Subpart HH-National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities

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SOURCE: 64 FR 32628, June 17, 1999, unless otherwise noted.

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40 CFR 63.760 - Applicability and designation of affected source

(a) This subpart applies to the owners and operators of the emission points, specified in paragraph (b) of this section that are located at oil and natural gas production facilities that meet the specified criteria in paragraphs (a)(1) and either (a)(2) or (a)(3) of this section.

(1) Facilities that are major or area sources of hazardous air pollutants (HAP) as defined in 40 CFR 63.761. Emissions for major source determination purposes can be estimated using the maximum natural gas or hydrocarbon liquid throughput, as appropriate, calculated in paragraphs (a)(1)(i) through (iii) of this section. As an alternative to calculating the maximum natural gas or hydrocarbon liquid throughput, the owner or operator of a new or existing source may use the facility's design maximum natural gas or hydrocarbon liquid throughput to estimate the maximum potential emissions. Other means to determine the facility's major source status are allowed, provided the information is documented and recorded to the Administrator's satisfaction in accordance with 40

CFR 63.10(b)(3). A facility that is determined to be an area source, but subsequently increases its emissions or its potential to emit above the major source levels, and becomes a major source, must comply thereafter with all provisions of this subpart applicable to a major source starting on the applicable compliance date specified in paragraph (f) of this section. Nothing in this paragraph is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(i) If the owner or operator documents, to the Administrator's satisfaction, a decline in annual natural gas or hydrocarbon liquid throughput, as appropriate, each year for the 5 years prior to October 15, 2012, the owner or operator shall calculate the maximum natural gas or hydrocarbon liquid throughput used to determine maximum potential emissions according to the requirements specified in paragraph (a)(1)(i)(A) of this section. In all other circumstances, the owner or operator shall calculate the maximum throughput used to determine whether a facility is a major source in accordance with the requirements specified in paragraph (a)(1)(i)(B) of this section.

(A) The maximum natural gas or hydrocarbon liquid throughput is the average of the annual natural gas or hydrocarbon liquid throughput for the 3 years prior to October 15, 2012, multiplied by a factor of 1.2.

(B) The maximum natural gas or hydrocarbon liquid throughput is the highest annual natural gas or hydrocarbon liquid throughput over the 5 years prior to October 15, 2012, multiplied by a factor of 1.2.

(ii) The owner or operator shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput each year and upon request submit such records to the Administrator. If the facility annual natural gas or hydrocarbon liquid throughput increases above the maximum natural gas or hydrocarbon liquid throughput calculated in paragraph (a)(1)(i)(A) or (a)(1)(i)(B) of this section, the maximum natural gas or hydrocarbon liquid throughput must be recalculated using the higher throughput multiplied by a factor of 1.2.

(iii) The owner or operator shall determine the maximum values for other parameters used to calculate emissions as the maximum for the period over which the maximum natural gas or hydrocarbon liquid throughput is determined in accordance with paragraph (a)(1)(i)(A) or (B) of this section. Parameters, other than glycol circulation rate, shall be based on either highest measured values or annual average. For estimating maximum potential emissions from glycol dehydration units, the glycol circulation rate used in the calculation shall be the unit's maximum rate under its physical and operational design consistent with the definition of potential to emit in 40 CFR 63.2.

(2) Facilities that process, upgrade, or store hydrocarbon liquids.

(3) Facilities that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer.

(b) The affected sources for major sources are listed in paragraph (b)(1) of this section and for area sources in paragraph (b)(2) of this section.

(1) For major sources, the affected source shall comprise each emission point located at a facility that meets the criteria specified in paragraph (a) of this section and listed in paragraphs (b)(1)(i) through (b)(1)(iv) of this section.

(i) Each glycol dehydration unit as specified in paragraphs (b)(1)(i)(A) through (C) of this section.

(A) Each large glycol dehydration unit;

(B) Each small glycol dehydration unit for which construction commenced on or before August 23, 2011, is an existing small glycol dehydration unit; and

(C) Each small glycol dehydration unit for which construction commenced after August 23, 2011, is a new small glycol dehydration unit.

(ii) Each storage vessel with the potential for flash emissions;

(iii) The group of all ancillary equipment, except compressors, intended to operate in volatile hazardous air pollutant service (as defined in 40 CFR 63.761), which are located at natural gas processing plants; and

(iv) Compressors intended to operate in volatile hazardous air pollutant service (as defined in 40 CFR 63.761), which are located at natural gas processing plants.

(2) For area sources, the affected source includes each triethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in paragraph (a) of this section.

(c) Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.

(d) The owner and operator of a facility that does not contain an affected source as specified in paragraph (b) of this section are not subject to the requirements of this subpart.

(e) Exemptions. The facilities listed in paragraphs (e)(1) and (e)(2) of this section are exempt from the requirements of this subpart. Records shall be maintained as required in 40 CFR 63.10(b)(3).

(1) A facility that exclusively processes, stores, or transfers black oil (as defined in 40 CFR 63.761) is not subject to the requirements of this subpart. For the purposes of this subpart, a black oil facility that uses natural gas for fuel or generates gas from black oil shall qualify for this exemption.

(2) A major source facility, prior to the point of custody transfer, with a facility-wide actual annual average natural gas throughput less than 18.4 thousand standard cubic meters per day and a facility-wide actual annual average hydrocarbon liquid throughput less than 39,700 liters per day.

(f) The owner or operator of an affected major source shall achieve compliance with the provisions of this subpart by the dates specified in paragraphs (f)(1), (2), and (f)(7) through (9) of this section. The owner or operator of an affected area source shall achieve compliance with the provisions of this subpart by the dates specified in paragraphs (f)(3) through (6) of this section.

(1) Except as specified in paragraphs (f)(7) through (9) of this section, the owner or operator of an affected major source, the construction or reconstruction of which commenced before February 6, 1998, shall achieve compliance with the applicable provisions of this subpart no later than June 17, 2002, except as provided for in 40 CFR 63.6(i). The owner or operator of an area source, the construction or reconstruction of which commenced before February 6, 1998, that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source that is subject to this subpart shall comply with this subpart 3 years after becoming a major source.

(2) Except as specified in paragraphs (f)(7) through (9) of this section, the owner or operator of an affected major source, the construction or reconstruction of which commences on or after February 6, 1998, shall achieve compliance with the applicable provisions of this subpart immediately upon initial startup or June 17, 1999, whichever date is later. Area sources, other than production field facilities identified in (f)(9) of this section, the construction or reconstruction of which commences on or after February 6, 1998, that become major sources shall comply with the provisions of this standard immediately upon becoming a major source.

(3) The owner or operator of an affected area source, located in an Urban-1 county, as defined in 40 CFR 63.761, the construction or reconstruction of which commences before February 6, 1998, shall achieve compliance with the provisions of this subpart no later than the dates specified in paragraphs (f)(3)(i) or (ii) of this section, except as provided for in 40 CFR 63.6(i).

(i) If the affected area source is located within any UA plus offset and UC boundary, as defined in 40 CFR 63.761, the compliance date is January 4, 2010.

(ii) If the affected area source is not located within any UA plus offset and UC boundary, as defined in 40 CFR 63.761, the compliance date is January 5, 2009.

(4) The owner or operator of an affected area source, located in an Urban-1 county, as defined in 40 CFR 63.761, the construction or reconstruction of which commences on or after February 6, 1998, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.

(5) The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in 40 CFR 63.761, the construction or reconstruction of which commences before July 8, 2005, shall achieve compliance with the provisions of this subpart no later than the dates specified in paragraphs (f)(5)(i) or (ii) of this section, except as provided for in 40 CFR 3.6(i).

(i) If the affected area source is located within any UA plus offset and UC boundary, as defined in 40 CFR 63.761, the compliance date is January 4, 2010.

(ii) If the affected area source is not located within any UA plus offset and UC boundary, as defined in 40 CFR 63.761, the compliance date is January 5, 2009.

(6) The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in 40 CFR 63.761, the construction or reconstruction of which commences on or after July 8, 2005, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.

(7) Each affected existing small glycol dehydration unit, as defined in 40 CFR 63.761, located at a major source, that commenced construction before August 23, 2011, must achieve compliance no later than October 15, 2015, except as provided in 40 CFR 63.6(i).

(8) Each affected new small glycol dehydration unit, as defined in 40 CFR 63.761, located at a major source, that commenced construction on or after August 23, 2011, must achieve compliance immediately upon initial startup or October 15, 2012, whichever is later.

(9) A production field facility, as defined in 40 CFR 63.761, constructed on or before August 23, 2011, that was previously determined to be an area source but becomes a major source (as defined in paragraph 3 of the major source definition in 40 CFR 63.761) on the October 15, 2012 must achieve compliance no later than October 15, 2015, except as provided in 40 CFR 63.6(i).

(g) The following provides owners or operators of an affected source at a major source with information on overlap of this subpart with other regulations for equipment leaks. The owner or operator of an affected source at a major source shall document that they are complying with other regulations by keeping the records specified in 40 CFR 63.774(b)(9).

(1) [Reserved]

(2) After the compliance dates specified in paragraph (f) of this section, ancillary equipment and compressors that are subject to this subpart and are also subject to and controlled under the provisions of 40 CFR 61 Subpart V, are only required to comply with the requirements of 40 CFR 61 Subpart V.

(3) After the compliance dates specified in paragraph (f) of this section, ancillary equipment and compressors that are subject to this subpart and are also subject to and controlled under the provisions of 40 CFR 63 Subpart H, are only required to comply with the requirements of 40 CFR 63 Subpart H.

(h) An owner or operator of an affected source that is a major source or is located at a major source and is subject to the provisions of this subpart is also subject to 40 CFR 70 or 71 operating permit requirements. Unless otherwise required by law, the owner or operator of an area source subject to the provisions of this subpart is exempt from the permitting requirements established by 40 CFR 70 or 40 CFR 71.

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40 CFR 63.761 - Definitions

All terms used in this subpart shall have the meaning given them in the Clean Air Act (Act), subpart A of this part (General Provisions), and in this section. If the same term is defined in subpart A and in this section, it shall have the meaning given in this section for purposes of this subpart.

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

Alaskan North Slope means the approximately 180,000 square kilometer area (69,000 square mile area) extending from the Brooks Range to the Arctic Ocean.

Ancillary equipment means any of the following pieces of equipment: pumps, pressure relief devices, sampling connection systems, open-ended valves, or lines, valves, flanges, or other connectors.

API gravity means the weight per unit volume of hydrocarbon liquids as measured by a system recommended by the American Petroleum Institute (API) and is expressed in degrees.

Associated equipment, as used in this subpart and as referred to in section 112(n)(4) of the Act, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the wellbore to the point of custody transfer, except glycol dehydration units and storage vessels.

Black oil means hydrocarbon (petroleum) liquid with an initial producing gas-to-oil ratio (GOR) less than 0.31 cubic meters per liter and an API gravity less than 40 degrees.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering and exporting thermal energy in the form of steam or hot water. Boiler also means any industrial furnace as defined in 40 CFR 260.10.

BTEX means benzene, toluene, ethyl benzene and xylene.

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 one or more control devices. If gas or vapor from regulated equipment is routed to a process (e.g., to a fuel gas system), the conveyance system shall not be considered a closed-vent system and is not subject to closed-vent system standards.

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

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at standard conditions, as specified in 40 CFR 63.2.

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

Control device means any equipment used for recovering or oxidizing HAP or volatile organic compound (VOC) vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For the purposes of this subpart, if gas or vapor from regulated equipment is used, reused (i.e., injected into the flame zone of an enclosed combustion device), returned back to the process, or sold, then the recovery system used, including piping, connections, and flow inducing devices, is not considered to be a control device or closed-vent system.

Cover means a device which is placed on top of or over a material such that the entire surface area of the material is enclosed and sealed. A cover may have openings (such as access hatches, sampling ports, and gauge wells) if those openings are necessary for operation, inspection, maintenance, or repair of the unit on which the cover is installed, provided that each opening is closed and sealed when the opening is not in use. In addition, a cover may have one or more safety devices. Examples of a cover include, but are not limited to, a fixed-roof installed on a tank, an external floating roof installed on a tank, and a lid installed on a drum or other container.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Equipment leaks means emissions of HAP from ancillary equipment (as defined in this section) and compressors.

Facility means any grouping of equipment where hydrocarbon liquids are processed, upgraded (i.e., remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For the purpose of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Field natural gas means natural gas extracted from a production well prior to entering the first stage of processing, such as dehydration.

Fixed-roof means a cover that is mounted on a 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 combustion device occupied by the flame envelope.

Flare means a thermal oxidation system using an open flame (*i.e.*, without enclosure).

Flash tank. See the definition for gas-condensate-glycol (GCG) separator.

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

Gas-condensate-glycol (GCG) separator means a two- or three-phase separator through which the "rich" glycol stream of a glycol dehydration unit is passed to remove entrained gas and hydrocarbon liquid. The GCG separator is commonly referred to as a flash separator or flash tank.

Gas-to-oil ratio (GOR) means the number of standard cubic meters of gas produced per liter of crude oil or other hydrocarbon liquid.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Glycol dehydration unit baseline operations means operations representative of the large glycol dehydration unit operations as of June 17, 1999 and the small glycol dehydrator unit operations as of August 23, 2011. For the purposes of this subpart, for determining the percentage of overall HAP emission reduction attributable to process modifications, baseline operations shall be parameter values (including, but not limited to, glycol circulation rate or glycol-HAP absorbency) that represent actual long-term conditions (i.e., at least 1 year). Glycol dehydration units in operation for less than 1 year shall document that the parameter values represent expected long-term operating conditions had process modifications not been made.

Glycol dehydration unit process vent means the glycol dehydration unit reboiler vent and the vent from the GCG separator (flash tank), if present.

Glycol dehydration unit reboiler vent means the vent through which exhaust from the reboiler of a glycol dehydration unit passes from the reboiler to the atmosphere or to a control device.

Hazardous air pollutants or *HAP* means the chemical compounds listed in section 112(b) of the Clean Air Act. All chemical compounds listed in section 112(b) of the Act need to be considered when making a major source determination. Only the HAP compounds listed in Table 1 of this subpart need to be considered when determining compliance.

Hydrocarbon liquid means any naturally occurring, unrefined petroleum liquid.

In VHAP service means that a piece of ancillary equipment or compressor either contains or contacts a fluid (liquid or gas) which has a total volatile HAP (VHAP) concentration equal to or greater than 10 percent by weight as determined according to the provisions of 40 CFR 63.772(a).

In wet gas service means that a piece of equipment contains or contacts the field gas before the extraction of natural gas liquids.

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 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.

Initial producing GOR means the producing standard cubic meters of gas per liter at the time that the reservoir pressure is above the bubble point pressure (or dewpoint pressure for a gas).

Initial startup means the first time a new or reconstructed source begins production. For the purposes of this subpart, initial startup does not include subsequent startups (as defined in this section) of equipment, for example, following malfunctions or shutdowns.

Large glycol dehydration unit means a glycol dehydration unit with an actual annual average natural gas flowrate equal to or greater than 85 thousand standard cubic meters per day and actual annual average benzene emissions equal to or greater than 0.90 Mg/yr, determined according to 40 CFR 63.772(b). A glycol dehydration unit complying with the 0.9 Mg/yr control option under 40 CFR 63.765(b)(1)(ii) is considered to be a large dehydrator.

Major source, as used in this subpart, shall have the same meaning as in 40 CFR 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Natural gas means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface. The principal hydrocarbon constituent is methane.

Natural gas liquids (NGL) means the liquid hydrocarbons, such as ethane, propane, butane, pentane, natural gasoline, and condensate that are extracted from field natural gas.

Natural gas processing plant (gas plant) means any processing site engaged in the extraction of natural gas liquids from field gas, or the fractionation of mixed NGL to natural gas products, or a combination of both.

No detectable emissions means no escape of HAP from a device or system to the atmosphere as determined by:

(1) Instrument monitoring results in accordance with the requirements of 40 CFR 63.772(c); and

(2) The absence of visible openings or defects in the device or system, such as rips, tears, or gaps.

Operating parameter value means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, indicates that an owner or operator has complied with an applicable operating parameter limitation, over the appropriate averaging period as specified in 40 CFR 63.772(f) or (g).

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

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

Primary fuel means the fuel that provides the principal heat input (i.e., more than 50 percent) to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

Process heater means an enclosed device using a controlled flame, the primary purpose of which is to transfer heat to a process fluid or process material that is not a fluid, or to a heat transfer material for use in a process (rather than for steam generation).

Produced water means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.

