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OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **March 9, 2021**

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

THROUGH: Rick Groshong, Environmental Manager, Compliance and Enforcement

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

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

FROM: Kyle Walker, E.I., New Source Permits Section

SUBJECT: Evaluation of Permit Application **No. 2019-1082-TVR4**
ONEOK Field Services Company, L.L.C.
Leedey Gas Plant (SIC 1321/NAICS 211130)
Facility ID: 1679
Section 32, T16N, R21W, Roger Mills County, Oklahoma
Latitude: 35.81332°N; Longitude: 99.46314°W
Directions: From Leedey, go 2 miles south on SH 34, turn west on SH 47 and go 6 miles, then turn south 1.5 miles and turn east into the site.

SECTION I. INTRODUCTION

ONEOK Field Services Company, L.L.C. (OFS) has submitted an application to renew the permit to operate their Leedey Gas Plant, which currently operates under Permit No. 2014-0859-TVR3 issued on April 3, 2015. The facility is a minor source of hazardous air pollutants (HAP) and an existing PSD major source.

The facility was issued Construction Permit No. 2014-0859-C (M-1) on May 5, 2020, to address the following two items:

- OFS constructed a combustor control for condensate tank and truck loading emissions. These modifications are part of the compliance plan submitted to address Enforcement Case 9399. The enforcement actions are detailed in Section XIII. COMPLIANCE.

- OFS re-evaluated sulfur dioxide (SO_2) emissions from the engines and heaters. The SO_2 estimates for the engines and heaters were calculated based on the properties of pipeline quality natural gas.

The conditions of construction permit 2014-0859-C (M-1) are being rolled into this permit renewal. It was determined the amine unit is subject to Title 40 Code of Federal Regulations Part

64 Compliance Assurance Monitoring (CAM). E-FLR1 controls the amine unit, and is subject to CAM. Therefore, the amine unit was added to the CAM review for E-FLR1. Specific Condition 22 was modified to include the amine unit under the E-FLR1 CAM requirements. The facility has recalculated formaldehyde emissions for E-ENG2.2 and E-ENG3.3 without considering the catalytic converters to insure compliance with minor source limitations. VOC emissions for E-ENG1.2 through E-ENG13.3 were recalculated to include formaldehyde emissions to insure compliance with permit limitations. No other modifications have been requested.

SECTION II. FACILITY DESCRIPTION

The Leedey Gas Plant is a compressor station and a natural gas processing plant. Native field gas enters the plant at approximately 10-20 psig and passes through one of two separators to collect liquids. The gas is then sent to inlet compressors (C-4.3, C-8.2, C-10.4, C-12.2, and C-13.3) where pressure is boosted to approximately 1,000 psig. The liquids collected in the two low-pressure separators are piped to a 30,000-gal pressurized tank (TNK-20) where produced water and basic sediment and water (BS&W) are separated from the condensate. From TNK-20, condensate is routed to a 30,000-gal atmospheric condensate tank TNK-19 and produced water/BS&W is routed to two (2) 210-bbl produced water tanks (TNK-21 and TNK-22) and one (1) 210-bbl BS&W tank (TNK-23). Emissions from TNK-19 are controlled by the combustor. Emissions from the produced water and BS&W tanks are emitted to the atmosphere. All liquids from the compressor inter-stage separators are also routed through TNK-20 to the atmospheric tanks.

Another gas stream enters the plant at around 800 psig and is routed through an inlet filter separator located 150 feet north of the precomp building. All liquids entering through this system are also routed through TNK-20 to the atmospheric tanks. The gas is then boosted by compressor C-9 to approximately 1,000 psig and blends with the gas from the native field gathering system. Blended wet gas is then treated with an amine solution for the removal of acid gases (primarily CO_2 and some H_2S). The amine solution is regenerated with a natural gas-fired heater (H-2.2). The resulting acid gas is then sent to the acid gas flare (E-FLR1). The sweetened, wet gas is then passed through an air-cooled condenser and dehydrated with a glycol contactor. The glycol solution is regenerated with a natural gas-fired heater (H-3). The vapors from the glycol still vent are partially condensed in an air-cooled condenser. Liquids from the glycol condenser are piped to the BS&W tank to be stored and then disposed. Uncondensed vapors are sent to the acid gas flare (E-FLR1).

The sweetened and dry gas is then split and further dehydrated in two molecular sieve units. Each molecular sieve unit uses a natural gas-fired heater (H-1 and H-4) for regeneration. The gas streams are then processed in two cryogenic expander units where most of the components heavier than ethane are condensed. The condensed product streams are then blended, passed through one or more bullet-shaped pressure tanks (TNK-11 through TNK-18, 220 psig), and pumped into a liquid pipeline. The uncondensed gas, which is sweetened, dried, and purified, leaves the cryogenic plant and enters the residue compressors (C-1.2, C-2.2, C-3.3, C-5.2, C-6.2, and C-11.2) to be blended and compressed into a gas pipeline, 950-1,000 psig.

After separation, condensate is loaded from TNK-19 into trucks to be transported off-site for sales. Produced water and BS&W is transported offsite for disposal. Condensate truck loading emissions are routed to the combustor.

SECTION III. EQUIPMENT

EUG 1 Internal Combustion Engines

EU ID#	ID#	HP	EU Make/Model	Serial No.	Installed Date	Gas Service
E-ENG1.2	2620	800	Superior 8G825 w/CC	20348	2008	Dry
E-ENG2.2	2621	800	Superior 8G825 w/CC	18789	2009	Dry
E-ENG3.3	2622	800	Superior 8G825 w/CC	19160	2010	Dry
E-ENG4.3	2614	881	Waukesha L7042 GU w/CC	366743	2001	Wet
E-ENG5.2	2272	1,085	Caterpillar G-3516 TALE w/OC	4EK02665	2010	Dry
E-ENG6.2	2626	1,340	Caterpillar G-3516 TALE w/OC	4EK04985	2010	Dry
E-ENG8.2	2616	881	Waukesha L7042 G w/CC	277148	2011	Wet
E-ENG9	2617	881	Waukesha L7042 G w/CC	317007-C	1991	Wet
E-ENG10.4	2618	881	Waukesha L7042 G w/CC	166001A	2007	Wet
E-ENG11.2	2625	1,478	Waukesha L7042 GSI w/CC	C-11315/1	2010	Dry
E-ENG12.2	2615	1,232	Waukesha L7042 GSI w/CC	277542	2011	Wet
E-ENG13.3	2619	1,232	Waukesha L7042 GSI w/CC	363177	2011	Wet

W/CC – With Catalytic Converter; W/OC – With Oxidation Catalyst

Engine Stack Parameters

EU ID#	ID#	Engine Make/Model	Ht. ft	Dia. ft	Fuel Use BTU/hp-hr	Exhaust ACFM	Temp ºF
E-ENG1.2	2620	White 8G825	17	0.83	8,500	4,437	900
E-ENG2.2	2621	White 8G825	17	0.83	8,500	4,437	900
E-ENG3.3	2622	White 8G825	17	0.83	8,500	4,437	900
E-ENG4.3	2614	Waukesha L7042GU	17	0.67	8,500	4,894	969
E-ENG5.2	2272	Caterpillar G-3516 TALE	39	1.00	7,450	5,956	842
E-ENG6.2	2626	Caterpillar G-3516 TALE	39	1.00	7,545	7,651	854
E-ENG8.2	2616	Waukesha L7042G	20	0.67	8,500	4,894	969
E-ENG9	2617	Waukesha L7042G	20	0.67	8,500	4,894	969
E-ENG10.3	2618	Waukesha L7042G	20	0.67	8,500	4,894	969
E-ENG11.2	2627	Waukesha L7042GSI	39	1.17	7,824	6,967	1,125
E-ENG12.2	2615	Waukesha L7042GSI	21	0.83	8,500	5,377	1,055
E-ENG13.3	2619	Waukesha L7042GSI	26	0.83	8,500	5,377	1,055

EUG 2a Storage Tanks

EU ID#	ID#	Contents	Barrels	Gallons	Const. Date
E-TNK3	MT-1	Methanol	60	2,520	1982
E-TNK4	AT-1	Amine	300	12,600	1980
E-TNK5	LOT-1	Lube Oil	152	6,360	1958
E-TNK6	AFT-1	Antifreeze	24.5	1,030	1980

