DRAFT/PROPOSED

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **June 18, 2021**

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

THROUGH: Rick Groshong, Compliance and Enforcement Group Manager

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

THROUGH: Joseph K. Wills, P.E., Engineering Section

FROM: Alex Johnson, E.I., Existing Source Permit Section

SUBJECT: Evaluation of Permit Application No. **2020-0510-TVR**
ONEOK Field Services Company, LLC
Ward Compressor Station/Northern Rows Compressor Station
AQD Facility ID: 7252
Section 28, Township 14N, Range 10W, Canadian County, Oklahoma
Latitude 35.65289° N and Longitude 98.26808° W
Directions: From the intersection of Highway 281 and Highway 270 in Geary, OK, proceed 3.25 miles east on Highway 270. Turn north and proceed 2 miles north on N. Niles Road. Turn west and proceed 0.4 miles on Edmond Rd. The station is located on the north side of the road.

SECTION I. INTRODUCTION

ONEOK Field Services Company (OFS) has submitted an application for renewal of the Part 70 operating permit for the Ward Compressor Station/Northern Rows Compressor Station. The facility is currently operating under Permit No. 2015-0545-TV (M-1), issued on March 6, 2019. The facility is a gas compressor station (SIC 1311/NAICS 211130) and is located in an attainment area. The facility is not a Prevention of Significant Deterioration (PSD) source, but is a major source of Hazardous Air Pollutants (HAPs).

SECTION II. FACILITY DESCRIPTION

The facility is a collocated pair of natural gas compressor stations. Natural gas entering the facilities is routed through inlet scrubbers where free liquids are removed from the gas. The natural gas then passes through suction headers that feed the compressors, which boost gas pressure. The compressor units discharge natural gas into a pipeline for transmission. Condensate and produced water are routed from the inlet separators to designated storage tanks. The condensate tanks are equipped with vapor recovery units (VRUs) to capture working, breathing, and flashing losses. Condensate is transported off-site via tanker truck for sales and produced water is transported off-site via tanker truck for disposal.

SECTION III. PERMIT HISTORY

Permits	Date Issued	Description
2010-202-C	6/29/2010	Initial minor source construction permit for Ward Station
2010-202-O	12/29/2011	Initial minor source operating permit. Added one condensate tank
2010-202-C (M-1)	6/3/2014	Major source construction permit. Facility expanded to include newly constructed Northern Rows Station
2015-0545-TV	7/14/2016	Initial Title V operating permit. Added produced water operations
2015-0545-C (M-1)	8/28/2017	Significant modification to add four engines. The facility becomes a major source of HAP.
2015-0545-TV (M-1)	3/6/2019	Administrative amendment to incorporate conditions from 2015-0545-C (M-1). Current permit

SECTION IV. REQUESTED CHANGES

The applicant has requested the following changes to the permit, none of these changes are considered significant modifications under OAC 252:100-8-7.2(b)(2):

- Reduce emission calculations for the Ward condensate and produced water tanks (WTK-1, WTK-2, WTK-3, and WTK-5). This resulted in a decrease in permitted emissions.
- Update formaldehyde control efficiency for the Northern Rows engines (C-1 through C-8) to better fit the existing emission factor. This does not affect the permit because there are no specific conditions for engine formaldehyde emissions.
- Update Northern Rows condensate loading (TL-1) pressure and molecular weight to be consistent with Ward condensate loading. This does not affect the permit because the specific conditions for the condensate loading only address throughput.
- A new gas analysis was submitted for the facility, changing the VOC content, which resulted in emission increases for blowdown emissions (WBD and BD) and fugitive emissions (WFUG and FUG). This does not affect the permit because there are no specific conditions for the blowdown or fugitive emissions.
- Change Northern Rows Compressor Station Produced Water Loading number from TLW-1 to TL-2.

SECTION V. EQUIPMENT

Emission units are organized into emission unit groups (EUGs) as shown below.

EUG 1A Ward Internal Combustion Engines

EU ID#	Name/Model	Serial No.	Installation Date
WC-1	1,380-hp Caterpillar G-3516B 4-stroke, lean-burn with oxidation catalyst	JEF01026	March 2011; Mfg. Date 8/26/2010

WC-2	1,380-hp Caterpillar G-3516B 4-stroke, lean-burn with oxidation catalyst	JEF01021	March 2011; Mfg. Date 8/18/2010
WC-3	1,380-hp Caterpillar G-3516B 4-stroke, lean-burn with oxidation catalyst	JEF01025	March 2011; Mfg. Date 8/25/2010
WC-4	1,380-hp Caterpillar G-3516B 4-stroke, lean-burn with oxidation catalyst	JEF01020	March 2011; Mfg. Date 8/18/2010
WC-5	1,380-hp Caterpillar G-3516B 4-stroke, lean-burn with oxidation catalyst	JEF01031	March 2011; Mfg. Date 9/02/2010

EUG 1B Northern Rows Internal Combustion Engines

EU ID#	Name/Model	Serial No.	Installation Date
C-1	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN00834	October 2014; Mfg. Date post 2010
C-2	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN00833	October 2014; Mfg. Date post 2010
C-3	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN00831	October 2014; Mfg. Date post 2010
C-4	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN00832	October 2014; Mfg. Date post 2010
C-5	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN01107	2018; Mfg. Date 1/2015
C-6	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN01112	2018; Mfg. Date 1/2015
C-7	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN01116	2018; Mfg. Date 2/2015
C-8	2,370-hp Caterpillar G-3608 LE 4-stroke, lean-burn with oxidation catalyst	BEN01115	2018; Mfg. Date 2/2015

EUG 2A Ward Storage Tanks

EU ID#	Contents	Capacity		Installation Date
		Barrels	Gallons	
WTK-1	Condensate	300	12,600	March 2011
WTK-2	Condensate	300	12,600	March 2011
WTK-3	Condensate	300	12,600	March 2011
WTK-5	Produced Water	300	12,600	March 2011

EUG 2B Northern Rows Storage Tanks

EU ID#	Contents	Capacity		Installation Date
		Barrels	Gallons	
TK-1	Condensate	400	16,800	January 2014
TK-2	Condensate	400	16,800	January 2014
TK-3	Condensate	400	16,800	January 2014
TK-4	Produced Water	400	16,800	January 2014
TK-5	Produced Water	400	16,800	January 2014

EUG 3 Truck Loading

EU ID#	Source Description	Throughput
WTL-1	Ward Compressor Station Condensate Loading	1,500,000
WTL-2	Ward Compressor Station Produced Water Loading	3,300,000
TL-1	Northern Rows Compressor Station Condensate Loading	1,762,500
TL-2	Northern Rows Compressor Station Produced Water Loading	17,000,000

EUG 4 Additional Storage Tanks

EU ID#	Contents	Capacity		Installation Date
		Barrels	Gallons	
WTK-4	Methanol	210	8,820	March 2011
TK-6	Methanol	400	16,800	January 2014

EUG 5 Fugitive VOC Emission Sources

EU ID#	Source Description	Installation Date
WFUG	Ward Compressor Station Fugitives	March 2011
FUG	Northern Rows Compressor Station Fugitives	January 2014/ August 2018

EUG 6 Compressor Miscellaneous Venting and Blowdown Emissions

EU ID#	Source Description	Installation Date
WBD	Ward Compressor Station Venting and Blowdowns	March 2011
BD	Northern Rows Compressor Station Venting and Blowdowns	January 2014

SECTION VI. EMISSIONS

EUG1 – Compressor Engines

Compressor engine emission factors after emission controls are presented in Table 1. Compressor engine emissions are estimated based on 8,760 hours per year operation and 1,026 BTU/SCF average heating value. Table 3 lists the engine specifications and stack parameters. H_2CO is added to the VOC emissions shown in the facility-wide emissions summary to represent total VOC for the engines. Control efficiencies for the oxidation catalysts are based on manufacturer data and operational experience.