Production field facilities means those facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Reciprocating compressor means a piece of equipment that increases the pressure of a process gas by positive displacement, employing linear movement of the drive shaft.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representatives is approved in advance by the permitting authority;

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(3) For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or

(4) For affected sources:

(i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Act or the regulations promulgated thereunder are concerned; and

(ii) The designated representative for any other purposes under 40 CFR 70.

Safety device means a device that meets both of the following conditions: it is not used for planned or routine venting of liquids, gases, or fumes from the unit or equipment on which the device is installed; and it remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the unit or equipment on which the device is installed in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. Examples of unplanned events which may require a safety device to open include failure of an essential equipment component or a sudden power outage.

Shutdown means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of a glycol dehydration unit, or other affected source under this subpart, or equipment required or used solely to comply with this subpart.

Small glycol dehydration unit means a glycol dehydration unit, located at a major source, with an actual annual average natural gas flowrate less than 85 thousand standard cubic meters per day or actual annual average benzene emissions less than 0.90 Mg/yr, determined according to 40 CFR 63.772(b).

Startup means the setting into operation of a glycol dehydration unit, or other affected equipment under this subpart, or equipment required or used to comply with this subpart. Startup includes initial startup and operation solely for the purpose of testing equipment.

Storage vessel means a tank or other vessel that is designed to contain an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water and that is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) that provide structural support.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank GOR equal to or greater than 0.31 cubic meters per liter and an API gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Tank battery means a collection of equipment used to separate, treat, store, and transfer crude oil, condensate, natural gas, and produced water. A tank battery typically receives crude oil, condensate, natural gas, or some combination of these extracted products from several production wells for accumulation and separation prior to transmission to a natural gas plant or petroleum refinery. A tank battery may or may not include a glycol dehydration unit.

Temperature monitoring device means an instrument used to monitor temperature and having a minimum accuracy of ± 2 percent of the temperature being monitored expressed in °C, or ± 2.5 °C, whichever is greater. The temperature monitoring device may measure temperature in degrees Fahrenheit or degrees Celsius, or both.

Total organic compounds or *TOC,* as used in this subpart, means those compounds which can be measured according to the procedures of Method 18, 40 CFR 60 Appendix A.

UA plus offset and UC is defined as the area occupied by each urbanized area, each urban cluster that contains at least 10,000 people, and the area located two miles or less from each urbanized area boundary.

Urban-1 County is defined as a county that contains a part of a Metropolitan Statistical Area with a population greater than 250,000, based on the Office of Management and Budget's *Standards for defining Metropolitan and Micropolitan Statistical Areas* (December 27, 2000), and Census 2000 Data released by the U.S. Census Bureau.

Urbanized area refers to Census 2000 Urbanized Area, which is defined in the *Urban Area Criteria for Census 2000* (March 15, 2002). Essentially, an urbanized area consists of densely settled territory with a population of at least 50,000 people.

Urban cluster refers to a Census 2000 Urban Cluster, which is defined in the *Urban Area Criteria for Census 2000* (March 15, 2002). Essentially, an urban cluster consists of densely settled territory with at least 2,500 people but fewer than 50,000 people.

Volatile hazardous air pollutant concentration or *VHAP concentration* means the fraction by weight of all HAP contained in a material as determined in accordance with procedures specified in 40 CFR 63.772(a).

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40 CFR 63.762 - Affirmative defense for violations of emission standards during malfunction

(a) The provisions set forth in this subpart shall apply at all times.

(b)-(c) [Reserved]

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

(1) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (d)(2) of this section, and must prove by a preponderance of evidence that:

(i) The violation:

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

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

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

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

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

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

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

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

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

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

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

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

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

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40 CFR 63.763 - [Reserved]

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40 CFR 63.764 - General standards

(a) Table 2 of this subpart specifies the provisions of Subpart A (General Provisions) of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(b) All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. Reports may be submitted on electronic media.

(c) Except as specified in paragraph (e) of this section, the owner or operator of an affected source located at an existing or new major source of HAP emissions shall comply with the standards in this subpart as specified in paragraphs (c)(1) through (3) of this section.

(1) For each glycol dehydration unit process vent subject to this subpart, the owner or operator shall comply with the requirements specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) The owner or operator shall comply with the control requirements for glycol dehydration unit process vents specified in 40 CFR 63.765;

(ii) The owner or operator shall comply with the monitoring requirements specified in 40 CFR 63.773; and

(iii) The owner or operator shall comply with the recordkeeping and reporting requirements specified in 40 CFR 63.774 and 63.775.

(2) For each storage vessel with the potential for flash emissions subject to this subpart, the owner or operator shall comply with the requirements specified in paragraphs (c)(2)(i) through (iii) of this section.

(i) The control requirements for storage vessels specified in 40 CFR 63.766;

(ii) The monitoring requirements specified in 40 CFR 63.773; and

(iii) The recordkeeping and reporting requirements specified in 40 CFR 63.774 and 63.775.

(3) For ancillary equipment (as defined in 40 CFR 63.761) and compressors at a natural gas processing plant subject to this subpart, the owner or operator shall comply with the requirements for equipment leaks specified in 40 CFR 63.769.

(d) Except as specified in paragraph (e)(1) of this section, the owner or operator of an affected source located at an existing or new area source of HAP emissions shall comply with the applicable standards specified in paragraph (d) of this section.

(1) Each owner or operator of an area source located within an UA plus offset and UC boundary (as defined in 40 CFR 63.761) shall comply with the provisions specified in paragraphs (d)(1)(i) through (iii) of this section.

(i) The control requirements for glycol dehydration unit process vents specified in 40 CFR 63.765;

(ii) The monitoring requirements specified in 40 CFR 63.773; and

(iii) The recordkeeping and reporting requirements specified in 40 CFR 63.774 and 63.775.

(2) Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in 40 CFR 63.761) shall comply with paragraphs (d)(2)(i) through (iii) of this section.

(i) Determine the optimum glycol circulation rate using the following equation:

$$L_{OPT} = 1.15 * 3.0 \frac{\text{gal TEG}}{\text{lb } H_2O} * \left(\frac{F * (I - O)}{24 \text{ hr/day}} \right)$$

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Where:

L_{OPT} = Optimal circulation rate, gal/hr.

F = Gas flowrate (MMSCF/D).
I = Inlet water content (lb/MMSCF).
O = Outlet water content (lb/MMSCF).
3.0 = The industry accepted rule of thumb for a TEG-to water ratio (gal TEG/lb H_2O).
1.15 = Adjustment factor included for a margin of safety.

(ii) Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with paragraph (d)(2)(i) of this section. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with paragraph (d)(2)(i), the owner or operator must calculate an alternate circulation rate using GRI-GLYCalc™, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with 40 CFR 63.775(c)(7).

(iii) Maintain a record of the determination specified in paragraph (d)(2)(ii) in accordance with the requirements in 40 CFR 63.774(f) and submit the Initial Notification in accordance with the requirements in 40 CFR 63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with paragraph (d)(2)(i) or (ii) of this section and submit the information specified under 40 CFR 63.775(c)(7)(ii) through (v).

(e) Exemptions

(1) The owner or operator of an area source is exempt from the requirements of paragraph (d) of this section if the criteria listed in paragraph (e)(1)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in 40 CFR 63.774(d)(1).

(i) The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in 40 CFR 63.772(b)(1) of this subpart; or

(ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in 40 CFR 63.772(b)(2) of this subpart.

(2) The owner or operator is exempt from the requirements of paragraph (c)(3) of this section for ancillary equipment (as defined in 40 CFR 63.761) and compressors at a natural gas processing plant subject to this subpart if the criteria listed in paragraph (e)(2)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in 40 CFR 63.774(d)(2).

(i) Any ancillary equipment and compressors that contain or contact a fluid (liquid or gas) must have a total VHAP concentration less than 10 percent by weight, as determined by the procedures specified in 40 CFR 63.772(a); or

(ii) That ancillary equipment and compressors must operate in VHAP service less than 300 hours per calendar year.

(f) Each owner or operator of a major HAP source subject to this subpart is required to apply for a 40 CFR 70 or 71 operating permit from the appropriate permitting authority. If the Administrator has approved a State operating permit program under 40 CFR 70, the permit shall be obtained from the State authority. If a State operating permit program has not been approved, the owner or operator of a source shall apply to the EPA Regional Office pursuant to 40 CFR 71.

(g)-(h) [Reserved]

(i) 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 standard to fail to take action to repair the leak(s) within the specified time. If action is taken to repair the leak(s) within the specified time, failure of that action to successfully repair the leak(s) is not a violation of this standard. However, if the repairs are unsuccessful, and a leak is detected, the owner or operator shall take further action as required by the applicable provisions of this subpart.

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

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40 CFR 63.765 - Glycol dehydration unit process vent standards

(a) This section applies to each glycol dehydration unit subject to this subpart that must be controlled for air emissions as specified in either paragraph (c)(1)(i) or paragraph (d)(1)(i) of 40 CFR 63.764.

(b) Except as provided in paragraph (c) of this section, an owner or operator of a glycol dehydration unit process vent shall comply with the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) For each glycol dehydration unit process vent, the owner or operator shall control air emissions by either paragraph (b)(1)(i), (ii), or (iii) of this section.

(i) The owner or operator of a large glycol dehydration unit, as defined in 40 CFR 63.761, shall connect the process vent to a control device or a combination of control devices through a closed-vent system. The closed-vent system shall be designed and operated in accordance with the requirements of 40 CFR 63.771(c). The control device(s) shall be designed and operated in accordance with the requirements of 40 CFR 63.771(d).

(ii) The owner or operator of a large glycol dehydration unit shall connect the process vent to a control device or combination of control devices through a closed-vent system and the outlet benzene emissions from the control device(s) shall be reduced to a level less than 0.90 megagrams per year. The closed-vent system shall be designed and operated in accordance with the requirements of 40 CFR 63.771(c). The control device(s) shall be designed and operated in accordance with the requirements of 40 CFR 63.771(d), except that the performance levels specified in 40 CFR 63.771(d)(1)(i) and (ii) do not apply.

(iii) You must limit BTEX emissions from each existing small glycol dehydration unit process vent, as defined in 40 CFR 63.761, to the limit determined in Equation 1 of this section. You must limit BTEX emissions from each new small glycol dehydration unit process vent, as defined in 40 CFR 63.761, to the limit determined in Equation 2 of this section. The limits determined using Equation 1 or Equation 2 must be met in accordance with one of the alternatives specified in paragraphs (b)(1)(iii)(A) through (D) of this section.

$$EL_{BTEX} = 3.28x10^{-4} \cdot Throughput \cdot C_{i,BTEX} \cdot 365 \frac{days}{yr} \cdot \frac{1\ Mg}{1x10^{6}\ grams}$$

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Equation 1

Where:

EL_{BTEX} = Unit-specific BTEX emission limit, megagrams per year;
3.28×10^{-4} = BTEX emission limit, grams BTEX/standard cubic meter-ppmv;
Throughput = Annual average daily natural gas throughput, standard cubic meters per day.
$C_{i,BTEX}$ = average annual BTEX concentration of the natural gas at the inlet to the glycol dehydration unit, ppmv.

$$EL_{BTEX} = 4.66x10^{-6} \cdot Throughput \cdot C_{i,BTEX} \cdot 365 \frac{days}{yr} \cdot \frac{1\ Mg}{1x10^{6}\ grams}$$

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Where:

EL_{BTEX} = Unit-specific BTEX emission limit, megagrams per year;
4.66×10^{-6} = BTEX emission limit, grams BTEX/standard cubic meter-ppmv;

Throughput = Annual average daily natural gas throughput, standard cubic meters per day.
$C_{i,BTEX}$ = average annual BTEX concentration of the natural gas at the inlet to the glycol dehydration unit, ppmv.

(A) Connect the process vent to a control device or combination of control devices through a closed-vent system. The closed vent system shall be designed and operated in accordance with the requirements of 40 CFR 63.771(c). The control device(s) shall be designed and operated in accordance with the requirements of 40 CFR 63.771(f).
(B) Meet the emissions limit through process modifications in accordance with the requirements specified in 40 CFR 63.771(e).
(C) Meet the emissions limit for each small glycol dehydration unit using a combination of process modifications and one or more control devices through the requirements specified in paragraphs (b)(1)(iii)(A) and (B) of this section.
(D) Demonstrate that the emissions limit is met through actual uncontrolled operation of the small glycol dehydration unit. Document operational parameters in accordance with the requirements specified in 40 CFR 63.771(e) and emissions in accordance with the requirements specified in 40 CFR 63.772(b)(2).

(2) One or more safety devices that vent directly to the atmosphere may be used on the air emission control equipment installed to comply with paragraph (b)(1) of this section.

(c) As an alternative to the requirements of paragraph (b) of this section, the owner or operator may comply with one of the requirements specified in paragraphs (c)(1) through (3) of this section.

(1) The owner or operator shall control air emissions by connecting the process vent to a process natural gas line.
(2) The owner or operator shall demonstrate, to the Administrator's satisfaction, that the total HAP emissions to the atmosphere from the large glycol dehydration unit process vent are reduced by 95.0 percent through process modifications, or a combination of process modifications and one or more control devices, in accordance with the requirements specified in 40 CFR 63.771(e).
(3) Control of HAP emissions from a GCG separator (flash tank) vent is not required if the owner or operator demonstrates, to the Administrator's satisfaction, that total emissions to the atmosphere from the glycol dehydration unit process vent are reduced by one of the levels specified in paragraph (c)(3)(i) through (iv) of this section, through the installation and operation of controls as specified in paragraph (b)(1) of this section.
(i) For any large glycol dehydration unit, HAP emissions are reduced by 95.0 percent or more.
(ii) For any large glycol dehydration unit, benzene emissions are reduced to a level less than 0.90 megagrams per year.
(iii) For each existing small glycol dehydration unit, BTEX emissions are reduced to a level less than the limit calculated by Equation 1 of paragraph (b)(1)(iii) of this section.
(iv) For each new small glycol dehydration unit, BTEX emissions are reduced to a level less than the limit calculated by Equation 2 of paragraph (b)(1)(iii) of this section.

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40 CFR 63.766 - Storage vessel standards

(a) This section applies to each storage vessel with the potential for flash emissions (as defined in 40 CFR 63.761) subject to this subpart.
(b) The owner or operator of a storage vessel with the potential for flash emissions (as defined in 40 CFR 63.761) shall comply with one of the control requirements specified in paragraphs (b)(1) and (2) of this section.

(1) The owner or operator shall equip the affected storage vessel with the potential for flash emissions with a cover that is connected, through a closed-vent system that meets the conditions specified in 40 CFR 63.771(c), to a control device or a combination of control devices that meets any of the conditions specified in 40 CFR 63.771(d). The cover shall be designed and operated in accordance with the requirements of 40 CFR 63.771(b).
(2) The owner or operator of a pressure storage vessel that is designed to operate as a closed system shall operate the storage vessel with no detectable emissions at all times that material is in the storage vessel, except as provided for in paragraph (c) of this section.

(3) The owner or operator shall control air emissions by connecting the cover, through a closed-vent system that meets the conditions specified in 40 CFR 63.771(c), to a process natural gas line.

(c) One or more safety devices that vent directly to the atmosphere may be used on the storage vessel and air emission control equipment complying with paragraphs (b)(1) and (2) of this section.

(d) This section does not apply to storage vessels for which the owner or operator is subject to and controlled under the requirements specified in 40 CFR 60 Subparts Kb or OOOO; or is subject to and controlled under the requirements specified under 40 CFR 63 Subparts G or CC. Storage vessels subject to and controlled under 40 CFR 60 Subpart OOOO shall submit the periodic reports specified in 40 CFR 63.775(e).

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40 CFR 63.767 - 63.768 - [Reserved]

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40 CFR 63.769 - Equipment leak standards

(a) This section applies to equipment subject to this subpart and specified in paragraphs (a)(1) and (2) of this section that is located at a natural gas processing plant and operates in VHAP service equal to or greater than 300 hours per calendar year.

(1) Ancillary equipment, as defined in 40 CFR 63.761; and

(2) Compressors.

(b) This section does not apply to ancillary equipment and compressors for which the owner or operator is subject to and controlled under the requirements specified in Subpart H of this part; or is subject to and controlled under the requirements specified in 40 CFR 60 Subpart OOOO. Ancillary equipment and compressors subject to and controlled under 40 CFR 60 Subpart OOOO shall submit the periodic reports specified in 40 CFR 63.775(e).

