TITLE 45
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY

DRAFT SERIES 45
STANDARDS OF PERFORMANCE FOR EXISTING CRUDE OIL AND NATURAL GAS FACILITIES

§45-45-1. General.

1.1. Scope. --

1.1.1. This rule establishes emission standards, compliance schedules, testing, monitoring, recordkeeping, and reporting requirements, and implements the federal emission guidelines and compliance times pursuant to 40CFR60, subpart OOOOc, *Emissions Guidelines for Greenhouse Gas Emissions from Existing Crude Oil and Natural Gas Facilities,* and § 111(d) of the federal Clean Air Act to control methane emissions from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022. The designated facilities are listed in paragraphs 1.1.1.a through 1.1.1.i. and Table 45-45A and defined in §45-45-4.

1.1.1.a. Wells.

1.1.1.b. Centrifugal compressors.

1.1.1.c. Reciprocating compressors.

1.1.1.d. Process controllers.

1.1.1.e. Pumps.

1.1.1.f. Storage vessels.

1.1.1.g. Fugitive emissions components.

1.1.1.h. Super emitter events.

1.1.1.i. Process unit equipment.

1.1.2. This rule adopts test methods and performance testing, initial compliance requirements, continuous compliance requirements, recordkeeping requirements, reporting requirements, and definitions to implement the standards of performance. The Secretary hereby adopts these by reference, including any associated reference methods, performance specifications and other test methods which are appended to requirements.

1.1.3. This rule specifies the requirements by which remaining useful life and other factors (RULOF) standards may supersede the federal standards of performance and or compliance times provided in the model rule provisions of the emissions guidelines.

1.1.4. This rule does not include any well closure requirements regulated or administered by the West Virginia Department of Environmental Protection, Office of Oil and Gas.

1.2. Authority. -- W. Va. Code § 22-5-4.

1.3. Filing Date. --

1.4. Effective Date. --

1.5. Sunset Provision. -- Does not apply.

1.6. Incorporation by reference. -- federal counterpart regulation. The Secretary has determined that a federal counterpart rule exists, and in accordance with the Secretary's recommendation, with limited exception, this rule incorporates by reference the sections of 40CFR60, Subpart OOOOc, effective June 1, 2025, identified in subsection 3.1.

§45-45-2. Definitions.

2.1. "Access to electrical power" means commercial line power is available onsite, with sufficient capacity to support the required power loading of onsite equipment, and which provides reliable and consistent power.

2.2. "Administrator" means the Administrator of the United States Environmental Protection Agency or his or her authorized representative.

2.3. "Associated gas" means the natural gas from wells operated primarily for oil production that is released from the liquid hydrocarbon during the initial stage of separation after the wellhead. Associated gas production begins at the startup of production after the flow back period ends. Gas from wildcat or delineation wells is not associated gas.

2.4. "Centralized production facility" means 1 or more storage vessels and all equipment at a single surface site used to gather, for the purpose of sale or processing to sell, crude oil, condensate, produced water, or intermediate hydrocarbon liquid from one or more offsite natural gas or oil production wells. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline. Process vessels and process tanks are not considered storage vessels or storage tanks. A centralized production facility is located upstream of the natural gas processing plant or the crude oil pipeline breakout station and is a part of producing operations.

2.5. "Centrifugal compressor" means any machine for raising the pressure of a natural gas by drawing in low pressure natural gas and discharging significantly higher-pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors for the purposes of 45CSR45.

2.6. "Certifying official" means one of the following:

2.6.1. 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 with a designated facility subject to this rule and either:

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

2.6.1.b. The Administrator is notified of such delegation of authority prior to the exercise of that authority. The Administrator reserves the right to evaluate such delegation;

2.6.2. For a partnership (including but not limited to general partnerships, limited partnerships, and limited liability partnerships) or sole proprietorship: a general partner or the proprietor, respectively. If a general partner is a corporation, the provisions of subdivision 2.6.1 apply;

2.6.3. For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of 45CSR45, 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

2.6.4. For designated facilities:

2.6.4.a. The designated representative in so far as actions, standards, requirements, or prohibitions under title IV of the CAA or the regulations promulgated thereunder are concerned; or

2.6.4.b. The designated representative for any other purposes under this rule.

2.7. "Clean Air Act" ("CAA") means the federal Clean Air Act, as amended, 42 U.S.C. § 7401, et seq.

2.8. "Completion combustion device" means any ignition device, installed horizontally or vertically, used in exploration and production operations to combust otherwise vented emissions from completions. Completion combustion devices include pit flares.

2.9. "Compressor station" means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering or transmission pipelines, or into or out of storage. This includes, but is not limited to, gathering and boosting stations and transmission compressor stations. The combination of one or more compressors located at a well site, centralized production facility, or an onshore natural gas processing plant, is not a compressor station for purposes of 40 CFR §§ 60.5386c(e) and 60.5397c.

2.10. "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.

2.11. "Crude oil and natural gas source category" means:

2.11.1. Crude oil production, which includes the well and extends to the point of custody transfer to the crude oil transmission pipeline or any other forms of transportation; and

2.11.2. Natural gas production, processing, transmission, and storage, which include the well and extend to, but do not include, the local distribution company custody transfer station.

2.12. "Deviation" means any instance in which a designated source subject to this subpart, or an owner or operator of such a source:

2.12.1. Fails to meet any requirement or obligation established by this rule including, but not limited to, any emission limit, operating limit, or work practice standard;

2.12.2. Fails to meet any term or condition that is adopted to implement an applicable requirement in this rule and that is included in the operating permit for any designated source required to obtain such a permit; or

2.12.3. Fails to meet any emission limit, operating limit, or work practice standard of 45CSR45 during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this rule.

2.13. "Equipment", as used in the standards and requirements of 45CSR45 relative to the process unit equipment designated facility at onshore natural gas processing plants, means each pump, pressure relief device, open-ended valve or line, valve, and flange or other connector that has the potential to emit methane and any device or system required by those same standards and requirements of 45CSR45.

2.14. "Flare" means a thermal oxidation system using an open (without enclosure) flame. Completion combustion devices as defined in this section are not considered flares.

2.15. "Fugitive emissions" means, for the purposes of section 15 and 40CFR §60.5397c, any indication of emissions observed from a fugitive emissions component using AVO, an indication of visible emissions observed from an OGI instrument, or an instrument reading of 500 ppmv or greater using Method 21 of appendix A-7 to 40 CFR 60.

2.16. "Fugitive emissions component" means any component that has the potential to emit fugitive emissions of methane at a well site, centralized production facility, or compressor station, such as valves (including separator dump valves), connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to section 23 and 40CFR § 60.5411c, thief hatches or other openings on a storage vessel not subject to section 14 and 40CFR § 60.5396c, compressors, instruments, meters, and yard piping.

2.17. "Liquids unloading" means the unloading of liquids that have accumulated over time in gas wells, which are impeding or halting production. Routine well maintenance activities, including workovers, screenouts, coil tubing cleanouts, or any other activity that requires a rig or other machinery are not considered liquids unloading.

2.18. "Major production and processing equipment" means reciprocating or centrifugal compressors, glycol dehydrators, heater/treaters, separators, control devices, natural gas-driven process controllers, natural gas-driven pumps, and storage vessels or tank batteries collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water, for the purpose of determining whether a well site is a wellhead only well site.

2.19. "Marginal well site" means a well site where the total production of the well site is at or below 15 barrels of oil equivalent (boe) per day based on a rolling 12 month average. To convert natural gas production to barrels of oil equivalent, divide the cubic feet of natural gas produced by 6,000. (85 Fed. Reg. 57441, September 15, 2020).

2.20. "Maximum average daily throughput" means the following:

2.20.1. The earliest calculation of daily average throughput, determined as described in subdivision 2.20.2 or 2.20.3, to a tank battery over the days that production is routed to that tank battery during the 30-day PTE evaluation period employing generally accepted methods specified in section 4.1.5.b and § 60.5386c(e)(2).

2.20.2. If throughput to the tank battery is measured on a daily basis (e.g., via level gauge automation or daily manual gauging), the maximum average daily throughput is the average of all daily throughputs for days on which throughput was routed to the tank battery during the 30-day evaluation period; or

2.20.3. If throughput to the tank battery is not measured on a daily basis (e.g., via manual gauging at the start and end of loadouts), the maximum average daily throughput is the highest, of the average daily throughputs, determined for any production period to that tank battery during the 30-day evaluation period, as determined by averaging total throughput to that tank battery over each production period. A production period begins when production begins to be routed to a tank battery and ends either when throughput is routed away from that tank battery or when a loadout occurs from that tank battery, whichever happens

first. Regardless of the determination methodology, operators must not include days during which throughput is not routed to the tank battery when calculating maximum average daily throughput for that tank battery.

2.21. "Multi-wellhead only well site" means a well site that contains 2 or more wellheads and no major production and processing equipment.

2.22. "Natural gas-driven diaphragm pump" means a positive displacement pump powered by pressurized natural gas that uses the reciprocating action of flexible diaphragms in conjunction with check valves to pump a fluid. A pump in which a fluid is displaced by a piston driven by a diaphragm is not considered a diaphragm pump for purposes of 45CSR45. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a diaphragm pump.

2.23. "Natural gas-driven piston pump" means a positive displacement pump powered by pressurized natural gas that moves and pressurizes fluid by using one or more reciprocating pistons. A pump in which a fluid is displaced by a piston driven by a diaphragm is considered a piston pump for purposes of 45CSR45. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a piston pump.

2.24. "Natural gas-driven process controller" means a process controller powered by pressurized natural gas.

2.25. "Natural gas liquids" means the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

2.26. "Natural gas processing plant (gas plant)" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A Joule- Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not a natural gas processing plant.

2.27. "No detectable emissions" means for the purposes of section 18 and 21 and 40CFR §§ 60.5401c and 60.5406c, that the equipment is operating with an instrument reading of less than 500 ppmv above background, as determined by Method 21 of appendix A-7 to 40CFR part 60.

2.28. "No identifiable emissions" means, for the purposes of covers, closed vent systems, and self-contained natural gas-driven process controllers and as determined according to the provisions of section 27 and 40CFR § 60.5416c, that no emissions are detected by AVO means when inspections are conducted by AVO; no emissions are imaged with an OGI camera when inspections are conducted with OGI; and equipment is operating with an instrument reading of less than 500 ppmv above background, as determined by Method 21 of appendix A-7 to 40CFR part 60 when inspections are conducted with Method 21.

2.29. "Process controller" means an automated instrument used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature.

2.30. "Process unit" means components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the products.

2.31. "Process unit shutdown" means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered process unit shutdowns:

2.31.1. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.

2.31.2. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.

2.31.3. The use of spare equipment and technically feasible bypassing of equipment without stopping production.

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

2.33. "Removed from service" means that a storage vessel designated facility has been physically isolated and disconnected from the process for a purpose other than maintenance in accordance with subsection 14.3 and 40CFR §60.5396c(c)(1).

2.34. "Repaired" means the following:

2.34.1. For the purposes of fugitive emissions components designated facilities, that fugitive emissions components are adjusted, replaced, or otherwise altered, in order to eliminate fugitive emissions as defined in section 15 and 40CFR § 60.5397c and resurveyed as specified in subdivision 15.8.4 and 40CFR § 60.5397c(h)(4) and it is verified that emissions from the fugitive emissions components are below the applicable fugitive emissions definition.

2.34.2. For the purposes of process unit equipment designated facilities, that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in section 17 and 18 and 40CFR §§ 60.5400c and 60.5401c and is re- monitored as specified in section 17.2 and 40CFR § 60.5400c(b) introductory text or section 21 and 40CFR § 60.5406c, respectively, to verify that emissions from the equipment are below the applicable leak definition. Pumps in light liquid service subject to subdivision 17.3.2 and 40CFR § 60.5400c(c)(2) or paragraph 18.2.1.b and 40CFR § 60.5401c(b)(1)(ii) are not subject to re-monitoring.

2.35. "Returned to service" means that a storage vessel designated facility that was removed from service has been:

2.35.1. Reconnected to the original source of liquids or has been used to replace any storage vessel designated facility; or

2.35.2. Installed in any location covered by this subpart and introduced with crude oil, condensate, intermediate hydrocarbon liquids or produced water.

2.36. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8.

2.37. "Single wellhead only well site" means a wellhead only well site that contains only one wellhead and no major production and processing equipment.

2.38. "Small well site" means, for purposes of the fugitive emissions standards in sections 15 and 16 and 40CFR §§ 60.5397c and 60.5398c, a well site that contains a single wellhead, no more than one piece of certain major production and processing equipment, and associated meters and yard piping. Small well sites cannot include any controlled storage vessels (or controlled tank batteries), control devices, or natural gas-driven process controllers, or natural gas-driven pumps.

2.39. "Startup of production" means the beginning of initial flow following the end of flowback when there is continuous recovery of salable quality gas and separation and recovery of any crude oil, condensate, or produced water, except as otherwise provided in this definition. For the purposes of the fugitive monitoring requirements of section 15 and 40CFR § 60.5397c, startup of production means the beginning of the continuous recovery of salable quality gas and separation and recovery of any crude oil, condensate, or produced water.

2.40. "Storage vessel" means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after startup of production following flowback for a period which exceeds 60 days is considered a storage vessel under this subpart. A tank or other vessel shall not be considered a storage vessel if it has been removed from service in accordance with the requirements of subdivision 14.3.1 and 40CFR § 60.5396c(c)(1) until such time as such tank or other vessel has been returned to service. For the purposes of 45CSR45, the following are not considered storage vessels:

2.40.1. Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. If you do not keep or are not able to produce records, as required by section 29 and 40CFR § 60.5420c(c)(6)(v), showing that the vessel has been located at a site for less than 180 consecutive days, the vessel described herein is considered to be a storage vessel from the date the original vessel was first located at the site. This exclusion does not apply to a well completion vessel as described above.

2.40.2. Process vessels such as surge control vessels, bottoms receivers or knockout vessels.

2.40.3. Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

2.41. "Super Emitter Events" means any emissions event that is located at an oil and natural gas facility (e.g., individual well site, centralized production facility, natural gas processing plant, or compressor station) and that is detected using remote detection methods and has a quantified emission rate of 100 kg/hr of methane or greater.

2.42. "Tank battery" means a group of all storage vessels that are manifolded together for liquid transfer. A tank battery may consist of a single storage vessel if only one storage vessel is present.

2.43. "Well" means a hole drilled for the purpose of producing oil or natural gas, or a well into which fluids are injected.

2.44. "Well site" means one or more surface sites that are constructed for the drilling and subsequent operation of any oil well, natural gas well, or injection well. For the purposes of the fugitive emissions standards at section 15 and 40CFR § 60.5397c, a well site does not include:

2.44.1. UIC Class II oilfield disposal wells and disposal facilities;

2.44.2. UIC Class I oilfield disposal wells; and

2.44.3. The flange immediately upstream of the custody meter assembly and equipment, including fugitive emissions components, located downstream of this flange.

2.45. "Wellhead" means the piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead

valve. The wellhead does not include other equipment at the well site except for any conveyance through which gas is vented to the atmosphere.

2.46. "Wellhead only well site" means, for the purposes of the fugitive emissions standards at section 15 and 40CFR § 60.5397c and the standards in section 16 and 40CFR § 60.5398c, a well site that contains one or more wellheads and no major production and processing equipment.

2.47. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in 40 CFR § 60.5430c and 40 CFR part 60, subparts A, Ba, or OOOOc. Words and phrases not defined therein shall have the meaning given to them in the federal Clean Air Act.

§45-45-3. Adoption of standards.

3.1. The Secretary hereby adopts and incorporates by reference the following sections of 40CFR60, subpart OOOOc, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025, for the purposes of implementing a program for standards of performance for existing designated facilities within the crude oil and natural gas source category as defined in section 2 that commenced construction, modification, or reconstruction on or before December 6, 2022 and meet the applicability requirements of section 4:

3.1.1. § 60.5405c;

3.1.2. § 60.5406c;

3.1.3. § 60.5410c;

3.1.4. § 60.5411c;

3.1.5. § 60.5412c;

3.1.6. § 60.5413c;

3.1.7. § 60.5415c;

3.1.8. § 60.5416c;

3.1.9. § 60.5417c;

3.1.10. § 60.5420c

3.1.11. § 60.5421c;

3.1.12. § 60.5422c;

3.1.13. § 60.5424c;

3.1.14. § 60.5425c; and

3.1.15. § 60.5430c.

§45-45-4. Applicability.

4.1. Owners or operators of designated facilities within the crude oil and natural gas source category as defined in section 2 that commenced construction, modification, or reconstruction on or before December

6, 2022, and are listed in subdivisions 4.1.1 through 4.1.8 and Table 45-45A are subject to and shall comply with the applicable requirements of 45CSR45.

4.1.1. Each well designated facility, which is a single well drilled for the purpose of producing oil or natural gas.

4.1.2. Each centrifugal compressor designated facility, which is a single centrifugal compressor.

4.1.2.a. A centrifugal compressor located at a well site is not a designated facility.

4.1.2.b. A centrifugal compressor located at a centralized production facility is a designated facility.

4.1.3. Each reciprocating compressor designated facility, which is a single reciprocating compressor.

4.1.3.a. A reciprocating compressor located at a well site is not a designated facility.

4.1.3.b. A reciprocating compressor located at a centralized production facility is a designated facility.

4.1.4. Each process controller designated facility, which is the collection of natural gas-driven process controllers at a well site, centralized production facility, onshore natural gas processing plant, or a compressor station.

4.1.4.a. Natural gas-driven process controllers that function as emergency shutdown devices are exempt from the designated facility.

4.1.4.b. Process controllers that are not driven by natural gas are exempt from the designated facility.

4.1.5. Storage vessel designated facility.

4.1.5.a. Each storage vessel designated facility, which is a tank battery that has the potential for methane emissions equal to or greater than 20 tpy as specified in paragraph 4.1.5.b. A tank battery with the potential for methane emissions below 20 tpy is not a storage vessel designated facility provided the owner or operator keeps records of the potential for emissions calculation for the life of the storage vessel or until such time the tank battery becomes a storage vessel designated facility because the potential for methane emissions meets or exceeds 20 tpy.

4.1.5.b. The owner or operator shall calculate the potential for methane emissions as the cumulative emissions from all storage vessels within the tank battery as specified by the applicable requirements in subparagraphs 4.1.5.b.1 through 4.1.5.b.3. When making the determination, the owner or operator may consider requirements under a legally and practicably enforceable limit in a permit issued to the owner or operator under 45CSR13, 45CSR14, 45CSR19, 45CSR30, or other requirements established under federal or state authority.

4.1.5.b.1. For purposes of determining the applicability of a storage vessel tank battery as a designated facility, a legally and practicably enforceable limit shall include the elements provided in parts 4.1.5.b.1.A through 4.1.5.b.1.F:

4.1.5.b.1.A. A quantitative production limit and quantitative operational limit(s) for the equipment, or quantitative operational limits for the equipment;

4.1.5.b.1.B. An averaging time period for the production limit in part 4.1.5.b.1.A that is equal to or less than 30 days if the limit is a production-based limit;

4.1.5.b.1.C. Parametric limits established for the production and/or operational limit(s) in part 4.1.5.b.1.A and an initial compliance demonstration (i.e., performance test) for the control device that establishes the parametric limits when a control device is used to achieve an operational limit;

4.1.5.b.1.D. Ongoing monitoring of the parametric limits in 4.1.5.b.1.C that demonstrates continuous compliance with the production and/or operational limit(s) in 4.1.5.b.1.A;

4.1.5.b.1.E. Recordkeeping by the owner or operator that demonstrates continuous compliance with the limit(s) in parts 4.1.5.b.1.A through 4.1.5.b.1.D; and

4.1.5.b.1.F. Periodic reporting to the Secretary and Administrator, as required, that demonstrates continuous compliance.

4.1.5.b.2. For each tank battery located at a well site or centralized production facility, the owner or operator shall determine the potential for methane emissions within 60 days after the effective date of the approved state plan, except as provided in paragraph 4.1.5.d. The potential for methane emissions shall be calculated using a generally accepted model or calculation methodology that accounts for flashing, working, and breathing losses, based on the maximum average daily throughput to the tank battery determined for a 30-day period of production.

4.1.5.b.3. For each tank battery not located at a well site or centralized production facility, including each tank battery located at a compressor station or onshore natural gas processing plant, the owner or operator shall determine the potential for methane emissions within 60 days after the effective date of the approved state plan, using either the method described in part 4.1.5.b.3.A or 4.1.5.b.3.B.

4.1.5.b.3.A. Determine the potential for methane emissions using a generally accepted model or calculation methodology that accounts for flashing, working, and breathing losses, and based on the throughput to the tank battery established in a legally and practicably enforceable limit provided in a permit issued to the owner or operator under 45CSR13, 45CSR14, 45CSR19, 45CSR30, or other requirements established under federal or state authority; or

4.1.5.b.3.B. Determine the potential for methane emissions using a generally accepted model or calculation methodology that accounts for flashing, working and breathing losses, based on projected maximum average daily throughput. Maximum average daily throughput shall be determined using a generally accepted engineering model (e.g., volumetric condensate rates from the tank battery based on the maximum gas throughput capacity of each producing facility) to project the maximum average daily throughput for the tank battery.

4.1.5.c. If an owner or operator has a storage vessel designated facility that subsequently has its potential for methane emissions decrease to less than 20 tpy, the storage vessel designated facility shall remain a designated facility under this rule.

4.1.5.d. If an owner or operator has storage vessels not subject to a legally and practicably enforceable limit in a permit issued to the owner or operator under 45CSR13, 45CSR14, 45CSR19, 45CSR30, or other requirements established under federal or state authority, any vapor from the storage vessel that is recovered and routed to a process through a vapor recovery unit designed and operated as specified in subsection 4.1 is not required to be included in the determination of potential for methane emissions for purposes of determining designated facility status, provided the owner or operator complies with the requirements of subparagraphs 4.1.5.d.1 through 4.1.5.d.4.