For WC-1 through WC-5, NOx and VOC factors are from NSPS Subpart JJJJ; the VOC factor does not include formaldehyde. The CO and formaldehyde emission factor is based on manufacturer's data plus a 79% control efficiency applied by the oxidation catalysts. The formaldehyde emissions include a safety factor of 50%.

For C-1 through C-8, the NOx factor is from manufacturer data plus a 40% safety factor. The CO emission factor is based on manufacturer's data plus an 85% control efficiency applied by the oxidation catalysts, while the formaldehyde emission factor is based on manufacturer's data plus a 79% control efficiency and a 50% safety factor. The VOC factor is from NSPS Subpart JJJJ; the VOC factor does not include formaldehyde.

Table 1: Engine Emission Factors

Emissions Source	NOx g/hp-hr	CO g/hp-hr	VOC(1) g/hp-hr	H_2CO g/hp-hr
WC-1 through WC-5	1.00	0.59	0.70	0.130
C-1 through C-8	0.70	0.41	0.70	0.081

(1) Does not include formaldehyde.

Table 2: Engine Emissions, per engine

ID#	NO_X		CO		VOC(1)		H_2CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
WC-1 through WC-5	3.04	13.33	1.78	7.81	2.13	9.33	0.40	1.73
C-1 through C-8	3.66	16.02	2.14	9.38	3.66	16.02	0.42	1.85

(1) Does not include formaldehyde. Formaldehyde is included in the overall facility-wide table.

Table 3: Engine Specifications and Stack Parameters

Parameter	WC-1 through WC-5	Parameter	C-1 through C-8
Manufacturer	Caterpillar	Manufacturer	Caterpillar
Model	G-3516B	Model	G-3608 LE
Control	Oxidation Catalyst	Control	Oxidation Catalyst
Input Parameter		**Input Parameter**	
Horsepower (max)	1,380	Horsepower (max)	2,370
Fuel Consumption	7,051 BTU/hp-hr	Fuel Consumption	6,600 BTU/hp-hr
Stack Diameter	12 in.	Stack Diameter	20 in.
Height above Grade	15 ft.	Height above Grade	30 ft.
Exhaust Flow	8,738 ACFM	Exhaust Flow	16,144 ACFM
Exhaust Temperature	993 ºF	Exhaust Temperature	857 ºF

EUG 2 –Storage Tanks

Working, breathing, and flashing VOC emissions from the condensate tanks (WTK-1 through WTK-3 and TK-1 through TK-3) were estimated using ProMax. Flashing emissions from the Ward and Northern Rows facilities were based on a site-specific condensate analysis. The condensate tanks are equipped with vapor recovery units which provide 100% control efficiency when working. VOC emissions from the condensate shall be calculated using approved methods and representative analyses for the throughputs.

Table 4: Tank Emissions (per tank)

Parameter	WTK-1 – WTK-3 Data	TK-1 – TK-3 Data
Throughput, gal/yr	500,000	587,500
Liquid in Tank(s)	Condensate	Condensate
Working/Breathing Method/Tool	ProMax	ProMax
Flash Calculation Method/Tool	ProMax	ProMax
Working/Breathing Emissions, TPY	1.98	1.40
Flashing Emissions, TPY	6.30	3.82
Control Type	VRU	VRU
Capture Efficiency, %	100	100
Control Efficiency, %	100	100
VRU Shutdown Time, hr/yr	438	438

Parameter	WTK-1 – WTK-3 Data	TK-1 – TK-3 Data
Total VOC Emissions, TPY	0.41	0.26

To demonstrate that the tanks are not subject to NSPS Subpart OOOO, OFS has requested a limit of 5.99 TPY of VOC for the set of tanks TK-1 through TK-3. To allow for operational flexibility, OFS has requested a limit of 1.24 TPY of VOC for the set of tanks WTK-1 through WTK-3.

Working, breathing, and flashing VOC emissions from produced water tanks (WTK-5, TK-4, and TK-5) were estimated using the ProMax condensate run, ratioing the throughputs, and multiplying the result by 1%. Flashing emissions from produced water tanks were based on a site-specific condensate analysis.

Table 5: Produced Water Tank Emissions (per tank)

Parameter	WTK-5 Data	TK-4 – TK-5 Data
Throughput, gal/yr	3,300,000	17,000,000
Liquid in Tank(s)	Produced Water	Produced Water
Working/Breathing Method/Tool	ProMax	ProMax
Flash Calculation Method/Tool	ProMax	ProMax
Working/Breathing Emissions, TPY	0.09	0.14
Flashing Emissions, TPY	0.42	0.55
Control Type	None	None
Total VOC Emissions, TPY	0.50	0.70

To demonstrate that the tanks are not subject to NSPS Subpart OOOO, OFS has requested a limit of 5.99 TPY of VOC for the set of tanks TK-4 and TK-5.

EUG 3 – Loading Emissions

VOC emissions for the condensate and produced water truck loadout operations were estimated using AP-42 (6/08), Equation (1) in Section 5.2, "Transportation and Marketing of Petroleum Liquids". It was assumed produced water has 1% of the emissions for an equal volume of condensate. Produced water loading emissions are insignificant.

Table 6: Loading Parameters and Emissions

Parameter	WTL-1	WTL-2	TL-1	TL-2
Liquids Loaded	Condensate	Produced Water	Condensate	Produced Water
Throughput, gal/yr	1,500,000	3,300,000	1,762,500	17,000,000
Saturation Factor	0.6	0.6	0.6	0.6
Temp., ^{o}F	59.96	59.96	59.96	59.96
TVP, psia	11.3308	11.3308	11.3308	11.3308
MW, lb/lbmol	54.1190	54.1190	54.1190	54.1190
VOC, wt.%	100	1	100	1
Emission Factor, lb/10^3 gal (1)	8.82	0.0882	8.82	0.0882
Control Method	None	None	None	None
VOC Emitted at Truck, TPY	6.61	0.15	7.77	0.75

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

EUG 4 – Other Storage Tanks

Working and breathing VOC emissions from the methanol tanks (WTK-4 and TK-6) were estimated using AP-42 (6/20) Section 7.1.

Table 7: Methanol Tank Emissions (per tank)

Parameter	WTK-4 Data	TK-6 Data
Throughput, gal/yr	458,640	458,640
Liquid in Tank(s)	Methanol	Methanol
Working/Breathing Method/Tool	AP-42 (6/20) Section 7.1	AP-42 (6/20Section 7.1
Flash Calculation Method/Tool	(No Flashing)	(No Flashing)
Working/Breathing Emissions, TPY	0.24	0.37
Control Type	None	None
Total VOC Emissions, TPY	0.24	0.37

EUG 5 – Fugitive Emissions

Fugitive emissions are based on Table 2-4 of "1995 Protocol for Equipment Leak Emission Estimates (EPA 453/R-95-017)," Oil and Gas Production Operations Average Emission Factors, the estimated number of components below, and the VOC (C_{3+}) content of the materials handled.

Table 8: Ward Facility Fugitive VOC Emissions

Source Type/Service	No. of Sources	Em. Factor (lb/hr/source)*	VOC Wt % *	VOC lb/hr	VOC TPY
Valves – Gas	540	9.92E-03	14.80	0.79	3.47
Connectors – Gas	1,080	4.41E-04	14.80	0.07	0.31
Flanges - Gas	675	8.60E-04	14.80	0.09	0.38
Relief Valves - Gas	36	1.94E-02	14.80	0.10	0.45
Open-Ended Lines – Gas	18	4.41E-03	14.80	0.01	0.05
Compressor Seals - Gas	10	1.94E-02	14.80	0.03	0.13
Other – Gas	20	1.94E-02	14.80	0.06	0.25
Valves - Light Oil	18	5.51E-03	100.00	0.10	0.43
Connectors - Light Oil	39	4.63E-04	100.00	0.02	0.08
Flanges - Light Oil	6	2.43E-04	100.00	<0.01	0.01
Pump Seals - Light Oil	2	2.87E-02	100.00	0.06	0.25
Other - Light Oil	4	1.65E-02	100.00	0.07	0.29
TOTALS			**--**	**1.40**	**6.10**

* Based on a speciated gas analysis.

