Florida Department of Environmental Protection

Northwest District
160 W. Government Street, Suite 308
Pensacola, Florida 32502-5740

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Secretary

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

Quantum Resources Management, LLC
5 Houston Center
1401 McKinney Street, Suite 2700
Houston, Texas 77010

Authorized Representative:
Mr. Scott Crump, Manager E & P Services

Air Permit No. 1130005-015-AC
Permit Expires: April 19, 2015

St Regis Gas Treatment Facility & Jay Gas Plant
Title V Source Air Construction Permit
Natural Gas Liquids Fractionation Unit Project

This is the final air construction permit, which authorizes construction of a skid mounted Natural Gas Liquids Fractionation Unit, operation of existing Jay Hot Oil Heater (EU 042), and increases throughput of two 630,000 gallon fixed roof processed crude oil Storage Tanks. The proposed work will be conducted at the St. Regis Gas Treatment Facility & Jay Gas Plant, which is Crude Petroleum and Natural Gas (Standard Industrial Classification No. 1311). The facility is located in Santa Rosa County at 5415 Oil Plant Road in Jay, Florida. The UTM coordinates are Zone 17, 482.8km East and 3425.6 km North; and, Latitude: 30°52'45" North and Longitude: 87° 10' 45" West. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C., and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Pensacola, Florida

/s/

_____

J. Charles Harp
Program Administrator
Waste Management/Air Resources

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on _____April 19, 2013_____ to the persons listed below.

Scott Crump, QRM, scrump@qracq.com
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FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

/s/_____April 19, 2013_____
Clerk Date

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This facility consists of sulfur recovery plants, oil and gas treating including natural gas dehydration and tri-ethylene glycol (TEG) regeneration, saltwater disposal, processed crude oil storage tanks, and tertiary recovery.

Two Sulfur Recovery Plants (J2 and J3) (EU 034), control sulfur emissions from the production and treating of sour crude oil and gas from the Jay Oil Field. Acid gas containing H_2S from oil and gas production is oxidized and reacted to form elemental sulfur by a multi stage Claus process. A minimum of 96% of the H_2S is recovered as elemental sulfur. Unconverted H_2S is thermally oxidized to SO_2 prior to discharge.

The Primary Emergency Flare (FL01) (EU 035) has continuous feed and purge streams with a 26.0 M cubic feet per hour pilot and the Saltwater Disposal System Flare (FL02) (EU 035) has continuous feed streams and a 0.5 M cubic feet per hour pilot stream. SO_2 emissions are controlled by a smokeless flare tip on each flare with a manual eductor gas system.

A Centaur turbine (EU 037) is located at the Jay Central Saltwater Disposal Facility (JCSWD). This is a 3,600 HP turbine operating on natural gas.

A recompressor 4-stroke rich-burn Engine (EU 038) and five 1,000 HP Ingersoll-Rand Recompressor Engines (EU 044) each with a maximum heat input rate of 11.6 MMBtu per hour are all equipped with catalytic converters. The catalytic converters reduce the exhaust concentration of formaldehyde.

Sulfur Storage Pits (Jay 2 and Jay 3) (EU 039) are used to store molten sulfur. Loading racks transfer the molten sulfur to tanker trucks.

A Glycol Reboiler Vent (EU 048) controls HAP and VOC emissions with an air-cooled condenser. Wet natural gas and dry tri-ethylene glycol (TEG) are contacted in a packed contactor tower to remove water from the natural gas. TEG is regenerated by heating and vaporizing the water content as steam in the TEG reboiler. Dried TEG is reused in the contactor tower, while the vapor is condensed to recover organics. The vent stream is combusted in the flame-zone of the TEG reboiler process heater with a venturi burner.

Various gas fired Process Heaters (Jay 2 and Jay 3 Process Heater, Jay 2 and Jay 3 Stabilizer Bottom Heaters and Jay plant hot oil heater) (EU 040, 041 and 042, respectively) are used throughout the facility. Jay 2 and Jay 3 Process Heaters each have a maximum heat input rate of 56.7 MMBtu per hour. Jay 2 and Jay 3 Stabilizer Bottom Heaters each have a maximum heat input rate of 28.4 MMBtu per hour. The Jay Plant Hot Oil Heater has a maximum heat input rate of 55.65 MMBtu per hour.

