

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

MEMORANDUM

June 29, 2022

TO: Lee Warden, P.E., Permits and Engineering Group Manager

THROUGH: Richard Kienlen, P.E., Engineering Manager, New Source Permits Section

THROUGH: Ryan Buntyn, P.E., New Source Permits Section

FROM: Junru Wang, P.E., Existing Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2021-0408-O**
ScissorTail Energy, LLC
Richville Compressor Station (SIC 1311/NAICS 211130)
Facility ID: 6799
Latitude: 34.92992 °N, Longitude: 95.65837 °W
Section 6, Township 5N, Range 16E, Pittsburg County, Oklahoma
Driving Directions: From US 69 and SH 31 near Krebs, OK, travel east on
SH 31 through Krebs, turn right onto County Road E1440, and then travel
1.25 miles east to the facility, located to the south.

SECTION I. INTRODUCTION

ScissorTail Energy, LLC (ScissorTail or the applicant) has requested an individual minor source operating permit for their Richville Compressor Station in Pittsburg County, Oklahoma. The facility is currently operating under individual minor source operating Permit No. 2020-0071-O, issued on January 5, 2021, and the General Permit for Oil and Gas Facilities (GP-OGF) NOI to Construct Authorization No. 2021-0408-NOI, received and issued on September 2, 2021. The purpose of the NOI to Construct was to install one (1) 400-HP Caterpillar G3408TA engine (C-4/003) and to update other emission source calculations. This permit will incorporate the new unit whose construction was authorized by Authorization No. 2021-0408-NOI. On issuance, this permit will be a FESOP.

Based on data provided by the applicant, the facility has emissions of 65.48 TPY for NO_x, 41.51 TPY for CO, 36.93 TPY for VOC, and 4.53 TPY for HAPs. This facility, therefore, qualifies for a “synthetic minor” permit because the controlled emissions of each of the criteria pollutants are below the major source threshold of 100 TPY and the HAP emissions are below the 10 TPY threshold for a single HAP and below the 25 TPY threshold for any combination of HAPs.

SECTION II. FACILITY DESCRIPTION

Natural gas enters the facility via a pipeline gathering system through an inlet separator, where liquids are removed from the gas. The gas stream is then compressed by the engine-driven

compressors. After the inlet gas passes through the compressors, it is then routed to the amine unit for removal of carbon dioxide (CO₂). The gas then leaves the amine system and goes through the dehydration unit. Liquids from the inlet separator are stored in the produced water/slop oil storage tanks and loaded into tank trucks for disposal.

SECTION III. EQUIPMENT

The following is a list of current equipment.

| EU ID | Equipment Type | Size/Rating | Control | Serial No. | Manufacture Date |
|---------|------------------------------|-------------|---------|------------|------------------|
| C-3/163 | Waukesha L7042GU Engine | 687-HP | CC | 327244 | 1976 |
| C-4/003 | Caterpillar G3408TA Engine | 400-HP | CC | 6NB01658 | 11/10/1997 |
| T-1 | Produced Water/Slop Oil Tank | 300-bbl | - | - | 2008 |
| T-2 | Produced Water/Slop Oil Tank | 150-bbl | - | - | 2008 |
| A-1 | Amine Unit | 12.0-MMSCFD | - | - | - |
| H-1 | Glycol Reboiler | 0.5-MMBTUH | - | - | - |
| H-2 | Amine Reboiler | 5.5-MMBTUH | - | - | - |
| D-1 | Glycol Dehydration Unit | 7.0-MMSCFD | - | - | - |
| LOAD-1 | Truck Loading Emissions | - | - | - | - |
| FUG-1 | Fugitive Emissions | - | - | - | - |

SECTION IV. FACILITY-SPECIFIC OR REPRESENTATIVE SAMPLE

TANKS

The flash emissions for the storage tanks were not calculated using a process simulation; therefore, no facility-specific or representative sample is needed for these units. The applicant used Vasquez-Beggs method to calculate the produced water/slop oil (T-1 and T-2) flash emissions.

DEHYDRATION UNIT

| Glycol Dehydrator Considerations | Yes | No |
|--|-----|----|
| The facility submitted a facility-specific extended gas analysis of the inlet gas. | X | |
| The sample was no older than three (3) calendar years at the time of submittal. | X | |

AMINE UNIT

| Amine Unit Considerations | Yes | No |
|---|-----|----|
| The facility submitted a facility-specific extended gas analysis of the inlet gas. | X | |
| The facility submitted a facility-specific H ₂ S sampling of the inlet gas. The H ₂ S sampling can be a stain tube, lab analysis, or other approved method. | X | |
| The sample was no older than three (3) calendar years at the time of submittal. | X | |

FUGITIVES

| Natural Gas Compressor Station (Gathering) Fugitive Considerations | Yes | No |
|---|------------|-----------|
| The facility submitted a facility-specific sample of the inlet gas or sales gas. | X | |
| The facility submitted a representative facility sample of the inlet gas or sales gas from a representative facility that is within 10 miles. | | X |
| The facility did not submit a liquid sample and assumed 100% VOC content for the liquid service components. | X | |
| The facility submitted a facility-specific sample of the VOC containing liquid. | | X |
| The sample was no older than three (3) calendar years at the time of submittal. | X | |

SECTION V. EMISSIONS

Unless otherwise stated emissions are based on 8,760 hours per year of operation with combustion sources firing field-grade natural gas.

ENGINES

Emissions from engine C-4/003 are based on the manufacturer’s data with a control efficiency of 65% for NOx and uncontrolled for CO and VOC. H₂CO emissions for engine C-4/003 are calculated based on AP-42 (7/00), Table 3.2-3 for uncontrolled, 4SRB engines. Emissions from engine C-3/163 are based on the manufacturer’s data with control efficiencies of 58% for NOx and CO, 75% for H₂CO, and uncontrolled for VOC.

Engine Emission Factors

| EU ID | NO_x | CO | VOC⁽¹⁾ | H₂CO | |
|------------------------|-----------------------|----------------|--------------------------|------------------------|-----------------|
| | g/hp-hr | g/hp-hr | g/hp-hr | g/hp-hr | lb/MMBTU |
| C-3/163 | 5.00 | 5.00 | 2.00 | 0.0125 | - |
| C-4/003 ⁽²⁾ | 7.70 | 1.60 | 1.60 | - | 0.0205 |

⁽¹⁾ Does not include H₂CO.