Table 9: Northern Rows Facility Fugitive VOC Emissions

Source Type/Service	No. of Sources	Em. Factor (lb/hr/source)*	VOC Wt % *	VOC lb/hr	VOC TPY

Valves – Gas	750	9.92E-03	17.24	1.28	5.62
Connectors – Gas	1,900	4.41E-04	17.24	0.14	0.63
Flanges - Gas	1,000	8.60E-04	17.24	0.15	0.65
Relief Valves - Gas	60	1.94E-02	17.24	0.20	0.88
Compressor Seals - Gas	16	1.94E-02	17.24	0.05	0.23
Other – Gas	10	1.94E-02	17.24	0.03	0.15
Valves - Light Oil	380	5.51E-03	100.00	2.09	9.17
Connectors - Light Oil	1,100	4.63E-04	100.00	0.01	0.04
Flanges - Light Oil	40	2.43E-04	100.00	0.51	2.23
Pump Seals - Light Oil	2	2.87E-02	100.00	0.06	0.25
Other - Light Oil	5	1.65E-02	100.00	0.08	0.36
TOTALS			**--**	**4.60**	**20.21**

* Based on a speciated gas analysis.

EUG 6 – Blowdowns

Process vent blowdown emissions from the Ward Compressor Station (WBD) were calculated based on a maximum blowdown volume of 1.2 million cubic feet per year (100 venting episodes and the volume of piping) and a VOC content of gas of 14.80% (wt). Process vent blowdown emissions from the Northern Rows Compressor Station (BD) were calculated based on a maximum blowdown volume of 2.4 million cubic feet per year (100 venting episodes and the volume of piping) and a VOC content of gas of 17.24% (wt).

Table 10: Blowdown Emissions

ID#	VOC, TPY
WBD	4.46
BD	10.72

Total Facility Emissions

Table 11: Total Facility-Wide Controlled Emissions

ID #	Source	NOx		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
WC-1	1,380-hp Caterpillar G-3516B[1]	3.04	13.33	1.78	7.81	2.53	11.06
WC-2	1,380-hp Caterpillar G-3516B[1]	3.04	13.33	1.78	7.81	2.53	11.06
WC-3	1,380-hp Caterpillar G-3516B[1]	3.04	13.33	1.78	7.81	2.53	11.06
WC-4	1,380-hp Caterpillar G-3516B[1]	3.04	13.33	1.78	7.81	2.53	11.06
WC-5	1,380-hp Caterpillar G-3516B[1]	3.04	13.33	1.78	7.81	2.53	11.06
WBD	Ward Miscellaneous Venting and Blowdowns	--	--	--	--	--	4.46
C-1	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
C-2	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
C-3	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
C-4	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
C-5	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
C-6	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
C-7	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87

ID #	Source	NOx		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
C-8	2,370-hp Caterpillar G-3608 LE[1]	3.66	16.02	2.14	9.38	4.08	17.87
BD	Northern Rows Miscellaneous Venting and Blowdowns	--	--	--	--	--	10.72
WTK-1	300-bbl Condensate Tank[2]	--	--	--	--	--	1.24
WTK-2	300-bbl Condensate Tank[2]	--	--	--	--	--	
WTK-3	300-bbl Condensate Tank[2]	--	--	--	--	--	
WTK-4	210-bbl Methanol Tank[3]	--	--	--	--	--	0.25
WTK-5	300-bbl Produced Water Tank[2]	--	--	--	--	--	0.50
WTL-1	Ward Condensate Loading	--	--	--	--	--	6.61
WTL-2	Ward Water Loading	--	--	--	--	--	0.15
TK-1	400-bbl Condensate Tank[2]	--	--	--	--	--	5.99
TK-2	400-bbl Condensate Tank[2]	--	--	--	--	--	
TK-3	400-bbl Condensate Tank[2]	--	--	--	--	--	
TK-4	400-bbl Produced Water Tank[2]	--	--	--	--	--	5.99
TK-5	400-bbl Produced Water Tank[2]	--	--	--	--	--	
TK-6	400-bbl Methanol Tank[3]	--	--	--	--	--	0.34
TL-1	Northern Rows Cond. Loading	--	--	--	--	--	7.77
TL-2	Northern Rows Water Loading	--	--	--	--	--	0.75
WFUG	Ward Fugitives	--	--	--	--	1.40	6.10
FUG	Northern Rows Fugitives	--	--	--	--	4.60	20.21
Total Emissions		**44.48**	**194.81**	**26.02**	**114.09**	**51.29**	**269.34**
Emissions from Permit No. 2015-545-TV		**44.48**	**194.81**	**26.02**	**114.09**	**145.82**	**268.88**
Change in Emissions		**0.00**	**0.00**	**0.00**	**0.00**	**-94.53**	**+0.46**

1 – Equipped with an oxidation catalyst.
2 – Includes working, breathing, and flashing losses.
3 – Includes working and breathing losses.

Engine VOC emissions include formaldehyde.

Based on Table 11, the facility is considered a major source since NOx, CO, and VOC emissions exceed the major source threshold of 100 TPY for criteria pollutants.

Hazardous Air Pollutants

The primary hazardous air pollutant (HAP) emission from the facility is formaldehyde. Formaldehyde emissions from the Caterpillar engines are estimated based on manufacturer's data. Table 6 lists formaldehyde emissions based on 8,760 hours per year operation. There are negligible HAP emissions from all other sources. Controlled individual HAP emissions are greater than 10 TPY. The facility is, therefore, a major source of HAPs.

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Table 6 Formaldehyde Emissions

Emissions Source	Formaldehyde	
	lb/hr	TPY
WC-1, 1,380-hp Caterpillar G-3516B with Oxid. Cata.	0.40	1.73
WC-2, 1,380-hp Caterpillar G-3516B with Oxid. Cata.	0.40	1.73

WC-3, 1,380-hp Caterpillar G-3516B with Oxid. Cata.	0.40	1.73
WC-4, 1,380-hp Caterpillar G-3516B with Oxid. Cata.	0.40	1.73
WC-5, 1,380-hp Caterpillar G-3516B with Oxid. Cata.	0.40	1.73
C-1, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-2, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-3, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-4, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-5, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-6, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-7, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
C-8, 2,370-hp Caterpillar G-3608 LE with Oxid. Cata.	0.42	1.85
Totals	**5.36**	**23.45**

SECTION VII. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Records are available to confirm the insignificance of the activities. Appropriate recordkeeping of activities indicated below with "*" is specified in the Specific Conditions. Any Activity to which a state or federal applicable requirement applies is not insignificant even if it is included on this list.

1. Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTUH heat input (commercial natural gas).
2. * 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.
3. 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.
4. * 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.
5. * 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.
6. * Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant.

SECTION VIII. OKLAHOMA AIR POLLUTION CONTROL RULES

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

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

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

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

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

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

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the existing permit or from the current 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 mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

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

OAC 252:100-19 (Particulate Matter) [Applicable]
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 are subject to the requirements of this subchapter. Appendix C specifies a PM emission limitation of 0.60 lbs/MMBTU for all equipment at this facility with a heat input rating of 10 MMBUTH or less. Appendix C specifies a PM emission limitation for all equipment at this facility with a heat input rating of greater than 10 MMBTUH but less than 1,000 MMBTUH based on the following

calculation: $E = 1.0428080X^{-0.238561}$, where E is the allowable emission rate and X is the maximum heat input. Table 3.2-2 of AP-42 (7/00) lists total PM emissions from 4-stroke, lean burn natural gas-fired engines to be 0.01 lbs/MMBTU.

