**DRAFT**

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY**
**AIR QUALITY DIVISION**

**MEMORANDUM** **June 29, 2020**

**TO:** Phillip Fielder, P.E., Chief Engineer

**THROUGH:** Rick Groshong, Sr. Environmental Programs Manager, Compliance and Enforcement

**THROUGH:** Phil Martin, P.E., Engineering Manager, Existing Source Permits Section

**THROUGH:** David Schutz, P.E., New Source Permits Section

**FROM:** Amalia Talty, P.E., New Source Permits Section

**SUBJECT:** Evaluation of Permit Application No**. 2019-1117-TVR2**
MarkWest Oklahoma Gas Company, LLC.
Womack Compressor Station (SIC 4922/NAICS 486210)
Facility ID No.: 6510
Section 11, Township 2N, Range 11E, Coal County, Oklahoma
Latitude: 34.66073°N, Longitude: 96.10997°W
Directions: From Coalgate, OK, drive 9.6 miles north on Hwy 31. Proceed 2 miles east on Lonestar Church Road to Ilbern Road. Turn north on Ilbern Road and follow approximately 0.8 miles, the facility will be on the east side of the road just past E1625 Road.

## SECTION I. INTRODUCTION

MarkWest Oklahoma Gas Company, LLC (MarkWest) has applied for the renewal Title V operating permit for their Womack Compressor Station. The facility is currently operating under Permit No. 2014-1954-TVR (M-2) issued September 28, 2017. The facility is a minor source for Prevention of Significant Deterioration (PSD) and an area source of Hazardous Air Pollutants (HAPs).

With this renewal MarkWest is requesting to update the $NO_X$ and CO flare emissions using current AP-42 emission factors.

Since the facility emits more than 100 TPY of a regulated pollutant, it is subject to Title V permitting requirements. Issuance of this permit will not result in any change in permit status. Pipeline-grade natural gas is the primary fuel with the facility being operated continuously.

## SECTION II. FACILITY DESCRIPTION

The facility is a natural gas transmission station and is responsible for the compression of approximately 84-MMSCFD of natural gas into a pipeline. Natural gas is transported to the facility by a pipeline gathering system. Field gas enters the facility through an inlet separator, where produced water is separated from the gas stream. The gas is compressed, then processed by the two 42-MMSCFD glycol dehydration units and leaves the facility by pipeline. The glycol dehydrators are used to remove water from the gas prior to exiting the facility. In the dehydration process, gas passes through a contactor vessel where water is absorbed by the tri-ethylene glycol (TEG). The glycol dehydrators are equipped with a single flare to reduce emissions from the units. The "rich" glycol containing water goes to the glycol reboilers, where heat is used to boil off the water. The heat is supplied by two 1.0-MMBTUH glycol reboilers, which exhaust to the atmosphere. No condensate is produced at this facility therefore there is no condensate storage tank or loading emissions. There are two (2) 400-bbl wastewater storage tanks on-site. Equipment on-site is fueled by natural gas.

## SECTION III. PERMIT HISTORY

2008-136-C – Construction permit seeking a minor source permit for a compressor station
2008-136-C (M-1) – Minor modification to add an additional engine.
2008-136-C (M-2) – Modification to update facility to major source.
2008-136-TV – Initial Title V Permit.
2014-1954-TVR – Title V Renewal Permit.
2014-1954-TVR (M-1) – Administrative amendment to change the date in S.C No. 14.
2014-1954-C (M-2) – Construction permit to add (3) three additional engines.
2014-1954-TVR (M-2) – Administrative amendment to incorporate construction permit.

## SECTION IV. EQUIPMENT

**1: Engines**

| Point ID# | Description | Serial Number | Mfg. Date | Subject to |
|---|---|---|---|---|
| P-ENG 1 | 2,370-hp Caterpillar G3608 TALE$^{(oc)}$ | BEN4WF00049 | 4/11/19 | JJJJ |
| P-ENG 2 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW02335 | 8/6/08 | JJJJ |
| P-ENG 3 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW00991 | 3/23/07 | JJJJ$^{\phi}$ |
| P-ENG 4 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW00712 | 1/31/07 | JJJJ$^{\phi}$ |
| P-ENG 5 | 1,340-hp Caterpillar G3606 TALE$^{(oc)}$ | 4EK04874 | 3/11/00 | ZZZZ |
| P-ENG 6$^{*}$ | 1,775-hp Caterpillar G3606 TALE$^{(oc)}$ | 4ZS01292 | 12/1/09 | JJJJ |
| P-ENG 7 | 1,775-hp Caterpillar G3606 TALE$^{(oc)}$ | 4ZS01100 | 12/30/09 | JJJJ |
| P-ENG 8 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | 4EK04129 | 08/06/04 | ZZZZ |
| P-ENG 9 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW02703 | 1/5/09 | JJJJ |
| P-ENG 10 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW02664 | 12/16/08 | JJJJ |
| P-ENG 11 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW00766 | 06/11/07 | JJJJ$^{\phi}$ |
| P-ENG 12 | 1,340-hp Caterpillar G3516 TALE$^{(oc)}$ | WPW02066 | 02/25/08 | JJJJ |

* - Temporarily removed $\phi$ - gap engine $^{(oc)}$ – w/ oxidation catalyst

**EUG-02: Heaters (Considered Insignificant Activities)**

| Point ID# | Description | MMBTUH | Mfg. Date |
|---|---|---|---|
| P-HEAT 1 | Gas Dehy Reboiler | 1.0 | 06/08 |
| P-HEAT 2 | Gas Dehy Reboiler | 1.0 | 01/09 |

**EUG-03: Flare**

| Point ID# | Description | MMBTUH | Mfg. Date |
|---|---|---|---|
| P-Flare | Dehy Vent Flare (1 unit) | 1.0 | 2008 |

**EUG-04: Storage Tanks (Considered Insignificant Activities)**

| Point ID# | Contents | Capacity | | Mfg. Date |
|---|---|---|---|---|
| | | Barrels | Gallons | |
| T-Tank 1 | Produced Water Storage Tank | 400 | 16,800 | 2008 |
| T-Tank 2 | Produced Water Storage Tank | 400 | 16,800 | 2008 |

**EUG-06: Fugitive VOC Emission Sources**

| Point ID# | Equipment | Number | Const. Date |
|---|---|---|---|
| P-FUG | Valves – Gas/Vapor | 140 | 2008 |
| | Valves – Light Oil | 40 | 2008 |
| | Valves – Water/Light Oil | 60 | 2008 |
| | Flanges/Connectors – Gas/Vapor | 200 | 2008 |
| | Flanges/Connectors – Light Oil | 60 | 2008 |
| | Flanges/Connections – Water/Light Oil | 100 | 2008 |
| | Compressor Seals | 12 | 2008 |
| | Open-Ended Lines | 16 | 2008 |
| | Pumps – Light Oil | 6 | 2008 |
| | Pumps – Water/Light Oil | 8 | 2008 |

## SECTION IV. AIR EMISSIONS

ENGINE(S)

Engine emissions are calculated using manufacturer's data as shown below. All twelve (12) engines are controlled with an oxidation catalyst. VOC limits do not include formaldehyde, but formaldehyde has been included in the VOC emissions in the facility-wide emissions table.

