

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM

June 22, 2016

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager

THROUGH: Rick Groshong, Environmental Programs Manager

THROUGH: Phillip Martin, P.E., Existing Source Permits Section Manager

THROUGH: Peer Review, John Howell, P.E.

FROM: David Pollard, DEQ Regional Office at Tulsa

SUBJECT: Evaluation of Permit Application No. **2016-0451-TVR2**
ONEOK Gas Transportation, L.L.C.
Red Oak Compressor Station; Facility ID: 1225
Section 14, T6N, R21E, Latimer County (Lat. 34.99423° – Long. -95.05420°)
Driving Directions: From Red Oak, 1 mile east on Hwy I-270, 3 miles north
on State Hwy 82. The facility is on the west side of
Hwy 82.

SECTION I. INTRODUCTION

ONEOK Gas Transportation, L.L.C. (applicant) submitted an application received May 2, 2016, to renew their Title V permit for the subject natural gas compressor station (SIC 4922). The facility is currently operating under Permit No. 2011-016-TVR. The only changes for this permit are to address the applicability of 40 CFR 60 Subpart OOOO, Crude Oil and Natural Gas Production, Transmission, and Distribution.

SECTION II. FACILITY DESCRIPTION

Equipment having significant emissions include two 4-stroke rich burn (4SRB) White/Superior engines equipped with catalytic converters and three 4-stroke lean burn (4SLB) Caterpillar engines. Field gas flows into the facility through a separator where water is separated and accumulated in a 90-barrel tank, while gas flows to the suction header for the five compressors. Wastewater generated by the scrubbers on the five units is also routed to the 90-bbl tank. The White/Superior units are equipped with a pulsation filter bottle. Additional water separated in the bottle is routed to a 100-bbl wastewater pit. Compressed gas from all units then enters a transmission line and leaves the facility. The facility stores antifreeze and lube oil on-site, as listed in the following section, but these activities are insignificant.

SECTION III. EQUIPMENT**EUG 1 - Internal Combustion Engines**

Point ID#	EU Name/Model	Serial No.	Const/mod Date
ENG-1	800-hp White/Superior 8G-825 with catalytic converter	320579	1992
ENG-2	800-hp White/Superior 8G-825 with catalytic converter	304939	1992
ENG-3	1,265-hp Caterpillar G-3516 SITA engine	4EK02175	2000
ENG-4	1,265-hp Caterpillar G-3516 SITA engine	4EK02807	2000
ENG-5	1,775-hp Caterpillar G-3606 TA engine	3XF00233	2003

EUG 2 - Storage Tanks

Point ID#	Contents	Capacity	Const. Date
TNK-1	Wastewater	90 bbl	1992
TNK-2	Wastewater	100 bbl	1992
TNK-3	Antifreeze	500 gal	1992
TNK-4	Lube Oil	1,000 gal	1992

EUG 3 - Fugitive VOC Emission Sources

Piping components are detailed in the following Emissions Section.

SECTION IV. AIR EMISSIONS

Engine combustion emissions are calculated based on 8,760 hours per year operations and manufacturer's emission factors, as follows.

Engine Emission Factors (g/hp-hr)

Source	NO_x	CO	VOC
Each 800-hp White/Superior 8G-825 engine w/cc	2.0	3.0	0.5
Each 1,265-hp Caterpillar G-3516 TALE engine	3.0	3.0	0.5
1,775-hp Caterpillar G-3606 TA engine	2.0	3.0	0.5

Combustion Emissions

Point ID#	NO _x		CO		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
ENG-1	3.53	15.45	5.29	23.17	0.88	3.86
ENG-2	3.53	15.45	5.29	23.17	0.88	3.86
ENG-3	8.37	36.65	8.37	36.65	1.39	6.11
ENG-4	8.37	36.65	8.37	36.65	1.39	6.11
ENG-5	7.83	34.28	11.74	51.42	1.96	8.57
Total	31.63	138.48	39.06	171.06	6.50	28.51

Emissions from the wastewater, antifreeze, and lube oil tanks are considered insignificant and are not shown in the facility-wide emissions table below. There are no loading or flash emissions because the facility produces no condensate. Fugitive emissions are estimated using Table 2-4 of EPA’s “Protocol for Equipment Leak Emission Estimates” (11/95, EPA-453/R-95-017), an estimated number of components, and a gas analysis indicating a maximum VOC (C₃+) value of 4% by weight.