EU ID#	ID#	Contents	Barrels	Gallons	Const. Date
E-TNK7	GT-1	Gasoline	22.4	942	1988
E-TNK8	KT-1	Kerosene	5.95	250	1990
E-TNK9	ST-1	Solvent/Diesel	5.95	250	1989
E-TNK10	MT-3	Methanol	300	12,600	1980
E-TNK11	V-300A	Liquid Propane/Butane	715	30,000	1980
E-TNK12	V-300B	Liquid Propane/Butane	715	30,000	1980
E-TNK13	V-300C	Liquid Propane/Butane	715	30,000	1980
E-TNK14	V-300D	Liquid Propane/Butane	715	30,000	1980
E-TNK15	V-300E	Liquid Propane/Butane	715	30,000	1981
E-TNK16	V-300F	Liquid Propane/Butane	715	30,000	1981
E-TNK17	V-300G	Liquid Propane/Butane	715	30,000	1981
E-TNK18	V-300H	Liquid Propane/Butane	715	30,000	1981
E-TNK20	V-310B	Condensate	715	30,000	1981
E-TNK21	COND-1	Produced H_2O/BS&W	210	8,820	1997
E-TNK22	COND-2	Produced H_2O/BS&W	210	8,820	1997
E-TNK23	BSW-3	BS&W	210	8,820	1997
E-TNK24	RTW-1	Water	210	8,820	2002
E-TNK25	MT-2	Methanol	12	504	UNK

EUG 2b Storage Tanks with Combustion Control

EU ID#	ID#	Contents	Barrels	Gallons	Const. Date
E-TNK19	V-310A	Condensate	715	30,000	1981

EUG 2c Controlled Activities

EU ID#	ID#	Activity
E-TL1	E-TL1	Condensate Truck Loading

EUG 3 Gas-Fired Heaters

EU ID#	ID#	Name	Heat Input	Fuel Usage
			MMBTUH	SCFH
E-HTR1	H-1	Mol-Sieve Regen. Heater	2.5	2,500
E-HTR2.2	H-2.2	Amine Unit Reboiler	6.0	6,000
E-HTR3	H-3	Glycol Unit Reboiler	1.5	1,500
E-HTR4	H-4	Mol-Sieve Regen. Heater	2.5	2,500

Heater Vent/Stack Parameters

EU	Point		Height	Diameter	Exhaust	Temp.
ID#	ID#	Name	ft	ft	ACFM	°F
E-HTR1	H-1	Mol-Sieve Regen. Heater	16	1.167	898	500
E-HTR2.2	H-2.2	Amine Unit Reboiler	36	2.500	2,649	500
E-HTR3	H-3	Glycol Unit Reboiler	21	1.167	706	500
E-HTR4	H-4	Mol-Sieve Regen. Heater	16	1.167	1,091	500
E-FLR1	Flare	Acid Gas Flare	60	0.833	2,157	1,800

EUG 4a Amine Unit

EU ID#	ID#	Installation Date	Throughput
AMINE1	E-FLR1	1981	60 MMSCFD

EUG 4b Glycol Dehydration Unit

EU ID#	ID#	Installation Date	Throughput
DEHY1	E-FLR1	1981	60 MMSCFD

EUG 4c Flare Pilot Emissions

EU ID#	ID#	Installation Date	Pilot Rating
E-FLR1	E-FLR1	1981	1.03 MMBTUH
COMB-1	COMB-1	2020	0.20 MMBTUH

EUG 5 Fugitive VOC Emission Sources Pre-1984

EU ID#	Equipment	Number
E-FUG1	Valves	2,205
	Relief Valves	118
	Compressor Seals	48
	Pump Seals	29
	Flange/Connections	2,224

EUG 6 Fugitive VOC Emission Sources Subject to NSPS, Subpart KKK

EU ID#	Equipment	Number
E-FUG2	Valves	198
	Relief Valves	7
	Flange/Connections	387

SECTION IV. AIR EMISSIONS

ENGINES

NO_X, CO, VOC, and formaldehyde (H_2CO) emission factors for the engines are listed following. All of the engines are equipped with catalytic converters or oxidation catalysts. NOx, CO, and VOC emission factors are based on manufacturer's data. The NOx and CO emission factor for E-ENG2.2 and E-ENG3.3 include a 250% safety factor. Formaldehyde emissions are based on AP-42 (7/00), Tables 3.2-2 and 3.2-3 emission factors or manufacturer information and are shown in the "Hazardous Air Pollutants (HAP)" discussion. CO and/or H_2CO emissions are controlled with 70% efficiency for the engines indicated in the *Engine Emission Factor* table. The estimated VOC emissions presented in the "Facility-Wide Emissions" table include formaldehyde. SO_2 emissions are based on emission factors from AP-42 (7/00), Tables 3.2-2 and 3.2-3 and engine fueling rates.

Engine Emission Factors

ID#	NO_X	CO	VOC	H_2CO
	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBTU
E-ENG1.2[(1)]	2.00	3.00	0.44	0.0205
E-ENG2.2[(2)]	5.00	7.50	0.66	0.0205

ID#	NO_X	CO	VOC	H_2CO
	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBTU
E-ENG3.3[(2)]	5.00	7.50	0.66	0.0205
E-ENG4.3[(1)]	2.00	3.00	0.44	0.0205
E-ENG5.2[(2)]	2.00	3.00	0.50	0.0740
E-ENG6.2[(2)]	2.00	3.00	0.50	0.0730
E-ENG8.2[(1)]	2.00	3.00	0.44	0.0205
E-ENG9[(1)]	2.00	3.00	0.44	0.0205
E-ENG10.3[(1)]	2.00	3.00	0.44	0.0205
E-ENG11.2[(1)]	2.00	3.00	0.44	0.0205
E-ENG12.2[(1)]	2.00	3.00	0.44	0.0205
E-ENG13.3[(1)]	2.00	3.00	0.44	0.0205

(1) CO and H_2CO each include a control efficiency of 70%; fuel consumption is listed with stack parameters.
(2) CO includes 70% control efficiency and a 250% safety factor; fuel consumption is listed with stack parameters.

Engine Emissions

EU ID#	NO_X		CO		VOC		H_2CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
E-ENG1.2	3.53	15.45	5.29	23.18	0.78	3.40	0.04	0.18
E-ENG2.2	8.82	38.63	13.23	57.94	1.16	5.10	0.14	0.61
E-ENG3.3	8.82	38.63	13.23	57.94	1.16	5.10	0.14	0.61
E-ENG4.3	3.89	17.01	5.83	25.52	0.86	3.74	0.05	0.20
E-ENG5.2	4.78	20.95	7.18	31.43	1.20	5.24	0.60	2.62
E-ENG6.2	5.91	25.88	8.86	38.82	1.48	6.47	0.74	3.23
E-ENG8.2	3.89	17.01	5.83	25.52	0.86	3.74	0.05	0.20
E-ENG9	3.89	17.01	5.83	25.52	0.86	3.74	0.05	0.20
E-ENG10.4	3.89	17.01	5.83	25.52	0.86	3.74	0.05	0.20
E-ENG11.2	6.52	28.54	9.78	42.82	1.43	6.28	0.07	0.31
E-ENG12.2	5.43	23.79	8.15	35.69	1.20	5.23	0.06	0.28
E-ENG13.3	5.43	23.79	8.15	35.69	1.20	5.23	0.06	0.28
Totals	64.80	283.70	97.19	425.59	13.05	57.01	2.04	8.94

Estimated working and breathing emissions for the condensate tanks COND-1 and COND-2 are based on EPA TANKS 4.0.9d calculations.

Tank COND-1 and COND-2 Emissions per tank

Parameter	Data
Contents	Produced H_2O/BS&W
Throughput, gal/yr	210,000
Flash Calculation Method/Tool	ProMax
Working/Breathing Method/Tool	EPA TANKS 4.0.9d
Control Type	None
VOC Emissions, TPY	0.35

Estimated working and breathing emissions for the methanol tank MT-1 are based on EPA TANKS 4.0.9d calculations.

Tank MT-1 Emissions

Parameter	Data
Contents	Methanol
Throughput, gal/yr	131,040
Working/Breathing Method/Tool	EPA TANKS 4.0.9d
Control Type	None
VOC Emissions, TPY	0.21

Estimated working and breathing emissions for atmospheric tank V-310A are based on EPA TANKS 4.0.9d calculations and a throughput of 1,379,700 gal/yr. Flashing emissions for V-310A were estimated with BR&E ProMax using the Peng-Robinson equation of state. Emissions are captured with 98% efficiency and controlled by COMB-1 with 98% efficiency.

Tank V-310A Emissions

Parameter	Data
Contents	Condensate
Throughput, gal/yr	1,379,700
Flash Calculation Method/Tool	ProMax
Working/Breathing Method/Tool	EPA TANKS 4.0.9d
Control Type	Flare (COMB-1)
Capture Efficiency, %	98
Control Efficiency, %	98
VOC Emissions Emitted at Tank, TPY	4.52
VOC Emissions Emitted at Flare, TPY	4.43
VOC Emissions, TPY	8.95

Emissions from loading condensate into tank trucks (E-TL1) were estimated using AP-42 (6/08), Section 5.2, Equation 1, and the parameters listed in the table below. The condensate properties were calculated by ProMax using a site specific analysis.