⁽²⁾ Brake Specific Heat = 7,075 BTU/hp-hr.

Engine Emissions

| EU ID | NO_x | | CO | | VOC⁽¹⁾ | | H₂CO | |
|--------------|-----------------------|------------|--------------|------------|--------------------------|------------|------------------------|------------|
| | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| C-3/163 | 7.57 | 33.17 | 7.57 | 33.17 | 3.03 | 13.27 | 0.02 | 0.08 |
| C-4/003 | 6.79 | 29.74 | 1.41 | 6.18 | 1.41 | 6.18 | 0.05 | 0.24 |

⁽¹⁾ Does not include H₂CO. H₂CO is added to VOC only in the facility-wide emissions summary.

GLYCOL DEHYDRATION UNIT

Emissions from the glycol dehydration unit were estimated using GRI-GLYCalc 4.0 and an extended representative gas analysis. D-1 has a maximum gas throughput of 7.0-MMSCFD and a maximum glycol circulation rate of 1.5 GPM. The flash tank off-gases are routed back to the process (e.g., facility inlet) with a 100% collection efficiency. The still vent emissions are uncontrolled. The analysis of the inlet gas indicates that the gas does not contain BTEX (i.e., benzene, toluene, ethylbenzene, or xylene), or n-hexane.

Glycol Dehydrator Emissions

| Parameter | Data for D-1 |
|---|--------------------------|
| Type of Glycol | Triethylene |
| Dry Gas Flow Rate, MMSCFD | 7.0 |
| Glycol Pump Type | Gas Injection |
| Lean Glycol Circulation Rate Input, GPM | 1.5 |
| Regenerator Vent | |
| Control Type or Recycle | None |
| VOC Emissions, TPY | 0.001 |
| Flash Tank | |
| Flash Tank Temperature, °F | 100 |
| Flash Tank Pressure, psig | 50 |
| Control Type or Recycle | Recycle (Route to Inlet) |
| Overall Control Efficiency, % | 100 |
| VOC Emissions, TPY | - |
| Total Emissions, TPY | |
| Benzene | <0.01 |
| Toluene | <0.01 |
| Ethylbenzene | <0.01 |
| Xylene | <0.01 |
| n-Hexane | <0.01 |
| Total HAPs | <0.01 |
| Total VOC⁽¹⁾ | <0.01 |

⁽¹⁾ To be conservative, the applicant has requested a 1.00 TPY VOC emission limit.

REBOILERS

Emissions for the dehydration reboiler (H-1) and the amine reboiler (H-2) are based on AP-42 (7/98), Section 1.4, the ratings listed below, and a fuel heating value of 1,020 BTU/SCF.

Reboiler Emission Factors

| EU ID | NO _x (lb/MMSCF) | CO (lb/MMSCF) | VOC (lb/MMSCF) |
|------------------|-------------------------------|------------------|-------------------|
| H-1 – 0.5-MMBTUH | 100 | 84 | 5.5 |
| H-2 – 5.5-MMBTUH | 100 | 84 | 5.5 |

Reboiler Emissions

| EU ID | NO _x | | CO | | VOC | |
|-------|-----------------|------|-------|------|-------|------|
| | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| H-1 | 0.05 | 0.21 | 0.04 | 0.18 | <0.01 | 0.01 |
| H-2 | 0.54 | 2.36 | 0.45 | 1.98 | 0.03 | 0.13 |

AMINE UNIT

Emission estimates from the amine unit are based on a ProMax process simulation, an inlet gas analysis, and continuous operation.

Amine Unit

| Parameter | Data |
|---|---------------------|
| Type of Amine | MDEA ⁽¹⁾ |
| Dry Gas Flow Rate, MMSCFD | 12.0 |
| Inlet Gas H ₂ S Concentration, ppmv | <0.01 |
| Outlet Gas H ₂ S Concentration, ppmv | <0.01 |
| Lean Amine Recirculation Rate Input, GPM | 60 |
| Flash Tank Temperature, °F | 156.65 |
| Flash Tank Pressure, psig | 75.00 |
| Regenerator Vent | |
| Control | None |
| VOC Emissions, TPY | 0.01 |
| H ₂ S Emissions, lb/hr | <0.01 |
| SO ₂ Emissions, lb/hr | <0.01 |
| Flash Tank | |
| Control Type or Recycle | Reboiler |
| Control Efficiency, % | 100 |
| VOC Emissions, TPY | - |
| H ₂ S Emissions, lb/hr | - |
| SO ₂ Emissions, lb/hr | - |
| Total Emissions | |
| VOC, TPY ⁽²⁾ | 0.01 |
| Total HAPs, TPY | <0.01 |
| H ₂ S Emissions, lb/hr | <0.01 |
| SO ₂ Emissions, lb/hr | <0.01 |

⁽¹⁾ MDEA = Methyl diethanolamine.

⁽²⁾ To be conservative, the applicant has requested a 1.00 TPY VOC emission limit.

TANKS

Flashing emissions from the produced water/slop oil tanks (T-1 and T-2) were calculated using the Vasquez-Beggs Solution Gas/Oil Ratio Correlation Method and the listed throughput. Flashing emissions at the tanks result as liquids under pressure enter the tanks at atmospheric pressure. Working and breathing emissions from the produced water/slop oil tanks (T-1 and T-2) were calculated based on AP-42 (06/20), Section 7.1. Flash emissions from the produced water/slop oil tanks were calculated with throughput adjusted to reflect a 90% water and 10% condensate mixture. The storage tanks are uncontrolled.