Fugitive Emissions

Equipment Item	Number	Factor (Lb/hr/item)	VOC Emissions	
			Lb/hr	TPY
Valves - Inlet Gas	80	0.00992	<0.01	0.02
Pressure Relief Valves	12	0.01940	<0.01	<0.01
Flange/Connectors - Inlet Gas	190	0.00086	<0.01	<0.01
Compressor Seals	12	0.01940	<0.01	<0.01
Open Ended Lines	1	0.00441	<0.01	<0.01
Pump Seals	2	0.00529	<0.01	<0.01
Totals			<0.06	<0.07

Blowdown emissions are based on an annual volume of 1,200,000 scf/year and the ideal gas law to calculate the mass of 0.12 tons per year.

Facility-wide Emissions

EUG	NO _x		CO		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Engines	31.6	138	39.1	171	6.5	28.5
Fugitives					0.1	0.1
Blowdown					0.1	0.1
Total	31.6	138	39.1	171	6.7	28.7

AP-42, Section 3.2 lists speciated organic HAP emission factors for 4SRB and 4SLB natural gas stationary engines. The primary emission of concern is formaldehyde, which emission factors show to have at least an order of magnitude more emissions than any other compound listed. The facility estimated formaldehyde emissions using the 4SRB rich-burn engine factor of 0.0205 lbs/MMBTU from AP-42 (7/00), Section 3.2, for a heat input of 6.2 MMBTUH with a 70% reduction in the catalytic converters for the White/Superior engines and stack test results for the

Caterpillar G-3516 (0.25 g/hp-hr) and G-3606 (0.20 g/hp-hr) engines. The table below lists estimated formaldehyde emissions for all of the compressor engines. The facility estimated total HAP emissions to be 12.0 TPY, using appropriate data from AP-42.

Engines	Rating	Emission factor	Formaldehyde Emissions	
			Lb/hr	TPY
1 and 2	6.2 MMBTUH each	0.0205 Lb/MMBTU	0.08	0.33
3 and 4	1,265 hp each	0.25 g/hp-hr	1.39	6.11
5	1,775 hp	0.2 g/hp-hr	0.78	3.43
Totals			2.25	9.87

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified on Part 1b of the forms submitted with the construction application are duplicated below. Most of these activities are not present and are listed only in the event that some may be added in the future. Appropriate recordkeeping on activities indicated below with “*”, is required.

- a. *Stationary reciprocating engines burning natural gas, gasoline, aircraft fuels, or diesel fuel which are either used exclusively for emergency power generation or for peaking power service not exceeding 500 hours/year.
- b. Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTUH heat input (commercial natural gas).
- c. *Storage tanks with less than or equal to 10,000 gallons capacity that store volatile organic liquids with a true vapor pressure less than or equal to 1.0 psia at maximum storage temperature.
- d. *Emissions from crude oil and condensate marine and truck loading equipment operations at crude oil and natural gas production sites where the loading rate does not exceed 10,000 gallons per day averaged over a 30-day period.
- e. *Emissions from crude oil and condensate storage tanks with a capacity of less than or equal to 420,000 gallons that store crude oil and condensate prior to custody transfer.
- f. *Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature.
- g. Additions or upgrades of instrumentation or control systems that result in emission increases less than the pollutant quantities specified in OAC 252:100-8-3(e)(1).
- h. Cold degreasing operations utilizing solvents that are denser than air.
- i. *Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant.

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 listed in OAC 252:100, Appendix Q. These requirements are addressed in the “Federal Regulations” section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. 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 were submitted and fees paid for previous years as required.

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 that result in emissions not authorized in the permit and that exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities refer to those individual emission units either listed in Appendix I 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 HAP 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 operating permit application, or are developed from the applicable requirement.

