorded during periods identified in paragraphs (f)(7)(i) through (f)(7)(v) 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 operation when monitors are not operating.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions;

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

(vi) For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], paragraphs (f)(7)(ii) through (f)(7)(iv) no longer apply.

(g) For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (g)(1) or (g)(2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in §§63.114, 63.117, and 63.118 for process vents, §§63.127, 63.129, and 63.130 for transfer operations, §§63.143, 63.146, and 63.147 for wastewater, and/or §63.152(f), except that §63.152(f)(7) shall apply. The owner or operator shall retain each record required by paragraph (g)(1) or (g)(2) of this section as provided in §63.103(c) of subpart F of this part, except as provided otherwise in paragraph (g)(1) or (g)(2) of this section.

(1) The owner or operator may retain only the 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 (g)(1)(i) through (g)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (g)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the periodic report immediately preceding implementation of the requirements of paragraph (g)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than startups, shutdowns, or malfunctions (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 occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "other than startups, shutdowns, or malfunctions (*e.g.*, a temperature reading of −200 °C on a boiler)," in this paragraph no longer applies.

(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 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 (g)(1)(ii)(A) through (g)(1)(iii)(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 6 1-hour average values; and

(C) The running average reflects a period of operation other than a startup, shutdown, or malfunction. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "other than a startup, shutdown, or malfunction" in this paragraph no longer applies.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than startups, shutdowns, or malfunctions, 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. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "other than startups, shutdowns, or malfunctions" in this paragraph no longer applies.

(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 (g)(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 (g)(1) of this section, at the times specified in paragraphs (g)(1)(v)(A) through (g)(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 (g)(1)(vi)~~-~~(A) through (C) 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 (g) of this section.

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraph (g)(1)(i) through (g)(1)(v) of this section. The description shall include monitoring equipment manufacturer(s) and model number(s) and the pollutant or parameter monitored, and 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 §63.103(c) of subpart F of this part, except as provided in paragraph (g)(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 affect its ability to comply with the requirements of paragraph (g)(1) of this section.

(D) Owners and operators subject to paragraph (g)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. 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 the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after its creation. Thereafter, the superseded description may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (g)(1) of this section, and a period of 6 consecutive months has passed without an excursion as defined in paragraph (g)(2)(iv) of this section, the owner or operator is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the 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 was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average values, the owner or operator shall notify the Administrator in the next periodic report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily averages as provided in paragraph (g)(2) of this section, there is an excursion as defined in paragraph (g)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average value for each day, and shall notify the Administrator in the next periodic report. The owner or operator shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (g)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (g)(1) (i), (ii), (iii), (iv), (v), and (vi) of this section. For any calendar week, if compliance with paragraphs (g)(1) (i), (ii), (iii), and (iv) 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 operation other than a startup, shutdown, or malfunction. For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the phrase "other than a startup, shutdown, or malfunction" in this paragraph no longer applies.

(iv) For purposes of paragraph (g) of this section, an excursion means that the 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 (g)(2)(iv)(A) and (g)(2)(iv)(B) of this section.

(A) The daily average value during any startup, shutdown, or malfunction shall not be considered an excursion for purposes of this paragraph (g)(2), if the owner or operator operates the source during such periods in accordance with §63.102(a)(4). For each source as defined in §63.101 of subpart F of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies.

(B) An excused excursion, as described in §63.152(c)(2)(ii) (B) and (C), shall not be considered an excursion for purposes of this paragraph (g)(2).

(h) Beginning no later than [INSERT date 60 days after date of publication of final rule in the Federal Register], owners and operators must submit performance test reports in accordance with this paragraph. Unless otherwise specified in this subpart, within 60 days after the date of completing each performance test required by this subpart, owners and operators must submit the results of the performance test following the procedures specified in § 63.9(k) of subpart A. Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, owners and operators may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or alternate electronic file.

§63.153 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (~~4~~5) of this section.

(1) Approval of alternatives to the requirements in §§63.110, 63.112 through 63.113, 63.119, 63.126, 63.132 through 63.140, 63.148 through 63.149, and 63.150(i)(1) through (4). Follow the requirements in §63.121 to request permission to use an alternative means of emission limitation for storage vessels. 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.

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

Table 1 to Subpart G of Part 63—Process Vents—Coefficients for Total Resource Effectiveness for Existing Source Nonhalogenated and Halogenated Vent Streams

Type of Stream	Control Device Basis	Values of Coefficients			
		a	b	c	d
Nonhalogenated	Flare	1.935	3.660×10^{-1}	-7.687×10^{-3}	-7.333×10^{-4}
	Thermal Incinerator 0 Percent Heat Recovery	1.492	6.267×10^{-2}	3.177×10^{-2}	-1.159×10^{-3}
	Thermal Incinerator 70 Percent Heat Recovery	2.519	1.183×10^{-2}	1.300×10^{-2}	4.790×10^{-2}

Halogenated	Thermal Incinerator and Scrubber	3.995	5.200×10^{-2}	-1.769×10^{-3}	9.700×10^{-4}

Table 1A to Subpart G of Part 63—Applicable 40 CFR Part 63 General Provisions

40 CFR part 63, subpart A, provisions applicable to subpart G
§63.1(a)(1), (a)(2), (a)(3), (a)(13), (a)(14), (b)(2) and (c)(4)
§63.2
§63.5(a)(1), (a)(2), (b), (d)(1)(ii), (d)(3)(i), (d)(3)(iii) through (d)(3)(vi), (d)(4), (e), (f)(1), and (f)(2)
§63.6(a), (b)(3), (c)(5), (i)(1), (i)(2), (i)(4)(i)(A), (i)(5) through (i)(14), (i)(16) and (j)
§63.9(a)(2), (b)(4)(i),[a] (b)(4)(ii), (b)(4)(iii), (b)(5),[a] (c), (d), (j), and (k).
§63.10(d)(4)
§63.11 (c), (d), and (e)
§63.12(b)

[a] The notifications specified in §63.9(b)(4)(i) and (b)(5) shall be submitted at the times specified in 40 CFR part 65.

Table 2 to Subpart G of Part 63—Process Vents—Coefficients for Total Resource Effectiveness for New Source Nonhalogenated and Halogenated Vent Streams

Type of stream	**Control device basis**	**Values of Coefficients**			
		a	**b**	**c**	**d**
Nonhalogenated	Flare	0.5276	0.0998	-2.096×10^{-3}	-2.000×10^{-4}
	Thermal Incinerator 0 Percent Heat Recovery	0.4068	0.0171	8.664×10^{-3}	-3.162×10^{-4}
	Thermal Incinerator 70 Percent Heat Recovery	0.6868	3.209×10^{-3}	3.546×10^{-3}	1.306×10^{-2}
Halogenated	Thermal Incinerator and Scrubber	1.0895	1.417×10^{-2}	-4.822×10^{-4}	2.645×10^{-4}

Table 3 to Subpart G of Part 63—Process Vents—Monitoring, Recordkeeping, and Reporting Requirements for ~~Complying With 98 Weight-Percent Reduction of Total~~

~~Organic Hazardous Air Pollutants Emissions or a Limit of 20 Parts Per Million by Volume~~Control Devices and Recapture Devices

Control or recapture device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Thermal incinerator, other than a thermal oxidizer used to comply with §63.124	Firebox temperature[b] [63.114(a)(1)(i)]	1. Continuous records.[c] 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS.[d] 3. Record the daily average firebox temperature for each operating day.[e] 4. Report all daily average temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
Thermal oxidizer used to comply with §63.124	Combustion chamber temperature [63.124(b)(5)(i)]	1. Continuous records.[c] 2. Record and report the combustion chamber temperature averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block average firebox temperature for

		each operating day. 4. Report all 1-hour block temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
Thermal oxidizer used to comply with §63.124 (Continued)	Flue gas flow rate [63.124(b)(5)(ii)]	1. Continuous records.[c] 2. Record and report the flue gas flow rate averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block average flue gas flow rate for each operating day. 4. Report all 1-hour block flue gast flow rates that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]

Catalytic incinerator	Temperature upstream and downstream of the catalyst bed [63.114(a)(1)(ii)]	1. Continuous records.[c] 2. Record and report the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test—NCS.[d] 3. Record the daily average upstream temperature and temperature difference across the catalyst bed for each operating day.[e] 4. Report all daily average upstream temperatures that are outside the range established in the NCS or operating permit—PR. 5. Report all daily average temperature differences across the catalyst bed that are outside the range established in the NCS or operating permit—PR.[g] 6. Report all operating days when insufficient monitoring data are collected.[f]
Flare (if meeting the requirements of §63.11(b) of subpart A of this part)	Presence of a flame at the pilot light [63.114(a)(2)]	1. Hourly records of whether the monitor was continuously operating and whether the pilot

		flame was continuously present during each hour. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.[d] 3. Record the times and durations of all periods when all pilot flames are absent or the monitor is not operating. 4. Report the times and durations of all periods when all pilot flames of a flare are absent—PR.[g]
Flare (if meeting the requirements of §63.108 of subpart F of this part)	The parameters are specified in §63.108 of subpart F of this part	1. Records as specified in §63.108(m) of subpart F of this part. 2. Report information as specified in §63.108(l) of subpart F of this part—PR.[g]
Boiler or process heater with a design heat input capacity less than 44 megawatts and vent stream is *not* introduced with or as the primary fuel	Firebox temperature[b] [63.114(a)(3)]	1. Continuous records.[c] 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS.[d] 3. Record the daily average firebox temperature for each

		operating day.[e] 4. Report all daily average firebox temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
~~Recapture devices~~	~~The appropriate monitoring device identified in table 4 when, in the table, the term "recapture" is substituted for "recovery." [63.114(a)(5)]~~	~~1. The recordkeeping and reporting requirements for monitored parameters identified for the appropriate monitoring device in table 4 of this subpart.~~
Scrubber for halogenated vent streams (Note: Controlled by a combustion device other than a flare)	pH of scrubber effluent [63.114(a)(4)(i)], and	1. Continuous records.[c] 2. Record and report the pH of the scrubber effluent averaged over the full period of the performance test—NCS.[d] 3. Record the daily average pH of the scrubber effluent for each operating day.[e] 4. Report all daily average pH values of the scrubber effluent that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]

Scrubber for halogenated vent streams (Note: Controlled by a combustion device other than a flare) (Continued)	Scrubber liquid and gas flow rates [63.114(a)(4)(ii)]	1. Continuous records of scrubber liquid flow rate.[c] 2. Record and report the scrubber liquid/gas ratio averaged over the full period of the performance test—NCS.[d] 3. Record the daily average scrubber liquid/gas ratio for each operating day.[e] 4. Report all daily average scrubber liquid/gas ratios that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
All control devices	Presence of flow diverted to the atmosphere from the control device [63.114(d)(1)] *or*	1. Hourly records of whether the flow indicator was operating and whether diversion was detected at any time during each hour. 2. Record and report the times and durations of all periods when the vent stream is diverted through a bypass line or the monitor is not operating—PR.[g] 3. For each source as defined in §63.101 of subpart F of this

		part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR.[g]
	Monthly inspections of sealed valves [63.114(d)(2)]	1. Records that monthly inspections were performed. 2. Record and report all monthly inspections that show the valves are moved to the diverting position or the seal has been changed—PR.[g] 3. For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in

		§63.100(k)(10) of subpart F of this part, record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR.[g]
All recapture devices (as an alternative to the below for absorbers, condensers, and carbon adsorbers)	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device [63.114(a)(5)(i)]	1. Continuous records.[c] 2. Record and report the concentration level or reading averaged over the full period of the performance test—NCS.[d]
		3. Record the daily average concentration level or reading for each operating day[e].
		4. Report all daily average concentration levels or readings that are outside the range established in the

		NCS or operating permit—PR.[g]
Absorber[h]	Exit temperature of the absorbing liquid [63.114(a)(5)(ii)], and	1. Continuous records.[c] 2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the performance test—NCS[d]
		3. Record the daily average exit temperature of the absorbing liquid for each operating day[e].
		4. Report all the daily average exit temperatures of the absorbing liquid that are outside the range established in the NCS or operating permit—PR.[g]
	Exit specific gravity [63.114(a)(5)(ii)]	1. Continuous records.[c] 2. Record and report the exit specific gravity averaged over the full period of the performance test—NCS.[d]
		3. Record the daily average exit specific gravity for each operating day[e].
		4. Report all daily average exit specific gravity values that are outside the range established in the NCS or operating permit—PR.[g]

Condenser[h]	Exit (product side) temperature [63.114(a)(5)(iii)]	1. Continuous records.[c] 2. Record and report the exit temperature averaged over the full period of the performance test—NCS.[d]
		3. Record the daily average exit temperature for each operating day[e].
		4. Report all daily average exit temperatures that are outside the range established in the NCS or operating permit—PR.[g]
Carbon adsorber[h]	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s) [63.114(a)(5)(iv)], and	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the period of the performance test—NCS.[d]
		3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is outside the range established in the NCS or operating permit—PR.[g]

	Temperature of the carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)] [63.114(a)(5)(iv)]	1. Records of the temperature of the carbon bed after each regeneration. 2. Record and report the temperature of the carbon bed after each regeneration during the period of the performance test—NCS.[d]
		3. Report all carbon bed regeneration cycles during which temperature of the carbon bed after regeneration is outside the range established in the NCS or operating permit—PR.[g]
	Outlet HAP or TOC concentration [63.114(a)(5)(v)]	For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.114(a)(5)(v), the owner or operator must record each outlet HAP or TOC concentration measured according to §§63.114(a)(5)(v)(B) and (a)(5)(v)(C).
	Adsorbent replacement [63.114(a)(5)(v)]	1. For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the

			requirements in §63.114(a)(5)(v), the owner or operator must record date and time the adsorbent was last replaced.
	Breakthrough [63.114(a)(5)(v)]	For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.114(a)(5)(v), the owner or operator must: 1. Record breakthrough limit and bed life established according to § 63.114(a)(5)(v)(A). 2. Report the date of each instance when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber and the adsorber is not replaced according to §63.114(a)(5)(v)(A)(*1*)—PR.[g]	
Scrubber with a reactant tank used to comply with §63.124	Liquid-to-gas ratio [63.124(b)(4)(i)]	1. Continuous records.[c] 2. Record and report the L/G of the scrubber averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block L/G of the scrubber for each operating day. 4. Report all 1-hour block L/G values of the scrubber that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]	
Scrubber with a reactant tank used to comply with §63.124 (Continued)	pH of liquid in reactant tank [63.124(b)(4)(ii)]	1. Continuous records.[c] 2. Record and report the pH of liquid in reactant tank averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block pH of liquid in reactant tank for each operating day. 4. Report all 1-hour block values of the pH of liquid in reactant tank that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]	

Scrubber with a reactant tank used to comply with §63.124 (Continued)	Pressure drop [63.124(b)(4)(iii)]	1. Continuous records.[c] 2. Record and report the pressure drop of the scrubber averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block pressure drop of the scrubber for each operating day. 4. Report all 1-hour block pressure drop values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
Scrubber with a reactant tank used to comply with §63.124 (Continued)	Temperature of scrubbing liquid entering column [63.124(b)(4)(iv)]	1. Continuous records.[c] 2. Record and report the temperature of scrubbing liquid entering column averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block temperature of scrubbing liquid entering column for each operating day. 4. Report all 1-hour block values of the temperature of scrubbing liquid entering column that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
Scrubber with a reactant tank used to comply with §63.124 (Continued)	Liquid feed pressure [63.124(b)(4)(v)]	1. Continuous records.[c] 2. Record and report the liquid feed pressure of the scrubber averaged over the full period of the performance test—NCS.[d] 3. Record each 1-hour block liquid feed pressure of the scrubber for each operating day. 4. Report all 1-hour block liquid feed pressure values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
Sorbent injection	Sorbent injection rate[b] [63.114(a)(6)(i)]	1. Continuous records.[c] 2. Record and report the sorbent injection rate averaged over the full period of the performance test—NCS.[d] 3. Record the daily average sorbent injection rate for each operating day.[e] 4. Report all daily average sorbent injection

		rates that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]
Sorbent injection	Carrier gas flow rate[b] [63.114(a)(6)(ii)]	1. Continuous records.[c] 2. Record and report the carrier gas flow rate averaged over the full period of the performance test—NCS.[d] 3. Record the daily average carrier gas flow rate for each operating day.[e] 4. Report all daily average carrier gas flow rates that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[g]

[a] Regulatory citations are listed in brackets.

[b] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

[c] "Continuous records" is defined in §63.111 of this subpart.

[d] NCS = Notification of Compliance Status described in §63.152 of this subpart.

[e] The daily average is the average of all recorded parameter values for the operating day. If all recorded values during an operating day are within the range established in the NCS or operating permit, a statement to this effect can be recorded instead of the daily average.

[f] The periodic reports shall include the duration of periods when monitoring data is not collected for each excursion as defined in §63.152(c)(2)(ii)(A) of this subpart.

[g] PR = Periodic Reports described in §63.152 of this subpart.

[h] Alternatively, these devices may comply with the organic monitoring device provisions listed at this table under "All recapture devices.".

Table 4 to Subpart G of Part 63—Process Vents—Monitoring, Recordkeeping, and Reporting Requirements For Maintaining a TRE Index Value >1.0 and. ≤4.0 [no longer applicable in accordance with §63.113(a)(4)]

Final recovery device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Absorber[b]	Exit temperature of the absorbing liquid [63.114(b)(1)], and	1. Continuous records[c]. 2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the TRE determination—NCS.[d]

		3. Record the daily average exit temperature of the absorbing liquid for each operating day[e].
		4. Report all the daily average exit temperatures of the absorbing liquid that are outside the range established in the NCS or operating permit—PR[f].
	Exit specific gravity [63.114(b)(1)]	1. Continuous records. 2. Record and report the exit specific gravity averaged over the full period of the TRE determination—NCS.
		3. Record the daily average exit specific gravity for each operating day[e].
		4. Report all daily average exit specific gravity values that are outside the range established in the NCS or operating permit—PR.
Condenser[d]	Exit (product side) temperature [63.114(b)(2)]	1. Continuous records. 2. Record and report the exit temperature averaged over the full period of the TRE determination—NCS.
		3. Record the daily average exit temperature for each operating day[e].
		4. Report all daily average exit temperatures that are outside the range established in the NCS or operating permit—PR.
Carbon adsorber[d]	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s) [63.114(b)(3)], and	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the period of the TRE determination—NCS.
		3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is outside the range established in the NCS or operating permit—PR.
	Temperature of the carbon bed after regeneration [and within 15	1. Records of the temperature of the carbon bed after each regeneration.

	minutes of completing any cooling cycle(s)] [63.114(b)(3)]	2. Record and report the temperature of the carbon bed after each regeneration during the period of the TRE determination—NCS.
		3. Report all carbon bed regeneration cycles during which temperature of the carbon bed after regeneration is outside the range established in the NCS or operating permit—PR.
All recovery devices (as an alternative to the above)	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device [63.114 (b)]	1. Continuous records. 2. Record and report the concentration level or reading averaged over the full period of the TRE determination—NCS.
		3. Record the daily average concentration level or reading for each operating day[e].
		4. Report all daily average concentration levels or readings that are outside the range established in the NCS or operating permit—PR.

[a] Regulatory citations are listed in brackets.

[b] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table under "All Recovery Devices."

[c] "Continuous records" is defined in §63.111 of this subpart.

[d] NCS = Notification of Compliance Status described in §63.152 of this subpart.

[e] The daily average is the average of all values recorded during the operating day. If all recorded values during an operating day are within the range established in the NCS or operating permit, a statement to this effect can be recorded instead of the daily average.

[f] PR= Periodic Reports described in §63.152 of this subpart.

Table 5 to Subpart G of Part 63—Group 1 Storage Vessels at Existing Sources

Vessel capacity (cubic meters)	Vapor Pressure[~~1~~a] (kilopascals)
75 ≤capacity <151[b]	≥13.1[b]
38 ≤capacity<151[c]	≥6.9[c]
151 ≤capacity	≥5.2

[~~1~~a] Maximum true vapor pressure of total organic HAP at storage temperature.

[b] For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, these vessel capacity and vapor pressure criterion no longer apply.

[c] For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, these vessel capacity and vapor pressure criterion apply.

Table 6 to Subpart G of Part 63—Group 1 Storage Vessels at New Sources

Vessel capacity (cubic meters)	Vapor pressure[a] (kilopascals)
38 ≤capacity<151	≥13.1
151 ≤capacity	≥0.7

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

Table 7 to Subpart G of Part 63—Transfer Operations—Monitoring, Recordkeeping, and Reporting Requirements for Complying With 98 Weight-Percent Reduction of Total Organic Hazardous Air Pollutants Emissions or a Limit of 20 Parts Per Million by Volume

Control device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Thermal incinerator	Firebox temperature[b] [63.127(a)(1)(i)]	1. Continuous records[c] during loading. 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS.[d]
		3. Record the daily average firebox temperature for each operating day[e]
		4. Report daily average temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR[g]
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed [63.127(a)(1)(ii)]	1. Continuous records during loading. 2. Record and report the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test—NCS.
		3. Record the daily average upstream temperature and temperature difference across catalyst bed for each operating day.[e]

		4. Report all daily average upstream temperatures that are outside the range established in the NCS or operating permit—PR.
		5. Report all daily average temperature differences across the catalyst bed that are outside the range established in the NCS or operating permit—PR.
		6. Report all operating days when insufficient monitoring data are collected.[f]
Boiler or process heater with a design heat input capacity less than 44 megawatts and vent stream is not introduced with or as the primary fuel	Firebox temperature[b] [63.127(a)(3)]	1. Continuous records during loading. 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS.
		3. Record the daily average firebox temperature for each operating day.[e]
		4. Report all daily average firebox temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient data are collectedf—PR.
Flare (if meeting the requirements of §63.126(b)(2)(i))	Presence of a flame at the pilot light [63.127(a)(2)]	1. Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.
		2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.
		3. Record the times and durations of all periods when all pilot flames are absent or the monitor is not operating.
		4. Report the duration of all periods when all pilot flames of a flare are absent—PR.
Flare (if meeting the requirements of §63.108 of subpart F of this part)	The parameters are specified in §63.108 of subpart F of this part	1. Records as specified in §63.108(m) of subpart F of this part. 2. Report information as specified in §63.108(l) of subpart F of this part—PR.

Scrubber for halogenated vent streams (Note: Controlled by a combustion device other than a flare)	pH of scrubber effluent [63.127(a)(4)(i)], and	1. Continuous records during loading. 2. Record and report the pH of the scrubber effluent averaged over the full period of the performance test—NCS.
		3. Record the daily average pH of the scrubber effluent for each operating day.[e]
		4. Report all daily average pH values of the scrubber effluent that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
	Scrubber liquid and gas flow rates [63.127(a)(4)(ii)]	1. Continuous records during loading of scrubber liquid flow rate. 2. Record and report the scrubber liquid/gas ratio averaged over the full period of the performance test—NCS.
		3. Record the daily average scrubber liquid/gas ratio for each operating day.[e]
		4. Report all daily average scrubber liquid/gas ratios that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
Absorber[h]	Exit temperature of the absorbing liquid [63.127(b)(1)], and	1. Continuous records during loading. 2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the performance test—NCS.
		3. Record the daily average exit temperature of the absorbing liquid for each operating day.[e]
		4. Report all daily average exit temperatures of the absorbing liquid that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
	Exit specific gravity [63.127(b)(1)]	1. Continuous records during loading. 2. Record and report the exit specific gravity averaged over the full period of the performance test—NCS.

		3. Record the daily average exit specific gravity for each operating day.[e]
		4. Report all daily average exit specific gravity values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
Condenser[h]	Exit (product side) temperature [63.127(b)(2)]	1. Continuous records during loading. 2. Record and report the exit temperature averaged over the full period of the performance test—NCS.
		3. Record the daily average exit temperature for each operating day.[e]
		4. Report all daily average exit temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
Carbon adsorber[h]	Total regeneration stream mass or volumetric or volumetric flow during carbon bed regeneration cycle(s) [63.127(b)(3)], and	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the period of the performance test—NCS.
		3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
	Temperature of the carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)] [63.127(b)(3)]	1. Records of the temperature of the carbon bed after each regeneration. 2. Record and report the temperature of the carbon bed after each regeneration during the period of the performance test—NCS.
		3. Report all the carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration is outside the range established in the NCS or operating permit and all operating days when

		insufficient monitoring data are collected[f]—PR.
	Outlet HAP or TOC concentration [63.127(b)(4)]	For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.127(b)(4), the owner or operator must record each outlet HAP or TOC concentration measured according to §§63.127(b)(4)(ii) and (b)(4)(iii).
	Adsorbent replacement [63.127(b)(4)]	1. For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.127(b)(4), the owner or operator must record date and time the adsorbent was last replaced.
	Breakthrough [63.127(b)(4)]	For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in §63.127(b)(4), the owner or operator must: 1. Record breakthrough limit and bed life established according to § 63.127(b)(4)(i). 2. Report the date of each instance when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber and the adsorber is not replaced according to §63.127(b)(4)(iii)(A)—PR.
All recovery devices (as an alternative to the above)	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device [63.127(b)]	1. Continuous records during loading. 2. Record and report the concentration level or reading averaged over the full period of the performance test—NCS.
		3. Record the daily average concentration level or reading for each operating day.[d]
		4. Report all daily average concentration levels or readings that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
All control devices and vapor balancing systems	Presence of flow diverted to the	1. Hourly records of whether the flow indicator was operating and whether a

	atmosphere from the control device [63.127(d)(1)] or	diversion was detected at any time during each hour.
		2. Record and report the duration of all periods when the vent stream is diverted through a bypass line or the monitor is not operating—PR.
		3. For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR.
	Monthly inspections of sealed valves [63.127(d)(2)]	1. Records that monthly inspections were performed. 2. Record and report all monthly inspections that show the valves are moved to the diverting position or the seal has been changed. 3. For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR.