**Emissions for 2,370-hp Caterpillar G3608 engine**

| Pollutant | Uncontrolled Emission Factor g/hp-hr | Control Efficiency | Emission Factor g/hp-hr | Emission (each engine) | |
|---|---|---|---|---|---|
| | | | | lb/hr | TPY |
| $NO_X$ | 0.7 | -0- | 0.7 | 3.66 | 16.02 |
| CO | 2.5 | 93% | 0.18 | 0.91 | 4.00 |
| VOC | 0.6 | 50% | 0.3 | 1.57 | 6.87 |
| Formaldehyde | 0.4 | 93% | 0.03 | 0.15 | 0.64 |

**Emissions for 1,340-hp Caterpillar G3516 engines**

| Pollutant | Uncontrolled Emission Factor g/hp-hr | Control Efficiency | Emission Factor g/hp-hr | Emission (each engine) | |
|---|---|---|---|---|---|
| | | | | lb/hr | TPY |
| $NO_X$ | 1.5 | -0- | 1.50 | 4.43 | 19.4 |
| CO | 1.9 | 93% | 0.13 | 0.39 | 1.72 |
| VOC | 0.5 | -0- | 0.50 | 1.48 | 6.47 |
| Formaldehyde | 0.3 | 80% | 0.06 | 0.18 | 0.78 |

**Emissions for 1,775-hp Caterpillar G3606 engines**

| Pollutant | Uncontrolled Emission Factor g/hp-hr | Control Efficiency | Emission Factor g/hp-hr | Emission (each engine) | |
|---|---|---|---|---|---|
| | | | | lb/hr | TPY |
| $NO_X$ | 0.7 | -0- | 0.7 | 2.74 | 12.00 |
| CO | 2.5 | 80% | 0.5 | 1.96 | 8.57 |
| VOC | 0.6 | 50% | 0.3 | 1.17 | 5.14 |
| Formaldehyde | 0.26 | 80% | 0.05 | 0.20 | 0.89 |

**Engine Stack Parameters**

| Source (make/model) | Horsepower (hp) | Height (Feet) | Diameter (Inches) | Flow (ACFM) | Temp (°F) | Fuel Usage (SCFH) |
|---|---|---|---|---|---|---|
| Caterpillar G3608 TALE | 2,370 | 22 | 24 | 15,553 | 878 | 15,410 |
| Caterpillar G3516 TALE | 1,340 | 22 | 18 | 7,685 | 855 | 8,750 |
| Caterpillar G3606 TALE | 1,775 | 25 | 24 | 12,004 | 867 | 11,453 |

GLYCOL DEHYDRATION UNIT

VOC and HAP emissions from the two (2) dehydration units were estimated using the GRI software, "GLYCalc 4.0," an extended gas analysis, and maximum glycol circulation capacity. Gas flow of 42 MMSCFD and a glycol circulation rate of 7.5-gpm were entered into the program for each dehydration unit. Flare emissions assume 98% control efficiency of VOC from the dehydration unit vent.

| Parameter | Data |
|---|---|
| Calculation Tool | GRI-GLYCalc 4.0 |
| Dry Gas Flow Rate, MMSCFD | 42 |
| Glycol Pump Type | Gas |
| Glycol Pump Design Capacity, gpm | 7.5 |
| **Regenerator Still Vent** | |
| Condenser Temperature, ºF | 120° |
| Condenser Pressure, psig | 14.7 |
| Control Type | Flare |
| Control Efficiency, % | 98% |
| **Flash Tank** | |
| Flash Tank Temperature, ºF | 69° |
| Flash Tank Pressure, psig | 12.0 |
| Control Type or Recycle | Recycle/recompress |
| Control Efficiency, % | 100% |

**Dehy Emissions (per unit)**

| Pollutant | lb/hr | TPY |
|---|---|---|
| n-Hexane | <0.01 | < 0.01 |
| Benzene | 0.01 | 0.04 |
| Toluene | 0.04 | 0.19 |
| Ethylbenzene | 0.01 | 0.05 |
| Xylene | 0.11 | 0.49 |
| **Total HAP** | **0.18** | **0.77** |
| **Total VOC** | **0.59** | **2.60** |

HEATER(S)

Potential emissions for the two (2) glycol dehydrator reboilers are based on AP-42 (7/98), Tables 1.4-1, 1.4-2, and 1.4-3 for commercial boilers, and a maximum firing rate.

**Heater Emission Factors**

| ID # | NOx (lb/MMBTU) | CO (lb/MMBTU) | VOC (lb/MMBTU) |
|---|---|---|---|
| REB-1, REB-2 | 0.098 | 0.082 | 0.005 |

**Heater Emissions (per heater)**

| Heat Input | NOx | | CO | | VOC | |
|---|---|---|---|---|---|---|
| MMBTUH | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| 1.0 | 0.10 | 0.43 | 0.08 | 0.36 | < 0.01 | 0.02 |

FLARE(S)

Potential $NO_x$, and CO emissions from the dehydration still vents were conservatively estimated using a heat value of 1.0-MMBTUH, AP-42 (2/18), Table 13.5-1 factors for industrial flares, and 8,760 hrs/yr. Potential VOC, $SO_2$, and $H_2S$ emissions were calculated using emission factors from AP-42 (7/98) Table 1.4-2 and flare pilot feed rate. It is assumed that VOC and HAP emissions only account for pilot emissions.

| Pollutant | Factor lb/MMBTU | Emissions | |
|---|---|---|---|
| | | lb/hr | TPY |
| $NO_x$ | 0.068 | 0.07 | 0.30 |
| CO | 0.31 | 0.31 | 1.36 |
| VOC | 0.0054 | < 0.01 | < 0.01 |
| HAP | 0.0018 | < 0.01 | < 0.01 |
| $PM_{10/2.5}$ | 0.0075 | < 0.01 | 0.03 |
| $SO_2$ | <0.001 | < 0.01 | < 0.01 |

FUGITIVE(S)

Emissions from fugitive equipment leaks are based on EPA's document, "1995 Protocol for Equipment Leak Emission Estimates," Table 2-4, Oil and Gas Operations Average Emissions Factors for process piping fugitives, and estimated counts of components. Although this category of emissions was mentioned in the most recent synthetic minor construction permit, no calculations were performed, and no limits were authorized. Note that a gas analysis performed on May 9, 2007, shows the actual VOC content of the stream to be 4.7% by weight, so the following table shows slightly high results.