A 5,000 HP Cooper-Bessemer Engine (EU 045) has a maximum heat input rate of 42.0 MMBtu per hour using natural gas. A 2,500 HP Cooper-Bessemer Engines (EU 046) has a maximum heat input rate of 42.0 MMBtu per hour using natural gas.

A 14,300 HP (South) Water Flood Gas Turbine (EU 050) is natural gas-fired.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Facility ID No. 1130005	
ID No.	**Emission Unit Description**

034	Sulfur Recovery Plants J2 and J3
035	Flares FL01 and FL02
037	JCSWD Solar Centaur Turbine Subject to 40 CFR 60 Subpart GG
038	Recompressor Engine with Catalytic Converter
039	Sulfur Pits
048	TEG Reboiler subject to 40 CFR 63 Subpart HH
040	Jay 2 and 3 Process Heaters - 56.7 MMBtu per hour each heater
041	Jay 2 and 3 Stabilizer Bottom Heaters - 28.4 MMBtu per hour each heater
042	Jay Plant Hot Oil Heater - 55.65 MMBtu per hour
044	Five 1,000 HP natural gas fired Ingersol Rand Compressor Engines with Catalytic Converters - 11.6 MMBtu per hour heat input
045	(1) - 5,000 HP natural gas fired Cooper Bessemer "A" Engine - 42.0 MMBtu per hour heat input with "Clean Burn" Combustion Technology
046	(1) - 2,500 HP natural gas fired Cooper Bessemer "B" Engine - 21.0 MMBtu per hour heat input
050	14,300 HP (South) Water Flood Gas Turbine
	UNREGULATED EMISSIONS UNITS and/or ACTIVITIES
043	14,300 HP (North Water Flood Gas Turbine
047	(2) - 630,000 gallon fixed roof processed crude oil Storage Tanks
049	Fugitive emissions

Proposed Project

This project is for the construction of a Natural Gas Liquids Fractionation Unit to fractionate natural gas liquids produced from the Jay Oil Field DE-C2 Tower into propane, butane and natural gasoline. Natural gas coming directly from a well contains many natural gas liquids (NGLs) that are commonly removed. NGLs include ethane, propane, butane, iso-butane, and natural gasoline. There are two basic steps to the treatment of natural gas liquids in the natural gas stream. First, the liquids must be extracted from the natural gas. Second, these natural gas liquids must be separated themselves, down to their base components.

The skid mounted Natural Gas Liquids Fractionation Unit consists of a depropanizer, a debutanizer, accumulators (propane and debutanizer), condensers (propane and butane), reboilers (depropanizer and debutanizer), pumps (depropanizer reflux and debutanizer reflux) and an R-G cooler. A molecular sieve helps purify gas going to the fractionation unit by removing sulfur compounds. Propane and butane not meeting sales specifications are recyled by use of an off-spec pressurized gas vessel. Natural gas from the Natural Gas Liquids Fractionation Unit is returned to the field to aid in further oil recovery. Propane, butane and natural gasoline are temporarily stored on-site for off-site sales. The natural gasoline produced will be sent to two existing 630,000 gallon crude oil storage tanks to be mixed with processed crude.

The Jay Plant Hot Oil Heater (EU 042), which has not operated since 2008, will be restarted to supply heat to the Natural Gas Liquids Fractionation Unit. Eleven new insignificant emissions units and/or activities are added and two removed. This project will add or modify the following emissions units.

Facility ID No. 1130005	
ID No.	**Emission Unit Description**
052	Natural Gas Liquids Fractionation Unit - skid mounted
042	Jay Plant Hot Oil Heater - 55.65 MMBtu per hour

	UNREGULATED EMISSIONS UNITS
047	(2) - 630,000 gallon fixed roof processed crude oil Storage Tanks

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northwest District Waste Management/Air Resources Program, Florida Department of Environmental Protection (Department). The District's mailing address is 160 W Government Street, Suite 308, Pensacola, Florida 32502-5740. All documents related to applications for permits to operate an emissions unit shall be submitted to the District Office.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the District Office at the above address or nwdair@dep.state.fl.us

3. Appendices: The following Appendices are attached as part of this permit:

    a. Appendix A. Citation Formats and Glossary of Common Terms;

    b. Appendix B. General Conditions;

    c. Appendix C. Common Conditions; and

    d. Appendix D. Common Testing Requirements.

    e. Appendix Insignificant EU's

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. Asbestos: This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source. [40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

8. Source Obligation:

    (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

    (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation)

solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

9. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. You can obtain a permit application form or apply for permit renewal electronically at the following web address: http://www.dep.state.fl.us/air/emission/permitting.htm. [Rules 62-4.030, 62-4.050 and Chapter 62-213, F.A.C.]