OAC 252:100-9 (Excess Emissions 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 affirmative defense, 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 (PM)) [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 compressor engines are subject to the requirements of this subchapter. 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 Million BTU per hour (MMBTUH) or less. Table 3.2-3 of AP-42 (7/00) lists total PM emissions from 4SRB burn natural gas-fired engines to be 0.01 lbs/MMBTU and Table 3.2-2 lists total PM emissions from 4SLB natural gas-fired engines to be 0.02 lbs/MMBTU. The permit requires the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

Engines	Maximum Heat Input, (MMBTUH)	Appendix C Emission Limit, (lbs/MMBTU)	Potential Emission Rate, (lbs/MMBTU)
1 and 2	6.2 each	0.60	0.01
3 and 4	9.83 each	0.60	0.02
5	12.1	0.58	0.02

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
 No discharge of greater than 20% opacity is allowed except for short-term occurrences that 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 these standards.

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 originated 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 to 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 5 limits sulfur dioxide emissions from new fuel-burning 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 approximately 1,000 Btu/scf, this limit corresponds to fuel sulfur content of approximately 1,200 ppmv. The permit requires the use of gaseous fuel with sulfur content less than 343 ppmv to ensure compliance with Subchapter 31.

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 lbs of NO_x per MMBTU, three-hour average. 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. There are no tanks that store a VOC with a vapor pressure greater than 1.5 psia. The storage tanks hold only produced water.

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 does not have the physical equipment (loading arm and pump) to conduct this type of loading. Therefore, this requirement is not applicable.

Part 5 limits the VOC content of coating used in coating lines or operations. 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. Temperature and available air must be sufficient to provide essentially complete combustion. The compressor engines are designed to provide essentially complete combustion of organic materials.

Part 7 also regulates effluent water separators that receive water containing more than 200 gallons per day of VOC. There is 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 VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52

[Not Applicable]

Final total emissions are less than the threshold of 250 TPY of any single regulated pollutant and the facility is not one of the listed stationary sources with an emission threshold of 100 TPY.

NSPS, 40 CFR Part 60

[Not Applicable]

Subparts K, Ka, Kb, VOL Storage Vessels. There are no tanks at this facility with capacity greater than the threshold capacity of any of these subparts.

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

Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. The equipment is not in a SOCOMI 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 and sets standards for each facility which commences construction or modification after January 20, 1984. "Construction" as defined in §60.2 means fabrication, erection, or installation of an affected facility. "Sweetening unit" means a process that separates H₂S and CO₂ contents from the sour gas stream. This facility does not have a "sweetening unit" as defined.

Subpart JJJJ, Stationary Spark Ignition Combustion Engines (SI ICE) 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. There are no new, modified, or reconstructed engines at this facility. The engines in this facility were manufactured prior to July 12, 2006 and are not subject to this subpart.

Subpart OOOO, Crude Oil and Natural Gas Production, Transmission, and Distribution. This subpart was promulgated on August 16, 2012, and affects well completions, pneumatic controllers, equipment leaks from natural gas processing plants, sweetening units at natural gas

processing plants, reciprocating compressors, centrifugal compressors and storage vessels which are constructed, modified or reconstructed after August 23, 2011 and prior to September 18, 2015. Well completions subject to the NSPS are limited to the flow-back period following hydraulic fracturing operations at a gas well affected facility. These completions include those conducted at newly drilled and fractured wells, as well as completions conducted following re-fracturing operations that may occur at various times over the life of the well.

All equipment at the facility was manufactured before August 23, 2011. The facility as it exists, is therefore not an affected source since it predates the effective date of this rule.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides or vinyl chloride except for trace amounts of benzene. Subpart J, Equipment Leaks of Benzene, only applies to process streams which contain more than 10% benzene by weight. Analysis of Oklahoma natural gas indicates a maximum benzene content of less than 1%.

NESHAP, 40 CFR Part 63

[Subpart ZZZZ Applicable]

Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to triethylene glycol (TEG) 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.

The facility is not a major source of HAP emissions and there are no triethylene glycol dehydration units.

Subpart HHH, Natural Gas Transmission and Storage. This subpart affects Natural Gas Transmission and Storage Facilities. It applies to emission points that are located at facilities that are major sources of HAP emissions, 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. The affected source is each glycol dehydration unit. The owner or operator of a facility that does not contain an affected source is not subject to the requirements of this subpart. The facility is not a major source of HAP emissions and there are no dehydration units. Therefore, this subpart does not apply.

Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006. All five engines at this facility, ENG-1, ENG-2, ENG-3, ENG-4, and ENG-5 are existing

engines. The existing RICE at this site are subject to work practice standards, but not emission limits, under Subpart ZZZZ.

CAM, 40 CFR Part 64

[Applicable]

This part applies to any pollutant-specific emissions unit at a major source that is required to obtain an operating permit, for any application for an initial operating permit submitted after April 18, 1998, that addresses “large emissions units,” or any application that addresses “large emissions units” as a significant modification to an operating permit, or for any application for renewal of an operating 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 of 100 TPY or 10/25 TPY of a HAP

The 800-hp White/Superior 8G825 engines have the potential to emit (pre-control device) more than 100 TPY of NO_x. Since potential pre-control emissions exceed major source levels (100 TPY of a regulated pollutant), they are subject to CAM. An appropriate CAM plan is included in the specific conditions of this permit.

Chemical Accident Prevention Provisions, 40 CFR Part 68

[Not Applicable]

This facility only handles or stores naturally occurring hydrocarbon mixtures prior to entry into a petroleum refining process unit or a natural gas processing plant. This facility does not process or store more than the threshold quantity of any regulated substances (Section 112r of the Clean Air Act 1990 Amendments). More information on this federal program is available on the web page: www.epa.gov/ceppo.

Stratospheric Ozone Protection, 40 CFR Part 82

[Applicable]

This facility does not produce, consume, recycle, import, or export any controlled substances or controlled products as defined in this part, nor does this facility perform service on motor (fleet) vehicles which involves ozone-depleting substances. Therefore, as currently operated, this facility is not subject to these requirements. To the extent that the facility has air-conditioning units that apply, the permit requires compliance with Part 82.

SECTION VIII. COMPLIANCE

Inspection

A full compliance evaluation inspection was completed by Michael Provence, DEQ, on August 25, 2015. The report notes that, based on observations made onsite and a review of Facility records, no areas of noncompliance were found.

Testing

The following table illustrates the results of the most recent PEA testing on engines compared to the permit limits.

Engine	Date Tested	Permit Limits		Test Results	
		NO _x (lbs/hr)	CO (lb/hr)	NO _x (lbs/hr)	CO (lb/hr)
ENG-1	10/07/15	3.53	5.29	2.10	3.60
ENG-2	10/07/15	3.53	5.29	2.76	3.60

The applicant did not have records of tests for Engines 3, 4 and 5 readily available because they have not been operated for a long period of time.

Tier Classification and Public Review

This application has been determined to be a **Tier II** based on the request for renewal of an operating permit for a major source for which a Title V operating permit is required. The applicant 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 real property.

The applicant did not publish a “Notice of Filing a Tier II Application”. The applicant plans to include it with the “Notice Of Draft permit”. Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page: www.deq.state.ok.us/.

Fee Paid

Part 70 operating permit renewal fee of \$7,500.

SECTION IX. SUMMARY

This facility was constructed as described in the application. There are no active Air Quality compliance or enforcement issues that would affect the issuance of this permit. Issuance of the operating permit is recommended, pending public and EPA review.

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

**ONEOK Gas Transportation, L.L.C.
Red Oak Compressor Station**

Permit No. 2016-0451-TVR2

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on May 2, 2016. The Evaluation Memorandum dated June 22, 2016, 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 emissions limitations for each point. [OAC 252:100-8-6(a)(1)]

EUG 1

Emission Unit		Units	NO _x	CO	VOC	Formaldehyde
ENG-1	800-hp White/Superior 8G-825 engine w/catalytic converter	lb/hr	3.53	5.29	0.88	0.04
		TPY	15.45	23.17	3.86	0.17
ENG-2	800-hp White/Superior 8G-825 engine w/ catalytic converter	lb/hr	3.53	5.29	0.88	0.04
		TPY	15.45	23.17	3.86	0.17
ENG-3	1,265-hp Caterpillar G-3516 TALE engine	lb/hr	8.37	8.37	1.39	0.70
		TPY	36.65	36.65	6.11	3.05
ENG-4	1,265-hp Caterpillar G-3516 TALE engine	lb/hr	8.37	8.37	1.39	0.70
		TPY	36.65	36.65	6.11	3.05
ENG-5	1,775-hp Caterpillar G-3606 TA engine	lb/hr	7.83	11.74	1.96	0.78
		TPY	34.28	51.42	8.57	3.43

EUG 2: Storage tanks VOC emissions are insignificant based on existing equipment items and do not have a specific limitation.