4.1.5.d.1. The owner or operator meets the cover requirements specified in section 23 and 40CFR § 60.5411c(b).

4.1.5.d.2. The owner or operator meets the closed vent system requirements specified in section 23 and 40CFR §§ 60.5411c(a)(2) through (4) and (c).

4.1.5.d.3. The owner or operator maintains records that documents compliance with subparagraphs 4.1.5.d.1 and 4.1.5.d.2.

4.1.d.4. If the apparatus that recovers and routes vapor to a process is removed, or if operation is inconsistent with the conditions specified in subparagraphs 4.1.5.d.1 and 4.1.5.d.2, the owner or operator shall determine the storage vessel's potential for methane emissions according to subsection 4.1 within 30 days of such removal or operation.

4.1.5.e. The requirements specified in subparagraphs 4.1.5.e.1 and 4.1.5.e.2 apply to each storage vessel designated facility immediately upon return to service.

4.1.5.e.1. A storage vessel designated facility or portion of a storage vessel designated facility that is reconnected to the original source of liquids remains a storage vessel designated facility subject to the same requirements that applied before being removed from service.

4.1.5.e.2. Any storage vessel that is used to replace a storage vessel designated facility or a portion of a storage vessel designated facility, or used to expand a storage vessel designated facility assumes the designated facility status of the storage vessel designated facility being replaced or expanded.

4.1.5.f. A storage vessel with a capacity greater than 100,000 gallons used to recycle water that has passed through two stage separation is not a storage vessel designated facility.

4.1.6. Each process unit equipment designated facility, which is the group of all equipment within a process unit at an onshore natural gas processing plant is a designated facility.

4.1.6.a. Equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system, or liquefied natural gas unit is covered by sections 17, 18, 19, 30, and 31 and 40CFR §§ 60.5400c, 60.5401c, 60.5402c, 60.5421c, and 60.5422c if it is located at an onshore natural gas processing plant.

4.1.6.b. Equipment not located at the onshore natural gas processing plant site is exempt from the provisions of sections 17, 18, 19, 30, and 31 and 40CFR §§ 60.5400c, 60.5401c, 60.5402c, 60.5421c, and 60.5422c.

4.1.7. Each pump designated facility, which is the collection of natural gas-driven diaphragm and piston pumps at a well site, centralized production facility, onshore natural gas processing plant, or a compressor station. Pumps that are not driven by natural gas and that are not in operation 90 days or more per calendar year are not included in the pump designated facility.

4.1.8. Each fugitive emissions components designated facility, which is the collection of fugitive emissions components at a well site, centralized production facility, or a compressor station.

4.2. Facilities exempt under 40CFR § 60.14(e) are not designated facilities.

4.3. If an owner or operator of a designated facility makes changes to the facility that meets the definition of a modification after December 6, 2022, the designated facility becomes subject to 40CFR60, subpart OOOOb and 45CSR16.

4.4. If an owner or operator of a designated facility makes physical or operational changes to a designated facility for which construction commenced on or before September 9, 2024, primarily to comply with the emission guidelines provided in 40CFR60, subpart OOOOc, those changes do not qualify as a modification and the facility is not subject to 40CFR60, subpart OOOOb and 45CSR16.

4.5. Owners or operators of facilities located inside and including the Local Distribution Company (LDC) custody transfer station are not subject to this rule.

4.6. The following Prevention of Significant Deterioration (PSD) and Title V thresholds for Greenhouse Gases apply:

4.6.1. For the purposes of PSD definitions under 40CFR § 51.166(b)(49)(ii) and §45CSR14-2.66.b, with respect to GHG emissions from designated facilities, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered the pollutant that otherwise is subject to regulation under the Act as defined in 40CFR § 51.166(b)(48) and §45CSR14-2.80.

4.6.2. For the purposes of Title V definitions under 40CFR § 70.2 and §45CSR30-2, with respect to GHG emissions from designated facilities, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered the pollutant that otherwise is "subject to regulation" as defined in 40CFR § 70.2 and §45CSR30-2.

4.7. Exemption. Owners of operators of designated facilities are exempt from the obligation to obtain a permit under 40CFR part 70 and 45CSR30, provided you are not otherwise required by law to obtain a permit under 40CFR § 70.3(a) and §45CSR30-3.1. Owners or operators that are exempt from the obligation to obtain a Title V permit shall comply with the provisions of 45CSR45.

§45-45-5. Increments of progress and compliance schedules.

5.1. Compliance deadline. Each owner or operator of a designated facility shall comply with the applicable requirements of 45CSR45 and achieve final compliance by March 9, 2029, unless a Remaining Useful Life and Other Factors demonstration submitted and accepted in accordance with section 6 allows for a later deadline.

5.2. Legally enforceable increments of progress for each designated facility or category of facilities. Each owner or operator of a designated facility shall comply with the requirements of subsections 5.3 through 5.5.

5.3. The owner or operator of a designated facility shall comply with the requirements in subdivisions 5.3.1 and 5.3.2.

5.3.1. The owner or operator shall submit a final compliance control plan on or before 28 months after the state plan submittal deadline of March 9, 2026 (July 9, 2028) unless a Remaining Useful Life and Other Factors demonstration submitted and accepted in accordance with section 6 allows for a later deadline.

5.3.2. The owner or operator shall submit the Notification of Compliance report as specified in section 29 and 40CFR §60.5420c on or before 60 days after the state plan compliance date of March 9, 2029 unless a Remaining Useful Life and Other Factors demonstration submitted and accepted in accordance with section 6 allows for a later deadline.

5.4. If the owner or operator fails to meet the final compliance control plan increment of progress report compliance date, the owner or operator shall submit a notification to the Secretary postmarked or emailed within 10 business days after the required submittal date for that increment of progress informing the

Secretary that you did not meet the increment. The owner or operator shall continue to submit a report each subsequent calendar month until the increment of progress is met.

5.5. Final compliance control plan. The owner or operator shall meet the requirements in subdivisions 5.5.1 through 5.5.3 to comply with the increment of progress report for the final compliance control plan.

5.5.1. The final control plan shall include the following information:

5.5.1.a. A description of the designated facilities covered under the control plan; and

5.5.1.b. The emissions control methods planned to be implemented for each designated facility covered under the control plan.

5.5.2. The owner or operator may submit one control plan that covers all of the owner's or operator's designated facilities in the state in lieu of submitting a separate control plan for each designated facility.

5.5.3. The owner or operator shall maintain a copy of the final control plan onsite.

§45-45-6. Applying for a less stringent standard based on Remaining Useful Life and Other Factors (RULOF).

6.1. An owner or operator may apply for a standard of performance that is less stringent or that has a longer compliance schedule than specified by 40CFR 60, subpart OOOOc for a designated facility or class of designated facilities, provided the less stringent standard or longer compliance schedule is identified in 45CSR45 and the owner or operator satisfies the requirements specified in subsections 6.2 through 6.5.

6.2 The bases for obtaining a standard of performance that is less stringent or has a longer compliance schedule than specified by 40CFR 60, subpart OOOOc are provided in subdivisions 6.2.1 and 6.2.2.

6.2.1. For a designated facility or class of designated facilities, the owner or operator may request a less stringent standard of performance or a compliance schedule longer than specified by 40CFR 60, subpart OOOOc. The request shall demonstrate to the Secretary with respect to each such facility or class of such facilities that the degree of emission limitation determined by the US EPA cannot reasonably be achieved based on:

6.2.1.a. Unreasonable cost of control resulting from plant age, location, or basic process design;

6.2.1.b. Physical impossibility or technical infeasibility of installing necessary control equipment; or

6.2.1.c. Other circumstances specific to the facility.

6.2.2. For the purpose of 6.2, the owner or operator shall demonstrate to the Secretary that there are fundamental differences between the information specific to a facility or class of facilities and the information the US EPA considered in determining the degree of emission limitation achievable through application of the best system of emission reduction or the compliance schedule that make achieving such degree of emission limitation or meeting such compliance schedule unreasonable for that facility.

6.3. If the owner or operator makes the required demonstration to the Secretary in accordance with subsection 6.2 and the Secretary concurs with the recommendation, then, for the facility or class of facilities involved in the demonstration, the owner or operator may comply with a standard of performance or a

compliance schedule that is less stringent than required by an applicable emission guideline in 40CFR 60, subpart OOOOc.

6.3.1. The standard of performance applied under subsection 6.3 shall be no less stringent or have a compliance schedule no longer than is necessary to address the fundamental differences identified under subsection 6.2.

6.3.1a. To the extent necessary to determine a standard of performance satisfying that criteria, the owner or operator shall evaluate the systems of emission reduction identified in the applicable emission guideline in 40CFR 60, subpart OOOOc using the factors and evaluation metrics the US EPA considered in assessing those systems, including technical feasibility, the amount of emission reductions, the cost of achieving such reductions, any non-air quality health and environmental impacts, and energy requirements.

6.3.1.b. The owner or operator may also consider, as justified, other factors specific to the facility or class of facilities that were the basis of the demonstration under subsection 6.2 and other systems of emission reduction in addition to those the US EPA considered in the applicable emission guideline in 40CFR 60, subpart OOOOc.

6.3.2. Any standard of performance established in accordance with subdivision 6.3.1 shall be in the form required by 40CFR 60, subpart OOOOc.

6.4. Any standard of performance established by the Secretary in accordance with the RULOF requirements of section 6 based on an operating condition(s) within the owner or operator's control (such as remaining useful life or restricted capacity) shall be included as an enforceable requirement in an air quality permit issued pursuant to 45CSR13, 45CSR14, 45CSR19, 45CSR30 or in a Compliance Order issued by the Secretary. The RULOF standard shall include enforceable implementation requirements including monitoring, recordkeeping, and reporting requirements.

6.5. Any owner or operator with a less stringent standard of performance shall comply with all other applicable requirements of 45CSR45.

§45-45-7. Standards for Super-Emitter Events.

7.1. Super-emitter events. The owner or operator shall comply with the requirements listed in subsections 7.2 and 7.3 upon receiving notification of a super-emitter event issued by the U.S. EPA under 40CFR60, subpart OOOOb § 60.5371b(c).

7.2. Super-emitter event investigation. The owner or operator of an oil and natural gas facility (e.g., a well site, centralized production facility, natural gas processing plant, or compressor station) shall initiate a super-emitter event investigation within 5 calendar days of receiving a notification from the U.S. EPA of a super-emitter event.

7.2.1. If an owner or operator of an oil and natural gas facility receives notification of a super-emitter event from the U.S. EPA and does not own or operate an oil and natural gas facility within 50 meters of the latitude and longitude provided in the notification, the owner or operator shall report this information as a result to the U.S. EPA as specified in subsection 7.3. After the information is reported, the super-emitter event investigation is deemed completed.

7.2.2 If an owner or operator of an oil and natural gas facility receives notification of a super-emitter event from the U.S. EPA and owns or operates an oil and natural gas facility located within 50 meters of the latitude and longitude provided in the notification and which has a designated facility or associated equipment subject to 45CSR45 onsite, the owner or operator shall investigate to determine the source of the super-emitter event in accordance with this subsection 7.2 and shall report the result(s) in

accordance with subsection 7.3. The investigation may include and is not limited to the actions specified in paragraphs 7.2.2.a through 7.2.2.e.

7.2.2.a. The owner or operator shall review all maintenance activities (e.g., liquids unloading) and process activities from the designated facilities subject to 45CSR45 starting from the date of detection of the super-emitter event, as identified in the super-emitter event notification provided by the U.S. EPA, until the date of investigation to determine if the activities indicate any potential source(s) of the super-emitter event emissions.

7.2.2.b. The owner or operator shall review all monitoring data from emission control devices (e.g., flares) from designated facilities subject to 45CSR45 from the initial date of detection of the super-emitter event, as identified in the super-emitter event notification provided by the U.S. EPA, until the date the notification was received by the owner or operator. The owner or operator shall review the monitoring data to identify any malfunction of the emission control devices or periods when the emission control devices were not in compliance with applicable requirements that may indicate a potential source of the super-emitter event emissions.

7.2.2.c. If a fugitive emissions survey or periodic screening event was conducted in accordance with section 15 or subsection 16.2 between the initial date of detection of the super-emitter event, as identified in the super-emitter event notification provided by the U.S. EPA, and the date the notification was received by the owner or operator, the owner or operator shall review the results of that survey or periodic screening to identify any potential source(s) of the super-emitter event emissions.

7.2.2.d. If continuous monitoring with advanced methane detection technology in accordance with subsection 16.3 is conducted for the designated facilities and equipment, the owner or operator shall review the monitoring data collected on or after the initial date of detection of the super-emitter event, as identified in the super-emitter event notification provided by the U.S. EPA, until the date the notification was received by the owner or operator.

7.2.2.e. If the designated facility is a well site, centralized production facility, or compressor station, the owner or operator shall screen the entirety of the well site, centralized production facility, or compressor station with OGI, Method 21 of Appendix A-7 to 40CFR60, or an alternative test method(s) approved per 40CFR § 60.5398c(d), to determine if a super-emitter event is present.

7.2.3. If the source of the super-emitter event was found to be from fugitive emission components at a well site, centralized production facility, or compressor station subject to 45CSR45, the owner or operator shall comply with the repair requirements under section 15 and the associated recordkeeping and reporting requirements under section 29 and 40CFR §§ 60.5420c(b)(8) and 60.5420c(c)(13).

7.3. Super-emitter event report. The owner or operator of an oil and natural gas facility who has received a super-emitter event notification from the U.S. EPA shall submit to the U.S. EPA a report of the result of the super-emitter event investigation conducted per subsection 7.2. The submission shall be made in accordance with subdivision 7.3.1. If during an investigation required by subsection 7.2, the owner or operator finds the super-emitter event (i.e., emission at 100 kg/hr of methane or more) to be ongoing at the time of the initial report to the U.S. EPA, the owner or operator shall submit additional information in accordance with subdivision 7.3.2. The owner or operator shall attest to the information included in the report as specified in subdivision 7.3.3.

7.3.1. Within 15 days of receiving notification of a super-emitter event from the U.S. EPA under 40CFR60, subpart OOOOb § 60.5371b(c), an owner or operator shall submit a report of the result(s) of the super-emitter event investigation conducted under subsection 7.2 through the Super-Emitter Program Portal, at www.epa.gov/super-emitter. If the owner or operator identifies a demonstrable error in the super-emitter event notification from the U.S. EPA, the report may include a statement of the demonstrable error.

The owner or operator shall include in the report the applicable information in paragraphs 7.3.1.a through 7.3.1.h.

7.3.1.a. The Notification Report ID of the super-emitter event notification from the U.S. EPA.

7.3.1.b. Whether the recipient of the super-emitter event notification from the U.S. EPA owns or operates an oil and natural gas facility located within 50 meters of the latitude and longitude provided in the notification. If the recipient of the super-emitter event notification from the U.S. EPA does not own or operate an oil and natural gas facility within 50 meters of the latitude and longitude provided in the notification, the recipient is not required to report the information in paragraphs 7.3.1.c through 7.3.1.h.

7.3.1.c. General identification information for the oil and natural gas facility including, the facility name, the physical address, an applicable ID Number (e.g., EPA ID Number, API Well ID Number), the name of the owner or operator or responsible official (where applicable), and their email address(es).

7.3.1.d. Indication of whether there is a designated facility or associated equipment subject to 45CSR45 at the oil and natural gas facility.

7.3.1.e. Indication of whether the specific source of the super-emitter event was identified. If the specific source of the super-emitter event cannot be identified, the owner or operator shall certify that all applicable investigations specified in paragraphs 7.2.2.a through 7.2.2.e were conducted for all designated facilities and associated equipment subject to 45CSR45 that are at this oil and natural gas facility, and the owner or operator has determined that the designated facilities and associated equipment are not the source of the super-emitter event. If the owner or operator indicates that the source of the super-emitter event was not identified, then the information in paragraphs 7.3.1.f through 7.3.1.h is not required.

7.3.1.f. The source(s) of the super-emitter event.

7.3.1.g. Indication of whether the source of the super-emitter event is a designated facility or associated equipment subject to regulation under 45CSR45. If the source of the super-emitter event is a designated facility or associated equipment subject to regulation under 45CSR45, identify the applicable regulation(s).

7.3.1.h. Indication of whether the super-emitter event is ongoing at the time of the initial report submittal.

7.3.1.h.1. If the super-emitter event is not ongoing at the time of the initial report submittal, the owner or operator shall provide the actual (or if not known, estimated) date and time the super-emitter event ended.

7.3.1.h.2. If the super-emitter event is ongoing at the time of the initial report submittal, the owner or operator shall provide a short narrative of the plan to end the super-emitter event, including the targeted end date for the efforts to be completed and the super-emitter event ended.

7.3.2. If the super-emitter event is ongoing at the time of the initial report submittal, the owner or operator shall update the initial report through the Super-Emitter Program Portal (www.epa.gov/super-emitter) to provide the end date and time of the super-emitter event within 5 business days of the date the super-emitter event ends.

7.3.3. The owner or operator shall sign the following attestation when submitting data into the Super-Emitter Program Portal: "I certify that the information provided in this report regarding the specified super-emitter event was prepared under my direction or supervision. I further certify that the investigations were conducted, and this report was prepared pursuant to the requirements of 40 CFR § 60.5371c (a) and (b). Based on my professional knowledge and experience, and inquiry of personnel involved in the

assessment, the certification submitted herein is true, accurate, and complete. I am aware that knowingly false statements may be punishable by fine or imprisonment." The requirements of 40 CFR § 60.5388c (a) and (b) correspond to the requirements of 45CSR45 7.2 and 7.3.

§45-45-8. Standards for gas well liquids unloading operations at well designated facilities.

8.1. General requirements. The owner or operator of a well designated facility shall comply with subdivisions 8.1.1 and 8.1.2 and has a general duty to safely maximize resource recovery and minimize releases to the atmosphere during gas well liquids unloading operations.

8.1.1. If an employed gas well liquids unloading operation technology or technique does not result in venting methane emissions to the atmosphere, the owner or operator shall comply with the requirements specified in 8.1.1.a, 8.1.1.b, 8.4, and 8.5. If an unplanned venting event occurs, the owner or operator shall comply with the requirements specified in 8.3 through 8.6.

8.1.1.a. The owner or operator shall comply with the recordkeeping requirements specified in section 29 and 40CFR §60.5420c(c)(1)(i).

8.1.1.b. The owner or operator shall submit the information specified in section 29 and §§ 60.5420c(b)(1) and (2)(i) in the annual report.

8.1.2. If a gas well liquids unloading operation technology or technique vents methane emissions to the atmosphere, the owner or operator shall comply with the requirements specified in subsections 8.2 and 8.3, or 8.7.

8.2. Work practice standards. If a gas well liquids unloading operation uses a technology or technique that vents methane emissions to the atmosphere, the owner or operator shall comply with the requirements specified in subdivisions 8.2.1 through 8.2.3 and divisions 8.3 through 8.6.

8.2.1. The owner or operator shall employ best management practices to minimize venting of methane emissions as specified in subsection 8.3 for each gas well liquids unloading operation.

8.2.2. The owner or operator shall comply with the recordkeeping requirements specified in section 29 and 40CFR § 60.5420c(c)(1)(ii).

8.2.3. The owner or operator shall submit the information specified in section 29 and 40CFR §§ 60.5420c(b)(1) and (2)(ii) in the annual report.

8.3. Best management practice requirements. The owner or operator of each gas well liquids unloading operation complying with 8.1.2 and 8.2 shall develop, maintain, and follow a best management practice plan to minimize venting of methane emissions to the maximum extent possible from each gas well liquids unloading operation. The best management practice plan shall meet the minimum criteria specified in subdivisions 8.3.1 through 8.3.4:

8.3.1. Include steps that create a differential pressure to minimize the need to vent a well to unload liquids;

8.3.2. Include steps to reduce wellbore pressure as much as possible prior to opening the well to the atmosphere;

8.3.3. Unload liquids through the separator where feasible; and

8.3.4. Close all wellhead vents to the atmosphere and return the well to production as soon as practicable.

8.4. Initial compliance. The owner or operator shall demonstrate initial compliance with the standards that apply to well liquids unloading operations at well designated facilities as required by section 22 and 40CFR § 60.5410c(a).

8.5. Continuous compliance. The owner or operator shall demonstrate continuous compliance with the standards that apply to well liquids unloading operations at well designated facilities as required by section 26 and 40CFR § 60.5415c(a).

8.6. Recordkeeping and recording. The owner or operator shall perform the required notification, recordkeeping and reporting requirements as specified in section 29 and 40CFR §§ 60.5420c(b)(2) and (c)(1).

8.7. Other compliance option. If an owner or operator decides to comply with subdivision 8.1.2 by complying with this subsection in lieu of complying with subsections 8.2 and 8.3, the owner or operator shall reduce methane emissions from well designated facilities gas wells that unload liquids by 95.0 % by complying with the requirements specified in subdivisions 8.7.1 and 8.7.2 and meet the initial and continuous compliance and recordkeeping and reporting requirements specified in subdivisions 8.7.3 through 8.7.5.

8.7.1. Route emissions through a closed vent system to a control device that meets the conditions specified in section 24 and 40CFR § 60.5412c.

8.7.2. Route emissions through a closed vent system that meets the requirements of section 23 and 40 CFR §§ 60.5411c(a) and (c).

8.7.3. Demonstrate initial compliance with standards that apply to well designated facility gas well liquids unloading as required by section 22 and 40 CFR § 60.5410c(b).

8.7.4. Demonstrate continuous compliance with standards that apply to well designated facility gas well liquids unloading as required by section 26 and 40 CFR § 60.5415c(b).

8.7.5. Submit reports as required by section 29 and 40 CFR §§ 60.5420c(b)(1), (2), and (10) through (12), as applicable; and the recordkeeping as required by section 29 and 40 CFR §§ 60.5420c(c)(1), (7), and (9) through (12), as applicable.

§45-45-9. Standards for associated gas wells at well designated facilities.