Vasquez-Beggs Inputs, Total

| Parameter | T-1 and T-2 |
|--|--------------------|
| API Gravity | 70 |
| Separator Pressure (psig) | 35 |
| Separator Temperature (°F) | 60 |
| Stock Tank Barrels of Oil Per Day (BOPD) | 3.26 |
| Gas Molecular Weight (lb/lb-mol) | 60 |
| Separator Gas Specific Gravity | 0.9 |
| Fraction VOC in Tank Gas | 0.8 |
| Atmospheric Pressure (psia) | 14.7 |

Tank Emissions

| Parameter | T-1 Data | T-2 Data |
|---------------------------------|----------------------------|----------------------------|
| Throughput, gal/yr | 400,000 | 100,000 |
| Liquid in Tank(s) | Produced Water/Slop Oil | Produced Water/Slop Oil |
| Working/Breathing Method/Tool | AP-42 (06/20), Section 7.1 | AP-42 (06/20), Section 7.1 |
| Flash Calculation Method/Tool | Vasquez-Beggs | Vasquez-Beggs |
| Uncontrolled Emissions, TPY | 4.92 | 1.51 |
| Control Type | None | None |
| Total VOC Emissions, TPY | 4.92 | 1.51 |

LOADING

Emissions from loading produced water/slop oil into tank trucks were estimated using AP-42 (6/08), Section 5.2, Equation 1, and the parameters listed in the table below.

Loading Parameters and Emissions

| Parameter | LOAD-1 |
|--|-------------------------|
| Liquids Loaded | Produced Water/Slop Oil |
| Throughput, gal/yr | 500,000 |
| Saturation Factor | 0.60 |
| Temp., °F | 85.00 |
| TVP, psia | 8.30 |
| MW, lb/lbmol | 60.00 |
| VOC, wt. % | 10 |
| Emission Factor, lb/10 ³ gal ⁽¹⁾ | 0.68 |
| Total VOC Emissions, TPY | 0.17 |

⁽¹⁾ Final factor considering any VOC reduction stated for methane/ethane.

FUGITIVES

Emissions from fugitive equipment leaks (FUG-1) are based on EPA’s “Protocol for Equipment Leak Emission Estimates” (11/95, EPA-453/R-95-017), an estimated number of components, and the VOC (C₃₊) content of the materials handled.

Fugitive Emissions

| EU ID | VOC, TPY | Total HAPs, TPY |
|-------|----------|-----------------|
| FUG-1 | 8.42 | 4.21 |

FACILITY-WIDE EMISSIONS

| EU ID | Source | NO _x | | CO | | VOC | |
|---------|--|-----------------|-------|-------|-------|---------------------|----------------------|
| | | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| C-3/163 | 687-HP Waukesha L7042GU Engine ⁽¹⁾ | 7.57 | 33.17 | 7.57 | 33.17 | 3.05 ⁽²⁾ | 13.35 ⁽²⁾ |
| C-4/003 | 400-HP Caterpillar G3408TA Engine ⁽¹⁾ | 6.79 | 29.74 | 1.41 | 6.18 | 1.46 ⁽²⁾ | 6.42 ⁽²⁾ |
| T-1 | 300-bbl Produced Water/Slop Oil Tank | - | - | - | - | - | 4.92 |
| T-2 | 150-bbl Produced Water/Slop Oil Tank | - | - | - | - | - | 1.51 |
| A-1 | 12.0-MMSCFD Amine Overhead Vent | - | - | - | - | - | 1.00 |

| EU ID | Source | NO _x | | CO | | VOC | |
|--|-----------------------------|-----------------|--------------|-------------|--------------|-------------|--------------|
| | | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| H-1 | 0.5-MMBTUH Glycol Reboiler | 0.05 | 0.21 | 0.04 | 0.18 | <0.01 | 0.01 |
| H-2 | 5.5-MMBTUH Amine Reboiler | 0.54 | 2.36 | 0.45 | 1.98 | 0.03 | 0.13 |
| D-1 | 7.0-MMSCFD Dehydration Unit | - | - | - | - | - | 1.00 |
| LOAD-1 | Truck Loading | - | - | - | - | - | 0.17 |
| FUG-1 | Fugitive Emissions | - | - | - | - | 1.92 | 8.42 |
| Total Emissions | | 14.95 | 65.48 | 9.47 | 41.51 | 6.46 | 36.93 |
| Previous Emissions (Permit No. 2020-0071-O) | | 8.12 | 35.58 | 8.03 | 35.20 | 4.35 | 24.02 |
| Change in Emissions | | 6.83 | 29.90 | 1.44 | 6.31 | 2.11 | 12.91 |

(1) Equipped with CC.

(2) Includes H₂CO.

The total HAP emissions from the equipment at the facility are 4.53 TPY. Therefore, the individual and the total emissions of HAPs do not exceed the major source thresholds of 10/25 TPY.

SECTION VI. 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, Emission Inventory, and Annual Fees) [Applicable]
 The owner or operator of any facility that is a source of air emissions shall submit a complete emission inventory annually on forms obtained from the Air Quality Division. Required annual information shall be provided to Air Quality.

OAC 252:100-7 (Permits for Minor Facilities) [Applicable]
 Subchapter 7 sets forth the permit application fees and the basic substantive requirements of permits for minor facilities. Since controlled criteria pollutant emissions are less than 100 TPY for each pollutant, and emissions of HAP will not exceed 10 TPY for any one HAP or 25 TPY for any aggregate of HAP, the facility is defined as a “synthetic minor” source.

OAC 252:100-9 (Excess Emission Reporting Requirement) [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, and 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]
Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. Fuel-burning equipment is defined in OAC 252:100-19 as any internal combustion engine or gas turbine, or other combustion device used to convert the combustion of fuel into usable energy. Thus, the engines and reboilers are subject to the requirements of this subchapter. OAC 252:100, Appendix C specifies a PM emission limitation of 0.60 lb/MMBTU for all equipment at this facility with a heat input rating of 10 MMBTUH or less. Table 3.2-3 of AP-42 (7/00) lists the total PM emissions from 4-stroke, rich-burn, natural gas-fired engines to be 0.02 lb/MMBTU. Table 1.4-2 of AP-42 (7/98) lists the total PM emissions for natural gas-fired heaters to be 7.6 lb/MMft³ or about 0.0075 lb/MMBTU. This permit requires the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

| EU ID | Equipment | Maximum Heat Input (MMBTUH) | Emissions (lb/MMBTU) | |
|---------|--|-----------------------------|----------------------|-----------|
| | | | Appendix C | Potential |
| C-3/163 | 687-HP Waukesha L7042GU Engine ⁽¹⁾ | 4.97 | 0.60 | 0.02 |
| C-4/003 | 400-HP Caterpillar G3408TA Engine ⁽¹⁾ | 2.83 | 0.60 | 0.02 |
| H-1 | 0.5-MMBTUH Glycol Reboiler | 0.50 | 0.60 | <0.01 |
| H-2 | 5.5-MMBTUH Amine Reboiler | 5.50 | 0.60 | <0.01 |

⁽¹⁾ Equipped with CC.