Equipment	Maximum Heat Input (MMBTUH)	Emissions (lbs/MMBTU)	
		Limit	Potential
1,380-hp Cat G-3516B engines	9.73 each	0.60	0.01
2,370-hp Cat G-3608 LE engines	15.64 each	0.54	0.01

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 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 little possibility of exceeding the opacity 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 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 hydrogen sulfide (H_2S) emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 $\mu g/m^3$. Based on modeling conducted for the general permit for oil and gas facilities, the ambient impacts of H_2S from oil and gas facilities combusting natural gas with a maximum H_2S content of 343 ppmv and storing condensate or sweet crude oil will be in compliance with the H_2S ambient air concentration limit.
Part 5 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 343 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 343 ppmv for all fuel-burning equipment to ensure compliance with Subchapter 31.

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

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
None of the following affected processes are located at this facility: 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 condensate and methanol storage tanks 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. No coating operation is located at this facility.
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 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 252:100-7	Permits For Minor Facilities	Not in source category
OAC 252:100-11	Alternative Emissions Reduction	Not requested
OAC 252:100-15	Mobile Sources	Not in source category
OAC 252:100-17	Incinerators	Not type of emission unit
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	Municipal Solid Waste Landfills	Not in source category

SECTION IX. 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 26 specific industries with a threshold of 100 TPY.

NSPS, 40 CFR Part 60 [Subparts JJJJ, OOOO, and OOOOa Applicable]
Subpart Kb, Volatile Organic Liquid (VOL) Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813-gallons capacity and built after July 23, 1984. All storage tank capacities at this facility are smaller than the threshold level.

Subpart GG, Stationary Gas Turbines. This subpart sets standards for stationary gas turbines; however, the compressors here are powered by reciprocating engines.

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. This subpart sets standards for natural gas processing plants which are defined as any site engaged in the extraction of natural gas liquids from field gas, fractionation of natural gas liquids, or both. These operations are not conducted at this facility.

Subpart LLL, Onshore Natural Gas Processing: SO_2 Emissions. This subpart sets standards for natural gas sweetening units. Subpart LLL affects units which sweeten "sour" natural gas, which is defined as gas having more than 4 ppm H_2S. These operations are not conducted at this facility.

Subpart JJJJ, Stationary Spark Ignition Internal 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. All engines at this facility were ordered after June 12, 2006. According to §60.4230(a)(4)(i), which concerns owners and operators of SI-ICE, engines larger than 500 hp (excluding lean-burn engine with a maximum engine power between 500 and 1,350) manufactured after July 1, 2007 are affected facilities. The Caterpillar G-3516B and G-3608 LE engines are subject to this subpart.

Subpart OOOO, Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015. This subpart affects the following affected facilities:

(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. On April 12, 2013, EPA proposed revisions to NSPS, Subpart OOOO revising the affected facilities to only those storage vessels that emit more than 6 TPY and revising the definition to only include those storage vessels that contain crude oil, condensate, intermediate hydrocarbon liquids, or produced water.
(f) The group of all equipment, except compressors, within a process unit is an affected facility.
    (1) Addition or replacement of equipment for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.
    (2) Equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system, or liquefied natural gas unit is covered by §§ 60.5400, 60.5401, 60.5402, 60.5421, and 60.5422 if it is located at an onshore natural gas processing plant.
(g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.
    (1) Each sweetening unit that processes natural gas is an affected facility; and
    (2) Each sweetening unit that processes natural gas followed by a sulfur recovery unit is an affected facility.
    (3) Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H_2S) in the acid gas (expressed as sulfur) are required to comply with recordkeeping and reporting requirements specified in §60.5423(c) but are not required to comply with §§60.5405 through 60.5407 and §§60.5410(g) and 60.5415(g) of this subpart.

For each reciprocating compressor the owner/operator must replace the rod packing before 26,000 hours of operation or prior to 36 months. If utilizing the number of hours, the hours of operation must be continuously monitored. Commenced construction is based on the date of installation of the compressor (excluding relocation) at the facility. The four existing compressors at the Northern Rows facility associated with Caterpillar G-3608 LE engines C-1 through C-4 are subject to this subpart. The compressors at Northern Rows were manufactured in 2013, also making them subject to Subpart OOOO.

All pneumatic controllers constructed after August 23, 2011 and prior to September 18, 2015 are either intermittent/snap-action controllers that vent non-continuously or are continuous bleed controllers that have a bleed rate less than 6 SCFH. The five condensate and produced water tanks at Northern Rows (TK-1 through TK-5) have federally enforceable emissions limits of less than 6 TPY and are exempt from this subpart. These tanks were installed in 2014, under the construction permit 2010-202-C (M-1). Under this permit the condensate storage tanks were given federally enforceable limits. The produced water tanks were given federally enforceable limits in 2015-0545-TV because their potential to emit was less than 6 TPY since installation. All equipment associated with the Ward Compressor Station were installed prior to August 23, 2011, and are not subject to this subpart.

The permit will require the facility to comply with all applicable requirements of NSPS, Subpart OOOO.

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.

Four compressors were added to the facility in 2015-0545-TV (M-1), issued on February 13, 2019. Adding four compressors to the facility constituted a "modification," making the facility subject to the leak detection and repair (LDAR) requirements of Subpart OOOOa with a compliance date of June 3, 2017 or 60 days after startup of the additional compressors. The new compressors themselves were manufactured in early 2015, pre-dating Subpart OOOOa. The other potentially subject equipment at this facility commenced construction prior to the NSPS, Subpart OOOOa applicability date of September 18, 2015, and they have not been modified or reconstructed.

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, concerns only process streams that 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 affected emission points that are located at facilities which are major sources of HAPs that 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. This subpart also applies to area sources of HAP emissions. Subpart HH affects glycol dehydration unit process vents, storage vessels with potential for flash emissions, and compressors and ancillary equipment (valves, flanges, etc.) in VHAP service (i.e., more than 10% by weight HAPs) that are located at gas processing plants. This facility is a major source of HAPs and must meet the compliance, reporting, and recordkeeping requirements of Subpart HH. However, the facility is not in VHAP service, so there are no specific device requirements.

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

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE) affects new and existing engines at major and area sources. All engines at this location are "new" sources. Table 2a and Table 2b of Subpart ZZZZ provides the following requirements for new and reconstructed 4SLB engines located at major sources of HAPs:

For Each	You must meet the following emission limitation, except during periods of startup . . .
4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2

The operator plans to use Option "b" to demonstrate compliance.

For Each	You must meet the following emission limitation, except during periods of startup . . .
1. New and reconstructed 4SLB stationary RICE ≥250 hp located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.

CAM, 40 CFR Part 64 [Not Applicable]
Compliance Assurance Monitoring (CAM) as published in the Federal Register on October 20, 1997, applies to any pollutant specific emission unit at a major source that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY or 10 TPY of any one HAP or 25 TPY total of all HAPs.

No engine has potential emissions exceeding the 10/25 TPY HAP emissions levels or 100 TPY of a criteria pollutant; therefore, CAM is not applicable.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
The definition of a stationary source does not apply to transportation, including storage incident to transportation, of any regulated substance or any other extremely hazardous substance under the provisions of this part. Naturally occurring hydrocarbon mixtures, prior to entry into a natural gas processing plant or a petroleum refining process unit, including: condensate, crude oil, field gas, and produced water, are exempt for the purpose of determining whether more than a threshold quantity of a regulated substance is present at the stationary source. More information on this federal program is available on the web page: www.epa.gov/rmp.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subpart A and F Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.
Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.

The standard conditions of the permit address the requirements specified at §82.156 for persons opening appliances for maintenance, service, repair, or disposal; §82.158 for equipment used during the maintenance, service, repair, or disposal of appliances; §82.161 for certification by an approved technician certification program of persons performing maintenance, service, repair, or disposal of appliances; §82.166 for recordkeeping; § 82.158 for leak repair requirements; and §82.166 for refrigerant purchase records for appliances normally containing 50 or more pounds of refrigerant.