9.1. The owner or operator of a well designated facility shall comply with either subdivision 9.1.1, 9.1.2, 9.1.3 or 9.1.4 for each associated gas well, except as provided in subsections 9.2, 9.3, and 9.4. The owner or operator shall also comply with the initial compliance requirements of subsection 9.6, the continuous compliance requirements of subsection 9.7, and the recordkeeping and reporting requirements of subsection 9.8.

9.1.1. Recover the associated gas from the separator and route the recovered gas into a gas gathering flow line or collection system to a sales line.

9.1.2. Recover the associated gas from the separator and use the recovered gas as an onsite fuel source.

9.1.3. Recover the associated gas from the separator and use the recovered gas for another useful purpose that a purchased fuel or raw material would serve.

9.1.4. Recover the associated gas from the separator and reinject the recovered gas into the well or inject the recovered gas into another well.

9.2. Control device exception. If the owner or operator meets one of the conditions in subdivisions 9.2.1 or 9.2.2, the owner or operator may route the associated gas to a control device that reduces methane emissions by at least 95.0% in lieu of complying with subsection 9.1. The associated gas shall be routed through a closed vent system that meets the requirements of section 23 and 40CFR §§ 60.5411c(a) and (c) and the control device must meet the conditions specified in section 24 and 40CFR §§ 60.5412c(a), (b), and (c).

9.2.1. The annual methane contained in the associated gas from your oil well is 40 tpy or less at the initial compliance date, as determined in accordance with subsection 9.5.

9.2.2. If the owner or operator demonstrates and certifies that it is not feasible to comply with subdivisions 9.1.1, 9.1.2, 9.1.3 and 9.1.4 due to technical reasons by providing a detailed analysis documenting and certifying the technical reasons for the infeasibility in accordance with paragraphs 9.2.2.a through 9.2.2.d.

9.2.2.a. To demonstrate it is not feasible to comply with subdivisions 9.1.1 through 9.1.4, the owner or operator shall provide a detailed analysis documenting and certifying the technical reasons for this infeasibility. The demonstration shall address the technical infeasibility for all options identified in subdivisions 9.1.1, 9.1.2, 9.1.3 and 9.1.4. Documentation of these demonstrations must be maintained in accordance with section 29 and 40CFR § 60.5420c(c)(2)(iv).

9.2.2.b. A professional engineer or another qualified individual with expertise in the uses of associated gas shall certify, sign, and date the demonstration. The certification shall state: "I certify that the assessment of technical and safety infeasibility was prepared under my direction or supervision. I further certify that the assessment was conducted, and this report was prepared pursuant to the requirements of 45CSR45 § 9.2.2 and 40CFR § 60.5391c(b)(2). Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete."

9.2.2.c. The demonstration and certification are valid for no more than 12 months. The owner or operator shall re-analyze the feasibility of complying with subdivisions 9.1.1, 9.1.2, 9.1.3 and 9.1.4 and finalize a new demonstration and certification each year.

9.2.2.d. The owner or operator shall maintain documentation of the demonstrations and certifications in accordance with section 29 and 40CFR § 60.5420c(c)(2)(iv) and submitted in annual reports in accordance with section 29 and 40CFR § 60.5420c(b)(3).

9.3. Temporary exception. If the owner or operator is complying with subsection 9.1, the owner or operator may temporarily route the associated gas to a flare or control device in the situations and for the durations identified in subdivisions 9.3.1, 9.3.2, 9.3.3 or 9.3.4. The associated gas shall be routed through a closed vent system that meets the requirements of section 23 and 40CFR §§ 60.5411c(a) and (c) and the control device shall meet the conditions specified in section 24 and 40CFR § 60.5412c. If the owner or operator routes emissions to a flare, the owner or operator shall demonstrate that the flare requirements of section 33 and 40CFR § 60.18 are met during the period when the associated gas is routed to the flare. The owner or operator shall maintain records of all temporary flaring instances in accordance with section 29 and 40CFR § 60.5420c(c)(2) and report the events in the annual report in accordance with section 29 and 40CFR § 60.5420c(b)(3).

9.3.1. For equal to or less than 24 hours during a deviation caused by malfunction causing the need to flare.

9.3.2. For equal to or less than 24 hours during repair, maintenance including blow downs, a bradenhead test, a packer leakage test, a production test, or commissioning.

9.3.3. For wells complying with subsection 9.1, for the duration of a temporary interruption in service from the gathering or pipeline system, or 30 days, whichever is less.

9.3.4. For 72 hours from the time that the associated gas does not meet pipeline specifications, or until the associated gas meets pipeline specifications, whichever is less.

9.4. If the owner or operator is complying with subsections 9.1, 9.2, or 9.3, the owner or operator may vent the associated gas in the situations and for the durations identified in subdivisions 9.4.1, 9.4.2, or 9.4.3. The owner or operator shall maintain records of all venting instances in accordance with section 29 and 40CFR § 60.5420c(c)(2) and report the events in the annual report in accordance with section 29 and 40CFR § 60.5420c(b)(3).

9.4.1. For up to 12 hours to protect the safety of personnel.

9.4.2. For up to 30 minutes during bradenhead monitoring.

9.4.3. For up to 30 minutes during a packer leakage test.

9.5. The owner or operator shall calculate the methane content in associated gas as specified in subdivision 9.5.1 and comply with the requirements in subdivision 9.5.2 and 9.5.3.

9.5.1. Calculate the methane content in associated gas from your oil well using Equation 45-45-A.

Equation 45-45-A.

$$AG_{methane} = \frac{(GOR \times V \times M_{methane} \times 0.0192)}{907.2}$$

Where:

$AG_{methane}$ = Amount of methane in associated gas from the oil well, tons methane per year

GOR = Gas to oil ratio for the well in standard cubic feet of gas per barrel of oil; oil here refers to hydrocarbon liquids produced of all API gravities. GOR shall be determined for the well using available data, an appropriate standard method published by a consensus-based standards organization which include, but are not limited to, the following: ASTM International, the American National Standards Institute (ANSI), the American Gas Association (AGA), the American Society of Mechanical Engineers (ASME), the American Petroleum Institute (API), and the North American Energy Standards Board (NAESB), or in industry standard practice.

V = Volume of oil produced in the calendar year preceding the initial compliance date, in barrels per year.

$M_{methane}$ = mole fraction of methane in the associated gas.

0.0192 = density of methane gas at 60 °F and 14.7 psia in kilograms per cubic foot

907.2 = conversion of kilograms to tons, kilograms per ton

9.5.2. The owner or operator shall maintain records of the calculation of the methane in associated gas from your oil well results in accordance with section 29 and 40CFR § 60.5420c(c)(2), and submit the

information, as well as the background information, in the next annual report in accordance with section 29 and 40CFR § 60.5420c(b)(3).

9.5.3. If a process change occurs that could increase the methane content in the associated gas, the owner or operator shall recalculate the methane content in accordance with subdivision 9.5.1.

9.6. The owner or operator shall demonstrate initial compliance with the standards that apply to associated gas wells at well designated facilities as required by section 22 and 40CFR § 60.5410c(b).

9.7. The owner or operator shall demonstrate continuous compliance with the standards that apply to associated gas wells at well designated facilities as required by section 26 and 40CFR § 60.5415c(b).

9.8. The owner or operator shall maintain records and submit reports as required by section 29 and 40CFR §§ 60.5420c(b)(1), (3), and (10) through (12), as applicable, and section 29 and 40CFR §§ 60.5420c(c)(2) and (7) and (9) through (12), as applicable.

§45-45-10. Standards for centrifugal compressor designated facilities.

10.1. The owner or operator of a centrifugal compressor designated facility shall comply with standards in this subsection. The owner or operator of each centrifugal compressor designated facility that is a wet or dry seal centrifugal compressor shall comply with the GHG standards, using volumetric flow rate as a surrogate, as specified in subdivisions 10.1.1 and 10.1.2. The owner or operator may comply with subdivisions 10.1.3 and either 10.1.4 or 10.1.5 in lieu of complying with subdivisions 10.1.1 and 10.1.2.

10.1.1. Any owner or operator that utilizes a centrifugal compressor, shall comply with the GHG standards in paragraph 10.1.1.a through 10.1.1.c and the seal repair requirements of paragraph 10.1.1.d.

10.1.1.a. The owner or operator shall conduct volumetric flow rate measurements from each wet seal centrifugal compressor (including each self-contained wet seal centrifugal compressor) vent using the methods specified in subdivision 10.1.2 and in accordance with the schedule specified in subparagraphs 10.1.1.a.1 and 10.1.1.a.2. The volumetric flow rate, measured in accordance with subdivision 10.1.2, shall not exceed 3 scfm per seal. If the individual seals are manifolded to a single open-vented line, the volumetric flow rate shall not exceed the sum of the individual seals multiplied by 3 scfm. If the volumetric flow rate exceeds 3 scfm multiplied by the number of seals connected to the vent, the seals connected to the measured vent shall be repaired as provided in paragraph 10.1.1.d.

10.1.1.a.1. The owner or operator shall conduct the first volumetric flow rate measurement from the wet seal centrifugal compressor (including self-contained wet seal centrifugal compressors) vents on or before 8,760 hours of operation 36 months after the state plan submittal deadline (3/9/2029), or on or before 8,760 hours of operation after startup, whichever date is later.

10.1.1.a.2. The owner or operator shall conduct subsequent volumetric flow rate measurements from the wet seal centrifugal compressor (including self-contained wet seal centrifugal compressor) vents on or before 8,760 hours of operation after the previous measurement.

10.1.1.b. Reserved.

10.1.1.c. The owner or operator shall conduct volumetric flow rate vent measurements from each centrifugal compressor equipped with dry seals using the methods specified in subdivision 10.1.2 and in accordance with the schedule specified in subparagraphs 10.1.1.c.1 and 10.1.1.c.2. The volumetric flow rate, measured in accordance with subdivision 10.1.2, shall not exceed 10 scfm per seal. If the individual seals are manifolded to a single open-vented line, the volumetric flow rate shall not exceed the sum of the individual seals multiplied by 10 scfm. If the volumetric flow rate exceeds 10 scfm multiplied by the

number of seals connected to the vent, the seals connected to the measured vent shall be repaired as provided in paragraph 10.1.1.d.

10.1.1.c.1. The owner or operator shall conduct the first volumetric flow rate vent measurement from the centrifugal compressor equipped with a dry seal on or before 8,760 hours of operation 36 months after the state plan submittal deadline (3/9/2029), or on or before 8,760 hours of operation after startup, whichever date is later.

10.1.1.c.2. The owner or operator shall conduct subsequent volumetric flow rate vent measurements from the centrifugal compressor equipped with a dry seal on or before 8,760 hours of operation after the previous measurement.

10.1.1.d. The owner or operator shall repair the seal within 90 calendar days after the date of the volumetric emissions measurement exceeds the applicable required flow rate per seal. The owner or operator shall conduct follow-up volumetric flow rate measurements from seal vents using the methods specified in subdivision 10.1.2 within 15 days after the repair to document that the rate has been reduced to less than the applicable required flow rate per seal. If the individual seals are manifolded to a single open-ended line or vent, the volumetric flow rate shall be reduced to less than the sum of the individual seals multiplied by the applicable required flow rate per seal specified in paragraphs 10.1.1.a through 10.1.1.c, as applicable. Delay of repair is allowed if the conditions in subparagraphs 10.1.1.d.1 or 10.1.1.d.2 are met.

10.1.1.d.1. If the repair of the wet or dry seal is technically infeasible, would require a vent blowdown, a compressor station shutdown, or would be unsafe to repair during operation of the unit, the owner or operator shall complete the repair during the next scheduled compressor station maintenance shutdown, after a scheduled vent blowdown, or within 2 years of the date the volumetric emissions measurement exceeded the applicable required flow rate per seal, whichever is earliest. A vent blowdown is the opening of one or more blowdown valves to depressurize major production and processing equipment, other than a storage vessel.

10.1.1.d.2. If the repair requires replacement of the compressor seal or a part thereof, but the replacement seal or part cannot be acquired and installed within the repair timelines specified under paragraph 10.1.1.d due to the condition specified in part 10.1.1.d.2.A, the owner or operator shall complete the repair in accordance with part 10.1.1.d.2.B and document the repair in accordance with section 29 and 40CFR §§ 60.5420c(c)(3)(iii)(F) through (H).

10.1.1.d.2.A. Seal or part thereof supplies had been sufficiently stocked and are depleted at the time of the required repair.

10.1.1.d.2.B. The owner or operator shall order the required replacement seal or part no later than 10 calendar days after the centrifugal compressor is added to the delay of repair list due to parts unavailability. The repair shall be completed as soon as practicable, but no later than 30 calendar days after receipt of the replacement seal or part, unless the repair requires a compressor station shutdown. If the repair requires a compressor station shutdown, the repair shall be completed in accordance with the timeframe specified in subparagraph 10.1.1.d.1.

10.1.2. The owner or operator shall determine the volumetric flow rates from the centrifugal compressor dry or wet seal vents as specified in paragraph 10.1.2.a or 10.1.2.b.

10.1.2.a. For each dry or wet seal centrifugal compressor in operating-mode or in standby-pressurized- mode, the owner or operator shall determine volumetric flow rate at standard conditions from each dry or wet seal vent using one of the methods specified in subparagraphs 10.1.2.a.1 through 10.1.2.a.3.

10.1.2.a.1. The owner or operator may choose to use any of the methods set forth in section 20 and 40CFR § 60.5405c(a) to screen for leaks/emissions. For the purposes of this paragraph, when using any of the methods in section 20 and 40CFR §60.5405c(a), emissions are detected whenever a leak is detected according to the method. If emissions are detected using the methods set forth in section 20 and 40CFR § 60.5405c(a), then the owner or operator shall use one of the methods specified in 10.1.2.a.2 or 10.1.2.a.3 to determine the volumetric flow rate. If emissions are not detected using the methods in section 20 and 40CFR §60.5405c(a), then the owner or operator may assume that the volumetric flow rate is zero.

10.1.2.a.2. Use a temporary or permanent flow meter according to methods set forth in section 20 and 40CFR § 60.5405c(b).

10.1.2.a.3. Use a high-volume sampler according to the methods set forth in section 20 and 40CFR § 60.5405c(c).

10.1.2.b. For conducting measurements on manifolded groups of dry or wet seal centrifugal compressors, the owner or operator shall determine the volumetric flow rate from the compressor dry or wet seal as specified in subparagraph 10.1.2.b.1 or 10.1.2.b.2.

10.1.2.b.1. Measure at a single point in the manifold downstream of all dry or wet seal compressor inputs and, if practical, prior to comingling with other non-compressor emission sources.

10.1.2.b.2. Determine the volumetric flow rate at standard conditions from the common stack using one of the methods specified in subparagraph 10.1.2.a.1 through 10.1.2.a.3.

10.1.3. Alternative. As an alternative to meeting the requirements of subdivisions 10.1.1 and 10.1.2 for compressors with wet seals and dry seals, the owner or operator has the option of reducing methane emissions from each centrifugal compressor wet seal fluid degassing system by 95.0 % by meeting the requirements of subdivision 10.1.4, or the option of routing the emissions from each centrifugal compressor wet seal fluid degassing system or dry seal system to a process by meeting the requirements of subdivision 10.1.5.

10.1.4. If an owner or operator uses a control device to reduce methane emissions by 95.0 %, the owner or operator shall equip the wet seal fluid degassing system with a cover that meets the requirements of section 23 and 40CFR § 60.5411c(b). The cover shall be connected through a closed vent system that meets the requirements of section 23 and 40CFR §§ 60.5411c(a) and (c) and the closed vent system shall be routed to a control device that meets the conditions specified in section 24 and 40CFR § 60.5412c.

10.1.5. If the owner or operator routes the emissions to a process, the owner or operator shall equip the wet seal fluid degassing system or dry seal system with a cover that meets the requirements of section 23 and 40CFR § 60.5411c(b). The cover shall be connected through a closed vent system that meets the requirements of section 23 and 40CFR §§ 60.5411c(a) and (c).

10.2. The owner or operator of a centrifugal compressor designated facility shall comply with standards in this subsection.

10.3. The owner or operator of a centrifugal compressor designated facility shall comply with standards in this subsection.

10.4 The owner or operator of a centrifugal compressor designated facility shall comply with standards in this subsection.

§45-45-11. Standards for reciprocating compressor designated facilities. The owner or operator of each reciprocating compressor designated facility shall comply with the standards, using volumetric flow

rate as a surrogate, in subsections 11.1 through 11.3, or the standards in subsection 11.4. The owner or operator shall also comply with the requirements in subsections 11.5 through 11.7.

11.1. The volumetric flow rate of each cylinder, measured in accordance with subsection 11.2 or 11.3, shall not exceed 2 scfm per individual cylinder. If the individual cylinders are manifolded to a single open-ended vent line, the volumetric flow rate shall not exceed the sum of the individual cylinders multiplied by 2 scfm. The owner or operator shall conduct measurements of the volumetric flow rate in accordance with the schedule specified in subdivisions 11.1.1 and 11.1.2 and determine the volumetric flow rate per cylinder in accordance with subsection 11.2 or 11.3. If the volumetric flow rate, measured in accordance with subsection 11.2 or 11.3, for a cylinder exceeds 2 scfm per cylinder (or a combined volumetric flow rate greater than the number of compression cylinders multiplied by 2 scfm), the owner or operator shall repair or replace the rod packing or packings as provided in subdivision 11.1.3.

11.1.1. The owner or operator shall conduct the first volumetric flow rate measurements from the reciprocating compressor rod packing vent on or before 8,760 hours of operation after the effective date of an approved state plan, on or before 8,760 hours of operation after last rod packing replacement, or on or before 8,760 hours of operation after startup, whichever date is later.

11.1.2. The owner or operator shall conduct subsequent volumetric flow rate measurements from the reciprocating compressor rod packing vent on or before 8,760 hours of operation after the previous measurement which demonstrates compliance with the applicable volumetric flow rate of 2 scfm per cylinder (or a combined cylinder volumetric flow rate greater than the number of compression cylinders multiplied by 2 scfm), or on or before 8,760 hours of operation after last rod packing replacement, whichever date is later.

11.1.3. The owner or operator shall repair or replace the rod packing within 90 calendar days after the date of the volumetric emissions measurement that exceeded 2 scfm per cylinder. The owner or operator shall conduct follow-up volumetric flow rate measurements from compressor vents using the methods specified in subsection 11.2 within 15 days after the repair (or rod packing replacement) to document that the rate has been reduced to less than 2 scfm per cylinder. The Secretary will allow a delay of repair if the conditions in paragraphs 11.1.3.a or 11.1.3.b are met.

11.1.3.a. If the repair (or rod packing replacement) is technically infeasible, would require a vent blowdown, a compressor station shutdown, or would be unsafe to repair during operation of the unit, the owner or operator shall complete the repair (or rod packing replacement) during the next scheduled compressor station maintenance shutdown, after a scheduled vent blowdown, or within 2 years of the date of the volumetric emissions measurement that exceeds the applicable required flow rate per cylinder, whichever is earliest. A vent blowdown is the opening of one or more blowdown valves to depressurize major production and processing equipment, other than a storage vessel.

11.1.3.b. If the repair requires replacement of the rod packing or a part, but the replacement cannot be acquired and installed within the specified repair timelines due to the condition specified in sub paragraph 11.1.3.b.1, the owner or operator shall complete the repair in accordance with sub paragraph 11.1.3.b.2 and document the repair in accordance with section 29 and 40CFR §§ 60.5420c(c)(4)(viii) through (x).

11.1.3.b.1. Rod packing or part supplies were sufficiently stocked but are depleted at the time of the required repair.

11.1.3.b.2. The owner or operator shall order the required rod packing or replacement part no later than 10 calendar days after the reciprocating compressor is added to the delay of repair list due to parts unavailability. The owner or operator shall complete the repair as soon as practicable, but no later than 30 calendar days after receipt of the replacement rod packing or part, unless the repair requires a

compressor station shutdown. If the repair requires a compressor station shutdown, the owner or operator shall complete the repair in accordance with the timeframe specified in paragraph 11.1.3.a.

11.2. The owner or operator shall determine the volumetric flow rate per cylinder from the reciprocating compressor as specified in subdivision 11.2.1 or 11.2.2.

11.2.1. For reciprocating compressor rod packing equipped with an open-ended vent line on compressors in operating or standby pressurized mode, the owner or operator shall determine the volumetric flow rate of the rod packing using one of the methods specified in paragraphs 11.2.1.a through 11.2.1.c.

11.2.1.a. The owner or operator shall determine the volumetric flow rate at standard conditions from the open-ended vent line using a high-volume sampler according to methods set forth in section 20 and 40CFR § 60.5405c(c).

11.2.1.b. The owner or operator shall determine the volumetric flow rate at standard conditions from the open-ended vent line using a temporary or permanent meter, according to methods set forth in section 20 and 40 CFR § 60.5405c(b).

11.2.1.c. The owner or operator may use any of the methods set forth in section 20 and 40CFR § 60.5405c(a) to screen for leaks and emissions. For the purposes of this paragraph, emissions are detected whenever a leak is detected according to any of the methods in section 20 and 40CFR § 60.5405c(a). If emissions are detected using the methods set forth in section 20 and 40CFR § 60.5405c(a), then the owner or operator shall use one of the methods specified in paragraphs 11.2.1.a and 11.2.1.b to determine the volumetric flow rate per cylinder. If emissions are not detected using the methods in section 20 and 40CFR § 60.5405c(a), then the owner or operator may assume that the volumetric flow rate is zero.

11.2.2. For reciprocating compressor rod packing not equipped with an open-ended vent line on compressors in operating or standby pressurized mode, the owner or operator shall determine the volumetric flow rate of the rod packing using the methods specified in paragraphs 11.2.2.a and 11.2.2.b.

11.2.2.a. The owner or operator shall use the methods described in section 20 and 40CFR § 60.5405c(a) to conduct leak detection of emissions from the rod packing case into an open distance piece, or, for compressors with a closed distance piece, the owner or operator shall conduct annual leak detection of emissions from the rod packing vent, distance piece vent, compressor crank case breather cap, or other vent emitting gas from the rod packing.