[a] Regulatory citations are listed in brackets.

[b] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

[c] "Continuous records" is defined in §63.111 of this subpart.

[d] NCS = Notification of Compliance Status described in §63.152 of this subpart.

[e] The daily average is the average of all recorded parameter values for the operating day. If all recorded values during an operating day are within the range established in the NCS or operating permit, a statement to this effect can be recorded instead of the daily average.

[f] The periodic reports shall include the duration of periods when monitoring data are not collected for each excursion as defined in §63.152(c)(2)(ii)(A) of this subpart.

[g] PR = Periodic Reports described in §63.152 of this subpart.

[h] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table under "All Recovery Devices."

Table 8 to Subpart G of Part 63—Organic HAP's Subject to the Wastewater Provisions for Process Units at New Sources

Chemical name	CAS No.[a]
Allyl chloride	107051
Benzene	71432
Butadiene (1,3-)	106990
Carbon disulfide	75150
Carbon tetrachloride	56235
Cumene	98828
Ethylbenzene	100414
Ethyl chloride (Chloroethane)	75003
Ethylene oxide	75218
Ethylidene dichloride	75343
(1,1-Dichloroethane).	
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	100543
Methyl bromide (Bromomethane)	74839
Methyl chloride (Chloromethane)	74873
Phosgene	75445
Tetrachloroethylene (Perchloroethylene)	127184
Toluene	108883

Trichloroethane (1,1,1-) (Methyl chloroform)	71556
Trichloroethylene	79016
Trimethylpentane (2,2,4-)	540841
Vinyl chloride (chloroethylene)	75014
Vinylidene chloride	75354
(1,1-Dichloroethylene).	
Xylene (m-)	108383
Xylene (p-)	106423

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

Note. The list of organic HAP's on table 8 is a subset of the list of organic HAP's on table 9 of this subpart.

Table 9 to Subpart G of Part 63—Organic HAP's Subject to the Wastewater Provisions for Process Units at New and Existing Sources and Corresponding Fraction Removed (Fr) Values

Chemical name	CAS No.[a]	Fr
Acetaldehyde	75070	0.95
Acetonitrile	75058	0.62
Acetophenone	98862	0.72
Acrolein	107028	0.96
Acrylonitrile	107131	0.96
Allyl chloride	107051	0.99
Benzene	71432	0.99
Benzyl chloride	100447	0.99
Biphenyl	92524	0.99
Bromoform	75252	0.99
Butadiene (1,3-)	106990	0.99
Carbon disulfide	75150	0.99
Carbon tetrachloride	56235	0.99
Chlorobenzene	108907	0.99

Chloroform	67663	0.99
Chloroprene (2-Chloro-1,3-butadiene)	126998	0.99
Cumene	98828	0.99
Dichlorobenzene (p-)	106467	0.99
Dichloroethane (1,2-) (Ethylene dichloride)	107062	0.99
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111444	0.87
Dichloropropene (1,3-)	542756	0.99
Diethyl sulfate	64675	0.90
Dimethyl sulfate	77781	0.53
Dimethylaniline (N,N-)	121697	0.99
Dimethylhydrazine (1,1-)	57147	0.57
Dinitrophenol (2,4-)	51285	0.99
Dinitrotoluene (2,4-)	121142	0.38
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911	0.37
Epichlorohydrin(1-Chloro-2,3-epoxypropane)	106898	0.91
Ethyl acrylate	140885	0.99
Ethylbenzene	100414	0.99
Ethyl chloride (Chloroethane)	75003	0.99
Ethylene dibromide (Dibromomethane)	106934	0.99
Ethylene glycol dimethyl ether	110714	0.90
Ethylene glycol monobutyl ether acetate	112072	0.76
Ethylene glycol monomethyl ether acetate	110496	0.28
Ethylene oxide	75218	0.98
Ethylidene dichloride (1,1-Dichloroethane)	75343	0.99
Hexachlorobenzene	118741	0.99
Hexachlorobutadiene	87683	0.99
Hexachloroethane	67721	0.99
Hexane	110543	0.99
Isophorone	78591	0.60
Methanol	67561	0.31

Methyl bromide (Bromomethane)	74839	0.99
Methyl chloride (Chloromethane)	74873	0.99
Methyl isobutyl ketone (Hexone)	108101	0.99
Methyl methacrylate	80626	0.98
Methyl tert-butyl ether	1634044	0.99
Methylene chloride (Dichloromethane)	75092	0.99
Naphthalene	91203	0.99
Nitrobenzene	98953	0.80
Nitropropane (2-)	79469	0.98
Phosgene	75445	0.99
Propionaldehyde	123386	0.99
Propylene dichloride (1,2-Dichloropropane)	78875	0.99
Propylene oxide	75569	0.99
Styrene	100425	0.99
Tetrachloroethane (1,1,2,2-)	79345	0.99
Tetrachloroethylene (Perchloroethylene)	127184	0.99
Toluene	108883	0.99
Toluidine (o-)	95534	0.44
Trichlorobenzene (1,2,4-)	120821	0.99
Trichloroethane (1,1,1-) (Methyl chloroform)	71556	0.99
Trichloroethane (1,1,2-) (Vinyl trichloride)	79005	0.99
Trichloroethylene	79016	0.99
Trichlorophenol (2,4,5-)	95954	0.96
Triethylamine	121448	0.99
Trimethylpentane (2,2,4-)	540841	0.99
Vinyl acetate	108054	0.99
Vinyl chloride (Chloroethylene)	75014	0.99
Vinylidene chloride (1,1-Dichloroethylene)	75354	0.99
Xylene (m-)	108383	0.99
Xylene (o-)	95476	0.99

Xylene (p-)	106423	0.99

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

Table 10 to Subpart G of Part 63—Wastewater—Compliance Options for Wastewater Tanks

Capacity (m^3)	Maximum true vapor pressure (kPa)	Control requirements
<75		§63.133(a)(1)
“75 and <151	<13.1 ”13.1	§63.133(a)(1) §63.133(a)(2)
“151	<5.2 ”5.2	§63.133(a)(1) §63.133(a)(2)

Table 11 to Subpart G of Part 63—Wastewater—Inspection and Monitoring Requirements for Waste Management Units

To comply with	Inspection or monitoring requirement	Frequency of inspection or monitoring	Method
Tanks:			
63.133(b)(1)	Inspect fixed roof and all openings for leaks	Initially Semi-annually	Visual.
63.133(c)	Inspect floating roof in accordance with §§63.120 (a)(2) and (a)(3)	See §63.120 (a)(2) and (a)(3)	Visual.
63.133(d)	Measure floating roof seal gaps in accordance with §§63.120 (b)(2)(i) through (b)(4)		See §63.120 (b)(2)(i) through (b)(4).
	—Primary seal gaps	Once every 5 years Initially Annually	
	—Secondary seal gaps		
63.133(f) 63.133(g)	Inspect wastewater tank for control equipment failures and improper work practices	Initially Semi-annually	Visual.
Surface impoundments:			
63.134(b)(1)	Inspect cover and all openings for leaks	Initially Semi-annually	Visual.

63.134(c)	Inspect surface impoundment for control equipment failures and improper work practices	Initially Semi-annually	Visual.
Containers:			
63.135(b)(1), 63.135(b)(2) (ii)	Inspect cover and all openings for leaks	Initially Semi-annually	Visual.
63.135(d)(1)	Inspect enclosure and all openings for leaks	Initially Semi-annually	Visual.
63.135(e)	Inspect container for control equipment failures and improper work practices	Initially Semi-annually	Visual.
Individual Drain Systems[a]:			
63.136(b)(1)	Inspect cover and all openings to ensure there are no gaps, cracks, or holes	Initially Semi-annually	Visual.
63.136(c)	Inspect individual drain system for control equipment failures and improper work practices	Initially Semi-annually	Visual.
63.136(e)(1)	Verify that sufficient water is present to properly maintain integrity of water seals	Initially Semi-annually	Visual.
63.136(e)(2), 63.136(f)(1)	Inspect all drains using tightly-fitted caps or plugs to ensure caps and plugs are in place and properly installed	Initially Semi-annually	Visual.
63.136(f)(2)	Inspect all junction boxes to ensure covers are in place and have no visible gaps, cracks, or holes	Initially Semi-annually	Visual or smoke test or other means as specified.
63.136(f)(3)	Inspect unburied portion of all sewer lines for cracks and gaps	Initially Semi-annually	Visual.
Oil-water separators:			
63.137(b)(1)	Inspect fixed roof and all openings for leaks	Initially Semi-annually	Visual.
63.137(c)	Measure floating roof seal gaps in accordance with 40 CFR 60.696(d)(1)	Initially[b]	See 40 CFR 60.696(d)(1).

	—Primary seal gaps	Once every 5 years	
63.137(c)	—Secondary seal gaps	Initially[b] Annually	
63.137(d)	Inspect oil-water separator for control equipment failures and improper work practices	Initially Semi-annually	Visual.

[a] As specified in §63.136(a), the owner or operator shall comply with either the requirements of §63.136 (b) and (c) or §63.136 (e) and (f).

[b] Within 60 days of installation as specified in §63.137(c).

Table 12 to Subpart G of Part 63—Monitoring Requirements for Treatment Processes

To comply with	Parameters to be monitored	Frequency	Methods
1. Required mass removal of Table 8 and/or Table 9 compound(s) from wastewater treated in a properly operated biological treatment unit, §63.138(f), and §63.138(g)	Appropriate parameters as specified in §63.143(c) and approved by permitting authority	Appropriate frequency as specified in §63.143 and approved by permitting authority	Appropriate methods as specified in §63.143 and as approved by permitting authority.
2. Steam stripper	(i) Steam flow rate; and	Continuously	Integrating steam flow monitoring device equipped with a continuous recorder.
	(ii) Wastewater feed mass flow rate; and	Continuously	Liquid flow meter installed at stripper influent and equipped with a continuous recorder.
	(iii) Wastewater feed temperature; or (iv) Column operating temperature	Continuously	(A) Liquid temperature monitoring device installed at stripper influent and equipped with a continuous or recorder; or (B) Liquid temperature monitoring device installed in the column top tray liquid phase (i.e., at the downcomer)

			and equipped with a continuous recorder.
3. Other treatment processes or alternative monitoring parameters to those listed in item 2 of this table	Other parameters may be monitored upon approval from the Administrator with the requirements specified in §63.151(f)		

Table 13 to Subpart G of Part 63—Wastewater—Monitoring Requirements for Control Devices

Control Device	Monitoring equipment required	Parameters to be monitored	Frequency
All control devices	1. Flow indicator installed at all bypass lines to the atmosphere and equipped with continuous recorder[b] *or*	1. Presence of flow diverted from the control device to the atmosphere *or*	Hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during each hour
	2. Valves sealed closed with car-seal or lock-and-key configuration	2. Monthly inspections of sealed valves	Monthly.
Thermal Incinerator	Temperature monitoring device installed in firebox or in ductwork immediately downstream of firebox[a] and equipped with a continuous recorder[b]	Firebox temperature	Continuous.
Catalytic Incinerator	Temperature monitoring device installed in gas stream immediately before and after catalyst bed and equipped with a continuous recorder[b]	1. Temperature upstream of catalyst bed *or* 2. Temperature difference across catalyst bed	Continuous.
Flare (if meeting the requirements of §63.139(c)(3))	Heat sensing device installed at the pilot light and equipped with a continuous recorder[a]	Presence of a flame at the pilot light	Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.

Flare (if meeting the requirements of §63.108 of subpart F of this part)	The monitoring equipment is specified in §63.108 of subpart F of this part	The parameters are specified in §63.108 of subpart F of this part	The frequency is specified in §63.108 of subpart F of this part
Boiler or process heater <44 megawatts and vent stream is not mixed with the primary fuel	Temperature monitoring device installed in firebox[a] and equipped with continuous recorder[b]	Combustion temperature	Continuous.
Condenser	Temperature monitoring device installed at condenser exit and equipped with continuous recorder[b]	Condenser exit (product side) temperature	Continuous.
Carbon adsorber (regenerative)	Integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, *and*	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s)	For each regeneration cycle, record the total regeneration stream mass or volumetric flow.
	Carbon bed temperature monitoring device	Temperature of carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)]	For each regeneration cycle and within 15 minutes of completing any cooling cycle, record the carbon bed temperature.
	The monitoring equipment is specified in §63.139(d)(5)	The parameters are specified in §63.139(d)(5)	The frequency is specified in §63.139(d)(5)
Carbon adsorber (Non-regenerative)	Organic compound concentration monitoring device.[c]	Organic compound concentration of adsorber exhaust	Daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.
	The monitoring equipment is specified in §63.139(d)(5)	The parameters are specified in §63.139(d)(5)	The frequency is specified in §63.139(d)(5)
Alternative monitoring parameters	Other parameters may be monitored upon approval from the Administrator in accordance with the requirements in §63.143(e)(3)		

[a] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

[b] "Continuous recorder" is defined in §63.111 of this subpart.

[c] As an alternative to conducting this monitoring, an owner or operator may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system.

Tables 14-14b to Subpart G of Part 63 [Reserved]

Table 15 to Subpart G of Part 63—Wastewater—Information on Table 8 and/or Table 9 Compounds To Be Submitted With Notification of Compliance Status for Process Units at New and/or Existing Sources[a b]

Process unit identification code[c]	Stream identification code	Concentration of table 8 and/or table 9 compound(s) (ppmw)[d e]	Flow rate (lpm)[e f]	Group 1 or Group 2[g]	Compliance approach[h]	Treatment process(es) identification[i]	Waste management unit(s) identification	Intended control device

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.

[b] Other requirements for the NCS are specified in §63.152(b) of this subpart.

[c] Also include a description of the process unit (e.g., benzene process unit).

[d] Except when §63.132(e) is used, annual average concentration as specified in §63.132 (c) or (d) and §63.144.

[e] When §63.132(e) is used, indicate the wastewater stream is a designated Group 1 wastewater stream.

[f] Except when §63.132(e) is used, annual average flow rate as specified in §63.132 (c) or (d) and in §63.144.

[g] Indicate whether stream is Group 1 or Group 2. If Group 1, indica0te whether it is Group 1 for Table 8 or Table 9 compounds or for both Table 8 and Table 9 compounds.

[h] Cite §63.138 compliance option used.

Table 16 to Subpart G of Part 63 [Reserved]

Table 17 to Subpart G of Part 63—Information for Treatment Processes To Be Submitted With Notification of Compliance Status[a b]

Treatment process identification[c]	Description[d]	Wastewater stream(s) treated[e]	Monitoring parameters[f]

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.

[b] Other requirements for the Notification of Compliance Status are specified in §63.152(b) of this Subpart.

[c] Identification codes should correspond to those listed in Table 15.

[d] Description of treatment process.

[e] Stream identification code for each wastewater stream treated by each treatment unit. Identification codes should correspond to entries listed in Table 15.

[f] Parameter(s) to be monitored or measured in accordance with Table 12 and §63.143.

Table 18 to Subpart G of Part 63—Information for Waste Management Units To Be Submitted With Notification of Compliance Status[a b]

Waste management unit identification[c]	Description[d]	Wastewater stream(s) received or managed[e]

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.

[b] Other requirements for the Notification of Compliance Status are specified in §63.152(b) of this Subpart.

[c] Identification codes should correspond to those listed in Table 15.

[d] Description of waste management unit.

[e] Stream identification code for each wastewater stream received or managed by each waste management unit. Identification codes should correspond to entries listed in Table 15.

Table 19 to Subpart G of Part 63—Wastewater—Information on Residuals To Be Submitted With Notification of Compliance Status[a] [b]

Residual identification[c]	Residual description[d]	Wastewater stream identification[e]	Treatment process[f]	Fate[g]	Control device identification code	Control device description[h]	Control device efficiency[i]

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.

[b] Other requirements for the Notification of Compliance Status are specified in §63.152(b) of this subpart.

[c] Name or identification code of residual removed from Group 1 wastewater stream.

[d] Description of residual (e.g., steam stripper A-13 overhead condensates).

[e] Identification of stream from which residual is removed.

[f] Treatment process from which residual originates.

[g] Indicate whether residual is sold, returned to production process, or returned to waste management unit or treatment process; or whether HAP mass of residual is destroyed by 99 percent.

[h] If the fate of the residual is such that the HAP mass is destroyed by 99 percent, give description of device used for HAP destruction.

[i] If the fate of the residual is such that the HAP mass is destroyed by 99 percent, provide an estimate of control device efficiency and attach substantiation in accordance with §63.146(b)(9) of this subpart.

Table 20 to Subpart G of Part 63—Wastewater—Periodic Reporting Requirements for Control Devices Subject to §63.139 Used To Comply With §§63.13 Through 63.139

Control device	Reporting requirements
(1) Thermal Incinerator	Report all daily average[a] temperatures that are outside the range established in the NCS[b] or operating permit and all operating days when insufficient monitoring data are collected.[c]
(2) Catalytic Incinerator	(i) Report all daily average[a] upstream temperatures that are outside the range established in the NCS[b] or operating permit.

	(ii) Report all daily average[a] temperature differences across the catalyst bed that are outside the range established in the NCS[b] or operating permit.
	(iii) Report all operating days when insufficient monitoring data are collected.[c]
(3) Boiler or Process Heater with a design heat input capacity less than 44 megawatts and vent stream is not mixed with the primary fuel	Report all daily average[a] firebox temperatures that are outside the range established in the NCS[b] or operating permit and all operating days when insufficient monitoring data are collected.[c]
(4a) Flare (if meeting the requirements of §63.139(c)(3))	Report the duration of all periods when all pilot flames are absent.
(4b) Flare (if meeting the requirements of §63.108 of subpart F of this part)	The reporting requirements are specified in §63.108(l) of subpart F of this part.
(5) Condenser	Report all daily average[a] exit temperatures that are outside the range established in the NCS[b] or operating permit and all operating days when insufficient monitoring data are collected[c].
(6) Carbon Adsorber (Regenerative)	(i) Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is outside the range established in the NCS[b] or operating permit.
	(ii) Report all carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration is outside the range established in the NCS[b] or operating permit.
	(iii) Report all operating days when insufficient monitoring data are collected[c].
	(iv) For each regenerative adsorber that is regenerated offsite subject to the requirements in §63.139(d)(5) report the date of each instance when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber and the adsorber is not replaced according to §63.139(d)(5)(iii)(A).
(7) Carbon Adsorber (Non-Regenerative)	(i) Report all operating days when inspections not done according to the schedule developed as specified in table 13 of this subpart.
	(ii) Report all operating days when carbon has not been replaced at the frequency specified in table 13 of this subpart.

	(iii) For each nonregenerative adsorber subject to the requirements in §63.139(d)(5), report the date of each instance when breakthrough, as defined in §63.101 of subpart F of this part, is detected between the first and second adsorber and the adsorber is not replaced according to §63.139(d)(5)(iii)(A).
(8) All Control Devices	(i) Report the times and durations of all periods when the vent stream is diverted through a bypass line or the monitor is not operating, or
	(ii) Report all monthly inspections that show the valves are moved to the diverting position or the seal has been changed.
	(iii) For each source as defined in §63.101 of subpart F of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

[a] The daily average is the average of all values recorded during the operating day, as specified in §63.147(d).

[b] NCS = Notification of Compliance Status described in §63.152.

[c] The periodic reports shall include the duration of periods when monitoring data are not collected for each excursion as defined in §63.152(c)(2)(ii)(A).

Table 21 to Subpart G of Part 63—Average Storage Temperature (T_s) as a Function of Tank Paint Color

Tank Color	Average Storage Temperature (T_s)
White	T_A a = 0
Aluminum	T_A = 2.5
Gray	T_A = 3.5
Black	T_A = 5.0

[a] T_A is the average annual ambient temperature in degrees Fahrenheit.

Table 22 to Subpart G of Part 63—Paint Factors for Fixed Roof Tanks

Tank color		Paint factors (F_p) Paint Condition	
Roof	Shell	Good	Poor
White	White	1.00	1.15
Aluminum (specular)	White	1.04	1.18
White	Aluminum (specular)	1.16	1.24
Aluminum (specular)	Aluminum (specular)	1.20	1.29
White	Aluminum (diffuse)	1.30	1.38
Aluminum (diffuse)	Aluminum (diffuse)	1.39	1.46
White	Gray	1.30	1.38
Light gray	Light gray	1.33	1.44
Medium gray	Medium gray	1.40	1.58

Table 23 to Subpart G of Part 63—Average Clingage Factors (c)[a]

Liquid	Shell condition		
	Light rust[b]	Dense rust	Gunite lined
Gasoline	0.0015	0.0075	0.15
Single component stocks	0.0015	0.0075	0.15
Crude oil	0.0060	0.030	0.60

[a] Units for average clingage factors are barrels per 1,000 square feet.

[b] If no specific information is available, these values can be assumed to represent the most common condition of tanks currently in use.

Table 24 to Subpart G of Part 63—Typical Number of Columns as a Function of Tank Diameter for Internal Floating Roof Tanks With Column Supported Fixed Roofs[a]

Tank diameter range (D in feet)	Typical number of columns, (N_C)
$0 < D \leq 85$	1
$85 < D \leq 100$	6
$100 < D \leq 120$	7
$120 < D \leq 135$	8
$135 < D \leq 150$	9

150 <D ≤170	16
170 <D ≤190	19
190 <D ≤220	22
220 <D ≤235	31
235 <D ≤270	37
270 <D ≤275	43
275 <D ≤290	49
290 <D ≤330	61
330 <D ≤360	71
360 <D ≤400	81

[a] Data in this table should not supersede information on actual tanks.

Table 25 to Subpart G of Part 63—Effective Column Diameter (F_c)

Column type	F_c (feet)
9-inch by 7-inch built-up columns	1.1
8-inch-diameter pipe columns	0.7
No construction details known	1.0

Table 26 to Subpart G of Part 63—Seal Related Factors for Internal Floating Roof Vessels

Seal type	K_S	n
Liquid mounted resilient seal:		
Primary seal only	3.0	0
With rim-mounted secondary seal[a]	1.6	0
Vapor mounted resilient seal:		
Primary seal only	6.7	0
With rim-mounted secondary seal[a]	2.5	0

[a] If vessel-specific information is not available about the secondary seal, assume only a primary seal is present.

Table 27 to Subpart G of Part 63—Summary of Internal Floating Deck Fitting Loss Factors (K_F) and Typical Number of Fittings (N_F)

Deck fitting type	Deck fitting loss factor (K_F)[a]	Typical number of fittings (N_F)
Access hatch		1.
Bolted cover, gasketed	1.6	
Unbolted cover, gasketed	11	
Unbolted cover, ungasketed	[b]25	
Automatic gauge float well		1.
Bolted cover, gasketed	5.1	
Unbolted cover, gasketed	15	
Unbolted cover, ungasketed	[b]28	
Column well		(see Table 24).
Builtup column-sliding cover, gasketed	33	
Builtup column-sliding cover, ungasketed	[b]47 10	
Pipe column-flexible fabric sleeve seal	19	
Pipe column-sliding cover, gasketed	32	
Pipe column-sliding cover, ungasketed		
Ladder well		1.
Sliding cover, gasketed	56	
Sliding cover, ungasketed	[b]76	
Roof leg or hanger well		$(5 + D/10 + D^2/600)^c$.
Adjustable	[b]7.9	
Fixed	0	
Sample pipe or well		1.
Slotted pipe-sliding cover, gasketed	44	
Slotted pipe-sliding cover, ungasketed	57	

Sample well-slit fabric seal, 10 percent open area	[b]12	
Stub drain, 1-in diameter[d]	1.2	$(D^2/125)^c$.
Vacuum breaker		1.
Weighted mechanical actuation, gasketed	[b]0.7	
Weighted mechanical actuation, ungasketed	0.9	

[a] Units for K_F are pound-moles per year.

[b] If no specific information is available, this value can be assumed to represent the most common/typical deck fittings currently used.

[c] D = Tank diameter (feet).

[d] Not used on welded contact internal floating decks.

Table 28 to Subpart G of Part 63—Deck Seam Length Factors[a] (S_D) for Internal Floating Roof Tanks

Deck construction	Typical deck seam length factor
Continuous sheet construction[b]:	
5-feet wide sheets	0.2[c]
6-feet wide sheets	0.17
7-feet wide sheets	0.14
Panel construction[d]:	
5 × 7.5 feet rectangular	0.33
5 × 12 feet rectangular	0.28

[a]Deck seam loss applies to bolted decks only. Units for S^D are feet per square feet.

[b] $S_D = 1/W$, where W = sheet width (feet).

[c] If no specific information is available, these factors can be assumed to represent the most common bolted decks currently in use.

[d] $S_D = (L + W)/LW$, where W = panel width (feet), and L = panel length (feet).

Table 29 to Subpart G of Part 63—Seal Related Factors for External Floating Roof Vessels

Seal type	Welded vessels		Riveted vessels	
	K_S	N	K_S	N
Metallic shoe seal:				

Primary seal only	1.2	1.5	1.3	1.5
With shoe-mounted secondary seal	0.8	1.2	1.4	1.2
With rim-mounted secondary seal	0.2	1.0	0.2	1.6
Liquid mounted resilient seal:				
Primary seal only	1.1	1.0	[a]NA	NA
With weather shield	0.8	0.9	NA	NA
With rim-mounted secondary seal	0.7	0.4	NA	NA
Vapor mounted resilient seal:				
Primary seal only	1.2	2.3	NA	NA
With weather shield	0.9	2.2	NA	NA
With rim-mounted secondary seal	0.2	2.6	NA	NA

[a] NA = Not applicable.