(c) For each piece of ancillary equipment and each compressor subject to this section located at an existing or new source, the owner or operator shall meet the requirements specified in 40 CFR 61 Subpart V, 40 CFR 61.241 through 61.247, except as specified in paragraphs (c)(1) through (8) of this section, except that for valves subject to 40 CFR 61.242-7(b) or 40 CFR 61.243-1, a leak is detected if an instrument reading of 500 ppm or greater is measured. A leak detected from a valve at a source constructed on or before August 23, 2011 shall be repaired in accordance with the schedule in 40 CFR 61.242-7(d), or by October 15, 2013, whichever is later. A leak detected from a valve at a source constructed after August 23, 2011 shall be repaired in accordance with the schedule in 40 CFR 61.242-7(d), or by October 15, 2012, whichever is later.

(1) Each pressure relief device in gas/vapor service shall be monitored quarterly and within 5 days after each pressure release to detect leaks, except under the ollowing conditions.

(i) The owner or operator has obtained permission from the Administrator to use an alternative means of emission limitation that achieves a reduction in emissions of VHAP at least equivalent to that achieved by the control required in this subpart.

(ii) The pressure relief device is located in a nonfractionating facility that is monitored only by non-facility personnel, it may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days. Such a pressure relief device shall not be allowed to operate for more than 30 days after a pressure release without monitoring.

(2) For pressure relief devices, if an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(3) For pressure relief devices, when a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, unless a delay in repair of equipment is granted under 40 CFR 61.242-10.

(4) Sampling connection systems are exempt from the requirements of 40 CFR 61.242-5.

(5) Pumps in VHAP service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,000 standard cubic meters per day or more of field gas are exempt from the routine monitoring requirements of 40 CFR 61.242-2(a)(1) and 61.242-7(a), and paragraphs (c)(1) through (3) of this section.

(6) Pumps in VHAP service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service located within a natural gas processing plant that is located on the Alaskan North Slope are exempt from the routine monitoring requirements of 40 CFR 61.242-2(a)(1) and 61.242-7(a), and paragraphs (c)(1) through (3) of this section.
(7) Reciprocating compressors in wet gas service are exempt from the compressor control requirements of 40 CFR 61.242-3.
(8) Flares, as defined in 40 CFR 63.761, used to comply with this subpart shall comply with the requirements of 40 CFR 63.11(b).

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40 CFR 63.770 - [Reserved]

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40 CFR 63.771 - Control equipment requirements

(a) This section applies to each cover, closed-vent system, and control device installed and operated by the owner or operator to control air emissions as required by the provisions of this subpart. Compliance with paragraphs (b), (c), and (d) of this section will be determined by review of the records required by 40 CFR 63.774 and the reports required by 40 CFR 63.775, by review of performance test results, and by inspections.

(b) Cover requirements

(1) The cover and all openings on the cover (e.g., access hatches, sampling ports, and gauge wells) shall be designed to form a continuous barrier over the entire surface area of the liquid in the storage vessel.
(2) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:
(i) To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);
(ii) To inspect or sample the material in the unit;
(iii) To inspect, maintain, repair, or replace equipment located inside the unit; or
(iv) To vent liquids, gases, or fumes from the unit through a closed-vent system to a control device designed and operated in accordance with the requirements of paragraphs (c) and (d) of this section.

(c) Closed-vent system requirements

(1) The closed-vent system shall route all gases, vapors, and fumes emitted from the material in an emissions unit to a control device that meets the requirements specified in paragraph (d) of this section.
(2) The closed-vent system shall be designed and operated with no detectable emissions.
(3) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, the owner or operator shall meet the requirements specified in paragraphs (c)(3)(i) and (c)(3)(ii) of this section.
(i) For each bypass device, except as provided for in paragraph (c)(3)(ii) of this section, the owner or operator shall either:
(A) At the inlet to the bypass device that could divert the stream away from the control device to the atmosphere, properly install, calibrate, maintain, and operate a flow indicator that is capable of taking periodic readings and sounding an alarm when the bypass device is open such that the stream is being, or could be, diverted away from the control device to the atmosphere; or
(B) Secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
(ii) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (c)(3)(i) of this section.

(d) Control device requirements for sources except small glycol dehydration units. Owners and operators of small glycol dehydration units, shall comply with the control device requirements in paragraph (f) of this section.

(1) The control device used to reduce HAP emissions in accordance with the standards of this subpart shall be one of the control devices specified in paragraphs (d)(1)(i) through (iii) of this section.

(i) An enclosed combustion device (e.g., thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) that is designed and operated in accordance with one of the following performance requirements:

(A) Reduces the mass content of either TOC or total HAP in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of 40 CFR 63.772(e); or

(B) Reduces the concentration of either TOC or total HAP in the exhaust gases at the outlet to the device to a level equal to or less than 20 parts per million by volume on a dry basis corrected to 3 percent oxygen as determined in accordance with the requirements of 40 CFR 63.772(e); or

(C) Operates at a minimum temperature of 760 degrees C, provided the control device has demonstrated, under 40 CFR 63.772(e), that combustion zone temperature is an indicator of destruction efficiency.

(D) 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.

(ii) A vapor recovery device (e.g., carbon adsorption system or condenser) or other non-destructive control device that is designed and operated to reduce the mass content of either TOC or total HAP in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of 40 CFR 63.772(e).

(iii) A flare, as defined in 40 CFR 63.761, that is designed and operated in accordance with the requirements of 40 CFR 63.11(b).

(2) [Reserved]

(3) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (d)(1) of this section as specified in 40 CFR 63.772(e).

(4) The owner or operator shall operate each control device in accordance with the requirements specified in paragraphs (d)(4)(i) and (ii) of this section.

(i) Each control device used to comply with this subpart shall be operating at all times when gases, vapors, and fumes are vented from the HAP emissions unit or units through the closed-vent system to the control device, as required under 40 CFR 63.765, 40 CFR 63.766, and 40 CFR 63.769. An owner or operator may vent more than one unit to a control device used to comply with this subpart.

(ii) For each control device monitored in accordance with the requirements of 40 CFR 63.773(d), the owner or operator shall demonstrate compliance according to the requirements of 40 CFR 63.772(f) or (g), as applicable.

(5) For each carbon adsorption system used as a control device to meet the requirements of paragraph (d)(1) of this section, the owner or operator shall manage the carbon as follows:

(i) Following the initial startup of the control device, all carbon in the control device shall be replaced with fresh carbon on a regular, predetermined time interval that is no longer than the carbon service life established for the carbon adsorption system. Records identifying the schedule for replacement and records of each carbon replacement shall be maintained as required in 40 CFR 63.774(b)(7)(ix). The schedule for replacement shall be submitted with the Notification of Compliance Status Report as specified in 40 CFR 63.775(d)(5)(iv). Each carbon replacement must be reported in the Periodic Reports as specified in 40 CFR 63.772(e)(2)(xii).

(ii) The spent carbon removed from the carbon adsorption system shall be either regenerated, reactivated, or burned in one of the units specified in paragraphs (d)(5)(ii)(A) through (d)(5)(ii)(G) of this section.

(A) Regenerated or reactivated in a thermal treatment unit for which the owner or operator has been issued a final permit under 40 CFR 270 that implements the requirements of 40 CFR 264 Subpart X.

(B) Regenerated or reactivated in a thermal treatment unit equipped with and operating air emission controls in accordance with this section.

(C) Regenerated or reactivated in a thermal treatment unit equipped with and operating organic air emission controls in accordance with a national emissions standard for HAP under another subpart in 40 CFR 61 or this part.

(D) Burned in a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR 270 that implements the requirements of 40 CFR 264 Subpart O.

(E) Burned in a hazardous waste incinerator which the owner or operator has designed and operates in accordance with the requirements of 40 CFR 265 Subpart O.

(F) Burned in a boiler or industrial furnace for which the owner or operator has been issued a final permit under 40 CFR 270 that implements the requirements of 40 CFR 266 Subpart H.

(G) Burned in a boiler or industrial furnace which the owner or operator has designed and operates in accordance with the interim status requirements of 40 CFR 266 Subpart H.

(e) Process modification requirements. Each owner or operator that chooses to comply with 40 CFR 63.765(c)(2) shall meet the requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(1) The owner or operator shall determine glycol dehydration unit baseline operations (as defined in 40 CFR 63.761). Records of glycol dehydration unit baseline operations shall be retained as required under 40 CFR 63.774(b)(10).

(2) The owner or operator shall document, to the Administrator's satisfaction, the conditions for which glycol dehydration unit baseline operations shall be modified to achieve the 95.0 percent overall HAP emission reduction, or BTEX limit determined in 40 CFR 63.765(b)(1)(iii), as applicable, either through process modifications or through a combination of process modifications and one or more control devices. If a combination of process modifications and one or more control devices are used, the owner or operator shall also establish the emission reduction to be achieved by the control device to achieve an overall HAP emission reduction of 95.0 percent for the glycol dehydration unit process vent or, if applicable, the BTEX limit determined in 40 CFR 63.765(b)(1)(iii) for the small glycol dehydration unit process vent. Only modifications in glycol dehydration unit operations directly related to process changes, including but not limited to changes in glycol circulation rate or glycol-HAP absorbency, shall be allowed. Changes in the inlet gas characteristics or natural gas throughput rate shall not be considered in determining the overall emission reduction due to process modifications.

(3) The owner or operator that achieves a 95.0 percent HAP emission reduction or meets the BTEX limit determined in 40 CFR 63.765(b)(1)(iii), as applicable, using process modifications alone shall comply with paragraph (e)(3)(i) of this section. The owner or operator that achieves a 95.0 percent HAP emission reduction or meets the BTEX limit determined in 40 CFR 63.765(b)(1)(iii), as applicable, using a combination of process modifications and one or more control devices shall comply with paragraphs (e)(3)(i) and (ii) of this section.

(i) The owner or operator shall maintain records, as required in 40 CFR 63.774(b)(11), that the facility continues to operate in accordance with the conditions specified under paragraph (e)(2) of this section.

(ii) The owner or operator shall comply with the control device requirements specified in paragraph (d) or (f) of this section, as applicable, except that the emission reduction or limit achieved shall be the emission reduction or limit specified for the control device(s) in paragraph (e)(2) of this section.

(f) Control device requirements for small glycol dehydration units

(1) The control device used to meet BTEX the emission limit calculated in 40 CFR 63.765(b)(1)(iii) shall be one of the control devices specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) An enclosed combustion device (e.g., thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) that is designed and operated to meet the levels specified in paragraphs (f)(1)(i)(A) or (B) of this section. 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.

(A) The mass content of BTEX in the gases vented to the device is reduced as determined in accordance with the requirements of 40 CFR 63.772(e).

(B) The concentration of either TOC or total HAP in the exhaust gases at the outlet of the device is reduced to a level equal to or less than 20 parts per million by volume on a dry basis corrected to 3 percent oxygen as determined in accordance with the requirements of 40 CFR 63.772(e).

(ii) A vapor recovery device (e.g., carbon adsorption system or condenser) or other non-destructive control device that is designed and operated to reduce the mass content of BTEX in the gases vented to the device as determined in accordance with the requirements of 40 CFR 63.772(e).

(iii) A flare, as defined in 40 CFR 63.761, that is designed and operated in accordance with the requirements of 40 CFR 63.11(b).

(2) The owner or operator shall operate each control device in accordance with the requirements specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) Each control device used to comply with this subpart shall be operating at all times. An owner or operator may vent more than one unit to a control device used to comply with this subpart.

(ii) For each control device monitored in accordance with the requirements of 40 CFR 63.773(d), the owner or operator shall demonstrate compliance according to the requirements of either 40 CFR 63.772(f) or (h).

(3) For each carbon adsorption system used as a control device to meet the requirements of paragraph (f)(1)(ii) of this section, the owner or operator shall manage the carbon as required under (d)(5)(i) and (ii) of this section.

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40 CFR 63.772 - Test methods, compliance procedures, and compliance demonstrations

(a) Determination of material VHAP or HAP concentration to determine the applicability of the equipment leak standards under this subpart (40 CFR 63.769). Each piece of ancillary equipment and compressors are presumed to be in VHAP service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service or in wet gas service.

(1) For a piece of ancillary equipment and compressors to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10.0 percent by weight. For the purposes of determining the percent VHAP content of the process fluid that is contained in or contacts a piece of ancillary equipment or compressor, you shall use the method in either paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) Method 18 of 40 CFR 60 Appendix A, or

(ii) ASTM D6420-99 (2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference-see 40 CFR 63.14), provided that the provisions of paragraphs (a)(1)(ii)(A) through (D) of this section are followed:

(A) The target compound(s) are those listed in section 1.1 of ASTM D6420-99 (2004);

(B) The target concentration is between 150 parts per billion by volume and 100 parts per million by volume;

(C) For target compound(s) not listed in Table 1.1 of ASTM D6420-99 (2004), but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in section 10.5.3 of ASTM D6420-99 (2004), is conducted, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water soluble; and

(D) For target compound(s) not listed in Table 1.1 of ASTM D6420-99 (2004), and not amenable to detection by mass spectrometry, ASTM D6420-99 (2004) may not be used.

(2) For a piece of ancillary equipment and compressors to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction of natural gas liquids.

(b) Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.

(1) The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) The owner or operator shall install and operate a monitoring instrument that directly measures natural gas flowrate to the glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The owner or operator shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.

(ii) The owner or operator shall document, to the Administrator's satisfaction, the actual annual average natural gas flowrate to the glycol dehydration unit.

(2) The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of either paragraph (b)(2)(i) or (ii) of this section. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

(i) The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1); or

(ii) The owner or operator shall determine an average mass rate of benzene or BTEX emissions in kilograms per hour through direct measurement using the methods in 40 CFR 63.772(a)(1)(i) or (ii), or an alternative method according to 40 CFR 63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.

(c) No detectable emissions test procedure

(1) The no detectable emissions test procedure shall be conducted in accordance with Method 21, 40 CFR 60 Appendix A.

(2) The detection instrument shall meet the performance criteria of Method 21, 40 CFR 60 Appendix A, except that the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the fluid and not for each individual organic compound in the stream.

(3) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21, 40 CFR 60 Appendix A.

(4) Calibration gases shall be as follows:

(i) Zero air (less than 10 parts per million by volume hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration less than 10,000 parts per million by volume.

(5) An owner or operator may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If an owner or operator chooses to adjust the instrument readings for the background level, the background level value must be determined according to the procedures in Method 21 of 40 CFR 60 Appendix A.

(6)

(i) Except as provided in paragraph (c)(6)(ii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR 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 inert gases that 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 facility that will meet the performance criteria specified in paragraph (c)(6)(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)(6)(i) of this section.

(7) An owner or operator must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in paragraph (c)(7)(i) or (c)(7)(ii) of this section.

(i) If an owner or operator chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in paragraph (c)(8) of this section.

(ii) If an owner or operator chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in paragraph (c)(5) of this section is compared with the applicable value for the potential leak interface as specified in paragraph (c)(8) of this section.

(8) A potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in paragraph (c)(7) of this section, is less than 500 parts per million by volume.

(d) Test procedures and compliance demonstrations for small glycol dehydration units. This paragraph applies to the test procedures for small dehydration units.

(1) If the owner or operator is using a control device to comply with the emission limit in 40 CFR 63.765(b)(1)(iii), the requirements of paragraph (e) of this section apply. Compliance is demonstrated using the methods specified in paragraph (f) of this section.

(2) If no control device is used to comply with the emission limit in 40 CFR 63.765(b)(1)(iii), the owner or operator must determine the glycol dehydration unit BTEX emissions as specified in paragraphs (d)(2)(i) through (iii) of this section. Compliance is demonstrated if the BTEX emissions determined as specified in paragraphs (d)(2)(i) through (iii) are less than the emission limit calculated using the equation in 40 CFR 63.765(b)(1)(iii).

(i) Method 1 or 1A, 40 CFR 60 Appendix A, as appropriate, shall be used for selection of the sampling sites at the outlet of the glycol dehydration unit process vent. Any references to particulate mentioned in Methods 1 and 1A do not apply to this section.

(ii) The gas volumetric flowrate shall be determined using Method 2, 2A, 2C, or 2D, 40 CFR 60 Appendix A, as appropriate.

(iii) The BTEX emissions from the outlet of the glycol dehydration unit process vent shall be determined using the procedures specified in paragraph (e)(3)(v) of this section. As an alternative, the mass rate of BTEX at the outlet of the glycol dehydration unit process vent may be calculated using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and shall be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1). When the BTEX mass rate is calculated for glycol dehydration units using the model GRI-GLYCalc™, all BTEX measured by Method 18, 40 CFR 60 Appendix A, shall be summed.