**Fugitive Emissions**

| Component | Number of Items | Emission Factor, lb/hr/item | Percent VOC | VOC Leakage | |
|---|---|---|---|---|---|
| | | | | lb/hr | TPY |
| Gas/vapor valves | 140 | 0.00992 | 5.0% | 0.069 | 0.304 |
| Light oil valves | 40 | 0.0055 | 100% | 0.220 | 0.964 |
| Water/light oil valves | 60 | 0.000216 | 100% | 0.013 | 0.057 |
| Gas/vapor flanges/conn. | 200 | 0.00086 | 5.0% | 0.010 | 0.038 |
| Light oil flanges/conn. | 60 | 0.000243 | 100% | 0.015 | 0.064 |
| Water/light oil fl/conn. | 100 | 0.000006 | 100% | 0.001 | 0.003 |
| Compressor seals | 12 | 0.0194 | 5.0% | 0.012 | 0.051 |
| Open-ended lines | 16 | 0.00441 | 5.0% | 0.004 | 0.016 |
| Light oil pumps | 6 | 0.02886 | 100% | 0.173 | 0.758 |
| Water/light oil pumps | 8 | 0.000052 | 100% | <.001 | 0.002 |
| | | | **TOTALS** | **0.515** | **2.255** |

**Facility Emissions**

| Unit ID | Unit ID | $NO_x$ | | CO | | VOC* | |
|---|---|---|---|---|---|---|---|
| | | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| P-ENG 1 | 2,370-hp Caterpillar G3608 TALE (oc) | 3.66 | 16.02 | 0.91 | 4.00 | 1.71 | 7.51 |
| P-ENG 2 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 3 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 4 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 5 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 6 | 1,775-hp Caterpillar G3606 TALE (oc) | 2.74 | 12.00 | 1.96 | 8.57 | 1.38 | 6.03 |
| P-ENG 7 | 1,775-hp Caterpillar G3606 TALE (oc) | 2.74 | 12.00 | 1.96 | 8.57 | 1.38 | 6.03 |
| P-ENG 8 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 9 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 10 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 11 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG 12 | 1,340-hp Caterpillar G3516 TALE (oc) | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| DEHY-1 | 42-MMSCFD TEG Dehy Unit | -- | -- | -- | -- | 0.59 | 2.60 |
| DEHY-2 | 42-MMSCFD TEG Dehy Unit | -- | -- | -- | -- | 0.59 | 2.60 |
| REB-1 | 1.0-MMBTUH TEG Reboiler | 0.10 | 0.43 | 0.09 | 0.36 | 0.01 | 0.02 |
| REB-2 | 1.0-MMBTUH TEG Reboiler | 0.10 | 0.43 | 0.09 | 0.36 | 0.01 | 0.02 |
| FL-1 | 1.0-MMBTUH Flare | 0.07 | 0.03 | 0.03 | 1.36 | 0.02 | 0.08 |
| FUG | Fugitive Emissions | -- | -- | -- | -- | 0.51 | 2.25 |
| | **Totals** | **49.28** | **215.9** | **8.83** | **37.72** | **21.09** | **92.36** |

* VOC emissions include formaldehyde

**Hazardous Air Pollutants (HAPs) Emissions**

The engines will have emissions of HAPs, the most significant being formaldehyde. Emissions of formaldehyde were calculated using the manufacturer emission factor. Formaldehyde emissions are below major source levels.

**Formaldehyde Emissions**

| Source | Unit ID | Uncontrolled factor g-hp/hr | Reduction Factor (%) | Emissions | |
|---|---|---|---|---|---|
| | | | | lb/hr | TPY |
| P-ENG 1 | 2,370-hp Caterpillar G3608 TALE (oc) | 0.4 | 93 | 0.15 | 0.64 |
| P-ENG 2 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 3 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 4 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 5 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 6 | 1,775-hp Caterpillar G3606 TALE (oc) | 0.3 | 80 | 0.20 | 0.89 |
| P-ENG 7 | 1,775-hp Caterpillar G3606 TALE (oc) | 0.3 | 80 | 0.20 | 0.89 |
| P-ENG 8 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 9 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 10 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 11 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| P-ENG 12 | 1,340-hp Caterpillar G3516 TALE (oc) | 0.3 | 80 | 0.18 | 0.78 |
| | | | **Totals** | **2.15** | **9.41** |

HAP emissions are less than the 10/25 TPY thresholds.

## SECTION VI. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified on Part 1b of the Title V application forms are duplicated below. Appropriate recordkeeping of activities indicated below with "*" is specified in the Specific Conditions.

* Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTUH heat input (commercial natural gas). The dehy regen heaters are rated less than 5 MMBTUH.

* Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant. The produced water tanks and other miscellaneous tanks have potential to emit of less than 5 TPY of any criteria pollutant and other activities may be used in the future.

## SECTION VII. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories have been submitted and fees paid for the past years.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the existing operating permit, from the renewal application, or are developed from the applicable requirement.

OAC 252:100-9 (Excess Emission Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter) [Applicable]
This subchapter limits particulate emissions from fuel-burning equipment with a rated heat input of 10 MMBTUH and less to 0.6 lb/MMBTU. For 2 cycle and 4 cycle engines, AP-42 (7/00), Section 3.2 lists the total PM emissions to be less than 0.05 lbs/MMBTU. AP-42 (7/98), Table

1.4-1 lists natural gas PM emissions from external combustion sources to be 7.6 lb/MMSCF or about 0.0076 lb/MMBTU. The permit requires the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case, shall the average of any six-minute period exceed 60% opacity. When burning natural gas, there is very little possibility of exceeding the opacity standards.