Table 30 to Subpart G of Part 63—Roof Fitting Loss Factors, K_{Fa}, K_{Fb}, and m,[a] and Typical Number of Fittings, N_T

Fitting type and construction details	Loss factors[b]			Typical number of fittings, N_T
	K_{Fa} (lb-mole/yr)	K_{Fb} (lb-mole/[mi/hr]^m-yr)	m (dimensionless)	
Access hatch (24-in-diameter well)				1.
Bolted cover, gasketed	0	0	[c]0	
Unbolted cover, ungasketed	2.7	7.1	1.0	
Unbolted cover, gasketed	2.9	0.41	1.0	
Unslotted guide-pole well (8-in-diameter unslotted pole, 21-in-diameter well)				1.
Ungasketed sliding cover	0	67	[c]0.98	
Gasketed sliding cover	0	3.0	1.4	
Slotted guide-pole/sample well (8-in-diameter unslotted pole, 21-in-diameter well)				([d]).
Ungasketed sliding cover, without float	0	310	1.2	

Ungasketed sliding cover, with float	0	29	2.0	
Gasketed sliding cover, without float	0	260	1.2	
Gasketed sliding cover, with float	0	8.5	1.4	
Gauge-float well (20-inch diameter)				1.
Unbolted cover, ungasketed	2.3	5.9	[c]1.0	
Unbolted cover, gasketed	2.4	0.34	1.0	
Bolted cover, gasketed	0	0	0	
Gauge-hatch/sample well (8-inch diameter)				1.
Weighted mechanical actuation, gasketed	0.95	0.14	[c]1.0	
Weighted mechanical actuation, ungasketed	0.91	2.4	1.0	
Vacuum breaker (10-in-diameter well)				N_{F6} (Table 31).
Weighted mechanical actuation, gasketed	1.2	0.17	[c]1.0	
Weighted mechanical actuation, ungasketed	1.2	3.0	1.0	
Roof drain (3-in-diameter)				N_{F7} (Table 31).
Open	0	7.0	[e]1.4	N_{F8} (Table 32[f]).
90 percent closed	0.51	0.81	1.0	
Roof leg (3-in-diameter)				N_{F8} (Table 32[f]).
Adjustable, pontoon area	1.5	0.20	[c]1.0	
Adjustable, center area	0.25	0.067	[c]1.0	
Adjustable, double-deck roofs	0.25	0.067	1.0	

Fixed	0	0	0	
Roof leg (2½ -in-diameter)				N_{F8} (Table 32[f]).
Adjustable, pontoon area	1.7	0	0	
Adjustable, center area	0.41	0	0	
Adjustable, double-deck roofs	0.41	0	0	
Fixed	0	0	0	
Rim vent (6-in-diameter)				1[g].
Weighted mechanical actuation, gasketed	0.71	0.10	[c]1.0	
Weighted mechanical actuation, ungasketed	0.68	1.8	1.0	

[a] The roof fitting loss factors, K_{Fa}, K_{Fb}, and m, may only be used for wind speeds from 2 to 15 miles per hour.

[b] Unit abbreviations are as follows: lb = pound; mi = miles; hr = hour; yr = year.

[c] If no specific information is available, this value can be assumed to represent the most common or typical roof fittings currently in use.

[d] A slotted guide-pole/sample well is an optional fitting and is not typically used.

[e] Roof drains that drain excess rainwater into the product are not used on pontoon floating roofs. They are, however, used on double-deck floating roofs and are typically left open.

[f] The most common roof leg diameter is 3 inches. The loss factors for 2½ -inch diameter roof legs are provided for use if this smaller size roof is used on a particular floating roof.

[g] Rim vents are used only with mechanical-shoe primary seals.

Table 31 to Subpart G of Part 63—Typical Number of Vacuum Breakers, N_{F6} and Roof Drains,[a] N_{F7}

Tank diameter D (feet)[b]	No. of vacuum breakers, N_{F6}		No. of roof drains, N_{F7} double-deck roof[c]
	Pontoon roof	Double-deck roof	
50	1	1	1
100	1	1	1
150	2	2	2
200	3	2	3
250	4	3	5

300	5	3	7
350	6	4	[d]
400	7	4	[d]

[a] This table should not supersede information based on actual tank data.

[b] If the actual diameter is between the diameters listed, the closest diameter listed should be used. If the actual diameter is midway between the diameters listed, the next larger diameter should be used.

[c] Roof drains that drain excess rainwater into the product are not used on pontoon floating roofs. They are, however, used on double-deck floating roofs, and are typically left open.

[d] For tanks more than 300 feet in diameter, actual tank data or the manufacturer's recommendations may be needed for the number of roof drains.

Table 32 to Subpart G of Part 63—Typical Number of Roof Legs,[a] N_{F8}

Tank diameter D (feet)[b]	Pontoon roof		No. of legs on double-deck roof
	No. of pontoon legs	No. of center legs	
30	4	2	6
40	4	4	7
50	6	6	8
60	9	7	10
70	13	9	13
80	15	10	16
90	16	12	20
100	17	16	25
110	18	20	29
120	19	24	34
130	20	28	40
140	21	33	46
150	23	38	52
160	26	42	58
170	27	49	66
180	28	56	74
190	29	62	82

200	30	69	90
210	31	77	98
220	32	83	107
230	33	92	115
240	34	101	127
250	34	109	138
260	36	118	149
270	36	128	162
280	37	138	173
290	38	148	186
300	38	156	200
310	39	168	213
320	39	179	226
330	40	190	240
340	41	202	255
350	42	213	270
360	44	226	285
370	45	238	300
380	46	252	315
390	47	266	330
400	48	281	345

[a] This table should not supersede information based on actual tank data.

[b] If the actual diameter is between the diameters listed, the closest diameter listed should be used. If the actual diameter is midway between the diameters listed, the next larger diameter should be used.

Table 33 to Subpart G of Part 63—Saturation Factors

Cargo carrier	Mode of operation	S factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00

	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00

Table 34 to Subpart G of Part 63—Fraction Measured (F_m) and Fraction Emitted (F_e) For HAP Compounds in Wastewater Streams

Chemical name	CAS Number[a]	F_m	F_e
Acetaldehyde	75070	1.00	0.48
Acetonitrile	75058	0.99	0.36
Acetophenone	98862	0.31	0.14
Acrolein	107028	1.00	0.43
Acrylonitrile	107131	1.00	0.43
Allyl chloride	107051	1.00	0.89
Benzene	71432	1.00	0.80
Benzyl chloride	100447	1.00	0.47
Biphenyl	92524	0.86	0.45
Bromoform	75252	1.00	0.49
Butadiene (1,3-)	106990	1.00	0.98
Carbon disulfide	75150	1.00	0.92
Carbon tetrachloride	56235	1.00	0.94
Chlorobenzene	108907	1.00	0.73
Chloroform	67663	1.00	0.78
Chloroprene (2-Chloro-1,3-butadiene)	126998	1.00	0.68
Cumene	98828	1.00	0.88
Dichlorobenzene (p-)	106467	1.00	0.72
Dichloroethane (1,2-) (Ethylene dichloride)	107062	1.00	0.64
Dichloroethyl ether (Bis(2-Chloroethyl ether))	111444	0.76	0.21
Dichloropropene (1,3-)	542756	1.00	0.76
Diethyl sulfate	64675	0.0025	0.11
Dimethyl sulfate	77781	0.086	0.079
Dimethylaniline (N,N-)	121697	0.00080	0.34

Dimethylhydrazine (1,1-)	57147	0.38	0.054
Dinitrophenol (2,4-)	51285	0.0077	0.060
Dinitrotoluene (2,4-)	121142	0.085	0.18
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911	0.87	0.18
Epichlorohydrin(1-Chloro-2,3-epoxypropane)	106898	0.94	0.35
Ethyl acrylate	140885	1.00	0.48
Ethylbenzene	100414	1.00	0.83
Ethyl chloride (Chloroethane)	75003	1.00	0.90
Ethylene dibromide (Dibromomethane)	106934	1.00	0.57
Ethylene glycol dimethyl ether	110714	0.86	0.32
Ethylene glycol monobutyl ether acetate	112072	0.043	0.067
Ethylene glycol monomethyl ether acetate	110496	0.093	0.048
Ethylene oxide	75218	1.00	0.50
Ethylidene dichloride (1,1-Dichloroethane)	75343	1.00	0.79
Hexachlorobenzene	118741	0.97	0.64
Hexachlorobutadiene	87683	0.88	0.86
Hexachloroethane	67721	0.50	0.85
Hexane	110543	1.00	1.00
Isophorone	78591	0.51	0.11
Methanol	67561	0.85	0.17
Methyl bromide (Bromomethane)	74839	1.00	0.85
Methyl chloride (Chloromethane)	74873	1.00	0.84
Methyl isobutyl ketone (Hexone)	108101	0.98	0.53
Methyl methacrylate	80626	1.00	0.37
Methyl tert-butyl ether	1634044	1.00	0.57
Methylene chloride (Dichloromethane)	75092	1.00	0.77
Naphthalene	91203	0.99	0.51
Nitrobenzene	98953	0.39	0.23
Nitropropane (2-)	79469	0.99	0.44
Phosgene	75445	1.00	0.87

Propionaldehyde	123386	1.00	0.41
Propylene dichloride (1,2-Dichloropropane)	78875	1.00	0.72
Propylene oxide	75569	1.00	0.60
Styrene	100425	1.00	0.80
Tetrachloroethane (1,1,2,2-)	79345	1.00	0.46
Tetrachloroethylene (Perchloroethylene)	127184	1.00	0.92
Toluene	108883	1.00	0.80
Toluidine (o-)	95534	0.15	0.052
Trichlorobenzene (1,2,4-)	120821	1.00	0.64
Trichloroethane (1,1,1-) (Methyl chloroform)	71556	1.00	0.91
Trichloroethane (1,1,2-) (Vinyl Trichloride)	79005	1.00	0.60
Trichloroethylene	79016	1.00	0.87
Trichlorophenol (2,4,5-)	95954	0.11	0.086
Triethylamine	121448	1.00	0.38
Trimethylpentane (2,2,4-)	540841	1.00	1.00
Vinyl acetate	108054	1.00	0.59
Vinyl chloride (Chloroethylene)	75014	1.00	0.97
Vinylidene chloride (1,1-Dichloroethylene)	75354	1.00	0.94
Xylene (m-)	108383	1.00	0.82
Xylene (o-)	95476	1.00	0.79
Xylene (p-)	106423	1.00	0.82

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

Table 35 to Subpart G of Part 63—Control Requirements for Items of Equipment That Meet the Criteria of §63.149 of Subpart G

Item of equipment	Control requirement[a]
Drain or drain hub	(a) Tightly fitting solid cover (TFSC); or (b) TFSC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of §63.139(c); or (c) Water seal with submerged discharge or barrier to protect discharge from wind.

Manhole[b]	(a) TFSC; or (b) TSFC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of §63.139(c); or (c) If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
Lift station	(a) TFSC; or (b) TFSC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of §63.139(c); or (c) If the lift station is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter. The lift station shall be level controlled to minimize changes in the liquid level.
Trench	(a) TFSC; or (b) TFSC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of §63.139(c); or (c) If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
Pipe	Each pipe shall have no visible gaps in joints, seals, or other emission interfaces.
Oil/Water separator	(a) Equip with a fixed roof and route vapors to a process or to a fuel gas system, or equip with a closed vent system that routes vapors to a control device meeting the requirements of §63.139(c); or (b) Equip with a floating roof that meets the equipment specifications of §60.693 (a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4).
Tank[c]	Maintain a fixed roof.[d] If the tank is sparged[e] or used for heating or treating by means of an exothermic reaction, a fixed roof and a system shall be maintained that routes the organic hazardous air pollutants vapors to other process equipment or a fuel gas system, or a closed vent system that routes vapors to a control device that meets the requirements of 40 CFR §63.119 (e)(1) or (e)(2).

[a] Where a tightly fitting solid cover is required, it shall be maintained with no visible gaps or openings, except during periods of sampling, inspection, or maintenance.

[b] Manhole includes sumps and other points of access to a conveyance system.

[c] Applies to tanks with capacities of 38 m^3 or greater.

[d] A fixed roof may have openings necessary for proper venting of the tank, such as pressure/vacuum vent, j-pipe vent.

[e] The liquid in the tank is agitated by injecting compressed air or gas.

Table 36 to Subpart G of Part 63—Compound Lists Used for Compliance Demonstrations for Enhanced Biological Treatment Processes (See §63.145(h))

List 1	**List 2**
Acetonitrile	Acetaldehyde.
Acetophenone	Acrolein.
Acrylonitrile	Allyl Chloride.
Biphenyl	Benzene.
Chlorobenzene	Benzyl Chloride,
Dichloroethyl Ether	Bromoform.
Diethyl Sulfate	Bromomethane.
Dimethyl Sulfate	Butadiene 1,3.
Dimethyl Hydrazine 1,1	Carbon Disulfide.
Dinitrophenol 2,4	Carbon Tetrachloride
Dinitrotoluene 2,4	Chloroethane (ethyl chloride).
Dioxane 1,4	Chloroform.
Ethylene Glycol Monobutyl Ether Acetate	Chloroprene.
Ethylene Glycol Monomethyl Ether Acetate	Cumene (isopropylbenzene).
Ethylene Glycol Dimethyl Ether	Dibromoethane 1,2.
Hexachlorobenzene	Dichlorobenzene 1,4.
Isophorone	Dichloroethane 1,2.
Methanol	Dichloroethane 1,1 (ethylidene dichloride).
Methyl Methacrylate	Dichloroethene 1,1 (vinylidene chloride).
Nitrobenzene	Dichloropropane 1,2.
Toluidine	Dichloropropene 1,3.
Trichlorobenzene 1,2,4.	Dimethylaniline N,N.
Trichlorophenol 2,4,6	Epichlorohydrin.
Triethylamine	Ethyl Acrylate.
	Ethylbenzene.
	Ethylene Oxide.

	Ethylene Dibromide.
	Hexachlorobutadiene.
	Hexachloroethane.
	Hexane-n.
	Methyl Isobutyl Ketone.
	Methyl Tertiary Butyl Ether.
	Methyl Chloride.
	Methylene Chloride (dichloromethane).
	Naphthalene.
	Nitropropane 2
	Phosgene.
	Propionaldehyde.
	Propylene Oxide.
	Styrene.
	Tetrachloroethane 1,1,2,2.
	TolueneTrichloroethane 1,1,1 (methyl chloroform).
	Trichloroethane 1,1,2.
	Trichloroethylene.
	Trimethylpentane 2,2,4.
	Vinyl Chloride.
	Vinyl Acetate.
	Xylene-m.
	Xylene-o.
	Xylene-p.

Table 37 to Subpart G of Part 63—Default Biorates for List 1 Compounds

Compound name	Biorate, K1 L/g MLVSS-hr
Acetonitrile	0.100
Acetophenone	0.538
Acrylonitrile	0.750

Biphenyl	5.643
Chlorobenzene	10.000
Dichloroethyl ether	0.246
Diethyl sulfate	0.105
Dimethyl hydrazine(1,1)	0.227
DIMethyl sulfate	0.178
Dinitrophenol 2,4	0.620
Dinitrotoluene(2,4)	0.784
Dioxane(1,4)	0.393
Ethylene glycol dimethyl ether	0.364
Ethylene glycol monomethyl ether acetate	0.159
Ethylene glycol monobutyl ether acetate	0.496
Hexachlorobenzene	16.179
ISophorone	0.598
Methanol	0.200
Methyl methacrylate	4.300
Nitrobenzene	2.300
Toluidine (-0)	0.859
Trichlorobenzene 1,2,4	4.393
Trichlorophenol 2,4,5	4.477
Triethylamine	1.064

Table 38 to Subpart G of Part 63—Toxic Equivalency Factors

Dioxin and Furan Congener	Toxic Equivalency Factor
1,2,3,7,8-pentachlorodibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	0.01
octachlorodibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorodibenzofuran	0.1

2,3,4,7,8-pentachlorodibenzofuran	0.3
1,2,3,7,8-pentachlorodibenzofuran	0.03
1,2,3,4,7,8-hexachlorodibenzofuran	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	0.01
Octachlorodibenzofuran	0.0003

Figure 1 to Subpart G of Part 63—Definitions of Terms Used in Wastewater Equations

Main Terms

AMR	Actual mass removal of Table 8 and/or Table 9 compounds achieved by treatment process or a series of treatment processes, kg/hr.
C	Concentration of Table 8 and/or Table 9 compounds in wastewater, ppmw.
CG	Concentration of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, dry basis, ppmv.
CG_c	Concentration of TOC or organic hazardous air pollutants corrected to 3-percent oxygen, in vented gas stream, dry basis, ppmv.
CGS	Concentration of sample compounds in vented gas stream, dry basis, ppmv.
E	Removal or destruction efficiency, percent.
F_{bio}	Site-specific fraction of Table 8 and/or Table 9 compounds biodegraded, unitless.
f^{bio}	Site-specific fraction of an individual Table 8 or Table 9 compound biodegraded, unitless.
Fm	Compound-specific fraction measured factor, unitless (listed in table 34).
Fr	Fraction removal value for Table 8 and/or Table 9 compounds, unitless (listed in Table 9).
Fr_{avg}	Flow-weighted average of the Fr values.
i	Identifier for a compound.
j	Identifier for a sample.
k	Identifier for a run.
K_2	Constant, $41.57 * 10^{-9}$, $(ppm)^{-1}$ (gram-mole per standard m^3) (kg/g), where standard temperature (gram-mole per standard m^3) is 20 °C.

m	Number of samples.
M	Mass, kg.
MW	Molecular weight, kg/kg-mole.
n	Number of compounds.
p	Number of runs.
$\%O_{2d}$	Concentration of oxygen, dry basis, percent by volume.
Q	Volumetric flowrate of wastewater, m^3/hr.
QG	Volumetric flow rate of vented gas stream, dry standard, m^3/min.
QMG	Mass flowrate of TOC (minus methane and ethane) or organic hazardous air pollutants, in vented gas stream, kg/hr.
QMW	Mass flowrate of Table 8 and/or Table 9 compounds in wastewater, kg/hr.
ρ	Density, kg/m^3.
RMR	Required mass removal achieved by treatment process or a series of treatment processes, kg/hr.
t_T	Total time of all runs, hr.

Subscripts

a	Entering.
b	Exiting.
i	Identifier for a compound.
j	Identifier for a sample.
k	Identifier for a run.
m	Number of samples.
n	Number of compounds.
p	Number of runs.
T	Total; sum of individual.

For the reasons set out in the preamble, the Environmental Protection Agency proposes to amend title 40, chapter I, part 63 of the Code of Federal Regulations as follows:

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

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

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

Subpart H—National Emission Standards for ~~Organic~~ Hazardous Air Pollutants for Equipment Leaks and Fenceline Monitoring for All Emission Sources

Contents

Tables to Subpart H

§63.160 Applicability and designation of source.

(a) The provisions of this subpart apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by this subpart that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of a specific subpart in 40 CFR part 63 that references this subpart.

(b) After the compliance date for a process unit, equipment to which this subpart applies that are also subject to the provisions of:

(1) 40 CFR part 60, except 40 CFR part 60, subpart VVb, will be required to comply only with the provisions of this subpart.

(2) 40 CFR part 61 will be required to comply only with the provisions of this subpart.

(c) If a process unit subject to the provisions of this subpart has equipment to which this subpart does not apply, but which is subject to a standard identified in paragraph (c)(1), (c)(2), or (c)(3) of this section, the owner or operator may elect to apply this subpart to all such equipment in the process unit. If the owner or operator elects this method of compliance, all VOC in such equipment shall be considered, for purposes of applicability and compliance with this subpart, as if it were organic hazardous air pollutant (HAP). Compliance with the provisions of this subpart, in the manner described in this paragraph, shall be deemed to constitute compliance with the standard identified in paragraph (c)(1), (c)(2), or (c)(3) of this section.

(1) 40 CFR part 60, subpart VV, GGG, or KKK;

(2) 40 CFR part 61, subpart F or J; or

(3) 40 CFR part 264, subpart BB or 40 CFR part 265, subpart BB.

~~(2) [Reserved]~~

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

(e) Except as provided in any subpart that references this subpart, lines and equipment not containing process fluids are not subject to the provisions of this subpart. Utilities, 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 considered to be part of a process unit.

(f) The provisions of this subpart do not apply to research and development facilities or to bench-scale batch processes, regardless of whether the facilities or processes are located at the same plant site as a process subject to the provisions of this subpart.

(g) *Alternative means of compliance*—For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, on and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies. (1) *Option to comply with part 65.* Owners or operators of CMPU that are subject to §63.100 may choose to comply with the provisions of 40 CFR part 65 for all Group 1 and Group 2 process vents, Group 1 storage vessels, Group 1 transfer operations, and equipment that are subject to §63.100, that are part of the CMPU. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) For equipment, 40 CFR part 65 satisfies the requirements of §§63.102, 63.103, and 63.162 through 63.182. When choosing to comply with 40 CFR part 65, the requirements of §63.180(d) continue to apply.

(ii) For Group 1 and Group 2 process vents, Group 1 storage vessels, and Group 1 transfer operations, comply with §63.110(i)(1).

(2) *Part 65, subpart C or F.* For owners or operators choosing to comply with 40 CFR part 65, each surge control vessel and bottoms receiver subject to §63.100 that meets the conditions specified in table 2 or table 3 of this subpart shall meet the requirements for storage vessels in 40 CFR part 65, subpart C; all other equipment subject to §63.100 shall meet the requirements in 40 CFR part 65, subpart F.

(3) *Part 63, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C or F, for equipment subject to §63.100 must also comply with the applicable general provisions of this part 63 listed in table 4 of this subpart. All sections and paragraphs of subpart A of this part that are not mentioned in table 4 of this subpart do not apply to owners or operators of equipment subject to §63.100 of subpart F complying with 40 CFR part 65, subpart C or F, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C or F, must comply with 40 CFR part 65, subpart A.

§63.161 Definitions.

All terms used in this subpart shall have the meaning given them in the Act and in subpart F of this part~~this section as follows~~, except as provided in any subpart that references this subpart.

~~*Batch process* means a process in which the equipment is fed intermittently or discontinuously. Processing then occurs in this equipment after which the equipment is generally emptied. Examples of industries that use batch processes include pharmaceutical production and pesticide production.~~

~~*Batch product-process equipment train* means the collection of equipment (e.g., connectors, reactors, valves, pumps, etc.) configured to produce a specific product or intermediate by a batch process.~~

~~*Bench-scale batch process* means a batch process (other than a research and development facility) that is operated on a small scale, such as one capable of being located on a laboratory bench top. This bench-scale equipment will typically include reagent feed vessels, a small reactor and associated product separator, recovery and holding equipment. These processes are only capable of producing small quantities of product.~~

~~*Bottoms receiver* means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.~~

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

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

~~*Closed-vent system* means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back into a process.~~

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

~~*Compliance date* means the dates specified in §63.100(k) or §63.100(l)(3) of subpart F of this part for process units subject to subpart F of this part; the dates specified in §63.190(e) of subpart I of this part for process units subject to subpart I of this part. For sources subject to other subparts in 40 CFR part 63 that reference this subpart, compliance date will be defined in those subparts. However, the compliance date for §63.170 shall be no later than 3 years after the effective date of those subparts unless otherwise specified in such other subparts.~~

~~*Connector* means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are not inaccessible, glass, or glass-lined as described in §63.174(h) of this subpart.~~

~~*Control device* means any equipment used for recovering, recapturing, or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, flares, boilers, and process heaters.~~

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

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

~~*Equipment* means 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 this subpart.~~

~~*First attempt at repair* means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in §63.180 (b) and (c), as appropriate, to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.~~

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

~~*Fuel gas* means gases that are combusted to derive useful work or heat.~~

~~*Fuel gas system* means the offsite and onsite piping and control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.~~

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

~~*In food/medical service* means that a piece of equipment in organic hazardous air pollutant service contacts a process stream used to manufacture a Food and Drug Administration~~

~~regulated product where leakage of a barrier fluid into the process stream would cause any of the following:~~

~~(1) A dilution of product quality so that the product would not meet written specifications,~~

~~(2) An exothermic reaction which is a safety hazard,~~

~~(3) The intended reaction to be slowed down or stopped, or~~

~~(4) An undesired side reaction to occur.~~

~~*In gas/vapor service* means that a piece of equipment in organic hazardous air pollutant service contains a gas or vapor at operating conditions.~~

~~*In heavy liquid service* means that a piece of equipment in organic hazardous air pollutant service is not in gas/vapor service or in light liquid service.~~

~~*In light liquid service* means that a piece of equipment in organic hazardous air pollutant service contains a liquid that meets the following conditions:~~

~~(1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20 °C,~~

~~(2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20 °C is equal to or greater than 20 percent by weight of the total process stream, and~~

~~(3) The fluid is a liquid at operating conditions.~~

~~NOTE: Vapor pressures may be determined by the methods described in 40 CFR 60.485(e)(1).~~

~~*In liquid service* means that a piece of equipment in organic hazardous air pollutant service is not in gas/vapor service.~~

~~*In organic hazardous air pollutant* or *in organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of~~

~~total organic HAP's as determined according to the provisions of §63.180(d) of this subpart. The provisions of §63.180(d) of this subpart also specify how to determine that a piece of equipment is not in organic HAP service.~~

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

~~*In volatile organic compound* or *in VOC service* means, for the purposes of this subpart, that:~~

~~(1) The piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight (see 40 CFR 60.2 for the definition of VOC, and 40 CFR 60.485(d) to determine whether a piece of equipment is not in VOC service); and~~

~~(2) The piece of equipment is not in heavy liquid service as defined in 40 CFR 60.481.~~

~~*In-situ sampling systems* means nonextractive samplers or in-line samplers.~~

~~*Initial start-up* means the first time a new or reconstructed source begins production. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups (as defined in this section) of process units following malfunctions or process unit shutdowns.~~

~~*Instrumentation system* means a group of equipment components used to condition and convey a sample of the process fluid to analyzers and instruments for the purpose of determining process operating conditions (e.g., composition, pressure, flow, etc.). Valves and connectors are the predominant type of equipment used in instrumentation systems; however, other types of equipment may also be included in these systems. Only valves nominally 0.5 inches and smaller, and connectors nominally 0.75 inches and smaller in diameter are considered instrumentation systems for the purposes of this subpart. Valves greater than nominally 0.5 inches and connectors~~

~~greater than nominally 0.75 inches associated with instrumentation systems are not considered part of instrumentation systems and must be monitored individually.~~

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

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

~~*On-site* or *On site* means, with respect to records required to be maintained by this subpart, that the 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 chemical manufacturing process unit to which the records pertain, or storage in central files elsewhere at the major source.~~

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

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

~~*Polymerizing monomer* means a molecule or compound usually containing carbon and of relatively low molecular weight and simple structure (e.g., hydrogen cyanide, acrylonitrile, styrene), which is capable of conversion to polymers, synthetic resins, or elastomers by combination with itself due to heat generation caused by a pump mechanical seal surface,~~

~~contamination by a seal fluid (e.g., organic peroxides or chemicals that will form organic peroxides), or a combination of both with the resultant polymer buildup causing rapid mechanical seal failure.~~

~~*Pressure release* means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device. This release can be one release or a series of releases over a short time period due to a malfunction in the process.~~

~~*Pressure relief device or valve* means a safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process equipment. A common pressure relief device is a spring-loaded pressure relief valve. Devices that are actuated either by a pressure of less than or equal to 2.5 psig or by a vacuum are not pressure relief devices.~~

~~*Process unit* means a chemical manufacturing process unit as defined in subpart F of this part, a process subject to the provisions of subpart I of this part, or a process subject to another subpart in 40 CFR part 63 that references this subpart.~~

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

~~shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit shutdowns.~~

~~*Recapture device* means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. Recapture devices include, but are not limited to, absorbers, carbon absorbers, and condensers.~~

~~*Recovery device* means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use or reuse. Recovery devices include, but are not limited to, absorbers, carbon absorbers, and condensers. For purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.~~

~~*Repaired* means that equipment:~~

~~(1) Is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart, and~~

~~(2) Unless otherwise specified in applicable provisions of this subpart, is monitored as specified in §63.180 (b) and (c), as appropriate, to verify that emissions from the equipment are below the applicable leak definition.~~

~~*Routed to a process or route to a process* means the emissions are conveyed by hard-piping or a closed vent system to any enclosed portion of a process unit where the emissions are predominately recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not organic hazardous air pollutants; and/or incorporated into a product; and/or recovered.~~

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

~~*Screwed connector* means a threaded pipe fitting where the threads are cut on the pipe wall and the fitting requires only two pieces to make the connection (i.e., the pipe and the fitting).~~

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

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

~~*Start-up* means the setting in operation of a piece of equipment or a control device that is subject to this subpart.~~

~~*Surge control vessel* means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within a process unit (as defined in the specific subpart that references this subpart) when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.~~

§63.162 Standards: General.