(e) Control device performance test procedures. This paragraph applies to the performance testing of control devices. The owners or operators shall demonstrate that a control device achieves the performance requirements of 40 CFR 63.771(d)(1), (e)(3)(ii) or (f)(1) using a performance test as specified in paragraph (e)(3) of this section. Owners or operators using a condenser have the option to use a design analysis as specified in paragraph (e)(4) of this section. The owner or operator may elect to use the alternative procedures in paragraph (e)(5) of this section for performance testing of a condenser used to control emissions from a glycol dehydration unit process vent. Flares shall meet the provisions in paragraph (e)(2) of this section. As an alternative to conducting a performance test under this section for combustion control devices, a control device that can be demonstrated to meet the performance requirements of 40 CFR 63.771(d)(1), (e)(3)(ii) or (f)(1) through a performance test conducted by the manufacturer, as specified in paragraph (h) of this section, can be used.

(1) The following control devices are exempt from the requirements to conduct performance tests and design analyses under this section:

(i) Except as specified in paragraph (e)(2) of this section, a flare, as defined in 40 CFR 63.761, that is designed and operated in accordance with 40 CFR 63.11(b);

(ii) Except for control devices used for small glycol dehydration units, a boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(iii) Except for control devices used for small glycol dehydration units, a boiler or process heater into which the vent stream is introduced with the primary fuel or is used as the primary fuel;

(iv) Except for control devices used for small glycol dehydration units, a boiler or process heater burning hazardous waste for which the owner or operator has either been issued a final permit under 40 CFR 270 and complies with the requirements of 40 CFR 266 Subpart H; or has certified compliance with the interim status requirements of 40 CFR 266 Subpart H;

(v) Except for control devices used for small glycol dehydration units, a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR 270 and complies with the requirements of 40 CFR 264 Subpart O; or has certified compliance with the interim status requirements of 40 CFR 265 Subpart O.

(vi) 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.

(2) An owner or operator shall design and operate each flare, as defined in 40 CFR 63.761, in accordance with the requirements specified in 40 CFR 63.11(b) and the compliance determination shall be conducted using Method 22 of 40 CFR 60 Appendix A, to determine visible emissions.

(3) For a performance test conducted to demonstrate that a control device meets the requirements of 40 CFR 63.771(d)(1), (e)(3)(ii) or (f)(1), the owner or operator shall use the test methods and procedures specified in paragraphs (e)(3)(i) through (v) of this section. The initial and periodic performance tests shall be conducted according to the schedule specified in paragraph (e)(3)(vi) of this section.

(i) Method 1 or 1A, 40 CFR 60 Appendix A, as appropriate, shall be used for selection of the sampling sites in paragraphs (e)(3)(i)(A) and (B) of this section. Any references to particulate mentioned in Methods 1 and 1A do not apply to this section.

(A) To determine compliance with the control device percent reduction requirement specified in 40 CFR 63.771(d)(1)(i)(A), (d)(1)(ii) or (e)(3)(ii), sampling sites shall be located at the inlet of the first control device, and at the outlet of the final control device.

(B) To determine compliance with the enclosed combustion device total HAP concentration limit specified in 40 CFR 63.771(d)(1)(i)(B), or the BTEX emission limit specified in 40 CFR 63.765(b)(1)(iii) the sampling site shall be located at the outlet of the combustion device.

(ii) The gas volumetric flowrate shall be determined using Method 2, 2A, 2C, or 2D, 40 CFR 60 Appendix A, as appropriate.

(iii) To determine compliance with the control device percent reduction performance requirement in 40 CFR 63.771(d)(1)(i)(A), (d)(1)(ii), and (e)(3)(ii), the owner or operator shall use one of the following methods: Method 18, 40 CFR 60 Appendix A; Method 25A, 40 CFR 60 Appendix A; ASTM D6420-99 (2004), as specified in 40 CFR 63.772(a)(1)(ii); or any other method or data that have been validated according to the applicable procedures in Method 301, 40 CFR 63 Appendix A. The following procedures shall be used to calculate percent reduction efficiency:

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

(B) The mass rate of either TOC (minus methane and ethane) or total HAP (E_i, E_o) shall be computed using the equations and procedures specified in paragraphs (e)(3)(iii)(B)(*1*) through (*3*) of this section. As an alternative, the mass rate of either TOC (minus methane and ethane) or total HAP at the inlet of the control device (E_i) may be calculated using the procedures specified in paragraph (e)(3)(iii)(B)(*4*) of this section.

(*1*) The following equations shall be used:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o$$

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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 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 = Flowrate 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) (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.
n = Number of components in sample.

(*2*) When the TOC mass rate is calculated, all organic compounds (minus methane and ethane) measured by Method 18, 40 CFR 60 Appendix A, or Method 25A, 40 CFR 60 Appendix A, or ASTM D6420-99 (2004) as specified in 40 CFR 63.772(a)(1)(ii), shall be summed using the equations in paragraph (e)(3)(iii)(B)(*1*) of this section.

(*3*) When the total HAP mass rate is calculated, only HAP chemicals listed in Table 1 of this subpart shall be summed using the equations in paragraph (e)(3)(iii)(B)(*1*) of this section.

(*4*) As an alternative to the procedures for calculating E_i specified in paragraph (e)(3)(iii)(B)(*1*) of this section, the owner or operator may use the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and shall be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1). When the TOC mass rate is calculated for glycol dehydration units using the model GRI-GLYCalc™, all organic compounds (minus methane and ethane) measured by Method 18, 40 CFR 60 Appendix A, or Method 25A, 40 CFR 60 Appendix A, shall be summed. When the total HAP mass rate is calculated for glycol dehydration units using the model GRI-GLYCalc™, only HAP chemicals listed in Table 1 of this subpart shall be summed.

(C) The percent reduction in TOC (minus methane and ethane) or total HAP shall be calculated as follows:

$$R_{cd} = \frac{E_i - E_o}{E_i} \times 100\%$$

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Where:

R_{cd} = Control efficiency of control device, percent.
E_i = Mass rate of TOC (minus methane and ethane) or total HAP at the inlet to the control device as calculated under paragraph (e)(3)(iii)(B) of this section, kilograms TOC per hour or kilograms HAP per hour.
E_o = Mass rate of TOC (minus methane and ethane) or total HAP at the outlet of the control device, as calculated under paragraph (e)(3)(iii)(B) of this section, kilograms TOC per hour or kilograms HAP per hour.

(D) 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 HAP or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total HAP in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total HAP exiting the device, respectively.

(iv) To determine compliance with the enclosed combustion device total HAP concentration limit specified in 40 CFR 63.771(d)(1)(i)(B), the owner or operator shall use one of the following methods to measure either TOC (minus methane and ethane) or total HAP: Method 18, 40 CFR 60 Appendix A; Method 25A, 40 CFR 60 Appendix A; ASTM D6420-99 (2004), as specified in 40 CFR 63.772(a)(1)(ii), or any other method or data that have been validated according to Method 301 of Appendix A of this part. The following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

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

(B) The TOC concentration or total HAP concentration shall be calculated according to paragraph (e)(3)(iv)(B)(*1*) or (e)(3)(iv)(B)(*2*) of this section.

(*1*) The TOC concentration is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{i=1}^{x} \frac{\left(\sum_{j=1}^{n} C_{ji} \right)}{x}$$

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Where:

C_{TOC} =entration of total organic compounds minus methane and ethane, dry basis, parts per million by volume.
C_{ji} = Concentration of sample component 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.

(*2*) The total HAP concentration shall be computed according to the equation in paragraph (e)(3)(iv)(B)(*1*) of this section, except that only HAP chemicals listed in Table 1 of this subpart shall be summed.

(C) The TOC concentration or total HAP concentration shall be corrected to 3 percent oxygen as follows:

(*1*) The emission rate correction factor for excess air, integrated sampling and analysis procedures of Method 3A or 3B, 40 CFR 60 Appendix A, ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981, Part 10 (manual portion only) (incorporated by reference as specified in 40 CFR 63.14) shall be used to determine the oxygen concentration. The samples shall be taken during the same time that the samples are taken for determining TOC concentration or total HAP concentration.

(*2*) The TOC or HAP concentration shall be corrected for percent oxygen by using the following equation:

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right)$$

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Where:

C_c = TOC concentration or total HAP concentration corrected to 3 percent oxygen, dry basis, parts per million by volume.
C_m = TOC concentration or total HAP concentration, dry basis, parts per million by volume.
$\%O_{2d}$ = Concentration of oxygen, dry basis, percent by volume.

(v) To determine compliance with the BTEX emission limit specified in 40 CFR 63.765(b)(1)(iii) the owner or operator shall use one of the following methods: Method 18, 40 CFR 60 Appendix A; ASTM D6420-99 (Reapproved 2004), as specified in 40 CFR 63.772(a)(1)(ii) (incorporated by reference as

specified in 40 CFR 63.14); or any other method or data that have been validated according to the applicable procedures in Method 301, 40 CFR 63 Appendix A. The following procedures shall be used to calculate BTEX emissions:

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

(B) The mass rate of BTEX (E_o) shall be computed using the equations and procedures specified in paragraphs (e)(3)(v)(B)(*1*) and (*2*) of this section.

(*1*) The following equation shall be used:

$$E_o = K_2\left(\sum_{j=1}^{n} C_{oj} M_{oj}\right) Q_o$$

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Where:

E_o = Mass rate of BTEX at the outlet of the control device, dry basis, kilogram per hour.
C_{oj} = Concentration of sample component j of the gas stream at the outlet of the control device, dry basis, parts per million by volume.
M_{oj} = Molecular weight of sample component j of the gas stream at the outlet of the control device, gram/gram-mole.
Q_o = Flowrate of gas stream at the outlet of the control device, dry standard cubic meter per minute.
K_2 = Constant, 2.494×10^{-6} (parts per million) (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 degrees C.
n = Number of components in sample.

(*2*) When the BTEX mass rate is calculated, only BTEX compounds measured by Method 18, 40 CFR 60 Appendix A, or ASTM D6420-99 (Reapproved 2004) (incorporated by reference as specified in 40 CFR 63.14) as specified in 40 CFR 63.772(a)(1)(ii), shall be summed using the equations in paragraph (e)(3)(v)(B)(*1*) of this section.

(vi) The owner or operator shall conduct performance tests according to the schedule specified in paragraphs (e)(3)(vi)(A) and (B) of this section.

(A) An initial performance test shall be conducted within 180 days after the compliance date that is specified for each affected source in 40 CFR 63.760(f)(7) through (8), except that the initial performance test for existing combustion control devices (i.e., control devices installed on or before August 23, 2011) at major sources shall be conducted no later than October 15, 2015. If the owner or operator of an existing combustion control device at a major source chooses to replace such device with a control device whose model is tested under 40 CFR 63.772(h), then the newly installed device shall comply with all provisions of this subpart no later than October 15, 2015. The performance test results shall be submitted in the Notification of Compliance Status Report as required in 40 CFR 63.775(d)(1)(ii).

(B) Periodic performance tests shall be conducted for all control devices required to conduct initial performance tests except as specified in paragraphs (e)(3)(vi)(B)(*1*) and (*2*) of this section. The first periodic performance test shall be conducted no later than 60 months after the initial performance test required in paragraph (e)(3)(vi)(A) of this section. Subsequent periodic performance tests shall be conducted at intervals no longer than 60 months following the previous periodic performance test or whenever a source desires to establish a new operating limit. The periodic performance test results must be submitted in the next Periodic Report as specified in 40 CFR 63.775(e)(2)(xi). Combustion control devices meeting the criteria in either paragraph (e)(3)(vi)(B)(*1*) or (*2*) of this section are not required to conduct periodic performance tests.

(*1*) A control device whose model is tested under, and meets the criteria of, 40 CFR 63.772(h), or

(*2*) A combustion control device demonstrating during the performance test under 40 CFR 63.772(e) that combustion zone temperature is an indicator of destruction efficiency and operates at a minimum temperature of 760 degrees C.

(4) For a condenser design analysis conducted to meet the requirements of 40 CFR 63.771(d)(1), (e)(3)(ii), or (f)(1), the owner or operator shall meet the requirements specified in paragraphs (e)(4)(i) and (ii) of this section. Documentation of the design analysis shall be submitted as a part of the Notification of Compliance Status Report as required in 40 CFR 63.775(d)(1)(i).

(i) The condenser design analysis shall include an analysis of the vent stream composition, constituent concentrations, flowrate, 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. As an alternative to the condenser design analysis, an owner or operator may elect to use the procedures specified in paragraph (e)(5) of this section.

(ii) If the owner or operator and the Administrator do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph (e)(3) of this section. The Administrator may choose to have an authorized representative observe the performance test.

(5) As an alternative to the procedures in paragraph (e)(4)(i) of this section, an owner or operator may elect to use the procedures documented in the GRI report entitled, "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1) as inputs for the model GRI-GLYCalc™, Version 3.0 or higher, to generate a condenser performance curve.

(f) Compliance demonstration for control device performance requirements. This paragraph applies to the demonstration of compliance with the control device performance requirements specified in 40 CFR 63.771(d)(1)(i), (e)(3), and (f)(1). Compliance shall be demonstrated using the requirements in paragraphs (f)(1) through (3) of this section. As an alternative, an owner or operator that installs a condenser as the control device to achieve the requirements specified in 40 CFR 63.771(d)(1)(ii), (e)(3), or (f)(1) may demonstrate compliance according to paragraph (g) of this section. An owner or operator may switch between compliance with paragraph (f) of this section and compliance with paragraph (g) of this section only after at least 1 year of operation in compliance with the selected approach. Notification of such a change in the compliance method shall be reported in the next Periodic Report, as required in 40 CFR 63.775(e), following the change.

(1) The owner or operator shall establish a site specific maximum or minimum monitoring parameter value (as appropriate) according to the requirements of 40 CFR 63.773(d)(5)(i).

(2) The owner or operator shall calculate the daily average of the applicable monitored parameter in accordance with 40 CFR 63.773(d)(4) except that the inlet gas flowrate to the control device shall not be averaged.

(3) Compliance with the operating parameter limit is achieved when the daily average of the monitoring parameter value calculated under paragraph (f)(2) of this section is either equal to or greater than the minimum or equal to or less than the maximum monitoring value established under paragraph (f)(1) of this section. For inlet gas flowrate, compliance with the operating parameter limit is achieved when the value is equal to or less than the value established under 40 CFR 63.772(h) or under the performance test conducted under 40 CFR 63.772(e), as applicable.

(4) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits and required zero and span adjustments), the CMS required in 40 CFR 63.773(d) must be operated at all times the affected source is operating. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Monitoring system repairs are required to be completed in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

(5) Data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities may not be used in calculations used to report emissions or operating levels. All the data collected during all other required data collection periods must be used in assessing the operation of the control device and associated control system.

(6) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required quality monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements.

(g) Compliance demonstration with percent reduction or emission limit performance requirements-condensers. This paragraph applies to the demonstration of compliance with the performance requirements specified in 40 CFR 63.771(d)(1)(ii), (e)(3), or (f)(1) for condensers. Compliance shall be demonstrated using the procedures in paragraphs (g)(1) through (3) of this section.

(1) The owner or operator shall establish a site-specific condenser performance curve according to 40 CFR 63.773(d)(5)(ii). For sources required to meet the BTEX limit in accordance with 40 CFR 63.771(e) or (f)(1) the owner or operator shall identify the minimum percent reduction necessary to meet the BTEX limit.

(2) Compliance with the requirements in 40 CFR 63.771(d)(1)(ii), (e)(3), or (f)(1) shall be demonstrated by the procedures in paragraphs (g)(2)(i) through (iii) of this section.

(i) The owner or operator must calculate the daily average condenser outlet temperature in accordance with 40 CFR 63.773(d)(4).

(ii) The owner or operator shall determine the condenser efficiency for the current operating day using the daily average condenser outlet temperature calculated under paragraph (g)(2)(i) of this section and the condenser performance curve established under paragraph (g)(1) of this section.

(iii) Except as provided in paragraphs (g)(2)(iii)(A) and (B) of this section, at the end of each operating day, the owner or operator shall calculate the 365-day average HAP, or BTEX, emission reduction, as appropriate, from the condenser efficiencies as determined in paragraph (g)(2)(ii) of this section for the preceding 365 operating days. If the owner or operator uses a combination of process modifications and a condenser in accordance with the requirements of 40 CFR 63.771(e), the 365-day average HAP, or BTEX, emission reduction shall be calculated using the emission reduction achieved through process modifications and the condenser efficiency as determined in paragraph (g)(2)(ii) of this section, both for the previous 365 operating days.