OAC 252:100-29 (Fugitive Dust) [Applicable]
This subchapter states that no person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Under normal operating conditions, this facility has negligible potential to violate this requirement; therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 2 limits the ambient air concentration of hydrogen sulfide ($H_2S$) emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 $\mu g/m^3$. Engines combusting fuel with an $H_2S$ content of less than 343 ppmv are unlikely to exceed the $H_2S$ ambient air concentration limit. A fuel sulfur limit of 343 ppmv will ensure compliance with the $H_2S$ ambient air concentration limit.
Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lbs/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of approximately 1,044 Btu/scf, this limit corresponds to fuel sulfur content of approximately 1,256-ppmv. The permit requires the use of gaseous fuel with sulfur content less than 343-ppmv to ensure compliance with Subchapter 31. Analysis performed on a gas sample taken July 12, 2007, showed no detectable sulfur.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits new gas-fired fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.2 lb of $NO_x$ per MMBTU. There are no equipment items that exceed the 50 MMBTUH threshold.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
This subchapter affects gray iron cupolas, blast furnaces, basic oxygen furnaces, petroleum catalytic cracking units, and petroleum catalytic reforming units. There are no affected sources.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a

permanent submerged fill pipe or with an organic vapor recovery system. Lube oil and antifreeze tanks have vapor pressures less than 1.5 psia.
Part 3 requires loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility will not have the physical equipment (loading arm and pump) to conduct this type of loading. Therefore, this requirement will not be applicable.
Part 5 limits the VOC content of coating of parts and products. This facility will not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is not an affected operation.
Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location will be subject to this requirement.
Part 7 also requires effluent water separators which receive water containing more than 200 gallons per day of any VOC to be equipped with vapor control devices. There will be no effluent water separator at this location.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

**The following Oklahoma Air Pollution Control Rules are not applicable to this facility:**

| | | |
|---|---|---|
| OAC 252:100-11 | Alternative Emissions Reduction | not requested |
| OAC 252:100-15 | Mobile Sources | not in source category |
| OAC 252:100-23 | Cotton Gins | not type of emission unit |
| OAC 252:100-24 | Grain Elevators | not in source category |
| OAC 252:100-39 | Nonattainment Areas | not in area category |
| OAC 252:100-47 | Landfills | not in source category |

## SECTION VIII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable]
Final total emissions will be less than the threshold of 250 TPY of any single regulated pollutant and the facility is not one of the listed stationary sources with a threshold of 100 TPY.

NSPS, 40 CFR Part 60 [Subparts JJJJ and OOOOa are Applicable]
Subparts K, Ka, Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813-gallons capacity and built after July 23, 1984. All storage tank capacities at this facility are smaller than the threshold level.
Subpart GG, Stationary Gas Turbines. This subpart sets standards for stationary gas turbines; however, the compressors here will be powered by reciprocating engines.
Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. This subpart sets standards for natural gas processing plants which are defined as any site engaged in the extraction of natural gas liquids from field gas, fractionation of natural gas liquids, or both. These operations will not be conducted at this plant.
Subpart LLL, Onshore Natural Gas Processing: $SO_2$ emissions. Onshore Natural Gas Processing: SO2 Emissions. This subpart sets standards for natural gas sweetening units. There will be no natural gas sweetening operation at this site.
Subpart IIII, Stationary Compression Ignition Internal Combustion Engines. This subpart affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. There are no CI ICE engines located at this facility.
Subpart JJJJ, Stationary Spark Ignition (SI) Internal Combustion Engines (ICE). This subpart was published in the Federal Register on January 18, 2008. It promulgates emission standards for all new SI engines ordered after June 12, 2006 and all SI engines modified or reconstructed after June 12, 2006, regardless of size. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based on engine class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or non-emergency), and manufacture date. Engine manufacturers are required to certify certain engines to meet the emission standards and may voluntarily certify other engines. An initial notification is required only for owners and operators of engines greater than 500 HP that are non-certified. Emergency engines will be required to be equipped with a non-resettable hour meter and are limited to 100 hours per year of operation excluding use in an emergency (the length of operation and the reason the engine was in operation must be recorded). Ten (10) of the engines (with the exception of engine P-ENG-5 and P-ENG-8) were manufactured after June 12, 2006 and are therefore subject to this subpart. Engines P-ENG-3, P-

ENG-4, and P-ENG-11 were manufactured prior to July 1, 2008, and therefore considered "gap engines" and not subject to an emission standard, equipment standard, or work practice standard under this subpart.

Subpart OOOO, Crude Oil and Natural Gas Production, Transmission, and Distribution. This subpart was published as final in the Federal Register on August 16, 2012. It regulates equipment at crude oil and natural gas production, transmission and distribution facilities that commenced construction, reconstruction, and modification after August 23, 2011, and on or before September 18, 2015. All applicable equipment under this subpart was constructed prior to August 23, 2011, and therefore not subject to this subpart.

Subpart OOOOa, Crude Oil and Natural Gas Production, Transmission, and Distribution. This subpart was published in the Federal Registry on June 3, 2016, with an effective date of August 2, 2016. This subpart regulates equipment at crude oil and natural gas production, transmission and distribution facilities that commenced construction, reconstruction, or modification after September 18, 2015. This subpart regulates single well heads, centrifugal and reciprocating compressors, single continuous bleed natural gas driven pneumatic controllers with a natural gas bleed rate greater than 6 SCFH, storage vessels with the potential for VOC emissions greater than 6 TPY after federally enforceable conditions, onshore natural gas processing plants, sweetening units, single natural gas driven pneumatic diaphragm pumps located at onshore natural gas processing plants, and fugitive emission components located at a compressor station. Since the horsepower of the new compressors was increased with the engines substitution, the fugitive emissions components located at the facility are subject to this subpart. MarkWest will comply with the requirements of this subpart as applicable.

NESHAP, 40 CFR Part 61 [Not Applicable]

There are no emissions of any of the pollutants subject to 40 CFR Part 61 except benzene. Subpart J affects process streams that contain more than 10% benzene by weight, while Subpart BB affects transfer and loading operations with 70% or more by weight benzene. The expected benzene concentrations are less than 0.5%, which are well below the de minimis level.

NESHAP, 40 CFR Part 63 [Subparts HH and ZZZZ are Applicable]

Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to triethylene glycol dehydration units at area sources and affected emission points that are located at facilities that are major sources of HAP emissions and either process, upgrade, or store hydrocarbons prior to the point of custody transfer or prior to which the natural gas enters the natural gas transmission and storage source category. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer. There is no natural gas processing plant and the facility is not located prior to the point of custody transfer. Subpart HH is applicable to this site since it is an area source for HAPs.