Loading Parameters and Emissions

ID#	Parameters and Emissions
E-TL1	Condensate
Throughput, gal/yr	1,379,700
Temp., ^{o}F	59.96
TVP, psia	13.98
MW, lb/lbmol	51.59
VOC, wt.%	100
Emission Factor, lb/10^3 gal	10.37
E-TL1	Condensate
Capture Efficiency, %	70

Loading Parameters and Emissions (continued)

ID#	Parameters and Emissions
Control Efficiency, %	98
Uncaptured VOC, TPY	2.15
VOC Emissions Emitted at Flare, TPY	0.10
VOC Emissions, TPY	2.25

Emissions from the glycol dehydration unit (DEHY1) are based on GRI-GLYCalc Version 4.0, a natural gas throughput of 60 MMSCFD, a lean glycol recirculation rate of 5.73 gallons per minute (gpm), condensation of the still vent off-gases (at 120°F), and combustion of the condenser off-gases. The estimate used a site specific gas analysis. Uncondensed vapors from the condenser are vented to the acid gas flare (E-FLR1). The acid gas flare is 98% efficient. Glycol unit emissions include a 10% safety factor.

Glycol Dehydrator Emissions

Parameter	Data
Type of Glycol	Triethylene
Gas Flow Rate, MMSCFD	60
Glycol Pump Type	Electric
Lean Glycol Pump Design Capacity, gpm	5.73
Lean Glycol Circulation Rate Input, gpm	5.73
Regenerator Vent	
Control Type or Recycle	Condenser/E-FLR1
Condenser Outlet Temperature, ^{o}F	120
Uncontrolled VOC Emissions, TPY	61.95
Overall Control Efficiency, %	98 (with 5% excess oxygen)
Controlled VOC Emissions, TPY	1.30
Flash Tank	
None	
Total Emissions, TPY(1)	
VOC	1.30
Benzene	0.08
Toluene	0.22
Ethylbenzene	<0.01
Xylene	0.02
n-Hexane	0.12
Total HAPs	**0.44**

(1) Includes a 10% safety factor.

Emission estimates from the heaters are based the rated heat input of each boiler and AP-42 (7/1998), Section 1.4 emission factors for NO_X, CO, VOC, $PM_{10/2.5}$, and SO_2. The heaters operate continuously.

Heater Capacities and Emission Factors

Parameter	Value
Burner Capacity: E-HTR1	2.5 MMBTUH
Burner Capacity: E-HTR2.2	6.0 MMBTUH
Burner Capacity: E-HTR3	1.5 MMBTUH
Burner Capacity: E-HTR4	2.5 MMBTUH
Emission Factors	
NO_x	100 lb/MMscf
CO	84 lb/MMscf
VOC	5.5 lb/MMscf
SO_2	0.6 lb/MMscf
$PM_{10/2.5}$ Filt. + Cond.	7.6 lb/MMscf

Heater Emissions

EU ID#	ID#	Capacity	NO_X		CO		VOC	
			lb/hr	TPY	lb/hr	lb/hr	TPY	lb/hr
E-HTR1	H-1	2.5 MMBTUH	0.25	1.07	0.21	0.90	0.01	0.06
E-HTR2.2	H-2.2	6.0 MMBTUH	0.59	2.58	0.49	2.16	0.03	0.14
E-HTR3	H-3	1.5 MMBTUH	0.15	0.64	0.12	0.54	0.01	0.04
E-HTR4	H-4	2.5 MMBTUH	0.25	1.07	0.21	0.90	0.01	0.06
Totals			**1.24**	**5.36**	**1.03**	**4.50**	**0.06**	**0.30**

Emissions of H_2S, SO_2, VOC, and hazardous air pollutants (HAP) from the amine unit (AMINE1) are based on an inlet gas analysis and AmineCalc Version 1.0, a flow rate of 60 MMSCFD, and a concentration of 60 ppm H_2S. The unit is equipped with a flash tank.

Amine Unit Parameters

Amine Unit	AMINE1
Inlet Acid Gas, MMSCFD	60
Amine Type	DEA
Pump Design Capacity, gpm	60
Lean Amine Recirculation Rate, gpm	60
Inlet Gas H_2S Concentration, ppmv	60
Outlet Gas H_2S Concentration, ppmv	0-0.5 ppm
Regenerator Still Vent	
Still Vent Control	Combustion (E-FLR1)
VOC Control Efficiency, %	98
H_2S Control Efficiency, %	98
H_2S to SO_2 Conversion Rate, %	98
VOC Emissions, TPY	2.44
H_2S Emissions, lb/hr	0.26
SO2 Emissions, TPY	104.54
Flash Tank	
Flash Tank Temperature, °F	100-125
Flash Tank Pressure, psig	800-900

Flash Tank Control	Combustion (E-FLR1)
VOC Control Efficiency, %	98
H_2S Control Efficiency, %	98
H_2S to SO_2 Conversion Rate, %	98
VOC Emissions, TPY	0.61
H_2S Emissions, lb/hr	0
SO2 Emissions, TPY	0
Total Emissions	
VOC, TPY	3.05
H_2S, lb/hr	0.26
SO_2, TPY	104.54

The amine unit vent and flash tank are routed to the acid gas flare. NOx and CO emissions from the acid gas flare (E-FLR1) are based on a waste gas heating value of 127 BTU/SCF, a gas throughput of 1,641,088 Btu/hr, emission factors from AP-42 (02/18), Section 13.5, Table 13.5-1 and Table 13.5-2 for Industrial Flares, and continuous operation. The VOC control efficiency of the acid gas flare is 98%. The flare includes a pilot that operates continuously with a maximum heat duty of 1.03 MMBTUH and a heating value of 1,026 BTU/SCF. Pilot emissions are based on AP-42 (07/98), Table 1.4-1 and Table 1.4-2 emission factors.

Acid gases from the rich amine flash tank and the amine regeneration still are vented to the acid gas flare for conversion of H_2S to SO_2. Emission estimates of SO_2 and H_2S are based on an inlet gas rate of 60 MMSCFD, an H_2S concentration of 60 ppmv in the inlet gas, a mass balance, and a conversion rate of 98%.

E-FLR1 Combustion Emissions

Point	**Source**	**Gas Combusted Btu/hr**	**Emission Factor**		**NOx TPY**	**CO TPY**
			NOx	**CO**		
DEHY-1	From Condenser	1,641,088	0.068 lb/MMBtu	0.31 lb/MMBtu	0.49	2.23
AMINE-1	Regenerator and Flash Tank					
PILOT	Pilot Gas	1,030,000	100 lb/MMSCF	84 lb/MMSCF	0.44	0.37
Total					**0.93**	**2.60**

Total Acid Gas Flare (E-FLR1) Emissions

EU	**Equipment**	**NO_X**		**CO**		**VOC**		**SO_2**		**H_2S**	
		lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
E-FLR1	Acid Gas Flare	0.21	0.93	0.59	2.60	1.00	4.38	23.87	104.54	0.26	1.13

NOx and CO emissions from the combustor (COMB-1) are based on a waste gas heating value of 2,742 BTU/SCF, a gas throughput of 3.89 MMSCF per year, and emission factors from AP-42 (02/18), Section 13.5, Table 13.5-1 and Table 13.5-2 for Industrial Flares. The VOC control efficiency of the combustor is 98%. The combustor includes a pilot that operates continuously with a maximum heat duty of 0.2 MMBTUH and a heating value of 1,026 BTU/SCF. Pilot emissions are based on AP-42 (07/98), Table 1.4-1 and Table 1.4-2 emission factors.

COMB-1 Emissions

Point	Source	Rating MMBtu/hr	Emission Factor lb/MMBTU		NOx TPY	CO TPY
			NOx(1)	CO(1)		
COMB-1	Flare Gas Combustion	1.2[1]	0.068	0.31	0.36	1.65
PILOT	Pilot Gas	1.03	0.098	0.082	0.09	0.07
Total					**0.45**	**1.72**

1 – Based on estimated throughput of 3.89 MMscf/yr and a heating value of 2,742 Btu/scf.

Total COMB-1 Emissions.

EU	Equipment	NO_X		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
COMB-1	Process Flare	0.10	0.45	0.39	1.72	1.14	4.98

Blowdown emissions (BD) from the facility were based on mass balance estimates and a site specific gas analysis. The annual volume of blowdown gas was estimated to equal 1.2 MMSCF per year with a molar volume conversion of 379.4 SCF/lb-mol (at 60° F and 1 atm). Blowdowns are an insignificant activity.

Blowdown Emissions

EU ID#	ID#	Blowdown Volume (SCF/yr)	VOC (TPY)
BD	BD	1,200,000	3.82

Fugitive VOC emissions are based on EPA's *1995 Protocol for Equipment Leak Emission Estimates* (EPA-453/R-95-017), estimates of the number of process components, and an estimated fraction of C3+. Emission estimates for fugitive equipment leaks are presented below.