(A) After the compliance dates specified in 40 CFR 63.760(f), an owner or operator with less than 120 days of data for determining average HAP, or BTEX, emission reduction, as appropriate, shall calculate the average HAP, or BTEX emission reduction, as appropriate, for the first 120 days of operation after the compliance dates. For sources required to meet the overall 95.0 percent reduction requirement, compliance is achieved if the 120-day average HAP emission reduction is equal to or greater than 90.0 percent. For sources required to meet the BTEX limit under 40 CFR 63.765(b)(1)(iii), compliance is achieved if the average BTEX emission reduction is at least 95.0 percent of the required 365-day value identified under paragraph (g)(1) of this section (i.e., at least 76.0 percent if the 365-day design value is 80.0 percent).

(B) After 120 days and no more than 364 days of operation after the compliance dates specified in 40 CFR 63.760(f), the owner or operator shall calculate the average HAP emission reduction as the HAP emission reduction averaged over the number of days between the current day and the applicable compliance date. For sources required to meet the overall 95.0-percent reduction requirement, compliance with the performance requirements is achieved if the average HAP emission reduction is equal to or greater than 90.0 percent. For sources required to meet the BTEX limit under 40 CFR 63.765(b)(1)(iii), compliance is achieved if the average BTEX emission reduction is at least 95.0 percent of the required 365-day value identified under paragraph (g)(1) of this section (i.e., at least 76.0 percent if the 365-day design value is 80.0 percent).

(3) If the owner or operator has data for 365 days or more of operation, compliance is achieved based on the applicable criteria in paragraphs (g)(3)(i) or (ii) of this section.

(i) For sources meeting the HAP emission reduction specified in 40 CFR 63.771(d)(1)(ii) or (e)(3) the average HAP emission reduction calculated in paragraph (g)(2)(iii) of this section is equal to or greater than 95.0 percent.

(ii) For sources required to meet the BTEX limit under 40 CFR 63.771(e)(3) or (f)(1), compliance is achieved if the average BTEX emission reduction calculated in paragraph (g)(2)(iii) of this section is equal to or greater than the minimum percent reduction identified in paragraph (g)(1) of this section.

(h) Performance testing for combustion control devices-manufacturers' performance test

(1) This paragraph applies to the performance testing of a combustion control device conducted by the device manufacturer. The manufacturer shall demonstrate that a specific model of control device achieves the performance requirements in paragraph (h)(7) of this section by conducting a performance test as specified in paragraphs (h)(2) through (6) of this section.

(2) Performance testing shall consist of three one-hour (or longer) test runs for each of the four following firing rate settings making a total of 12 test runs per test. Propene (propylene) gas shall be used for the testing fuel. All fuel analyses shall be performed by an independent third-party laboratory (not affiliated with the control device manufacturer or fuel supplier).

(i) 90-100 percent of maximum design rate (fixed rate).

(ii) 70-100-70 percent (ramp up, ramp down). Begin the test at 70 percent of the maximum design rate. During the first 5 minutes, incrementally ramp the firing rate to 100 percent of the maximum design rate. Hold at 100 percent for 5 minutes. In the 10-15 minute time range, incrementally ramp back down to 70 percent of the maximum design rate. Repeat three more times for a total of 60 minutes of sampling.

(iii) 30-70-30 percent (ramp up, ramp down). Begin the test at 30 percent of the maximum design rate. During the first 5 minutes, incrementally ramp the firing rate to 70 percent of the maximum design rate. Hold at 70 percent for 5 minutes. In the 10-15 minute time range, incrementally ramp back down to 30 percent of the maximum design rate. Repeat three more times for a total of 60 minutes of sampling.

(iv) 0-30-0 percent (ramp up, ramp down). Begin the test at 0 percent of the maximum design rate. During the first 5 minutes, incrementally ramp the firing rate to 30 percent of the maximum design rate. Hold at 30 percent for 5 minutes. In the 10-15 minute time range, incrementally ramp back down to 0 percent of the maximum design rate. Repeat three more times for a total of 60 minutes of sampling.

(3) All models employing multiple enclosures shall be tested simultaneously and with all burners operational. Results shall be reported for the each enclosure individually and for the average of the emissions from all interconnected combustion enclosures/chambers. Control device operating data shall be collected continuously throughout the performance test using an electronic Data Acquisition System and strip chart. Data shall be submitted with the test report in accordance with paragraph (h)(8)(iii) of this section.

(4) Inlet gas testing shall be conducted as specified in paragraphs (h)(4)(i) through (iii) of this section.

(i) The inlet gas flow metering system shall be located in accordance with Method 2A, 40 CFR 60 Appendix A-1, (or other approved procedure) to measure inlet gas flowrate at the control device inlet location. The fitting for filling inlet gas sample containers shall be located a minimum of 8 pipe diameters upstream of any inlet gas flow monitoring meter.

(ii) Inlet gas flowrate shall be determined using Method 2A, 40 CFR 60 Appendix A-1. Record the start and stop reading for each 60-minute THC test. Record the inlet gas pressure and temperature at 5-minute intervals throughout each 60-minute THC test.

(iii) Inlet gas fuel sampling shall be conducted in accordance with the criteria in paragraphs (h)(4)(iii)(A) and (B) of this section.

(A) At the inlet gas sampling location, securely connect a Silonite-coated stainless steel evacuated canister fitted with a flow controller sufficient to fill the canister over a 3 hour period. Filling shall be conducted as specified in the following:

(*1*) Open the canister sampling valve at the beginning of the total hydrocarbon (THC) test, and close the canister at the end of each THC run.

(*2*) Fill one canister across the three test runs for each THC test such that one composite fuel sample exists for each test condition.

(*3*) Label the canisters individually and record on a chain of custody form.

(B) Each inlet gas sample shall be analyzed using the following methods. The results shall be included in the test report.

(*1*) Hydrocarbon compounds containing between one and five atoms of carbon plus benzene using ASTM D1945-03 (Reapproved 2010) (incorporated by reference as specified in 40 CFR 63.14).

(*2*) Hydrogen (H_2), carbon monoxide (CO), carbon dioxide (CO_2), nitrogen (N_2), oxygen (O_2) using ASTM D1945-03 (Reapproved 2010) (incorporated by reference as specified in 40 CFR 63.14).

(*3*) Higher heating value using ASTM D3588-98 (Reapproved 2003) or ASTM D4891-89 (Reapproved 2006) (incorporated by reference as specified in 40 CFR 63.14).

(5) Outlet testing shall be conducted in accordance with the criteria in paragraphs (h)(5)(i) through (v) of this section.

(i) Sampling and flowrate measured in accordance with the following:

(A) The outlet sampling location shall be a minimum of 4 equivalent stack diameters downstream from the highest peak flame or any other flow disturbance, and a minimum of one equivalent stack diameter upstream of the exit or any other flow disturbance. A minimum of two sample ports shall be used.

(B) Flowrate shall be measured using Method 1, 40 CFR 60 Appendix 1, for determining flow measurement traverse point location; and Method 2, 40 CFR 60 Appendix 1, shall be used to measure duct velocity. If low flow conditions are encountered (i.e., velocity pressure differentials less than 0.05 inches of water) during the performance test, a more sensitive manometer or other pressure measurement device shall be used to obtain an accurate flow profile.

(ii) Molecular weight shall be determined as specified in paragraphs (h)(4)(iii)(B) and (h)(5)(ii)(A) and (B) of this section.

(A) An integrated bag sample shall be collected during the Method 4, 40 CFR 60 Appendix A, moisture test. Analyze the bag sample using a gas chromatograph-thermal conductivity detector (GC-TCD) analysis meeting the following criteria:

(*1*) Collect the integrated sample throughout the entire test, and collect representative volumes from each traverse location.

(*2*) The sampling line shall be purged with stack gas before opening the valve and beginning to fill the bag.

(*3*) The bag contents shall be vigorously mixed prior to the GC analysis.

(*4*) The GC-TCD calibration procedure in Method 3C, 40 CFR 60 Appendix A, shall be modified by using EPAAlt-045 as follows: For the initial calibration, triplicate injections of any single concentration must agree within 5 percent of their mean to be valid. The calibration response factor for a single concentration re-check must be within 10 percent of the original calibration response factor for that concentration. If this criterion is not met, the initial calibration using at least three concentration levels shall be repeated.

(B) Report the molecular weight of: O_2, CO_2, methane (CH4), and N_2 and include in the test report submitted under 40 CFR 63.775(d)(iii). Moisture shall be determined using Method 4, 40 CFR 60 Appendix A. Traverse both ports with the Method 4, 40 CFR 60 Appendix A, sampling train during each test run. Ambient air shall not be introduced into the Method 3C, 40 CFR 60 Appendix A, integrated bag sample during the port change.

(iii) Carbon monoxide shall be determined using Method 10, 40 CFR 60 Appendix A, or ASTM D6522-00 (Reapproved 2005), (incorporated by reference as specified in 40 CFR 63.14). The test shall be run at the same time and with the sample points used for the EPA Method 25A, 40 CFR 60 Appendix A, testing. An instrument range of 0-10 per million by volume-dry (ppmvd) shall be used.

(iv) Visible emissions shall be determined using Method 22, 40 CFR 60 Appendix A. The test shall be performed continuously during each test run. A digital color photograph of the exhaust point, taken from the position of the observer and annotated with date and time, will be taken once per test run and the four photos included in the test report.

(v) Excess air shall be determined using resultant data from the EPA Method 3C tests and EPA Method 3B, 40 CFR 60 Appendix A, equation 3B-1 or ANSI/ASME PTC 19.10, 1981-Part 10 (manual portion only) (incorporated by reference as specified in 40 CFR 63.14).

(6) Total hydrocarbons (THC) shall be determined as specified by the following criteria:

(i) Conduct THC sampling using Method 25A, 40 CFR 60 Appendix A, except the option for locating the probe in the center 10 percent of the stack shall not be allowed. The THC probe must be traversed to 16.7 percent, 50 percent, and 83.3 percent of the stack diameter during each test.

(ii) A valid test shall consist of three Method 25A, 40 CFR 60 Appendix A, tests, each no less than 60 minutes in duration.

(iii) A 0-10 parts per million by volume-wet (ppmvw) (as propane) measurement range is preferred; as an alternative a 0-30 ppmvw (as carbon) measurement range may be used.

(iv) Calibration gases will be propane in air and be certified through EPA Protocol 1-"EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards," September 1997, as amended August 25, 1999, EPA-600/R-97/121 (or more recent if updated since 1999).

(v) THC measurements shall be reported in terms of ppmvw as propane.

(vi) THC results shall be corrected to 3 percent CO_2, as measured by Method 3C, 40 CFR 60 Appendix A.

(vii) Subtraction of methane/ethane from the THC data is not allowed in determining results.

(7) Performance test criteria:

(i) The control device model tested must meet the criteria in paragraphs (h)(7)(i)(A) through (C) of this section:

(A) Method 22, 40 CFR 60 Appendix A, results under paragraph (h)(5)(v) of this section with no indication of visible emissions, and

(B) Average Method 25A, 40 CFR 60 Appendix A, results under paragraph (h)(6) of this section equal to or less than 10.0 ppmvw THC as propane corrected to 3.0 percent CO_2, and

(C) Average CO emissions determined under paragraph (h)(5)(iv) of this section equal to or less than 10 parts ppmvd, corrected to 3.0 percent CO_2.

(D) Excess combustion air shall be equal to or greater than 150 percent.

(ii) The manufacturer shall determine a maximum inlet gas flowrate which shall not be exceeded for each control device model to achieve the criteria in paragraph (h)(7)(i) of this section.

(iii) A control device meeting the criteria in paragraphs (h)(7)(i)(A) through (C) of this section will have demonstrated a destruction efficiency of 95.0 percent for HAP regulated under this subpart.

(8) The owner or operator of a combustion control device model tested under this section shall submit the information listed in paragraphs (h)(8)(i) through (iii) of this section in the test report required under 40 CFR 63.775(d)(1)(iii).

(i) Full schematic of the control device and dimensions of the device components.

(ii) Design net heating value (minimum and maximum) of the device.

(iii) Test fuel gas flow range (in both mass and volume). Include the minimum and maximum allowable inlet gas flowrate.

(iv) Air/stream injection/assist ranges, if used.

(v) The test parameter ranges listed in paragraphs (h)(8)(v)(A) through (O) of this section, as applicable for the tested model.

(A) Fuel gas delivery pressure and temperature.

(B) Fuel gas moisture range.

(C) Purge gas usage range.

(D) Condensate (liquid fuel) separation range.

(E) Combustion zone temperature range. This is required for all devices that measure this parameter.

(F) Excess combustion air range.

(G) Flame arrestor(s).

(H) Burner manifold pressure.

(I) Pilot flame sensor.

(J) Pilot flame design fuel and fuel usage.

(K) Tip velocity range.

(L) Momentum flux ratio.

(M) Exit temperature range.

(N) Exit flowrate.

(O) Wind velocity and direction.

(vi) The test report shall include all calibration quality assurance/quality control data, calibration gas values, gas cylinder certification, and strip charts annotated with test times and calibration values.

(i) Compliance demonstration for combustion control devices-manufacturers' performance test. This paragraph applies to the demonstration of compliance for a combustion control device tested under the provisions in paragraph (h) of this section. Owners or operators shall demonstrate that a control device achieves the performance requirements of 40 CFR 63.771(d)(1), (e)(3)(ii) or (f)(1), by installing a device tested under paragraph (h) of this section and complying with the following criteria:

(1) The inlet gas flowrate shall meet the range specified by the manufacturer. Flowrate shall be calculated as specified in 40 CFR 63.773(d)(3)(i)(H)(*1*).

(2) A pilot flame shall be present at all times of operation. The pilot flame shall be monitored in accordance with 40 CFR 63.773(d)(3)(i)(H)(*2*).
(3) Devices shall be operated with no visible emissions, except for periods not to exceed a total of 2 minutes during any hour. A visible emissions test using Method 22, 40 CFR 60 Appendix A, shall be performed each calendar quarter. The observation period shall be 1 hour and shall be conducted according to EPA Method 22, 40 CFR 60 Appendix A.
(4) Compliance with the operating parameter limit is achieved when the following criteria are met:
(i) The inlet gas flowrate monitored under paragraph (i)(1) of this section is equal to or below the maximum established by the manufacturer; and
(ii) The pilot flame is present at all times; and
(iii) During the visible emissions test performed under paragraph (i)(3) of this section the duration of visible emissions does not exceed a total of 2 minutes during the observation period. Devices failing the visible emissions test shall follow manufacturers repair instructions, if available, or best combustion engineering practice as outlined in the unit inspection and maintenance plan, to return the unit to compliant operation. All repairs and maintenance activities for each unit shall be recorded in a maintenance and repair log and shall be available on site for inspection.
(iv) Following return to operation from maintenance or repair activity, each device must pass a Method 22 visual observation as described in paragraph (i)(3) of this section.

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40 CFR 63.773 - Inspection and monitoring requirements

(a) This section applies to an owner or operator using air emission controls in accordance with the requirements of 40 CFR 63.765 and 63.766.
(b) The owner or operator of a control device whose model was tested under 40 CFR 63.772(h) shall develop an inspection and maintenance plan for each control device. At a minimum, the plan shall contain the control device manufacturer's recommendations for ensuring proper operation of the device. Semi-annual inspections shall be conducted for each control device with maintenance and replacement of control device components made in accordance with the plan.
(c) Cover and closed-vent system inspection and monitoring requirements
(1) For each closed-vent system or cover required to comply with this section, the owner or operator shall comply with the requirements of paragraphs (c) (2) through (7) of this section.
(2) Except as provided in paragraphs (c)(5) and (6) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (c)(2)(i) and (ii) of this section, each cover shall be inspected according to the procedures and schedule specified in paragraph (c)(2)(iii) of this section, and each bypass device shall be inspected according to the procedures of paragraph (c)(2)(iv) of this section.
(i) For each closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange), the owner or operator shall:
(A) Conduct an initial inspection according to the procedures specified in 40 CFR 63.772(c) to demonstrate that the closed-vent system operates with no detectable emissions. Inspection results shall be submitted with the Notification of Compliance Status Report as specified in 40 CFR 63.775(d)(1) or (2).
(B) Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; or broken or missing caps or other closure devices. The owner or operator shall monitor a component or connection using the procedures in 40 CFR 63.772(c) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. Inspection results shall be submitted in the Periodic Report as specified in 40 CFR 63.775(e)(2)(iii).
(ii) For closed-vent system components other than those specified in paragraph (c)(2)(i) of this section, the owner or operator shall:
(A) Conduct an initial inspection according to the procedures specified in 40 CFR 63.772(c) to demonstrate that the closed-vent system operates with no detectable emissions. Inspection results shall be submitted with the Notification of Compliance Status Report as specified in 40 CFR 63.775(d)(1) or (2).