Subpart HHH, Natural Gas Transmission and Storage. This subpart applies to affected emission points that are located at facilities that are major sources of HAP, as defined in this subpart, and that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user. This facility will be a minor source of HAP and therefore not subject to this subpart.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart affects any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions. Owners and operators of the following new or reconstructed RICE must meet the requirements of Subpart ZZZZ by complying with either 40 CFR Part 60 Subpart IIII (for CI engines) or 40 CFR Part 60 Subpart JJJJ (for SI engines):

1) Stationary RICE located at an area source;
2) The following Stationary RICE located at a major source of HAP emissions:
   a. 2SLB and 4SRB stationary RICE with a site rating of ≤ 500 brake HP;
   b. 4SLB stationary RICE with a site rating of < 250 brake HP;
   c. Stationary RICE with a site rating of ≤ 500 brake HP which combust landfill or digester gas equivalent to 10% or more of the gross heat input on an annual basis;
   d. Emergency or limited use stationary RICE with a site rating of ≤ 500 brake HP; and
   e. CI stationary RICE with a site rating of ≤ 500 brake HP.

No further requirements apply for engines subject to NSPS under this part. Based on emission calculations, this facility is a minor source of HAP. A stationary RICE located at an area source of HAP emissions is new if construction commenced on or after June 12, 2006. Ten (10) of the engines were manufactured after June 12, 2006, and are classified as new engines under this subpart. Three (3) of the engines (P-ENG3, P-ENG4 & P-ENG11) are new engines under ZZZZ but are not affected sources under NSPS JJJJ. The seven (7) engines subject to JJJJ comply with this MACT by demonstrating compliance with NSPS Subpart JJJJ, per §63.6590(c). The same standard applies to the three (3) new engines not affected by JJJJ, despite the fact that these "gap" engines have no requirements under JJJJ. Engines P-ENG-5 and P-ENG-8 were constructed prior to June 12, 2006, and are considered an existing engine under this subpart.
Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers at area sources of HAPs. EPA has published various actions regarding implementation of this rule with the latest version on February 2, 2013. This facility is an area source of HAPs but all the heaters are natural gas-fired and therefore not subject to this subpart.

Compliance Assurance Monitoring, 40 CFR Part 64 [Not Applicable]
Compliance Assurance Monitoring, as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant greater than major source levels.

All the engines use a control device to achieve compliance with the applicable emission limits. However, they do not emit greater than major source levels prior to control and are not subject to CAM.

The two (2) glycol dehydration units use a control device to achieve compliance with NESHAP HH and applicable emission limits. However, the potential emissions are less than major source levels and are not subject to CAM. The emissions limits set in the permit are carried over from the previous permit and do not represent the potential emissions of the emission unit.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
This facility handles naturally occurring hydrocarbon mixtures at a natural gas processing plant and the Chemical Accident Prevention Provisions are applicable to this facility. The facility was required to submit the appropriate accidental release emergency response program plan prior to June 21, 1999. This facility has submitted the appropriate plan to EPA. More information on this federal program is available on the web page: *www.epa.gov/rmp.*

Stratospheric Ozone Protection, 40 CFR Part 82 [Subparts A and F Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).
Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.
Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.
The standard conditions of the permit address the requirements specified at § 82.156 for persons opening appliances for maintenance, service, repair, or disposal; § 82.158 for equipment used during the maintenance, service, repair, or disposal of appliances; § 82.161 for certification by an approved technician certification program of persons performing maintenance, service, repair, or disposal of appliances; § 82.166 for recordkeeping; § 82.158 for leak repair requirements; and §

82.166 for refrigerant purchase records for appliances normally containing 50 or more pounds of refrigerant.

## SECTION IX. COMPLIANCE

### Tier Classification and Public Review

This application has been determined to be a Tier II, based on the request for a permit renewal for an existing major source. The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the land.

**Public Review**
The applicant has submitted a "Notice of Filing a Tier II Application" in the *Coalgate Record Register*, a local newspaper in Coal County on October 16, 2019. The notice states that the application was available for public review at the Coal County Public Library in Coalgate, OK, or the DEQ office in Oklahoma City.

The applicant will also publish a "Notice of Tier II Draft Permit" in a local newspaper in Coal County where the facility is located. The notice will state that the draft permit will be available for public review at the facility or the DEQ office in Oklahoma City. The notices will also state that the draft permit will be available for public review at a local public library in Coalgate, Oklahoma. Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page: www.deq.ok.gov.

**State Review**
This facility is not located within 50 miles of the border of Oklahoma. Therefore, notice is not required to be sent to any state bordering Oklahoma.

**EPA Review**
After the 30 day notice period, a proposed permit will be sent to EPA for a 45 day review, contingent on public comments received regarding the draft permit.

### Fee Paid

Part 70 renewal permit application fee of $7,500 was paid on October 11, 2019.

### Inspection

On April 25, 2019, a Full Compliance Evaluation was conducted at this facility. The evaluation was conducted by Corey Gum, Environmental Program Specialists for the Oklahoma Department of Environmental Quality, Air Quality Division. Greg Clark, EH&S compliance coordinator, represented the Facility. The facility was physically as described in the permit application and supplemental materials. Identification plates with the make, model, and serial number were attached to each engine.

**Testing**

Emission testing for the engines were provided by the facility. All results are presented below and show compliance with the applicable permit conditions.

**Engine Testing**

| SOURCE | PERMIT LIMITS | | TEST RESULTS | | TEST DATE |
|---|---|---|---|---|---|
| | NOx lb/hr | CO lb/hr | NOx lb/hr | CO lb/hr | |
| P-ENG 1 | 3.65 | 0.91 | 2.61 | 0.34 | 7/9/19 |
| P-ENG 2 | 4.43 | 0.39 | 3.83 | 0.21 | 7/9/19 |
| P-ENG 3 | 4.43 | 0.39 | 3.34 | < 0.01 | 7/9/19 |
| P-ENG 4 | 4.43 | 0.39 | 2.16 | 0.02 | 8/20/19 |
| P-ENG 5 | 4.43 | 0.39 | 2.74 | 0.34 | 7/15/19 |
| P-ENG 6 | 2.74 | 1.96 | 1.81 | 0.44 | 7/10/19 |
| P-ENG 7 | 2.74 | 1.96 | 1.76 | 0.34 | 7/10/19 |
| P-ENG 8 | 4.43 | 0.39 | 0.29 | 0.34 | 7/10/19 |
| P-ENG 9 | 4.43 | 0.39 | 3.02 | 0.34 | 7/9/19 |
| P-ENG 10 | 4.43 | 0.39 | 2.90 | < 0.01 | 7/9/19 |
| P-ENG 11 | 4.43 | 0.39 | 2.71 | 0.34 | 7/10/19 |
| P-ENG 12 | 4.43 | 0.39 | 4.24 | < 0.01 | 7/15/19 |

**SECTION X. SUMMARY**

The facility was constructed as described in the permit application. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the permit is recommended, contingent on public and EPA review.