11.2.2.b. The owner or operator shall measure emissions found in paragraph 11.2.2.a using a meter or high-volume sampler according to methods set forth in section 20 and 40CFR §§ 60.5405c(b) or (c).

11.3. For conducting measurements on manifolded groups of reciprocating compressor designated facilities, the owner or operator shall determine the volumetric flow rate from reciprocating compressor rod packing vent as specified in subdivisions 11.3.1 and 11.3.2.

11.3.1. Measure at a single point in the manifold downstream of all compressor vent inputs and, if practical, prior to comingling with other non-compressor emission sources.

11.3.2. Determine the volumetric flow rate per cylinder at standard conditions from the common stack using one of the methods specified in paragraphs 11.3.2.a through 11.3.2.d.

11.3.2.a. A temporary or permanent flow meter according to the methods set forth in section 20 and 40CFR § 60.5405c(b).

11.3.2.b. A high-volume sampler according to methods set forth in section 20 and 40CFR § 60.5405c(c).

11.3.2.c. An alternative method, as set forth in section 20 and 40CFR § 60.5405c(d).

11.3.2.d. Any of the methods set forth in section 20 and 40CFR § 60.5405c(a) to screen for emissions. For the purposes of this paragraph, emissions are detected whenever a leak is detected when using any of the methods in section 20 and 40CFR § 60.5405c(a). If emissions are detected using the methods set forth in section 20 and 40CFR § 60.5405c(a), then the owner or operator shall use one of the methods specified in paragraphs 11.3.2.a through 11.3.2.c to determine the volumetric flow rate per cylinder. If emissions are not detected using the methods in section 20 and 40CFR § 60.5405c(a), then the owner or operator may assume that the volumetric flow rate is zero.

11.4. Alternatives. As an alternative to complying with the standards in subsections 11.1 through 11.3, the owner or operator may meet the requirements specified in subdivisions 11.4.1, 11.4.2, or 11.4.3.

11.4.1. Collect the methane emissions from the reciprocating compressor rod packing using a rod packing emissions collection system that is operated to route the rod packing emissions to a process. To comply with this option, the owner or operator shall equip the reciprocating compressor with a cover that meets the requirements of section 23 and 40CFR § 60.5411c(b). The cover shall be connected through a closed vent system that meets the requirements of section 23 and 40CFR §§ 60.5411c(a) and (c).

11.4.2. Reduce methane emissions from each rod packing emissions collection system by using a control device that reduces methane emissions by 95.0 %. To comply with this option, the owner or operator shall equip the reciprocating compressor with a cover that meets the requirements of section 23 and 40CFR § 60.5411c(b). The cover shall be connected through a closed vent system that meets the requirements of section 23 and 40CFR §§ 60.5411c(a) and (c) and the closed vent system shall be routed to a control device that meets the conditions specified in section 24 and 40CFR § 60.5412c.

11.4.3. As an alternative to conducting the required volumetric flow rate measurements under subdivision 11.4.1, the owner or operator may choose to comply by replacing the rod packing on or before 8,760 hours of operation after the effective date of the final rule, on or before 8,760 hours of operation after the previous flow rate measurement, or on or before 8,760 hours of operation after the date of the most recent compressor rod packing replacement, whichever date is later.

11.5. Initial compliance. The owner or operator shall demonstrate initial compliance with standards that apply to reciprocating compressor designated facilities as required by section 22 and 40CFR § 60.5410c(d).

11.6. Continuous compliance. The owner or operator shall demonstrate continuous compliance with standards that apply to reciprocating compressor designated facilities as required by section 26 and 40CFR § 60.5415c(f).

11.7. Recordkeeping and reporting. The owner or operator shall perform the reporting requirements as specified in section 29 and 40CFR §§ 60.5420c(b)(1) and (5) and (10) through (12), as applicable; and the recordkeeping requirements as specified in section 29 and 40CFR §§ 60.5420c(c)(4) and (7) through (12), as applicable.

§45-45-12. Standards for process controller designated facilities. The owner or operator of each process controller designated facility shall comply with the standards in this section.

12.1. The owner or operator shall design and operate each process controller designated facility with zero methane emissions to the atmosphere, except as provided in subsection 12.2.

12.1.1. If the owner or operator complies by routing the emissions to a process, emissions shall be routed to a process through a closed vent system.

12.1.2. If the owner or operator complies using a self-contained natural gas-driven process controller, the owner or operator shall design and operate each self-contained natural gas-driven process controller with no identifiable emissions, as demonstrated by section 27 and 40CFR § 60.5416c(b).

12.2. Reserved.

12.3. If the owner or operator routes process controller emissions to a process or a control device, the owner or operator shall route the process controller designated facility emissions through a closed vent system that meets the requirements of section 23 and 40CFR § 60.5411c(a) and (c).

12.4. Initial compliance. The owner or operator shall demonstrate initial compliance with standards that apply to process controller designated facilities as required by section 22 and 40CFR § 60.5410c(e).

12.5. Continuous compliance. The owner or operator shall demonstrate continuous compliance with standards that apply to process controller designated facilities as required by section 26 and 40CFR § 60.5415c(g).

12.6. Recordkeeping and reporting. The owner or operator shall perform the reporting as required by section 29 and 40CFR §§ 60.5420c(b)(1), (6) and (10) through (12), as applicable, and the recordkeeping as required by section 29 and 40CFR §§ 60.5420c(c)(5), (7), and (9) through (12), as applicable.

12.7. Remaining Useful Life and Other Factors for a process controller designated facility.

12.7.1. Applicability. This section applies to an owner or operator of a marginal well site as defined in section 2 or a site that does not have access to electrical power as defined in section 2 and for which the owner or operator complied with the RULOF requirements in section 6.

12.7.2. General. The owner or operator meeting the applicability requirements in subdivision 12.7.1 may comply with the process controller standards by meeting either the requirements of subdivisions 12.7.4 and 12.7.5 or by complying with subdivision 12.7.6, instead of complying with subsection 12.1. The RULOF standards in subsection 12.7 are derived from 40CFR §60.5394c(b) for facilities located in Alaska that do not have access to electrical power.

12.7.3. Except as specified in subsection 12.7, the standards and requirements that apply to process controllers at marginal well sites are the same as specified in subsections 12.1 through 12.6.

12.7.4. With the exception of natural gas-driven continuous bleed controllers meeting the condition in paragraph 12.7.4.a and complying with paragraph 12.7.4.b, each natural gas-driven continuous bleed process controller in the process controller designated facility shall have a bleed rate $\leq$ 6 standard cubic feet per hour (scfh).

12.7.4.a. A natural gas-driven continuous bleed process controller with a bleed rate higher than 6 scfh may be used if the requirements of paragraph 12.7.4.b are met.

12.7.4.b. The owner or operator shall demonstrate to the Secretary that a natural gas-driven continuous bleed controller with a bleed rate higher than 6 scfh is required. The demonstration shall be based on the specific functional need, including and not limited to response time, safety, or positive actuation.

12.7.5. Each natural gas-driven intermittent vent process controller in the process controller designated facility shall comply with the requirements in paragraphs 12.7.5.a and 12.7.5.b.

12.7.5.a. Each natural gas-driven intermittent vent process controller shall not emit to the atmosphere during idle periods.

12.7.5.b. The owner or operator shall monitor each natural gas-driven intermittent vent process controller to ensure that it is not emitting to the atmosphere during idle periods, as specified in subparagraphs 12.7.5.b.1 through 12.7.5.b.3.

12.7.5.b.1. Monitoring shall be conducted at the same frequency as specified for fugitive emissions components designated facilities located at the same type of site, as specified in subsection 15.7 or 15.13 as appropriate.

12.7.5.b.2. The owner or operator shall include the natural gas-driven intermittent vent process controller monitoring in the monitoring plan required in subsection 15.2.

12.7.5.b.3. When monitoring identifies emissions to the atmosphere from a natural gas-driven intermittent vent controller during idle periods, the owner or operator shall take corrective action by repairing or replacing the natural gas-driven intermittent vent process controller within 5 calendar days of the date the emissions to the atmosphere were detected. After the repair or replacement of a natural gas-driven intermittent vent process controller, the owner or operator shall resurvey the natural gas-driven intermittent vent process controller within 5 days to verify that it is not venting emissions during idle periods.

12.7.6. The owner or operator shall reduce methane emissions from all controllers in the process controller designated facility by 95.0%. The owner or operator shall route emissions to a control device through a closed vent system that meets the conditions specified in section 24 and 40CFR § 60.5412c.

12.7.7. Initial compliance. The owner or operator meeting the applicability requirements in subdivision 12.7.1 shall demonstrate initial compliance standards that apply to process controller designated facilities as required by section 22 and 40CFR § 60.5410c(e) and may follow requirement (e)(2) in lieu of (e)(1).

12.7.8. Continuous compliance. The owner or operator meeting the applicability requirements in subdivision 12.7.1 shall demonstrate continuous compliance with standards that apply to process controller designated facilities as required by section 26 and 40 CFR § 60.5415c(g) and may follow requirement (g)(2) in lieu of (g)(1).

12.7.9. Recordkeeping and reporting. The owner or operator meeting the applicability requirements in subdivision 12.7.1 shall comply with paragraphs 12.7.9.a and 12.7.9.b.

12.7.9.a. Submit reports as required by section 29 and 40CFR §§ 60.5420c(b)(1), (6), and (10) through (12), as applicable. The owner or operator may comply with 40CFR § 60.5420c(b)(6)(iii) in lieu of (b)(6)(ii) and § 60.5420c(b)(6)(vii or viii), as applicable, in lieu of (b)(6)(v or vi).

12.7.9.b. Maintain records as required by section 29 and 40CFR §§ 60.5420c(c)(5), (7), and (9) through (12), as applicable. The owner may comply with 40CFR § 60.5420c(c)(5)(iii or iv or v), as appliable, in lieu of (c)(5)(ii).

§45-45-13. Standards for pump designated facilities. The owner or operator of each pump designated facility shall comply with the standards in this section.

13.1. Sites with access to electrical power or that have 3 or more natural gas-driven diaphragm pumps. For each pump designated facility meeting the criteria specified in subdivision 13.1.1 or 13.1.2, the owner or operator shall design and operate the pump designated facility with zero methane emissions to the

atmosphere. If the owner or operator chooses to comply by routing the pump designated facility emissions to a process, the emissions shall be routed to the process through a closed vent system.

13.1.1. The pump designated facility is located at a site that has access to electrical power.

13.1.2. The pump designated facility is located at a site that does not have access to electrical power and has 3 or more natural gas-driven diaphragm pumps.

13.2. Sites without access to electrical power and that have fewer than 3 or more natural gas-driven diaphragm pumps.

13.2.1. For each pump designated facility located at a site that does not have access to electrical power and that has fewer than 3 natural gas-driven diaphragm pumps, the owner or operator shall comply with subdivision 13.2.2 or 13.2.3, except as provided in subdivisions 13.2.4 through 13.2.8.

13.2.2. The owner or operator shall route emissions from a pump designated facility through a closed vent system to a process if a vapor recovery unit is onsite.

13.2.3. The owner or operator shall reduce methane emissions from a pump designated facility by 95.0 % if a vapor recovery unit is not onsite and route emissions through a closed vent system to a control device meeting the conditions specified in section 24 and 40CFR § 60.5412c.

13.2.4. The owner or operator is not required to install an emissions control device or a vapor recovery unit, if such a unit is necessary to enable emissions to be routed to a process, solely for the purpose of complying with the requirements of subdivision 13.2.2 or 13.2.3. If a control device capable of achieving a 95.0 % emissions reduction and a vapor recovery unit is not on site, the owner or operator shall comply with subdivisions 13.2.5 or 13.2.6, as applicable. For the purposes of this subdivision, boilers and process heaters are not considered control devices.

13.2.5. If an emissions control device is on site but is unable to achieve a 95.0 % emissions reduction, the owner or operator shall route the emissions through a closed vent system to the control device. The owner or operator shall certify that there is no vapor recovery unit on site and that there is no control device capable of achieving a 95.0 % emissions reduction on site.

13.2.6. If there is not a vapor recovery unit on site and there is not an emission control device on site, the owner or operator shall certify that there is not a vapor recovery unit or emissions control device on site. If the owner or operator subsequently installs a control device or vapor recovery unit, the owner or operator shall meet the requirements of paragraphs 13.2.6.a and 13.2.6.b.

13.2.6.a. The owner or operator shall comply with the requirements of subdivisions 13.2.1 through 13.2.3, as applicable, within 30 days of startup of the control device or vapor recovery unit.

13.2.6.b. The owner or operator shall maintain the records in section 29 and 40CFR §§ 60.5420c(c)(14)(ii) and (v), as applicable. The owner or operator is no longer required to maintain the records in section 29 and 40CFR § 60.5420c(c)(14)(v) certifying that there is not a vapor recovery unit or control device on site.

13.2.7. If an owner or operator complying with subdivision 13.2.1 determines through an engineering assessment that routing the pump designated facility emissions to a control device or to a process is technically infeasible, the owner or operator shall comply with the requirements specified in paragraphs 13.2.7.a through 13.2.7.b.

13.2.7.a. The owner or operator shall conduct the technical infeasibility assessment in accordance with the criteria in paragraph 13.2.7.b and have it certified by either a qualified professional

engineer or an in-house engineer with expertise on the design and operation of the pump designated facility and the control device or processes at the site in accordance with paragraph 13.2.7.c.

13.2.7.b. The technical infeasibility assessment to route emissions from the pump designated facility to an existing control device or process shall include, but is not limited to, safety considerations, distance from the control device or process, pressure losses and differentials in the closed vent system, and the ability of the control device or process to handle the pump designated facility emissions which are routed to them. The technical infeasibility assessment shall be prepared under the direction or supervision of the qualified professional engineer or in-house engineer who signs the certification in accordance with paragraph 13.2.7.c.

13.2.7.c. The following certification, signed and dated by the qualified professional engineer or in-house engineer, shall state: "I certify that the assessment of technical infeasibility was prepared under my direction or supervision. I further certify that the assessment was conducted and this report was prepared pursuant to the requirements of § 45CSR45-13.2.7.b and 40CFR § 60.5395c(b)(7)(ii). Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete."

13.2.8. If the emissions are routed to a control device or process and the control device or process is subsequently removed from the location or is no longer available such that there is no option to route to a control device or process, the owner or operator is no longer required to be in compliance with the requirements of subdivision 13.2.2 or 13.2.3, and instead shall comply with subdivision 13.2.6.

13.3. If the owner or operator uses a control device or routes emissions to a process to reduce emissions, the owner or operator shall route the emissions through a closed vent system that meets the requirements of section 23 and 40CFR § 60.5411c(a) and (c).

13.4. Initial compliance. The owner or operator shall demonstrate initial compliance with standards that apply to pump designated facilities as required by section 22 and 40CFR § 60.5410c(f).

13.5. Continuous compliance. The owner or operator shall demonstrate continuous compliance with the standards that apply to pump designated facilities as required by section 26 and 40CFR § 60.5415c(d).

13.6. Recordkeeping and reporting. The owner or operator shall submit reports as required by section 29 and 40CFR §§ 60.5420c(b)(1), (9), and (b)(10) through (12), as applicable, and the maintain records as required by section 29 and 40CFR §§ 60.5420c(c)(7), (c)(9) through (12), and (14), as applicable.

§45-45-14. Standards for storage vessel designated facilities. The owner or operator of each storage vessel designated facility shall comply with the standards in this section, except as provided in subsection 14.5.

14.1. General requirements. The owner or operator shall comply with the requirements of subdivision 14.1.1 and 14.1.2. After 12 consecutive months of compliance with subdivision 14.1.2, the owner or operator may continue to comply with subdivision 14.1.2 or comply with subdivision 14.1.3, if applicable. If the owner or operator chooses to meet the requirements of subdivision 14.1.3, the owner or operator is not required to comply with the requirements of subdivision 14.1.2, except as provided in paragraphs 14.1.3.a and 14.1.3.b.

14.1.1. Determine the potential for methane emissions in accordance with paragraph 4.1.5.b.

14.1.2. Reduce methane emissions by 95.0 %.

14.1.3. Maintain the uncontrolled actual methane emissions from the storage vessel designated facility at less than 14 tpy without considering control in accordance with paragraphs 14.1.3.a and 14.1.3.b.

Prior to using the uncontrolled actual methane emission rates for compliance purposes, the owner or operator shall demonstrate that the uncontrolled actual methane emissions have remained less than 14 tpy as determined monthly for 12 consecutive months. After such demonstration, the owner or operator shall determine the uncontrolled actual rolling 12-month determination methane emissions rates each month. The uncontrolled actual methane emissions shall be calculated using a generally accepted model or calculation methodology which account for flashing, working, and breathing losses, and the calculations shall be based on the actual average throughput, temperature, and separator pressure for the month. The owner or operator may no longer comply with this subdivision and shall instead comply with subdivision 14.1.2 if the storage vessel designated facility meets the conditions specified in paragraphs 14.1.3.a or 14.3.b.

14.1.3.a. If a well feeding the storage vessel designated facility undergoes fracturing or refracturing, the owner or operator shall comply with subdivision 14.1.2 as soon as liquids from the well following fracturing or refracturing are routed to the storage vessel designated facility.

14.1.3.b. If the rolling 12-month emissions determination required in this section indicates that methane emissions increase to 14 tpy or greater from the storage vessel designated facility and the increase is not associated with fracturing or refracturing of a well feeding the storage vessel designated facility, the owner or operator shall comply with subdivision 14.1.2 within 30 days of the monthly determination.

14.2. Control requirements.

14.2.1. Except as required in subdivision 14.2.2, if the owner or operator uses a control device to reduce methane emissions from the storage vessel designated facility, the owner or operator shall meet all of the design and operational criteria specified in paragraphs 14.2.1.a through 14.2.1.d.

14.2.1.a. Each storage vessel in the tank battery shall be equipped with a cover that meets the requirements of section 23 and 40CFR § 60.5411c(b);

14.2.1.b. The storage vessels shall be manifolded together with piping such that all vapors are shared among the headspaces of the storage vessels in the tank battery;

14.2.1.c. The tank battery shall be equipped with one or more closed vent system that meets the requirements of section 23 and 40CFR § 60.5411c(a) and (c); and

14.2.1.d. The vapors collected in paragraphs 14.2.1.b and 14.2.1.c shall be routed to a control device that meets the conditions specified in section 24 and 40CFR § 60.5412c. As an alternative to routing the closed vent system to a control device, the owner or operator may route the closed vent system to a process.

14.2.2. For storage vessel designated facilities that do not have flashing emissions and that are not located at well sites or centralized production facilities, the owner or operator may use a floating roof to reduce emissions. If the owner or operator uses a floating roof to reduce emissions, the owner or operator shall meet the requirements of 40CFR § 60.112b(a)(1) or (2) and the relevant monitoring, inspection, recordkeeping, and reporting requirements in 40CFR60, subpart Kb. The owner or operator shall submit a statement that the owner or operator is complying with 40CFR § 60.112b(a)(1) or (2) with the initial annual report specified in section 29 and 40CFR §§ 60.5420c(b)(1) and (7).

§45-45-15. Standards for fugitive emissions components designated facilities. The owner or operator of each fugitive emissions components designated facility shall comply with the standards in this section. The requirements of this section are independent of the cover and closed vent system requirements of section 23 and 40CFR § 60.5411c.

15.1. General requirements. The owner or operator shall monitor all fugitive emissions components in accordance with subsections 15.2 through 15.7. The owner or operator shall repair all sources of fugitive emissions in accordance with subsection 15.8. The owner or operator shall demonstrate initial compliance in accordance with subsection 15.9. The owner or operator shall maintain records in accordance with subsection 15.10 and submit reports in accordance with subsection 15.11. The owner or operator shall comply with the requirements for well closures in accordance with subsection 15.12. If an owner or operator of a designated facility or category of designated facilities satisfies the requirements for RULOF standards under section 6, the owner may meet the RULOF requirements of subsection 15.13.

15.2. Develop a fugitive emissions monitoring plan. The owner or operator shall develop a fugitive emissions monitoring plan that covers all fugitive emissions components designated facilities within each company-defined area in accordance with subsections 15.3 and 15.4.

15.3. Fugitive emissions monitoring plan. The fugitive emissions monitoring plan shall include the elements specified in subdivisions 15.3.1 through 15.3.8, at a minimum.

15.3.1. Frequency for conducting surveys. Surveys shall be conducted at least as frequently as required by subsections 15.6 and 15.7.

15.3.2. Technique for determining fugitive emissions (i.e., AVO or other detection methods, Method 21 of appendix A-7 to 40 CFR 60; and/or OGI which meets the requirements of paragraphs 15.3.7.a through 15.3.7.g.

15.3.3. Manufacturer and model number of fugitive emissions detection equipment to be used, if applicable.

15.3.4. Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. The repair schedule shall meet the requirements of subsection 15.8, at a minimum.

15.3.5. Procedures and timeframes for verifying fugitive emission component repairs.

15.3.6. Records that will be kept and the length of time records will be kept.

15.3.7. OGI. If an OGI is being used for compliance, the plan shall also include the elements specified in paragraphs 15.3.7.a through 15.3.7.7.

15.3.7.a. Verification that the OGI equipment meets the specifications of subparagraphs 15.3.7.a.1 and 15.3.7.a.2. This verification is an initial verification and may either be performed by the owner or operator of the facility, by the manufacturer, or by a third party. For the purposes of complying with the fugitive emissions monitoring program with OGI, fugitive emissions are defined as any visible emissions observed using OGI.

15.3.7.a.1. The OGI equipment shall be capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions.

15.3.7.a.2. The OGI equipment shall be capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of ≤60 g/hr from a quarter inch diameter orifice.

15.3.7.b. Procedure for a daily verification check.

15.3.7.c. Procedure for determining the operator's maximum viewing distance from the equipment and how the operator will ensure that this distance is maintained.