A. Fractionation Unit - Skid Mounted

This section of the permit addresses the following emissions unit

ID No.	Emissions Unit Description
052	Natural Gas Liquids Fractionation Unit - skid mounted

This emissions unit fractionates natural gas liquids produced from the Jay Oil Field DE-C2 Tower into propane, butane and natural gasoline. Natural gas coming directly from a well contains many natural gas liquids (NGLs) that are commonly removed. NGLs include ethane, propane, butane, iso-butane, and natural gasoline. There are two basic steps to the treatment of natural gas liquids in the natural gas stream. First, the liquids must be extracted from the natural gas. Second, these natural gas liquids must be separated themselves, down to their base components.

The skid mounted Natural Gas Liquids Fractionation Unit consists of a depropanizer, a debutanizer, accumulators (propane and debutanizer), condensers (propane and butane), reboilers (depropanizer and debutanizer), pumps (depropanizer reflux and debutanizer reflux) and an R-G cooler. A molecular sieve helps purify gas going to the fractionation unit by removing sulfur compounds. Propane and butane not meeting sales specifications are recyled by use of an off-spec pressurized gas vessel. Natural gas from the Natural Gas liquids fractionation unit is returned to the field to aid in further oil recovery. Propane, butane and natural gasoline are temporarily stored on-site for off-site sales. The natural gasoline produced will be sent to two existing 630,000 gallon crude oil storage tanks to be mixed with processed crude.

The following specific conditions apply to the emissions unit(s) listed above:

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

2. New Equipment: Except for the change noted below, the new equipment authorized by this permit shall be subject to the same requirements, such as, but not limited to; emissions standards, recordkeeping, compliance testing and fuels limitations previously established for this emissions unit in all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

EQUIPMENT

3. Natural Gas Liquids Fractionation Unit: The permittee is authorized to install a skid-mounted Natural Gas Liquids Fractionation Unit with a molecular sieve, an off-spec gas pressurized vessel, and ancillary equipment (piping, valves, flanges, pressure relief valves, pumps, etc.). [Application No. 1130005-015-AC]

PERFORMANCE RESTRICTIONS

4. Permitted Capacity: The maximum process rate of the Natural Gas Liquids Fractionation Unit shall not exceed 90 MMscf per day of natural gas liquids. [Rule 62-210.200(PTE), F.A.C.]

5. Restricted Operation: The hours of operation of the Fractionation Unit are not limited (8760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

40 CFR 60 Subpart VVa

6. 40 CFR 60.482-1a - Standards: General

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR 60.482-1a through 60.482-10a or 40 CFR 60.480a(e) for all equipment within 180 days of initial startup.

(b) Compliance with 40 CFR 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485a.

(c) N.A.

(d) Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-2a through 60.482-10a if it is identified as required in 40 CFR 60.486a(e)(5).

7. 40 CFR 60.482-2a - Standards: Pumps in light liquid service.

(a)

(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485a(b), except as provided in 40 CFR 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must 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 40 CFR 60.482-1a(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in 40 CFR 60.482-1a(f).

(b)

(1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

(ii) 2,000 ppm or greater for all other pumps.

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.

(i) Monitor the pump within 5 days as specified in 40 CFR 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.

(c)

(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10a; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

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

(4)

(i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.

(A) Monitor the pump within 5 days as specified in 40 CFR 60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(B) Designate the visual indications of liquids dripping as a leak.

(5)

(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm.

(ii) 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.

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6)

(i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

(e) Any pump that is designated, as described in 40 CFR 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing;

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading

of less than 500 ppm above background as measured by the methods specified in 40 CFR 60.485a(c); and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) 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 or to a fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482-10a, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate
danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

8. <u>40 CFR 60.482-4a - Standards: Pressure relief devices in gas/vapor service</u>

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485a(c).

(b)

(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9a.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR 60.485a(c).

(c) - (d) N.A.

9. <u>40 CFR 60.482-6a - Standards: Open-ended valves or lines</u>

(a)

(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1a(c) and paragraphs (d) and (e) of this section.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) - (e) N.A.

10. <u>40 CFR 60.482-7a - Standards: Valves in gas/vapor service and in light liquid service</u>

(a)

(1) Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in

paragraphs (f), (g), and (h) of this section, 40 CFR 60.482-1a(c) and (f), and 40 CFR 60.483-1a and 60.483-2a.