Section 19-12 limits emissions of particulate matter from industrial processes and direct-fired fuel-burning equipment based on their process weight rates. Since there are no significant particulate emissions from the nonfuel-burning processes at the facility compliance with the standard is assured without any special monitoring provisions.

OAC 252:100-25 (Visible Emissions and Particulate Matter) [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. The permit will require that any on-site equipment be fueled only with natural gas to ensure compliance with this requirement.

OAC 252:100-29 (Fugitive Dust) [Applicable]
 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 will not cause a problem in this area; 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 H₂S emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 µg /m³. Based on modeling conducted for the general permit for oil and gas facilities, a single uncontrolled amine unit (still vent routed to the atmosphere) treating “sweet” (<4 ppmv H₂S) natural gas at a minor facility will be in compliance with the H₂S ambient air concentration limit. Also, since the ambient impacts of H₂S from the engines, heaters, and boilers is so low, and there are no significant emissions of H₂S from the condensate or “sweet” crude oil storage, the facility as a whole would be in compliance with the H₂S ambient air concentration limit.

Part 5, Section 31-25 limits sulfur dioxide emissions from new petroleum or natural gas process equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of 1,000 BTU/SCF, this limit corresponds to fuel sulfur content of 1,203 ppmv. Gas produced from oil and gas wells having 162 ppmv or less total sulfur will ensure compliance with Subchapter 31. The permit requires the use of pipeline-grade natural gas or field gas with a maximum sulfur content of 162 ppmv for all fuel-burning equipment to ensure compliance with Subchapter 31.

Part 5, Section 31-26(1) requires H₂S in the waste gas stream from any new petroleum or natural gas process equipment (constructed after July 1, 1972) to be reduced by 95% by removal or by being oxidized to SO₂. This requirement does not apply if a facility’s emissions of H₂S do not exceed 0.3 lb/hr, based on a two-hour average. To document ongoing exemption status for OAC 252:100-31-26 (monthly), the facility shall monitor the H₂S concentration of the gas going to the amine unit (at least quarterly), and the gas throughput (scfh, monthly average), to arrive at the allowed 0.3 lb/hr or less exemption value.

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 facility has none of the affected sources: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

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 at maximum storage temperature to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The produced water/slop oil tanks at this facility are subject to this requirement. Part 3 requires VOC 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 does not have the physical equipment (loading arm and pump) to conduct this type of loading and is not subject to this requirement.

Part 5 limits the VOC content of coatings from any coating line or other coating operation. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment. The VOC emission is less than 100 pound per day and so is exempt. Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location is subject to this requirement.

Part 7 requires all effluent water separator openings which receive water containing more than 200 gallons per day of any VOC, to be sealed or the separator to be equipped with an external floating roof or a fixed roof with an internal floating roof or a vapor recovery system. No effluent water separators are located at this facility.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates 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 anywhere in the state, 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.

SECTION VII. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60 [Subpart OOOOa Applicable]
Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813-gallons capacity and built after July 23, 1984. The tanks at the site have a capacity less than the threshold, 19,813 gallons. Therefore, this subpart is not applicable.

Subpart GG, Stationary Gas Turbines. There are none at this facility.

Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The equipment is not in a SOCMI plant.

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. The facility does not engage in natural gas processing.

Subpart LLL, Onshore Natural Gas Processing: SO₂ Emissions. This subpart affects sweetening units and sweetening units followed by sulfur recovery units which commenced construction, reconstruction, or modification after January 20, 1984. The amine unit was constructed after the promulgation of Subpart LLL, will process “sweet” natural gas as defined by Subpart LLL (4-ppm H₂S or less), and therefore is not subject. There are no standards applicable for any unit which processes less than 2 LT/D sulfur.

Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. There are no compression ignition engines located at this facility.

Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines (SI-ICE). This subpart 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. Engines C-3/163 and C-4/003 were manufactured before June 12, 2006, and are not subject to this subpart.

Subpart OOOO, Crude Oil and Natural Gas Facilities. This subpart affects the following sources that commence construction, reconstruction, or modification after August 23, 2011, and on or before September 18, 2015:

- (a) Each gas well affected facility, which is a single natural gas well.
- (b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.
- (c) Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.
- (d) Each pneumatic controller affected facility, which is:
 - (1) For the oil production segment (between the wellhead and the point of custody transfer to an oil pipeline): a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
 - (2) For the natural gas production segment (between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not including natural gas processing plants): a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
 - (3) For natural gas processing plants: a single continuous bleed natural gas-driven pneumatic controller.
- (e) Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment, that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water and has the potential for VOC emissions equal to or greater than 6 TPY.
- (f) The group of all equipment, except compressors, within a process unit located at an onshore natural gas processing plant is an affected facility.

- (g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.

The reciprocating compressors associated with compressor engines C-3/163 and C-4/003, and storage tanks T-1 and T-2, were constructed before August 23, 2011, and are not subject to this subpart.

There are no wells or centrifugal compressors located at this facility, and the facility is not a gas plant. All pneumatic controllers have a bleed rate of less than 6 SCFH and are not subject to this subpart. The amine unit that removes CO₂ and trace amounts of H₂S is not located at a gas plant. The amine unit is therefore not subject to this subpart.

Subpart OOOOa, Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After September 18, 2015. This subpart affects the following onshore affected facilities:

- (a) Each well affected facility, which is a single well that conducts a well completion operation following hydraulic fracturing or refracturing.
- (b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.
- (c) Each reciprocating compressor affected facility, which is a single reciprocating compressor. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.
- (d) Each pneumatic controller affected facility:
 - (1) Each pneumatic controller affected facility not located at a natural gas processing plant, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
 - (2) Each pneumatic controller affected facility located at a natural gas processing plant, which is a single continuous bleed natural gas-driven pneumatic controller.
- (e) Each storage vessel affected facility, which is a single storage vessel with the potential for VOC emissions equal to or greater than 6 TPY as determined according to § 60.5365a(e).
- (f) The group of all equipment within a process unit located at an onshore natural gas processing plant is an affected facility. Equipment within a process unit of an affected facility located at onshore natural gas processing plants are exempt from this subpart if they are subject to and controlled according to Subparts VVa, GGG, or GGGa.
- (g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.
- (h) Each pneumatic pump affected facility:
 - (1) For natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven diaphragm pump.
 - (2) For well sites, each pneumatic pump affected facility, which is a single natural gas-driven diaphragm pump.
- (i) The collection of fugitive emissions components at a well site, as defined in § 60.5430a, is an affected facility, except as provided in § 60.5365a(i)(2).
- (j) The collection of fugitive emissions components at a compressor station, as defined in § 60.5430a, is an affected facility.