SECTION X. COMPLIANCE

The Specific Conditions of this permit contain various testing, monitoring, recordkeeping, and reporting requirements in order to document on-going compliance with emission limits. The specific method used to document compliance was based on the type of emission unit, the type of process equipment, the specific pollutants emitted, and the amount of permitted emissions taking into account other regulatory requirements that an emission unit may be subject to.

In addition to the permitting requirements, the following periodic inspections were conducted since issuance of the Title V permit.

Inspection Type	Date	Summary/Results
Full Inspection	October 22, 2019	Two violations: Failing to submit NSPS Subpart OOOO annual report for engines C-5 thought C-8 in 2018, and collect NESHAP Subpart ZZZZ catalyst inlet temperature data for engines C-5 through C-8 in 2018. One area of concern: failed to include 12-month rolling total of produced water throughput in the 2019 SAR. Resulted in compliance case 9865. Case closed in October 22, 2020
Full Inspection	November 2, 2017	In Compliance
Full Inspection	June 22, 2016	Two violations: Engine emission limits for WC-5 were exceeded for NOx, and those excess emissions were not reported within 30 days. Resulted in compliance case 8556. Case closed in January 25, 2018

In addition, the following other enforcement actions have been taken place since issuance of the Title V permit.

Compliance Case ID#	Referral Date	Summary/Result
9269	August 20, 2018	Self-Disclosure: Failure to submit NESHAP Subpart ZZZZ testing for engines C-5 through C-8. Case closed in September 24, 2018.
9409	January 29, 2019	Self-Disclosure: Malfunctioning pressure sensor during NESHAP Subpart ZZZZ testing for engines C-6 and C-8. Case closed in April 11, 2019.
9865	June 5, 2020	Failure to submit NSPS OOOO annual reports for engines C-5 through C-8 for 2018. Failure to collect catalyst inlet temperature required by NESHAP Subpart ZZZZ for C-5 and C-8 from May 23, 2018 – August 24, 2018. Area of concern for not including 12-month rolling totals of produced water throughput. Case closed in October 22, 2020
10044	March 7, 2021	Self-Disclosure: Failure to follow the site-specific performance evaluation plan for engines C-5 – C-8 for 2018, and for C-1 – C-8 for 2019. Results were also not submitted. Case is still ongoing.

Performance Testing

Testing as required by NESHAP Subpart ZZZZ was conducted. The numbers were taken at 15% O_2. Results of the testing are listed following:

Points	Test Date	Formaldehyde Limit (ppmvd)	Test Result (ppmvd)
WC-1	4/8/2020	14.000	2.633
WC-2	4/7/2020	14.000	8.500
WC-3	4/7/2020	14.000	6.011
WC-4	4/5/2020	14.000	7.850
WC-5	4/8/2020	14.000	3.754
C-1	4/14/2020	14.000	5.358
C-2	4/15/2020	14.000	2.463
C-3	4/14/2020	14.000	7.240
C-4	4/15/2020	14.000	1.362
C-5	6/18/2020	14.000	8.395
C-6	6/19/2020	14.000	6.823
C-7	6/18/2020	14.000	9.608
C-8	6/19/2020	14.000	9.779

Engine Performance Testing

Points	Test Date	Limit (lb/hr)	Test Result (lb/hr)

		NO_X	CO	NO_X	CO
WC-1	4/8/2020	3.040	1.780	1.280	0.046
WC-2	4/7/2020	3.040	1.780	1.296	0.142
WC-3	4/7/2020	3.040	1.780	1.291	0.140
WC-4	4/5/2020	3.040	1.780	1.561	0.140
WC-5	4/8/2020	3.040	1.780	1.360	0.071
C-1	4/14/2020	3.660	2.140	3.475	0.422
C-2	4/15/2020	3.660	2.140	1.581	0.248
C-3	4/14/2020	3.660	2.140	2.357	0.428
C-4	4/15/2020	3.660	2.140	1.690	0.080
C-5	6/18/2020	3.660	2.140	2.885	0.162
C-6	6/19/2020	3.660	2.140	2.940	0.161
C-7	6/18/2020	3.660	2.140	3.150	0.118
C-8	6/19/2020	3.660	2.140	2.474	0.190

Stack testing as required by NSPS Subpart JJJJ was conducted. Results of the testing are listed following.

Unit ID	Test Date	Power During Test	Emissions Limitations			Test Results		
			NOx g/hp-hr	CO g/hp-hr	VOC g/hp-hr	NOx g/hp-hr	CO g/hp-hr	VOC g/hp-hr
WC-1	4/8/2020	91.29%	1.00	2.00	0.70	0.461	0.017	0.043
WC-2	4/7/2020	99.63%	1.00	2.00	0.70	0.428	0.047	0.163
WC-3	4/7/2020	94.62%	1.00	2.00	0.70	0.449	0.049	0.156
WC-4	4/5/2020	97.05%	1.00	2.00	0.70	0.529	0.047	0.125
WC-5	4/8/2020	91.19%	1.00	2.00	0.70	0.490	0.026	0.088
C-1	4/14/2020	97.86%	1.00	2.00	0.70	0.68	0.083	0.061
C-2	4/15/2020	93.56%	1.00	2.00	0.70	0.323	0.051	0.161
C-3	4/14/2020	92.30%	1.00	2.00	0.70	0.489	0.089	0.099
C-4	4/15/2020	91.73%	1.00	2.00	0.70	0.353	0.017	0.103
C-5	6/18/2020	94.61%	1.00	2.00	0.70	0.584	0.033	0.115
C-6	6/19/2020	91.32%	1.00	2.00	0.70	0.616	0.034	0.110
C-7	6/18/2020	97.54%	1.00	2.00	0.70	0.618	0.023	0.113
C-8	6/19/2020	93.34%	1.00	2.00	0.70	0.507	0.039	0.114

SECTION XI. TIER CLASSIFICATION, PUBLIC AND EPA REVIEW

Tier Classification and Public Review

This application has been determined to be **Tier II** based on the request for renewal of a Part 70 operating permit.

The applicant published the "Notice of Filing a Tier II Application" in the *El Reno Tribune* newspaper, a semi-weekly local newspaper in Canadian County on January 6, 2021. The notice stated that the application was available for review at the El Reno Carnegie Library in Canadian County. The information on all permit actions is available for review by the public in the Air Quality section of the DEQ web page at https://www.deq.ok.gov.

The applicant requested and was granted concurrent public and EPA review periods. The draft permit will be made available for a 30-day public review at a location in the county where the facility is located and on the Air Quality section of the DEQ web page at https://www.deq.ok.gov. The proposed permit will be sent to EPA for a 45-day review period.

This facility is not located within 50 miles of the border of Oklahoma so no notice to other states is required.

If the Administrator does not object in writing during the 45-day EPA review period, any person that meets the requirements of this subsection may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection. Any such petition shall be based only on objections to the permit that the petitioner raised with reasonable specificity during the public comment period provided for in 27A O.S. § 2-14-302.A.2., unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period. If the Administrator objects to the permit as a result of a petition filed under this subsection, the DEQ shall not issue the permit until EPA's objection has been resolved, except that a petition for review does not stay the effectiveness of a permit or its requirements if the permit was issued after the end of the 45-day review period and prior to an EPA objection. If the DEQ has issued a permit prior to receipt of an EPA objection under this subsection, the DEQ will modify, terminate, or revoke such permit, and shall do so consistent with the procedures in 40 CFR §§ 70.7(g)(4) or (5)(i) and (ii) except in unusual circumstances. If the DEQ revokes the permit, it may thereafter issue only a revised permit that satisfies EPA's objection. In any case, the source will not be in violation of the requirement to have submitted a timely and complete application.

Fees Paid

Part 70 operating permit renewal fee of $7,500 has been received.