15.3.7.d. Procedure for determining maximum wind speed during which monitoring can be performed and how the operator will ensure monitoring occurs only at wind speeds below this threshold.

15.3.7.e. Procedures for conducting surveys, including the items specified in subparagraphs 15.3.7.e.1 through 15.3.7.e.3.

15.3.7.e.1. How the operator will ensure an adequate thermal background is present to view potential fugitive emissions.

15.3.7.e.2. How the operator will deal with adverse monitoring conditions, such as wind.

15.3.7.e.3. How the operator will deal with interferences (e.g., steam).

15.3.7.f. Training and experience needed prior to performing surveys.

15.3.7.g. Procedures for calibration and maintenance. At a minimum, procedures shall comply with those recommended by the manufacturer.

15.3.8. Method 21. If Method 21 of appendix A-7 to 40CFR60 is being used for compliance, the plan shall also include the elements specified in paragraphs 15.3.8.a through 15.3.8.4. For the purposes of complying with the fugitive emissions monitoring program using Method 21, a fugitive emission is defined as an instrument reading of 500 ppmv or greater.

15.3.8.a. Verification that the monitoring equipment meets the requirements specified in Section 6.0 of Method 21 of appendix A-7 to 40CFR60. For purposes of instrument capability, the fugitive emissions definition shall be 500 ppmv or greater methane using a FID-based instrument. If the owner or operator chooses to use an analyzer other than a FID-based instrument, the owner or operator shall develop a site-specific fugitive emission definition that would be equivalent to 500 ppmv methane using a FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to the compound of interest).

15.3.8.b. Procedures for conducting surveys. At a minimum, the procedures shall ensure that the surveys comply with the relevant sections of Method 21 of appendix A-7 to 40CFR60, including section 8.3.1.

15.3.8.c. Procedures for calibration. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A-7 to 40CFR60. At a minimum, the owner or operator shall also conduct precision tests at the interval specified in Method 21 of appendix A-7 to 40CFR60, section 8.1.2, and a calibration drift assessment at the end of each monitoring day. The calibration drift assessment shall be conducted as specified in subparagraph 15.3.8.c.1. The corrective action for drift assessments is specified in subparagraphs 15.3.8.c.2 and 15.3.8.c.3.

15.3.8.c.1. The owner or operator shall check the instrument using the same calibration gas that was used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 to 40CFR60, section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. If multiple scales are used, the owner or operator shall record the instrument reading for each scale used. Divide the arithmetic difference of the initial and post-test calibration response by the corresponding calibration gas value for each scale and multiply by 100 to express the calibration drift as a percentage.

15.3.8.c.2. If a calibration drift assessment shows a negative drift of more than 10 percent, then all equipment with instrument readings between the fugitive emission definition multiplied by (100 minus the percent of negative drift) divided by 100 and the fugitive emission definition that was monitored since the last calibration shall be re-monitored.

15.3.8.c.3. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment with instrument readings above the fugitive emission definition and below the fugitive emission definition multiplied by (100 plus the percent of positive drift) divided by 100 monitored since the last calibration may be re-monitored.

15.3.8.d. Procedures for monitoring yard piping (other than buried yard piping). At a minimum, place the probe inlet at the surface of the yard piping and run the probe down the length of the piping. Connection points on the piping must be monitored following the procedures specified in Method 21 of appendix A-7 to 40CFR60.

15.4. Additional elements of fugitive emissions monitoring plan. Each fugitive emissions monitoring plan shall include the elements specified in subdivision 15.4.1 and 15.4.2, at a minimum, as applicable.

15.4.1. If the owner or operator is using an OGI, the plan shall include procedures to ensure that all fugitive emissions components, except buried yard piping and associated components (e.g., connectors), are monitored during each survey. Example procedures include, but are not limited to, a sitemap with an observation path, a written narrative of where the fugitive emissions components are located and how they will be monitored, or an inventory of fugitive emissions components.

15.4.2. If the owner or operator is using Method 21 of appendix A-7 to 40CFR60, the plan shall include a list of fugitive emissions components to be monitored and method for determining the location of fugitive emissions components to be monitored in the field (e.g., tagging, identification on a process and instrumentation diagram, etc.). The fugitive emissions monitoring plan shall include the written plan developed for all of the fugitive emissions components designated as difficult-to-monitor in accordance with subdivision 15.7.2, and the written plan for fugitive emissions components designated as unsafe-to-monitor in accordance with subdivision 15.7.3.

15.5. Monitoring of fugitive emissions components. Each fugitive emissions component, except buried yard piping and associated components (e.g., connectors), shall be observed or monitored for fugitive emissions during each monitoring survey.

15.6. Initial monitoring survey. The owner or operator shall conduct initial monitoring surveys according to the requirements specified in subdivision 15.6.1 through 15.6.3.

15.6.1. Single wellhead only sites and small sites. At single wellhead only sites and small sites, the owner or operator shall conduct an initial monitoring survey using audible, visual, and olfactory (AVO), or any other detection methods (e.g., OGI), within 90 days of the startup of production, for each fugitive emissions components designated facility or by 90 days after March 9, 2026, whichever date is later.

15.6.2. Multi-wellhead only well sites, well sites or centralized production facilities that contain the major production and processing equipment. For multi-wellhead only well sites, well sites or centralized production facilities that contain the major production and processing equipment specified in subparagraphs 15.7.1.d.1, 15.7.1.d.2, 15.7.1.d.3 or 15.7.1.d.4, and compressor station sites, the owner or operator shall conduct an initial monitoring survey using OGI or Method 21 to appendix A-7 to 40CFR60 within 90 days of the effective date of the West Virginia state plan for each fugitive emissions components designated facility, or by 36 months after March 9, 2026,whichever date is later.

15.6.3. Reserved.

15.7. Monitoring frequency. The owner or operator shall perform a monitoring survey of each fugitive emissions components designated facility as specified in subdivision 15.7.1,with the exceptions noted in subdivisions 15.7.2 through 15.7.4. Monitoring for fugitive emissions components designated facilities

located at well sites and centralized production facilities that have wells located onsite shall continue monitoring at the specified frequencies in paragraphs 15.7.1.a through 15.7.1.f until the well closure requirements of subsection 15.12 are completed.

15.7.1. Monitoring survey. The owner or operator shall conduct a monitoring survey of the fugitive emissions components designated facilities using the methods and at the frequencies specified in paragraphs 15.7.1.a through 15.7.1.f.

15.7.1.a. Single wellhead only well sites. The owner or operator shall conduct a monitoring survey of the fugitive emissions component designated facilities located at single wellhead only well sites at least quarterly using AVO, or any other detection method after the initial survey, except as specified in paragraph 15.7.1.f. Any indications of fugitive emissions using these methods are considered fugitive emissions that shall be repaired in accordance with subsection 15.8.

15.7.1.b. Small well sites. The owner or operator shall conduct a monitoring survey of the fugitive emissions component designated facilities located at small well sites at least quarterly using AVO, or any other detection method, after the initial survey except as specified in paragraph 15.7.1.f. Any indications of fugitive emissions using these methods are considered fugitive emissions that shall be repaired in accordance with subsection 15.8. At small well sites with an uncontrolled storage vessel, a visual inspection of all thief hatches and other openings on the storage vessel that are fugitive emissions components shall be conducted in conjunction with the monitoring survey to ensure that they are kept closed and sealed at all times except during times of adding or removing material, inspecting or sampling material, or during required maintenance operations. If evidence of a deviation from this requirement is found, the owner or operator shall take corrective action. At small well sites with a separator, a visual inspection of all separator dump valves to ensure the dump valve is free of debris and not stuck in an open position shall be conducted in conjunction with the monitoring survey. Any dump valve not operating as designed shall be repaired.

15.7.1.c. Multi-wellhead only well sites. The owner or operator shall conduct a monitoring survey of the fugitive emissions components designated facilities located at multi-wellhead only well sites in accordance with sub paragraphs 15.7.1.c.1 and 15.7.1.c.2, except as specified in paragraph 15.7.1.f.

15.7.1.c.1. The owner or operator shall conduct a monitoring survey at least quarterly using AVO, or any other detection method after the initial survey. Any indications of fugitive emissions using these methods are considered fugitive emissions that shall be repaired in accordance with subsection 15.8.

15.7.1.c.2. The owner or operator shall conduct a monitoring survey at least semiannually using OGI or Method 21 of appendix A-7 to 40CFR60 after the initial survey. Consecutive semiannual surveys shall be conducted at least 4 months apart and no more than 7 months apart.

15.7.1.d. Well sites or centralized production facilities that contain the major production and processing equipment. The owner or operator shall conduct a monitoring survey of the fugitive emissions components designated facilities located at well sites or centralized production facilities that contain the major production and processing equipment specified in subparagraphs 15.7.1.d.1, 15.7.1.d.2, 15.7.1.d.3, or 15.7.1.d.4 at the frequencies specified in subparagraphs 15.7.1.d.5 and 15.7.1.d.6, except as specified in paragraph 15.7.1.f.

15.7.1.d.1. One or more controlled storage vessels or tank batteries.

15.7.1.d.2. One or more control devices.

15.7.1.d.3. One or more natural gas-driven process controllers or pumps.

15.7.1.d.4. Two or more pieces of major production and processing equipment not specified in subparagraphs 15.7.1.d.1 through 15.7.1.d.3.

15.7.1.d.5. The owner or operator shall conduct a monitoring survey at least bimonthly using AVO, or any other detection method after the initial survey. Any indications of fugitive emissions using these methods are considered fugitive emissions that shall be repaired in accordance with subsection 15.8. A visual inspection of all thief hatches and other openings on storage vessels (or tank batteries) that are fugitive emissions components shall be conducted in conjunction with the monitoring survey to ensure that they are kept closed and sealed at all times except during times of adding or removing material, inspecting or sampling material, or during required maintenance operations. The owner or operator shall take corrective action if evidence of a deviation from this requirement is found. A visual inspection shall be conducted of all separator dump valves to ensure the dump valve is free of debris and not stuck in an open position and shall be conducted in conjunction with the monitoring survey. The owner or operator shall repair any dump valve not operating as designed.

15.7.1.d.6. The owner or operator shall conduct a monitoring survey at least quarterly using OGI or Method 21 of appendix A-7 to 40CFR60 after the initial survey. Consecutive quarterly monitoring surveys shall be conducted at least 60 calendar days apart.

15.7.1.e. The owner or operator shall conduct a monitoring survey of the fugitive emissions components designated facility located at a compressor station at the frequencies specified in subparagraphs 15.7.1.e.1 and 15.7.1.e.2, except as specified in paragraph 15.7.1.f.

15.7.1.e.1. The owner or operator shall conduct a monitoring survey at least monthly using AVO, or any other detection method after the initial survey. Any indications of fugitive emissions using these methods are considered fugitive emissions and the owner or operator shall make repairs in accordance with subsection 15.8.

15.7.e.2. The owner or operator shall conduct a monitoring survey at least quarterly using OGI or Method 21 of appendix A-7 to 40CFR60 after the initial survey. Consecutive quarterly monitoring surveys shall be conducted at least 60 calendar days apart.

15.7.1.f. Reserved.

15.7.2. Difficult-to-monitor. If Method 21 of appendix A-7 to 40CFR60 is being used for compliance, fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. If the owner or operator designates fugitive emissions components as difficult-to-monitor, the owner or operator shall meet the specifications of paragraphs 15.7.2.a through 15.7.2.d.

15.7.2.a. The owner or operator shall develop a written plan for all the fugitive emissions components designated as difficult-to-monitor. The written plan shall be incorporated into the fugitive emissions monitoring plan required by paragraphs 15.7.2.b, 15.7.2.c, and 15.7.2.d.

15.7.2.b. The plan shall include the identification and location of each fugitive emissions component designated as difficult-to-monitor.

15.7.2.c. The plan shall include an explanation of why each fugitive emissions component is designated as difficult-to-monitor.

15.7.2.d. The plan shall include a schedule for monitoring the difficult-to-monitor fugitive emissions components at least once per calendar year.

15.7.3. Unsafe-to-monitor. If Method 21 of appendix A-7 to 40CFR60 is being used for compliance, fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. If the owner or operator designates fugitive emissions components as unsafe-to-monitor, the owner or operator shall meet the specifications of paragraphs 15.7.3.a through 15.7.3.d.

15.7.3.a. The owner or operator shall develop a written plan for all the fugitive emissions components designated as unsafe-to-monitor. The written plan shall be incorporated into the fugitive emissions monitoring plan required by paragraphs 15.7.3.b, 15.7.3.c, and 15.7.3.d.

15.7.3.b. The plan shall include the identification and location of each fugitive emissions component designated as unsafe-to-monitor.

15.7.3.c. The plan shall include an explanation of why each fugitive emissions component is designated as unsafe-to-monitor.

15.7.3.d. The plan shall include a schedule for monitoring the fugitive emissions components designated as unsafe-to-monitor.

15.7.4. The requirements of subparagraphs 15.7.1.d.6 and 15.7.1.e.2 are waived during a quarterly monitoring period for any fugitive emissions components designated facility located within an area that has an average calendar month temperature below 0 degrees Fahrenheit for 2 of 3 consecutive calendar months of a quarterly monitoring period. The calendar month temperature average for each month within the quarterly monitoring period shall be determined using historical monthly average temperatures over the previous three years as reported by a National Oceanic and Atmospheric Administration source or other source approved by the Administrator. The requirements of paragraph 15.7.1.d and15.7.1.e shall not be waived for 2 consecutive quarterly monitoring periods.

15.8. Repairs. The owner or operator shall repair each identified source of fugitive emissions in accordance with subdivisions 15.8.1 and 15.8.2.

15.8.1. The owner or operator shall attempt a first repair in accordance with paragraphs 15.8.1.1 and 15.8.1.2.

15.8.1.a. A first attempt at repair shall be made no later than 15 calendar days after detection of fugitive emissions that were identified using AVO.

15.8.1.b. If the owner or operator is complying with paragraphs 15.7.1.a 1through 5.7.1.f using OGI or Method 21 of appendix A-7 to 40CFR60, a first attempt at repair shall be made no later than 30 calendar days after detection of the fugitive emissions.

15.8.2. The owner or operator shall complete the repair as soon as practicable, and no later than 15 calendar days after the first attempt at repair as required in paragraph 15.8.1.a and 30 calendar days after the first attempt at repair as required in paragraph 15.8.1.b.

15.8.3. Delay of repair will be allowed if the conditions in paragraphs 15.8.3.a or 15.8.3.b are met.

15.8.3.a. If the repair is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair shall be completed during the next scheduled compressor station maintenance shutdown, scheduled well shutdown, scheduled well shut-in, after a scheduled vent blowdown, or within 2 years of detecting the fugitive emissions, whichever is earliest. A vent blowdown is the opening of 1 or more blowdown valves to depressurize major production and processing equipment, other than a storage vessel.

15.8.3.b. If the repair requires replacement of a fugitive emissions component or a part thereof, but the replacement cannot be acquired and installed within the repair timelines specified in subdivisions 15.8.1 and 15.8.2 due to either of the conditions specified in subparagraphs 15.8.3.b.1 or 15.8.3.b.2, the repair shall be completed in accordance with subparagraph 15.8.3.b.3 and documented in accordance with section 29 and 40CFR § 60.5420c(c)(13)(v)(I).

15.8.3.b.1. Valve assembly supplies had been sufficiently stocked but are depleted at the time of the required repair.

15.8.3.b.2. A replacement fugitive emissions component or a part thereof requires custom fabrication.

15.8.3.b.3. The owner or operator shall order the required replacement no later than 10 calendar days after the first attempt at repair. The repair shall be completed as soon as practicable, but no later than 30 calendar days after receipt of the replacement component, unless the repair requires a compressor station or well shutdown. If the repair requires a compressor station or well shutdown, the owner or operator shall complete the repair in accordance with the timeframe specified in paragraph 15.8.3.a.

15.8.4. The owner or operator shall resurvey each identified source of fugitive emissions to complete repair according to the requirements of paragraphs 15.8.4.a through 15.8.4.v to ensure that there are no fugitive emissions.

15.8.4.a. The operator may resurvey the fugitive emissions components to verify repair using either Method 21 of appendix A-7 to 40CFR60 or OGI, except as specified in paragraph 15.8.4.e.

15.8.4.b. For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, the owner or operator shall take a digital photograph of that component, or the component shall be tagged during the monitoring survey when the fugitive emissions were initially found for identification purposes and subsequent repair. The digital photograph shall include the date that the photograph was taken and shall clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).

15.8.4.c. Operators that use Method 21 of appendix A-7 to 40CFR60 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in subparagraphs 15.8.4.c.1 and 15.8.4.c.2.

15.8.4.c.1. A fugitive emissions component is repaired when the Method 21 instrument indicates a concentration of less than 500 ppmv above background or when no soap bubbles are observed when the alternative screening procedures specified in section 8.3.3 of Method 21 of appendix A-7 to 40CFR60 are used.

15.8.4.c.2. Operators shall use the Method 21 monitoring requirements specified in paragraph 15.3.8.b or the alternative screening procedures specified in section 8.3.3 of Method 21 of appendix A-7 to 40CFR60.

15.8.4.d. Operators that use OGI to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in subparagraphs 15.8.4.d.1 and 15.8.4.d.2.

15.8.4.d.1. A fugitive emissions component is repaired when the OGI instrument shows no indication of visible emissions.

15.8.4.d.2. Operators shall use the OGI monitoring requirements specified in subdivision 15.3.7.

15.8.5. For fugitive emissions identified using AVO detection methods, the operator may resurvey using those same methods, Method 21 of appendix A-7 to 40CFR60, or OGI. For operators that use AVO detection methods, a fugitive emissions component is repaired when there are no indications of fugitive emissions using these methods.

15.9. Initial compliance. The owner or operator shall demonstrate initial compliance with the standards that apply to fugitive emissions components designated facilities as required by section 22 and 40CFR § 60.5410c(i).

15.10. Continuous compliance. The owner or operator shall demonstrate continuous compliance with the standards that apply to fugitive emissions components designated facilities as required by section 26 and 40CFR § 60.5415c(j).

15.11. Reporting and recordkeeping. The owner or operator shall submit reports as specified in section 29 and 40CFR §§ 60.5420c(b)(1) and (8), and maintain records as specified in section 29 and 40CFR § 60.5420c(c)(13).

15.12. Well closure requirements. The owner or operator shall complete the requirements specified in subdivisions 15.12.1 through 15.12.4.

15.12.1. The owner or operator shall submit a well closure plan to the Administrator within 30 days of the cessation of production from all wells located at the well site as specified in section 29 and 40CFR § 60.5420c(a)(4)(i). The well closure plan shall include, at a minimum, the information specified in paragraphs 15.12.1.a through 15.12.1.c.

15.12.1.a. Description of the steps necessary to close all wells at the well site, including permanent plugging of all wells;

15.12.1.b. Description of the financial requirements and disclosure of financial assurance to complete closure; and

15.12.1.c. Description of the schedule for completing all activities in the well closure plan.

15.12.2. The owner or operator shall submit a notification as specified in section 29 and 40CFR § 60.5420c(a)(4)(ii) of intent to close the well site to the Administrator 60 days before beginning well closure activities.

15.12.3. The owner or operator shall conduct a survey of the well site using OGI, including each closed well, after completing all well closure activities outlined in the well closure plan specified in subdivision 15.12.1. If any emissions are imaged by the OGI instrument, then the owner or operator shall take steps to eliminate those emissions and resurvey the source of emissions. The owner or operator shall repeat steps to eliminate emissions and resurvey the source of emissions until no emissions are imaged by the OGI instrument. The owner or operator shall update the well closure plan specified in subdivision 15.12.1 to include the video of the OGI survey demonstrating closure of all wells at the site.

15.12.4. The owner or operator shall maintain the records specified in section 29 and 40CFR § 60.5420c(c)(13) and submit the reports specified in section 29 and 40CFR § 60.5420c(b)(8).

15.13. Remaining Useful Life and Other Factors for initial fugitive emission monitoring surveys and monitoring frequency of subsequent fugitive emission monitoring surveys for certain facilities.

15.13.1. Applicability. Subsection 15.13 applies to any owner or operator of a marginal well site as defined in section 2 that complied with the RULOF requirements in section 6.

15.13.2. General. The owner or operator meeting the applicability requirements in subdivision 15.13.1 and meeting the requirements of section 6 may conduct initial fugitive emission monitoring surveys as specified in 15.13.4 and subsequent fugitive emission monitoring surveys as specified in 15.13.5.

15.13.3. Except as specified in subsection 15.13, the standards and requirements that apply to fugitive emissions components designated facilities at marginal well sites are the same as specified in 15.1 through 15.12.

15.13.4. The owner or operator of a marginal well site that is a multi-wellhead only well site or that contains major production and processing equipment specified in paragraphs 15.7.1.d.1 through 15.7.1.d.4 shall conduct initial fugitive emission monitoring surveys according to subdivision 15.6.1 in lieu of 15.6.2.

15.13.5. The owner or operator of a marginal well site that is a multi-wellhead only well site or that contains major production and processing equipment specified in subparagraphs 15.7.1.d.1 through 15.7.1.d.4 shall conduct subsequent monitoring surveys as specified in either paragraph 15.13.5.a or 15.13.5.b as appropriate.

15.13.5.a. The owner or operator of a marginal well site that is a multi-wellhead only well site shall conduct subsequent fugitive emission monitoring surveys according to paragraph 15.7.1.a in lieu of 15.7.1.c.

15.13.5.b. The owner or operator of a marginal well site that contains the major production and processing equipment specified in subparagraphs 15.7.1.d.1 through 4 shall conduct subsequent fugitive emission monitoring surveys according to paragraphs 15.7.1.b in lieu of 15.7.1.d.

15.13.6. Initial compliance. The owner or operator meeting the applicability requirements in subdivision 15.13.1 shall demonstrate initial compliance with the standards that apply to fugitive emissions components designated facilities as required by section 22 and 40CFR § 60.5410c(i) except that initial monitoring shall be conducted per subsection 15.5 and subdivision 15.13.4.