There are no gas wells or natural gas-driven pneumatic controllers operating at a natural gas bleed rate greater than 6 SCFH at this facility. Additionally, this facility is not a gas plant. The two (2) storage tanks were installed before September 18, 2015, and are not subject to this subpart. The two (2) reciprocating compressors associated with engines C-3/163 and C-4/003 were manufactured before September 18, 2015, and are not subject to this subpart. The facility has been modified after September 18, 2015, due to the increase in total compressor horsepower; therefore, it is subject to the fugitive emissions leak monitoring requirements of this rule.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the pollutants subject to 40 CFR 61 (arsenic, asbestos, radionuclides, coke oven emissions, mercury, beryllium, vinyl chloride, and benzene) except for benzene. Subpart J affects process streams, which contain more than 10% benzene by weight. Benzene is present only in trace amounts in any product stream in this facility.

NESHAP, 40 CFR Part 63

[Subparts HH and ZZZZ Applicable]

Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to affected sources that are located at facilities that are major and area sources of HAP. This facility is an area source of HAP emissions. The only affected units are the TEG dehydration units. Even though the TEG dehydration unit at this facility is considered an affected area source, it is exempt from the requirements of § 63.764(d)(2) since the actual average emissions of benzene from the glycol dehydration unit process vents to the atmosphere are less than 1 TPY, as determined by the procedures specified in § 63.772(b)(2). However, the facility must maintain records of the de minimis determination as required in § 63.774(d)(1). All applicable requirements have been incorporated into the permit.

Subpart HHH, affects Natural Gas Transmission and Storage Facilities that are major sources of HAP. Because this facility is an area source of HAPs, this subpart does not apply.

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:
 - i) 2SLB and 4SRB stationary RICE with a site rating of ≤ 500 brake HP;
 - ii) 4SLB stationary RICE with a site rating of < 250 brake HP;
 - iii) 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;
 - iv) Emergency or limited use stationary RICE with a site rating of ≤ 500 brake HP; and
 - v) CI stationary RICE with a site rating of ≤ 500 brake HP.

No further requirements apply for engines subject to NSPS under this part. A stationary RICE located at an area source of HAP emissions is new if construction commenced after June 12, 2006. Based on emission calculations, this facility is an area source of HAP. C-3/163 and C-4/003 were

manufactured before June 12, 2006, and are considered as existing remote stationary RICE subject to the management practices under this subpart.

Existing SI RICE located at an area source of HAP emissions must comply with the applicable emission limitations and operating limitations that became applicable on October 19, 2013. A summary of the requirements for the SI RICE located at this facility are shown on the following table.

| Engine Category | Requirements From Table 2d to Subpart ZZZZ of Part 63 ⁽¹⁾ |
|---|---|
| Non-emergency, non-black start 4SLB & 4SRB remote stationary RICE >500 HP | a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ⁽²⁾ |
| | b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and |
| | c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary. |
| Non-emergency, non-black start 4SRB stationary RICE ≤ 500 HP | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ⁽²⁾ |
| | b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and |
| | c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. |

- (1) During periods of startup you must minimize the engine’s time spent at idle and minimize the engine’s startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
- (2) Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement.

Onshore remote stationary RICE means stationary RICE meeting any of the following criteria:

1. Stationary RICE located on a pipeline segment that meets both of the following criteria:
 - i. A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.
 - ii. The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

2. Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25-mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Based on information submitted by the applicant, this facility and the engines within the facility are considered remote. All applicable requirements have been incorporated into the permit.

Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters at major sources of HAPs. Because this facility is an area source of HAP, this subpart does not apply.

Subpart JJJJJ, Industrial, Commercial, and Institutional Boilers. This subpart affects new and existing boilers located at area sources of HAP, except for gas-fired boilers. Boiler means an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam or hot water. There are no boilers located at this facility.

SECTION VIII. COMPLIANCE

TIER CLASSIFICATION AND PUBLIC REVIEW

This application has been determined to be **Tier I** based on the request for Modification of a minor operating permit that did not undergo the FESOP Enhanced NSR Process [Traditional NSR]. The draft permit will undergo public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA have 30 days to comment on the draft permit. Permits available for public review and comment are found at this location: <https://www.deq.ok.gov/permits-for-public-review/>.

The applicant has submitted an affidavit stating that they are not seeking a permit for land used or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant has a current easement given to accomplish the permitted purpose.

FEES PAID

The applicant submitted a total of \$2,250 in fees to cover the difference between the individual minor facility construction permit application fee (\$2,000) and the minor facility general permit authorization to construct application fee (\$500) and to cover the individual minor facility operating permit application fee (\$750).

INSPECTION

A full compliance inspection was conducted on November 2, 2017. The inspection was conducted by Helen King of the Department of Environmental Quality, Air Quality Division (AQD), who was accompanied by Rick Royer, representing ScissorTail. No compliance issues were discovered during the inspection. Since the facility-wide emissions did not increase by more than 50 TPY for NO_x and CO due to the changes, a new inspection is not required.

COMPLIANCE AND ENFORCEMENT CASE

There are no active Air Quality compliance or enforcement issues concerning this facility.

SECTION IX. SUMMARY

The facility was constructed and is operating 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 that would prevent issuance of the permit. Issuance of the operating permit is recommended, contingent on public review.