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, 40 CFR 60.482-1a(c), and 40 CFR 60.483-1a and 60.483-2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the existing valves in the process unit are monitored in accordance with 40 CFR 60.483-1a or 40 CFR 60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in 40 CFR 60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(c)

(1)

(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)

(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9a.

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

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in 40 CFR 60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR 60.485a(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section, and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in 40 CFR 60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either:

(i) Becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 and was constructed on or before January 5, 1981; or

(ii) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

11. <u>40 CFR 60.482-9a - Standards: Delay of repair</u>

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves and connectors will be allowed if:

(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

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10a.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

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

(e) 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.

(f) 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 instrument readings are below the leak definition.

12. <u>40 CFR 60.482-11a - Standards: Connectors in gas/vapor service and in light liquid service</u>

(a) 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.

(b) Except as allowed in 40 CFR 60.482-1a(c), 40 CFR 60.482-10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in 40 CFR 60.485a(b) and, as applicable, 40 CFR 60.485a(c).

(2) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.

(3) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent of leaking connectors within the total monitored connectors.

(C) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:

$$\%C_L = C_L / C_t * 100$$

Where:

$\%C_L$ = Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.
C_L = Number of connectors measured at 500 ppm or greater, by the method specified in 40 CFR 60.485a(b).
C_t = Total number of monitored connectors in the process unit or affected facility.

(d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected.
(e) Any connector that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:

(1) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) and (b) of this section; and
(2) The owner or operator of the connector has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (d) of this section if a leak is detected.

(f) Inaccessible, ceramic, or ceramic-lined connectors

(1) 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 paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of 40 CFR 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable:

(i) Buried;
(ii) Insulated in a manner that prevents access to the connector by a monitor probe;
(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;
(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;
(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; or
(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.

13. <u>40 CFR 60.483-1a - Alternative standards for valves - allowable percentage of valves leaking</u>
(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in 40 CFR 60.487a(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with 40 CFR 60.482-7a(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in 40 CFR 60.485a(b).

(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in 40 CFR 60.485a(h).

14. <u>40 CFR60.483-2a - Alternative standards for valves-skip period leak detection and repair</u>

(a)

(1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in 40 CFR 60.487(d)a.

(b)

(1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in 40 CFR 60.482-7a.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in 40 CFR 60.482-7a but can again elect to use this section.

(5) The percent of valves leaking shall be determined as described in 40 CFR 60.485a(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with 40 CFR 60.482-7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

15. <u>40 CFR 60.484a - Equivalence of means of emission limitation</u>

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

(b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

(2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

(2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

(3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

(5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

(d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(e)

(1) After a request for determination of equivalence is received, the Administrator will publish a notice in the FEDERAL REGISTER and provide the opportunity for public hearing if the Administrator judges that the request may be approved.

(2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the FEDERAL REGISTER.

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f)

(1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

40 CFR 60 Subpart OOOO

16. 40 CFR 60.5400 - What equipment leak standards apply to affected facilities at an onshore natural gas processing plant?

This section applies to the group of all equipment, except compressors, within a process unit.
(a) You must comply with the requirements of 40 CFR 60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in 40 CFR 60.5401.
(b) You may elect to comply with the requirements of 40 CFR 60.483-1a and 60.483-2a, as an alternative.
(c) You 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 according to the requirements of 40 CFR 60.5402 of this subpart.
(d) You must comply with the provisions of 40 CFR 60.485a of this part except as provided in paragraph (f) of this section.
(e) You must comply with the provisions of 40 CFR 60.486a and 60.487a of this part except as provided in 40 CFR 60.5401, 60.5421, and 60.5422 of this part.
(f) You must use the following provision instead of 40 CFR 60.485a(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 E169-93, E168-92, or E260-96 (incorporated by reference as specified in 40 CFR 60.17) must be used.

17. 40 CFR 60.5401 - What are the exceptions to the equipment leak standards for affected facilities at onshore natural gas processing plants?