15.13.7. Continuous compliance. The owner or operator meeting the applicability requirements in subdivision 15.13.1 shall demonstrate continuous compliance with the standards that apply to fugitive emissions components designated facilities as required by section 26 and 40CFR § 60.5415c(j) except that periodic monitoring shall be conducted per subsection 15.5 and subdivision 15.13.5.a for a well site that is a multi-wellhead only well site and per subsection 15.5 and subdivision 15.13.5.b for a well site that contains the major production and processing equipment specified in paragraphs 15.7.1.d.1 through 4.

15.13.8. Reporting and recordkeeping. The owner or operator meeting the applicability requirements in subdivision 15.13.1 shall submit reports as specified in section 29 and 40CFR §60.5420c(b)(1) and (8), and the maintain records as specified in section 29 and 40CFR § 60.5420c(c)(13).

§45-45-16. Alternative standards for fugitive emissions components designated facilities and alternative technology inspection and monitoring requirements for covers and closed vent systems. If an owner or operator chooses to use an alternative standard under this section, the owner or operator shall submit a notification under subsection 16.1. If an owner or operator chooses to demonstrate compliance with the alternative standards through periodic screening, the owner or operator is subject to the requirements in subsection 16.2. If an owner or operator chooses to demonstrate compliance through a continuous monitoring system, the owner or operator is subject to the requirements in subsection 16.3. The technology used for periodic screenings under subsection 16.2 or continuous monitoring under subsection 16.3 shall be approved in accordance with 45CSR16 and 40CFR § 60.5398b(d).

16.1. Notification. If an owner or operator chooses to demonstrate compliance with the alternative standards in either subdivision 16.2 or 16.3, the owner or operator shall notify the Administrator of adoption of the alternative standards in the first annual report following implementation of the alternative standards, as specified in section 32 and 40CFR § 60.5424c(a). After an owner or operator has implemented the alternative standards, the owner or operator shall continue to comply with the alternative standards.

16.2. Periodic screening. An owner or operator may choose to demonstrate compliance for fugitive emissions components designated facility and compliance with continuous inspection and monitoring requirements for covers and closed vent systems through periodic screenings using any methane measurement technology approved in accordance with 45CSR16 and 40CFR § 60.5398b(d). If an owner or operator chooses to demonstrate compliance using periodic screenings, the owner or operator shall comply with the requirements in subdivisions 16.2.1 through 16.2.5 and comply with the recordkeeping and reporting requirements in section 32 and 40CFR § 60.5424c.

16.2.1. The owner or operator shall use one or more alternative test method(s) approved per 45CSR16 and 40CFR § 60.5398b(d) to conduct periodic screenings.

16.2.1.a. The required frequencies for conducting periodic screenings are listed in Tables 45-45B and 45-45C. The owner or operator shall choose the appropriate frequency for conducting periodic screenings based on the minimum aggregate detection threshold of the method used to conduct the periodic screenings. The owner or operator shall also use Tables 45-45B and 45-45C to determine whether they are required to conduct an annual fugitive emissions survey using OGI, except as provided in paragraph 16.2.1.b.

16.2.1.b. Use of Table 45-45B or 45-45C is based on the required frequency for conducting monitoring surveys in paragraphs 15.7.1.a through 15.7.1.e.

16.2.1.c. The owner or operator may replace 1 or more individual periodic screening events required by Table 45-45B or 45-45C with an OGI survey. The OGI survey shall be conducted according to the requirements outlined in section 15.

16.2.1.d. If an owner or operator uses multiple methods to conduct periodic screenings, the owner or operator shall conduct all periodic screenings, regardless of the method used for the individual periodic screening event, at the frequency required for the alternative test method with the highest aggregate detection threshold (e.g., if methods with aggregate detection thresholds of 15 kg/hr are used, the periodic screenings must be conducted monthly). The owner or operator shall also conduct an annual OGI survey if an annual OGI survey is required for the alternative test method with the highest aggregate detection threshold.

16.2.2. The owner or operator shall develop a monitoring plan that covers the collection of fugitive emissions components, covers, and closed vent systems at each site where periodic screenings will be used to demonstrate compliance. The owner or operator may develop a site-specific monitoring plan, or 1 plan that includes multiple sites. At a minimum, the monitoring plan shall contain the information specified in paragraphs 16.2.2.a through 16.2.2.i.

16.2.2.a. Identification of each site that will be monitored through periodic screening, including latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five decimals of a degree using the North American Datum of 1983.

16.2.2.b. Identification of the alternative test method(s) approved per subdivision 16.2.4 that will be used for periodic screenings and the spatial resolution (i.e., component-level, area-level, or facility-level) of the technology used for each method.

16.2.2.c. Identification of and contact information for the entities that will be performing the periodic screenings.

16.2.2.d. Required frequency for conducting periodic screenings, based on the criteria outlined in subdivision 16.2.1.

16.2.2.e. If the owner or operator is required to conduct an annual OGI survey by paragraph 16.2.1.a or 16.2.1.c or chooses to replace any individual screening event with an OGI survey, the monitoring plan shall also include the information required by subsection 15.2.

16.2.2.f. Procedures for conducting monitoring surveys required by sub paragraphs 16.2.5.b.1, 16.2.5.c.1, and 16.2.5.d.1. At a minimum, the monitoring plan shall include the information required by subdivisions 15.3.2, 15.3.3, 15.3.7, and 15.3.8 and subsection 15.4, as applicable. The provisions of 40CFR § 60.5397c(d)(3) do not apply for purposes of conducting monitoring surveys required by paragraphs 16.2.5.b through16.2.5.d.

16.2.2.g. Procedures and timeframes for identifying and repairing fugitive emissions components, covers, and closed vent systems from which emissions are detected.

16.2.2.h. Procedures and timeframes for verifying repairs for fugitive emissions components, covers, and closed vent systems.

16.2.2.i. Records that will be kept and the length of time records will be kept.

16.2.3. The owner or operator shall conduct the initial screening of your site according to the timeframes specified in paragraphs 16.2.3.a and 16.2.3.b.

16.2.3.a. Within 90 days of the effective date of the state plan for each fugitive emissions components designated facility and storage vessel designated facility located at a well site.

16.2.3.b. No later than the final date by which the next monitoring survey required by paragraphs 15.7.1.a through 15.7.1.e would have been required to be conducted if the owner or operator was previously complying with the requirements in sections 15 and 27 and 40CFR § 60.5416c.

16.2.4. If the owner or operator is required to conduct an annual OGI survey by paragraph 16.2.1.a or 16.2.1.c, the owner or operator shall conduct OGI surveys according to the schedule in paragraphs 16.2.4.a through 16.2.4.d.

16.2.4.a. The owner or operator shall conduct the initial OGI survey no later than 12 calendar months after conducting the initial screening survey in subdivision 16.2.3.

16.2.4.b. The owner or operator shall conduct each subsequent OGI survey no later than 12 calendar months after the previous OGI survey was conducted. The owner or operator shall repair each identified source of fugitive emissions during the OGI survey in accordance with subsection 15.8.

16.2.4.c. If the owner or operator replaces a periodic screening event with an OGI survey or is required to conduct a monitoring survey in accordance with subparagraph 16.2.5.b.1 prior to the date that the next OGI survey under paragraph 16.2.4.b is due, the OGI survey conducted in lieu of the periodic screening event or the monitoring survey under subparagraph 16.2.5.b.1 may be used to fulfill the requirements of paragraph 16.2.4.b. The owner or operator shall conduct the next OGI survey no later than 12 calendar months after the date of the survey conducted under paragraph 16.2.1.d or subparagraph 16.2.5.b.1.

16.2.4.d. The owner or operator shall not use a monitoring survey conducted under subparagraph 16.2.5.c.1 or 16.2.5.d.1 to fulfill the requirements of paragraph 16.2.4.b unless the monitoring survey included all fugitive emission components at the site.

16.2.5. The owner or operator shall investigate confirmed detections of emissions from periodic screening events and repair each identified source of emissions in accordance with paragraphs 16.2.5.a through 16.2.5.f.

16.2.5.a. The owner or operator shall receive the periodic screening results no later than 5 calendar days after the screening event occurs.

16.2.5.b. If an alternative test method with a facility-level spatial resolution is used to conduct a periodic screening event and the results of the periodic screening event indicate confirmed emissions detection from a designated facility, the owner or operator shall take the actions listed in subparagraphs 16.2.5.b.1 through 16.2.5.b.3.

16.2.5.b.1. The owner or operator shall conduct a monitoring survey of all fugitive emissions components in a designated facility using either OGI or EPA Method 21 to appendix A-7 to 40CFR60. The owner or operator shall follow the monitoring plan procedures to conduct the survey.

16.2.5.b.2. The owner or operator shall inspect all covers and closed vent system(s) with OGI or Method 21 of appendix A-7 to 40CFR60 in accordance with the requirements in section 27 and 40CFR §§ 60.5416c(b)(1) through (4), as applicable.

16.2.5.b.3. The owner or operator shall conduct a visual inspection of all covers and closed vent systems to identify if there are any defects, as defined in section 27 and 40CFR §§ 60.5416c(a)(1)(ii), 60.5416c(a)(2)(iii), or 60.5416c(a)(3)(i), as applicable.

16.2.5.c. The owner or operator shall take the actions listed in subparagraphs 16.2.5.c.1 and 16.2.5.c.2, as applicable if an alternative test method with an area-level spatial resolution is used to conduct a periodic screening event and the results of the periodic screening event indicate a confirmed emissions detection emissions from a designated facility.

16.2.5.c.1. The owner or operator shall conduct a monitoring survey of all the fugitive emissions components located within a 4-meter radius of the location of the periodic screening's confirmed detection using either OGI or EPA Method 21 to appendix A-7 of 40CFR60. The owner or operator shall follow the monitoring plan procedures to conduct the survey.

16.2.5.c.2. If the confirmed detection occurred in the portion of a site that contains a storage vessel or a closed vent system, the owner or operator shall inspect all covers and all closed vent systems that are connected to all storage vessels and closed vent systems that are within a 2-meter radius of the location of the periodic screening's confirmed detection (i.e., inspect the whole system that is connected to the portion of the system in the radius of the detected event, not just the portion of the system that falls within the radius of the detected event).

16.2.5.c.2.A. The owner or operator shall inspect the cover(s) and closed vent system(s) with OGI or Method 21 of appendix A-7 to 40CFR60 in accordance with the requirements in section 27 and 40CFR§§ 60.5416c(b)(1) through (4), as applicable.

16.2.5.c.2.B. The owner or operator shall conduct a visual inspection of the closed vent system(s) and cover(s) to identify if there are any defects, as defined in section 27 and 40CFR §§ 60.5416c(a)(1)(ii), 60.5416c(a)(2)(iii), or 60.5416c(a)(3)(i), as applicable.

16.2.5.d. The owner or operator shall take the actions listed in subparagraphs 16.2.5.d.1 and 16.2.5.d.2, as applicable if you an alternative test method with a component-level spatial resolution to conduct a periodic screening event is used and the results of the periodic screening event indicate a confirmed emissions detection from a designated facility.

16.2.5.d.1. The owner or operator shall conduct a monitoring survey of all the fugitive emissions components located within a 1-meter radius of the location of the periodic screening's confirmed detection using either OGI or EPA Method 21 to appendix A-7 of 40CFR60. The owner or operator shall follow the monitoring plan procedures to conduct the survey.

16.2.5.d.2. If the confirmed detection occurred in the portion of a site that contains a storage vessel or a closed vent system, the owner or operator shall inspect all covers and all closed vent systems that are connected to all storage vessels and closed vent systems that are within a 0.5-meter radius of the location of the periodic screening's confirmed detection (i.e., inspect the whole system that is connected to the portion of the system in the radius of the detected event, not just the portion of the system that falls within the radius of the detected event).

16.2.5.d.2.A. The owner or operator shall inspect the cover(s) and closed vent system(s) with OGI or Method 21 of appendix A-7 to 40CFR60 in accordance with the requirements in section 27 and 40CFR § 60.5416c(b)(1) through (4), as applicable.

16.2.5.d.2.B. The owner or operator shall conduct a visual inspection of the closed vent system(s) and cover(s) to identify if there are any defects, as defined in sections 27 and 40CFR §§ 60.5416c(a)(1)(ii), 60.5416c(a)(2)(iii), or 60.5416c(a)(3)(i), as applicable.

16.2.5.e. The owner or operator shall repair all sources of fugitive emissions in accordance with subsection 15.8 and all emissions or defects of covers and closed vent systems in accordance with section 27 and 40CFR § 60.5416c(b)(4). The owner or operator shall complete all repairs including the resurvey verifying the repair, within 30 days of receiving the results of the periodic screening in paragraph 16.2.5.a, except as allowed by subdivision 15.8.3 and section 27 and 40CFR §60.5416c(b)(5).

16.2.5.f. If the results of the periodic screening event in paragraph 16.2.5.a indicate a confirmed detection at a designated facility, and the ground-based monitoring survey and inspections required by paragraphs 16.2.5.b through 16.2.5.d demonstrate the confirmed detection was caused by a failure of a control device used to demonstrate continuous compliance under 45CSR45, the owner or operator shall initiate an investigative analysis to determine the underlying primary and other contributing cause(s) of such failure within 24 hours of receiving the results of the monitoring survey and/or inspection. As part of the investigation, the owner or operator shall determine if the control device is operating in compliance with the applicable requirements of sections 26 and 28 and 40CFR §§ 60.5415c and 60.5417c, and if not, what actions are necessary to bring the control device into compliance with those requirements as soon as possible and prevent future failures of the control device from the same underlying cause(s).

16.2.5.g. If the results of the inspections required in paragraphs 16.2.5.b through 16.2.5.d indicate there is an emission or defect in the cover or closed vent system, the owner or operator shall perform an investigative analysis to determine the underlying primary and other contributing cause(s) of emissions from the cover or closed vent system within 5 days of completing the inspection required by paragraphs 16.2.5.b through 16.2.5.d. The investigative analysis shall include a determination as to whether the system was operated outside of the engineering design analysis and whether updates are necessary for the cover or closed vent system to prevent future emissions from the cover and closed vent system.

16.2.6. The owner or operator shall maintain the records as specified in section 29 and 32 and 40CFR §§ 60.5420c(c)(3) through (c)(6), (c)(13) and (c)(14) and § 60.5424c(c).

16.2.7. The owner or operator shall submit reports as specified in section 32 and 40CFR § 60.5424c.

16.3. Continuous Monitoring. The owner or operator may choose to demonstrate compliance for the fugitive emission components designated facility and compliance with continuous inspection and monitoring requirements for the covers and closed vent systems through continuous monitoring using a technology approved in accordance with 40CFR § 60.5398b(d). The owner or operator shall comply and develop a monitoring plan consistent with the requirements in subdivisions 16.3.1 through 16.3.9 and comply with the recordkeeping and reporting requirements in section 32 and 40CFR § 60.5424c if the owner or operator chooses to demonstrate compliance using continuous monitoring.

16.3.1. For the purpose of this section, continuous monitoring means the ability of a methane monitoring system to determine and record a valid methane mass emissions rate or equivalent of designated facilities at least once every 12-hour block.

16.3.1.a. The detection threshold of the system shall have the capability of detecting at least 0.40 kg/hr (0.88 lb/hr) of methane.

16.3.1.b. The owner or operator shall confirm the power and function of the devices used within the continuous monitoring system at least twice every 6-hour block for a health check.

16.3.1.c. The continuous monitoring system shall transmit all applicable valid data at least once every 24-hours. The continuous monitoring system shall transmit all valid data collected, including health checks required in paragraph 16.3.1.b.

16.3.1.d. The continuous monitoring system shall continuously collect data as specified in paragraph 16.3.1.c, except as specified in subparagraphs 16.3.1.d.1 through 16.3.1.d.4.

16.3.1.d.1. The rolling 12-month average operational downtime of the continuous monitoring system shall be ≤ to 10 %.

16.3.1.d.2. Operational downtime of the continuous monitoring system means a period of time for which any monitor fails to collect or transmit data as specified in subdivision 16.3.1 or any monitor is out-of-control as specified in subparagraph 16.3.1.d.3.

16.3.1.d.3. A monitor is out-of-control if it fails ongoing quality assurance checks, as specified in the alternative test method approved under 40CFR § 60.5398b(d), or if the monitor output is outside of range. The beginning of the out-of-control period is defined as the time of the failure of the quality assurance check. The end of the out-of-control period is defined as the time when either the monitor passes a subsequent quality assurance check, or a new monitor is installed. The out-of-control period for a monitor outside of range starts at the time when the monitor first reads outside of range and ends when the monitor reads within range again.

16.3.1.d.4. The owner or operator shall calculate the downtime for the continuous monitoring system each calendar month. When 12 months of data are available, at the end of each calendar month, the owner or operator shall calculate the 12-month average by averaging that month with the previous 11 calendar months. The owner or operator shall determine the rolling 12-month average by recalculating the 12-month average at the end of each month.

16.3.2. Monitoring plan. The owner or operator shall develop a monitoring plan that covers the collection of fugitive emissions components, covers, and closed vent systems for each site where continuous monitoring will be used to demonstrate compliance. At a minimum, the monitoring plan shall contain the information specified in paragraphs 16.3.2.a through 16.3.2.l.

16.3.2.a. Identification of each site to be monitored through continuous monitoring, including latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of at least four decimals of a degree using the North American Datum of 1983.

16.3.2.b. Identification of the approved alternative test method(s) approved under 40CFR § 60.5398b(d) used for the continuous monitoring, including the detection principle; the manufacturer, make, and model; instrument manual, if applicable; and the manufacturer's recommended maintenance schedule.

16.3.2.c. If the continuous monitoring system is administered through a third-party provider, contact information where the provider can be reached 24 hours a day.

16.3.2.d. Number and location of monitors. If the continuous monitoring system uses open path technology, the owner or operator shall identify the location of any reflectors used. These locations should be identified by latitude and longitude coordinates in decimal degrees to an accuracy and precision of at least five decimals of a degree using the North American Datum of 1983.

16.3.2.e. Discussion of system calibration requirements, including but not limited to, the calibration procedures and calibration schedule for the detection systems and meteorology systems.

16.3.2.f. Identification of critical components and infrastructure (e.g., power, data systems) and procedures for their repairs.

16.3.2.g. Procedures for out-of-control periods.

16.3.2.h. Procedures for establishing baseline emissions, including the identification of any sources with methane emissions not subject to this 45CSR45. The procedures for establishing the baseline emissions shall account for variability in the operation of the site. Operation of the site during the development of the baseline emissions shall represent the site's expected annual production or throughput.

16.3.2.i. Procedures for determining when a fugitive emissions event is detected by the continuous monitoring technology.

16.3.2.j. Procedures and timeframes for identifying and repairing fugitive emissions components, covers, and closed vent systems from which emissions are detected.

16.3.2.k. Procedures and timeframes for verifying repairs for fugitive emissions components, covers, and closed vent systems.

16.3.2.l. Records that will be kept and the length of time records will be kept.

16.3.3. Timeframes. The owner or operator shall install and begin conducting monitoring with your continuous monitoring system according to the timeframes specified in paragraphs 16.3.3.a and 16.3.3.b.

16.3.3.a. Within 120 days of the effective date of the state plan for each fugitive emissions components designated facility and storage vessel designated facility located at a well site.

16.3.3.b. No later than the final date by which the next monitoring survey required by paragraphs 15.7.1.a through 15.7.1.e would have been required to be conducted if you were previously complying with the requirements in sections 15 and 27 and 40CFR § 60.5416c.

16.3.4. Action levels. The owner or operator is subject to the following action-levels as specified in paragraphs 16.3.4.a and 16.3.4.b for any designated facilities located at a well site, centralized production facility, or compressor station.

16.3.4.a. For designated facilities located at a wellhead only well site, the action levels are as follows.

16.3.4.a.1. The 90-day rolling average action-level is 1.2 kg/hr (2.6 lbs/hr) of methane over the site-specific baseline emissions.

16.3.4.a.2. The 7-day rolling average action level is 15 kg/hr (34 lbs/hr) of methane over site-specific baseline emissions.

16.3.4.b. For designated facilities located at well sites with major production and processing equipment (including small well sites), centralized production facilities, and compressor stations, the action levels are as follows.

16.3.4.b.1. The 90-day rolling average action-level is 1.6 kg/hr (3.6 lbs/hr) of methane over the site- specific baseline emissions.

16.3.4.b.2. The rolling 7-day average action level is 21 kg/hr (46 lbs/hr) of methane over the site-specific baseline emissions.

16.3.5. Site-specific baseline emissions. The owner or operator shall establish site-specific baseline emissions upon initial installation and activation of a continuous monitoring system. The owner or operator shall establish the baseline emissions under the conditions outlined in paragraphs 16.3.5.a through 16.3.5.c. The owner or operator shall determine the baseline emission rates according to paragraphs16.3.5.d and 16.3.5.e. The baseline shall be established initially and any time there is a major change to the processing equipment at a well site (including small well sites), centralized production facility, or compressor station.

16.3.5.a. Inspect all fugitive emissions components according to the requirements in section 15 and covers and closed vent systems according to the requirements in section 27 and 40CFR § 60.5416c. This includes all fugitive emissions components, covers, and closed vent systems, regardless of whether they are regulated by 45CSR45. Repairs of any fugitive emissions, leaks, or defects found during the inspection shall be completed prior to beginning the period in paragraph 16.3.5.c.

16.3.5.b. Verify control devices (e.g., flares) on all affected sources are operating in compliance with the applicable requirements of sections 26 and 28 and 40CFR §§ 60.5415c and 60.5417c. The owner or operator shall ensure all control devices are operating in compliance with the applicable regulations prior to beginning the period in paragraph 16.3.5.c. Verify that all other methane emission sources (e.g., reciprocating engines) located at the site are operating consistent with any applicable regulations. The owner or operator shall ensure these sources are operating in compliance with the applicable regulations prior to beginning the period in paragraph 16.3.5.c.