SECTION XII. SUMMARY

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

PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

ONEOK Field Services Company, LLC **Permit No. 2020-0510-TVR**
Ward Compressor Station/Northern Rows Compressor Station **Facility ID No. 7252**

The permittee is authorized to operate in conformity with the specifications submitted to the Air Quality Division on November 21, 2020. The Evaluation Memorandum dated June 18, 2021, 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)]

EUG 1A: Emission limits for Ward Compressor Station permitted engines.

EUG 1A: Emission Limitations for Ward Compressor Station Engines

EU ID#	Source	NOx		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
WC-1	1,380-hp Caterpillar G-3516B w/OC	3.04	13.33	1.78	7.81	2.53	11.06
WC-2	1,380-hp Caterpillar G-3516B w/OC	3.04	13.33	1.78	7.81	2.53	11.06
WC-3	1,380-hp Caterpillar G-3516B w/OC	3.04	13.33	1.78	7.81	2.53	11.06
WC-4	1,380-hp Caterpillar G-3516B w/OC	3.04	13.33	1.78	7.81	2.53	11.06
WC-5	1,340-hp Caterpillar G-3516B w/OC	3.04	13.33	1.78	7.81	2.53	11.06

w/OC = with oxidation catalyst.

EUG 1B: Emission limits for Northern Rows Compressor Station permitted engines.

EUG 1B: Emission Limitations for Northern Rows Compressor Station Engines

EU ID#	Source	NOx		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
C-1	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-2	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-3	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-4	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-5	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-6	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-7	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87
C-8	2,370-hp Caterpillar G-3608 LE w/OC	3.66	16.02	2.14	9.38	3.66	17.87

w/OC = with oxidation catalyst.

EUG 2: Storage tank VOC emissions are estimated based on existing equipment items. The storage tanks from EUG 2A shall be controlled by a vapor recovery unit (VRU) with a 95% capture/control efficiency. The off-gases from the VRU shall be recycled to the station inlet manifolds. The permittee shall estimate uncontrolled emissions from the condensate tanks, which

shall not exceed the emission limitations listed for EUG 2A below. The condensate tanks shall be bottom filled or equipped with submerged fill pipes. [OAC 252:100-37-15(b)]

WTK-5 VOC emissions are estimated based on existing equipment items but does not have a specific limitation under normal operating conditions because it is considered an insignificant activity

EUG 2A: Ward Compressor Station Storage Tanks

EU ID #	Description	Throughput Limit	Emissions Limit
WTK-1, WTK-2, and WTK-3	300-bbl Condensate	1,500,000 gal/yr	1.24 TPY
WTK-5	300-bbl Produced Water	-	-

Storage tanks TK-1, TK-2, and TK-3 from EUG 2B shall be controlled by a vapor recovery unit (VRU) with a 95% capture/control efficiency. The off-gases from the VRU shall be recycled to the station inlet manifolds. The permittee shall estimate uncontrolled emissions from the condensate and produced water tanks, which shall not exceed the emission limitations listed for EUG 2B below. The condensate tanks shall be bottom filled or equipped with submerged fill pipes. [OAC 252:100-37-15(b)]

EUG 2B: Northern Rows Compressor Station Storage Tanks

EU ID #	Description	Throughput Limit	Emissions Limit
TK-1, TK-2, and TK-3	400-bbl Condensate	1,762,500 gal/yr	5.99 TPY
TK-4 and TK-5	400-bbl Produced Water	17,000,000 gal/yr	5.99 TPY

All vessel gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place. The facility shall record condensate and produced water throughputs (monthly, 12 month rolling total). VOC emissions from the condensate and produced water tanks shall be calculated using approved methods and representative analyses for the throughputs (monthly, 12 month rolling total).

EUG 3: Emission limits for condensate truck loading:

EU ID #	Emission Unit	Throughput Limit
WTL-1	Ward	1,500,000 gal/yr
TL-1	Northern Rows	1,762,500 gal/yr

a. The facility shall record condensate throughputs (monthly, 12-month rolling total).
b. The facility shall keep records of produced water loading as required for insignificant activities.

EUG 4: Additional Storage Tanks VOC emissions are estimated based on existing equipment items but do not have a specific limitation under normal operating conditions because they are considered insignificant activities.

EU ID #	Capacity (barrel/gallon)	Material Stored	Constructed Date
WTK-4	210/8,820	Methanol	March 2011

EU ID #	Capacity (barrel/gallon)	Material Stored	Constructed Date
TK-6	400/16,800	Methanol	January 2014

EUG 5: Fugitive VOC emissions are estimated based on existing equipment items but do not have a specific limitation. [OAC 252:100-8-6 (a)(3)]

EUG 5 Fugitive Sources

EU ID#	Emission Unit	Gas	Water/Light Oil
WFUG	Valves	540	18
	Connectors	1,080	39
	Flanges	675	6
	Relief Valves	36	0
	Open-Ended Lines	18	0
	Compressor Seals	10	0
	Other	20	4
	Pump Seals	0	2
FUG	Valves	750	380
	Connectors	1,900	1,100
	Flanges	1,000	40
	Relief Valves	60	0
	Compressor Seals	16	0
	Other	10	5
	Pump Seals	0	2

EUG 6 Miscellaneous Venting and Blowdown Emissions. Emissions from equipment blowdowns are based on the number of blowdowns, the volume of vented emissions, and the estimated VOC content of the vented emissions. Blowdown emissions do not have a specific limitation because they are considered insignificant activities.

EUG #	EU ID#	Description
6	WBD	Ward Compressor Station Venting and Blowdowns
	BD	Northern Rows Compressor Station Venting and Blowdowns

2. The fuel-burning equipment shall be fired with pipeline grade natural gas or other gaseous fuel with a sulfur content less than 343 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, or other approved methods. Compliance shall be demonstrated at least once every calendar year. [OAC 252:100-31]

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

4. Each engine at the facility shall have a permanent identification plate attached, which shows the make, model number, and serial number. [OAC 252:100-43]

5. At least once per calendar quarter, the permittee shall conduct tests of NOx and CO emissions in exhaust gases from each engine in EUG-1 and each replacement engine when operating under representative conditions for that period. Testing is required for any engine or replacement engine, which runs for more than 220 hours during that calendar quarter. Engines shall be tested no sooner than 20 days after the last test. Testing shall be conducted using a portable engine 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 an engine 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 indicate that emissions are within 10% of the emission limitation, the testing frequency shall revert to quarterly. Reduced engine testing does not apply to engines with catalytic converter/oxidation catalyst. [OAC 252:100-8-6 (a)(3)(A)]

6. 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. [OAC 252:100-9]

7.

7. The permittee is authorized to replace any internal combustion engine or turbine with emissions limitations specified in this permit with an engine or turbine that meets the following requirements: [OAC 252:100-8-6(f)(2)]

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

facilities, the permittee shall calculate the PTE or the net emissions increase resulting from the replacement to document that it does not exceed significance levels and submit the results with the notice required by paragraph (c) of this Specific Condition. The permittee shall attach each such notice to their copy of the relevant permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield described in OAC 252:100-8-6(d) does not apply to any change made pursuant to this paragraph.

(g) Engines whose installation and operation are authorized under this Specific Condition which are subject to 40 CFR Part 63, Subpart ZZZZ and/or 40 CFR Part 60, Subpart JJJJ shall comply with all applicable requirements.

8. 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. 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: capacity and materials stored.
b. 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: capacity and materials stored.
c. 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 capacity of the tanks and the amount of throughput (annual).
d. 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).