(B) Conduct annual inspections according to the procedures specified in 40 CFR 63.772(c) to demonstrate that the components or connections operate with no detectable emissions. Inspection results shall be submitted in the Periodic Report as specified in 40 CFR 63.775(e)(2)(iii).

(C) Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork; loose connections; or broken or missing caps or other closure devices. Inspection results shall be submitted in the Periodic Report as specified in 40 CFR 63.775(e)(2)(iii).

(iii) For each cover, the owner or operator shall:

(A) Conduct visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover, or between the cover and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case where the storage vessel is buried partially or entirely underground, inspection is required only for those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.

(B) The inspections specified in paragraph (c)(2)(iii)(A) of this section shall be conducted initially, following the installation of the cover. Inspection results shall be submitted with the Notification of Compliance Status Report as specified in 40 CFR 63.775(d)(12). Thereafter, the owner or operator shall perform the inspection at least once every calendar year, except as provided in paragraphs (c)(5) and (6) of this section. Annual inspection results shall be submitted in the Periodic Report as specified in 40 CFR 63.775(e)(2)(iii).

(iv) For each bypass device, except as provided for in 40 CFR 63.771(c)(3)(ii), the owner or operator shall either:

(A) At the inlet to the bypass device that could divert the steam away from the control device to the atmosphere, set the flow indicator to take a reading at least once every 15 minutes; or

(B) If the bypass device valve installed at the inlet to the bypass device is secured in the non-diverting position using a car-seal or a lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass device.

(3) In the event that a leak or defect is detected, the owner or operator shall repair the leak or defect as soon as practicable, except as provided in paragraph (c)(4) of this section.

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

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected.

(4) Delay of repair of a closed-vent system or cover for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in 40 CFR 63.761, 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.

(5) Any parts of the closed-vent system or cover that are designated, as described in paragraphs (c)(5) (i) and (ii) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (c)(2)(i), (ii), and (iii) of this section if:

(i) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (c)(2)(i), (ii), or (iii) of this section; and

(ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(6) Any parts of the closed-vent system or cover that are designated, as described in paragraphs (c)(6) (i) and (ii) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (c)(2)(i), (ii), and (iii) of this section if:

(i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(ii) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(7) Records shall be maintained as specified in 40 CFR 63.774(b)(5) through (8).

(d) Control device monitoring requirements

(1) For each control device, except as provided for in paragraph (d)(2) of this section, the owner or operator shall install and operate a continuous parameter monitoring system in accordance with the requirements of paragraphs (d)(3) through (7) of this section. Owners or operators that install and operate a flare in accordance with 40 CFR 63.771(d)(1)(iii) or (f)(1)(iii) are exempt from the requirements of paragraphs (d)(4) and (5) of this section. The continuous monitoring system shall be designed and operated so that a determination can be made on whether the control device is achieving the applicable performance requirements of 40 CFR 63.771(d), (e)(3), or (f)(1). Each continuous parameter monitoring system shall meet the following specifications and requirements:

(i) Each continuous parameter monitoring system shall measure data values at least once every hour and record either:

(A) Each measured data value; or

(B) Each block average value for each 1-hour period or shorter periods calculated from all measured data values during each period. If values are instead of all measured values.

(ii) A site-specific monitoring plan must be prepared that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraph (d) of this section and in 40 CFR 63.8(d). Each CPMS must be installed, calibrated, operated, and maintained in accordance with the procedures in your approved site-specific monitoring plan. Using the process described in 40 CFR 63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (d)(1)(ii)(A) through (E) of this section in your site-specific monitoring plan.

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

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

(C) Equipment performance checks, system accuracy audits, or other audit procedures;

(D) Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c)(1) and (3); and

(E) Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e)(1), and (e)(2)(i).

(iii) The owner or operator must conduct the CPMS equipment performance checks, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least once every 12 months.

(iv) The owner or operator must conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.

(2) An owner or operator is exempt from the monitoring requirements specified in paragraphs (d)(3) through (7) of this section for the following types of control devices:

(i) Except for control devices for small glycol dehydration units, a boiler or process heater in which all vent streams are introduced with the primary fuel or is used as the primary fuel; or

(ii) Except for control devices for small glycol dehydration units, a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts.

(3) The owner or operator shall install, calibrate, operate, and maintain a device equipped with a continuous recorder to measure the values of operating parameters appropriate for the control device as specified in either paragraph (d)(3)(i), (d)(3)(ii), or (d)(3)(iii) of this section.

(i) A continuous monitoring system that measures the following operating parameters as applicable:

(A) For a thermal vapor incinerator that demonstrates during the performance test conducted under 40 CFR 63.772(e) that the combustion zone temperature is an accurate indicator of performance, a temperature monitoring device equipped with a continuous recorder. The monitoring device shall have a minimum accuracy of ± 2 percent of the temperature being monitored in °C, or ± 2.5 °C, whichever value is greater. The temperature sensor shall be installed at a location representative of the combustion zone temperature.

(B) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have a minimum accuracy of ± 2 percent of the temperature being monitored in °C, or ± 2.5 °C, whichever value is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(C) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(D) For a boiler or process heater, a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall have a minimum accuracy of ± 2 percent of the temperature being monitored in °C, or ± 2.5 °C, whichever value is greater. The temperature sensor shall be installed at a location representative of the combustion zone temperature.

(E) For a condenser, a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall have a minimum accuracy of ± 2 percent of the temperature being monitored in °C, or ± 2.5 °C, whichever value is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser.

(F) For a regenerative-type carbon adsorption system:

(*1*) A continuous parameter monitoring system to measure and record the average total regeneration stream mass flow or volumetric flow during each carbon bed regeneration cycle. The integrating regenerating stream flow monitoring device must have an accuracy of ± 10 percent; and

(*2*) A continuous parameter monitoring system to measure and record the average carbon bed temperature for the duration of the carbon bed steaming cycle and to measure the actual carbon bed temperature after regeneration and within 15 minutes of completing the cooling cycle. The temperature monitoring device shall have a minimum accuracy of ± 2 percent of the temperature being monitored in °C, or ± 2.5 °C, whichever value is greater.

(G) For a nonregenerative-type carbon adsorption system, the owner or operator shall monitor the design carbon replacement interval established using a performance test performed in accordance with 40 CFR 63.772(e)(3) and shall be based on the total carbon working capacity of the control device and source operating schedule.

(H) For a control device model whose model is tested under 40 CFR 63.772(h):

(*1*) The owner or operator shall determine actual average inlet waste gas flowrate using the model GRI-GLYCalc™, Version 3.0 or higher, ProMax, or AspenTech HYSYS. Inputs to the models shall be representative of actual operating conditions of the controlled unit. The determination shall be performed to coincide with the visible emissions test under 40 CFR 63.772(i)(3);

(*2*) A heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(ii) A continuous monitoring system that measures the concentration level of organic compounds in the exhaust vent stream from the control device using an organic monitoring device equipped with a continuous recorder. The monitor must meet the requirements of Performance Specification 8 or 9 of Appendix B of 40 CFR 60 and must be installed, calibrated, and maintained according to the manufacturer's specifications.

(iii) A continuous monitoring system that measures alternative operating parameters other than those specified in paragraph (d)(3)(i) or (d)(3)(ii) of this section upon approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (5).

(4) Using the data recorded by the monitoring system, except for inlet gas flowrate, the owner or operator must calculate the daily average value for each monitored operating parameter for each operating day. If the emissions unit operation is continuous, the operating day is a 24-hour period. If the emissions unit operation is not continuous, the operating day is the total number of hours of control device operation per 24-hour period. Valid data points must be available for 75 percent of the operating hours in an operating day to compute the daily average.

(5) For each operating parameter monitor installed in accordance with the requirements of paragraph (d)(3) of this section, the owner or operator shall comply with paragraph (d)(5)(i) of this section for all control devices, and when condensers are installed, the owner or operator shall also comply with paragraph (d)(5)(ii) of this section.

(i) The owner or operator shall establish a minimum operating parameter value or a maximum operating parameter value, as appropriate for the control device, to define the conditions at which the control device must be operated to continuously achieve the applicable performance requirements of 40 CFR 63.771(d)(1), (e)(3)(ii), or (f)(1). Each minimum or maximum operating parameter value shall be established as follows:

(A) If the owner or operator conducts performance tests in accordance with the requirements of 40 CFR 63.772(e)(3) to demonstrate that the control device achieves the applicable performance requirements specified in 40 CFR 63.771(d)(1), (e)(3)(ii) or (f)(1), then the minimum

operating parameter value or the maximum operating parameter value shall be established based on values measured during the performance test and supplemented, as necessary, by a condenser design analysis or control device manufacturer recommendations or a combination of both.

(B) If the owner or operator uses a condenser design analysis in accordance with the requirements of 40 CFR 63.772(e)(4) to demonstrate that the control device achieves the applicable performance requirements specified in 40 CFR 63.771(d)(1), (e)(3)(ii), or (f)(1), then the minimum operating parameter value or the maximum operating parameter value shall be established based on the condenser design analysis and may be supplemented by the condenser manufacturer's recommendations.

(C) If the owner or operator operates a control device where the performance test requirement was met under 40 CFR 63.772(h) to demonstrate that the control device achieves the applicable performance requirements specified in 40 CFR 63.771(d)(1), (e)(3)(ii), or (f)(1), then the maximum inlet gas flowrate shall be established based on the performance test and supplemented, as necessary, by the manufacturer recommendations.

(ii) The owner or operator shall establish a condenser performance curve showing the relationship between condenser outlet temperature and condenser control efficiency. The curve shall be established as follows:

(A) If the owner or operator conducts a performance test in accordance with the requirements of 40 CFR 63.772(e)(3) to demonstrate that the condenser achieves the applicable performance requirements in 40 CFR 63.771(d)(1), (e)(3)(ii), or (f)(1), then the condenser performance curve shall be based on values measured during the performance test and supplemented as necessary by control device design analysis, or control device manufacturer's recommendations, or a combination of both.

(B) If the owner or operator uses a control device design analysis in accordance with the requirements of 40 CFR 63.772(e)(4)(i) to demonstrate that the condenser achieves the applicable performance requirements specified in 40 CFR 63.771(d)(1), (e)(3)(ii), or (f)(1), then the condenser performance curve shall be based on the condenser design analysis and may be supplemented by the control device manufacturer's recommendations.

(C) As an alternative to paragraph (d)(5)(ii)(B) of this section, the owner or operator may elect to use the procedures documented in the GRI report entitled, “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1) as inputs for the model GRI-GLYCalc™, Version 3.0 or higher, to generate a condenser performance curve.

(6) An excursion for a given control device is determined to have occurred when the monitoring data or lack of monitoring data result in any one of the criteria specified in paragraphs (d)(6)(i) through (vi) of this section being met. When multiple operating parameters are monitored for the same control device and during the same operating day and more than one of these operating parameters meets an excursion criterion specified in paragraphs (d)(6)(i) through (vi) of this section, then a single excursion is determined to have occurred for the control device for that operating day.

(i) An excursion occurs when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit) established for the operating parameter in accordance with the requirements of paragraph (d)(5)(i) of this section.

(ii) For sources meeting 40 CFR 63.771(d)(1)(ii), an excursion occurs when the 365-day average condenser efficiency calculated according to the requirements specified in 40 CFR 63.772(g)(2)(iii) is less than 95.0 percent. For sources meeting 40 CFR 63.771(f)(1), an excursion occurs when the 365-day average condenser efficiency calculated according to the requirements specified in 40 CFR 63.772(g)(2)(iii) is less than 95.0 percent of the identified 365-day required percent reduction.

(iii) For sources meeting 40 CFR 63.771(d)(1)(ii), if an owner or operator has less than 365 days of data, an excursion occurs when the average condenser efficiency calculated according to the procedures specified in 40 CFR 63.772(g)(2)(iii)(A) or (B) is less than 90.0 percent. For sources meeting 40 CFR 63.771(f)(1), an excursion occurs when the 365-day average condenser efficiency calculated according to the requirements specified in 40 CFR 63.772(g)(2)(iii) is less than the identified 365-day required percent reduction.

(iv) An excursion occurs when the monitoring data are not available for at least 75 percent of the operating hours in a day.

(v) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, an excursion occurs when:

(A) For each bypass line subject to 40 CFR 63.771(c)(3)(i)(A) the flow indicator indicates that flow has been detected and that the stream has been diverted away from the control device to the atmosphere.

(B) For each bypass line subject to 40 CFR 63.771(c)(3)(i)(B), if the seal or closure mechanism has been broken, the bypass line valve position has changed, the key for the lock-and-key type lock has been checked out, or the car-seal has broken.

(vi) For control device whose model is tested under 40 CFR 63.772(h) an excursion occurs when:

(A) The inlet gas flowrate exceeds the maximum established during the test conducted under 40 CFR 63.772(h).

(B) Failure of the quarterly visible emissions test conducted under 40 CFR 63.772(i)(3) occurs.

(7) For each excursion, the owner or operator shall be deemed to have failed to have applied control in a manner that achieves the required operating parameter limits. Failure to achieve the required operating parameter limits is a violation of this standard.

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40 CFR 63.774 - Recordkeeping requirements

(a) The recordkeeping provisions of 40 CFR 63 Subpart A, that apply and those that do not apply to owners and operators of sources subject to this subpart are listed in Table 2 of this subpart.

(b) Except as specified in paragraphs (c), (d), and (f) of this section, each owner or operator of a facility subject to this subpart shall maintain the records specified in paragraphs (b)(1) through (11) of this section:

(1) The owner or operator of an affected source subject to the provisions of this subpart shall maintain files of all information (including all reports and notifications) required by this subpart. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or period.

(i) All applicable records shall be maintained in such a manner that they can be readily accessed.

(ii) The most recent 12 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.

(iii) The remaining 4 years of records may be retained offsite.

(iv) 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) Records specified in 40 CFR 63.10(b)(2);

(3) Records specified in 40 CFR 63.10(c) for each monitoring system operated by the owner or operator in accordance with the requirements of 40 CFR 63.773(d). Notwithstanding the requirements of 40 CFR 63.10(c), monitoring data recorded during periods identified in paragraphs (b)(3)(i) through (iv) of this section shall not be included in any average or percent leak rate 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 or failed to collect required data.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) [Reserved]

(iii) Periods of non-operation resulting in cessation of the emissions to which the monitoring applies; and

(iv) Excursions due to invalid data as defined in 40 CFR 63.773(d)(6)(iv).

(4) Each owner or operator using a control device to comply with 40 CFR 63.764 of this subpart shall keep the following records up-to-date and readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.773(d) or specified by the Administrator in accordance with 40 CFR 63.773(d)(3)(iii). For flares, the hourly records and records of pilot flame outages specified in paragraph (e) of this section shall be maintained in place of continuous records.

(ii) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.773(d)(4) of this subpart, except as specified in paragraphs (b)(4)(ii)(A) through (C) of this section.

(A) For flares, the records required in paragraph (e) of this section.

(B) For condensers installed to comply with 40 CFR 63.765, records of the annual 365-day rolling average condenser efficiency determined under 40 CFR 63.772(g) shall be kept in addition to the daily averages.

(C) For a control device whose model is tested under 40 CFR 63.772(h), the records required in paragraph (h) of this section.

(iii) Hourly records of the times and durations of all periods when the vent stream is diverted from the control device or the device is not operating.

(iv) Where a seal or closure mechanism is used to comply with 40 CFR 63.771(c)(3)(i)(B), 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) Records identifying all parts of the cover or closed-vent system that are designated as unsafe to inspect in accordance with 40 CFR 63.773(c)(5), an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(6) Records identifying all parts of the cover or closed-vent system that are designated as difficult to inspect in accordance with 40 CFR 63.773(c)(6), an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(7) For each inspection conducted in accordance with 40 CFR 63.773(c), during which a leak or defect is detected, a record of the information specified in paragraphs (b)(7)(i) through (b)(7)(viii) of this section.

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

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

(iii) Maximum instrument reading measured by the method specified in 40 CFR 63.772(c) after the leak or defect is successfully repaired or determined to be nonrepairable.

(iv) “Repair delayed” and the reason for the delay if a leak or defect is not repaired within 15 calendar days after discovery of the leak or defect.

(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 or defect if a leak or defect 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 or defect.

(ix) Records identifying the carbon replacement schedule under 40 CFR 63.771(d)(5) and records of each carbon replacement.