(a) You may comply with the following exceptions to the provisions of 40 CFR 60.5400(a) and (b).
(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 40 CFR 60.485a(b) except as provided in 40 CFR 60.5400(c) and in paragraph (b)(4) of this section, and 40 CFR 60.482-4a(a) through (c) of Subpart VVa.
(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.
(3)

(i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9a.
(ii) A first attempt at repair must 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 non-plant 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 40 CFR 60.482-4a(b)(1) of subpart VVa.
(ii) No pressure relief device described in paragraph (b)(4)(i) of this section must 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 40 CFR 60.482-5a.
(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 40 CFR 60.482-2a(a)(1) and 60.482-7a(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 40 CFR 60.482-2a(a)(1), 60.482-7a(a), and paragraph (b)(1) of this section.
(f) An owner or operator may use the following provisions instead of 40 CFR 60.485a(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 D86-96 (incorporated by reference as specified in 40 CFR 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 D86-96 (incorporated by reference as specified in 40 CFR 60.17).

(g) An owner or operator may use the following provisions instead of 40 CFR 60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of Appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in 40 CFR 60.486a(e)(8). Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. 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 since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

18. <u>40 CFR 60.5402 - What are the alternative emission limitations for equipment leaks from onshore natural gas processing plants?</u>

(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 must 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 the Administrator 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, the applicant 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.

TESTING REQUIREMENTS

40 CFR 60 Subpart VVa

19. 40 CFR 60.485a - Test methods and procedures

(a) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b).

(b) The owner or operator shall determine compliance with the standards in 40 CFR 60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of Appendix A-7 of this part. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of Appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in 40 CFR 60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. 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 since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

(c) The owner or operator shall determine compliance with the no-detectable-emission standards in 40 CFR 60.482-2a(e), 60.482-3a(i), 60.482-4a, 60.482-7a(f), and 60.482-10a(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 of Appendix A-7 of this part shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Not Applicable. However, compliance must be demonstrated with 40 CFR 60.5400(f).

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d)(1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference - see 40 CFR 60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 of Appendix A-7 of this part shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{max} = K_1 + K_2 H_T$$

Where:

V_{max} = Maximum permitted velocity, m/sec (ft/sec).
H_T = Net heating value of the gas being combusted, MJ/scm (Btu/scf).
K_1 = 8.706 m/sec (metric units) = 28.56 ft/sec (English units).
K_2 = 0.7084 m^4 /(MJ-sec) (metric units) = 0.087 ft^4 /(Btu-sec) (English units).

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

Where:

K = Conversion constant, 1.740×10^{-7} (g-mole)(MJ)/(ppm-scm-kcal) (metric units) = 4.674×10^{-6} [(g-mole)(Btu)/(ppm-scf-kcal)] (English units).
C_i = Concentration of sample component "i," ppm
H_i = net heat of combustion of sample component "i" at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole.

(5) Method 18 of Appendix A-6 of this part or ASTM D6420-99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts

per billion by volume and 100 ppmv) and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference-see 40 CFR 60.17) shall be used to determine the concentration of sample component "i."
(6) ASTM D2382-76 or 88 or D4809-95 (incorporated by reference-see 40 CFR 60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.
(7) Method 2, 2A, 2C, or 2D of Appendix A-7 of this part, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

(h) The owner or operator shall determine compliance with 40 CFR 60.483-1a or 40 CFR 60.483-2a as follows:
(1) The percent of valves leaking shall be determined using the following equation:

$$\%V_L = (V_L / V_T) * 100$$

Where:

$\%V_L$ = Percent leaking valves.
V_L = Number of valves found leaking.
V_T = The sum of the total number of valves monitored.

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.
(3) The number of valves leaking shall include valves for which repair has been delayed.
(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.
(5) If the process unit has been subdivided in accordance with 40 CFR 60.482-7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.
(6) The total number of valves monitored does not include a valve monitored to verify repair.

{Permitting Note: Permittee can use 40 CFR 60.5401(f) instead of 40 CFR 60.485a(e) and 40 CFR 60.5401(g) instead of 40 CFR 60.485a(b)(2).}

40 CFR 60 Subpart OOOO

20. 40 CFR 60.5410 - How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
You must determine initial compliance with the standards for each affected facility using the requirements in paragraph (f) of this section. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year.
(a) - (e) N.A.
(f) For affected facilities at onshore natural gas processing plants, initial compliance with the VOC requirements is demonstrated if you are in compliance with the requirements of 40 CFR 60.5400.
(g) N.A.

MONITORING REQUIREMENTS

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21. 40 CFR 60.5415 - How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?

(a) - (e) N.A.

(f) For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of 40 CFR 60.5400.

(g) N.A.