Fugitive VOC Emissions

Fugitive Components and Numbers		Factors lb/hr/Source	Average VOC %	Emissions lb/hr	TPY
Valves-Inlet Gas	1,101	0.0099208	20	2.1846	9.5685
Valves-Residue Gas	513	0.0099208	3	0.1527	0.6688
Valves-Product Liquid	591	0.0055116	100	3.2574	14.2674
Relief Valves-Inlet Gas	65	0.0194007	20	0.2522	1.1046
Relief Valves-Residue Gas	41	0.0194007	3	0.0239	0.1047
Other-Product Liquid	12	0.0165347	100	0.1984	0.8690
Flanges-Inlet Gas	1,115	0.0008598	20	0.1917	0.8396
Flanges-Residue Gas	576	0.0008598	3	0.0149	0.0653
Flanges-Product Liquid	533	0.0002425	100	0.1293	0.5663
Compressor Seals-Inlet Gas	27	0.0194007	20	0.1048	0.4590
Compressor Seals-Residue	21	0.0194007	3	0.0122	0.0534
Pump Seals-Product Liquid	29	0.0286601	100	0.8311	3.6402
Total Fugitive VOC Emissions				**7.3532**	**32.2068**

Facility wide emissions are presented following.

Facility-Wide Emissions

Sources	NO_X		CO		VOC		SO_2	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
2620, Superior 8G825[1]	3.53	15.45	5.29	23.18	0.82	3.58	<0.01	0.02
2621, Superior 8G825[1]	8.82	38.63	13.23	57.94	1.30	5.71	<0.01	0.02
2622, Superior 8G825[1]	8.82	38.63	13.23	57.94	1.30	5.71	<0.01	0.02
2614, Waukesha L7042G[1]	3.89	17.01	5.83	25.52	0.90	3.94	<0.01	0.02
2272, Caterpillar G3516TALE[1]	4.78	20.95	7.18	31.43	1.79	7.86	<0.01	0.02
2626, Caterpillar G3516TALE[1]	5.91	25.88	8.86	38.82	2.22	9.70	0.01	0.03
2616, Waukesha L7042G[1]	3.89	17.01	5.83	25.52	0.90	3.94	<0.01	0.02
2617, Waukesha L7042G[1]	3.89	17.01	5.83	25.52	0.90	3.94	<0.01	0.02
2618, Waukesha L7042G[1]	3.89	17.01	5.83	25.52	0.90	3.94	<0.01	0.02
2627, Waukesha L7042GSI[1]	6.52	28.54	9.78	42.82	1.50	6.59	0.01	0.03
2615, Waukesha L7042GSI[1]	5.43	23.79	8.15	35.69	1.26	5.52	0.01	0.03
2619, Waukesha L7042GSI[1]	5.43	23.79	8.15	35.69	1.26	5.52	0.01	0.03
H-1, Regen. Heater	0.25	1.07	0.21	0.90	0.01	0.06	<0.01	0.01
H-2.2, Amine Reboiler	0.59	2.58	0.49	2.16	0.03	0.14	<0.01	0.02
H-3, TEG Heater	0.15	0.64	0.12	0.54	0.01	0.04	<0.01	<0.01
H-4, Regen. Heater	0.25	1.07	0.21	0.90	0.01	0.06	<0.01	0.01
AMINE1, Amine Unit	-----	-----	-----	-----	-----	-----	-----	-----
DEHY1, Glycol Dehydrator	-----	-----	-----	-----	-----	-----	-----	-----
E-FLR1, Acid Gas Flare	0.21	0.93	0.59	2.60	1.00	4.38	23.87	104.54
MT-1, Methanol Tank	-----	-----	-----	-----	-----	0.21	-----	-----
V-310A, Condensate Tank	-----	-----	-----	-----	1.03	4.52	-----	-----
COND-1, Produced H_2O/BS&W	-----	-----	-----	-----	-----	0.35	-----	-----
COND-2, Produced H_2O/BS&W	-----	-----	-----	-----	-----	0.35	-----	-----
E-TL1, Condensate Loading	-----	-----	-----	-----	-----	2.15	-----	-----
E-TL2, Water Loading	-----	-----	-----	-----	-----	0.02	-----	-----
BD, Blowdowns	-----	-----	-----	-----	-----	3.82	-----	-----
COMB-1, Vent Combustor	0.10	0.45	0.39	1.72	1.01	4.43	<0.01	<0.01
Fugitive Emissions	-----	-----	-----	-----	-----	32.21	-----	-----
Total Emissions	**66.35**	**290.44**	**99.20**	**434.41**	**18.16**	**118.70**	**24.04**	**104.88**

1 – VOC emissions includes formaldehyde.

Hazardous Air Pollutants (HAP)

The internal combustion engines will have emissions of HAP, the most significant being formaldehyde. Formaldehyde emissions are presented in the following table. Formaldehyde emissions for the rich-burn engines were calculated based on the emission factor from AP-42 (7/00) Table 3.2-3. Formaldehyde emissions from the lean-burn Caterpillar engines (E-ENG5.2 and E-ENG6.2) are based on manufacturer data and do not include reductions for the oxidation catalysts.

Formaldehyde Emissions from the Engines

EU ID#	MMBTUH	lb/MMBTU	Control Eff. (%)	Est. Emissions	
				lb/hr	TPY
E-ENG1.2	6.80	0.0205	70	0.04182	0.1832
E-ENG2.2	6.80	0.0205	0	0.13940	0.6106
E-ENG3.3	6.80	0.0205	0	0.13940	0.6106
E-ENG4.3	7.49	0.0205	70	0.04606	0.2017
E-ENG5.2	8.08	0.0740	0	0.59792	2.6189
E-ENG6.2	10.11	0.0730	0	0.73803	3.2326
E-ENG8.2	7.49	0.0205	70	0.04606	0.2017
E-ENG9	7.49	0.0205	70	0.04606	0.2017
E-ENG10.3	7.49	0.0205	70	0.04606	0.2017
E-ENG11.2	11.56	0.0205	70	0.07109	0.3114
E-ENG12.2	10.47	0.0205	70	0.06439	0.2820
E-ENG13.3	10.47	0.0205	70	0.06439	0.2820
Totals				**2.04068**	**8.9381**

Benzene, toluene, ethylbenzene, xylene, and n-hexane emissions from the glycol unit are emitted at the acid gas flare. HAP emissions estimates from the glycol unit are presented below.

Potential HAP Emissions from the Acid Gas Flare

Pollutant	CAS #	lb/hr	TPY
Benzene	71432	0.0319	0.1397
Toluene	108883	0.0827	0.3622
Ethyl benzene	100414	0.0029	0.0126
Xylene	1330207	0.0300	0.1313
n-Hexane	110543	0.0089	0.0392
Totals		**0.1564**	**0.685**

Greenhouse Gas (GHG)

GHG emissions were estimated at 68,179.39 TPY. GHG emissions from combustion based on the total facility heat input, default emission factors from 40 CFR Part 98, Subpart C, and the Global Warming Potentials of 40 CFR Part 98, Subpart A. GHG emissions from the Acid Gas Flare are based on the inputs for the amine unit listed above and are mainly CO_2. GHG emissions from fugitive emissions and condensate tanks are also based on the throughputs and parameters listed above and are mainly CH_4.

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application and listed in OAC 252:100-8, Appendix I, are listed below. Recordkeeping for activities indicated with "*" is listed 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 MMBTU/hr heat input (commercial natural gas). There are three heaters/reboilers in EUG 3 rated at 2.5, 1.5, and 2.5 MMBTUH each.

2. * 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. The permit requires storage tanks having capacities less than 39,894 gallons and storing products with vapor pressures less than 1.5 psia to keep records of capacity and fluids stored.

Insignificant Tanks

EU ID#	ID#	Contents	Barrels	Gallons	Const. Date
E-TNK4	AT-1	Amine	300	12,600	1980
E-TNK5	LOT-1	Lube Oil	152	6,360	1958
E-TNK6	AFT-1	Antifreeze	24.5	1,030	1980
E-TNK8	KT-1	Kerosene	5.95	250	1990
E-TNK9	ST-1	Solvent/Diesel	5.95	250	1989
E-TNK11	V-300A	Liquid Propane/Butane	715	30,000	1980
E-TNK12	V-300B	Liquid Propane/Butane	715	30,000	1980
E-TNK13	V-300C	Liquid Propane/Butane	715	30,000	1980
E-TNK14	V-300D	Liquid Propane/Butane	715	30,000	1980
E-TNK15	V-300E	Liquid Propane/Butane	715	30,000	1981
E-TNK16	V-300F	Liquid Propane/Butane	715	30,000	1981
E-TNK17	V-300G	Liquid Propane/Butane	715	30,000	1981
E-TNK18	V-300H	Liquid Propane/Butane	715	30,000	1981
E-TNK20	V-310B	Condensate	715	30,000	1981
E-TNK23	BSW-3	BS&W	210	8,820	1997
E-TNK24	RTW-1	Water	210	8,820	2002

3. Hand wiping and spraying of solvents from containers with less than 1-liter capacity used for spot cleaning and/or degreasing in ozone attainment areas. Routine maintenance on compressor engines might require use of a degreasing solvent sprayed from containers with less than a 1-liter capacity.

4. * Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant. Actual emissions from the amine unit regeneration heater, molecular sieve units, glycol dehydration unit's regenerator heater, the methanol tanks, the 30,000-gal pressurized tank V-310B, the gasoline tank, and blowdowns are all below 5 TPY.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

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

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

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

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

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

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

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are based on information in the application and the current operating permit or developed from the applicable requirements.

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 and heaters 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 provides an equation to determine the allowable particulate matter for units with greater than 10 MMBTUH capacity but less than 1,000 MMBTUH capacity. Table 3.2-2 of AP-42 (7/00) lists the total PM emissions from 4-stroke, lean-burn natural gas-fired engines to be 0.01 lbs/MMBTU. Table 3.2-3 of AP-42 (7/00) lists the total PM emissions from 4-stroke, rich-burn natural gas-fired engines to be 0.02 lbs/MMBTU. Table 1.4-2 of AP-42 (7/98) lists the total PM emissions for natural gas-fired heaters to be 7.6 lb/MMft^3or about 0.0075 lb/MMBTU. The permit shall require the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

EU ID#	Equipment	Maximum Heat Input (MMBTUH)	Emissions (lbs/MMBTU)	
			Appendix C	Potential
E-ENG1.2	Superior 8G825 w/CC	6.8	0.60	0.02
E-ENG2.2	Superior 8G825 w/CC	6.8	0.60	0.02
E-ENG3.3	Superior 8G825 w/CC	6.8	0.60	0.02
E-ENG4.3	Waukesha L7042 GU w/CC	7.5	0.60	0.02
E-ENG5.2	Caterpillar G-3516 TALE w/OC	8.1	0.60	0.01
E-ENG6.2	Caterpillar G-3516 TALE w/OC	10.1	0.60(1)	0.01
E-ENG8.2	Waukesha L7042 G w/CC	7.5	0.60	0.02
E-ENG9	Waukesha L7042 G w/CC	7.5	0.60	0.02
E-ENG10.4	Waukesha L7042 G w/CC	7.5	0.60	0.02
E-ENG11.2	Waukesha L7042 GSI w/CC	11.6	0.58(1)	0.02
E-ENG12.2	Waukesha L7042 GSI w/CC	10.5	0.60(1)	0.02
E-ENG13.3	Waukesha L7042 GSI w/CC	10.5	0.60(1)	0.02
E-HTR1	Mol-Sieve Regen. Heater	2.5	0.60	<0.01
E-HTR2.2	Amine Unit Reboiler	6.0	0.60	<0.01
E-HTR3	Glycol Unit Reboiler	1.5	0.60	<0.01
E-HTR4	Mol-Sieve Regen. Heater	2.5	0.60	<0.01

w/CC = with catalytic converter; w/OC = with oxidation catalyst.

(1) – Limit calculated based on GP-OGF, Appendix C. equation for units greater than 10 MMBTUH and less than 1,000 MMBTUH.

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

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

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 impact of hydrogen sulfide (H_2S) emissions from any new or existing source. Emissions from all of the equipment have been modeled using SCREEN3 and have been shown to be in compliance with these standards as shown in the following tables. Since Screen3 is currently not an approved model, a qualitative assessment was conducted based on modeling done for the O&G GP which indicates compliance and no additional modeling is needed.

Ambient Impacts of H_2S

	Standard	**Impact**
Averaging Time	**$\mu g/m^3$**	**$\mu g/m^3$**
24-hour	278	1

Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of 1,000 BTU/SCF, this limit corresponds to fuel sulfur content of 1,203 ppmv. The permit requires the use of gaseous fuel with sulfur content less than 343 ppmv to ensure compliance with Subchapter 31.
Part 5 requires removal or oxidation of H_2S from the exhaust gas of any new petroleum or natural gas process equipment. This part allows direct oxidation of H_2S to SO_2, without sulfur recovery, when the exhaust gas will contain no more than 100 lbs/hr SO_2 (2-hour average). Compliance with the 100 lb/hr can be demonstrated by establishing that the acid gas stream contains 0.54 long tons per day (LTD) of sulfur or less. Oxidation of the H_2S must be conducted in a system that assures at least a 95% reduction of the H_2S in the exhaust gases and that is equipped with an alarm system to signal non-combustion of the exhaust gases. These requirements do not apply if H_2S emissions do not exceed 0.3 lb/hr. All emissions from the amine unit's still vent are vented to the acid gas flare for conversion of H_2S to SO_2 at an estimated efficiency of 98%. The permit limits the facility H_2S content to 60 ppmv with a maximum throughput of 60 MMSCFD, which is equivalent to 0.15 LTPD and 1.18 TPY of H_2S emissions after control. All applicable requirements have been incorporated into the permit.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
None of the units exceed the 50 MMBTU/hr threshold for fuel-burning equipment and therefore are not applicable to this subchapter.

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. There are no affected sources present.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3, Section 37-15 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and containing 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. This applies to the condensate tank V-301A and the methanol storage tanks (MT-1, MT-2, and MT-3). The other Volatile Organic Liquid (VOL) storage tanks are pressurized or the vapor pressure of the material stored in the tanks is below the de minimis level.
Part 3, Section 37-16 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, Section 37-25 limits the VOC content of coatings for any coating line or coating operation. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is exempt.
Part 7, Section 37-35 requires the owner/operator of a facility which emits gases containing VOCs from a vapor recovery blowdown system to burn those gases by a smokeless flare or an equally-effective control device. This facility is subject to these requirements.
Part 7, Section 37-36 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, Section 37-37 requires all effluent water separators, which receive water containing more than 200 gallons per day of any VOC, openings 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 252:100-11	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 VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Applicable]

Total potential emissions of NO_X and CO are greater than the PSD threshold of 250 TPY. Any future emission increases must be evaluated for PSD if they exceed a significance level (40 TPY NO_X, 40 TPY SO_2, 100 TPY CO, 40 TPY VOC, 25 TPY PM, 15 TPY PM_{10}, and 10 TPY $PM_{2.5}$).

NSPS, 40 CFR Part 60 [Subparts A, KKK, and LLL are Applicable]

Subpart A, General Provisions – Control Device Requirements. This section contains requirements for all control devices used to comply with the applicable requirements of Part 60. Addition of a system whose primary function is control of air emissions does not constitute a modification under NSPS. Since the flare is not used to comply with Subpart KKK, it is not subject to this section of this subpart.

Subpart K, Ka, Kb, VOL Storage Vessels. Tanks COND-1, COND-2, and BSW-3 are not subject because they store wastewater and not VOL and are below the size threshold (19,813-gallons). There are nine 30,000-gallon pressurized (50 psig) VOL storage tanks that are exempted from this subpart. There is one 30,000-gallon atmospheric condensate storage tank controlled by a flare (E-TNK19). E-TNK19 was constructed in 1981 and is less than 40,000-gallons. Therefore, E-TNK19 is not subject to Subpart Ka. There are two methanol storage tanks (2,520-gallon and 504-gallon) that are below the regulated size of 19,813 gallons at the site. The remaining tanks at the facility are below the Subpart Kb regulated size of 19,813 gallons.

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

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. 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. Subpart KKK requires equipment monitoring, leak detection, equipment repair, recordkeeping, and semi-annual reporting. Although most of the plant is exempt from this subpart based on construction prior to 1984, components in "WOK Gas to P4," "Native Gas to P2, P3, P5, and P6," Amine Unit, Inlet to Amine, and Methanol Tank are subject to this subpart. The permit will incorporate all applicable requirements. The facility keeps Subpart KKK monitoring records for the fugitive components listed in EUG5 Fugitive VOC Emission Sources Pre-1984.