(a) Compliance with this subpart will be determined by review of the records required by §63.181 of this subpart and the reports required by §63.182 of this subpart, review of performance test results, and by inspections.

(b)(1) An owner or operator may request a determination of alternative means of emission limitation to the requirements of §§63.163 through 63.170, and §§63.172 through 63.174 of this subpart as provided in §63.177.

(2) If the Administrator makes a determination that a means of emission limitation is a permissible alternative to the requirements of §§63.163 through 63.170, and §§63.172 through 63.174 of this subpart, the owner or operator shall comply with the alternative.

(c) Each piece of equipment in a process unit to which this subpart applies shall be identified such that it can be distinguished readily from equipment that is not subject to this subpart. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

(d) Equipment that is in vacuum service is excluded from the requirements of this subpart.

(e) Equipment that is in organic HAP service less than 300 hours per calendar year is excluded from the requirements of §§63.163 through 63.174 of this subpart and §63.178 of this subpart if it is identified as required in §63.181(j) of this subpart.

(f) When each leak is detected as specified in §§63.163 and 63.164; §§63.168 and 63.169; and §§63.172 through 63.174 of this subpart, the following requirements apply:

(1) Clearly identify the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored as specified in §§63.168(f)(3), and 63.175(e)(7)(i)(D) of this subpart, and no leak has been detected during the follow-up monitoring. If the owner or operator elects to comply using the provisions of §63.174(c)(1)(i) of this subpart, the identification on a connector may be removed after it is monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring.

(3) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of §63.174(c)(1)(i), may be removed after it is repaired.

(g) Except as provided in paragraph (g)(1) of this section, all terms in this subpart that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), refer to the standard calendar periods unless specified otherwise in the section or subsection that imposes the requirement.

(1) If the initial compliance date does not coincide with the beginning of the standard calendar period, an owner or operator may elect to utilize a period beginning on the compliance date, or may elect to comply in accordance with the provisions of paragraphs (g)(2) or (g)(3) of this section.

(2) Time periods specified in this subpart for completion of required tasks may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part. 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.

(3) Except as provided in paragraph (g)(1) or (g)(2) of this section, where the period specified for compliance is a standard calendar period, if the initial compliance date does not coincide with the beginning of the calendar period, compliance shall be required according to the schedule specified in paragraphs (g)(3)(i) or (g)(3)(ii) of this section, as appropriate.

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

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

(4) 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 each period, provided the task is conducted at a reasonable interval after completion of the task during the previous period.

(h) In all cases where the provisions of this subpart require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of this subpart to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of this subpart. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of this subpart.

§63.163 Standards: Pumps in light liquid service.

(a) The provisions of this section apply to each pump that is in light liquid service.

(1) The provisions are to be implemented on the dates specified in the specific subpart in 40 CFR part 63 that references this subpart in the phases specified below:

(i) For each group of existing process units at existing sources subject to the provisions of subparts F or I of this part, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2½ years after the compliance date.

(ii) For new sources subject to the provisions of subparts F or I of this part, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(iii) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for each pump in ethylene oxide service, as defined in §63.101 of subpart F of this part, that is added to a CMPU, and for each pump in ethylene oxide service, that replaces a pump in ethylene oxide service, owners and operators must initially monitor for leaks within 5 days after initial startup of the equipment.

(2) The owner or operator of a source subject to the provisions of subparts F or I of this part may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) Sources subject to other subparts in 40 CFR part 63 that reference this subpart shall comply on the dates specified in the applicable subpart.

(b)(1) The owner or operator of a process unit subject to this subpart shall monitor each pump monthly to detect leaks by the method specified in §63.180(b) of this subpart and shall comply with the requirements of paragraphs (a) through (d) of this section, except as provided in §63.162(b) of this subpart and paragraphs (e) through (j) of this section.

(2) Except as specified in paragraph (b)(2)(iv) of this section, ~~T~~the instrument reading, as determined by the method as specified in §63.180(b) of this subpart, that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 5,000 parts per million or greater.

(iii) For Phase III, an instrument reading of:

(A) 5,000 parts per million or greater for pumps handling polymerizing monomers;

(B) 2,000 parts per million or greater for pumps in food/medical service; and

(C) 1,000 parts per million or greater for all other pumps.

(iv) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for pumps in ethylene oxide service, as defined in §63.101 of subpart F of this part, the instrument reading that defines a leak for pumps is 500 parts per million or greater.

(3) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (c)(3) of this section or §63.171 of this subpart.

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

(i) Tightening of packing gland nuts.

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

(3) Except as specified in paragraph (c)(4) of this section, f~~F~~or pumps in Phase III to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.

(4) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for pumps in ethylene oxide service, as defined in §63.101 of subpart F of this part, paragraph (c)(3) of this section is not applicable.

(d)(1) The owner or operator shall decide no later than the first monitoring period whether to calculate percent leaking pumps on a process unit basis or on a source-wide basis. Once the owner or operator has decided, all subsequent percent calculations shall be made on the same basis.

(2) If, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the owner or operator shall implement a quality improvement program for pumps that complies with the requirements of §63.176 of this subpart.

(3) The number of pumps at a process unit shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process unit within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(4) Percent leaking pumps shall be determined by the following equation:

$$\%P_L = ((P_L - P_S)/(P_T - P_S)) \times 100$$

where:

$\%P_L$ = Percent leaking pumps

P_L = Number of pumps found leaking as determined through monthly monitoring as required in paragraphs (b)(1) and (b)(2) of this section.

P_T = Total pumps in organic HAP service, including those meeting the criteria in paragraphs (e) and (f) of this section.

P_S = Number of pumps leaking within 1 month of start-up during the current monitoring period.

(e) Except as specified in paragraph (e)(7) of this section, ~~E~~each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (a) through (d) of this section, provided the following requirements are met:

(1) Each dual mechanical seal system is:

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

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of §63.172 of this subpart; or

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

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

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

(4) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(i) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in §63.180(b) of this subpart to determine if there is a leak of organic HAP in the barrier fluid.

(ii) If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in paragraph (e)(3) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

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

(ii) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (e)(6)(i) of this section, or if, based on the criteria established in paragraph (e)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171 of this subpart.

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

(7) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for pumps in ethylene oxide service, as defined in §63.101 of subpart F of this part, paragraph (e) of this section is not applicable.

(f) Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of paragraphs (a) through (c) of this section.

(g) Any pump equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §63.172 of this subpart is exempt from the requirements of paragraphs (b) through (e) of this section.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(3) and (e)(4) of this section, and the daily requirements of paragraph (e)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

(i) If more than 90 percent of the pumps at a process unit meet the criteria in either paragraph (e) or (f) of this section, the process unit is exempt from the requirements of paragraph (d) of this section.

(j) Any pump that is designated, as described in §63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor pump is exempt from the requirements of paragraphs (b) through (e) of this section if:

(1) The owner or operator of the pump determines that the pump is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b) through (d) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

§63.164 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in §63.162(b) of this subpart and paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of §63.172 of this subpart; or

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

(c) The barrier fluid shall not be in light liquid service.

(d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171 of this subpart.

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

(h) A compressor is exempt from the requirements of paragraphs (a) through (g) of this section if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of §63.172 of this subpart.

(i) Any compressor that is designated, as described in §63.181(b)(2)(ii) of this subpart, to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

§63.165 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in paragraph (b) of this section, as measured by the method specified in §63.180(c) of this subpart. For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, this paragraph (a) no longer applies and instead the owner or operator must comply with paragraph (e) of this section.

(b) Except as specified in paragraph (e) of this section, comply with paragraphs (b)(1) and (b)(2) of this section.

(1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart.

(2) No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart.

(c) Except as specified in paragraph (e) of this section, ~~A~~any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.172 of this subpart is exempt from the requirements of paragraphs (a) and (b) of this section.

(d) Except as specified in paragraph (e) of this section, comply with paragraphs (d)(1) and (d)(2) of this section.

(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart.

(e) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, except as specified in paragraph (e)(4) of this section, owners and operators must comply with the requirements specified in paragraphs (e)(1) and (2) of this section for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of paragraph (a) through (d) of this section. Except as specified in paragraphs (e)(4) and (5) of this section, owners and operators must also comply with the requirements specified in paragraphs (e)(3), (6), (7), and (8) of this section for all pressure relief devices in organic HAP service.

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

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

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

(ii) If the pressure relief device includes a rupture disk, either comply with the requirements in paragraph (e)(2)(i) of this section (and do not replace the rupture disk) or install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release.

(iii) If the pressure relief device consists only of a rupture disk, install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. Owners and operators must not initiate startup of the equipment served by the rupture disk until the rupture disc is replaced.

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

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

(A) Identifying the pressure release;

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

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

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

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

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

(C) Inherently safer designs or safety instrumentation systems.

(D) Deluge systems.

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

(iii) If any affected pressure relief device releases to atmosphere as a result of a pressure release event, owners and operators must perform root cause analysis and corrective action analysis according to the requirement in paragraph (e)(6) of this section and implement corrective actions according to the requirements in paragraph (e)(7) of this section. Owners and operators must also calculate the quantity of organic HAP released during each pressure release event and report this quantity as required in §63.182(d)(2)(xviii). Calculations may be based on data from the pressure relief device monitoring alone or in combination with process parameter monitoring data and process knowledge.

(iv) Owners and operators must determine the total number of release events that occurred during the calendar year for each affected pressure relief device separately.

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

(A) Except as specified in paragraph (e)(3)(v)(D) of this section, any release event for which the root cause of the event was determined to be operator error or poor maintenance.

(B) Except as specified in paragraph (e)(3)(v)(D) of this section, a second release event from a single pressure relief device in a 3 calendar year period for the same root cause for the same equipment.

(C) Except as specified in paragraph (e)(3)(v)(D) of this section, a third release event from a single pressure relief device in a 3 calendar year period for any reason.

(D) Paragraphs (e)(3)(v)(A) through (e)(3)(v)(C) of this section do not apply to pressure relief devices in ethylene oxide service, as defined in §63.101 of subpart F of this part; instead, any release event from an affected pressure relief device in ethylene oxide service is a violation of the pressure release management work practice standards.

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

(ii) Before the compliance dates specified in §63.100(k)(10) of subpart F of this part, both the closed vent system and control device (if applicable) referenced in paragraph (e)(4)(i) of this section must meet the applicable requirements specified in §63.172.

(iii) The drain system (if applicable) referenced in paragraph (e)(4)(i) of this section must meet the applicable requirements specified in §63.136(e) of subpart G of this part.

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

(i) Pressure relief devices in heavy liquid service, as defined in §63.161.

(ii) Thermal expansion relief valves.

(iii) Pressure relief devices on mobile equipment.

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

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

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

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

(ii) [Reserved]

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

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

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

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

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

(8) *Flowing pilot-operated pressure relief devices.* For affected sources that commenced construction or reconstruction on or before **[DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER]**, owners and operators are prohibited from installing a flowing pilot-operated pressure relief device or replacing any pressure relief device with a flowing pilot-operated pressure relief device after **[INSERT date 3 years after date of publication of final rule in the Federal Register]**. For affected sources that commenced construction or reconstruction after **[DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER]**, owners and operators are prohibited from installing and operating flowing pilot-operated pressure relief devices. For purpose of compliance with this paragraph, a flowing pilot-operated pressure relief device means the type of pilot-operated pressure relief device where the pilot discharge vent continuously releases emissions to the atmosphere when the pressure relief device is actuated.

§63.166 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §63.162(b) of this subpart. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.172 of this subpart; or

(4) Collect, store, and transport the purged process fluid to a system or facility identified in paragraph (b)(4)(i), (ii), or (iii) of this section.

(i) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility.

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) *In-situ* sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§63.167 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.162(b) of this subpart and paragraphs (d) and (e) of this section.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair.

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

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

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

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or, would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraph (a) through (c) of this section.

§63.168 Standards: Valves in gas/vapor service and in light liquid service.

(a) The provisions of this section apply to valves that are either in gas service or in light liquid service.

(1) The provisions are to be implemented on the dates set forth in the specific subpart in 40 CFR part 63 that references this subpart as specified in paragraph (a)(1)(i), (a)(1)(ii), or (a)(1)(iii) of this section.

(i) For each group of existing process units at existing sources subject to the provisions of subpart F or I of this part, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2½ years after the compliance date.

(ii) For new sources subject to the provisions of subpart F or I of this part, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(iii) Sources subject to other subparts in 40 CFR part 63 that reference this subpart shall comply on the dates specified in the applicable subpart.

(2) The owner or operator of a source subject to this subpart may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of §63.180(b)(6) of this subpart.

(b) The owner or operator of a source subject to this subpart shall monitor all valves, except as provided in §63.162(b) of this subpart and paragraphs (h) and (i) of this section, at the intervals specified in paragraphs (c) and (d) of this section and shall comply with all other provisions of this section, except as provided in §63.171, §63.177, §63.178, and §63.179 of this subpart.

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

(2) Except as specified in paragraph (b)(2)(iv) of this section, ~~T~~the instrument reading that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 500 parts per million or greater.

(iii) For Phase III, an instrument reading of 500 parts per million or greater.

(iv) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for valves in ethylene oxide service, as defined in §63.101 of subpart F of this part, that are either in gas service or in light liquid service the instrument reading that defines a leak is 100 parts per million or greater.

(c) In Phases I and II, each valve shall be monitored quarterly.

(d) Except as specified in paragraph (d)(5) of this section, ~~I~~in Phase III, the owner or operator shall monitor valves for leaks at the intervals specified below:

(1) At process units with 2 percent or greater leaking valves, calculated according to paragraph (e) of this section, the owner or operator shall either:

(i) Monitor each valve once per month; or

(ii) Within the first year after the onset of Phase III, implement a quality improvement program for valves that complies with the requirements of §63.175 (d) or (e) of this subpart and monitor quarterly.

(2) At process units with less than 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (d)(3) and (d)(4) of this section.

(3) At process units with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 quarters.

(4) At process units with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every 4 quarters.

(5) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for valves in ethylene oxide service, as defined in §63.101 of subpart F of this part, that are either in gas service or in light liquid service the monitoring period is once per month.

(e)(1) Percent leaking valves at a process unit shall be determined by the following equation:

$$\%V_L = (V_L/(V_T + V_C)) \times 100$$

where:

$\%V_L$	=	Percent leaking valves as determined through periodic monitoring required in paragraphs (b) through (d) of this section.
V_L	=	Number of valves found leaking excluding nonrepairables as provided in paragraph (e)(3)(i) of this section.
V_T	=	Total valves monitored, in a monitoring period excluding valves monitored as required by (f)(3) of this section.
V_C	=	Optional credit for removed valves = 0.67 × net number (i.e., total removed−total added) of valves in organic HAP service removed from process unit after the date set forth in §63.100(k) of subpart F for existing process units, and after the date of initial start-up for new sources. If credits are not taken, then $V_C = 0$.

(2) For use in determining monitoring frequency, as specified in paragraph (d) of this section, the percent leaking valves shall be calculated as a rolling average of two consecutive monitoring periods for monthly, quarterly, or semiannual monitoring programs; and as an average of any three out of four consecutive monitoring periods for annual monitoring programs.

(3)(i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(3)(ii) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process unit may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

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

(f)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §63.171 of this subpart.

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

(3) When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair.

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

(ii) Periodic monitoring required by paragraphs (b) through (d) of this section may be used to satisfy the requirements of this paragraph (f)(3), if the timing of the monitoring period coincides with the time specified in this paragraph (f)(3). Alternatively, other monitoring may be performed to satisfy the requirements of this paragraph (f)(3), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in this paragraph (f)(3).

(iii) If a leak is detected by monitoring that is conducted pursuant to paragraph (f)(3) of this section, the owner or operator shall follow the provisions of paragraphs (f)(3)(iii)(A) and (f)(3)(iii)(B) of this section, to determine whether that valve must be counted as a leaking valve for purposes of §63.168(e) of this subpart.

(A) If the owner or operator elected to use periodic monitoring required by paragraphs (b) through (d) of this section to satisfy the requirements of paragraph (f)(3) of this section, then the valve shall be counted as a leaking valve.

(B) If the owner or operator elected to use other monitoring, prior to the periodic monitoring required by paragraphs (b) through (d) of this section, to satisfy the requirements of paragraph (f)(3) of this section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

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

(1) Tightening of bonnet bolts,

(2) Replacement of bonnet bolts,

(3) Tightening of packing gland nuts, and

(4) Injection of lubricant into lubricated packing.

(h) Any valve that is designated, as described in §63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor valve is exempt from the requirements of paragraphs (b) through (f) of this section if:

(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b) through (d) of this section; and

(2) The owner or operator of the valve has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

(i) Any valve that is designated, as described in §63.181(b)(7)(ii) of this subpart, as a difficult-to-monitor valve is exempt from the requirements of paragraphs (b) through (d) of this section if:

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the valve is located is an existing source or the owner or operator designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor; and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

(j) Any equipment located at a plant site with fewer than 250 valves in organic HAP service is exempt from the requirements for monthly monitoring and a quality improvement program specified in paragraph (d)(1) of this section. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraph (d)(3) or (d)(4) of this section except as provided in paragraphs (h) and (i) of this section.

§63.169 Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.

(a) Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in §63.180(b) of this subpart if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in paragraphs (c) and (d) of this section, it is not necessary to monitor the system for leaks by the method specified in §63.180(b) of this subpart.

(b) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171 of this subpart.

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

(3) For equipment identified in paragraph (a) of this section that is not monitored by the method specified in §63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(d) First attempts at repair include, but are not limited to, the practices described under §§63.163(c)(2) and 63.168(g) of this subpart, for pumps and valves, respectively.

§63.170 Standards: Surge control vessels and bottoms receivers.

(a) Except as specified in paragraph (b) of this section, ~~E~~each surge control vessel or bottoms receiver that is not routed back to the process and that meets the conditions specified in table 2 or table 3 of this subpart shall be equipped with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements in §63.172 of this subpart, except as provided in §63.162(b) of this subpart, or comply with the requirements of §63.119(b) or (c) of subpart G of this part.

(b) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, paragraph (a) of this section no longer applies. Instead, each surge control vessel and bottoms receiver that is not routed back to the process and emits greater than or equal to 1.0 lb/hr of total organic HAP must be equipped with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements in §63.172, except as provided in §63.162(b), or comply with the requirements of §63.113(a)(1) or (a)(2) of subpart G of this part.

§63.171 Standards: Delay of repair.

(a) Except as specified in paragraph (f) of this section, ~~D~~delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(b) Except as specified in paragraph (f) of this section, ~~D~~delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.

(c) Except as specified in paragraph (f) of this section, ~~D~~delay of repair for valves, connectors, and agitators is also allowed if:

(1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.172 of this subpart.

(d) Except as specified in paragraph (f) of this section, ~~D~~delay of repair for pumps is also allowed if:

(1) Repair requires replacing the existing seal design with a new system that the owner or operator has determined under the provisions of §63.176(d) of this subpart will provide better performance or:

(i) A dual mechanical seal system that meets the requirements of §63.163(e) of this subpart,

(ii) A pump that meets the requirements of §63.163(f) of this subpart, or

(iii) A closed-vent system and control device that meets the requirements of §63.163(g) of this subpart; and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Except as specified in paragraph (f) of this section, ~~D~~delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(f) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, delay of repair is not allowed for light liquid pumps in ethylene oxide service, gas/vapor and light liquid valves in ethylene oxide service, and connectors in ethylene oxide service.

§63.172 Standards: Closed-vent systems and control devices.

(a) Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in §63.162(b) of this subpart.

(b) Recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts ~~par~~per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to the provisions of §63.179.

(c) Enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 °C.

(d) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~F~~flares used to comply with this subpart shall comply with the requirements of §63.11(b) of subpart A of this part.

(e) Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.

NOTE: The intent of this provision is to ensure proper operation and maintenance of the control device.

(f) Except as provided in paragraphs (k) and (l) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the closed-vent system is constructed of hard-piping, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and

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

(2) If the vapor collection system or closed-vent system is constructed of duct work, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and

(ii) Conduct annual inspections according to the procedures in paragraph (g) of this section.

(g) Each closed-vent system shall be inspected according to the procedures in §63.180(b) of this subpart.

(h) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (i) of this section.

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

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (i) of this section.

(i) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(j) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall comply with the provisions of either paragraph (j)(1) or (j)(2), and (j)(4) of this section, except as provided in paragraph (j)(3) of this section.

(1) Install, set or adjust, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in §63.118(a)(3) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; 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 the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line.

(3) Except as specified in paragraph (j)(4) of this section, ~~E~~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.

(4) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part:

(i) The use of a bypass line at any time on a closed vent system (used to comply with the provisions of this subpart) to divert emissions to the atmosphere or to a control device not meeting the requirements specified in this subpart is an emissions standards violation.

(ii) Paragraph (j)(3) of this section does not apply. Instead, the exemptions specified in paragraph (j)(4)(ii)(A) and (j)(4)(ii)(B) of this section apply.

(A) Except for pressure relief devices subject to §63.165(e)(4), equipment such as low leg drains and equipment subject to the requirements specified in subpart H of this part are not subject to this paragraph (j) of this section.

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

(k) Any parts of the closed-vent system that are designated, as described in paragraph 63.181(b)(7)(i), as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1) and (f)(2) of this section if:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (f)(1) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually.

(l) Any parts of the closed-vent system that are designated, as described in §63.181 (b)(7)(i) of this subpart, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1) and (f)(2) of this section if:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(m) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating.

(n) After the compliance dates specified in §63.100 of subpart F of this part, the owner or operator of any control device subject to this subpart that is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart BB, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, subpart BB, 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 chosen, in the next periodic report required by §63.182(d).

§63.173 Standards: Agitators in gas/vapor service and in light liquid service.

(a)(1) Each agitator shall be monitored monthly to detect leaks by the methods specified in §63.180(b) of this subpart, except as provided in §63.162(b) of this subpart.

(2) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(b)(1) Each agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator.

(2) If there are indications of liquids dripping from the agitator, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171 of this subpart.

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

(d) Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (d)(6) of this section are met:

(1) Each dual mechanical seal system is:

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

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of §63.172 of this subpart; or

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

(2) The barrier fluid is not in light liquid organic HAP service.

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

(4) Each agitator is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal.

(i) If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the agitator shall be monitored as specified in §63.180(b) of this subpart to determine the presence of organic HAP in the barrier fluid.

(ii) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in paragraph (d)(3) of this section is observed daily or is equipped with an alarm unless the agitator is located within the boundary of an unmanned plant site.