(h) Affirmative defense for violations of emission standards during malfunction. In response to an action to enforce the standards set forth in 40 CFR 60.5400, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in 40 CFR 60.5420(a), and must prove by a preponderance of evidence that:

(i) The violation:

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

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

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

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

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

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

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

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

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

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

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

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from

the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

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

RECORDS AND REPORTS

40 CFR 60 Subpart VVa

22. 40 CFR 60.486a - Recordkeeping requirements

(a)

(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR60.482-7a(c) and no leak has been detected during those 2 months.

(3) The identification on a connector may be removed after it has been monitored as specified in 40 CFR 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.

(4) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

(c) When each leak is detected as specified in 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

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

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

(4) Maximum instrument reading measured by Method 21 of Appendix A-7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

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

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

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

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

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

(d) N.A.

(e) The following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1a to 60.482-11a shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2)

(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2a(e), 60.482-3a(i), and 60.482-7a(f).

(ii) The designation of equipment as subject to the requirements of 40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i), or 40 CFR 60.482-7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

(3) A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4a.

(4)

(i) The dates of each compliance test as required in 40 CFR 60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with 40 CFR 60.482-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

(7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

(8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of Appendix A-7 of this part and 40 CFR 60.485a(b).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of Appendix A-7 of this part.
(v) Results of each calibration drift assessment required by 40 CFR 60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).
(vi) If an owner or operator makes their own calibration gas, a description of the procedure used.

(9) The connector monitoring schedule for each process unit as specified in 40 CFR 60.482-11a(b)(3)(v).
(10) Records of each release from a pressure relief device subject to 40 CFR 60.482-4a.

(f) The following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7a(g) and (h), all pumps subject to the requirements of 40 CFR 60.482-2a(g), and all connectors subject to the requirements of 40 CFR 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:
(1) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.
(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

(g) The following information shall be recorded for valves complying with 40 CFR 60.483-2a:
(1) A schedule of monitoring.
(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:
(1) Design criterion required in 40 CFR 60.482-2a(d)(5) and 60.482-3a(e)(2) and explanation of the design criterion; and
(2) Any changes to this criterion and the reasons for the changes.

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480a(d):
(1) An analysis demonstrating the design capacity of the affected facility,
(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
(3) An analysis demonstrating that equipment is not in VOC service.

(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) The provisions of 40 CFR 60.7(b) and (d) do not apply to affected facilities subject to this subpart.

Compliance must also be demonstrated with 40 CFR 60.5421(b).

23. <u>40 CFR 60.487a - Reporting requirements</u>

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:
(1) Process unit identification.
(2) Number of valves subject to the requirements of 40 CFR 60.482-7a, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 60.482-7a(f).
(3) Number of pumps subject to the requirements of 40 CFR 60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR 60.482-2a(e) and those pumps complying with 40 CFR 60.482-2a(f).

(4) Number of compressors subject to the requirements of 40 CFR 60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of 40 CFR 0.482-3a(i) and those compressors complying with 40 CFR 60.482-3a(h).

(5) Number of connectors subject to the requirements of 40 CFR 60.482-11a.

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR 60.486a:

(1) N.A.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in 40 CFR 60.482-7a(b) or 40 CFR 60.483-2a,

(ii) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7a(d)(1),

(iii) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2a(c)(1) and (d)(6),

(v) - (vi) N.A.

(vii) Number of connectors for which leaks were detected as described in 40 CFR 60.482-11a(b)

(viii) Number of connectors for which leaks were not repaired as required in 40 CFR 60.482-11a(d), and

(ix)-(x) [Reserved]

(xi) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of 40 CFR 60.483-1a or 60.483-2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

Compliance must also be demonstrated with 40 CFR 60.5422(b) and (c)

40 CFR 60 Subpart OOOO

24. 40 CFR 60.5420 - What are my notification, reporting, and recordkeeping requirements?

(a) You must submit the notifications required in 40 CFR 60.7(a)(1) and (4) if you own or operate one or more of the affected facilities specified in 40 CFR 60.5365 that was constructed, modified, or reconstructed during the reporting period.

(b) Reporting requirements. You must submit annual reports containing the information specified in paragraph (b)(1) of this section to the Administrator. The initial annual report is due 30 days after the end of the initial compliance period as determined according to 40 CFR 60.5410. Subsequent annual reports are due on the same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraph (b)(1) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

(1) The general information specified in paragraphs (b)(1)(i) through (iv) of this section.