9. Engines subject to 40 CFR Part 60, Subpart JJJJ, shall comply with all applicable standards for owners or operators of stationary spark ignition internal combustion engines:

[40 CFR §§60.4230 to 60.4248]

a. § 60.4230: Am I subject to this subpart?
b. § 60.4231: What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines?
c. § 60.4232: How long must my engines meet the emissions standards if I am a manufacturer of stationary SI internal combustion engines?
d. § 60.4233: What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
e. § 60.4234: How long must I meet the emissions standards if I am an owner or operator of a stationary SI internal combustion engine?
f. § 60.4235: What fuel requirements must I meet if I am an owner or operator of a stationary SI internal combustion engine?
g. § 60.4236: What is the deadline for importing or installing stationary SI ICE produced in the previous model year?
h. § 60.4237: What are the monitoring requirements if I am an owner or operator of a stationary SI internal combustion engine?

i. § 60.4238: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤ 19 KW (25 HP).
j. § 60.4239: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≥ 19 KW (25 HP) that use gasoline?
k. § 60.4240: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≥ 19 KW (25 HP) that use LPG?
l. § 60.4241: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program?
m. § 60.4242: What other requirement must I meet if I am a manufacturer of stationary SI internal combustion engines?
n. § 60.4243: What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
o. § 60.4244: What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
p. § 60.4245: What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
q. § 60.4246: What parts of the General Provisions apply to me?
r. § 60.4247: What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines?
s. § 60.4248: What definitions apply to this subpart?

10. The permittee shall comply with NSPS, Subpart OOOO, Standards of Performance for Crude Oil and Natural Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015, for all affected facility located at this facility. [40 CFR §§60.5360 to 60.5430]

a. § 60.5360 What is the purpose of this subpart?
b. § 60.5365 Am I subject to this subpart?
c. § 60.5370 When must I comply with this subpart?
d. § 60.5375 What standards apply to gas well affected facilities?
e. § 60.5380 What standards apply to centrifugal compressor affected facilities?
f. § 60.5385 What standards apply to reciprocating compressor affected facilities?
g. § 60.5390 What standards apply to pneumatic controller affected facilities?
h. § 60.5395 What standards apply to storage vessel affected facilities?
i. § 60.5400 What equipment leak standards apply to affected facilities at an onshore natural gas processing plant?
j. § 60.5401 What are the exceptions to the equipment leak standards for affected facilities at onshore natural gas processing plants?
k. § 60.5402 What are the alternative emission limitations for equipment leaks from onshore natural gas processing plants?
l. § 60.5405 What standards apply to sweetening units at onshore natural gas processing plants?
m. § 60.5406 What test methods and procedures must I use for my sweetening units affected facilities at onshore natural gas processing plants?
n. § 60.5407 What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities at onshore natural gas processing plants?
o. § 60.5408 What is an optional procedure for measuring hydrogen sulfide in acid gas-Tutwiler Procedure?

p. § 60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
q. § 60.5411 What additional requirements must I meet to determine initial compliance for my closed vent systems routing emissions from storage vessels or centrifugal compressor wet seal fluid degassing systems?
r. § 60.5412 What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my storage vessel or centrifugal compressor affected facility?
s. § 60.5413 What are the performance testing procedures for control devices used to demonstrate compliance at my storage vessel or centrifugal compressor affected facility?
t. § 60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?
u. § 60.5416 What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my storage vessel or centrifugal compressor affected facility?
v. § 60.5417 What are the continuous control device monitoring requirements for my storage vessel or centrifugal compressor affected facility?
w. § 60.5420 What are my notification, reporting, and recordkeeping requirements?
x. § 60.5421 What are my additional recordkeeping requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?
y. § 60.5422 What are my additional reporting requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?
z. § 60.5423 What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities at onshore natural gas processing plants?
aa. § 60.5425 What parts of the General Provisions apply to me?
bb. § 60.5430 What definitions apply to this subpart?

11. The owner/operator shall comply with all applicable requirements of the NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE), Subpart ZZZZ, for any engine at the facility subject to Subpart ZZZZ, including but not limited to:

[40 CFR §§63.6580 to 60.6675]

a. § 63.6580 What is the purpose of subpart ZZZZ?
b. § 63.6585 Am I subject to this subpart?
c. § 63.6590 What parts of my plant does this subpart cover?
d. § 63.6595 When do I have to comply with this subpart?
e. § 63.6600 What emission limitations and operating limitations must I meet?
f. § 63.6605 What are my general requirements for complying with this subpart?
g. § 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations?
h. § 63.6615 When must I conduct subsequent performance tests?
i. § 63.6620 What performance tests and other procedures must I use?

j. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
k. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
l. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
m. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
n. § 63.6645 What notifications must I submit and when?
o. § 63.6650 What reports must I submit and when?
p. § 63.6655 What records must I keep?
q. § 63.6660 In what form and how long must I keep my records?
r. § 63.6665 What parts of the General Provisions apply to me?
s. § 63.6670 Who implements and enforces this subpart?
t. § 63.6675 What definitions apply to this subpart?

12. The permittee shall comply with all applicable requirements in 40 CFR Part 60, Subpart OOOOa, Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015. This subpart affects all affected facility located at this facility, including, but not limited to, the following.

[40 CFR §§60.5360a to 60.5432a]

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, and 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 pump 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, pneumatic pump 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, pneumatic pump, 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?

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

    a. Periodic testing of NOx and CO exhaust from each engine and each replacement engine.
    b. Operating hours for each engine if less than 220 hours per quarter and not tested.
    c. For the fuel(s) burned, the appropriate document(s) as described in Specific Condition No. 2.
    d. Calculated emissions from EUG 2A and EUG 2B (monthly and 12-month rolling totals).
    e. Condensate throughputs (monthly and 12-month rolling totals).
    f. Produced water throughputs for tanks TK-4 and TK-5 at the Northern Rows facility (monthly and 12-month rolling totals).
    g. Records as required by 40 CFR Part 60, Subpart JJJJ.
    h. Records as required by 40 CFR Part 60, Subpart OOOO.
    i. Records as required by 40 CFR Part 60, Subpart OOOOa.
    j. Records as required by 40 CFR Part 63, Subpart ZZZZ.
    k. Records of insignificant activities.

14. The Permit Shield (Standard Conditions, Section VI) is extended to the following requirements that have been determined to be inapplicable to this facility: [OAC 252:100-8-6(d)(2)]

    a. 40 CFR Part 52, NSR
    b. OAC 252:100-8, Part 7, PSD
    c. OAC 252:100-33, Control of Emissions of Nitrogen Oxides
    d. OAC 252:100-35, Control of Emission of Carbon Monoxide
    e. OAC 252:100-39, Emissions of VOCs in Non-attainment Areas and Former Non-attainment Areas

15. No later than 30 days after each anniversary date of the issuance of the Part 70 operating permit (July 14, 2016), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

16. This Part 70 permit replaces and supersedes all previous Air Quality operating permits for this facility, which are now canceled.

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 (PM_{10}). 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 252:100-43-6]

PART 70 PERMIT

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

Permit No. 2020-0510-TVR

ONEOK Field Services Company, LLC,

having complied with the requirements of the law, is hereby granted permission to operate the Ward Compressor Station/Northern Rows Compressor Station, located in Section 28, Township 14N, Range 10W, Canadian County, Oklahoma, subject to the Standard Conditions dated June 21, 2016, and Specific Conditions, both of which are attached.

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

DRAFT/PROPOSED

Kendal Stegmann, Division Director **Date**

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

ONEOK Field Services Company, LLC
Attn: Ms. Jenny Ellette
P.O. Box 871
Tulsa, OK 74102

Subject: Operating Permit No. **2020-0510-TVR**
Ward Compressor Station/Northern Rows Compressor Station
AQD Facility ID: 7252
Section 28, Township 14N, Range 10W, Canadian County, Oklahoma.

Dear Ms. Ellette:

Air Quality Division has completed the initial review of your permit application referenced above. This application has been determined to be a **Tier II**. In accordance with 27A O.S. § 2-14-302 and OAC 252:004-7-13(c) the enclosed draft permit is now ready for public review. The requirements for public review 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 this draft permit on the DEQ website and access to the application through the DEQ website.