Point	Contents	Capacity	Const. Date
TNK-1	Wastewater	90 barrels	1992
TNK-2	Wastewater	100 barrels	1992
TNK-3	Antifreeze	500 gallons	1992
TNK-4	Lube Oil	1,000 gallons	1992

EUG 3: Fugitive VOC emissions from piping/valves/connections are insignificant based on existing equipment items and do not have a specific limitation.

Component	Service	≈ # of Components
Valves - Inlet Gas	Gas	80
Pressure Relief Valves	Gas	12

Component	Service	≈ # of Components
Flange/Connectors - Inlet Gas	Gas	190
Compressor Seals	Gas	12
Open Ended Lines	Gas	1
Pump Seals	Gas	2

2. The fuel-burning equipment shall be fired with gaseous fuel having 343 ppmv or less total sulfur. Compliance can be shown by the following methods: a current gas company bill, lab analysis, stain-tube analysis, gas contract, tariff sheet, or other approved methods. Compliance shall be demonstrated at least once per calendar year. [OAC 252:100-31]

3. The facility is subject to the requirements of 40 CFR Part 63, Subpart ZZZZ, including but not limited to the following: [40 CFR 63, Subpart ZZZZ]
 - §63.6580 What is the purpose of subpart ZZZZ?
 - §63.6585 Am I subject to this subpart?
 - §63.6590 What parts of my plant does this subpart cover?
 - §63.6595 When do I have to comply with this subpart?
 - §63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
 - §63.6605 What are my general requirements for complying with this subpart?
 - §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?
 - §63.6615 When must I conduct subsequent performance tests?
 - §63.6620 What performance tests and other procedures must I use?
 - §63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
 - §63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
 - §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
 - §63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
 - §63.6645 What notifications must I submit and when?
 - §63.6650 What reports must I submit and when?
 - §63.6655 What records must I keep?
 - §63.6660 In what form and how long must I keep my records?
 - §63.6665 What parts of the General Provisions apply to me?
 - §63.6675 What definitions apply to this subpart?

4. Engines ENG-1 and ENG-2 are subject to the Compliance Assurance Monitoring (CAM) requirements of 40 CFR 64 for NO_x emissions. Permittee shall comply with the CAM plan included as Appendix A to this permit. [40 CFR 64]

5. The permittee is authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)(1)]
6. Each engine at the facility shall have a permanent identification plate attached that shows the make, model number, and serial number. [OAC 252:100-43]
7. ENG1 and ENG2 shall be set to operate with an air/fuel ratio controller and exhaust gases passing through a functional catalytic converter and shall not be operated without the converter. [OAC 252:100-8-6(a)(1)]
8. At least once per calendar quarter, the permittee shall conduct tests of NO_x and CO emissions from the engine(s) 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 catalytic converters. [OAC 252:100-8-6 (a)(3)(A) & 100-43]
9. 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. Requirements of OAC 252:100-9 include immediate notification and written notification of Air Quality and demonstrations that the excess emissions meet the criteria specified in OAC 252:100-9. [OAC 252:100-9]
10. Replacement (including temporary periods of 6 months or less for maintenance purposes), of the internal combustion engines/turbines with emissions specified in this permit with engines/turbines of lesser or equal emissions of each pollutant (in lbs/hr and TPY) are authorized under the following conditions.
 - a. The permittee shall notify AQD in writing no later than 7 days in advance of the start-up of the replacement engine(s)/turbine(s). Said notice shall identify the equipment removed and