(i) The company name and address of the affected facility.

(ii) An identification of each affected facility being included in the annual report.

(iii) Beginning and ending dates of the reporting period.

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

(2) - (6) N.A.

(7)

(i) N.A.

(ii) All reports required by this subpart not subject to the requirements in paragraph (a)(2)(i) of this section must be sent to the Administrator at the appropriate address listed in 40 CFR 63.13 of this part. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (a)(2)(i) and (ii) of this section in paper format.

(c) Recordkeeping requirements. You must maintain the records identified as specified in 40 CFR 60.7(f). All records must be maintained for at least 5 years.

25. <u>40 CFR 60.5421 - What are my additional recordkeeping requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?</u>

(a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of 40 CFR 60.486a.

(b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of 40 CFR 60.5401(b)(1) of this subpart.

(1) When each leak is detected as specified in 40 CFR 60.5401(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must 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 40 CFR 60.5401(b)(2), the following information must 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 500 ppm” if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 500 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.
(x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-4a(a). The designation of equipment subject to the provisions of 40 CFR 60.482-4a(a) must be signed by the owner or operator.

26. 40 CFR 60.5422 - What are my additional reporting requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants***?***

(a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of 40 CFR 60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).
(b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in 40 CFR 60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of 40 CFR 60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of 40 CFR 60.482-4a(a) and those pressure relief devices complying with 40 CFR 60.482-4a(c).
(c) An owner or operator must include the following information in all semiannual reports in addition to the information required in 40 CFR 60.487a(c)(2)(i) through (vi):

(1) Number of pressure relief devices for which leaks were detected as required in 40 CFR 60.5401(b)(2); and
(2) Number of pressure relief devices for which leaks were not repaired as required in 40 CFR 60.5401(b)(3).

B. Jay Plant Hot Oil Heater

This section of the permit addresses the following emissions unit

ID No.	Emissions Unit Description
042	Jay Plant Hot Oil Heater - Started up December 20, 1993.

This emissions unit is the Jay Plant Hot Oil Heater, which has not operated since 2008, and will be restarted to provide heat to the skid-mounted Natural Gas Liquids Fractionation Unit. The heater has a maximum heat input rate of 55.65 MMBtu per hour and burns approximately 481 MMscf per year of pipeline natural gas (mostly methane) with a sulfur content less than 0.1% S by weight. The heater used to burn approximately 465 MMscf per year of field gas. The difference is due to the pipeline natural gas heating value being less than that of field gas because field gas coming directly from a well still contains many natural gas liquids (NGLs) that are commonly removed by NGL Fractionating Units, including ethane, propane, butane, iso-butane, and natural gasoline. These NGL fractions have higher heating values than methane. There are no specific regulations for this emissions unit.

The following specific conditions apply to the emissions unit(s) listed above:

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

2. New Equipment: Except for the change noted below, the new equipment authorized by this permit shall be subject to the same requirements, such as, but not limited to; emissions standards, recordkeeping, compliance testing and fuels limitations previously established for this emissions unit in all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

EQUIPMENT

3. Piping Components: The permittee is authorized to install equipment (piping, flanges, valves, pressure relief valves, pumps, etc.) necessary to connect the Jay Gas Plant Hot Oil Heater to the reboilers of the fractionation unit. [permit application 1130005-015-AC]

C. (2) - 630,000 gallon fixed roof processed crude oil Storage Tanks

This section of the permit addresses the following emissions unit

ID No.	Emissions Unit Description
047	(2) - 630,000 gallon fixed roof processed crude oil Storage Tanks - Started up June 11, 1973

This unregulated emissions unit consists of two 630,000 gallon fixed roof processed crude oil storage tanks. Operation of the skid-mounted fractionation unit increases the throughput to the storage tanks to approximately 69,300,000 gallons per year combined. These tanks were constructed in the early 1970's and pre-date NSPS requirements.

The following specific conditions apply to the emissions unit listed above:

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

2. New Equipment: Except for the change noted below, the new equipment authorized by this permit shall be subject to the same requirements, such as, but not limited to; emissions standards, recordkeeping, compliance testing and fuels limitations previously established for this emissions unit in all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

EQUIPMENT

3. Piping Components: The permittee is authorized to install piping components (piping, flanges, valves, pressure relief valves, pumps, etc.) necessary to connect the fractionation unit to the two fixed roof processed crude oil storage tanks. [permit application 1130005-015-AC]