(8) For each inspection conducted in accordance with 40 CFR 63.773(c) during which no leaks or defects are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks or defects were detected.

(9) Records identifying ancillary equipment and compressors that are subject to and controlled under the provisions of 40 CFR 60 Subpart KKK; 40 CFR 61 Subpart V; or 40 CFR 63 Subpart H.

(10) Records of glycol dehydration unit baseline operations calculated as required under 40 CFR 63.771(e)(1).

(11) Records required in 40 CFR 63.771(e)(3)(i) documenting that the facility continues to operate under the conditions specified in 40 CFR 63.771(e)(2).

(c) An owner or operator that elects to comply with the benzene emission limit specified in 40 CFR 63.765(b)(1)(ii) shall document, to the Administrator's satisfaction, the following items:

(1) The method used for achieving compliance and the basis for using this compliance method; and

(2) The method used for demonstrating compliance with 0.90 megagrams per year of benzene.

(3) Any information necessary to demonstrate compliance as required in the methods specified in paragraphs (c)(1) and (c)(2) of this section.

(d)

(1) An owner or operator of a glycol dehydration unit that meets the exemption criteria in 40 CFR 63.764(e)(1)(i) or 40 CFR 63.764(e)(1)(ii) shall maintain the records specified in paragraph (d)(1)(i) or paragraph (d)(1)(ii) of this section, as appropriate, for that glycol dehydration unit.

(i) The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with 40 CFR 63.772(b)(1), or

(ii) The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with 40 CFR 63.772(b)(2).

(2) An owner or operator that is exempt from the control requirements under 40 CFR 63.764(e)(2) of this subpart shall maintain the following records:

(i) Information and data used to demonstrate that a piece of ancillary equipment or a compressor is not in VHAP service or not in wet gas service shall be recorded in a log that is kept in a readily accessible location.

(ii) Identification and location of ancillary equipment or compressors, located at a natural gas processing plant subject to this subpart, that is in VHAP service less than 300 hours per year.

(e) Record the following when using a flare to comply with 40 CFR 63.771(d):

(1) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(2) All visible emission readings, heat content determinations, flowrate measurements, and exit velocity determinations made during the compliance determination required by 40 CFR 63.772(e)(2); and

(3) All hourly records and other recorded periods when the pilot flame is absent.

(f) The owner or operator of an area source not located within a UA plus offset and UC boundary must keep a record of the calculation used to determine the optimum glycol circulation rate in accordance with 40 CFR 63.764(d)(2)(i) or 40 CFR 63.764(d)(2)(ii), as applicable.

(g) The owner or operator of an affected source subject to this subpart shall maintain records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. The owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.764(j), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(h) Record the following when using a control device whose model is tested under 40 CFR 63.772(h) to comply with 40 CFR 63.771(d), (e)(3)(ii), and (f)(1):

(1) All visible emission readings and flowrate calculations made during the compliance determination required by 40 CFR 63.772(i); and

(2) All hourly records and other recorded periods when the pilot flame is absent.

(i) The date the semi-annual maintenance inspection required under 40 CFR 63.773(b) is performed. Include a list of any modifications or repairs made to the control device during the inspection and other maintenance performed such as cleaning of the fuel nozzles.

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40 CFR 63.775 - Reporting requirements

(a) The reporting provisions of Subpart A of this part, that apply and those that do not apply to owners and operators of sources subject to this subpart are listed in Table 2 of this subpart.

(b) Each owner or operator of a major source subject to this subpart shall submit the information listed in paragraphs (b)(1) through (b)(6) of this section, except as provided in paragraphs (b)(7) and (b)(8) of this section.

(1) The initial notifications required for existing affected sources under 40 CFR 63.9(b)(2) shall be submitted as provided in paragraphs (b)(1)(i) and (ii) of this section.

(i) Except as otherwise provided in paragraph (b)(1)(ii) of this section, the initial notifications shall be submitted by 1 year after an affected source becomes subject to the provisions of this subpart or by June 17, 2000, whichever is later. Affected sources that are major sources on or before June 17, 2000, and plan to be area sources by June 17, 2002, shall include in this notification a brief, nonbinding description of a schedule for the action(s) that are planned to achieve area source status.

(ii) An affected source identified under 40 CFR 63.760(f)(7) or (9) shall submit an initial notification required for existing affected sources under 40 CFR 63.9(b)(2) within 1 year after the affected source becomes subject to the provisions of this subpart or by October 15, 2013, whichever is later. An affected source identified under 40 CFR 63.760(f)(7) or (9) that plans to be an area source by October 15, 2015, shall include in this notification a brief, nonbinding description of a schedule for the action(s) that are planned to achieve area source status.

(2) The date of the performance evaluation as specified in 40 CFR 63.8(e)(2), required only if the owner or operator is required by the Administrator to conduct a performance evaluation for a continuous monitoring system. A separate notification of the performance evaluation is not required if it is included in the initial notification submitted in accordance with paragraph (b)(1) of this section.

(3) The planned date of a performance test at least 60 days before the test in accordance with 40 CFR 63.7(b). Unless requested by the Administrator, a site-specific test plan is not required by this subpart. If requested by the Administrator, the owner or operator must also submit the site-specific test plan required by 40 CFR 63.7(c) with the notification of the performance test. A separate notification of the performance test is not required if it is included in the initial notification submitted in accordance with paragraph (b)(1) of this section.

(4) A Notification of Compliance Status report as described in paragraph (d) of this section;

(5) Periodic Reports as described in paragraph (e) of this section; and

(6) If there was a malfunction during the reporting period, the Periodic Report specified in paragraph (e) of this section shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.764(j), including actions taken to correct a malfunction.

(7) [Reserved]

(8) Each owner or operator of ancillary equipment and compressors subject to this subpart that are exempt from the control requirements for equipment leaks in 40 CFR 63.769, are exempt from all reporting requirements for major sources in this subpart, for that equipment.

(c) Except as provided in paragraph (c)(8), each owner or operator of an area source subject to this subpart shall submit the information listed in paragraph (c)(1) of this section. If the source is located within a UA plus offset and UC boundary, the owner or operator shall also submit the information listed in paragraphs (c)(2) through (6) of this section. If the source is not located within any UA plus offset and UC boundaries, the owner or operator shall also submit the information listed within paragraph (c)(7).

(1) The initial notifications required under 40 CFR 63.9(b)(2) not later than January 3, 2008. In addition to submitting your initial notification to the addressees specified under 40 CFR 63.9(a), you must also submit a copy of the initial notification to the EPA's Office of Air Quality Planning and Standards. Send your notification via email to *Oil and Gas Sector@epa.gov* or via U.S. mail or other mail delivery service to U.S. EPA, Sector Policies and Programs Division/Fuels and Incineration Group (E143-01), Attn: Oil and Gas Project Leader, Research Triangle Park, NC 27711.

(2) The date of the performance evaluation as specified in 40 CFR 63.8(e)(2) if an owner or operator is required by the Administrator to conduct a performance evaluation for a continuous monitoring system.

(3) The planned date of a performance test at least 60 days before the test in accordance with 40 CFR 63.7(b). Unless requested by the Administrator, a site-specific test plan is not required by this subpart. If requested by the Administrator, the owner or operator must submit the site-specific test plan required by 40 CFR 63.7(c) with the notification of the performance test. A separate notification of the performance test is not required if it is included in the initial notification submitted in accordance with paragraph (c)(1) of this section.

(4) A Notification of Compliance Status as described in paragraph (d) of this section;

(5) Periodic reports as described in paragraph (e)(3) of this section; and

(6) If there was a malfunction during the reporting period, the Periodic Report specified in paragraph (e) of this section shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.764(j), including actions taken to correct a malfunction.

(7) The information listed in paragraphs (c)(1)(i) through (v) of this section. This information shall be submitted with the initial notification.

(i) Documentation of the source's location relative to the nearest UA plus offset and UC boundaries. This information shall include the latitude and longitude of the affected source; whether the source is located in an urban cluster with 10,000 people or more; the distance in miles to the nearest urbanized area boundary if the source is not located in an urban cluster with 10,000 people or more; and the name of the nearest urban cluster with 10,000 people or more and nearest urbanized area.

(ii) Calculation of the optimum glycol circulation rate determined in accordance with 40 CFR 63.764(d)(2)(i).

(iii) If applicable, documentation of the alternate glycol circulation rate calculated using GRI-GLYCalc™, Version 3.0 or higher and documentation stating why the TEG dehydration unit must operate using the alternate glycol circulation rate.

(iv) The name of the manufacturer and the model number of the glycol circulation pump(s) in operation.

(v) Statement by a responsible official, with that official's name, title, and signature, certifying that the facility will always operate the glycol dehydration unit using the optimum circulation rate determined in accordance with 40 CFR 63.764(d)(2)(i) or 40 CFR 63.764(d)(2)(ii), as applicable.

(8) An owner or operator of a TEG dehydration unit located at an area source that meets the criteria in 40 CFR 63.764(e)(1)(i) or 40 CFR 63.764(e)(1)(ii) is exempt from the reporting requirements for area sources in paragraphs (c)(1) through (7) of this section, for that unit.

(d) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status Report as required under 40 CFR 63.9(h) within 180 days after the compliance date specified in 40 CFR 63.760(f). In addition to the information required under 40 CFR 63.9(h), the Notification of Compliance Status Report shall include the information specified in paragraphs (d)(1) through (12) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If all of the information required under this paragraph has been submitted at any time prior to 180 days after the applicable compliance dates specified in 40 CFR 63.760(f), a separate Notification of Compliance Status Report is not required. If an owner or operator submits the information specified in paragraphs (d)(1) through (12) of this section at different times, and/or different submittals, subsequent submittals may refer to previous submittals instead of duplicating and resubmitting the previously submitted information.

(1) If a closed-vent system and a control device other than a flare are used to comply with 40 CFR 63.764, the owner or operator shall submit the information in paragraph (d)(1)(iii) of this section and the information in either paragraph (d)(1)(i) or (ii) of this section.

(i) The condenser design analysis documentation specified in 40 CFR 63.772(e)(4) of this subpart, if the owner or operator elects to prepare a design analysis.

(ii) If the owner or operator is required to conduct a performance test, the performance test results including the information specified in paragraphs (d)(1)(ii)(A) and (B) of this section. Results of a performance test conducted prior to the compliance date of this subpart can be used provided that the test was conducted using the methods specified in 40 CFR 63.772(e)(3) and that the test conditions are representative of current operating conditions. If the owner or operator operates a combustion control device model tested under 40 CFR 63.772(h), an electronic copy of the performance test results shall be submitted via email to *Oil_and_Gas_PT@EPA.GOV* unless the test results for that model of combustion control device are posted at the following Web site: *epa.gov/airquality/oilandgas/*.

(A) The percent reduction of HAP or TOC, or the outlet concentration of HAP or TOC (parts per million by volume on a dry basis), determined as specified in 40 CFR 63.772(e)(3) of this subpart; and

(B) The value of the monitored parameters specified in 40 CFR 773(d) of this subpart, or a site-specific parameter approved by the permitting agency, averaged over the full period of the performance test.

(iii) The results of the closed-vent system initial inspections performed according to the requirements in 40 CFR 63.773(c)(2)(i) and (ii).

(2) If a closed-vent system and a flare are used to comply with 40 CFR 63.764, the owner or operator shall submit performance test results including the information in paragraphs (d)(2)(i) and (ii) of this section. The owner or operator shall also submit the information in paragraph (d)(2)(iii) of this section.

(i) All visible emission readings, heat content determinations, flowrate measurements, and exit velocity determinations made during the compliance determination required by 40 CFR 63.772(e)(2) of this subpart.

(ii) A statement of whether a flame was present at the pilot light over the full period of the compliance determination.

(iii) The results of the closed-vent system initial inspections performed according to the requirements in 40 CFR 63.773(c)(2)(i) and (ii).

(3) For each owner or operator subject to the provisions specified in 40 CFR 63.769, the owner or operator shall submit the information required by 40 CFR 61.247(a), except that the initial report required in 40 CFR 61.247(a) shall be submitted as a part of the Notification of Compliance Status Report required in paragraph (d) of this section. The owner or operator shall also submit the information specified in paragraphs (d)(3) (i) and (ii) of this section.

(i) The number of each equipment (e.g., valves, pumps, etc.) excluding equipment in vacuum service, and

(ii) Any change in the information submitted in this paragraph shall be provided to the Administrator as a part of subsequent Periodic Reports described in paragraph (e)(2)(iv) of this section.

(4) The owner or operator shall submit one complete test report for each test method used for a particular source.

(i) For additional tests performed using the same test method, the results specified in paragraph (d)(1)(ii) of this section shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a 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.

(5) For each control device other than a flare used to meet the requirements of 40 CFR 63.764, the owner or operator shall submit the information specified in paragraphs (d)(5) (i) through (iii) of this section for each operating parameter required to be monitored in accordance with the requirements of 40 CFR 63.773(d).

(i) The minimum operating parameter value or maximum operating parameter value, as appropriate for the control device, established by the owner or operator to define the conditions at which the control device must be operated to continuously achieve the applicable performance requirements of 40 CFR 63.771(d)(1) or (e)(3)(ii).

(ii) An explanation of the rationale for why the owner or operator selected each of the operating parameter values established in 40 CFR 63.773(d)(5). This explanation shall include any data and calculations used to develop the value and a description of why the chosen value indicates that the control device is operating in accordance with the applicable requirements of 40 CFR 63.771(d)(1), (e)(3)(ii) or (f)(1).

(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.

(iv) For each carbon adsorber, the predetermined carbon replacement schedule as required in 40 CFR 63.771(d)(5)(i).

(6) Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status Report.

(7) After a Title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's Title V permit, including reports required under this subpart. After a Title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this subpart, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in this subpart.

(8) The owner or operator that elects to comply with the requirements of 40 CFR 63.765(b)(1)(ii) shall submit the records required under 40 CFR 63.774(c).

(9) The owner or operator shall submit the analysis performed under 40 CFR 63.760(a)(1).

(10) The owner or operator shall submit a statement as to whether the source has complied with the requirements of this subpart.

(11) The owner or operator shall submit the analysis prepared under 40 CFR 63.771(e)(2) to demonstrate the conditions by which the facility will be operated to achieve the HAP emission reduction of 95.0 percent, or the BTEX limit in 40 CFR 63.765(b)(1)(iii), through process modifications or a combination of process modifications and one or more control devices.

(12) If a cover is installed to comply with 40 CFR 63.764, the results of the initial inspection performed according to the requirements specified in 40 CFR 63.773(c)(2)(iii).

(13) If the owner or operator installs a combustion control device model tested under the procedures in 40 CFR 63.772(h), the data listed under 40 CFR 63.772(h)(8).

(14) For each combustion control device model tested under 40 CFR 63.772(h), the information listed in paragraphs (d)(14)(i) through (vi) of this section.

(i) Name, address and telephone number of the control device manufacturer.

(ii) Control device model number.

(iii) Control device serial number.

(iv) Date the model of control device was tested by the manufacturer.

(v) Manufacturer's HAP destruction efficiency rating.

(vi) Control device operating parameters, maximum allowable inlet gas flowrate.

(e) Periodic Reports. An owner or operator of a major source shall prepare Periodic Reports in accordance with paragraphs (e) (1) and (2) of this section and submit them to the Administrator. An owner or operator of an area source shall prepare Periodic Reports in accordance with paragraph (e)(3) of this section and submit them to the Administrator.

(1) An owner or operator shall submit Periodic Reports semiannually beginning 60 calendar days after the end of the applicable reporting period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status Report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status Report is due.

(2) The owner or operator shall include the information specified in paragraphs (e)(2)(i) through (ix) of this section, as applicable.

(i) The information required under 40 CFR 63.10(e)(3). For the purposes of this subpart and the information required under 40 CFR 63.10(e)(3), excursions (as defined in 40 CFR 63.773(d)(6)) shall be considered excess emissions.

(ii) A description of all excursions as defined in 40 CFR 63.773(d)(6) of this subpart that have occurred during the 6-month reporting period.

(A) For each excursion caused when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit), as specified in 40 CFR 63.773(d)(6)(i), the report must include the daily average values of the monitored parameter, the applicable operating parameter limit, and the date and duration of the period that the excursion occurred.

(B) For each excursion caused when the 365-day average condenser control efficiency is less than the value specified in 40 CFR 63.773(d)(6)(ii), the report must include the 365-day average values of the condenser control efficiency, and the date and duration of the period that the excursion occurred.