- shall include the new engine/turbine make, model, and horsepower; date of the change, and any change in emissions.
- b. Quarterly emissions tests for the replacement engine(s)/turbine(s) shall be conducted to confirm continued compliance with NO_x and CO emissions limitations. A copy of the first quarter testing shall be provided to AQD within 60 days of start-up of each replacement or additional engine/turbine. The test report shall include the engine/turbine fuel usage, stack flow (ACFM), stack temperature (°F), stack height (feet), stack diameter (inches), and pollutant emissions rates (g/hp-hr, lbs/hr, and TPY) at maximum rated horsepower for the altitude/location.
 - c. Replacement equipment and emissions are limited to equipment and emissions which are not a modification under NSPS or NESHAP, or a significant modification under PSD. The permittee shall evaluate the emissions increase resulting from the replacement in accordance with the procedures in OAC 252:100-8, including any associated emissions, to document that the replacement does not result in a significant increase, and submit the results with the notice required by (a.) of this Specific Condition.
 - d. Engines installed as allowed under the replacement allowances in this Specific Condition that are subject to 40 CFR Part 63, Subpart ZZZZ and/or 40 CFR Part 60, Subpart JJJ shall comply with all applicable requirements.
11. 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 emissions testing required for the engine(s) and each replacement engine.
 - b. Record of make, model, serial number, and emission rates (lbs/hr), for any replacement engine(s).
 - c. For the fuel(s) burned, the appropriate document(s) as described in Specific Condition No. 2, updated annually.
 - d. O&M records for any engine/turbine on the reduced testing frequency that operated more than 220 hours per quarter.
 - e. Operating hours of engines/turbines that operated less than 220 hours in a quarter and were not tested.
 - f. Records required by 40 CFR 63 Subpart ZZZZ beginning with the compliance date.
 - g. Records of compliance with Part 64.
12. 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. For stationary reciprocating engines burning natural gas, gasoline, aircraft fuels, or diesel fuel which are either used exclusively for emergency power generation or for peaking power service not exceeding 500 hours/year: Records of annual operating hours.
 - b. For storage tanks with less than or equal to 10,000 gallons capacity that store volatile organic liquids with a true vapor pressure less than or equal to 1.0 psia at maximum storage temperature: Records of the capacity of the tanks and contents.

- c. For emissions from crude oil and condensate storage tanks with a capacity of less than or equal to 420,000 gallons that store crude oil and condensate prior to custody transfer: Records of the capacity of the tanks and contents.
 - d. For emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature: Records of the capacity of the tanks and contents.
 - e. For activities that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: The type of activity and the amount of emissions from that activity (annual).
13. No later than 30 days after each anniversary date of the issuance of the original Title V permit, the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, certification of compliance with the terms and conditions of this permit.
[OAC 252:100-8-6(c)(5)(A), (C), & (D)]
14. This permit supersedes all previous Air Quality operating permits for this facility, which are now cancelled.

Attachment A

CAM MONITORING APPROACH

	Indicator No. 1	Indicator No 2	Indicator No. 3
I. Indicator	Temperature of exhaust gas into catalyst.	Pressure differential (decrease) of exhaust gas (press. in – press. out across catalyst).	Inspection & Preventive Maintenance (I/PM) See enclosed PM plan.
Measurement Approach	Exhaust gas temperature is measured continuously when engines are in operation using an inline thermocouple and translated by a temp. scanner or other end device.	During months that engines operate, pressure differential is measured monthly using a water column (w.c.) gauge or other device indicating pressure for inlet and outlet pressures.	During months that engines operate, monthly inspection according to PM plan; maintenance performed as needed.
II. Indicator Range	The indicator range is above 750 ° F, but lower than 1250 ° F., except during startup. Excursions trigger corrective action, logging and reporting in semiannual report.	The indicator range is a pressure drop deviation of less than 2 inches of water from the benchmark, except during startup. Excursions trigger corrective action, logging and reporting in semiannual report.	Adherence to PM plan. Excursions trigger corrective action, logging and reporting in semiannual report.
III. Performance Criteria	Temperature is measured at the inlet to the catalyst by a thermocouple. The minimum accuracy is +/-1% of temperature, ° F.	Pressure is measured at the inlet and outlet of the catalyst by pressure gauge. The minimum accuracy is +/-0.1 inches.	Inspections are performed on the engine, AFR and the catalyst.
A. Data Representativeness			
B. Verification of Operational Status	Guarantee from thermocouple manufacturer.	Guarantee from gauge manufacturer.	Every 3,000 operating hours or less, the AFR system is tested for operability and the AFR set points are verified. Monthly PM inspections verify operating characteristics of the system.
C. QA/QC Practices and Criteria	End device is calibrated at least annually or calibrated upon installation of a new end device. Thermocouple is replaced at least annually with a new thermocouple and is considered calibrated upon installation.	Gauge or other end device is checked/calibrated annually.	Qualified personnel perform inspection and preventive maintenance.
D. Monitoring Frequency	Temperature measured continuously when engines are in operation, recorded on log sheets once daily. Compliance assumed daily if no corrective action events.	During months that engines operate, pressure differential is measured monthly and recorded on log sheets once monthly. Compliance assumed monthly if no corrective action events.	During months that engines operate, monthly inspection in accordance with PM plan.
Data Collection Procedures	Temperature data recorded on log sheet once daily when engines are in operation. Otherwise, excursions trigger corrective action, logging and reporting in semiannual report.	During months that engines operate, pressure data recorded on log sheet once monthly. Otherwise, excursions trigger corrective action, logging and reporting in semiannual report.	Records are maintained to document the monthly inspections and any required maintenance. Record any excursions that required corrective action. If no excursions, compliance is assumed on a monthly basis.
Averaging period	None.	None.	NA

**MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(June 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(17) 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:

ONEOK Gas Transportation, L.L.C.
Attn: Eddie Heck, Environmental Specialist
P.O. Box 8781
Tulsa, OK 74102-0871

Re: Permit No. **2016-0451-TV2**
ONEOK Gas Transportation, L.L.C.
Red Oak Compressor Station
Latimer County, Oklahoma

Dear Mr. Heck:

Enclosed is the permit authorizing operation of 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 emission inventory for this facility. An emission inventory must be completed on approved AQD forms and submitted (hardcopy or electronically) every year by April 1st. Any questions concerning the form or submittal process should be referred to the Emission Inventory Staff at 405-702-4100.

Thank you for your cooperation in this matter. If we may be of further service, please contact me at (918) 293-1617 or by mail at DEQ Regional Office at Tulsa, 3105 East Skelly Drive, Suite 200, Tulsa, Oklahoma, 74105.

Sincerely,

Phillip Fielder
Engineering Manager
AIR QUALITY DIVISION

ONEOK Gas Transportation, L.L.C.
Attn: Eddie Heck, Environmental Specialist
P.O. Box 8781
Tulsa, OK 74102-0871

Re: Permit No. **2016-0451-TV2**
Red Oak Compressor Station: Facility ID: 1225
Latimer County, Oklahoma

Dear Mr. Heck:

Air Quality has received the permit application for the referenced facility and completed initial review. This application has been determined to be a Tier II application. In accordance with 27A O.S. 2-14-301 and 302 and OAC 252:4-7-13(c), the enclosed draft permit is now ready for public review. The requirements for public review of the draft permit include the following steps, which you must accomplish.

1. Publish at least one legal notice (one day) in at least one newspaper of general circulation within the county where the facility is located. (Instructions enclosed)
2. Provide for public review, for a period of 30 days following the date of the newspaper announcement, a copy of the application and draft permit at a convenient location (preferentially at a public location) within the county of the facility.
3. Send AQD a signed affidavit of publication for the notice(s) from Item #1 above within 20 days of publication of the draft permit. Any additional comments or requested changes you have for the draft permit or the application should be submitted within 30 days of publication.

Thank you for your cooperation in this matter. If we may be of further service, please contact David Pollard at (918) 293-1617 or by mail at 3105 E. Skelly Dr., Suite 200, Tulsa Oklahoma 74105.

Sincerely,

Phillip Fielder, P.E.
Permits and Engineering Group Manager
AIR QUALITY DIVISION



PART 70 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

Permit No. 2016-0451-TVR2

ONEOK Gas Transportation, L.L.C.,

having complied with the requirements of the law, is hereby granted permission to operate the Red Oak Compressor Station, in Section 14-T6N-R21E, near Red Oak, Latimer County,

subject to standard conditions dated June 21, 2016 and specific conditions, both attached.

This permit shall expire five (5) years from the date below, except as authorized under Section VIII of the Standard Conditions.

Director, Air Quality Division

Date