3. Send to AQD a copy of the proof of publication notice from Item #1 above together with any additional comments or requested changes which you may have on the draft permit.

Thank you for your cooperation in this matter. If we may be of further service, please contact Alex Johnson at alex.johnson@deq.ok.gov or (405) 702-4100.

Sincerely,

Phillip Fielder

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

ONEOK Field Services Company, LLC
Attn: Ms. Jenny Ellette
P.O. Box 871
Tulsa, OK 74102

Subject: Operating Permit No. **2020-0510-TVR**
Ward Compressor Station/Northern Rows Compressor Station
AQD Facility ID: 7252
Section 28, Township 14N, Range 10W, Canadian County, Oklahoma.

Dear Ms. Ellette:

Enclosed is the permit authorizing operation of the referenced facility. Please note that this permit is issued subject to the certain standards 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 or Alex Johnson, the permit writer, at (405) 702-4100.

Sincerely,

DRAFT/PROPOSED

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

Enclosure

NOTICE OF FILING
TIER II or TIER III AIR QUALITY PERMIT APPLICATION

APPLICANT RESPONSIBILITIES

Permit applicants are required to give public notice that a Tier II or Tier III permit application has been filed with DEQ. The notice must be published in one newspaper local to the site or facility. Upon publication, a signed affidavit of publication must be obtained from the newspaper and sent to AQD.

REQUIRED CONTENT (27A O.S. § 2-14-301 and OAC 252:4-7-13(c))

1. A statement that a Tier II or Tier III permit application has been filed with DEQ;
2. Name and Address of the applicant;
3. Name, address, legal description and county of the site or facility;
4. The type of permit or permit action being sought;
5. A description of activities to be regulated;
6. Location(s) where the application may be reviewed (a location in the county where the site/facility is located must be included);
7. Name, address, and telephone number of the applicant and DEQ contacts;
8. Any additional information required by DEQ rules or deemed relevant by applicant; and
9. For Tier III applications only, a 30-day opportunity to request a process meeting on the permit process.

SAMPLE NOTICE *(Italicized print is to be filled in by the applicant.)***:**

DEQ NOTICE OF TIER *…II or III…* **PERMIT APPLICATION FILING**

A Tier *…II or III…* **application for an air quality** *…type of permit or permit action being sought [e.g., Construction Permit for a Major Facility]…* **has been filed with the Oklahoma Department of Environmental Quality (DEQ) by applicant,** *…name and address.*

The applicant requests approval to *…brief description of purpose of application…* **at the** *…site/facility name … …[proposed to be]…* **located at** *…physical address (if any) and legal description including county…***.**

The application may be reviewed at *…location(s) (one must be in the county where the site/facility is located)…***or at the Air Quality Division's main office (see address below). The status of all permit applications is also available for review in the Air Quality Section of DEQ's Web Page: //www.deq.state.gov/**

[For Tier III only, add the following statement: **Any person(s) may request a meeting to explain the permitting process. Such request must be submitted in writing within 30 days of the publication of this notice to the Air Quality Division contact listed below.**]

After reviewing the application, the DEQ will prepare either a draft permit or a draft denial. At that time another notice will be published about where to review the draft, how to submit written comments on the draft and request a public meeting.

For additional information, contact *…names, addresses and telephone numbers of contact persons for the applicant,* **or contact DEQ at: Chief Engineer, Permits & Engineering Group, Air Quality Division, 707 North Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone: (405) 702-4100**

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
4-15-21

ACFM	Actual Cubic Feet per Minute
AD	Applicability Determination
AFRC	Air-to-Fuel Ratio Controller
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
BHP	Brake Horsepower (bhp)
BTU	British thermal unit (Btu)
C&E	Compliance and Enforcement
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS	Chemical Abstract Service
CAAA	Clean Air Act Amendments
CC	Catalytic Converter
CCR	Continuous Catalyst Regeneration
CD	Consent Decree
CEM	Continuous Emission Monitor
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CI	Compression Ignition
CNG	Compressed Natural Gas
CO	Carbon Monoxide or Consent Order
COA	Capable of Accommodating
COM	Continuous Opacity Monitor
D	Day
DEF	Diesel Exhaust Fluid
DG	Demand Growth
DSCF	Dry Standard (At Standard Conditions) Cubic Foot (Feet)
EGU	Electric Generating Unit
EI	Emissions Inventory
EPA	Environmental Protection Agency
ESP	Electrostatic Precipitator
EUG	Emissions Unit Group
EUSGU	Electric Utility Steam Generating Unit
FCE	Full Compliance Evaluation
FCCU	Fluid Catalytic Cracking Unit
FIP	Federal Implementation Plan
FR	Federal Register
GACT	Generally Achievable Control Technology
GAL	Gallon (gal)
GDF	Gasoline Dispensing Facility
GEP	Good Engineering Practice
GHG	Greenhouse Gases
GR	Grain(s) (gr)
H_2CO	Formaldehyde
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HC	Hydrocarbon
HCFC	Hydrochlorofluorocarbon
HFR	Horizontal Fixed Roof
HON	Hazardous Organic NESHAP
HP	Horsepower (hp)
HR	Hour (hr)
I&M	Inspection and Maintenance
IBR	Incorporation by Reference
ICE	Internal Combustion Engine
LAER	Lowest Achievable Emission Rate
LB	Pound(s) [Mass] (lb, lbs, lbm)
LB/HR	Pound(s) per Hour (lb/hr)
LDAR	Leak Detection and Repair
LNG	Liquefied Natural Gas
LT	Long Ton(s) (metric)
M	Thousand (Roman Numeral)
MAAC	Maximum Acceptable Ambient Concentration
MACT	Maximum Achievable Control Technology
MM	Prefix used for Million (Thousand-Thousand)
MMBTU	Million British Thermal Units (MMBtu)
MMBTUH	Million British Thermal Units per Hour (MMBtu/hr)
MMSCF	Million Standard Cubic Feet (MMscf)
MMSCFD	Million Standard Cubic Feet per Day
MSDS	Material Safety Data Sheet
MWC	Municipal Waste Combustor
MWe	Megawatt Electrical
NA	Nonattainment
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH_3	Ammonia
NMHC	Non-methane Hydrocarbon
NGL	Natural Gas Liquids
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NOI	Notice of Intent
NSCR	Non-Selective Catalytic Reduction
NSPS	New Source Performance Standards
NSR	New Source Review

O_3	Ozone
O&G	Oil and Gas
O&M	Operation and Maintenance
O&NG	Oil and Natural Gas
OAC	Oklahoma Administrative Code
OC	Oxidation Catalyst
PAH	Polycyclic Aromatic Hydrocarbons
PAE	Projected Actual Emissions
PAL	Plant-wide Applicability Limit
Pb	Lead
PBR	Permit by Rule
PCB	Polychlorinated Biphenyls
PCE	Partial Compliance Evaluation
PEA	Portable Emissions Analyzer
PFAS	Per- and Polyfluoroalkyl Substance
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers
PM_{10}	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers
POM	Particulate Organic Matter or Polycyclic Organic Matter
ppb	Parts per Billion
ppm	Parts per Million
ppmv	Parts per Million Volume
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
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
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
SOP	Standard Operating Procedure
SRU	Sulfur Recovery Unit
T	Tons
TAC	Toxic Air Contaminant
THC	Total Hydrocarbons
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulates
TV	Title V of the Federal Clean Air Act
$\mu g/m^3$	Micrograms per Cubic Meter
US EPA	U. S. Environmental Protection Agency
VFR	Vertical Fixed Roof
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VOL	Volatile Organic Liquid
VRT	Vapor Recovery Tower
VRU	Vapor Recovery Unit
YR	Year
2SLB	2-Stroke Lean Burn
4SLB	4-Stroke Lean Burn
4SRB	4-Stroke Rich Burn