(C) For each excursion caused when condenser control efficiency is less than the value specified in 40 CFR 63.773(d)(6)(iii), the report must include the average values of the condenser control efficiency, and the date and duration of the period that the excursion occurred.

(D) For each excursion caused by the lack of monitoring data, as specified in 40 CFR 63.773(d)(6)(iv), the report must include the date and duration of the period when the monitoring data were not collected and the reason why the data were not collected.

(E) For each excursion caused when the maximum inlet gas flowrate identified under 40 CFR 63.772(h) is exceeded, the report must include the values of the inlet gas identified and the date and duration of the period that the excursion occurred.

(F) For each excursion caused when visible emissions determined under 40 CFR 63.772(i) exceed the maximum allowable duration, the report must include the date and duration of the period that the excursion occurred, repairs affected to the unit, and date the unit was returned to service.

(iii) For each inspection conducted in accordance with 40 CFR 63.773(c) during which a leak or defect is detected, the records specified in 40 CFR 63.774(b)(7) must be included in the next Periodic Report.

(iv) For each owner or operator subject to the provisions specified in 40 CFR 63.769, the owner or operator shall comply with the reporting requirements specified in 40 CFR 61.247, except that the Periodic Reports shall be submitted on the schedule specified in paragraph (e)(1) of this section.

(v) For each closed-vent system with a bypass line subject to 40 CFR 63.771(c)(3)(i)(A), records required under 40 CFR 63.774(b)(4)(iii) of all periods when the vent stream is diverted from the control device through a bypass line. For each closed-vent system with a bypass line subject to 40 CFR 63.771(c)(3)(i)(B), records required under 40 CFR 63.774(b)(4)(iv) of all periods in which the seal mechanism is broken, the bypass valve position has changed, or the key to unlock the bypass line valve was checked out.

(vi) If an owner or operator elects to comply with 40 CFR 63.765(b)(1)(ii), the records required under 40 CFR 63.774(c)(3).

(vii) The information in paragraphs (e)(2)(vii) (A) and (B) of this section shall be stated in the Periodic Report, when applicable.

(A) No excursions.

(B) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted.

(viii) Any change in compliance methods as specified in 40 CFR 63.772(f).

(ix) If the owner or operator elects to comply with 40 CFR 63.765(c)(2), the records required under 40 CFR 63.774(b)(11).

(x) For flares, the records specified in 40 CFR 63.774(e)(3).

(xi) The results of any periodic test as required in 40 CFR 63.772(e)(3) conducted during the reporting period.

(xii) For each carbon adsorber used to meet the control device requirements of 40 CFR 63.771(d)(1), records of each carbon replacement that occurred during the reporting period.

(xiii) For combustion control device inspections conducted in accordance with 40 CFR 63.773(b) the records specified in 40 CFR 63.774(i).

(xiv) Certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(3) An owner or operator of an area source located inside a UA plus offset and UC boundary shall prepare and submit Periodic Reports in accordance with paragraphs (e)(3)(i) through (iii) of this section.

(i) Periodic reports must be submitted on an annual basis. The first reporting period shall cover the period beginning on the date the Notification of Compliance Status Report is due and ending on December 31. The report shall be submitted within 30 days after the end of the reporting period.

(ii) Subsequent reporting periods begin every January 1 and end on December 31. Subsequent reports shall be submitted within 30 days following the end of the reporting period.

(iii) The periodic reports must contain the information included in paragraph (e)(2) of this section.

(f) Notification of process change. Whenever a process change is made, or a change in any of the information submitted in the Notification of Compliance Status Report, the owner or operator shall submit a report within 180 days after the process change is made or as a part of the next Periodic Report as required under paragraph (e) of this section, whichever is sooner. The report shall include:

(1) A brief description of the process change;

(2) A description of any modification to standard procedures or quality assurance procedures;

(3) Revisions to any of the information reported in the original Notification of Compliance Status Report under paragraph (d) of this section; and

(4) Information required by the Notification of Compliance Status Report under paragraph (d) of this section for changes involving the addition of processes or equipment.

(g) Electronic reporting

(1) Within 60 days after the date of completing each performance test (defined in 40 CFR 63.2) as required by this subpart you must submit the results of the performance tests required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI

and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.
(2) All reports required by this subpart not subject to the requirements in paragraph (g)(1) of this section must be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (g)(1) of this section in paper format.

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40 CFR 63.776 - Implementation and enforcement

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.
(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under Subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.
(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.
(1) Approval of alternatives to the requirements in 40 CFR 63.760, 63.764 through 63.766, 63.769, 63.771, and 63.777.
(2) Approval of major alternatives to test methods under 40 CFR 63.7(e)(2)(ii) and (f), as defined in 40 CFR 63.90, and as required in this subpart.
(3) Approval of major alternatives to monitoring under 40 CFR 63.8(f), as defined in 40 CFR 63.90, and as required in this subpart.
(4) Approval of major alternatives to recordkeeping and reporting under 40 CFR 63.10(f), as defined in 40 CFR 63.90, and as required in this subpart.

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40 CFR 63.777 - Alternative means of emission limitation

(a) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in HAP emissions at least equivalent to the reduction in HAP emissions from that source achieved under the applicable requirements in 40 CFR 63.764 through 63.771, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.
(b) Any notice under paragraph (a) of this section shall be published only after public notice and an opportunity for a hearing.
(c) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information demonstrating that the alternative achieves equivalent emission reductions.

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40 CFR 63.778 - 63.779 - [Reserved]

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Appendix to Subpart HH of Part 63 - Tables

TABLE 1 TO SUBPART HH OF 40 CFR 63 - LIST OF HAZARDOUS AIR POLLUTANTS FOR SUBPART HH

CAS Number[a]	Chemical name

75070	Acetaldehyde
71432	Benzene (includes benzene in gasoline)
75150	Carbon disulfide
463581	Carbonyl sulfide
100414	Ethyl benzene
107211	Ethylene glycol
50000	Formaldehyde
110543	n-Hexane
91203	Naphthalene
108883	Toluene
540841	2,2,4-Trimethylpentane
1330207	Xylenes (isomers and mixture)
95476	o-Xylene
108383	m-Xylene
106423	p-Xylene

[a]CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

TABLE 2 TO SUBPART HH OF 40 CFR 63 - APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART HH

General provisions reference	Applicable to subpart HH	Explanation
40 CFR 63.1(a)(1)	Yes	
40 CFR 63.1(a)(2)	Yes	
40 CFR 63.1(a)(3)	Yes	
40 CFR 63.1(a)(4)	Yes	
40 CFR 63.1(a)(5)	No	Section reserved.
40 CFR 63.1(a)(6)	Yes	

40 CFR 63.1(a)(7) through (a)(9)	No	Section reserved.
40 CFR 63.1(a)(10)	Yes	
40 CFR 63.1(a)(11)	Yes	
40 CFR 63.1(a)(12)	Yes	
40 CFR 63.1(b)(1)	No	Subpart HH specifies applicability.
40 CFR 63.1(b)(2)	No	Section reserved.
40 CFR 63.1(b)(3)	Yes	
40 CFR 63.1(c)(1)	No	Subpart HH specifies applicability.
40 CFR 63.1(c)(2)	Yes	Subpart HH exempts area sources from the requirement to obtain a Title V permit unless otherwise required by law as specified in 40 CFR 63.760(h).
40 CFR 63.1(c)(3) and (c)(4)	No	Section reserved.
40 CFR 63.1(c)(5)	Yes	
40 CFR 63.1(d)	No	Section reserved.
40 CFR 63.1(e)	Yes	
40 CFR 63.2	Yes	Except definition of major source is unique for this source category and there are additional definitions in subpart HH.
40 CFR 63.3(a) through (c)	Yes	
40 CFR 63.4(a)(1) through (a)(2)	Yes	
40 CFR 63.4(a)(3) through	No	Section reserved.

(a)(5)		
40 CFR 63.4(b)	Yes	
40 CFR 63.4(c)	Yes	
40 CFR 63.5(a)(1)	Yes	
40 CFR 63.5(a)(2)	Yes	
40 CFR 63.5(b)(1)	Yes	
40 CFR 63.5(b)(2)	No	Section reserved.
40 CFR 63.5(b)(3)	Yes	
40 CFR 63.5(b)(4)	Yes	
40 CFR 63.5(b)(5)	No	Section Reserved.
40 CFR 63.5(b)(6)	Yes	
40 CFR 63.5(c)	No	Section reserved.
40 CFR 63.5(d)(1)	Yes	
40 CFR 63.5(d)(2)	Yes	
40 CFR 63.5(d)(3)	Yes	
40 CFR 63.5(d)(4)	Yes	
40 CFR 63.5(e)	Yes	
40 CFR 63.5(f)(1)	Yes	
40 CFR 63.5(f)(2)	Yes	
40 CFR 63.6(a)	Yes	
40 CFR 63.6(b)(1)	Yes	
40 CFR 63.6(b)(2)	Yes	
40 CFR 63.6(b)(3)	Yes	
40 CFR 63.6(b)(4)	Yes	
40 CFR 63.6(b)(5)	Yes	

40 CFR 63.6(b)(6)	No	Section reserved.
40 CFR 63.6(b)(7)	Yes	
40 CFR 63.6(c)(1)	Yes	
40 CFR 63.6(c)(2)	Yes	
40 CFR 63.6(c)(3) through (c)(4)	No	Section reserved.
40 CFR 63.6(c)(5)	Yes	
40 CFR 63.6(d)	No	Section reserved.
40 CFR 63.6(e)(1)(i)	No	See 40 CFR 63.764(j) for general duty requirement.
40 CFR 63.6(e)(1)(ii)	No	
40 CFR 63.6(e)(1)(iii)	Yes	
40 CFR 63.6(e)(2)	No	Section reserved.
40 CFR 63.6(e)(3)	No	
40 CFR 63.6(f)(1)	No	
40 CFR 63.6(f)(2)	Yes	
40 CFR 63.6(f)(3)	Yes	
40 CFR 63.6(g)	Yes	
40 CFR 63.6(h)(1)	No	
40 CFR 63.6(h)(2) through (h)(9)	Yes	
40 CFR 63.6(i)(1) through (i)(14)	Yes	
40 CFR 63.6(i)(15)	No	Section reserved.
40 CFR 63.6(i)(16)	Yes	
40 CFR 63.6(j)	Yes	

40 CFR 63.7(a)(1)	Yes	
40 CFR 63.7(a)(2)	Yes	But the performance test results must be submitted within 180 days after the compliance date.
40 CFR 63.7(a)(3)	Yes	
40 CFR 63.7(a)(4)	Yes	
40 CFR 63.7(c)	Yes	
40 CFR 63.7(d)	Yes	
40 CFR 63.7(e)(1)	No	
40 CFR 63.7(e)(2)	Yes	
40 CFR 63.7(e)(3)	Yes	
40 CFR 63.7(e)(4)	Yes	
40 CFR 63.7(f)	Yes	
40 CFR 63.7(g)	Yes	
40 CFR 63.7(h)	Yes	
40 CFR 63.8(a)(1)	Yes	
40 CFR 63.8(a)(2)	Yes	
40 CFR 63.8(a)(3)	No	Section reserved.
40 CFR 63.8(a)(4)	Yes	
40 CFR 63.8(b)(1)	Yes	
40 CFR 63.8(b)(2)	Yes	
40 CFR 63.8(b)(3)	Yes	
40 CFR 63.8(c)(1)	No	
40 CFR 63.8(c)(1)(i)	No	
40 CFR 63.8(c)(1)(ii)	Yes	
40 CFR 63.8(c)(1)(iii)	No	

40 CFR 63.8(c)(2)	Yes	
40 CFR 63.8(c)(3)	Yes	
40 CFR 63.8(c)(4)	Yes	
40 CFR 63.8(c)(4)(i)	No	Subpart HH does not require continuous opacity monitors.
40 CFR 63.8(c)(4)(ii)	Yes	
40 CFR 63.8(c)(5) through (c)(8)	Yes	
40 CFR 63.8(d)(1)	Yes	
40 CFR 63.8(d)(2)	Yes	
40 CFR 63.8(d)(3)	Yes	Except for last sentence, which refers to an SSM plan. SSM plans are not required.
40 CFR 63.8(e)	Yes	Subpart HH does not specifically require continuous emissions monitor performance evaluation, however, the Administrator can request that one be conducted.
40 CFR 63.8(f)(1) through (f)(5)	Yes	
40 CFR 63.8(f)(6)	Yes	
40 CFR 63.8(g)	No	Subpart HH specifies continuous monitoring system data reduction requirements.
40 CFR 63.9(a)	Yes	
40 CFR 63.9(b)(1)	Yes	
40 CFR 63.9(b)(2)	Yes	Existing sources are given 1 year (rather than 120 days) to submit this notification. Major

		and area sources that meet 40 CFR 63.764(e) do not have to submit initial notifications.
40 CFR 63.9(b)(3)	No	Section reserved.
40 CFR 63.9(b)(4)	Yes	
40 CFR 63.9(b)(5)	Yes	
40 CFR 63.9(c)	Yes	
40 CFR 63.9(d)	Yes	
40 CFR 63.9(e)	Yes	
40 CFR 63.9(f)	Yes	
40 CFR 63.9(g)	Yes	
40 CFR 63.9(h)(1) through (h)(3)	Yes	Area sources located outside UA plus offset and UC boundaries are not required to submit notifications of compliance status.
40 CFR 63.9(h)(4)	No	Section reserved.
40 CFR 63.9(h)(5) through (h)(6)	Yes	
40 CFR 63.9(i)	Yes	
40 CFR 63.9(j)	Yes	
40 CFR 63.10(a)	Yes	
40 CFR 63.10(b)(1)	Yes	40 CFR 63.774(b)(1) requires sources to maintain the most recent 12 months of data on-site and allows offsite storage for the remaining 4 years of data.
40 CFR 63.10(b)(2)	Yes	
40 CFR 63.10(b)(2)(i)	No	

40 CFR 63.10(b)(2)(ii)	No	See 40 CFR 63.774(g) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunctions.
40 CFR 63.10(b)(2)(iii)	Yes	
40 CFR 63.10(b)(2)(iv) through (b)(2)(v)	No	
40 CFR 63.10(b)(2)(vi) through (b)(2)(xiv)	Yes	
40 CFR 63.10(b)(3)	Yes	40 CFR 63.774(b)(1) requires sources to maintain the most recent 12 months of data on-site and allows offsite storage for the remaining 4 years of data.
40 CFR 63.10(c)(1)	Yes	
40 CFR 63.10(c)(2) through (c)(4)	No	Sections reserved.
40 CFR 63.10(c)(5) through (c)(8)	Yes	
40 CFR 63.10(c)(9)	No	Section reserved.
40 CFR 63.10(c)(10) through (11)	No	See 40 CFR 63.774(g) for recordkeeping of malfunctions.
40 CFR 63.10(c)(12) through (14)	Yes	
40 CFR 63.10(c)(15)	No	
40 CFR 63.10(d)(1)	Yes	
40 CFR 63.10(d)(2)	Yes	Area sources located outside UA plus offset and UC boundaries do not have to submit performance test reports.
40 CFR 63.10(d)(3)	Yes	

40 CFR 63.10(d)(4)	Yes	
40 CFR 63.10(d)(5)	No	See 40 CFR 63.775(b)(6) or (c)(6) for reporting of malfunctions.
40 CFR 63.10(e)(1)	Yes	Area sources located outside UA plus offset and UC boundaries are not required to submit reports.
40 CFR 63.10(e)(2)	Yes	Area sources located outside UA plus offset and UC boundaries are not required to submit reports.
40 CFR 63.10(e)(3)(i)	Yes	Subpart HH requires major sources to submit Periodic Reports semi-annually. Area sources are required to submit Periodic Reports annually. Area sources located outside UA plus offset and UC boundaries are not required to submit reports.
40 CFR 63.10(e)(3)(i)(A)	Yes	
40 CFR 63.10(e)(3)(i)(B)	Yes	
40 CFR 63.10(e)(3)(i)(C)	No	
40 CFR 63.10(e)(3)(i)(D)	Yes	Section reserved.
40 CFR 63.10(e)(3)(ii) through (viii)	Yes	
40 CFR 63.10(e)(4)	Yes	
40 CFR 63.10(f)	Yes	
40 CFR 63.11(a) and (b)	Yes	
40 CFR 63.11(c), (d), and (e)	Yes	

40 CFR 63.12(a) through (c)	Yes	
40 CFR 63.13(a) through (c)	Yes	
40 CFR 63.14(a) through (q)	Yes	
40 CFR 63.15(a) and (b)	Yes	
40 CFR 63.16	Yes	