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

(ii) If indications of liquids dripping from the agitator seal exceed the criteria established in paragraph (d)(6)(i) of this section, or if, based on the criteria established in paragraph (d)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171 of this subpart.

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

(e) Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from paragraphs (a) through (c) of this section.

(f) Any agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or fuel gas system or to a control device that complies with the requirements of §63.172 of this subpart is exempt from the requirements of paragraphs (a) through (c) of the section.

(g) Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(1) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each agitator is visually inspected as often as practical and at least monthly.

(h) Any agitator that is difficult-to-monitor is exempt from the requirements of paragraphs (a) through (d) of this section if:

(1) The owner or operator determines that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the agitator is located is an existing source or the owner or operator designates less than three percent of the total number of agitators in a new source as difficult-to-monitor; and

(3) The owner or operator follows a written plan that requires monitoring of the agitator at least once per calendar year.

(i) Any agitator that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of paragraphs (a) through (d) of this section.

(j) Any agitator that is designated, as described in §63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor agitator is exempt from the requirements of paragraphs (a) through (d) of this section if:

(1) The owner or operator of the agitator determines that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) through (d) of this section; and

(2) The owner or operator of the agitator has a written plan that requires monitoring of the agitator as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

§63.174 Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.162(b) of this subpart, and in paragraphs (f) through (h) of this section, at the intervals specified in paragraph (b) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart.

(2) Except as specified in paragraph (a)(3) of this section, ~~I~~if an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(3) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for connectors in ethylene oxide service, as defined in §63.101 of subpart F of this part, the instrument reading that defines a leak for connectors is 100 parts per million or greater.

(b) The owner or operator shall monitor for leaks at the intervals specified in either paragraph (b)(1) or (b)(2) of this section and in paragraphs (b)(3) through (b)(5) of this section.

(1) For each group of existing process units within an existing source, by no later than 12 months after the compliance date, the owner or operator shall monitor all connectors, except as provided in paragraphs (f) through (h) of this section.

(2) For new sources, within the first 12 months after initial start-up or by no later than 12 months after the date of promulgation of a specific subpart that references this subpart, whichever is later, the owner or operator shall monitor all connectors, except as provided in paragraphs (f) through (h) of this section.

(3) After conducting the initial survey required in paragraph (b)(1) or (b)(2) of this section, the owner or operator shall perform all subsequent monitoring of connectors at the frequencies specified in paragraphs (b)(3)(i) through (b)(3)(v) of this section, except as provided in paragraphs (b)(3)(vi) and (c)(2) of this section:

(i) Once per year (i.e., 12-month period), if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period.

(ii) Once every 2 years, if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. An owner or operator may comply with this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year period.

(iii) If the owner or operator of a process unit in a biennial leak detection and repair program calculates less than 0.5 percent leaking connectors from the 2-year monitoring period, the owner or operator may monitor the connectors one time every 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years.

(iv) If a process unit complying with the requirements of paragraph (b) of this section using a 4-year monitoring interval program has greater than or equal to 0.5 percent but less than 1 percent leaking connectors, the owner or operator shall increase the monitoring frequency to one time every 2 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii) of this section when the percent leaking connectors decreases to less than 0.5 percent.

(v) If a process unit complying with requirements of paragraph (b)(3)(iii) of this section using a 4-year monitoring interval program has 1 percent or greater leaking connectors, the owner or operator shall increase the monitoring frequency to one time per year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii) of this section when the percent leaking connectors decreases to less than 0.5 percent.

(vi) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for connectors in ethylene oxide service, as defined in §63.101 of subpart F of this part, the monitoring period is once every month and paragraph (c)(2) of this section is not applicable.

(4) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of §63.180(b)(6).

(5) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(11) of subpart F of this part, for each connector in ethylene oxide service, as defined in §63.101 of subpart F of this part, that is added to a CMPU, and for each connector in ethylene oxide service that replaces a connector in ethylene oxide service, owners and operators must initially monitor for leaks within 5 days after initial startup of the equipment.

(c)(1)(i) Except as provided in paragraph (c)(1)(ii) of this section, each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section, unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of paragraph (i)(2) of this section.

(ii) As an alternative to the requirements in paragraph (c)(1)(i) of this section, an owner or operator may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the owner or operator may not count nonrepairable connectors for the purposes of paragraph (i)(2) of this section. The owner or operator shall calculate the percent leaking connectors for the monitoring periods described in paragraph (b) of this section, by setting the nonrepairable component, C_{AN}, in the equation in paragraph (i)(2) of this section to zero for all monitoring periods.

(iii) An owner or operator may switch alternatives described in paragraphs (c)(1) (i) and (ii) of this section at the end of the current monitoring period he is in, provided that it is reported as required in §63.182 of this subpart and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch.

(2) As an alternative to the requirements of paragraph (b)(3) of this section, each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in paragraph (c)(2)(iii) or (c)(2)(iv) of this section may:

(i) Comply with the requirements of §63.169 of this subpart, and

(ii) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section.

(iii) For sources subject to subparts F and I of this part, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before December 31, 1992.

(iv) For sources not identified in paragraph (c)(2)(iii) of this section, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before the date of proposal of the applicable subpart of this part that references this subpart.

(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (g) of this section and in §63.171 of this subpart. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(e) [Reserved]

(f) Any connector that is designated, as described in §63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor connector is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with paragraphs (a) through (e) of this section; and

(2) The owner or operator has a written plan that requires monitoring of the connector as frequently as practicable during safe to monitor periods, but not more frequently than the periodic schedule otherwise applicable.

(g) Except as specified in paragraph (g)(3) of this section, ~~A~~any connector that is designated, as described in §63.181(b)(7)(iii) of this subpart, as an unsafe-to-repair connector is exempt from the requirements of paragraphs (a), (d), and (e) of this section if:

(1) The owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (d) of this section; and

(2) The connector will be repaired before the end of the next scheduled process unit shutdown.

(3) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates

specified in §63.100(k)(11) of subpart F of this part, for connectors in ethylene oxide service, as defined in §63.101 of subpart F of this part, paragraph (g) of this section is no longer applicable.

(h)(1) Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (c) of this section and from the recordkeeping and reporting requirements of §63.181 and §63.182 of this subpart. An inaccessible connector is one that is:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

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

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold; or

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

(2) If any inaccessible or ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §63.171 of this subpart and paragraph (g) of this section.

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

(i) For use in determining the monitoring frequency, as specified in paragraph (b) of this section, the percent leaking connectors shall be calculated as specified in paragraphs (i)(1) and (i)(2) of this section.

(1) For the first monitoring period, use the following equation:

$$\% C_L = C_L/(C_t + C_C) \times 100$$

where:

$\% C_L$	=	Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b) of this section.
C_L	=	Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart.
C_t	=	Total number of monitored connectors in the process unit.
C_C	=	Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(2) For subsequent monitoring periods, use the following equation:

$$\% C_L = [(C_L - C_{AN})/(C_t + C_C)] \times 100$$

where:

$\% C_L$	=	Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b) of this section.
C_L	=	Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart.
C_{AN}	=	Number of allowable nonrepairable connectors, as determined by monitoring required in paragraphs (b)(3) and (c) of this section, not to exceed 2 percent of the total connector population, C_t.

C_t	=	Total number of monitored connectors, including nonrepairables, in the process unit.
C_C	=	Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(j) Optional credit for removed connectors. If an owner or operator eliminates a connector subject to monitoring under paragraph (b) of this section, the owner or operator may receive credit for elimination of the connector, as described in paragraph (i) of this section, provided the requirements in paragraphs (j)(1) through (j)(4) are met.

(1) The connector was welded after the date of proposal of the specific subpart that references this subpart.

(2) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method.

(3) Welds created after the date of proposal but before the date of promulgation of a specific subpart that references this subpart are monitored or tested by 3 months after the compliance date specified in the applicable subpart.

(4) Welds created after promulgation of the subpart that references this subpart are monitored or tested within 3 months after being welded.

(5) If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is therefore not exempt from the provisions of this subpart.

§63.175 Quality improvement program for valves.

(a) In Phase III, an owner or operator may elect to comply with one of the alternative quality improvement programs specified in paragraphs (d) and (e) of this section. The decision to use one of these alternative provisions to comply with the requirements of §63.168(d)(1)(ii) of this subpart must be made during the first year of Phase III for existing process units and for new process units.

(b) An owner or operator of a process unit subject to the requirements of paragraph (d) or (e) of this section shall comply with those requirements until the process unit has fewer than 2 percent leaking valves, calculated as a rolling average of 2 consecutive quarters, as specified in §63.168(e) of this subpart.

(c) After the process unit has fewer than 2 percent leaking valves, the owner or operator may elect to comply with the requirements in §63.168 of this subpart, to continue to comply with the requirements in paragraph (e) (or (d), if appropriate) of this section, or comply with both the requirements in §63.168 and §63.175.

(1) If the owner or operator elects to continue the quality improvement program, the owner or operator is exempt from the requirements for performance trials as specified in paragraph (e)(6) of this section, or further progress as specified in paragraph (d)(4) of this section, as long as the process unit has fewer than 2 percent leaking valves calculated according to §63.168(e).

(2) If the owner or operator elects to comply with both paragraph (e) of this section and §63.168 of this subpart, he may also take advantage of the lower monitoring frequencies associated with lower leak rates in §63.168 (d)(2), (d)(3), and (d)(4) of this subpart.

(3) If the owner or operator elects not to continue the quality improvement program, the program is no longer an option if the process unit again exceeds 2 percent leaking valves, and in such case, monthly monitoring will be required.

(d) The following requirements shall be met if an owner or operator elects to use a quality improvement program to demonstrate further progress:

(1) The owner or operator shall continue to comply with the requirements in §63.168 of this subpart except each valve shall be monitored quarterly.

(2) The owner or operator shall collect the following data, and maintain records as required in §63.181(h)(1) of this subpart, for each valve in each process unit subject to the quality improvement program:

(i) The maximum instrument reading observed in each monitoring observation before repair, the response factor for the stream if appropriate, the instrument model number, and date of the observation.

(ii) Whether the valve is in gas or light liquid service.

(iii) If a leak is detected, the repair methods used and the instrument readings after repair.

(3) The owner or operator shall continue to collect data on the valves as long as the process unit remains in the quality improvement program.

(4) The owner or operator must demonstrate progress in reducing the percent leaking valves each quarter the process unit is subject to the requirements of paragraph (d) of this section, except as provided in paragraphs (d)(4)(ii) and (d)(4)(iii) of this section.

(i) Demonstration of progress shall mean that for each quarter there is at least a 10-percent reduction in the percent leaking valves from the percent leaking valves determined for the preceding monitoring period. The percent leaking valves shall be calculated as a rolling average of two consecutive quarters of monitoring data. The percent reduction shall be calculated using the rolling average percent leaking valves, according to the following:

$$\%LV_R = (\%LV_{AVG1} - \%LV_{AVG2} / \%LV_{AVG1} \times 100$$

where:

$\%LV_R$	=	Percent leaking valve reduction.
$\%LV_{AVG1}$	=	$(\%V_{Li} + \%V_{Li=1})/2$.
$\%LV_{AVG2}$	=	$(\%V_{Li=1} + \%V_{Li=2})/2$.

where:

$\%V_{Li}$, $\%V_{Li=1}$, $\%V_{Li=2}$ are percent leaking valves calculated for subsequent monitoring periods, i, i + 1, i + 2.

(ii) An owner or operator who fails for two consecutive rolling averages to demonstrate at least a 10-percent reduction per quarter in percent leaking valves, and whose overall average percent reduction based on two or more rolling averages is less than 10 percent per quarter, shall either comply with the requirements in §63.168(d)(1)(i) of this subpart using monthly monitoring or shall comply using a quality improvement program for technology review as specified in paragraph (e) of this section. If the owner or operator elects to comply with the requirements of paragraph (e) of this section, the schedule for performance trials and valve replacements remains as specified in paragraph (e) of this section.

(iii) As an alternative to the provisions in paragraph (d)(4)(i), an owner or operator may use the procedure specified in paragraphs (d)(4)(iii)(A) and (d)(4)(iii)(B) of this section to demonstrate progress in reducing the percent leaking valves.

(A) The percent reduction that must be achieved each quarter shall be calculated as follows:

$$\%RR = \frac{\%V_L - 2\%}{0.10}$$

%RR	=	percent reduction required each quarter, as calculated according to §63.168(e)
$\%V_L$	=	percent leaking valves, calculated according to §63.168(e), at the time elected to use provisions of §63.168(d)(1)(ii)

(B) The owner or operator shall achieve less than 2 percent leaking valves no later than 2 years after electing to use the demonstration of progress provisions in §63.175(d) of this subpart.

(e) The following requirements shall be met if an owner or operator elects to use a quality improvement program of technology review and improvement:

(1) The owner or operator shall comply with the requirements in §63.168 of this subpart except the requirement for monthly monitoring in §63.168(d)(1)(i) of this subpart does not apply.

(2) The owner or operator shall collect the data specified below, and maintain records as required in §63.181(h)(2), for each valve in each process unit subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or group of process units basis. The data shall include the following:

(i) Valve type (e.g., ball, gate, check); valve manufacturer; valve design (e.g., external stem or actuating mechanism, flanged body); materials of construction; packing material; and year installed.

(ii) Service characteristics of the stream such as operating pressure, temperature, line diameter, and corrosivity.

(iii) Whether the valve is in gas or light liquid service.

(iv) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if adjusted, instrument model number, and date of the observation.

(v) If a leak is detected, the repair methods used and the instrument readings after repair.

(vi) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the valves as long as the process unit remains in the quality improvement program.

(4) The owner or operator shall inspect all valves removed from the process unit due to leaks. The inspection shall determine which parts of the valve have failed and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5)(i) The owner or operator shall analyze the data collected to comply with the requirements of paragraph (e)(2) of this section to determine the services, operating or maintenance practices, and valve designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process specific factors.

(ii) The analysis shall also be used to identify any superior performing valve technologies that are applicable to the service(s), operating conditions, or valve designs associated with poorer than average emission performance. A superior performing valve technology is one for which a group of such valves has a leak frequency of less than 2 percent for specific applications in such a process unit. A candidate superior performing valve technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 2 percent leaking valves in the process unit.

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of valves removed from the process unit due to leaks,

(B) Information from the available literature and from the experience of other plant sites that will identify valve designs or technologies and operating conditions associated with low emission performance for specific services, and

(C) Information on limitations on the service conditions for the valve design and operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of Phase III. The first analysis shall be performed using a minimum of two quarters of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify superior performing valve designs or technologies that can be applied to the operating conditions and services identified as having poorer than average performance, except as provided in paragraph (e)(6)(v) of this section. The trial program shall be used to evaluate the feasibility of using in the process unit the valve designs or technologies that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of valves or operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 2 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing valve technologies is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in §63.181(h)(5)(ii) of this subpart.

(ii) The number of valves in the trial evaluation program shall be the lesser of 1 percent or 20 valves for programs involving single process units and the lesser of 1 percent or 50 valves for programs involving groups of process units.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing valve designs or technologies to be evaluated, the stages for evaluating the identified candidate valve designs or technologies, including the estimated time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial valves.

(iv) The performance trials shall initially be conducted for, at least, a 6-month period beginning not later than 18 months after the start of Phase III. Not later than 24 months after the start of Phase III, the owner or operator shall have identified valve designs or technologies that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (e)(6)(vi) of this section. The compilation of candidate and demonstrated superior emission performance valve designs or technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 total employees shall be exempt from trial evaluations of valves. Plant sites exempt from the trial evaluations of valves shall begin the program at the start of the fourth year of Phase III.

(vi) An owner or operator who has conducted performance trials on all candidate superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible candidate superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each owner or operator who elects to use a quality improvement program for technology review and improvement shall prepare and implement a valve quality assurance program that details purchasing specifications and maintenance procedures for all valves in the process unit. The quality assurance program may establish any number of categories, or classes, of valves as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (e)(5) of this section, if applicable, the

findings of the trial evaluation required in paragraph (e)(6) of this section, and the operating conditions in the process unit. The quality assurance program shall be reviewed and, as appropriate, updated each year as long as the process unit has 2 percent or more leaking valves.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of valves. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the valve;

(C) Include a written procedure for bench testing of valves that specifies performance criteria for acceptance of valves and specifies criteria for the precision and accuracy of the test apparatus. All valves repaired off-line after preparation of the quality assurance plan shall be bench-tested for leaks. This testing may be conducted by the owner or operator of the process unit, by the vendor, or by a designated representative. The owner or operator shall install only those valves that have been documented through bench-testing to be nonleaking.

(D) Require that all valves repaired on-line be monitored using the method specified in §63.180(b) of this subpart for leaks for 2 successive months, after repair.

(E) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the process unit or by a designated representative.

(F) Detail off-line valve maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished valves will meet the design specifications for the valve type and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of Phase III for plant sites with 400 or more valves or owned by a corporation with 100 or more employees; and no later than the start of the fourth year of Phase III for plant sites with less than 400 valves and owned by a corporation with less than 100 employees.

(8) Beginning at the start of the third year of Phase III for plant sites with 400 or more valves or owned by a corporation with 100 or more employees and at the start of the fourth year of Phase III for plant sites with less than 400 valves and owned by a corporation with less than 100 employees, each valve that is replaced for any reason shall be replaced with a new or modified valve that complies with the quality assurance standards for the valve category and that is identified as superior emission performance technology. Superior emission performance technology means valves or valve technologies identified with emission performance that, combined with appropriate process, operating, and maintenance practices, will result in less than 2 percent leaking valves for specific applications in a large population, except as provided in paragraph (e)(8)(ii) of this section.

(i) The valves shall be maintained as specified in the quality assurance program.

(ii) If a superior emission performance technology cannot be identified, then valve replacement shall be with one of (if several) the lowest emission performance technologies that has been identified for the specific application.

§63.176 Quality improvement program for pumps.

(a) In Phase III, if, on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit (or plant site) or three pumps in a process unit (or plant site) leak, the owner or operator shall comply with the requirements of this section as specified below:

(1) Pumps that are in food/medical service or in polymerizing monomer service shall comply with all requirements except for those specified in paragraph (d)(8) of this section.

(2) Pumps that are not in food/medical or polymerizing monomer service shall comply with all requirements of this section.

(b) The owner or operator shall comply with the requirements of this section until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit (or plant site). Once the performance level is achieved, the owner or operator shall comply with the requirements in §63.163 of this subpart.

(c) If in a subsequent monitoring period, the process unit (or plant site) has greater than 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the owner or operator shall resume the quality improvement program starting at performance trials.

(d) The quality improvement program shall include the following:

(1) The owner or operator shall comply with the requirements in §63.163 of this subpart.

(2) The owner or operator shall collect the following data, and maintain records as required in §63.181(h)(3), for each pump in each process unit (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the pumps as long as the process unit (or plant site) remains in the quality improvement program.

(4) The owner or operator shall inspect all pumps or pump seals which exhibited frequent seal failures and were removed from the process unit due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5)(i) The owner or operator shall analyze the data collected to comply with the requirements of paragraph (d)(2) of this section to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit (or plant site).

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using a minimum of 6 months of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in paragraph (d)(6)(v) of this section. The trial program shall be used to evaluate the feasibility of using in the process unit (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in §63.181(h)(5)(ii).

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process units. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the owner or operator shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (d)(6)(vi) of this section. The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) An owner or operator who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each owner or operator shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (d)(5) of this section, if applicable, the findings of the trial evaluation required in paragraph (d)(6) of this section, and the operating conditions in the process unit. The quality assurance program shall be updated each year as long as the process unit has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the plant site or process unit or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) Beginning at the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the owner or operator shall replace, as described in paragraphs (d)(8)(i) and (d)(8)(ii) of this section, the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance which, when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit or plant site. Superior emission performance technology includes material or

design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of §63.163 of this subpart are pumps determined to be superior performance technology.

(ii) The owner or operator may delay replacement of pump seals or pumps with superior technology until the next planned process unit shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

§63.177 Alternative means of emission limitation: General.

(a) Permission to use an alternative means of emission limitation under section 112(h)(3) of the Act shall be governed by the following procedures in paragraphs (b) through (e) of this section.

(b) Where the standard is an equipment, design, or operational requirement:

(1) Each owner or operator applying for permission to use an alternative means of emission limitation under §63.6(g) of subpart A of this part shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.

(2) The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Where the standard is a work practice:

(1) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.

(2) For each kind of equipment for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.

(3) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for permission shall commit, in writing, for each kind of equipment to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.

(5) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same or greater emission reduction as the required work practices of this subpart.

(d) An owner or operator may offer a unique approach to demonstrate the alternative means of emission limitation.

(e)(1) Manufacturers of equipment used to control equipment leaks of an organic HAP may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the organic HAP achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will grant permission according to the provisions of paragraphs (b), (c), and (d) of this section.

§63.178 Alternative means of emission limitation: Batch processes.

(a) As an alternative to complying with the requirements of §§63.163 through 63.171 and §§63.173 through 63.176, an owner or operator of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in paragraphs (b) and (c) of this section, or the owner or operator may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The owner or operator may switch among the alternatives provided the change is documented as specified in §63.181.

(b) The following requirements shall be met if an owner or operator elects to use pressure testing of batch product-process equipment to demonstrate compliance with this subpart. An owner or operator who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.163, §§63.168 and 63.169, and §§63.173 through 63.176 of this subpart.

(1) Each time equipment is reconfigured for production of a different product or intermediate, the batch product-process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service.

(i) When the batch product-process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment.

(ii) Each batch product process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year.

(iii) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate.

(2) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart.

(3)(i) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss.

(ii) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss.

(4)(i) If a leak is detected, it shall be repaired and the batch product-process equipment shall be retested before start-up of the process.

(ii) If a batch product-process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in paragraph (d) of this section are met.

(c) The following requirements shall be met if an owner or operator elects to monitor the equipment to detect leaks by the method specified in §63.180(b) of this subpart to demonstrate compliance with this subpart.

(1) The owner or operator shall comply with the requirements of §§63.163 through 63.170, and §§63.172 through 63.176 of this subpart.

(2) The equipment shall be monitored for leaks by the method specified in §63.180(b) of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(3) The equipment shall be monitored for leaks as specified below:

(i) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit.

(ii) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart.

(iii) Equipment other than connectors shall be monitored at the frequencies specified in table 1 of this subpart. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating.

(iv) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating.

(4) If a leak is detected, it shall be repaired as soon as practicable but not later than 15 calendar days after it is detected, except as provided in paragraph (d) of this section.

(d) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met:

(1) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted.

(2) The repair is made no later than 10 calendar days after delivery of the replacement equipment.

§63.179 Alternative means of emission limitation: Enclosed-vented process units.

Process units enclosed in such a manner that all emissions from equipment leaks are vented through a closed-vent system to a control device meeting the requirements of §63.172 of this subpart are exempt from the requirements of §63.163, through 63.171, and §§63.173 and 63.174 of this subpart. The enclosure shall be maintained under a negative pressure at all times while the process unit is in operation to ensure that all emissions are routed to a control device.

§63.180 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Monitoring, as required under this subpart, shall comply with the following requirements:

(1) Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.

(2)(i) Except as provided for in paragraph (b)(2)(ii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (b)(2)(i) of this section, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (b)(2)(i) of this section.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(4) Calibration gases shall be:

(i) Zero air (less than 10 parts per million of hydrocarbon in air); and

(ii) Mixtures of methane in air at the concentrations specified in paragraphs (b)(4)(ii)(A) through (b)(4)(ii)(C) of this section. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(A) For Phase I, a mixture of methane or other compounds, as applicable, in air at a concentration of approximately, but less than, 10,000 parts per million.

(B) For Phase II, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million for agitators, 5,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of this section.

(C) For Phase III, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators; 2,000 parts per million for pumps in food/medical service; 5,000 parts per million for pumps in polymerizing monomer service; 1,000 parts per million for all other pumps; and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of this section.

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(6) Monitoring data that do not meet the criteria specified in paragraphs (b)(1) through (b)(5) of this section may be used to qualify for less frequent monitoring under the provisions in §63.168(d)(2) and (d)(3) or §63.174(b)(3)(ii) or (b)(3)(iii) of this subpart provided the data meet the conditions specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section.

(i) The data were obtained before April 22, 1994.

(ii) The departures from the criteria specified in paragraphs (b)(1) through (b)(5) of this section or from the specified monitoring frequency of §63.168(c) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of section 3.1.2(a) of Method 21 of appendix A of 40 CFR part 60 instead of paragraph (b)(2) of this section, or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure.

(c) When equipment is monitored for compliance as required in §§63.164(i), 63.165(a), and 63.172(f) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the owner or operator may elect to adjust or not to adjust the instrument readings for background. If an owner or operator elects to not adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (b)(1) through (b)(4) of this section. In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (c)(1) through (c)(4) of this section.

(1) The requirements of paragraphs (b) (1) through (4) of this section shall apply.

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance.

(d)(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless an owner or operator demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR part 60, appendix A shall be used. The ASTM D6420-18 (Incorporated by reference, see § 63.14 of Subpart A of this part) may also be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(2)(i) An owner or operator may use good engineering judgment rather than the procedures in paragraph (d)(1) of this section to determine that the percent organic HAP content does not exceed 5 percent by weight. When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in paragraph (d)(1) of this section shall be used to resolve the disagreement.

(ii) Conversely, the owner or operator may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent.

(3) If an owner or operator determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in paragraph (d)(1) of this section, or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service.

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.

(e) When a flare is used to comply with §63.172(d), the owner or operator shall comply with paragraphs (e)(1) through (3) of this section, except as specified in paragraph (a) of §63.108 of subpart F of this part. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(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).

(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.

(f) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart.

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum.

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off.

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation:

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta P/t$	=	Change in pressure, psig/hr.
P_f	=	Final pressure, psig.
P_i	=	Initial pressure, psig.
$t_f - t_i$	=	Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the owner or operator shall use a pressure measurement device with a precision of at least + 10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour.