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

**ScissorTail Energy, LLC
Richville Compressor Station**

FESOP No. 2021-0408-O

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on April 15, 2022, and supplemental information. The Evaluation Memorandum dated June 29, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and emission limitations for each point:

| EU ID | Source | NO _x | | CO | | VOC | |
|---------|--|-----------------|-------|-------|-------|---------------------|----------------------|
| | | lb/hr | TPY | lb/hr | TPY | lb/hr | TPY |
| C-3/163 | 687-HP Waukesha L7042GU Engine ⁽¹⁾ | 7.57 | 33.17 | 7.57 | 33.17 | 3.05 ⁽²⁾ | 13.35 ⁽²⁾ |
| C-4/003 | 400-HP Caterpillar G3408TA Engine ⁽¹⁾ | 6.79 | 29.74 | 1.41 | 6.18 | 1.46 ⁽²⁾ | 6.42 ⁽²⁾ |
| T-1 | 300-bbl Produced Water/Slop Oil Tank | - | - | - | - | - | 4.92 |
| T-2 | 150-bbl Produced Water/Slop Oil Tank | - | - | - | - | - | 1.51 |
| A-1 | 12.0-MMSCFD Amine Overhead Vent | - | - | - | - | - | 1.00 |
| H-1 | 0.5-MMBTUH Glycol Reboiler | - | 0.21 | - | 0.18 | - | 0.01 |
| H-2 | 5.5-MMBTUH Amine Reboiler | - | 2.36 | - | 1.98 | - | 0.13 |
| D-1 | 7.0-MMSCFD Dehydration Unit | - | - | - | - | - | 1.00 |
| LOAD-1 | Truck Loading | - | - | - | - | - | 0.17 |

⁽¹⁾ Equipped with CC.

⁽²⁾ Includes H₂CO.

2. The fuel-burning equipment shall be fired with pipeline grade natural gas or other gaseous fuel with sulfur content less than 162 ppmv. Compliance can be shown by the following methods: for pipeline grade natural gas, a current gas company bill; for other gaseous fuel, a current lab analysis, stain-tube analysis, gas contract, tariff sheet, etc. Compliance shall be demonstrated at least once every calendar year.
3. The permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year, 8,760 hours).
4. Each engine at the facility shall have permanent identification plates attached, which show the make, model number, and serial number.
5. Each engine shall be set to operate with the exhaust gases passing through a properly functioning catalytic converter.
6. At least once per calendar quarter, the permittee shall conduct tests of NO_x and CO emissions in exhaust gases from the 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. The engine/turbine shall be tested no sooner than 20 calendar days after the last test. Testing shall be conducted using a portable analyzer in accordance with a protocol meeting the requirements of the “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. Reduced testing is not allowed for engines using catalytic converters or oxidation catalysts.

7. When periodic compliance testing shows engine exhaust emissions in excess of the lb/hr limits in Specific Condition No. 1, the permittee shall comply with the provisions of OAC 252:100-9 for excess emissions.
8. The glycol dehydration unit shall be installed and operated as follows:
 - a. The lean glycol recirculation rates of glycol dehydration unit D-1 shall not exceed 1.5 gallons per minute (GPM).
 - b. Based on monthly average, the natural gas throughput of the glycol dehydration unit D-1 shall not exceed 7.0 MMSCFD.
 - c. The glycol dehydration unit shall be equipped with a flash tank on the rich glycol stream.
 - d. The off-gases from the flash tank shall be routed back to the process (e.g., facility inlet) with a collection efficiency of 100%.
 - e. Monitor and record the lean glycol circulation rate at least once each 30 days. With each inspection the lean glycol circulation rate shall be recorded as follows:

| | |
|--------------------------------------|--|
| Circulation rate, as found (gal/min) | |
| Circulation rate, as left (gal/min) | |
| Date of inspection | |
| Inspected by | |

The requirement to monitor and record glycol circulation rate shall not apply if the pump capacity does not exceed 1.5 GPM. If so, the manufacturer’s rating or the performance data for the model of pump that verifies the maximum pump rate at any operational conditions shall be maintained and available for inspection.

9. The permittee shall comply with NSPS, Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015.

- 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?
10. The permittee shall comply with all applicable requirements of the NESHAP for Oil and Natural Gas Production, Subpart HH, for the affected dehydration unit including but not limited to the following:
- a. An owner or operator of a glycol dehydration unit that meets the exemption criteria in § 63.764(e)(1) shall maintain the records specified in § 63.774(d)(1), for that glycol dehydration unit.
11. The owner/operator shall comply with all applicable requirements of the NESHAP for Stationary RICE, Subpart ZZZZ, for each affected engine, including but not limited to:
- 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. § 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
- f. § 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?
- g. § 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?
- h. § 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
- i. § 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
- j. § 63.6605 What are my general requirements for complying with this subpart?
- k. § 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
- l. § 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?
- m. § 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?
- n. § 63.6615 When must I conduct subsequent performance tests?
- o. § 63.6620 What performance tests and other procedures must I use?
- p. § 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
- q. § 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
- r. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
- s. § 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
- t. § 63.6645 What notifications must I submit and when?
- u. § 63.6650 What reports must I submit and when?
- v. § 63.6655 What records must I keep?
- w. § 63.6660 In what form and how long must I keep my records?
- x. § 63.6665 What parts of the General Provisions apply to me?
- y. § 63.6670 Who implements and enforces this subpart?
- z. § 63.6675 What definitions apply to this subpart?

12. At least once per calendar quarter, the permittee shall conduct tests for H₂S concentrations in the inlet process gas to demonstrate that the H₂S concentration is less than or equal to 4 ppmv to comply with OAC 252:100-31. A quarterly test may be conducted no sooner than 20 calendar days after the most recent test. Testing shall be conducted using a stain-tube (accurate to 0.1 ppmv), lab analysis, or an equivalent method approved by Air Quality. When four consecutive quarterly tests show the inlet concentration 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. Any showing of non-compliance with the limit reverts the frequency back to quarterly.
13. Throughput of natural gas through the amine unit shall not exceed 12.0 MMSCFD, monthly average. The amine unit shall be equipped with a flash tank, and the off-gases from the flash tank shall be routed to the reboiler with a control efficiency of 100%.
14. Produced water/slop oil throughput at the facility shall not exceed 500,000 gallons (12-month rolling total). The storage tanks shall be bottom filled or operated with submerged fill pipes.
15. 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.
 - a. Periodic testing for NO_x and CO emissions for each engine.
 - b. Operating hours for each engine if less than 220 hours per quarter and not tested.
 - c. For the fuel(s) burned, maintain the appropriate document(s) as specified in Specific Condition No. 2.
 - d. Throughput for produced water/slop oil storage tanks (monthly and 12-month rolling total).
 - e. Glycol pump circulation rate (monthly/quarterly) if applicable, based on Specific Condition No. 8(e).
 - f. Natural gas throughput for the amine unit, MMSCFD (monthly average).
 - g. Natural gas throughput for the glycol dehydration unit, MMSCFD (monthly average).
 - h. Records required under NSPS 40 CFR Part 60, Subpart OOOOa.
 - i. Records required under NESHAP 40 CFR Part 63, Subparts HH and ZZZZ.
 - j. Records showing concentration of H₂S in the process gas to verify exemption from OAC 252:100-31, as required by Specific Condition No. 12.
16. Upon issuance, FESOP No. 2021-0408-O replaces and supersedes all previous Air Quality authorizations and/or permits issued to this facility, which are now cancelled.