16.3.5.c. The owner or operator shall record the site-level emission rate from the continuous monitoring system for 30 operating days using the alternative test method approved per 40CFR § 60.5398b(d). The owner or operator shall minimize any activities that are not normal, day-to-day activities during this 30 operating day period. The owner or operator shall document any maintenance activities and the period (including the start date and time and end date and time) such activities occurred during the 30 operating day period.

16.3.5.d. The owner or operator shall determine the site-specific baseline by calculating the mean emission rate (kg/hr of methane) for the 30 operating day period, less any time periods when maintenance activities were conducted.

16.3.5.e. The site-specific baseline emission rate shall be no more than 10 times the applicable 90-day action-level defined in paragraphs 16.3.4.a and 16.3.4.b.

16.3.6. Site emission rate. The owner or operator shall calculate the emission rate from the site according to paragraphs 16.3.6.a through 16.3.6.c. The owner or operator shall compare the emission rate calculated in subdivision 16.3.6 to the appropriate action levels in subdivision 16.3.4 to determine whether the action level was exceeded.

16.3.6.a. The owner or operator shall calculate the daily average mass emission rate in kg/hr of methane from your continuous monitoring system each calendar day.

16.3.6.b. Once the system has been operating for 7 calendar days, the owner or operator shall at the end of each calendar day calculate the 7-day average mass emission rate by averaging the mass emission rate from that day with the mass emission rate from the previous 6 calendar days. The owner or operator shall subtract the site-specific baseline mass emission rate from the 7-day average mass emission rate when comparing the mass emission rate to the applicable action level. The owner or operator shall determine the 7-day rolling average by recalculating the 7-day average each calendar day, less the site-specific baseline.

16.3.6.c. Once the system has been operating for 90 calendar days, the owner or operator shall at the end of each calendar day calculate the 90-day average mass emission rate by averaging the mass emission rate from that day with the mass emission rate from the previous 89 calendar days. The owner or operator shall subtract the site- specific baseline emission rate from the 90-day average mass emission rate when comparing the mass emission rate to the applicable action level. The owner or operator shall determine the 90-day rolling average by recalculating the 90-day average each calendar day, less the site-specific baseline.

16.3.7. Investigative analysis. Within 5 days of determining that either of the action levels in subdivision 16.3.4 has been exceeded, the owner or operator shall initiate an investigative analysis to determine the underlying primary and contributing cause(s) of such exceedance and the actions to be taken to reduce the mass emission rate below the applicable action level.

16.3.7.a. The owner or operator shall complete the investigative analysis and take initial steps to bring the mass emission rate below the action level within 5 days after determining there is an exceedance of the action level in subparagraph 16.3.4.a.2 or 16.3.4.b.2.

16.3.7.b. The owner or operator shall complete the investigative analysis and take initial steps to bring the mass emission rate below the action level within 30 days after determining there is an exceedance of the action level in subparagraph 16.3.4.a.1 or 16.3.4.b.1.

16.3.8. Mass emission rate reduction plan. The owner or operator shall develop a mass emission rate reduction plan if any of the criteria in paragraphs 16.3.8.a through 16.3.8.c are met. The plan shall describe the action(s) completed to date to reduce the mass emission rate below the action level, additional measures that are proposed to reduce methane emissions below the action level, and a schedule to complete these measures. The owner or operator shall submit the plan to the Administrator within 60 days of initially determining there is an exceedance of an action level in subdivision 16.3.4.

16.3.8.a. If, upon completion of the initial actions required under subdivision 16.3.7, the average mass emission rate for the following 30-day period is not below the applicable action level in subparagraph 16.3.4.a.1 or 16.3.4.b.1, the beginning of the 30-day period starts on the calendar day following completion of the initial actions in subdivision 16.3.7.

16.3.8.b. If, upon completion of the initial actions required under subdivision 16.3.6, the average mass emission rate for the following 24-hour period is not below the applicable action level in

subparagraph 16.3.4.a.2 or 16.3.4.b.2, the average mass emission rate will be the mass emission rate calculated according to paragraph 16.3.6.a for the calendar day following completion of the initial corrective actions in subdivision 16.3.7.

16.3.8.c. All actions needed to reduce the average mass emission rate below the action level require more than 30 days to implement.

16.3.9. The owner or operator shall maintain records as specified in section 29 and 32 and 40CFR §§ 60.5420c(c)(3) through (c)(6), (c)(13) and (c)(14), and 60.5424c(e). The owner or operator shall submit reports as specified in section 29 and 32 and 40CFR §§ 60.5420c(b)(1), (b)(3) through (9) and 60.5424c.

§45-45-17. Standards for process unit equipment designated facilities. This section applies to process unit equipment designated facilities located at an onshore natural gas processing plant. The owner or operator shall comply with the requirements of subsections 17.1 through 17.12 to reduce methane emissions from equipment leaks, except as provided in section 19. As an alternative to the standards in this section, the owner or operator may comply with the requirements in section 18.

17.1. General standards. The owner or operator shall comply with the requirements in subsections 17.2 through 17.4 for each pump in light liquid service, pressure relief device in gas/vapor service, valve in gas/vapor or light liquid service, and connector in gas/vapor or light liquid service, as applicable. The owner or operator shall comply with the requirements in subsection 17.5 for each open-ended valve or line. The owner or operator shall comply with the requirements in subsection 17.6 for each closed vent system and control device used to comply with equipment leak provisions in this section. The owner or operator shall comply with subsection 17.7 for each pump, valve, and connector in heavy liquid service and pressure relief device in light liquid or heavy liquid service. The owner or operator shall make repairs as specified in subsection 17.8. The owner or operator shall demonstrate initial compliance with the standards as specified in subsection 17.9. The owner or operator shall demonstrate continuous compliance with the standards as specified in subsection 17.10. The owner or operator shall submit reports as specified in subsection 17.11. The owner or operator shall perform recordkeeping as required in subsection 17.12.

17.1.1. Each piece of equipment is presumed to have the potential to emit methane unless an owner or operator demonstrates that the piece of equipment does not have the potential to emit methane. For a piece of equipment to be considered not to have the potential to emit methane, the methane content of a gaseous stream shall be below detection limits using Method 18 of appendix A-6 of 40CFR60. Alternatively, if the piece of equipment is in wet gas service, the owner or operator may choose to determine the methane content of the stream is below the detection limit of the methods described in ASTM E168-16(R2023), E169-16(R2022), or E260-96 (all incorporated by reference, see 40CFR § 60.17).

17.1.2. Reserved.

17.2. Monitoring surveys. The owner or operator shall monitor for leaks using OGI in accordance with appendix K to 40CFR60, unless otherwise specified in subsections 17.3 or 17.4.

17.2.1. Monitoring surveys shall be conducted bimonthly.

17.2.2. Any emissions observed using OGI are defined as a leak.

17.3. Additional requirements for pumps in light liquid service. In addition to the requirements in subsection 17.2, the owner or operator shall conduct weekly visual inspections of all pumps in light liquid service for indications of liquids dripping from the pump seal, except as specified subdivision 17.3.3 and 17.3.4. If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either subdivision 17.3.1 or 17.3.2.

17.3.1. The owner or operator shall monitor the pump within 5 calendar days using the methods specified in section 21 and 40CFR § 60.5406c. A leak is detected if any emissions are observed using OGI, or if an instrument reading of 2,000 ppmv or greater is provided using Method 21 of appendix A-7 to 40CFR60.

17.3.2. The owner or operator shall designate the visual indications of liquids dripping as a leak and repair the leak as specified in subsection 17.8.

17.3.3. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process, fuel gas system, or a control device that complies with the requirements of subsection 17.6, it is exempt from the weekly inspection requirements in subsection 17.3.

17.3.4. Any pump located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirements in subsection 17.3, provided that each pump is visually inspected as often as practicable and at least bimonthly.

17.4. Additional requirements for pressure relief devices in gas/vapor service. In addition to the requirements in subsection 17.2, the owner or operator shall monitor each pressure relief device as specified in subdivision 17.4.1, except as specified in subdivisions 17.4.2 and 17.4.3.

17.4.1. The owner or operator shall monitor each pressure relief device within 5 calendar days after each pressure release to detect leaks using the methods specified in section 21 and 40CFR§ 60.5406c. A leak is detected if any emissions are observed using OGI, or if an instrument reading of 500 ppmv or greater is provided using Method 21 of appendix A-7 to 40CFR60.

17.4.2. Any pressure relief device located in a nonfractionating plant that is monitored only by non- plant personnel may be monitored after a pressure release the next time the monitoring personnel are onsite or within 30 calendar days after a pressure release, whichever is sooner, instead of within 5 calendar days as specified in subdivision 17.4.1. No pressure relief device described in this subdivision may be allowed to operate for more than 30 calendar days after a pressure release without monitoring.

17.4.3. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in subsection 17.6 is exempt from the requirements of subdivision 17.4.1.

17.5. Open-ended valves or lines. Each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve, except as provided in subdivisions 17.5.4 and 17.5.5. The cap, blind flange, plug, or second valve shall seal the open end of the valve or line at all times except during operations requiring process fluid flow through the open-ended valve or line.

17.5.1. If evidence of a leak is found at any time by AVO, or any other detection method, a leak is detected.

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

17.5.3. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall remain closed at all other times.

17.5.4. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of subsection 17.5.

17.5.5. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block-and-bleed system as specified in subsection 17.5 introductory text, subdivisions 17.5.2 and 17.5.3 are exempt from the requirements of subsection 17.5.

17.6. Closed vent systems and control devices. Closed vent systems used to comply with the equipment leak provisions of this subdivision shall comply with the requirements in sections 23 and 27 and 40CFR §§ 60.5411c and 60.5416c. Control devices used to comply with the equipment leak provisions of this subsection shall comply with the requirements in sections 24, 26, and 27 and 40CFR §§ 60.5412c, 60.5415c(e), and 60.5417c.

17.7. Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service. If evidence of a potential leak is found at any time by AVO, or any other detection method, a leak is detected and shall be repaired in accordance with subsection 17.8.

17.8. Repair requirements. When a leak is detected, the owner or operator shall comply with the requirements of subdivisions 17.8.1 through 17.8.5, except as provided in subdivision 17.8.6.

17.8.1. A weatherproof and readily visible identification tag, marked with the equipment identification number, shall be attached to the leaking equipment. The identification tag on equipment may be removed after it has been repaired.

17.8.2. A first attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after the leak is detected. A first attempt at repair is not required if the leak is detected using OGI and the equipment identified as leaking would require elevating the repair personnel more than 2 meters above a support surface.

17.8.2.a. First attempts at repair for pumps in light liquid or heavy liquid service include, but are not limited to, the practices described in subparagraphs 17.8.2.a.1 and 17.8.2.a.2, where practicable.

17.8.2.a.1. Tightening the packing gland nuts.

17.8.2.a.2. Ensuring that the seal flush is operating at design pressure and temperature.

17.8.2.b. For each valve where a leak is detected, the owner or operator shall comply with subparagraphs 17.8.2.b.1, 17.8.2.b.2, 17.8.2.b.3, or 17.8.2.b.4.

17.8.2.b.1. Repack the existing valve with a low-e packing.

17.8.2.b.2. Replace the existing valve with a low-e valve; or

17.8.2.b.3. Perform a drill and tap repair with a low-e injectable packing.

17.8.2.b.4. An owner or operator is not required to utilize a low-e valve or low-e packing to replace or repack a valve if the owner or operator demonstrates that a low-e valve or low-e packing is not technically feasible. Low-e valve or low-e packing that is not suitable for its intended use is considered to be technically infeasible. Factors that may be considered in determining technical infeasibility include: retrofit requirements for installation (e.g., re-piping or space limitation), commercial unavailability for valve type, or certain instrumentation assemblies.

17.8.3. Repair of leaking equipment must be completed within 15 calendar days after detection of each leak, except as provided in subdivisions 17.8.4, 17.8.5, and 17.8.6.

17.8.4. If the repair for visual indications of liquids dripping for pumps in light liquid service can be made by eliminating visual indications of liquids dripping, the owner or operator shall make the repair within 5 calendar days of detection.

17.8.5. If the repair for AVO or other indication of a leak for open-ended valves or lines; pumps, valves, or connectors in heavy liquid service; or pressure relief devices in light liquid or heavy liquid service can be made by eliminating the AVO, or other indication of a potential leak, the owner or operator shall make the repair within 5 calendar days of detection.

17.8.6. Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days is technically infeasible without a process unit shutdown or as specified in paragraphs 17.8.6.a through 17.8.6.e. The owner or operator shall repair this equipment before the end of the next process unit shutdown. The owner or operator shall monitor to verify repair within 15 days after startup of the process unit.

17.8.6.a. Delay of repair of equipment is allowed for equipment which is isolated from the process, and which does not have the potential to emit methane.

17.8.6.b. Delay of repair for valves and connectors is allowed if the conditions in subparagraphs 17.8.6.b.1 and 17.8.6.b.2 are met.

17.8.6.b.1. The owner or operator shall demonstrate that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

17.8.6.b.2. When repair procedures are conducted, the purged material is collected and destroyed or recovered in a control device complying with subsection 17.6.

17.8.6.c. Delay of repair for pumps is allowed if the conditions in subparagraphs 17.8.6.c.1 and 17.8.6.c.2 are met.

17.8.6.c.1. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

17.8.6.c.2. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

17.8.6.d. If delay of repair is required to repack or replace the valve, the owner or operator shall use delay of repair. Delay of repair beyond a process unit shutdown is allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown is not allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

17.8.6.e. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive bimonthly monitoring results show no leak remains.

17.9. Initial compliance. The owner or operator shall demonstrate initial compliance with the standards that apply to equipment leaks at onshore natural gas processing plants as required by section 22 and 40CFR § 60.5410c(g).

17.10. Continuous compliance. The owner or operator shall demonstrate continuous compliance with the standards that apply to equipment leaks at onshore natural gas processing plants as required by section 26 and 40CFR § 60.5415c(i).

17.11. Reporting. The owner or operator shall submit reports as specified in sections 29 and 31 and 40CFR §§ 60.5420c(b)(1) and (10) through (12), as applicable, and 60.5422c.

17.12. The owner or operator shall maintain records as specified in sections 29 and 30 and 40CFR §§ 60.5420c(c)(7) and (9) through (12), as applicable, and 60.5421c.

§45-45-18. Alternative standards for process unit equipment designated facilities.

This section provides alternative standards for process unit equipment designated facilities located at an onshore natural gas processing plant. The owner or operator may choose to comply with the standards in this section instead of the requirements in section 17. For purposes of the alternative standards provided in this section, the owner or operator shall comply with the requirements of subsections 18.1 through 18.13 to reduce methane emissions from equipment leaks, except as provided in section 19.

18.1. General standards. The owner or operator shall comply with the requirements in subsection 18.2 for each pump in light liquid service. The owner or operator shall comply with the requirements of subsection 18.3 for each pressure relief device in gas/vapor service. The owner or operator shall comply with the requirements in subsection 18.4 for each open-ended valve or line. The owner or operator shall comply with the requirements in subsection 18.5 for each closed vent system and control device used to comply with equipment leak provisions in this section. The owner or operator shall comply with subsection 18.6 for each valve in gas/vapor or light liquid service. The owner or operator shall comply with subsection 18.7 for each pump, valve, and connector in heavy liquid service and pressure relief device in light liquid or heavy liquid service. The owner or operator shall comply with subsection 18.8 for each connector in gas/vapor and light liquid service. The owner or operator shall make repairs as specified in subsection 18.9. The owner or operator shall demonstrate initial compliance with the standards specified in subsection 18.10. The owner or operator shall demonstrate continuous compliance with the standards specified in subsection 18.11. The owner or operator shall submit reports as specified in subsection 18.12 and maintain records as required in subsection 18.12.

18.1.1. Each piece of equipment is presumed to have the potential to emit methane unless an owner or operator demonstrates that the piece of equipment does not have the potential to emit methane. For a piece of equipment to be considered not to have the potential to emit methane, the methane content of a gaseous stream must be below detection limits using Method 18 of appendix A-6 to 40CFR60. Alternatively, if the piece of equipment is in wet gas service, the owner or operator may choose to determine the methane content of the stream is below the detection limit of the methods described in ASTM E168-16(R2023), E169-16(R2022), or E260-96 (all incorporated by reference, see § 60.17).

18.1.2. Reserved.

18.2. Pumps in light liquid service. The owner or operator shall monitor each pump in light liquid service monthly to detect leaks by the methods specified in section 21 and 40CFR § 60.5406c, except as provided in subdivisions 18.2.2 through 18.2.6. A leak is defined as an instrument reading of 2,000 ppmv or greater. A pump that begins operation in light liquid service after the initial startup date for the process unit shall be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in subdivisions 18.2.2 through 18.2.6.

18.2.1. In addition to the requirements in subsection 18.2, the owner or operator shall conduct weekly visual inspections of all pumps in light liquid service for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph 18.2.1.a or 18.2.1.b.

18.2.1.a. Monitor the pump within 5 days using the methods specified in section 21 and 40CFR § 60.5406c. A leak is defined as an instrument reading of 2,000 ppmv or greater.

18.2.1.b. Designate the visual indications of liquids dripping as a leak, and repair the leak as specified in subsection 18.9.

18.2.2. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements in subsection 18.2, provided the requirements specified in paragraphs 18.2.2.a through 18.2.2.e are met.

18.2.2.a. Each dual mechanical seal system meets the requirements of subparagraphs 18.2.2.a. 1, 18.2.2.a.2, or 18.2.2.a.3.

18.2.2.a.1. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffng box pressure; or

18.2.2.a.2. Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of subsection 18.5; or

18.2.2.a.3. Equipped with a system that purges the barrier fluid into a process stream with zero methane emissions to the atmosphere.

18.2.2.b. The barrier fluid system is in heavy liquid service or does not have the potential to emit methane.

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

18.2.2.d. Each pump is checked according to the requirements in subdivision 18.2.1.

18.2.2.e. Each sensor meets the requirements in subparagraphs 18.2.2.e.1 through 18.2.2.e.3.

18.2.2.e.1. Each sensor as described in paragraph 18.2.2.c is checked daily or is equipped with an audible alarm.

18.2.2.e.2. The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

18.2.2.e.3. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in subparagraph 18.2.2.e.2, a leak is detected.

18.2.3. Any pump that is designated, as described in section 30 and 40CFR § 60.5421c(b)(12), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the requirements of subsection 18.2 and subdivisions 18.2.1 and 18.2.2 if the pump:

18.2.3.a. Has no externally actuated shaft penetrating the pump housing;

18.2.3.b. Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background as measured by the methods specified in section 21 and 40CFR § 60.5406c; and

18.2.3.c. Is tested for compliance with paragraph 18.2.3.b initially upon designation, annually, and at other times requested by the Secretary.

18.2.4. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process, fuel gas system, or a control device that complies with the requirements of subsection 18.5, it is exempt from subsection 18.2 introductory text, subdivisions 18.2.1 through 18.2.3, and the repair requirements of subsection 18.9.

18.2.5. Any pump that is designated, as described in section 30 and 40CFR § 60.5421c(b)(13), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of 18.2 introductory text, subdivision 18.2.1, and paragraph 18.2.2.d and 18.2.2.e if the conditions in paragraphs 18.2.5.a and 18.2.5.b are met.

18.2.5.a. The owner or operator demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection 18.2; and

18.2.5.b. The owner or operator has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, and not more frequently than the periodic monitoring schedule otherwise applicable, and the owner or operator repairs the equipment according to the procedures in subsection 18.9 if a leak is detected.

18.2.6. Any pump located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirements in subdivisions 18.2.1 and 18.2.4, and the daily requirements of subdivision 18.2.5, provided that each pump is visually inspected as often as practicable and at least monthly.

18.3. Pressure relief devices in gas/vapor service. The owner or operator shall monitor each pressure relief device quarterly using the methods specified in section 21 and 40CFR § 60.5406c. A leak is defined as an instrument reading of 500 ppmv or greater above background.

18.3.1. In addition to the requirements in subsection 18.3, after each pressure release, the owner or operator shall monitor each pressure relief device within 5 calendar days after each pressure release to detect leaks. A leak is detected if an instrument reading of 500 ppmv or greater is provided using the methods specified in section 21 and 40CFR § 60.5406c(b).

18.3.2. Any pressure relief device located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are onsite, or within 30 calendar days after a pressure release, whichever is sooner, instead of within 5 calendar days as specified in subdivision 18.3.1.

18.3.3. No pressure relief device described in subdivision 18.3.2 may be allowed to operate for more than 30 calendar days after a pressure release without monitoring.

18.3.4. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in subsection 18.5 is exempt from the requirements of subsection 18.3 introductory text and subdivision 18.3.1.

18.3.5. Pressure relief devices equipped with a rupture disk are exempt from the requirements of subdivisions 18.3.1 and 18.3.2 provided the owner or operator installs a new rupture disk upstream of the pressure relief device as soon as practicable, and no later than 5 calendar days after each pressure release, except as provided in 18.9.6.

18.4. Open-ended valves or lines. Each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve, except as provided in subdivision 18.4.4 and 18.4.5. The cap, blind flange, plug, or second valve shall seal the open end of the valve or line at all times except during operations requiring process fluid flow through the open-ended valve or line.

18.4.1. If evidence of a leak is found at any time by AVO, or any other detection method, a leak is detected and the owner or operator shall be repaired in accordance with subsection 18.9. A leak is defined as an instrument reading of 500 ppmv or greater if Method 21 of appendix A-7 to 40CFR60 is used.

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

18.4.3. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves and shall remain closed at all other times.

18.4.4. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of subsection 18.4 and subdivisions 18.4.1 through 18.4.3.

18.4.5. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block-and-bleed system as specified in subsection 18.4 introductory text and subdivisions 18.4.2 and 18.4.3 are exempt from the requirements of subsection 18.4.

18.5. Closed vent systems and control devices. Owners or operators of closed vent systems used to comply with the equipment leak provisions of section 18 shall comply with the requirements in sections 23 and 27 and 40CFR §§ 60.5411c and 60.5416c. Owners or operators of control devices used to comply with the equipment leak provisions of section 18 shall comply with the requirements in sections 24, 26, and 28 and 40CFR §§ 60.5412c, 60.5415c(e), and 60.5417c.