(5) An alternative procedure may be used for leak testing the equipment if the owner or operator demonstrates the alternative procedure is capable of detecting a pressure loss or rise.

(g) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart.

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off.

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure.

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected.

(4) An alternative procedure may be used for leak testing the equipment, if the owner or operator demonstrates the alternative procedure is capable of detecting losses of fluid.

§63.181 Recordkeeping requirements.

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

(b) Except as provided in paragraph (e) of this section, the following information pertaining to all equipment in each process unit subject to the requirements in §§63.162 through 63.174 of this subpart shall be recorded:

(1)(i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in §63.174 of this subpart and instrumentation systems) subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the list shall be complete no later than the completion of the initial survey required by §63.174 (b)(1) or (b)(2) of this subpart.

(ii) A schedule by process unit for monitoring connectors subject to the provisions of §63.174(a) of this subpart and valves subject to the provisions of §63.168(d) of this subpart.

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

(2)(i) A list of identification numbers for equipment that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of §63.163(g), §63.164(h), §63.165(c), or §63.173(f) of this subpart.

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

(iii) Identification of surge control vessels or bottoms receivers subject to the provisions of this subpart that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of §63.170 of this subpart.

(3)(i) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of this subpart.

(ii) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of this subpart.

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

(5) Identification of screwed connectors subject to the requirements of §63.174(c)(2) of this subpart. Identification can be by area or grouping as long as the total number within each group or area is recorded.

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

(i) Design criteria required in §§63.163(e)(6)(i), 63.164(e)(2), and 63.173(d)(6)(i) of this subpart and an explanation of the design criteria; and

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

(7) The following information pertaining to all pumps subject to the provisions of §63.163(j), valves subject to the provisions of §63.168(h) and (i) of this subpart, agitators subject to the provisions of §63.173(h) through (j), and connectors subject to the provisions of §63.174(f) and (g) of this subpart shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8)(i) A list of valves removed from and added to the process unit, as described in §63.168(e)(1) of this subpart, if the net credits for removed valves is expected to be used.

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

(9)(i) For batch process units that the owner or operator elects to monitor as provided under §63.178(c) of this subpart, a list of equipment added to batch product process units since the last monitoring period required in §63.178(c)(3)(ii) and (3)(iii) of this subpart.

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

(10) For any leaks detected as specified in §§63.163 and 63.164; §§63.168 and 63.169; and §§63.172 through 63.174 of this subpart, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(11) For each pressure relief device subject to the pressure release management work practice standards in §63.165(e), owners and operators must keep the records specified in paragraphs (b)(11)(i) through (b)(11)(iii) of this section.

(i) Records of the prevention measures implemented as required in §63.165(e)(3)(ii).

(ii) Records of the number of releases during each calendar year. Keep these records for the current calendar year and the past 5 calendar years.

(iii) For each release to the atmosphere, owners and operators must keep the records specified in paragraphs (b)(11)(iii)(A) through (b)(11)(iii)(D) of this section.

(A) The start and end time and date of each pressure release to the atmosphere.

(B) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event.

(C) Records of the root cause analysis and corrective action analysis conducted as required in §63.165(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §63.165(e)(7)(i).

(D) For any corrective action analysis for which implementation of corrective actions are required in §63.165(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(12) For equipment in ethylene oxide service, as defined in §63.101 of subpart F of this part, records of the percent ethylene oxide content of the process fluid and the method used to determine it.

(c) For visual inspections of equipment subject to the provisions of this subpart (e.g., §63.163(b)(3), §63.163(e)(4)(i)), the owner or operator shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in paragraph (d) of this section for leaking equipment identified in this inspection, except as provided in paragraph (e) of this section. These records shall be retained for 2 years.

(d) When each leak is detected as specified in §§63.163 and 63.164; §§63.168 and 63.169; and §§63.172 through 63.174 of this subpart, the following information shall be recorded and kept for 2 years:

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

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

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

(4) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

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

(i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure. For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, on and after [INSERT date 3 years after date of publication of final rule in the

Federal Register], the sentence “The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.6(e)(3) of subpart A of this part, for the source or may be part of a separate document that is maintained at the plant site.” in this paragraph no longer applies.

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

(6) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(7)(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in §63.174(b) of this subpart, as described in §63.174(c)(1) of this subpart, unless the owner or operator elects to comply with the provisions of §63.174(c)(1)(ii) of this subpart.

(ii) The date and results of monitoring as required in §63.174(c) of this subpart. If identification of connectors that have been opened or otherwise had the seal broken is made by location under paragraph (d)(7)(i) of this section, then all connectors within the designated location shall be monitored.

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

(9) Copies of the periodic reports as specified in §63.182(d) of this subpart, if records are not maintained on a computerized database capable of generating summary reports from the records.

(e) The owner or operator of a batch product process who elects to pressure test the batch product process equipment train to demonstrate compliance with this subpart is exempt from the requirements of paragraphs (b), (c), (d), and (f) of this section. Instead, the owner or operator shall maintain records of the following information:

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

(2) [Reserved]

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

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

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

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

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

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

(iii) The reason for the delay of repair.

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

(v) The date of successful repair.

(f) The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in §§63.165 (a) and (b) of this subpart. The results shall include:

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

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

(g) The owner or operator shall maintain records of the information specified in paragraphs (g)(1) through (g)(3) of this section for closed-vent systems and control devices subject to the provisions of §63.172 of this subpart. The records specified in paragraph (g)(1) of this section shall be retained for the life of the equipment. The records specified in paragraphs (g)(2) and (g)(3) of this section shall be retained for 2 years.

(1) The design specifications and performance demonstrations specified in paragraphs (g)(1)(i) through (g)(1)(iv) of this section.

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

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

(iii) Except as specified in paragraph (a) of §63.108 of subpart F of this part, t~~T~~he flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by §63.11(b) of subpart A of this part.

(iv) A description of the parameter or parameters monitored, as required in §63.172(e) of this subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Records of operation of closed-vent systems and control devices, as specified in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

(i) Except as specified in paragraph (a) of §63.108 of subpart F of this part, ~~D~~dates and durations when the closed-vent systems and control devices required in §§63.163 through 63.166, and §63.170 of this subpart are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

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

(iii) Dates and durations of start-ups and shutdowns of control devices required in §§63.163 through 63.166, and §63.170 of this subpart.

(3) Records of inspections of closed-vent systems subject to the provisions of §63.172 of this subpart, as specified in paragraphs (g)(3)(i) ~~and~~ through (g)(3)(iii) of this section.

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

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

(iii) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (g)(3)(i) and (g)(3)(ii) of this section. For each flow event from a bypass line subject to the requirements in §63.172(j), the owner or operator must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in this subpart, the owner or operator must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(h) Each owner or operator of a process unit subject to the requirements of §§63.175 and 63.176 of this subpart shall maintain the records specified in paragraphs (h)(1) through (h)(9) of this section for the period of the quality improvement program for the process unit.

(1) For owners or operators who elect to use a reasonable further progress quality improvement program, as specified in §63.175(d) of this subpart:

(i) All data required in §63.175(d)(2) of this subpart.

(ii) The percent leaking valves observed each quarter and the rolling average percent reduction observed in each quarter.

(iii) The beginning and ending dates while meeting the requirements of §63.175(d) of this subpart.

(2) For owners or operators who elect to use a quality improvement program of technology review and improvement, as specified in §63.175(e) of this subpart:

(i) All data required in §63.175(e)(2) of this subpart.

(ii) The percent leaking valves observed each quarter.

(iii) Documentation of all inspections conducted under the requirements of §63.175(e)(4) of this subpart, and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of §63.175(e) of this subpart.

(3) For owners or operators subject to the requirements of the pump quality improvement program as specified in §63.176 of this subpart:

(i) All data required in §63.176(d)(2) of this subpart.

(ii) The rolling average percent leaking pumps.

(iii) Documentation of all inspections conducted under the requirements of §63.176(d)(4) of this subpart, and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of §63.176(d) of this subpart.

(4) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.

(5) Records of all analyses required in §§63.175(e) and 63.176(d) of this subpart. The records will include the following:

(i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.

(ii) The reasons for rejecting specific candidate superior emission performing valve or pump technology from performance trials.

(iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under §§63.175(e)(6)(iii) and 63.176(d)(6)(iii) of this subpart.

(iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.

(6) All records documenting the quality assurance program for valves or pumps as specified in §§63.175(e)(7) and 63.176(d)(7) of this subpart.

(7) Records indicating that all valves or pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance requirements in §63.175(e)(7) and §63.176(d)(7) of this subpart.

(8) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified in §63.176(d)(8) of this subpart.

(9) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.

(i) The owner or operator of equipment in heavy liquid service shall comply with the requirements of either paragraph (i)(1) or (i)(2) of this section, as provided in paragraph (i)(3) of this section.

(1) Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service.

(2) When requested by the Administrator, demonstrate that the piece of equipment or process is in heavy liquid service.

(3) A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of "in light liquid service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(j) Identification, either by list, location (area or group) of equipment in organic HAP service less than 300 hours per year within a process unit subject to the provisions of this subpart under §63.160 of this subpart.

(k) Owners and operators choosing to comply with the requirements of §63.179 of this subpart shall maintain the following records:

(1) Identification of the process unit(s) and the organic HAP's they handle.

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

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

(k) For fenceline monitoring systems subject to §63.184 of this subpart, each owner or operator must keep the records specified in paragraphs (k)(1) through (k)(11) of this section.

(1) Coordinates of all passive tube and canister monitors, including co-located samplers and field blanks, and if applicable, the meteorological station. The owner or operator shall determine the coordinates using an instrument with an accuracy of at least 3 meters. The coordinates shall be in decimal degrees with at least five decimal places.

(2) The start and stop times and dates for each sample, as well as the tube or canister identifying information.

(3) Sampling period average temperature and barometric pressure measurements.

(4) For each outlier determined in accordance with Section 9.2 of Method 325A of appendix A of this part the sampler location of and the concentration of the outlier and the evidence used to conclude that the result is an outlier. The evidence must include documentation of accidental contamination by the sample handler. High sample results attributed to unknown causes are not outliers if there is no evidence of sample contamination and the sample does not meet the requirements in Section 9.2 of Method 325A of appendix A of this part.

(5) For samples that will be adjusted for offsite impacts, the location of and the concentration measured simultaneously by the additional sampler(s), and the perimeter samplers to which it applies.

(6) Individual sample results, the calculated Δc for each monitored compound for each sampling period and the two samples used to determine it, whether correction for offsite impacts was used, and the annual average Δc for each monitored compound calculated after each sampling period.

(7) Method detection limit for each sample, including co-located samples and blanks.

(8) Documentation of the root cause analysis and any resulting corrective action taken each time an action level is exceeded, including the dates the root cause analysis was initiated and the resulting correction action(s) were taken. If real-time sampling techniques are required under §63.184(e)(3)(B), the location of the real-time monitors for each 48-hour period.

(9) Any corrective action plan developed under §63.184(f).

(10) Other records as required by Methods 325A, 325B, and 327 of appendix A of this part.

(11) If monitoring is conducted using canisters in accordance with §63.184(b), if a near-field source correction is used as provided in §63.184(g), or if an alternative test method is used

that provides time-resolved measurements, records of hourly meteorological data, including temperature, barometric pressure, wind speed and wind direction, calculated daily unit vector wind direction and daily sigma theta, and other records specified in the site-specific monitoring plan.

§63.182 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section. Owners or operators requesting an extension of compliance shall also submit the report listed in paragraph (a)(6) of this section.

(1) An Initial Notification described in paragraph (b) of this section, and

(2) A Notification of Compliance Status described in paragraph (c) of this section,

(3) Periodic Reports described in paragraph (d) of this section, ~~and~~

(4) Fenceline Monitoring Reports described in paragraph (e) of this section, and

(5) [Reserved]

(6) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing an existing source up to 1 additional year beyond the compliance date specified in the subpart that references this subpart.

(i) For purposes of this subpart, a request for an extension shall be submitted to the operating permit authority as part of the operating permit application. If the State in which the source is located does not have an approved operating permit program, a request for an extension shall be submitted to the Administrator as a separate submittal. The dates specified in §63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart.

(ii) A request for an extension of compliance must include the data described in §63.6(i)(6)(i) (A), (B), and (D) of subpart A of this part.

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

(b) Each owner or operator of an existing or new source subject to the provisions of this subpart shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (b)(1), according to the schedule in paragraph (b)(2) of this section. The Initial Notification provisions in §63.9(b)(1) through (b)(3) of subpart A of this part shall not apply to owners or operators of sources subject to this subpart.

(1) The Initial Notification shall include the following information:

(i) The name and address of the owner or operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the chemical manufacturing processes subject to this subpart; and

(iv) A statement of whether the source can achieve compliance by the applicable compliance date specified in the subpart in 40 CFR part 63 that references this subpart.

(2) The Initial Notification shall be submitted according to the schedule in paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section, as applicable.

(i) For an existing source, the Initial Notification shall be submitted within 120 calendar days after the date of promulgation or no later than 120 calendar days after the source becomes subject to this subpart, whichever is later.

(ii) For a new source that has an initial start-up 90 days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by

§63.5(d) of subpart A of this part shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references this subpart). For a new source that reclassifies to major source status after January 19, 2021 and greater than 90 days after the initial start-up, the source shall submit the initial notification required by §63.9(b) no later than 120 days after the source becomes subject to this subpart.

(iii) For a new source that has an initial start-up prior to 90 days after the date of promulgation of the applicable subpart, the Initial Notification shall be submitted within 90 days after the date of promulgation of the subpart that references this subpart, or no later than 120 calendar days after the source becomes subject to this subpart, whichever is later.

(c) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status within 90 days after the compliance dates specified in the subpart in 40 CFR part 63 that references this subpart, except as provided in paragraph (c)(4) of this section. The owner or operator shall also submit a supplement to the Notification of Compliance Status as specified in paragraphs (c)(5) and (c)(6) of this section, if applicable.

(1) The notification shall provide the information listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this section for each process unit subject to the requirements of §63.163 through §63.174 of this subpart.

(i) Process unit identification.

(ii) Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service.

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

(iv) Planned schedule for each phase of the requirements in §63.163 and §63.168 of this subpart.

(2) The notification shall provide the information listed in paragraphs (c)(2)(i) and (c)(2)(ii) of this section for each process unit subject to the requirements of §63.178(b) of this subpart.

(i) Batch products or product codes subject to the provisions of this subpart, and

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

(3) The notification shall provide the information listed in paragraphs (c)(3)(i) and (c)(3)(ii) of this section for each process unit subject to the requirements in §63.179 of this subpart.

(i) Process unit identification.

(ii) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of §63.172 of this subpart.

(4) For existing sources subject to subpart F of this part, the Notification of Compliance Status shall be submitted for the group of process units with the earliest compliance date specified in §63.100(k) of subpart F of this part, by no later than 90 days after the compliance date for that group. The Notification of Compliance Status for each subsequent group shall be submitted as part of the first periodic report that is due not less than 90 days after the compliance date for that group.

(5) For pressure relief devices subject to the pressure release management work practice standards in §63.165(e), owners and operators must also submit the information listed in paragraphs (c)(5)(i) and (c)(5)(ii) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date for pressure relief device monitoring.

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

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

(6) For equipment that are in ethylene oxide service, as defined in §63.101 of subpart F of this part, owners and operators must also submit the information in this paragraph in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date. The supplement to the Notification of Compliance Status must identify all equipment that are in ethylene oxide service, and include the percent ethylene oxide content of the process fluid and the method used to determine it.

(d) The owner or operator of a source subject to this subpart shall submit Periodic Reports. On and after **[INSERT date three years after date of publication of final rule in the Federal Register]** or once the reporting template for this subpart has been available on the CEDRI website for 1 year, whichever date is later, owners and operators must submit all subsequent reports following the procedure specified in § 63.9(k) of subpart A, except any medium submitted through mail must be sent to the attention of the Hazardous Organic Chemical Manufacturing Sector Lead. Owners and operators must use the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/cedri*) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under §63.9(i) and §63.10(a) of subpart A, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. All Periodic Reports must include the following general information: company name, address (including county), and beginning and ending dates of the reporting period.

(1) A report containing the information in paragraphs (d)(2), (d)(3), and (d)(4) of this section shall be submitted semiannually starting 6 months after the Notification of Compliance Status, as required in paragraph (c) of this section. The first periodic report shall cover the first 6 months after the compliance date specified in §63.100(k)(3) of subpart F. Each subsequent periodic report shall cover the 6 month period following the preceding period.

(2) For each process unit complying with the provisions of §63.163 through §63.174 of this subpart, the summary information listed in paragraphs (d)(2)(i) through (d)(2)(~~xvi~~xix) of this paragraph for each monitoring period during the 6-month period.

(i) The number of valves for which leaks were detected as described in §63.168(b) of this subpart, the percent leakers, and the total number of valves monitored;

(ii) The number of valves for which leaks were not repaired as required in §63.168(f) of this subpart, identifying the number of those that are determined nonrepairable;

(iii) The number of pumps for which leaks were detected as described in §63.163(b) of this subpart, the percent leakers, and the total number of pumps monitored;

(iv) The number of pumps for which leaks were not repaired as required in §63.163(c) of this subpart;

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

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

(vii) The number of agitators for which leaks were detected as described in §63.173(a) and (b) of this subpart;

(viii) The number of agitators for which leaks were not repaired as required in §63.173(c) of this subpart;

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

(x) [Reserved]

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

(xii) [Reserved]

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

(xiv) The results of all monitoring to show compliance with §§63.164(i), 63.165(a), and 63.172(f) of this subpart conducted within the semiannual reporting period.

(xv) If applicable, the initiation of a monthly monitoring program under §63.168(d)(1)(i) of this subpart, or a quality improvement program under either §§63.175 or 63.176 of this subpart.

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

(xvii) If applicable, the compliance option that has been selected under §63.172(n).

(xviii) Compliance reports for pressure relief devices subject to the requirements §63.165(e) must include the information specified in paragraphs (d)(2)(xviii)(A) through (d)(2)(xviii)(C) of this section.

(A) For pressure relief devices in organic HAP gas or vapor service, pursuant to §63.165(e)(1), report the instrument readings and dates for all readings of 500 ppm or greater.

(B) For pressure relief devices in organic HAP gas or vapor service subject to §63.165(e)(2), report the instrument readings and dates of instrument monitoring conducted.

(C) For pressure relief devices in organic HAP service subject to §63.165(e)(3), report each pressure release to the atmosphere, including pressure relief device identification name or number, the start date, start time, and duration (in minutes) of the pressure release; an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(xix) For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(10) of subpart F of this part, the owner or operator must comply with this paragraph in addition to the requirements in paragraphs (d)(2)(i) through (d)(2)(xviii) of this section. For bypass lines subject to the requirements in §63.172(j), the Periodic Report must include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(3) For owners or operators electing to meet the requirements of §63.178(b) of this subpart, the report shall include the information listed in paragraphs (i) through (v) of this paragraph for each process unit.

(i) Batch product process equipment train identification;

(ii) The number of pressure tests conducted;

(iii) The number of pressure tests where the equipment train failed the pressure test;

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

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

(4) The information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates. Any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report.

(e) For fenceline monitoring systems subject to § 63.184 of this subpart, each owner or operator must submit Fenceline Monitoring Reports on a quarterly basis using the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/cedri*) for this subpart and following the procedure specified in §63.9(k), except any medium submitted through mail must be sent to the attention of the Hazardous Organic Chemical Manufacturing Sector Lead. The first quarterly report must be submitted once the owner or operator has obtained 12 months of data. The first quarterly report must cover the period beginning on the compliance date that is specified in §63.100(k)(12) of subpart F of this part and ending on March 31, June 30, September 30 or December 31, whichever date is the first date that occurs after the owner or operator has obtained 12 months of data (i.e., the first quarterly report will contain between 12 and 15 months of data). Each subsequent quarterly report must cover one of the following reporting periods: Quarter 1 from January 1 through March 31; Quarter 2 from April 1 through June 30; Quarter 3 from July 1 through September 30; and Quarter 4 from October 1 through December 31. Each quarterly report must be electronically submitted no later than 45 calendar days following the end of the reporting period.

(1) Facility name and address (including the county).

(2) Year and reporting quarter (*i.e.,* Quarter 1, Quarter 2, Quarter 3, or Quarter 4).

(3) For each passive tube or canister monitor: The latitude and longitude location coordinates; the sampler name; and identification of the type of sampler (*i.e.,* regular monitor, extra monitor, duplicate, field blank, inactive). Coordinates must be in decimal degrees with at least five decimal places.

(4) The beginning and ending dates for each sampling period.

(5) Individual sample results for each monitored compound, reported in units of $\mu g/m^3$, for each monitor for each sampling period that ends during the reporting period. Results below the method detection limit must be flagged as below the detection limit and reported at the method detection limit.

(6) Data flags for each outlier determined in accordance with Section 9.2 of Method 325A of appendix A of this part. For each outlier, the owner or operator must submit the individual sample result of the outlier, as well as the evidence used to conclude that the result is an outlier. The evidence must include documentation of accidental contamination by the sample handler. High sample results attributed to unknown causes are not outliers if there is no evidence

of sample contamination and the sample does not meet the requirements in Section 9.2 of Method 325A of appendix A of this part.

(7) The biweekly concentration difference (Δc) for each monitored compound for each sampling period and the annual average Δc for each monitored compound for each sampling period.

(8) Indication of whether the owner or operator was required to develop a corrective action plan under § 63.184(f) of this subpart.

§63.183 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (45) of this section.

(1) Approval of alternatives to the requirements in §§63.160, 63.162 through 63.176, 63.178 through 63.179. Follow the applicable procedures of §63.177 to request an alternative means of emission limitation for batch processes and enclosed-vented process units. 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.

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

§63.184 Fenceline monitoring provisions.

For each source as defined in §63.101 of subpart F of this part, and for each source as defined in §63.191 of subpart I of this part, beginning no later than the compliance dates specified in §63.100(k)(12) of subpart F of this part, the owner or operator must conduct sampling along the facility property boundary and analyze the samples in accordance with paragraphs (a) through (i) of this section. Sampling of benzene, 1,3-butadiene, chloroprene, and ethylene dichloride must be conducted in accordance with paragraph (a) of this section. Sampling of ethylene oxide and vinyl chloride must be conducted in accordance with paragraph (b) of this section. Paragraphs (c) through (i) of this section apply for any compound required to be sampled.

(a) The owner or operator must conduct sampling along the facility property boundary and analyze the samples in accordance with Methods 325A and 325B of appendix A of this part and paragraphs (a)(1) through (a)(3) of this section.

(1) The owner or operator must monitor the target analyte(s), as specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section.

(i) If the site uses, produces, stores, or emits benzene, the owner or operator must include benzene as a target analyte.

(ii) If the site uses, produces, stores, or emits 1,3-butadiene, the owner or operator must include 1,3-butadiene as a target analyte.

(iii) If the site uses, produces, stores, or emits chloroprene, the owner or operator must include chloroprene as a target analyte.

(iv) If the site uses, produces, stores, or emits ethylene dichloride, the owner or operator must include ethylene dichloride as a target analyte.

(2) The owner or operator must determine passive monitor locations in accordance with Section 8.2 of Method 325A of appendix A of this part.

(i) As it pertains to this subpart, known sources of VOCs, as used in Section 8.2.1.3 in Method 325A of appendix A of this part for siting passive monitors, means a wastewater treatment unit, process unit, or any emission source requiring control according to the requirements of this subpart, including marine vessel loading operations. For marine vessel loading operations, one passive monitor should be sited on the shoreline adjacent to the dock. For this subpart, an additional monitor is not required if the only emission sources within 50 meters of the monitoring boundary are equipment leak sources satisfying all of the conditions in paragraphs (a)(2)(i)(A) through (a)(2)(i)(C) of this section must be repaired no later than 15 calendar days after it is detected with no provisions for delay of repair. If a repair is not completed within 15 calendar days, the additional passive monitor specified in Section 8.2.1.3 in Method 325A of appendix A of this part must be used.

(A) The equipment leak sources in organic HAP service within 50 meters of the monitoring boundary are limited to valves, pumps, connectors, sampling connections, and open-ended lines. If compressors, pressure relief devices, or agitators in organic HAP service are present within 50 meters of the monitoring boundary, the additional passive monitoring location specified in Section 8.2.1.3 in Method 325A of appendix A of this part must be used.

(B) All equipment leak sources in gas or light liquid service (and in organic HAP service), including valves, pumps, connectors, sampling connections and open-ended lines, must be monitored using EPA Method 21 of 40 CFR part 60, appendix A–7 no less frequently than quarterly with no provisions for skip period monitoring, or according to the provisions of § 63.11(c) Alternative Work practice for monitoring equipment for leaks. For the purpose of this provision, a leak is detected if the instrument reading equals or exceeds the applicable limits in paragraphs (a)(2)(i)(B)(*1*) through (a)(2)(i)(B)(*5*) of this section:

(*1*) For valves, pumps or connectors at an existing source, an instrument reading of 10,000 ppmv.

(*2*) For valves or connectors at a new source, an instrument reading of 500 ppmv.

(*3*) For pumps at a new source, an instrument reading of 2,000 ppmv.

(*4*) For sampling connections or open-ended lines, an instrument reading of 500 ppmv above background.

(*5*) For equipment monitored according to the Alternative Work practice for monitoring equipment for leaks, the leak definitions contained in § 63.11(c)(6)(i) through (iii).

(C) All equipment leak sources in organic HAP service, including sources in gas, light liquid and heavy liquid service, must be inspected using visual, audible, olfactory, or any other detection method at least monthly. A leak is detected if the inspection identifies a potential leak to the atmosphere or if there are indications of liquids dripping.