PERMIT

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

FESOP No. 2021-0408-O

ScissorTail Energy, LLC,

having complied with the requirements of the law, is hereby granted permission to operate the Richville Compressor Station located in Section 6, Township 5N, Range 16E, Pittsburg County, Oklahoma, and subject to the standard conditions dated February 13, 2020, and specific conditions, both attached.

DRAFT

Lee Warden, P.E.
Permits and Engineering Group Manager

Issuance Date

ScissorTail Energy, LLC
Attn.: Ms. Janel Nelson
8811 S. Yale Ave., Ste. 200
Tulsa, OK 74137

Subject: FESOP No. **2021-0408-O**
Richville Compressor Station
Facility ID No. 6799
Section 6, Township 5N, Range 16E, Pittsburg County, Oklahoma

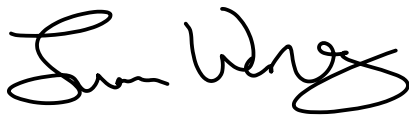
Dear Ms. Nelson:

Enclosed is the permit authorizing operation of the referenced facility above. 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 Junru.Wang@deq.ok.gov, or (405) 702-4197.

Sincerely,



Junru Wang, P.E.
Existing Source Permits Section
AIR QUALITY DIVISION

Enclosures

Choctaw Nation of Oklahoma
Attn.: Gary Batton, Chief
P.O. Box 1210
Durant, OK 74702-1210

Re: Permit Application No. **2021-0408-O**
ScissorTail Energy, LLC; Richville Compressor Station (Facility ID 6799)
Pittsburg County
Date Received: April 15, 2022

Dear Mr. Batton:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier I application referenced above. A Tier I application requires AQD to provide a 30-day public comment period on the draft Tier I permit on the ODEQ website. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to email notifications provided to tribal contacts on record.

Copies of draft permits and comment opportunities are provided to the public on the ODEQ website at the following location:

<https://www.deq.ok.gov/permits-for-public-review/>

If you prefer a copy of the draft permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify our Chief Engineer, Phillip Fielder, by e-mail at phillip.fielder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division
Attn.: Phillip Fielder, Chief Engineer
P.O. Box 1677
Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can be contacted at (405) 702-4237, and Mr. Fielder may be reached at (405) 702-4185.

Sincerely,



Lee Warden, P.E.
Permits and Engineering Group Manager
AIR QUALITY DIVISION

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
9-10-21

| | | | |
|----------------|---|------------------------|--|
| ACFM | Actual Cubic Feet per Minute | GEP | Good Engineering Practice |
| AD | Applicability Determination | GHG | Greenhouse Gases |
| AFRC | Air-to-Fuel Ratio Controller | GR | Grain(s) (gr) |
| API | American Petroleum Institute | | |
| ASTM | American Society for Testing and Materials | H₂CO | Formaldehyde |
| | | H₂S | Hydrogen Sulfide |
| | | HAP | Hazardous Air Pollutants |
| BACT | Best Available Control Technology | HC | Hydrocarbon |
| BAE | Baseline Actual Emissions | HCFC | Hydrochlorofluorocarbon |
| BBL | Barrel(s) | HFR | Horizontal Fixed Roof |
| BHP | Brake Horsepower (bhp) | HON | Hazardous Organic NESHAP |
| BTU | British thermal unit (Btu) | HP | Horsepower (hp) |
| | | HR | Hour (hr) |
| C&E | Compliance and Enforcement | | |
| CAA | Clean Air Act | I&M | Inspection and Maintenance |
| CAM | Compliance Assurance Monitoring | IBR | Incorporation by Reference |
| CAS | Chemical Abstract Service | ICE | Internal Combustion Engine |
| CAAA | Clean Air Act Amendments | | |
| CC | Catalytic Converter | LAER | Lowest Achievable Emission Rate |
| CCR | Continuous Catalytic Regeneration | LB | Pound(s) [Mass] (lb, lbs, lbm) |
| CD | Consent Decree | LB/HR | Pound(s) per Hour (lb/hr) |
| CEM | Continuous Emission Monitor | LDAR | Leak Detection and Repair |
| CFC | Chlorofluorocarbon | LNG | Liquefied Natural Gas |
| CFR | Code of Federal Regulations | LT | Long Ton(s) (metric) |
| CI | Compression Ignition | | |
| CNG | Compressed Natural Gas | M | Thousand (Roman Numeral) |
| CO | Carbon Monoxide or Consent Order | MAAC | Maximum Acceptable Ambient Concentration |
| COA | Capable of Accommodating | MACT | Maximum Achievable Control Technology |
| COM | Continuous Opacity Monitor | MM | Prefix used for Million (Thousand-Thousand) |
| D | Day | MMBTU | Million British Thermal Units (MMBtu) |
| DEF | Diesel Exhaust Fluid | MMBTUH | Million British Thermal Units per Hour (MMBtu/hr) |
| DG | Demand Growth | MMSCF | Million Standard Cubic Feet (MMscf) |
| DSCF | Dry Standard (At Standard Conditions) Cubic Foot (Feet) | MMSCFD | Million Standard Cubic Feet per Day |
| | | MSDS | Material Safety Data Sheet |
| EGU | Electric Generating Unit | MWC | Municipal Waste Combustor |
| EI | Emissions Inventory | MWe | Megawatt Electrical |
| EPA | Environmental Protection Agency | | |
| ESP | Electrostatic Precipitator | NA | Nonattainment |
| EUG | Emissions Unit Group | NAAQS | National Ambient Air Quality Standards |
| EUSGU | Electric Utility Steam Generating Unit | NAICS | North American Industry Classification System |
| | | NESHAP | National Emission Standards for Hazardous Air Pollutants |
| FCE | Full Compliance Evaluation | NH₃ | Ammonia |
| FCCU | Fluid Catalytic Cracking Unit | NMHC | Non-methane Hydrocarbon |
| FESOP | Federally Enforceable State Operating Permit | NGL | Natural Gas Liquids |
| | | NO₂ | Nitrogen Dioxide |
| FIP | Federal Implementation Plan | NO_x | Nitrogen Oxides |
| FR | Federal Register | NOI | Notice of Intent |
| | | NSCR | Non-Selective Catalytic Reduction |
| GACT | Generally Achievable Control Technology | | |
| GAL | Gallon (gal) | | |
| GDF | Gasoline Dispensing Facility | | |