18.6. Valves in gas/vapor and light liquid service. The owner or operator shall monitor each valve in gas/vapor and in light liquid service quarterly to detect leaks by the methods specified in section 21 and 40CFR § 60.5406c, except as provided in subdivisions 18.6.3 through 18.6.5.

18.6.1. A valve that begins operation in gas/vapor service or in light liquid service after the initial startup date for the process unit shall be monitored for the first time within 90 days after the end of its startup period to ensure proper installation, except for a valve that replaces a leaking valve and except as provided in subdivisions18.6.3 through 18.6.5.

18.6.2. The owner or operator shall repair each leaking valve according to the requirements in subsection 18.9. An instrument reading of 500 ppmv or greater is a leak.

18.6.3. Any valve that is designated, as described in section 30 and 40CFR § 60.5421c(b)(12), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the monitoring requirements of subsection 18.6 if the valve:

18.6.3.a. Has no externally actuating mechanism in contact with the process fluid;

18.6.3.b. Is operated with emissions less than 500 ppmv above background as determined by the methods specified in section 21 and 40CFR § 60.5406c; and

18.6.3.c. Is tested for compliance with paragraph 18.6.3.b initially upon designation, annually, and at other times requested by the Secretary.

18.6.4. Any valve that is designated, as described in section 30 and 40CFR § 60.5421c(b)(13), as an unsafe-to-monitor valve is exempt from the monitoring requirements of subsection 18.6 if the requirements in paragraphs 18.6.4.a and 18.6.4.b are met.

18.6.4.a. The owner or operator shall demonstrate that the valve is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection 18.6; and

18.6.4.b. The owner or operator has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times, and not more frequently than the periodic monitoring schedule otherwise applicable, and the owner or operator shall repair the equipment according to the procedures in subsection 18.9 if a leak is detected.

18.6.5. Any valve that is designated, as described in section 30 and 40CFR § 60.5421c(b)(14), as a diffcult-to-monitor valve is exempt from the monitoring requirements of subsection 18.6 if the requirements in paragraph 18.6.5.a through 18.6.5.c are met.

18.6.5.a. The owner or operator shall demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

18.6.5.b. The process unit within which the valve is located has less than 3.0 % of its total number of valves designated as difficult-to-monitor.

18.6.5.c. The owner or operator has a written plan that requires monitoring at least once per calendar year.

18.7. Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service. If evidence of a potential leak is found at any time by AVO, or any other detection method, the owner or operator shall comply with either subdivision 18.7.1 or 18.7.2.

18.7.1. The owner or operator shall monitor the equipment within 5 calendar days by the method specified in 40CFR § 60.5406c and repair any leaks detected according to subsection 18.9. An instrument reading of 10,000 ppmv or greater is defined as a leak.

18.7.2. The owner or operator shall designate the AVO, or other indication of a leak as a leak and repair the leak according to subsection 18.9.

18.8. Connectors in gas/vapor service and in light liquid service. The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

18.8.1. The owner or operator shall monitor all connectors in gas/vapor service and in light liquid service annually, except as provided in subsection 18.5 or subdivision 18.8.2.

18.8.2. Any connector that is designated, as described in section 30 and 40CFR § 60.5421c(b)(13), as an unsafe-to-monitor connector is exempt from the requirements of subsection 18.8 and subdivision 18.8.1 if the requirements of paragraphs 18.8.2.a and 18.8.2.b are met.

18.8.2.a. The owner or operator demonstrates the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection 18.8 and subdivision 18.8.1; and

18.8.2.b. The owner or operator has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor times, and not more frequently than the periodic monitoring schedule otherwise applicable and repairs the equipment according to the procedures in subsection 18.9 if a leak is detected.

18.8.3. Inaccessible, ceramic, or ceramic-line connectors.

18.8.3.a. Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of subsection 18.8 and subdivision 18.8.1, from the leak repair requirements of subsection 18.9, and from the recordkeeping and reporting requirements of section 30 and 31 and 40CFR §§ 60.5421c and 60.5422c. An inaccessible connector is one that meets any of the specifications in subparagraphs 18.8.3.a.1 through 18.3.3.a.6, as applicable.

18.8.3.a.1. Buried.

18.8.3.a.2. Insulated in a manner that prevents access to the connector by a monitor probe.

18.8.3.a.3. Obstructed by equipment or piping that prevents access to the connector by a monitor probe.

18.8.3.a.4. Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground.

18.8.3.a.5. Inaccessible because it would require elevating monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold.

18.8.3.a.6. Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines or would risk damage to equipment.

18.8.3.b. If any inaccessible, ceramic, or ceramic-lined connector is observed by AVO, or other means to be leaking, the indications of a leak to the atmosphere by AVO or other means shall be eliminated as soon as practicable.

18.8.4. Connectors which are part of an instrumentation systems and inaccessible, ceramic, or ceramic- lined connectors meeting the provisions of paragraph (h)(3) of this section, are not subject to the recordkeeping requirements of section 30 and 40CFR § 60.5421c(b)(1).

18.9. Repair requirements. When a leak is detected, the owner or operator shall comply with the requirements of subdivisions 18.9.1 through 18.9.5, except as provided in subdivision 18.9.6.

18.9.1. A weatherproof and readily visible identification tag, marked with the equipment identification number, shall be attached to the leaking equipment. The identification tag on the equipment may be removed after it has been repaired.

18.9.2. A first attempt at repair must be made as soon as practicable, but no later than 5 calendar days after the leak is detected.

18.9.2.a. First attempts at repair for pumps in light liquid or heavy liquid service include, but are not limited to, the practices described in subparagraphs 18.9.2.a.1 and 18.9.2.a.2, where practicable.

18.9.2.a.1. Tightening the packing gland nuts.

18.9.2.a.2. Ensuring that the seal flush is operating at design pressure and temperature.

18.9.2.b. For each valve where a leak is detected, the owner or operator shall comply with subparagraphs 18.9.2.b.1, 18.9.2.b.2 or 18.9.2.b.3, and 18.9.2.b.4.

18.9.2.b.1. Repack the existing valve with a low-e packing.

18.9.2.b.2. Replace the existing valve with a low-e valve; or

18.9.2.b.3. Perform a drill and tap repair with a low-e injectable packing.

18.9.2.b.4. An owner or operator is not required to utilize a low-e valve or low-e packing to replace or repack a valve if the owner or operator demonstrates that a low-e valve or low-e packing is not technically feasible. Low-e valve or low-e packing that is not suitable for its intended use is considered to be technically infeasible. Factors that may be considered in determining technical infeasibility include: retrofit requirements for installation (e.g., re- piping or space limitation), commercial unavailability for valve type, or certain instrumentation assemblies.

18.9.3. Repair of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in subdivisions 18.9.4, 18.9.5 and 18.9.6.

18.9.4. If the repair for visual indications of liquids dripping for pumps in light liquid service can be made by eliminating visual indications of liquids dripping, the owner or operator shall make the repair within 5 calendar days of detection.

18.9.5. If the repair for AVO or other indication of a leak for open-ended lines or valves; pumps, valves, or connectors in heavy liquid service; or pressure relief devices in light liquid or heavy liquid service can be made by eliminating the AVO, or other indication of a potential leak, the owner or operator shall make the repair within 5 calendar days of detection.

18.9.6. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 calendar days is technically infeasible without a process unit shutdown or as specified in paragraphs 18.9.6.a through 18.9.6.e. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair shall occur within 15 calendar days after startup of the process unit.

18.9.6.a. Delay of repair of equipment will be allowed for equipment which is isolated from the process, and which does not have the potential to emit methane.

18.9.6.b. Delay of repair for valves and connectors will be allowed if the conditions in subparagraphs 18.9.6.b.1 and 18.9.6.b.2 are met.

18.9.6.b.1. The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

18.9.6.b.2. When repair procedures are conducted, the purged material is collected and destroyed or recovered in a control device complying with subsection 18.5.

18.9.6.c. Delay of repair for pumps will be allowed if the conditions in subparagraphs 18.9.6.c.1 and 18.9.6.c.2 are met.

18.9.6.c.1. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

18.9.6.c.2. Repair is completed as soon as practicable, and not later than 6 months after the leak was detected.

18.9.6.d. If delay of repair is required to repack or replace the valve, you may use delay of repair. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

18.9.6.e. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring results show no leak remains.

18.10. Initial compliance. The owner or operator shall demonstrate initial compliance with the standards that apply to equipment leaks at onshore natural gas processing plants as required by section 22 and 40CFR § 60.5410c(g).

18.11. Continuous compliance. The owner or operator shall demonstrate continuous compliance with the standards that apply to equipment leaks at onshore natural gas processing plants as required by section 26 and 40CFR § 60.5415c(i).

18.12. Reporting. The owner or operator shall submit reports as specified in section 29 and 31 and 40CFR §§ 60.5420c(b)(1) and (10) through (12), as applicable, and 60.5422c.

18.13. Recordkeeping. The owner or operator shall maintain records as specified in section 29 and 30 and 40CFR §§ 60.5420c(c)(7) and (9) through (12), as applicable, and 60.5421c.

§45-45-19. Exceptions to the standards for process unit equipment designated facilities.

19.1. The owner or operator may comply with the following exceptions to the provisions of subsections 17.1 and 18.1, as applicable.

19.2. Pumps in light liquid service, pressure relief devices in gas/vapor service, valves in gas/vapor and light liquid service, and connectors in gas/vapor service and in light liquid service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas may comply with the exceptions specified in subdivisions 19.2.1 or 19.2.2.

19.2.1. The owner or operator is exempt from bimonthly OGI monitoring as required under subsection 17.2.

19.2.2. The owner or operator is exempt from the routine Method 21 of appendix A-7 to 40CFR60 monitoring requirements of subsections 18.2, 18.3, 18.6, and 18.8, if complying with the alternative standards of section 18.

19.3. Reserved.

19.4. The owner or operator may use the following provisions instead of section 21 and 40CFR § 60.5406c(d):

19.4.1. Equipment is in heavy liquid service if the weight percent evaporated is ≤ 10 % at 150 °Celsius (302 °Fahrenheit) as determined by ASTM D86-96 (incorporated by reference, see 40CFR § 60.17).

19.4.2. Equipment is in light liquid service if the weight percent evaporated is > 10 % at 150 °Celsius (302 °F) as determined by ASTM D86-96 (incorporated by reference, see 40CFR § 60.17).

19.5. Equipment that is in vacuum service, except connectors in gas/vapor and light liquid service, is excluded from the requirements of subsection17.2 through 17.7, if it is identified as required in section 30 and 40CFR § 60.5421c(b)(15). Equipment that is in vacuum service is excluded from the requirements of subsections 18.2 through 18.7 if it is identified as required in section 30 and 40CFR § 60.5421c(b)(15).

19.6. If the owner or operator designates equipment as having the potential to emit methane less than 300 hr/yr, the equipment is excluded from the requirements of subsections 17.2 through 17.7 and 18.2 through 18.8, if it is identified as required in section 30 and 40CFR § 60.5421c(b)(16) and it meets any of the conditions specified in subdivisions 19.6.1 through 19.6.3.

19.6.1. The equipment has the potential to emit methane only during startup and shutdown.

19.6.2. The equipment has the potential to emit methane only during process malfunctions or other emergencies.

19.6.3. The equipment is backup equipment that has the potential to emit methane only when the primary equipment is out of service.

§45-45-20. Test methods and procedures for centrifugal compressor and reciprocating compressor designated facilities.

20.1. Adoption of standards. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5405c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

20.2. General requirements. The owner or operator of centrifugal and reciprocating compressor designated facilities shall comply with the applicable requirements of 40CFR § 60.5405c as required by sections 1 through 19 of 45CSR45.

§45-45-21. Test methods and procedures for process unit equipment designated facilities.

21.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5406c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

21.2. General requirements. The owner or operator of process unit equipment designated facility shall comply with the applicable requirements of 40CFR § 60.5406c as required by sections 1 through 19 of 45CSR45.

§45-45-22. Initial compliance requirements for each designated facility.

22.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5410c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

22.2. General requirements. The owner or operator of each designated facility shall comply with the applicable requirements of 40CFR § 60.5410c as required by sections 1 through 19 of 45CSR45.

§45-45-23. Additional initial compliance requirements for covers and closed vent systems.

23.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5411c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

23.2. General requirements. The owner or operator of covers and closed vent systems shall comply with the applicable requirements of 40CFR § 60.5411c as required by sections 1 through 19 of 45CSR45.

§45-45-24. Additional initial compliance requirements for control devices.

24.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5412c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

24.2. General requirements. The owner or operator of each designated facility using a control device shall comply with the applicable requirements of 40CFR § 60.5412c as required by sections 1 through 19 of 45CSR45.

§45-45-25. Performance testing procedures for control devices.

25.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5413c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

25.2. General requirements. The owner or operator of each designated facility using a control device shall comply with the applicable requirements of 40CFR § 60.5413c as required by sections 1 through 19 and section 24 of 45CSR45.

§45-45-26. Continuous Compliance requirements for each designated facility.

26.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5415c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

26.2. General requirements. The owner or operator of each designated facility shall demonstrate continuous compliance with the standards for each designated facility by complying with the applicable requirements of 40CFR § 60.5415c as required by sections 1 through 19 of 45CSR45.

§45-45-27. Initial and continuous cover and closed vent system inspection and monitoring requirements.

27.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5416c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

27.2. General requirements. The owner or operator of each cover and closed vent system at each well, centrifugal compressor, reciprocating compressor, process controller, pump, storage vessel, and process unit equipment designated facility shall comply with the applicable initial and continuous inspection and monitoring requirements of 40CFR § 60.5416c as required by sections 1 through 19 of 45CSR45.

§45-45-28. Continuous monitoring requirements for control devices.

28.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5417c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

28.2. General requirements. The owner or operator of each control device used to meet emission standards for each well, centrifugal compressor, reciprocating compressor, process controller, pump, storage vessel, and process unit equipment designated facility shall comply with the applicable requirements of 40CFR § 60.5417c to demonstrate continuous compliance, as required by sections 1 through 19 of 45CSR45.

§45-45-29. Notification, reporting, and recordkeeping requirements.

29.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5420c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

29.2. General requirements. The owner or operator of each designated facility shall comply with the applicable notification, reporting, and recordkeeping requirements of 40CFR § 60.5420c as required by sections 1 through 19 of 45CSR45.

§45-45-30. Additional recordkeeping requirements for process unit equipment designated facilities.

30.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5421c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

30.2. General requirements. The owner or operator of each process unit equipment designated facility shall comply with the applicable recordkeeping requirements of 40CFR § 60.5421c as required by sections 1 through 19 of 45CSR45.

§45-45-31. Additional reporting requirements for process unit equipment designated facilities.

31.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5422c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

31.2. General requirements. The owner or operator of each process unit equipment designated facility shall comply with the applicable reporting requirements of 40CFR § 60.5422c as required by sections 1 through 19 and section 29 of 45CSR45.

§45-45-32. Additional recordkeeping and reporting requirements for complying with alternative standards for fugitive emissions components designated facilities and covers and closed vent systems.

32.1. The Secretary hereby adopts and incorporates by reference the provisions of 40CFR § 60.5424c, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

32.2. General requirements. Each owner or operator complying with alternative standards for fugitive emissions components designated facilities and covers and closed vent systems shall comply with the applicable reporting requirements of 40CFR § 60.5424c as required by sections 1 through 19 of 45CSR45.

§45-45-33. General provisions.

33.1. The Secretary hereby adopts and incorporates by reference the applicable general provisions to 40CFR60, subpart OOOOc identified in Table 45-45D, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60, effective June 1, 2025 for the purpose of implementing the standards of performance and federal emission guidelines from existing designated facilities in the crude oil and natural gas source category which commenced construction, modification, or reconstruction on or before December 6, 2022.

33.2. General provisions. The owner or operator shall comply with the applicable general provisions to 40CFR60, subpart OOOOc identified in Table 45-45D.

§45-45-34. Secretary.

34.1. Any and all references in 40CFR60, subpart OOOOc to "the Administrator" are amended to be the "Secretary", except in the following references, which shall remain "Administrator" and where the authority is not delegated to the state:

34.1.1. Approval of alternatives to the emission limits and standards in Tables 45-45A, 45-45B, and 45-45C and operating limits established under section 24, 26, or 28 and 40CFR §§ 60.5412c, 60.5415c, or § 60.5417c;

34.1.2. Approval of major alternatives to test methods;

34.1.3. Approval of major alternatives to monitoring;

34.1.4. Approval of major alternatives to recordkeeping and reporting;

34.1.5. Approval of an alternative to any electronic reporting required by this subpart;

34.1.6. Reserved;

34.1.7. Reserved;

34.1.8. Performance test and data reduction waivers under 40 CFR § 60.8(b); or

34.1.9. Where the context of the regulation clearly requires otherwise.

§45-45-35. Permits.

35.1. Nothing contained in the adoption by reference shall be construed or inferred to mean that permit requirements in accordance with applicable rules shall be in any way be limited or inapplicable.

§45-45-36. Inconsistency between rules.

36.1 In the event of any inconsistency between this rule and any other rule of the Division of Air Quality, the inconsistency shall be resolved by the determination of the Secretary, and the determination shall be based upon the application of the more stringent provision, term, condition, method or rule.

§45-45-37. Severability.

37.1. Each of the provisions of 40CFR60 including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60 and adopted and incorporated by reference under subsection 3.1 are severable.

37.2. In the event any provisions of 40CFR60 including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40CFR60 and adopted and incorporated by reference under subsection 3.1 is withdrawn by the U.S. EPA, is invalidated by a court of competent jurisdiction in a final action after the last appeal deadline, and/or is invalidated by an act of the United States Congress, such provision is severed from 45CSR45 after the effective date of the withdrawal or invalidation and is no longer adopted and incorporated by reference under subsection 3.1.

37.3. In the event any provisions are severed pursuant to subsection 37.2, the Secretary may terminate any permit or section of an existing permit issued pursuant to 45CSR13, 45CSR14, 45CSR19, and 45CSR30 to address, and limited to, the affected severed provisions.

37.4. In the event any provision is severed in accordance with subsection 37.2, the Secretary shall publicly identify the severed provisions which are no longer adopted and incorporated by reference.

Table 45-45A
Designated Facility and Standards of Performance Sections

Designated Facility	Standards of Performance Section
Super Emitter Events	§45-45-7
Wells	a. Gas wells liquids unloading events—§45-45-8 b. Associated gas wells—§45-45-9
Centrifugal Compressors	§45-45-10
Reciprocating Compressors	§45-45-11
Process Controllers	§45-45-12
Pumps	§45-45-13
Storage Vessels	§45-45-14
Fugitive Emissions Components	a. Primary standards—§45-45-15 b. Alternative standards for fugitive emissions components and covers and closed vent systems—§45-45-16
Process Unit Equipment	a. Onshore natural gas processing plants—§45-45-17 b. Process unit equipment alternative standards—§45-45-18 c. Process unit equipment requirement exceptions—§45-45-19

Table 45-45B
Alternative Technology Periodic Screening Frequency at Well Sites, Centralized Production Facilities, and Compressor Stations Subject to AVO Inspections with Quarterly OGI or EPA Method 21 Monitoring

Minimum screening frequency	Minimum detection threshold of screening technology (kg/hr)*
Quarterly	≤1
Bimonthly	≤2
Bimonthly + Annual OGI	≤10
Monthly	≤5
Monthly + Annual OGI	≤15
* Based on a probability of detection of 90%.	

Table 45-45C
Alternative Technology Periodic Screening Frequency at Well Sites and Centralized Production Facilities Subject to AVO Inspections and/or Semiannual OGI or EPA Method 21 Monitoring

Minimum screening frequency	Minimum detection threshold of screening technology (kg/hr)*
Semiannual	≤1
Triannual	≤2
Triannual + Annual OGI	≤10
Quarterly	≤5
Quarterly + Annual OGI	≤15
Bimonthly	≤15
* Based on a probability of detection of 90%.	

Table 45-45D
Applicability of General Provisions to 40CFR60 subpart OOOOc

General provisions citation	Subject of citation	Applies to subpart and 45CSR45?	Explanation
§ 60.1	General applicability of the General Provisions	Yes	
§ 60.2	Definitions	Yes	Additional terms defined in § 60.5430c.
§ 60.3	Units and abbreviations	Yes	
§ 60.4	Address	Yes	
§ 60.5	Determination of construction or modification	Yes	
§ 60.6	Review of plans	Yes	
§ 60.7	Notification and record keeping	Yes	Except that § 60.7 only applies as specified in 40CFR §§ 60.5417c(c) and 60.5420c(a).
§ 60.8	Performance tests	Yes	Except that the format and submittal of performance test reports is described in 40CFR § 60.5420c(b) and (d). Performance testing is required for control devices used on wells, storage vessels, centrifugal compressors, reciprocating compressors, process controllers, and pumps, as applicable, except that performance testing is not required for a control device used solely on pump(s).
§ 60.9	Availability of information	Yes	
§ 60.10	State authority	Yes	
§ 60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart OOOOc.
§ 60.12	Circumvention	Yes	
§ 60.13	Monitoring requirements	Yes	Continuous monitors are required for storage vessels
§ 60.14	Modification	Yes	To the extent any provision in § 60.14 conflicts with specific provisions in 40CFR60, subpart OOOOc and 45CSR45, it is superseded by 40CFR60, subpart OOOOc provisions and 45CSR45.
§ 60.15	Reconstruction	Yes	Except that § 60.15(d) does not apply to wells (i.e., well completions, well liquids unloading, associated gas wells), process controllers, pumps, centrifugal compressors, reciprocating compressors, storage vessels, or fugitive emissions components designated facilities.
§ 60.16	Priority list	Yes	
§ 60.17	Incorporations by reference	Yes	

§ 60.18	General control device and work practice requirements	Yes	
§ 60.19	General notification and reporting requirement	Yes	