(ii) If there are 19 or fewer monitoring locations, the owner or operator must collect at least one co-located duplicate sample per sampling period and at least one field blank per sampling period. If there are 20 or more monitoring locations, the owner or operator must collect at least two co-located duplicate samples per sampling period and at least one field blank per sampling period. The co-located duplicates may be collected at any of the perimeter sampling

(iii) The owner or operator must follow the procedure in Section 9.6 of Method 325B of appendix A of this part to determine the detection limit of benzene, 1,3-butadiene, chloroprene, and ethylene dichloride for each sampler used to collect samples and blanks.

(3) The owner or operator must use a sampling period and sampling frequency as specified in paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(i) ***Sampling period.*** A 14-day sampling period must be used, unless a shorter sampling period is determined to be necessary under paragraph (e) or (g) of this section. A sampling period is defined as the period during which sampling tube is deployed at a specific sampling location with the diffusive sampling end cap in-place and does not include the time required to analyze the sample. For the purpose of this subpart, a 14-day sampling period may be no shorter than 13 calendar days and no longer than 15 calendar days, but the routine sampling period must be 14 calendar days.

(ii) ***Sampling frequency.*** The frequency of sample collection must be once each contiguous 14-day sampling period, such that the beginning of the next 14-day sampling period begins immediately upon the completion of the previous 14-day sampling period.

(b) The owner or operator must conduct sampling along the facility property boundary and analyze the samples in accordance with Method 327 of appendix A of this part and paragraphs (b)(1) through (b)(3) of this section.

(1) The owner or operator must monitor the target analyte(s), as specified in paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(i) If the site uses, produces, stores, or emits ethylene oxide, the owner or operator must include ethylene oxide as a target analyte.

(ii) If the site uses, produces, stores, or emits vinyl chloride, the owner or operator must include vinyl chloride as a target analyte.

(2) The owner or operator must use a sampling period and sampling frequency as specified in paragraphs (b)(2)(i) and (b)(2)(ii) of this section.

(i) ***Sampling period.*** A 24-hour sampling period must be used, unless a shorter sampling period is determined to be necessary under paragraph (e) or (g) of this section. A sampling period is defined as the period during which the canister is deployed at a specific sampling location and actively sampling and does not include the time required to analyze the sample. For the purpose of this subpart, a 24-hour sampling period may be no shorter than 23 hours and no longer than 25 hours.

(ii) ***Sampling frequency.*** The frequency of sample collection must be once every 5 calendar days, such that the beginning of each sampling period begins approximately 120 hours (± 6 hours) from the end of the previous sample.

(3) The owner or operator must determine canister sample locations in accordance with paragraphs (b)(3)(i) through (b)(3)(v) of this section.

(i) The monitoring perimeter must be located between the property boundary and the process unit(s), such that the monitoring perimeter encompasses all potential sources of the target analyte(s) specified in paragraph (b)(1) of this section. If the site contains process units that are disconnected (*i.e.*, one or more process areas are not within the boundary of the main facility), the owner or operator must follow the requirements in paragraph (b)(3)(v) of this section.

(ii) The owner or operator must place 8 canisters around the monitoring perimeter during each sampling period.

(iii) To determine sampling locations, measure the length of the monitoring perimeter.

(A) Locate the point on the monitoring perimeter that is closest to sources of the target analyte(s). If one of the target analytes is ethylene oxide, this point must be the point on the monitoring perimeter that is closest to the sources of ethylene oxide.

(B) If the monitoring perimeter is less than or equal to 5,000 meters, divide the monitoring perimeter into 8 evenly spaced sampling points, with one point located in accordance with the requirements of paragraph (b)(3)(iii)(A) of this section.

(C) If the monitoring perimeter is greater than 5,000 meters, but less than or equal to 10,000 meters, divide the monitoring perimeter into 16 evenly spaced sampling points, with one point located in accordance with the requirements of paragraph (b)(3)(iii)(A) of this section.

(D) If the monitoring perimeter is greater than 10,000 meters, divide the monitoring perimeter into 24 evenly spaced sampling points, with one point located in accordance with the requirements of paragraph (b)(3)(iii)(A) of this section.

(iv) Place canisters on the monitoring perimeter at the sampling points as follows.

(A) If there are only 8 sampling points for the site, monitor each sampling point during each sampling period.

(B) If there are 16 sampling points for the site, number the sampling points consecutively along the monitoring perimeter. During the first sampling period, monitor the odd numbered sampling points. During the second sampling period, monitor the even numbered sampling points. Continue to alternate between the odd numbered and even numbered sampling points in subsequent sampling periods.

(C) If there are 24 sampling points for the site, number the sampling points consecutively along the monitoring perimeter. During the first sampling period, monitor every third sampling point starting with the first sampling point (*i.e.*, points 1, 4, 7, etc.). During the second sampling period, monitor every third sampling point starting with the second sampling point (*i.e.*, points 2, 5, 8, etc.). During the third sampling period, monitor every third sampling point starting with the third sampling point (*i.e.*, points 3, 6, 9, etc.). Continue to alternate between these placements for each subsequent sampling period (*i.e.*, the fourth sampling period will include every third sampling point starting with the first sampling point, the fifth sampling period will include every third sampling point starting with the second sampling point, and so on).

(v) If the site consists of small areas disconnected from the main facility, additional monitors must be placed on these areas in accordance with paragraphs (b)(3)(v)(A) through (b)(3)(v)(C) of this section. The monitoring perimeter for the disconnected area(s) must be located between the property boundary of the area and the process unit(s), such that the monitoring perimeter for the disconnected area encompasses all potential sources of the target analyte(s) specified in paragraph (b)(1) of this section.

(A) If the disconnected area is less than 50 acres, the owner or operator must sample at two locations each sampling period. One location must be placed in the expected prevailing wind direction for the sampling period, downwind of the main source of emissions of the target analyte(s). The other location must be located on the monitoring perimeter at 180 degrees from the first sample location.

(B) If the disconnected area is equal to or greater than 50 acres but less than or equal to 150 acres, the owner or operator must sample at four equally spaced locations. One sampling point must be located on the monitoring perimeter at the point that is closest to sources of the target analyte(s). If one of the target analytes is ethylene oxide, this point must be the point on the monitoring perimeter that is closest to the sources of ethylene oxide.

(C) If the disconnected area is greater than 150 acres, the sampling points for the disconnected area must be determined according to paragraphs (b)(3)(ii) through (b)(3)(iv) of this section.

(4) At least one co-located duplicate sample and at least one field blank must be collected per sampling period.

(5) The owner or operator must follow the procedures in Method 327 of appendix A of this part to determine the detection limit of the target analyte(s) and requirements for quality assurance samples.

(c) The owner or operator must collect and record meteorological data according to the applicable requirements in paragraphs (c)(1) through (c)(3) of this section.

(1) If monitoring is conducted under paragraph (b) of this section, if a near-field source correction is used as provided in paragraph (g)(2) of this section, or if an alternative test method is used that provides time-resolved measurements, the owner or operator must use an on-site meteorological station in accordance with Section 8.3 of Method 325A of appendix A of this part. Collect and record hourly average meteorological data, including temperature, barometric pressure, wind speed and wind direction and calculate daily unit vector wind direction and daily sigma theta.

(2) For cases other than those specified in paragraph (c)(1) of this section, the owner or operator must collect and record sampling period average temperature and barometric pressure using either an on-site meteorological station in accordance with Section 8.3 of Method 325A of appendix A of this part or, alternatively, using data from a National Weather Service (NWS) meteorological station provided the NWS meteorological station is within 40 kilometers (25 miles) of the facility.

(3) If an on-site meteorological station is used, the owner or operator must follow the calibration and standardization procedures for meteorological measurements in EPA-454/B-08-002.

(d) Within 45 days of completion of each sampling period, the owner or operator must determine whether the results are above or below the action level for each measured compound as follows. If the owner or operator is required to monitor any small disconnected area(s) of the facility under paragraph (b)(3)(v) of this section, the procedure for determining whether the results are above or below the action level for each measured compound must be performed for the disconnected area(s) separately.

(1) The owner or operator must determine the facility impact on the concentration (Δc) of each compound for each sampling period according to either paragraph (d)(1)(i) or (d)(1)(ii) of this section, as applicable.

(i) Except when near-field source correction is used as provided in paragraph (d)(1)(ii) of this section, the owner or operator must determine the highest and lowest sample results for each compound individually from the sample pool and calculate each compound's Δc as the difference in these concentrations. Co-located samples must be averaged together for the purposes of determining the concentration at a particular sampling location, and, if applicable, for determining Δc. The owner or operator must adhere to the following procedures when one or more samples for the sampling period are below the method detection limit for a particular compound:

(A) If the lowest detected value of a compound is below detection, the owner or operator must use zero as the lowest sample result when calculating Δc.

(B) If all sample results are below the method detection limit, the owner or operator must use the highest method detection limit for the sample set as the highest sample result and zero as the lowest sample result when calculating Δc.

(C) In the case of co-located samples, if one sample is above the method detection limit while the other sample is below the method detection limit, the owner or operator must use the method detection limit as the result for the sample that is below the method detection limit for purposes of averaging the results to determine the concentration at a particular sampling location, and, if applicable, for determining Δc.

(ii) When near-field source correction is used as provided in paragraph (g) of this section, the owner or operator must determine Δc using the calculation protocols outlined in paragraph (d)(1)(i) of this section and the additional requirements in paragraph (d)(2) of this section, as well as any additional requirements outlined in the approved site-specific monitoring plan.

(2) The owner or operator must calculate the annual average Δc for each monitored compound as follows:

(i) For sampling conducted under paragraph (a) of this section, the annual average Δc for each compound is based on the average of the Δc values for the 26 most recent 14-day sampling periods. The owner or operator must update this annual average value after receiving the results of each subsequent 14-day sampling period.

(ii) For sampling conducted under paragraph (b) of this section, the annual average Δc for each compound is based on the average of the Δc values for the 73 most recent sampling periods. The owner or operator must update this annual average value after receiving the results of each subsequent sampling period.

(3) The action level for each compound is listed in paragraphs (d)(3)(i) through (d)(3)(vi) of this section. If the annual average Δc value for a compound is greater than the listed action level for the compound, the concentration is above the action level, and the owner or operator must conduct a root cause analysis and corrective action in accordance with paragraph (e) of this section.

(i) The action level for benzene is 9 micrograms per cubic meter ($\mu g/m^3$) on an annual average basis.

(ii) The action level for 1,3-butadiene is 3 $\mu g/m^3$ on an annual average basis.

(iii) The action level for chloroprene is 0.3 $\mu g/m^3$ on an annual average basis.

(iv) The action level for ethylene oxide is 0.2 μg/m^3 on an annual average basis.

(v) The action level for vinyl chloride is 3 μg/m^3 on an annual average basis.

(vi) The action level for ethylene dichloride is 4 μg/m^3 on an annual average basis.

(e) Once any action level in paragraph (d)(3) of this section has been exceeded, the owner or operator must take the following actions to bring the annual average Δc back below the action level(s).

(1) Within 5 days of updating the annual average value as required in paragraph (d)(2) of this section and determining that any action level in paragraph (d)(3) of this section has been exceeded (*i.e.*, in no case longer than 50 days after completion of the sampling period), the owner or operator must initiate a root cause analysis to determine appropriate corrective action. A root cause analysis is an assessment conducted through a process of investigation to determine the primary underlying cause and all other contributing causes to an exceedance of an action level(s) set forth in paragraph (d)(3) of this section.

(i) The initial root cause analysis may include, but is not limited to:

(A) Leak inspection using Method 21 of part 60, appendix A-7 of this chapter, optical gas imaging, or handheld monitors.

(B) Visual inspection to determine the cause of the high emissions.

(C) Operator knowledge of process changes (*e.g.*, a malfunction or release event).

(ii) If the initial root cause cannot be identified using the type of techniques described in paragraph (e)(1)(i) of this section, the owner or operator must employ more frequent sampling and analysis to determine the root cause of the exceedance.

(A) The owner or operator may first employ additional monitoring points and shorter sampling periods for Methods 325A and 325B of appendix A of this part for benzene, 1,3-

butadiene, chloroprene, or ethylene dichloride or more frequent sampling with Method 327 of appendix A of this part for ethylene oxide or vinyl chloride to determine the root cause of the exceedance.

(B) If the owner or operator has not determined the root cause of the exceedance within 30 days of determining that the action level has been exceeded, the owner or operator must employ the appropriate real-time sampling techniques (*e.g.*, mobile gas chromatographs, optical spectroscopy instruments, sensors) to locate the cause of the exceedance. If the root cause is not identified after 48 hours, either the real-time monitor must be relocated or an additional monitor must be added. Relocation or addition of extra monitors must continue after each 48-hour period of nonidentification until the owner or operator can identify the root cause of the exceedance.

(2) If the underlying primary and other contributing causes of the exceedance are deemed to be under the control of the owner or operator, the owner or operator must take appropriate corrective action as expeditiously as possible to bring annual average fenceline concentrations back below the action level(s) set forth in paragraph (d)(3) of this section. At a minimum, the corrective actions taken must address the underlying primary and other contributing cause(s) determined in the root cause analysis to prevent future exceedances from the same underlying cause(s).

(3) The root cause analysis must be completed and initial corrective actions taken no later than 45 days after determining there is an exceedance of an action level.

(4) Until the annual average Δc is below the action level again, following completion of the initial corrective action, the owner or operator must conduct a new root cause analysis according to this paragraph (e), and if required, submit a corrective action plan under

paragraph (f) of this section following any sampling period for which the Δc for the sampling period is greater than the level specified in paragraphs (e)(4)(i) through (e)(4)(vi) of this section for the compound(s) that initially exceeded the action level.

(i) For benzene, a sampling period Δc of 9 $\mu g/m^3$.

(ii) For 1,3-butadiene, a sampling period Δc of 3 $\mu g/m^3$.

(iii) For chloroprene, a sampling period Δc of 0.3 $\mu g/m^3$.

(iv) For ethylene dichloride, a sampling period Δc of 4 $\mu g/m^3$.

(v) For ethylene oxide, a sampling period Δc of 0.2 $\mu g/m^3$.

(vi) For vinyl chloride, a sampling period Δc of 3 $\mu g/m^3$.

(f) An owner or operator must develop a corrective action plan if the conditions in paragraphs (f)(1), (f)(2), or (f)(3) of this section are met. The corrective action plan must describe the corrective action(s) completed to date, additional measures that the owner or operator proposes to employ to reduce annual average fenceline concentrations below the action level(s) set forth in paragraph (d)(3) of this section, and a schedule for completion of these measures. The corrective action plan does not need to be approved by the Administrator. However, if upon review, the Administrator disagrees with the additional measures outlined in the plan, the owner or operator must revise and resubmit the plan within 7 calendar days of receiving comments from the Administrator.

(1) If the compound that exceeded the action level was benzene, 1,3-butadiene, chloroprene, or ethylene dichloride, the owner or operator must develop a corrective action plan if, upon completion of the root cause analysis and initial corrective actions required in paragraph (e) of this section, the Δc value for the next sampling period, for which the sampling start time begins after the completion of the initial corrective actions, is greater than the level

specified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section for the compound(s) that initially exceeded the action level. The corrective action plan must include the implementation of real-time sampling techniques to locate the primary and other contributing causes of the exceedance. The owner or operator must submit the corrective action plan to the Administrator within 60 days after receiving the analytical results indicating that the Δc value for the sampling period following the completion of the initial corrective action is greater than the level specified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section.

(i) For benzene, a sampling period Δc of 9 $\mu g/m^3$.

(ii) For 1,3-butadiene, a sampling period Δc of 3 $\mu g/m^3$.

(iii) For chloroprene, a sampling period Δc of 0.3 $\mu g/m^3$.

(iv) For ethylene dichloride, a sampling period Δc of 4 $\mu g/m^3$.

(2) If the compound that exceeded the action level was ethylene oxide or vinyl chloride, the owner or operator must develop a corrective action plan if, upon completion of the root cause analysis and initial corrective actions required in paragraph (e) of this section, the Δc value for any of the next three sampling periods, for which the sampling start time begins after the completion of the initial corrective actions, is greater than the level specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this section for the compound(s) that initially exceeded the action level. The corrective action plan must include the implementation of real-time sampling techniques to locate the primary and other contributing causes of the exceedance. The owner or operator must submit the corrective action plan to the Administrator within 60 days after receiving the analytical results indicating that the Δc value for the sampling period following the completion of the initial corrective action is greater than the level specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this section.

(i) For ethylene oxide, a sampling period Δc of 0.2 μg/m^3.

(ii) For vinyl chloride, a sampling period Δc of 3 μg/m^3.

(3) The owner or operator must develop a corrective action plan if complete implementation of all corrective measures identified in the root cause analysis required by paragraph (e) of this section will require more than 45 days. The owner or operator must submit the corrective action plan to the Administrator no later than 60 days following the completion of the root cause analysis required in paragraph (e) of this section.

(g) An owner or operator may request approval from the Administrator for a site-specific monitoring plan to account for offsite upwind sources according to the requirements in paragraphs (g)(1) through (g)(4) of this section.

(1) The owner or operator must prepare and submit a site-specific monitoring plan and receive approval of the site-specific monitoring plan prior to using the near-field source alternative calculation for determining Δc provided in paragraph (g)(2) of this section. The site-specific monitoring plan must include, at a minimum, the elements specified in paragraphs (g)(1)(i) through (g)(1)(vi) of this section. The procedures in Section 12 of Method 325A of appendix A of this part are not required, but may be used, if applicable, when determining near-field source contributions.

(i) Identification of the near-field source or sources.

(ii) Location of the additional monitoring stations that will be used to determine the near-field source concentration contribution. The owner or operator must use additional monitoring stations to determine the near-field source contribution.

(iii) Identification of the fenceline monitoring locations impacted by the near-field source. If more than one near-field source is present, identify the near-field source or sources that are expected to contribute to the concentration at that monitoring location.

(iv) A description of (including sample calculations illustrating) the planned data reduction; the treatment of invalid data, data below detection limits, and data collected during calm wind periods; and calculations to determine the near-field source concentration contribution for each monitoring location.

(v) A detailed description of the measurement technique, measurement location(s), the standard operating procedures, measurement frequency, recording frequency, measurement detection limit, and data quality indicators to ensure accuracy, precision, and validity of the data.

(vi) A detailed description of how data will be handled during periods of calm wind conditions (*i.e.*, less than 2 miles per hour).

(2) When an approved site-specific monitoring plan is used, the owner or operator must determine Δc for comparison with the action level according to paragraph (d) of this section. When determining the highest and lowest sample results for use in the Δc calculation, the concentration for any monitor that has been corrected using an approved site-specific monitoring plan will be corrected according to the procedures specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) For each monitoring location corrected using the site-specific monitoring plan, the corrected fenceline concentration at that monitoring station will be equal to the fenceline concentration measured with Methods 325A and 325B or Method 327 of appendix A of this part minus the near-field source contributing concentration at the measurement location determined using the additional measurements and calculation procedures included in the site-specific monitoring plan.

(ii) If the fenceline concentration at the monitoring station is below the method detection limit for Methods 325A and 325B or Method 327 of appendix A of this part, no near-field source contribution can be subtracted from that monitoring station for that sampling period.

(3) The site-specific monitoring plan must be submitted and approved as described in paragraphs (g)(3)(i) through (g)(3)(iv) of this section.

(i) The site-specific monitoring plan must be submitted to the Administrator for approval.

(ii) The site-specific monitoring plan must also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Hazardous Organic Chemical Manufacturing Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to *refineryrtr@epa.gov.*

(iii) The Administrator will approve or disapprove the plan in 90 days. The plan is considered approved if the Administrator either approves the plan in writing or fails to disapprove the plan in writing. The 90-day period begins when the Administrator receives the plan.

(iv) If the Administrator finds any deficiencies in the site-specific monitoring plan and disapproves the plan in writing, the owner or operator may revise and resubmit the site-specific monitoring plan following the requirements in paragraphs (h)(3)(i) and (h)(3)(ii) of this section. The 90-day period starts over with the resubmission of the revised monitoring plan.

(4) The approval by the Administrator of a site-specific monitoring plan will be based on the completeness, accuracy and reasonableness of the request for a site-specific monitoring plan.

Factors that the Administrator will consider in reviewing the request for a site-specific monitoring plan include, but are not limited to, those described in paragraphs (g)(4)(i) through (g)(4)(v) of this section.

(i) The identification of the near-field source or sources and evidence of how the sources impact the fenceline concentrations.

(ii) The location(s) selected for additional monitoring to determine the near-field source concentration contribution.

(iii) The identification of the fenceline monitoring locations impacted by the near-field source or sources.

(iv) The appropriateness of the planned data reduction and calculations to determine the near-field source concentration contribution for each monitoring location, including the handling of invalid data, data below the detection limit, and data during calm periods.

(v) The adequacy of the description of and rationale for the measurement technique, measurement location(s), the standard operation procedure, measurement frequency, recording frequency, measurement detection limit, and data quality indicators to ensure accuracy, precision, and validity of the data.

(h) The owner or operator must comply with the applicable recordkeeping and reporting requirements in § 63.181 and § 63.182.

(i) As outlined in § 63.7(f) of subpart A of this part, the owner or operator may submit a request for an alternative test method. At a minimum, the request must follow the requirements outlined in paragraphs (i)(1) through (i)(7) of this section.

(1) The alternative method may be used in lieu of all or a partial number of passive samplers required in Method 325A of appendix A of this part or the canister sampling locations required under paragraph (b) of this section.

(2) The alternative method must be validated according to Method 301 in appendix A of this part or contain performance-based procedures and indicators to ensure self-validation.

(3) The method detection limit must nominally be at least an order of magnitude below the action level for the compound(s) that will be monitored with the alternative method. The alternate test method must describe the procedures used to provide field verification of the detection limit.

(4) If the alternative test method will be used to replace some or all passive samplers required under paragraph (a) of this section, the spatial coverage must be equal to or better than the spatial coverage provided in Method 325A of appendix A of this part. If the alternative test method will be used to replace some or all canisters required under paragraph (b) of this section, the spatial coverage must be equal to or better than the spatial coverage provided under paragraph (b) of this section.

(i) For path average concentration open-path instruments, the physical path length of the measurement must be no more than a passive sample footprint (the spacing that would be provided by the sorbent traps when following Method 325A) or canister sample footprint, as applicable. For example, if Method 325A requires spacing monitors A and B 610 meters (2000 feet) apart, then the physical path length limit for the measurement at that portion of the fenceline must be no more than 610 meters (2000 feet).

(ii) For range resolved open-path instrument or approach, the instrument or approach must be able to resolve an average concentration over each passive sampler footprint or canister sample footprint within the path length of the instrument.

(iii) The extra samplers required in Sections 8.2.1.3 of Method 325A may be omitted when they fall within the path length of an open-path instrument.

(5) At a minimum, non-integrating alternative test methods must provide a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(6) For alternative test methods capable of real time measurements (less than a 5 minute sampling and analysis cycle), the alternative test method may allow for elimination of data points corresponding to outside emission sources for purpose of calculation of the high point for the two week average. The alternative test method approach must have wind speed, direction and stability class of the same time resolution and within the footprint of the instrument.

(7) For purposes of averaging data points to determine the Δc for the individual sampling period, all results measured under the method detection limit must use the method detection limit. For purposes of averaging data points for the individual sampling period low sample result, all results measured under the method detection limit must use zero.

Table 1 to Subpart H of Part 63—Batch Processes

Monitoring Frequency for Equipment Other than Connectors

Operating time (% of year)	Equivalent continuous process monitoring frequency time in use		
	Monthly	Quarterly	Semiannually
0 to <25	Quarterly	Annually	Annually.
25 to <50	Quarterly	Semiannually	Annually.
50 to <75	Bimonthly	Three times	Semiannually.

75 to 100	Monthly	Quarterly	Semiannually.

Table 2 to Subpart H of Part 63—Surge Control Vessels and Bottoms Receivers at Existing Sources

Vessel capacity (cubic meters)	Vapor pressure[1] (kilopascals)
75 ≤capacity <151	≥13.1
151 ≤capacity	≥5.2[a]

[1]Maximum true vapor pressure of total organic HAP at operating temperature as defined in subpart G of this part.

Table 3 to Subpart H of Part 63—Surge Control Vessels and Bottoms Receivers at New Sources

Vessel capacity (cubic meters)	Vapor pressure[1] (kilopascals)
38 ≤capacity <151	≥13.1
151 ≤capacity	≥0.7

[1]Maximum true vapor pressure of total organic HAP at operating temperature as defined in subpart G of this part.

Table 4 to Subpart H of Part 63—Applicable 40 CFR Part 63 General Provisions

40 CFR part 63, subpart A, provisions applicable to subpart H
§63.1(a)(1), (a)(2), (a)(3), (a)(13), (a)(14), (b)(2) and (c)(4)
§63.2
§63.5(a)(1), (a)(2), (b), (d)(1)(ii), (d)(4), (e), (f)(1) and (f)(2)
§63.6(a), (b)(3), (c)(5), (i)(1), (i)(2), (i)(4)(i)(A), (i)(5) through (i)(14), (i)(16) and (j)
§63.9(a)(2), (b)(4)(i),[a] (b)(4)(ii), (b)(4)(iii), (b)(5),[a] (c), (d), (j) and (k).
§63.10(d)(4)
§63.11 (c), (d), and (e)
§63.12(b)

[a] The notifications specified in §63.9(b)(4)(i) and (b)(5) shall be submitted at the times specified in 40 CFR part 65.

For the reasons set out in the preamble, the Environmental Protection Agency proposes to amend title 40, chapter I, part 63 of the Code of Federal Regulations as follows:

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

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

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

Subpart I—National Emission Standards for ~~Organic~~ Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks

Contents

§63.190 Applicability and designation of source.

