

Subpart KKK—Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants.

SOURCE: 50 FR 26124, June 24, 1985, unless otherwise noted.

§ 60.630 Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities in onshore natural gas processing plants.

(2) A compressor in VOC service or in wet gas service is an affected facility.

(3) The group of all equipment except compressors (defined in § 60.631) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, is subject to the requirements of this subpart.

(c) Addition or replacement of equipment (defined in § 60.631) for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d) Facilities covered by subpart VV or subpart GGG of 40 CFR part 60 are excluded from this subpart.

(e) A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of this subpart.

§ 60.631 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, in subpart A or subpart VV of part 60; and the following terms shall have the specific meanings given them.

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

Equipment means each pump, pressure relief device, open-ended valve or line, valve, compressor, and flange or other connector that is in VOC service

or in wet gas service, and any device or system required by this subpart.

Field gas means feedstock gas entering the natural gas processing plant.

In light liquid service means that the piece of equipment contains a liquid that meets the conditions specified in § 60.485(e) or § 60.633(h)(2).

In wet gas service means that a piece of equipment contains or contacts the field gas before the extraction step in the process.

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

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.

Nonfractionating plant means any gas plant that does not fractionate mixed natural gas liquids into natural gas products.

Onshore means all facilities except those that are located in the territorial seas or on the outer continental shelf.

Process unit means equipment 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.

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

§ 60.632 Standards.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§ 60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in § 60.633, as soon as practicable, but no later than 180 days after initial start-up.

(b) An owner or operator may elect to comply with the requirements of §§ 60.483-1 and 60.483-2.

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(c) An owner or operator may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of § 60.634 of this subpart.

(d) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of § 60.485 except as provided in § 60.633(f) of this subpart.

(e) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §§ 60.486 and 60.487 except as provided in §§ 60.633, 60.635, and 60.636 of this subpart.

(f) An owner or operator shall use the following provision instead of § 60.485(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-63, 77, or 93, E168-67, 77, or 92, or E260-73, 91, or 96 (incorporated by reference as specified in § 60.17) shall be used.

[50 FR 26124, June 24, 1985, as amended at 65 FR 61773, Oct. 17, 2000]

§ 60.633 Exceptions.

(a) Each owner or operator subject to the provisions of this subpart may comply with the following exceptions to the provisions of subpart VV.

(b)(1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in § 60.485(b) except as provided in § 60.632(c), paragraph

(b)(4) of this section, and § 60.482-4 (a) through (c) of subpart VV.

(2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(3)(i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in § 60.482-9.

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

(4)(i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by nonplant personnel may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days as specified in paragraph (b)(1) of this section and § 60.482-4(b)(1) of subpart VV.

(ii) No pressure relief device described in paragraph (b)(4)(i) of this section shall be allowed to operate for more than 30 days after a pressure release without monitoring.

(c) Sampling connection systems are exempt from the requirements of § 60.482-5.

(d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§ 60.482-2(a)(1) and 60.482-7(a), and paragraph (b)(1) of this section.

(e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§ 60.482-2(a)(1), 60.482-7(a), and paragraph (b)(1) of this section.

(f) Reciprocating compressors in wet gas service are exempt from the compressor control requirements of § 60.482-3.

(g) Flares used to comply with this subpart shall comply with the requirements of § 60.18.

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(h) An owner or operator may use the following provisions instead of § 60.485(e):

(1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in § 60.17).

(2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in § 60.17).

[50 FR 26124, June 24, 1985, as amended at 51 FR 2702, Jan. 21, 1986; 65 FR 61773, Oct. 17, 2000]

§ 60.634 Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the FEDERAL REGISTER a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

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

(c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.

(d) The Administrator will treat applications under this section according to the following criteria, except in cases where he concludes that other criteria are appropriate:

(1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.

(2) If the applicant is an owner or operator of an affected facility, he must commit in writing to operate and maintain the alternative means so as

to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

§ 60.635 Recordkeeping requirements.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of § 60.486.

(b) The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of § 60.633(b)(1) of this subpart.

(1) When each leak is detected as specified in § 60.633(b)(2), a weather-proof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.

(2) When each leak is detected as specified in § 60.633(b)(2), the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(i) The instrument and operator identification numbers and the equipment identification number.

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

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

(iv) "Above 10,000 ppm" if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 10,000 ppm or greater.

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

(vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.

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

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(x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of § 60.482-4(a). The designation of equipment subject to the provisions of § 60.482-4(a) shall be signed by the owner or operator.

(c) An owner or operator shall comply with the following requirement in addition to the requirement of § 60.486(j): Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in § 60.633(f) shall be recorded in a log that is kept in a readily accessible location.

§ 60.636 Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of § 60.487.

(b) An owner or operator shall include the following information in the initial semiannual report in addition to the information required in § 60.487(b)(1)—(4): Number of pressure relief devices subject to the requirements of § 60.633(b) except for those pressure relief devices designated for no detectable emissions under the provisions of § 60.482-4(a) and those pressure relief devices complying with § 60.482-4(c).

(c) An owner or operator shall include the following information in all semiannual reports in addition to the information required in § 60.487(c)(2) (i) through (vi):

(1) Number of pressure relief devices for which leaks were detected as required in § 60.633(b)(2) and

(2) Number of pressure relief devices for which leaks were not repaired as required in § 60.633(b)(3).

Subpart LLL—Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions

SOURCE: 50 FR 40160, Oct. 1, 1985, unless otherwise noted.

§ 60.640 Applicability and designation of affected facilities.

(a) The provisions of this subpart are applicable to the following affected facilities that process natural gas: each

sweetening unit, and each sweetening unit followed by a sulfur recovery unit.

(b) Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H₂S) in the acid gas (expressed as sulfur) are required to comply with § 60.647(c) but are not required to comply with §§ 60.642 through 60.646.

(c) The provisions of this subpart are applicable to facilities located on land and include facilities located onshore which process natural gas produced from either onshore or offshore wells.

(d) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section which commences construction or modification after January 20, 1984.

(e) The provisions of this subpart do not apply to sweetening facilities producing acid gas that is completely re-injected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere.

§ 60.641 Definitions.

All terms used in this subpart not defined below are given the meaning in the Act and in subpart A of this part.

Acid gas means a gas stream of hydrogen sulfide (H₂S) and carbon dioxide (CO₂) that has been separated from sour natural gas by a sweetening unit.

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

Onshore means all facilities except those that are located in the territorial seas or on the outercontinental shelf.

Reduced sulfur compounds means H₂S, carbonyl sulfide (COS), and carbon disulfide (CS₂).

Sulfur production rate means the rate of liquid sulfur accumulation from the sulfur recovery unit.

Sulfur recovery unit means a process device that recovers element sulfur from acid gas.

Sweetening unit means a process device that separates the H₂S and CO₂ contents from the sour natural gas stream.

Total SO₂ equivalents means the sum of volumetric or mass concentrations of the sulfur compounds obtained by