Process Unit ID	**Service**	**Manufacture Date**	**Installation Date**	**Initial Startup**	**Subject to NSPS KKK monitoring?**
WOK Gas to P4	Wet Gas	1992, 1993, 2001	1992, 1993, 1/25/2001	1992, 1993, 2/12/2001	Yes
Native Gas to P2,3,5,6	Wet Gas	1992, 1993, 2004	1992, 1993,	1992, 1993, 10/26/2004	Yes
Inlet to Amine	Wet Gas	1993	1993	1993	Yes (LDAR)
Amine System	Wet Gas	1981	Modified 1993	Modified 1993	Yes (AVO)
Methanol Tank	Methanol	1981	Modified	Modified >1984	Yes (LDAR)
Residue system	Residue Gas	1980	Modified 1985	Modified 1985	No – Not in VOC service
Cryogenic Plant	Wet Gas	1981	1981	1981	Yes, elective
Inlet Comp 2614 P1 ENG4.3	Wet Gas	Pre-1982	1982	1982	Yes, elective
Inlet Comp 2615 P2 ENG12.2	Wet Gas	1977	1993	1993	Yes
Inlet Comp 2616 P3 ENG8.2	Wet Gas	1976	1991	1991	Yes
Inlet Comp 2617 P4 ENG9	Wet Gas	1976	1991	1991	Yes
Inlet Comp 2618 P5 ENG10.2	Wet Gas	1976	1991	1991	Yes
Inlet Comp 2619 P6 ENG13.3	Wet Gas	1973	1994	1994	Yes
Recompressor 2622 R3 ENG3.3	Residue Gas	1981	1981	1981	Yes, elective
Recompressor 2627 R6 ENG11.2	Residue Gas	1981	1991	1991	Yes, elective

Subpart LLL, Onshore Natural Gas Processing: SO_2 Emissions. This subpart sets standards for natural gas sweetening units constructed, reconstructed, or modified after January 20, 1984 and prior to August 23, 2011, and requires facilities with a design capacity of less than 2 LT/D of H_2S in the acid gas (expressed as sulfur) to keep, for the life of the facility, a record demonstrating that the facility's design capacity is less than 2 LT/D of H_2S expressed as sulfur. The amine unit was modified in 1985 and is applicable to the record-keeping requirement because the potential for sulfur production is only 0.15 LT/D.

Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines (SI-ICE). This subpart establishes emission standards for all new SI engines ordered after June 12, 2006 and all SI engines modified or reconstructed after June 12, 2006. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based on engine class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or non-emergency), and manufacture date. Engine manufacturers

are required to certify certain engines to meet the emission standards and may voluntarily certify other engines. An initial notification is required only for owners and operators of engines greater than 500 HP that are non-certified. The engines at this facility were all constructed prior to the applicability dates of this subpart and have not been modified or reconstructed. Therefore, they are not affected emission units.

Subpart KKKK, Stationary Combustion Turbines. There are no turbines at this facility.

Subpart OOOO, Crude Oil and Natural Gas Facilities. This subpart regulates equipment at crude oil and natural gas production, transmission and distribution facilities that commenced construction, reconstruction, or modification after August 23, 2011, and on or before September 18, 2015. This subpart regulates each gas well affected facility, each centrifugal and reciprocating compressor affected facilities, each single continuous bleed natural gas-driven pneumatic controller with a natural gas bleed rate greater than 6 standard cubic feet per hour (SCFH), each storage vessel with the potential for VOC emissions greater than 6 TPY after federally enforceable conditions, onshore natural gas processing plants and sweeting units. Any equipment potentially subject to this subpart was constructed prior to August 23, 2011, has not been modified or reconstructed during the applicable dates, and therefore is not subject to this subpart.

Subpart OOOOa, Crude Oil and Natural Gas Facilities. This subpart establishes emission standards and compliance schedules for subject equipment constructed, reconstructed, or modified after September 18, 2015. All of the potentially subject equipment located at the facility was constructed prior to September 18, 2015, has not been modified or reconstructed during the applicable dates, and are therefore exempt from this subpart.

NESHAP, 40 CFR Part 61 [Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, benzene, coke oven emissions, mercury, radionuclides or vinyl chloride except for trace amounts of benzene. Subpart J, Equipment Leaks of Benzene only affects process streams that contain more than 10% benzene by weight. All process streams at this facility are below this threshold.

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

Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to triethylene glycol (TEG) dehydration units at area sources and affected emission points that are located at facilities that are major sources of HAP emissions and either process, upgrade, or store hydrocarbons prior to the point of custody transfer or prior to which the natural gas enters the natural gas transmission and storage source category. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer. This facility is considered an area source of HAP. Even though the TEG dehydration unit at this facility is considered an affected source, it is exempt from the requirements of § 63.764€(1) and (d) since the criteria § 63.764€(1)(i) or (ii) are met. However, the facility must maintain records of the de minimis determination as required in § 63.774(d)(1). The applicant has stated and demonstrated that the glycol unit is exempt from the glycol optimization requirements by meeting the exemption of §63.764€(1) for actual benzene emissions below 0.99 TPY. The applicable recordkeeping requirements have been incorporated into the permit.

Subpart HHH, National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. This subpart applies to owners and operators of natural gas

transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. This facility is not a major source of HAP.

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

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

No further requirements apply for engines subject to NSPS under this part. A stationary RICE located at an area source of HAP emissions is new if construction commenced on or after June 12, 2006. Based on emission calculations, this facility is an area source of HAP. The engines at this facility were manufactured prior to June 12, 2006, have not been reconstructed, and are considered existing engines.

Existing RICE

				Serial	Installed	Gas
EU ID#	**Point #**	**HP**	**EU Make/Model**	**No.**	**Date**	**Service**
E-ENG1.2	2620	800	Superior 8G825 W/CC	20348	2008	Dry
E-ENG2.2	2621	800	Superior 8G825 W/CC	18789	2009	Dry
E-ENG3.3	2622	800	Superior 8G825 W/CC	19160	2010	Dry
E-ENG4.3	2614	881	Waukesha L7042 GU W/CC	366743	2001	Wet
E-ENG5.2	2272	1,085	Caterpillar G-3516 TALE W/OC	4EK02665	2010	Dry
E-ENG6.2	2626	1,340	Caterpillar G-3516 TALE W/OC	4EK04985	2010	Dry
E-ENG8.2	2616	881	Waukesha L7042 G W/CC	277418	2011	Wet
E-ENG9	2617	881	Waukesha L7042 G W/CC	317007-C	1991	Wet
E-ENG10.3	2618	881	Waukesha L7042 G W/CC	166001A	2007	Wet
E-ENG11.2	2627	1,478	Waukesha L7042 GSI W/CC	C-11315/1	2010	Dry
E-ENG12.2	2615	1,232	Waukesha L7042 GSI W/CC	277542	2011	Wet
E-ENG13.3	2619	1,232	Waukesha L7042 GSI W/CC	363177	2011	Wet

W/CC – With Catalytic Converter; W/OC – With Oxidation Catalyst

A summary of the requirements for existing SI RICE located at this facility are shown following.

Engine Category	
Remote	**Requirements**
Existing Non-Emergency, Non-Black Start, 4SRB & 4SLB HP > 500-hp	Change oil and filter every 2,160 hours of operation or annually, whichever comes first
	Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and
	Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.

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

1. Stationary RICE located on a pipeline segment that meets both of the following criteria:
   i. A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.
   ii. The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.
2. Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

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

Subpart CCCCCC, Gasoline Dispensing Facilities. This subpart establishes emission limitations and management practices for HAP emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF) located at an area source. GDF means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

If the GDF has a monthly throughput of less than 10,000 gallons of gasoline, it must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

1) Minimize gasoline spills;
2) Clean up spills as expeditiously as practicable;
3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

This facility has a monthly throughput of less than 10,000 gallons of gasoline. All applicable requirements have been incorporated into the permit.

Compliance Assurance Monitoring, 40 CFR Part 64 [Applicable]
Compliance Assurance Monitoring, as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, that is required to obtain a Title V permit, if it meets all of the following criteria:

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

All engines in EUG 1, the glycol dehydration unit, and the amine unit have emission limits, use a control device to achieve compliance with these emission limits, and have the potential to emit (pre-control device) greater than major source levels. Therefore, these sources are subject to the CAM. The CAM plan submitted with Permit No. 2003-294-TVR for the engines with catalytic converters required measurement of the temperature of the exhaust gases into the catalyst bed and pressure differential across the catalyst bed and an inspection and preventative maintenance plan. The CAM plan submitted with Permit No. 2003-294-TVR for the glycol dehydration unit with a condenser and combustion of the condenser off-gases required flare pilot flame monitoring of E-FLR1. Monitoring of the condenser outlet temperature is not needed since an outlet temperature of 120^0F was used. The amine unit is controlled by E-FLR1 which is subject to monitoring under CAM. All applicable requirements are incorporated into the permit.

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 [Subparts A and F are 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 VIII. COMPLIANCE

Tier Classification
The application requested a Part 70 operating permit renewal.

OAC 252:100-8-7. Permit Issuance (a) Criteria for issuance. A permit, permit modification, or renewal may be issued only if the applicable requirements of 27A O.S §§ 2-14-101 through 2-14-401; OAC 252:4-7; and this Chapter have been met and the DEQ has determined that the conditions of the permit provide for compliance with all applicable requirements and, for applications subject to OAC 252:100-8-8, that the requirements of that section have been satisfied.