(a) This subpart provides applicability provisions, definitions, and other general provisions that are applicable to sources subject to this subpart.

(b) Except as provided in paragraph (b)(7) of this section, the provisions of subparts I and H of this part apply to emissions of the designated organic HAP from the processes specified in paragraphs (b)(1) through (b)(6) of this section that are located at a plant site that is a major source as defined in section 112(a) of the Act. The specified processes are further defined in §63.191.

(1) Styrene-butadiene rubber production (butadiene and styrene emissions only).

(2) Polybutadiene rubber production (butadiene emissions only).

(3) The processes producing the agricultural chemicals listed in paragraphs (b)(3)(i) through (b)(3)(v) of this section (butadiene, carbon tetrachloride, methylene chloride, and ethylene dichloride emissions only).

(i) Captafol®,

(ii) Captan®,

(iii) Chlorothalonil,

(iv) Dacthal, and

(v) Tordon® acid.

(4) Processes producing the polymers/resins or other chemical products listed in paragraphs (b)(4)(i) through (b)(4)(vi) of this section (carbon tetrachloride, methylene chloride, tetrachloroethylene, chloroform, and ethylene dichloride emissions only).

(i) Hypalon®,

(ii) Oxybisphenoxarsine/1,3-diisocyanate (OBPA®),

(iii) Polycarbonates,

(iv) Polysulfide rubber,

(v) Chlorinated paraffins, and

(vi) Symmetrical tetrachloropyridine.

(5) Pharmaceutical production processes using carbon tetrachloride or methylene chloride (carbon tetrachloride and methylene chloride emissions only).

(6) Processes producing the polymers/resins or other chemical products listed in paragraphs (b)(6)(i) through (b)(6)(v) of this section (butadiene emissions only).

(i) [Reserved]

(ii) Methylmethacrylate-butadiene-styrene resins (MBS)

(iii) Butadiene-furfural cotrimer,

(iv) Methylmethacrylate-acrylonitrile-butadiene-styrene (MABS) resins, and

(v) Ethylidene norbornene.

(7) The owner or operator of a plant site at which a process specified in paragraphs (b)(1) through (b)(6) of this section is located is exempt from all requirements of this subpart I until not later than April 22, 1997 if the owner or operator certifies, in a notification to the appropriate EPA Regional Office, not later than May 14, 1996, that the plant site at which the process is located emits, and will continue to emit, during any 12-month period, less than 10 tons per year of any individual HAP, and less than 25 tons per year of any combination of HAP.

(i) If such a determination is based on limitations and conditions that are not federally enforceable (as defined in subpart A of this part), the owner or operator shall document the basis for the determination as specified in paragraphs (b)(7)(i)(A) through (b)(7)(i)(C).

(A) The owner or operator shall identify all HAP emission points at the plant site, including those emission points subject to and emission points not subject to subparts F, G, and H of this part;

(B) The owner or operator shall calculate the amount of annual HAP emissions released from each emission point at the plant site, using acceptable measurement or estimating techniques for maximum expected operating conditions at the plant site. Examples of estimating procedures that are considered acceptable include the calculation procedures in §63.150 of subpart G, the early reduction demonstration procedures specified in §§63.74(c)(2), (c)(3), (d)(2), (d)(3), and (g), or accepted engineering practices. If the total annual HAP emissions for the plant site are annually reported under EPCRA section 313, then such reported annual emissions may be used to satisfy the requirements of this paragraph.

(C) The owner or operator shall sum the amount of annual HAP emissions from all emission points on the plant site. If the total emissions of any one HAP are less than 10 tons per year and the total emissions of any combination of HAP are less than 25 tons per year, the plant site qualifies for the exemption described in paragraph (b)(7) of this section, provided that emissions are kept below these thresholds.

(ii) If such a determination is based on limitations and conditions that are federally enforceable, and the plant site is not a major source (as defined in subpart A of this part), the owner or operator is not subject to the provisions of paragraph (b)(7) of this section.

(c) The owner or operator of a process listed in paragraph (b) of this section that does not have the designated organic hazardous air pollutants present in the process shall comply only with the requirements of §63.192(k) of this subpart. To comply with this subpart, such processes shall not be required to comply with the provisions of subpart A of this part.

(d) For the purposes of subparts I and H of this part, the source includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems that are associated with the processes identified in paragraph (b) of this section and are intended to operate in organic hazardous air pollutant service (as defined in §63.191 of this subpart) for 300 hours or more during the calendar year. 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 process unit within the source for all purposes under subpart H of this part, providing there is no delay in the applicable compliance date in paragraph (e) of this section.

(e) The owner or operator of a process subject to this subpart is required to comply with the provisions of subpart H of this part on or before the dates specified in paragraph (e)(1) or (e)(2) of this section, unless the owner or operator eliminates the use or production of all HAP's that cause the process to be subject to this rule no later than 18 months after April 22, 1994.

(1) New sources that commence construction or reconstruction after December 31, 1992 shall comply upon initial start-up or April 22, 1994.

(2) Existing sources shall comply no later than October 24, 1994, except as provided in paragraphs (e)(3) through (e)(6) of this section or unless an extension has been granted by the EPA Regional Office or operating permit authority, as provided in §63.6(i) of subpart A of this part.

(3) Existing process units shall be in compliance with the requirements of §63.164 of subpart H no later than May 10, 1995, for any compressor meeting one or more of the criteria in paragraphs (e)(3)(i) through (e)(3)(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 must be modified to permit connecting the compressor to a closed vent system.

(4) Existing process units shall be in compliance with the requirements of §63.164 of subpart H no later than January 23, 1996, for any compressor meeting the criteria in paragraphs (e)(4)(i) through (e)(4)(iv) of this section.

(i) The compressor meets one or more of the criteria specified in paragraphs (e)(3) (i) through (iv) of this section;

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

(iii) 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 a request to the appropriate EPA Regional Office at the addresses listed in §63.13 of subpart A of this part no later than May 10, 1995. The request shall include the information specified in paragraphs (e)(4)(iv)(A) through (e)(4)(iv)(E) of this section. Unless the EPA Regional Office objects to the request within 30 days after receipt, the request shall be deemed approved.

(A) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(B) The name, address, and telephone number of a contact person for further information;

(C) An identification of the process unit, and of the specific equipment for which additional compliance time is required;

(D) The reason compliance cannot reasonably be achieved by May 10, 1995; and

(E) The date by which the owner or operator expects to achieve compliance.

(5)(i) If compliance with the compressor provisions of §63.164 of subpart H of this part cannot reasonably be achieved without a process unit shutdown, as defined in §63.161 of subpart H, the owner or operator shall achieve compliance no later than April 22, 1996, except as provided in paragraph (e)(5)(ii) of this section. The owner or operator who elects to use this provision shall also comply with the requirements of §63.192(m) of this subpart.

(ii) If compliance with the compressor provisions of §63.164 of subpart H of this part cannot be achieved without replacing the compressor or recasting the distance piece, the owner or operator shall achieve compliance no later than April 22, 1997. The owner or operator who elects to use this provision shall also comply with the requirements of §63.192(m) of this subpart.

(6) Existing sources shall be in compliance with the provisions of §63.170 of subpart H no later than April 22, 1997.

(f) The provisions of subparts I and H of this part do not apply to research and development facilities or to bench-scale batch processes, regardless of whether the facilities or processes are located at the same plant site as a process subject to the provisions of subpart I and H of this part.

(g)(1) If an additional process unit specified in paragraph (b) of this section is added to a plant site that is a major source as defined in Section 112(a) of the CAA, the addition shall be subject to the requirements for a new source in subparts H and I of this part if:

(i) It is an addition that meets the definition of construction in §63.2 of subpart A of this part;

(ii) Such construction commenced after December 31, 1992; and

(iii) The addition 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's, unless the Administrator establishes a lesser quantity.

(2) If any change is made to a process subject to this subpart, the change shall be subject to the requirements for a new source in subparts H and I of this part if:

(i) It is a change that meets the definition of reconstruction in §63.2 of subpart A of this part;

(ii) Such reconstruction commenced after December 31, 1992.

(3) If an additional process unit is added to a plant site or a change is made to a process unit and the addition or change is determined to be subject to the new source requirements according to paragraphs (g)(1) or (g)(2) of this section:

(i) The new or reconstructed source shall be in compliance with the new source requirements of subparts H and I of this part upon initial start-up of the new or reconstructed source or by April 22, 1994, whichever is later; and

(ii) The owner or operator of the new or reconstructed source shall comply with the reporting and recordkeeping requirements in subparts H and I of this part that are applicable to new sources. The applicable reports include, but are not limited to:

(A) Reports required by §63.182(b), if not previously submitted, §63.182 (c) and (d) of subpart H of this part; and

(B) Reports and notifications required by sections of subpart A of this part that are applicable to subparts H and I of this part, as identified in §63.192(a) of this subpart.

(4) If an additional process unit is added to a plant site, if a surge control vessel or bottoms receiver becomes subject to §63.170 of subpart H, or if a compressor becomes subject to §63.164 of subpart H, and if the addition or change is not subject to the new source requirements as determined according to paragraphs (g)(1) or (g)(2) of this section, the requirements in paragraphs (g)(4)(i) through (g)(4)(iii) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this

paragraph, process changes do not include: process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status required by §63.182(c) of subpart H of this part.

(i) The added emission point(s) and any emission point(s) within the added or changed process unit are subject to the requirements of subparts H and I of this part for an existing source;

(ii) The added emission point(s) and any emission point(s) within the added or changed process unit shall be in compliance with subparts H and I of this part by the dates specified in paragraphs (g)(4)(ii)(A) or (g)(4)(ii)(B) of this section, as applicable.

(A) If a process unit is added to a plant site or an emission point(s) is added to an existing process unit, the added process unit or emission point(s) shall be in compliance upon initial start-up of the added process unit or emission point(s) or by April 22, 1997, whichever is later.

(B) If a surge control vessel or bottoms receiver becomes subject to §63.170 of subpart H, if a compressor becomes subject to §63.164 of subpart H, or if a deliberate operational process change causes equipment to become subject to subpart H of this part, the owner or operator shall be in compliance upon initial start-up or by April 22, 1997, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule. The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

(iii) The owner or operator of a process unit or emission point that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements of subparts H and I of this part that are applicable to existing sources, including, but not limited to, the reports listed in paragraphs (g)(4)(iii)(A) and (g)(4)(iii)(B) of this section.

(A) Reports required by §63.182 of subpart H of this part; and

(B) Reports and notifications required by sections of subpart A of this part that are applicable to subparts H and I of this part, as identified in §63.192(a) of this subpart.

(h) *Rules stayed for reconsideration.* Notwithstanding any other provision of this subpart, the effectiveness of subpart I is stayed from October 24, 1994, to April 24, 1995, only as applied to those sources for which the owner or operator makes a representation in writing to the Administrator that the resolution of the area source definition issues could have an effect on the compliance status of the source with respect to subpart I.

(i) *Sections stayed for reconsideration.* Notwithstanding any other provision of this subpart, the effectiveness of §§63.164 and 63.170 of subpart H is stayed from October 28, 1994, to April 24, 1995, only as applied to those sources subject to §63.190(e)(2).

(j) If a change that does not meet the criteria in paragraph (g)(4) of this section is made to a process unit subject to subparts H and I of this part, and the change causes equipment to become subject to the provisions of subpart H of this part, then the owner or operator shall comply with the requirements of subpart H of this part for the equipment as expeditiously as practical, but in no event later than three years after the equipment becomes subject.

(1) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(2) The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

§63.191 Definitions.

(a) The following terms as used in subparts I and H of this part shall have the meaning given them in subpart A of this part: Act, Administrator, approved permit program, commenced, compliance date, construction, effective date, EPA, equivalent emission limitation, existing source, Federally enforceable, hazardous air pollutant, lesser quantity, major source, malfunction, new source, owner or operator, performance evaluation, performance test, permit program, permitting authority, reconstruction, relevant standard, responsible official, run, standard conditions, State, and stationary source.

(b) All other terms used in this subpart and in subpart H of this part shall have the meaning given them in the Act and in this section. If the same term is defined in subpart A or H of this part and in this section, it shall have the meaning given in this section for purposes of subparts I and H of this part.

Bench-scale batch process means a batch process (other than a research and development facility) that is operated on a small scale, such as one capable of being located on a laboratory bench top. This bench-scale equipment will typically include reagent feed vessels, a small reactor and associated product separator, recovery and holding equipment. These processes are only capable of producing small quantities of product.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

Butadiene-furfural cotrimer (R-11) means the product of reaction of butadiene with excess furfural in a liquid phase reactor. R-11 is usually used as an insect repellant and as a delousing agent for cows in the dairy industry.

Captafol® means the fungicide Captafol ([cis-N(1,1,2,2-tetrachloroethyl)-thio]-4-cylcohexene-1,2-dicarboximide). The category includes any production process units that store, react, or otherwise process 1,3-butadiene in the production of Captafol.

Captan® means the fungicide Captan. The production process typically includes, but is not limited to, the reaction of tetrahydrophthalimide and perchloromethyl mercaptan with caustic.

Chlorinated paraffins means dry chlorinated paraffins, which are mainly straight-chain, saturated hydrocarbons. The category includes, but is not limited to, production of chlorinated paraffins by passing gaseous chlorine into a paraffin hydrocarbon or by chlorination by using solvents, such as carbon tetrachloride, under reflux.

Chlorothalonil means the agricultural fungicide, bactericide and nematocide Chlorothalonil (Daconil). The category includes any process units utilized to dissolve tetrachlorophthalic acid chloride in an organic solvent, typically carbon tetrachloride, with the subsequent addition of ammonia.

Dacthal™ means the pre-emergent herbicide Dacthal™, also known as DCPA, DAC, and dimethyl ester 2,3,5,6-tetrachloroterephthalic acid. The category includes, but is not limited to, chlorination processes and the following production process units: photochlorination reactors, thermal chlorination reactors, and condensers.

Ethylidene Norbornene means the diene with CAS number 16219-75-3. Ethylidene norbornene is used in the production of ethylene-propylene rubber products.

Hypalon™ (*chlorosulfonated polyethylene*) means a synthetic rubber produced by reacting polyethylene with chloric and sulfur dioxide, transforming the thermoplastic polyethylene into a vulcanized elastomer. The reaction is conducted in a solvent (carbon tetrachloride) reaction medium.

Initial start-up means the first time a new or reconstructed source begins production. Initial start-up does not include operation solely for testing equipment. For purposes of subpart H of this part, initial start-up does not include subsequent start-ups (as defined in §63.161 of subpart H of this part) of process units (as defined in §63.161 of subpart H of this part) following malfunctions or process unit shutdowns.

In organic hazardous air pollutant service or *in organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of the designated organic HAP's listed in §63.190(b) of this subpart.

Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene (MABS) Resins means styrenic polymers containing methyl methacrylate, acrylonitrile, 1,3-butadiene, and styrene. The MABS copolymers are prepared by dissolving or dispersing polybutadiene rubber in a mixture of methyl methacrylate- acrylonitrile-styrene and butadiene monomer. The graft polymerization is carried out by a bulk or a suspension process.

Methyl Methacrylate-Butadiene-Styrene (MBS) Resins means styrenic polymers containing methyl methacrylate, 1,3-butadiene, and styrene. Production of MBS terpolymers is achieved using an emulsion process in which methyl methacrylate and styrene are grafted onto a styrene- butadiene rubber.

On-site or *On site* means, with respect to records required to be maintained by this subpart, that the 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 process unit to which the records pertain, or storage in central files elsewhere at the major source.

Oxybisphenoxarsine (OBPA)/1,3-Diisocyanate means the chemical with CAS number 58-36-6. The chemical is primarily used for fungicidal and bactericidal protection of plastics. The process uses chloroform as a solvent.

Pharmaceutical production process means a process that synthesizes one or more pharmaceutical intermediate or final products using carbon tetrachloride or methylene chloride as a reactant or process solvent. Pharmaceutical production process does not mean process operations involving formulation activities, such as tablet coating or spray coating of drug particles, or solvent recovery or waste management operations.

Polybutadiene production means a process that produces polybutadiene through the polymerization of 1,3-butadiene.

Polycarbonates means a special class of polyester formed from any dihydroxy compound and any carbonate diester or by ester interchange. Polycarbonates may be produced by solution or emulsion polymerization, although other methods may be used. A typical method for the manufacture of polycarbonates includes the reaction of bisphenol-A with phosgene in the presence of pyridine to form a polycarbonate. Methylene chloride is used as a solvent in this polymerization reaction.

Polysulfide rubber means a synthetic rubber produced by reaction of sodium sulfide and p-dichlorobenzene at an elevated temperature in a polar solvent. This rubber is resilient and has low temperature flexibility.

Process Unit means the group of equipment items used to process raw materials and to manufacture a product. For the purposes of this subpart, process unit includes all unit operations and associated equipment (e.g., reactors and associated product separators and recovery devices), associated unit operations (e.g., extraction columns), any feed and product storage vessels, and any transfer racks for distribution of final product.

Research and development facility means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products except in a deminimis manner.

Source means the collection of equipment listed in §63.190(d) to which this subpart applies as determined by the criteria in §63.190. For purposes of subparts H and I of this part, the term *affected source* as used in subpart A of this part has the same meaning as the term *source* defined here.

Styrene-butadiene rubber production means a process that produces styrene-butadiene copolymers, whether in solid (elastomer) or emulsion (latex) form.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within a process unit when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

Symmetrical tetrachloropyridine means the chemical with CAS number 2402-79-1.

Tordon acid™ means the synthetic herbicide 4-amino-3,5,6-trichloropicolinic acid, picloram. The category includes, but is not limited to, chlorination processes utilized in Tordon™ acid production.

§63.192 Standard.

(a)(1) The owner or operator of a source subject to this subpart shall comply with the requirements of subpart H of this part for the processes and designated organic HAP's listed in §63.190(b) of this subpart.

(2) The owner or operator of a pharmaceutical production process subject to this subpart may define a process unit as a set of operations, within a source, producing a product, as all operations collocated within a building or structure or as all affected operations at the source.

(b) All provisions in §§63.1 through 63.15 of subpart A of this part which apply to owners and operators of sources subject to subparts I and H of this part, are:

(1) The applicability provisions of §63.1 (a)(1), (a)(2), (a)(10), (a)(12) through (a)(14);

(2) The definitions of §63.2 unless changed or modified by specific entry in §63.191 or §63.161;

(3) The units and abbreviations in §63.3;

(4) The prohibited activities and circumvention provisions of §63.4 (a)(1), (a)(2), (a)(3), (a)(5), and (b);

(5) The construction and reconstruction provisions of §63.5(a), (b)(1), (b)(3), (d) (except the review is limited to the equipment subject to the provisions of subpart H), (e), and (f);

(6)(i) Except as specified in paragraph (b)(12) of this section, ~~T~~the compliance with standards and maintenance requirements of §63.6(a), (b)(3), (c)(5), (e), (i)(1), (i)(2), (i)(4)(i)(A), (i)(6)(i), (i)(8) through (i)(10), (i)(12) through (i)(14), (i)(16), and (j);

(ii) Except as specified in paragraph (b)(12) of this section, ~~T~~the operational and maintenance requirements of §63.6(e). The startup, shutdown, and malfunction plan requirement of §63.6(e)(3) is limited to control devices subject to the provisions of subpart H of part 63 and is optional for other equipment subject to subpart H. The startup, shutdown, and malfunction plan may include written procedures that identify conditions that justify a delay of repair. On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], the last two sentences of this paragraph do not apply.

(7) With respect to flares, except as specified in paragraph (b)(12) of this section, the performance testing requirements of §63.7(a)(3), (d), (e)(1), (e)(2), (e)(4), and (h);

(8) The notification requirements of §63.9 (a)(1), (a)(3), (a)(4), (b)(1)(i), (b)(4), (b)(5) (except, use the schedule specified in subpart H), (c), (d), and (i);

(9) The recordkeeping and reporting requirements of §63.10(a) and (f);

(10) Except as specified in paragraph (b)(12) of this section, ~~T~~the control device requirements of §63.11(b); and

(11) The provisions of §63.12 through §63.15.

(12) On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], §63.6(e)(1)(i), (e)(1)(ii), and (e)(3), §63.7(e)(1), and §63.11(b) of subpart A of this part do not apply. Instead, you must comply with paragraphs (b)(12)(i) through (b)(12)(iii) of this section.

(i) The owner or operator of a source subject to this subpart shall comply with the requirements at all times, except during periods of nonoperation of the source (or specific portion thereof) resulting in cessation of the emissions to which this subpart or subpart H of this part applies.

(ii) At all times, owners and operators subject to this subpart must operate and maintain any source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require owners and operators to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(iii) Owners and operators that use a flare to comply with this subpart must comply with §63.108 of subpart F of this part.

(c) Initial performance tests and initial compliance determinations shall be required only as specified in subpart H of this part.

(1) Performance tests and compliance determinations shall be conducted according to the applicable sections of subpart H.

(2) The owner or operator shall notify the Administrator of the intention 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.

NOTE: This requirement does not apply to equipment subject to monitoring using Method 21 of part 60, appendix A.

(3) Performance tests shall be conducted according to the provisions of §63.7(e) of subpart A of this part, except that performance tests shall be conducted at maximum representative operating conditions for the process except as specified in paragraph (c)(5) of this section. During the performance test, an owner or operator may operate the control or recovery device at maximum or minimum representative operating conditions for monitored control or recovery device parameters, whichever results in lower emission reduction.

(4) 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 of appendix A of this part.

(5) On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], in lieu of the requirements specified in §63.7(e)(1) of subpart A of this part you must conduct performance tests under such conditions as the Administrator specifies based

on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) An application for approval of construction or reconstruction, 40 CFR 63.5 of this chapter, will not be required if:

(1) The new process unit complies with the applicable standards in §63.162 or §63.178 of subpart H of this part; and

(2) In the next semiannual report required by §63.182(d) of subpart H of this part, the information in §63.182(c) of subpart H of this part is reported.

(e) If an owner or operator of a process plans to eliminate the use or production of all HAP's that cause the process to be subject to the provisions of subparts I and H of this part no later than 18 months after April 22, 1994, the owner or operator shall submit to the Administrator a brief description of the change, identify the HAP's eliminated, and the expected date of cessation of operation of the current process, by no later than January 23, 1995.

(f) Each owner or operator of a source subject to subparts I and H of this part shall keep copies of all applicable reports and records required by subpart H for at least 2 years, except as otherwise specified in subpart H. If an owner or operator submits copies of reports to the applicable 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)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(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 provides access within 2 hours after a request.

(2) The owner or operator subject to subparts I and H of this part shall keep the records specified in this paragraph, as well as records specified in subpart H of this part.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of a process subject to this subpart as specified in §63.190(b) of this subpart. On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies; however, for historical compliance purposes, a copy of these records must be retained and available on-site for at least five years after the date of occurrence.

(ii) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with subparts I and H of this part.

(iii) For each start-up, shutdown, and malfunction, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for the event. On and after [INSERT date 3 years after date of publication of final rule in the Federal Register], this paragraph no longer applies; however, for historical compliance purposes, a copy of the plan and these records must be retained and available on-site for at least five years after the date of occurrence.

(g) All reports required under subpart H shall ~~be sent to the Administrator at the addresses listed in §63.13 of subpart A of this part~~be submitted as required in §63.182 of subpart H of this part.

(1) Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(h) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in organic HAP emissions at least equivalent to the reduction in organic HAP emissions from that source achieved under any design, equipment, work practice, or operational standards in subpart H of this part, the Administrator will publish in the **Federal Register** a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(1) The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(2) Any notice under paragraph (h) of this section shall be published only after public notice and an opportunity for a hearing.

(3) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

(i) Each owner or operator of a source subject to this subpart shall obtain a permit under 40 CFR part 70 or part 71 from the appropriate permitting authority.

(1) If EPA has approved a State operating permit program under 40 CFR part 70, the permit shall be obtained from the State authority.

(2) If the State operating permit program has not been approved, the source shall apply to the EPA regional office pursuant to 40 CFR part 71.

(j) The requirements in subparts I and H of this part are Federally enforceable under section 112 of the Act on and after the dates specified in §63.190(d) of this subpart.

(k) The owner or operator of a process unit which meets the criteria of §63.190 (c), shall comply with the requirements of either paragraph (k)(1) or (k)(2) of this section.

(1) Retain information, data, and analysis used to determine that the process unit does not have the designated organic hazardous air pollutant present in the process. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(2) When requested by the Administrator, demonstrate that the chemical manufacturing process unit does not have the designated organic hazardous air pollutant present in the process.

(l) To qualify for the exemption specified in §63.190(b)(7) of this subpart, the owner or operator shall maintain the documentation of the information required pursuant to §63.190(b)(7)(i), and documentation of any update of this information requested by the EPA Regional Office, and shall provide the documentation to the EPA Regional Office upon request. The EPA Regional Office will notify the owner or operator, after reviewing such documentation, whether, in the EPA Regional Office's judgement, the source does not qualify for the exemption specified in §63.190(b)(7) of this subpart. In such cases, compliance with this subpart shall be required no later than 90 days after the date of such notification by the EPA Regional Office.

(m) An owner or operator who elects to use the compliance extension provisions of §63.190(e)(5) (i) or (ii) shall submit a compliance extension request to the appropriate EPA Regional Office no later than May 10, 1995. The request shall contain the information specified in §63.190(e)(4)(iv) and the reason compliance cannot reasonably be achieved without a process unit shutdown, as defined in §63.161 of subpart H or replacement of the compressor or recasting of the distance piece.

§63.193 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.190 and 63.192(a) through (b), (e), and (h) through (j). Where these standards reference another subpart, the cited provisions will be delegated 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.