| | | | |
|-------------------------|--|-------------------------|---------------------------------------|
| NSPS | New Source Performance Standards | SO₂ | Sulfur Dioxide |
| NSR | New Source Review | SO_x | Sulfur Oxides |
| | | SOP | Standard Operating Procedure |
| O₃ | Ozone | SRU | Sulfur Recovery Unit |
| O&G | Oil and Gas | | |
| O&M | Operation and Maintenance | T | Tons |
| O&NG | Oil and Natural Gas | TAC | Toxic Air Contaminant |
| OAC | Oklahoma Administrative Code | TEG | Triethylene Glycol |
| OC | Oxidation Catalyst | THC | Total Hydrocarbons |
| | | TPY | Tons per Year |
| PAH | Polycyclic Aromatic Hydrocarbons | TRS | Total Reduced Sulfur |
| PAE | Projected Actual Emissions | TSP | Total Suspended Particulates |
| PAL | Plant-wide Applicability Limit | TV | Title V of the Federal Clean Air Act |
| Pb | Lead | | |
| PBR | Permit by Rule | µg/m³ | Micrograms per Cubic Meter |
| PCB | Polychlorinated Biphenyls | US EPA | U. S. Environmental Protection Agency |
| PCE | Partial Compliance Evaluation | | |
| PEA | Portable Emissions Analyzer | VFR | Vertical Fixed Roof |
| PFAS | Per- and Polyfluoroalkyl Substance | VMT | Vehicle Miles Traveled |
| PM | Particulate Matter | VOC | Volatile Organic Compound |
| PM_{2.5} | Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers | VOL | Volatile Organic Liquid |
| PM₁₀ | Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers | VRT | Vapor Recovery Tower |
| | | VRU | Vapor Recovery Unit |
| POM | Particulate Organic Matter or Polycyclic Organic Matter | YR | Year |
| ppb | Parts per Billion | 2SLB | 2-Stroke Lean Burn |
| ppm | Parts per Million | 4SLB | 4-Stroke Lean Burn |
| ppmv | Parts per Million Volume | 4SRB | 4-Stroke Rich Burn |
| ppmvd | Parts per Million Dry Volume | | |
| PSD | Prevention of Significant Deterioration | | |
| psi | Pounds per Square Inch | | |
| psia | Pounds per Square Inch Absolute | | |
| psig | Pounds per Square Inch Gage | | |
| RACT | Reasonably Available Control Technology | | |
| RATA | Relative Accuracy Test Audit | | |
| RAP | Regulated Air Pollutant or Reclaimed Asphalt Pavement | | |
| RFG | Refinery Fuel Gas | | |
| RICE | Reciprocating Internal Combustion Engine | | |
| RO | Responsible Official | | |
| ROAT | Regional Office at Tulsa | | |
| RVP | Reid Vapor Pressure | | |
| SCC | Source Classification Code | | |
| SCF | Standard Cubic Foot | | |
| SCFD | Standard Cubic Feet per Day | | |
| SCFM | Standard Cubic Feet per Minute | | |
| SCR | Selective Catalytic Reduction | | |
| SER | Significant Emission Rate | | |
| SI | Spark Ignition | | |
| SIC | Standard Industrial Classification | | |
| SIP | State Implementation Plan | | |
| SNCR | Selective Non-Catalytic Reduction | | |

**MINOR SOURCE PERMIT TO OPERATE / CONSTRUCT
AIR POLLUTION CONTROL FACILITY
STANDARD CONDITIONS
(February 13, 2020)**

- A. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ) in accordance with and under the authority of the Oklahoma Clean Air Act. The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. This specifically includes compliance with the rules of the other Divisions of DEQ: Land Protection Division and Water Quality Division.
- B. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-7-15(g)) 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 252:100-7-15(f)]
- C. 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 252:100-7-18(a)]
- D. Unless specified otherwise, the term of an operating permit shall be unlimited.
- E. Notification to the Air Quality Division of DEQ of the sale or transfer of ownership of this facility is required and shall be made in writing by the transferor within 30 days after such date. A new permit is not required. [OAC 252:100-7-2(f)]
- F. The following limitations apply to the facility unless covered in the Specific Conditions:
1. No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility. [OAC 252:100-3]
 2. All facilities that emit air contaminants are required to file an emission inventory and pay annual operating fees based on the inventory. Instructions are available on the Air Quality section of the DEQ web page. www.deq.ok.gov [OAC 252:100-5]
 3. 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 252:100-9]
 4. 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]
 5. No particulate emissions from new fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lbs/MMBTU. [OAC 252:100-19]
 6. 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. [OAC 252:100-25]
 7. 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]

8. No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lbs/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
 9. 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 an organic material vapor-recovery system. [OAC 252:100-37-15(b)]
 10. 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]
- G. Any owner or operator subject to provisions of NSPS shall provide written notification as follows: [40 CFR 60.7 (a)]
1. A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
 2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
 3. A notification of the actual date of initial start-up of an affected facility postmarked within 15 days after such date.
 4. If a continuous emission monitoring system is included in the construction, a notification of the date upon which the test demonstrating the system performance will commence, along with a pretest plan, postmarked no less than 30 days prior to such a date.
- H. Any owner or operator subject to provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment. [40 CFR 60.7 (b)]
- I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by this subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least five years following the date of such measurements, maintenance, and records. [40 CFR 60.7 (f)]
- J. Any owner or operator subject to the provisions of NSPS shall conduct performance test(s) and furnish to AQD a written report of the results of such test(s). Test(s) shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up. [40 CFR 60.8]