OAC 252:100-8-7.1. Permit Renewal and Expiration (c) Issuance of renewal permit. Applications for permit renewal shall be subject to the same procedural requirements, including those for public participation, affected State comment, and EPA review, that apply to initial permit issuance under 252:100-8-7 (a).

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

Information on all permit actions is available for review by the public on the Air Quality section of DEQ web page at: https://www.deq.ok.gov. The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the land.

Public Review
The applicant published the "Notice of Filing a Tier II Application" in the *Cheyenne Star* a weekly newspaper in Roger Mills County on December 19, 2019. The notice stated that the application was available for public review for a period of 30 days at the Cheyenne Minnie R Slief Public Library; 100 Don Cearlock Avenue; Cheyenne, OK 73628. The application was also available for public review at the Air Quality Division main office at 707 N. Robinson Avenue; Oklahoma City, OK 73102. The applicant will publish a "Notice of Draft Permit" in the *Cheyenne Star* newspaper in Roger Mills County. The notice will state the draft permit is available for public review for a period of 30 days at a publicly accessible location in Roger Mills County or on the Air Quality section of the DEQ web page at https://www.deq.ok.gov.

State Review
This facility is not located within 50 miles of the border of Oklahoma and any other state.

EPA Review
The proposed permit will be forwarded to U.S. EPA Region VI for a 45-day review period.

Compliance
A full compliance evaluation was conducted by Cecilia Kleman, Environmental Programs Specialist for the Department of Environmental Quality at the Leedey Gas Plant on May 16, 2018. Based on the information provided or obtained during this evaluation, two violations were noted:

1. The Oklahoma Department of Environmental Quality (ODEQ) alleges that OFS failed to install and operate correctly emission controls as required by Specific Condition 1, EUG 2(c) of Permit No. 2014-0859-TVR3, by allowing emissions to occur from an emission unit required to have 100% capture.

2. ODEQ alleges that OFS failed to install and operate correctly emission controls by allowing a low pressure vent to continuously emit in violation of OAC 252:100-8-5(e)(3) due to this source not being a designated emission point except during blowdown events.

Enforcement Case 9399 was opened as a result of the evaluation. The facility was issued an alternative enforcement letter on February 11, 2019, requiring OFS to submit a compliance plan. The compliance plan stated OFS would ensure pressurized tanks are not allowed to vent to the atmosphere. The compliance plan also stated the operating permit (Permit No. 2014-0859-TVR3) did not accurately represent facility conditions and that the emissions from the blowdown vent likely required a control device. OFS requested a major modification construction permit to incorporate the combustor control for the blowdown vent. DEQ issued Construction Permit No. 2014-0859-C (M-1) on May 5, 2020, to authorize modifications to address the Enforcement actions.

Fee Paid
The applicant submitted the $7,500 application fee for a Part 70 renewal permit.

SECTION IX. SUMMARY

The facility was constructed as described in the permit application. Ambient air quality standards are not threatened at this site. There are no other active Air Quality compliance or enforcement issues other than those noted above. Issuance of the renewal permit is recommended, contingent upon public and EPA reviews.

DRAFT

PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

ONEOK Field Services Company, L.L.C. **Facility ID: 1679**
Leedey Gas Plant **Permit No. 2019-1082-TVR4**

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on October 4, 2019, and all supplemental materials. The Evaluation Memorandum dated March 9, 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)(1)]

EUG 1 (Internal Combustion Engines): Emission limitations for all of the internal combustion engines.

EU ID#	**Emission Unit**	**Emission Limits**			
Point #	**EU Make/Model**	**Units**	**NO_X**	**CO**	**VOC**
E-ENG1.2	800-hp Superior 8G825	**lb/hr**	3.53	5.30	0.82
2620 (R-1)	With Catalytic Converter	**TPY**	15.45	23.18	3.58
E-ENG2.2	800-hp Superior 8G825	**lb/hr**	8.82	13.23	1.30
2621 (R-2)	With Catalytic Converter	**TPY**	38.63	57.94	5.71
E-ENG3.3	800-hp Superior 8G825	**lb/hr**	8.82	13.23	1.30
2622 (R-3)	With Catalytic Converter	**TPY**	38.63	57.94	5.71
E-ENG4.3	881-hp Waukesha L7042 GU	**lb/hr**	3.89	5.83	0.90
2614 (P-1)	With Catalytic Converter	**TPY**	17.01	25.52	3.94
E-ENG5.2	1,085-hp Caterpillar G-3516 TALE	**lb/hr**	4.78	7.18	1.79
2272 (R-4)	With Oxidation Catalyst	**TPY**	20.95	31.43	7.86
E-ENG6.2	1,340-hp Caterpillar G-3516 TALE	**lb/hr**	5.91	8.86	2.22
2626 (R-5)	With Oxidation Catalyst	**TPY**	25.88	38.82	9.70
E-ENG8.2	881-hp Waukesha L7042 G	**lb/hr**	3.89	5.83	0.90
2616 (P-2)	With Catalytic Converter	**TPY**	17.01	25.52	3.94
E-ENG9	881-hp Waukesha L7042 G	**lb/hr**	3.89	5.83	0.90
2617 (P-4)	With Catalytic Converter	**TPY**	17.01	25.52	3.94

EU ID#	**Emission Unit**	**Emission Limits**			
Point #	**EU Make/Model**	**Units**	**NO_X**	**CO**	**VOC**
E-ENG10.3	881-hp Waukesha L7042 G	**lb/hr**	3.89	5.83	0.90
2618 (P-5)	With Catalytic Converter	**TPY**	17.01	25.52	3.94
E-ENG11.2	1,478-hp Waukesha L7042 GSI	**lb/hr**	6.52	9.78	1.50
2627 (R-6)	With Catalytic Converter	**TPY**	28.54	42.82	6.59
E-ENG12.2	1,232-hp Waukesha L7042 GSI	**lb/hr**	5.43	8.15	1.26
2615 (P-2)	With Catalytic Converter	**TPY**	23.79	35.69	5.52
E-ENG13.3	1,232-hp Waukesha L7042 GSI	**lb/hr**	5.43	8.15	1.26
2619 (P-6)	With Catalytic Converter	**TPY**	23.79	35.69	5.52

EUG 2a (Storage Tanks): VOC emissions from the listed storage tanks are estimated based on existing equipment items and are considered insignificant.

EU ID#	**Point ID#**	**Contents**	**Barrels**	**Gallons**
E-TNK3	MT-1	Methanol	60	2,520
E-TNK4	AT-1	Amine	300	12,600
E-TNK5	LOT-1	Lube Oil	152	6,360
E-TNK6	AFT-1	Antifreeze	24.5	1,030
E-TNK7	GT-1	Gasoline	22.4	942
E-TNK8	KT-1	Kerosene	5.95	250
E-TNK9	ST-1	Solvent/Diesel	5.95	250
E-TNK10	MT-3	Methanol	300	12,600
E-TNK11	V-300A	Liquid Propane/Butane	715	30,000
E-TNK12	V-300B	Liquid Propane/Butane	715	30,000
E-TNK13	V-300C	Liquid Propane/Butane	715	30,000
E-TNK14	V-300D	Liquid Propane/Butane	715	30,000
E-TNK15	V-300E	Liquid Propane/Butane	715	30,000
E-TNK16	V-300F	Liquid Propane/Butane	715	30,000
E-TNK17	V-300G	Liquid Propane/Butane	715	30,000
E-TNK18	V-300H	Liquid Propane/Butane	715	30,000
E-TNK20	V-310B	Condensate	715	30,000
E-TNK21	COND-1	Produced H_2O/BS&W[1]	210	8,820
E-TNK22	COND-2	Produced H_2O/BS&W	210	8,820
E-TNK23	BSW-3	BS&W	210	8,820
E-TNK24	RTW-1	Water	210	8,820
E-TNK25	MT-2	Methanol	12	504

[1] – BS&W = basic sediment and water

EUG 2b (Storage Tank with combustion control): VOC emissions from tank V-310A.

EU ID#	Point ID#	Contents	Barrels	Gallons
E-TNK19	V-310A	Condensate	715	30,000

Emissions Limits for the Atmospheric Condensate Tank

EU ID#	Point ID#	Capacity (gal)	Contents	VOC (TPY)*
E-TNK19	V-310A	30,000	Condensate	8.95

* VOC emissions from the condensate tank includes working, breathing, and flashing losses.

a. The throughput of condensate through V-310A shall not exceed 1,379,700 gallons (32,850 barrels) of condensate based on a 12-month rolling total.
b. The permittee shall determine and record the amount of condensate produced every month.
c. All of the vapors from storage tank V-310A shall be collected and routed to the combustor (COMB-1) with 98% capture and 98% control efficiency. The facility can request approval for an equally effective capture and control requirement.