# DRAFT

**PERMIT TO OPERATE**
**AIR POLLUTION CONTROL FACILITY**
**SPECIFIC CONDITIONS**

**MarkWest Oklahoma Gas Company, LLC** **Permit No. 2019-1117-TVR2**
**Womack Compressor Station**

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on October 11, 2019. The Evaluation Memorandum date June 29, 2020, explains the derivation of applicable permit requirements, and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operation under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emissions and emissions limitations: [OAC 252:100-8-6(a)]

**EUG 1 Internal Combustion Engines**

| EU ID | Source | $NO_X$ | | CO | | VOC[1] | |
|---|---|---|---|---|---|---|---|
| | | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| P-ENG-1 | Caterpillar 3608 [2] | 3.65 | 16.02 | 0.91 | 4.00 | 1.71 | 7.51 |
| P-ENG-2 | Caterpillar 3516 [2] | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-3 | Caterpillar 3516 [2] | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-4 | Caterpillar 3516 [2] | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-5 | Caterpillar 3516 [2] | 4.43 | 19.41 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-6 | Caterpillar 3606 [2] | 2.74 | 12.00 | 1.96 | 8.57 | 1.38 | 6.03 |
| P-ENG-7 | Caterpillar 3606 [2] | 2.74 | 12.00 | 1.96 | 8.57 | 1.38 | 6.03 |
| P-ENG-8 | Caterpillar 3516 [2] | 4.43 | 19.4 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-9 | Caterpillar 3516 [2] | 4.43 | 19.4 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-10 | Caterpillar 3516 [2] | 4.43 | 19.4 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-11 | Caterpillar 3516 [2] | 4.43 | 19.4 | 0.39 | 1.72 | 1.65 | 7.25 |
| P-ENG-12 | Caterpillar 3516 [2] | 4.43 | 19.4 | 0.39 | 1.72 | 1.65 | 7.25 |

1 - Emissions include formaldehyde
2 – Equipped with an oxidation catalyst

**EUG 2 Dehydrators and Control Flare**

This EUG contains a flare that serves the dehydrator vents. Each dehy is capable of processing 42 MMSCFD. The flare pilot is only 1 MMBTUH. Emission limitations from the combination of all elements of this EUG follow.

| Pollutant | TPY |
|---|---|
| $NO_X$ | 0.30 |
| CO | 1.36 |
| VOC | 5.28 |

**EUG 3 Heaters**

Emissions from the equipment listed following do not have a specific limitation and the emissions are insignificant.

| Point | Description | MMBTUH | Const. Date |
|---|---|---|---|
| P-HEAT 1 | Gas Dehy Reboiler | 1.0 | 06/08 |
| P-HEAT 2 | Gas Dehy Reboiler | 1.0 | 01/09 |

**EUG 4 Miscellaneous-Process Piping Fugitives**

Emissions from the equipment listed following do not have a specific limitation and the emissions are insignificant.

| Component | Approximate Number of Components |
|---|---|
| Valves – Gas/Vapor | 140 |
| Valves – Light Oil | 40 |
| Valves – Water/Light Oil | 60 |
| Flanges/Connectors – Gas/Vapor | 200 |
| Flanges/Connectors – Light Oil | 60 |
| Flanges/Connections – Water/Light Oil | 100 |
| Compressor Seals | 12 |
| Open-Ended Lines | 16 |
| Pumps – Light Oil | 6 |
| Pumps – Water/Light Oil | 8 |

Emissions of HAP shall not equal or exceed 10 TPY for any individual HAP or 25 TPY for the aggregate of all HAP.

2. Each of the twelve engines shall be operated only with exhaust gases passing through a properly functioning oxidation catalyst. [OAC 252:100-8-6(a)(1)]

3. The fuel-burning equipment shall be fueled only with gaseous fuel having 343 ppmv or less total sulfur. Compliance shall be shown at least once each calendar year by a current gas company bill, lab analysis, stain-tube analysis, gas contract, tariff sheet, or other approved method. [OAC 252:100-31]

4. The permittee shall be authorized to operate the facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)]

5. The make, model number and serial number shall be readily accessible and permanently identified on the engines at the facility. [OAC 252:100-43]

6. At least once per calendar quarter, the permittee shall conduct tests of $NO_x$ and CO emissions in exhaust gases from the engines in Specific Condition No. 1 and from each replacement

engine/turbine when operating under representative conditions for that period. Testing is required for any engine/turbine that runs for more than 220 hours during that calendar quarter. A quarterly test may be conducted no sooner than 20 calendar days after the most recent test. Testing shall be conducted using a portable analyzer in accordance with a protocol meeting the requirements of the latest AQD Portable Analyzer Guidance document, or an equivalent method approved by Air Quality. When four consecutive quarterly tests show the engine/turbine to be in compliance with the emissions limitations shown in the permit, then the testing frequency may be reduced to semi-annual testing. A semi-annual test may be conducted no sooner than 60 calendar days nor later than 180 calendar days after the most recent test. Likewise, when the following two consecutive semi-annual tests show compliance, the testing frequency may be reduced to annual testing. An annual test may be conducted no sooner than 120 calendar days nor later than 365 calendar days after the most recent test. Upon any showing of non-compliance with emissions limitations or testing that indicates that emissions are within 10% of the emission limitations, the testing frequency shall revert to quarterly. Testing performed under a previous permit may be used to justify a reduced monitoring frequency, i.e., quarterly to semiannual or annual, and may be used in lieu of testing required by this permit for an applicable reporting period, i.e., quarter, six-month, or annual period coinciding with issuance of this permit. Reduced testing frequency does not apply to engines with oxidation or catalytic converters. [OAC 252:100-8-6(a)(3)(A)]

7. When periodic compliance testing shows engine exhaust emissions in excess of the lb/hr limits in Specific Condition Number 1, the permittee shall comply with the provisions of OAC 252:100-9 for excess emissions. [OAC 252:100-9]

8. Replacement, including temporary periods (6 months or less for maintenance purposes) of any internal combustion engine shown in this permit with an engine of lesser or equal emissions of each pollutant, is authorized under the following conditions. [OAC 252:100-8-6(f)]

   a. The replacement engine or turbine shall comply with the same emissions limits as the engine or turbine that it replaced. This applies to lb/hr and TPY limits specified in this permit.
   b. The authorization of replacement of an engine or turbine includes temporary periods of 6 months or less for maintenance purposes.
   c. The permittee shall notify AQD in writing not later than 7 days prior to start-up of the replacement engine or turbine. Said notice shall identify the old engine/turbine and shall include the new engine/turbine make and model, serial number, horsepower rating, and pollutant emission rates (g/hp-hr, lb/hr, and TPY) at maximum horsepower for the altitude/location.
   d. Quarterly emissions tests for the replacement engine(s)/turbine(s) shall be conducted to confirm continued compliance with $NO_X$ and CO emission limitations. A copy of the first quarter testing shall be provided to AQD within 60 days of start-up of each replacement engine/turbine. The test report shall include the engine/turbine fuel usage, stack flow (ACFM), stack temperature (°F), and pollutant emission rates (g/hp-hr, lbs/hr, and TPY) at maximum rated horsepower for the altitude/location.

e. Replacement equipment and emissions are limited to equipment and emissions which are not a modification under NSPS or NESHAP.
f. Replacement equipment and emissions are limited to equipment and emissions which are not a modification or a significant modification under PSD. For existing PSD facilities, the permittee shall calculate the PTE or the net emissions increase resulting from the replacement to document that it does not exceed significance levels and submit the results with the notice required by paragraph (c) of this Specific Condition. The permittee shall attach each such notice to their copy of the relevant permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield described in OAC 252:100-8-6(d) does not apply to any change made pursuant to this paragraph.
g. Engines whose installation and operation are authorized under this Specific Condition which are subject to 40 CFR Part 63, Subpart ZZZZ and/or 40 CFR Part 60, Subpart JJJJ shall comply with all applicable requirements.

9. The glycol dehydration units shall be maintained and operated in accordance with applicable state and federal rules, including but not limited to the following requirements.
[OAC 252:100-8-6(a)(1)]

a. The natural gas throughput of each glycol dehydration unit shall not exceed 42 MMSCFD, monthly average.
b. The lean glycol circulation rate shall not exceed 7.50 gallons per minute per unit, monthly average.
c. The lean glycol circulation rate shall be monitored and recorded at least once every calendar month, as follows.
Circulation rate, as found (gal/min, strokes/min) _____
Circulation rate, as left (gal/min, strokes/min) _____
Date of inspection _____
Inspected by _____
d. As an alternative to (c), the manufacturer's rating, visible on the pump, or performance data for the model of pump that verifies the maximum pump rate at any operational conditions shall be maintained and available for inspection.
e. The dehydration units shall not be operated without a properly functioning flare to control VOC emissions from the vents.

10. The permittee shall comply with all applicable requirements of the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines, Subpart JJJJ, for each affected engine including but not limited to the following: [40 CFR §60.4230 - §60.4246]

a. §60.4230 Am I subject to this subpart?
b. §60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

c. §60.4234 How long must I meet the emissions standards if I am an owner or operator of a stationary SI internal combustion engine?
d. §60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?
e. §60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
f. §60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
g. §60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion
h. §60.4246 What parts of the General Provisions ally to me?

11. The permittee shall comply with NSPS, Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Production, Transportation, and Distribution, for all affected facilities located at this site for which construction, modified, or reconstructed after September 18, 2015. [40 CFR §60.536 through §60.543]

a. §60.5360a What is the purpose of this subpart?
b. §60.5365a Am I subject to this subpart?
c. §60.5370a When must I comply with this subpart?
d. §60.5375a What GHG and VOC standards apply to well affected facilities?
e. §60.5380a What GHG and VOC standards apply to centrifugal compressor affected facilities?
f. §60.5385a What GHG and VOC standards apply to reciprocating compressor affected facilities?
g. §60.5390a What GHG and VOC standards apply to pneumatic controller affected facilities?
h. §60.5393a What GHG and VOC standards apply to pneumatic pump affected facilities?
i. §60.5395a What VOC standards apply to storage vessel affected facilities?
j. §60.5397a What fugitive emissions GHG and VOC standards apply to the affected facility which is the collection of fugitive emissions components at a well site and the affected facility which is the collection of fugitive emissions components at a compressor station?
k. §60.5398a What are the alternative means of emission limitations for GHG and VOC from well completions, reciprocating compressors, the collection of fugitive emissions components at a well site and the collection of fugitive emissions components at a compressor station?
l. §60.5400a What equipment leak GHG and VOC standards apply to affected facilities at an onshore natural gas processing plant?
m. §60.5401a What are the exceptions to the equipment leak GHG and VOC standards for affected facilities at onshore natural gas processing plants?
n. §60.5402a What are the alternative means of emission limitations for GHG and VOC equipment leaks from onshore natural gas processing plants?

o. §60.5405a What standards apply to sweetening unit affected facilities at onshore natural gas processing plants?
p. §60.5406a What test methods and procedures must I use for my sweetening unit affected facilities at onshore natural gas processing plants?
q. §60.5407a What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities at onshore natural gas processing plants?
r. §60.5408a What is an optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure?
s. §60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
t. §60.5411a What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing emissions from centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels?
u. §60.5412a What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my centrifugal compressor, and storage vessel affected facilities?
v. §60.5413a What are the performance testing procedures for control devices used to demonstrate compliance at my centrifugal compressor and storage vessel affected facilities?
w. §60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, and affected facilities at onshore natural gas processing plants?
x. §60.5416a What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my centrifugal compressor, reciprocating compressor, pneumatic pump and storage vessel affected facilities?
y. §60.5417a What are the continuous control device monitoring requirements for my centrifugal compressor and storage vessel affected facilities?
z. §60.5420a What are my notification, reporting, and recordkeeping requirements?
aa. §60.5421a What are my additional recordkeeping requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
bb. §60.5422a What are my additional reporting requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
cc. §60.5423a What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities at onshore natural gas processing plants?
dd. §60.5425a What parts of the General Provisions apply to me?
ee. §60.5430a What definitions apply to this subpart?
ff. §60.5432a How do I determine whether a well is a low pressure well using the low pressure well equation?

12. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) for Stationary Reciprocating Internal Combustion Engines (RICE), Subpart ZZZZ, for each affected engine including but not limited to: [40 CFR §63.6580 through §63.6675]

    a. § 63.6580 What is the purpose of subpart ZZZZ?
    b. § 63.6585 Am I subject to this subpart?
    c. § 63.6590 What parts of my plant does this subpart cover?
    d. § 63.6595 When do I have to comply with this subpart?
    e. § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?
    f. § 63.6605 What are my general requirements for complying with this subpart?
    g. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
    h. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
    i. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
    j. § 63.6650 What reports must I submit and when?
    k. § 63.6655 What records must I keep?
    l. § 63.6660 In what form and how long must I keep my records?
    m. § 63.6665 What parts of the General Provisions apply to me?
    n. § 63.6670 Who implements and enforces this subpart
    o. § 63.6675 What definitions apply to this subpart?

13. The permittee shall maintain records of operations as listed below. These records shall be maintained on-site or at a local field office for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-8-6 (a)(3)(B)]

    a. Periodic emission testing of $NO_x$ and CO exhaust for each engine.
    b. Operating hours of engines which operated less than 220 hours and were not tested in a quarter.
    c. O&M log for any engine not tested in each 3-month period.
    d. For the fuel(s) burned, the appropriate document(s) as described in Specific Condition (SC) No. 3.
    e. Dehydration unit natural gas throughput (monthly average and 12-month rolling totals).
    f. Lean glycol circulation rate (monthly average) and other records as required by SC #9.
    g. Records as required by NSPS, Subparts JJJJ and OOOOa.
    h. Records as required by NESHAP, Subparts HH and ZZZZ.

14. The following records shall be maintained on site to verify Insignificant Activities. No recordkeeping is required for those operations which qualify as Trivial Activities.
    [OAC 252:100-8-6 (a)(3)(B)]

    a) Other tanks smaller than 10,000 gallons: capacity and materials stored.

15. No later than 30 days after each anniversary date of the issuance of the initial Title V operating permit (May 12, 2010), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

16. This permit supersedes all previous Air Quality operating permits for this facility, which are now canceled.

# DRAFT

**MAJOR SOURCE AIR QUALITY PERMIT**
**STANDARD CONDITIONS**
**(July 21, 2016)**

## SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.
[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

## SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements.
[OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.[OAC 252:100-8-6(a)(3)(C)(iv)]

## SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

(1)the date, place and time of sampling or measurement;
(2)the date or dates analyses were performed;
(3)the company or entity which performed the analyses;
(4)the analytical techniques or methods used;
(5)the results of such analyses; and
(6)the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report. [OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions. [OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act. [OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards ("NSPS") under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants ("NESHAPs") under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer's instructions and in accordance with a protocol meeting the requirements of the "AQD Portable Analyzer Guidance" document or an equivalent method approved by Air Quality.

[OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM10). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

## SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." [OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

## SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification. [OAC 252:100-8-6(c)(6)]

## SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but

excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit. [OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit. [OAC 252:100-8-6(d)(2)]

## SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.
[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

## SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

## SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
[OAC 252:100-8-6 (a)(6)]

## SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.
[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

## SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking, reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.
[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.
[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.
[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

## SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.
[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances: [OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

(1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
(2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
(3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.

(4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d). [OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a "grandfathered source," as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

## SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(18) for confidential information submitted to or obtained by the DEQ under this section):

(1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
(2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
(3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
(4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

## SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

(1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
(2) the permitted facility was at the time being properly operated;
(3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.
[OAC 252:100-8-6(a)(3)(C)(iv)]

## SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

## SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

(1) 5 tons per year of any one criteria pollutant.

(2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

## SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.

[OAC 252:100-8-2 and OAC 252:100, Appendix J]

## SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

(1) result in no net emissions increases,
(2) are not modifications under any provision of Title I of the federal Clean Air Act, and
(3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

## SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

(1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter.

[OAC 252:100-13]

(2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]

(3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]

(a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;

(b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;

(c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or

(d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.

(4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]

(5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]

(6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]

(7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

## SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

(1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;

(2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and

(3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

(1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
(2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158;
(3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
(5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

## SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

(1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
(2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).

(3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
(4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R.§ 70.8(a) and (c).
(5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
(6) The DEQ complies with 40 C.F.R. § 70.8(d).
(7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
(8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
(9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).
(10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

## SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[OAC 252:100-43-6]

**DRAFT**

# PART 70 PERMIT

**AIR QUALITY DIVISION**
**STATE OF OKLAHOMA**
**DEPARTMENT OF ENVIRONMENTAL QUALITY**
**707 NORTH ROBINSON, SUITE 4100**
**P.O. BOX 1677**
**OKLAHOMA CITY, OKLAHOMA 73101-1677**

# Permit No. 2019-1117-TVR2

**MarkWest Oklahoma Gas Company, LLC,**

**having complied with the requirements of the law, is hereby granted permission to operate at the Womack Compressor Station located in Section 11, T2N, R11E, Coal County, Oklahoma, subject to Specific Conditions and Standard Conditions dated July 21, 2016, both of which are attached:**

**This permit shall expire on five years from the date of issuance, except as Authorized under Section VIII of the Standard Conditions**

**Division Director** **Date**

**Air Quality Division**

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

MarkWest Oklahoma Gas Company, LLC
Attn: Susanne Coolbroth
1515 Arapahoe St, Tower 1, Suite 1600
Denver, CO 80202

SUBJECT: Part 70 Permit No. **2019-1117-TVR2**
Facility: Womack Compressor Station
Facility ID No.: 6510
Location: Section 11, T2N, R11E, Coal County, Oklahoma

Dear Ms. Coolbroth,

Enclosed is the permit authorizing operation of the modification to the referenced facility. Please note that this permit is issued subject to standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed through DEQ's electronic reporting system by April 1st of every year. Any questions concerning the submittal process should be referred to the Emissions Inventory Staff at (405) 702-4100.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me at (405) 702-4197.

Sincerely,

DRAFT

Amalia Talty, P.E.
New Source Permits Section
**AIR QUALITY DIVISION**