EUG 2c (Controlled Activities): Activities with emissions vented to a combustion device.

EU ID#	Point ID#	Activity
E-TL1	COMB-1	Condensate Truck Loading

Truck Loading (E-TL1) emissions shall be limited as follows:

EU ID#	Description	Contents	Throughput (gal/yr)	VOC (TPY)
E-TL1	Truck Loading	Condensate	1,379,700	2.36

Truck loading of condensate (E-TL1) shall be operated as follows to minimize VOC air emissions. [OAC 252:100-37]

a. All loading lines for the VOC loading system shall be equipped with fittings that make vapor-tight connections and which shall be closed when disconnected.
b. A means shall be provided to minimize VOC drainage from the loading hose when it is removed from the tank truck.
c. At least 70% of vapors displaced from tank trucks from condensate loading shall be collected and directed to COMB-1 or an approved equally effective control device.
d. The vapor disposal system shall route all collected vapors to a flare with a minimum destruction efficiency of 98%.

EUG 3 (Gas-Fired Heaters): The gas-fired heater emissions are estimated based on existing equipment items and are insignificant.

EU ID#	Point ID#	Name	Heat Input	Fuel Usage
			MMBTUH	SCFH
E-HTR1	H-1	Mol-Sieve Regen. Heater	2.5	2,500

EU ID#	Point ID#	Name	Heat Input	Fuel Usage
			MMBTUH	SCFH
E-HTR2.2	H-2.2	Amine Unit Reboiler	6.0	6,000
E-HTR3	H-3	Glycol Unit Reboiler	1.5	1,500
E-HTR4	H-4	Mol-Sieve Regen. Heater	2.5	2,500

EUG 4a (Amine Unit): Emission limits for the amine unit (AMINE1).

EU ID#	Point ID#	Installation Date	Throughput
AMINE1	E-FLR1	1981	60 MMSCFD

EU ID#	Point ID#	SO_2	
		lb/hr	TPY
AMINE1	E-FLR1	23.87	104.54

a. The amine unit shall be installed and operated as follows:
   i. Throughput of the amine unit shall not exceed 60 MMSCFD.
   ii. The permittee shall record the throughput of the amine unit daily.
   iii. The hydrogen sulfide (H_2S) content of the gas treated by the amine unit shall not exceed 60 ppmv.
   iv. At least annually the H_2S concentration of the gas treated by the amine unit shall be determined and recorded. [OAC 252:100-8-6(a)(3)(A)]
   v. The amine unit's flash tank and regenerator shall be vented to the acid gas flare (E-FLR1) with an efficiency of at least 98%. [OAC 252:100-31-26(a)(1)]
   vi. The acid gas flare shall have installed, calibrated, maintained, and operated an alarm system that will signal non-combustion of the exhaust gases from the amine unit. [OAC 252:100-31-26(c)]

EUG 4b (Glycol Dehydration Unit): Emission limits for the glycol dehydration unit (DEHY1).

EU ID#	Point ID#	Installation Date	Throughput
DEHY1	E-FLR1	1981	60 MMSCFD

EU ID#	Point ID#	VOC	
		lb/hr	TPY
DEHY1	E-FLR1	0.29	1.30

a. The glycol dehydration unit shall be installed and operated as follows:
   i. The glycol dehydration unit shall be equipped with a condenser.
   ii. All emissions from the glycol dehydration unit's still vent shall be vented through the condenser.
   iii. All off-gases from the condenser shall be routed to the acid gas flare (E-FLR1).
   iv. The lean glycol recirculation rate of the glycol dehydration unit shall not exceed 5.73 gallons per minute.
   v. The natural gas throughput shall not exceed 60 MMSCFD.
   vi. The permittee shall record the natural gas throughput of the glycol dehydration

unit daily.

vii. The actual average emissions of benzene from the glycol dehydration unit process vent shall be less than 0.90 megagram per year, as determined by the procedures specified in § 63.772(b)(2). [§ 63.764(e)(1)(i)]

viii. The owner or operator is exempt from the requirements of § 63.764(c)(1) and (d) if the criteria listed in § 63.764(e)(1)(i) or (ii) are met, except that the records of the determination of these criteria must be maintained as required in § 63.774(d)(1). [§ 63.764(e)(1)]

EUG 4c (Flare Emissions): The flares shall be operated as follows.

EU ID#	Pilot Rating (MMBTUH)[(1)]	Units Controlled
E-FLR1	1.03	AMINE1, DEHY1
COMB-1	0.20	V-310A, E-TL1

[(1)] The pilot rating of the flares is not limited.

The flares shall have installed, calibrated, maintained, and operated alarm systems that will signal non-combustion of gases. [OAC 252:100-31-26(c)]

EUG 5 (Fugitive VOC Emission Sources Pre-1984): Fugitive VOC emissions are estimated based on existing equipment items.

EU	Equipment	Number
E-FUG1	Valves	2,205
	Relief Valves	118
	Compressor Seals	48
	Pump Seals	29
	Flange/Connections	2,224

EUG 6 (Fugitive VOC Emission Sources subject to NSPS, Subpart KKK): Fugitive VOC emissions are estimated based on existing equipment items.

EU	Equipment	Number
E-FUG2	Valves	562
	Relief Valves	18
	Flange/Connections	1,054
	Pumps	4

2. The fuel-burning equipment shall be fired with pipeline grade natural gas or other gaseous fuel with a sulfur content of 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 in EUG 1 shall be set to operate with an automatic air/fuel ratio controller and with exhaust gases passing through either a properly functioning catalytic converter or oxidation catalyst. [OAC 252:100-8-6(a)]

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

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

7. The permittee shall keep operation and maintenance (O&M) records for those emission units that do not conduct quarterly testing. Such records shall at a minimum include the dates of operation, and maintenance, type of work performed, and the increase, if any, in emissions as a result. [OAC 252:100-8-6 (a)(3)(B)]

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

9. Replacement (including temporary periods of 6 months or less for maintenance purposes), of internal combustion engines/turbines with emissions limitations specified in this permit with engines/turbines of lesser or equal emissions of each pollutant (in lbs/hr and TPY) are authorized under the following conditions. [OAC 252:100-8-6 (f)]

   a. The replacement engine or turbine shall comply with the same emissions limits as the engine or turbine that it replaced. This applies to lb/hr and TPY limits specified in this permit.

b. The authorization of replacement of an engine or turbine includes temporary periods of 6 months or less for maintenance purposes.
c. The permittee shall notify AQD in writing not later than 7 days prior to start-up of the replacement engine or turbine. Said notice shall identify the old engine/turbine and shall include the new engine/turbine make and model, serial number, horsepower rating, and pollutant emission rates (g/hp-hr, lb/hr, and TPY) at maximum horsepower for the altitude/location.
d. Quarterly emissions tests for the replacement engine(s)/turbine(s) shall be conducted to confirm continued compliance with NO_X and CO emission limitations. A copy of the first quarter testing shall be provided to AQD within 60 days of start-up of each replacement engine/turbine. The test report shall include the engine/turbine fuel usage, stack flow (ACFM), stack temperature (°F), and pollutant emission rates (g/hp-hr, lbs/hr, and TPY) at maximum rated horsepower for the altitude/location.
e. Replacement equipment and emissions are limited to equipment and emissions which are not a modification under NSPS or NESHAP.
f. Replacement equipment and emissions are limited to equipment and emissions which are not a modification or a significant modification under PSD. For existing PSD facilities, the permittee shall calculate the PTE or the net emissions increase resulting from the replacement to document that it does not exceed significance levels and submit the results with the notice required by paragraph (c) of this Specific Condition. The permittee shall attach each such notice to their copy of the relevant permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield described in OAC 252:100-8-6(d) does not apply to any change made pursuant to this paragraph.
g. Engines whose installation and operation are authorized under this Specific Condition which are subject to 40 CFR Part 63, Subpart ZZZZ and/or 40 CFR Part 60, Subpart JJJJ shall comply with all applicable requirements.

10. The permittee shall maintain, and update annually, an inventory record of fugitive emission sources at the facility. The record shall include the following and shall be kept as specified in Specific Condition 13 of this permit: [OAC 252:100-8-6 (a)(3)]

a. Type of service (gas, heavy oil, light oil, and water/light oil),
b. Component type and count, and
c. VOC content of stream handled.

11. The permittee shall comply with the Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants, NSPS Subpart KKK, for each replacement compressor manufactured after January 20, 1984, and prior to August 23, 2011.
[40 CFR §§ 60.630 to 60.636]

a. Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in § 60.633(f) shall be recorded in a log that is kept in a readily accessible location as per § 60.635(c).

b. Information and data used to demonstrate that a reciprocating compressor is not in VOC service shall be recorded in a log that is kept in a readily accessible location as per § 60.486(j).

12. The permittee shall comply with the Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants, NSPS Subpart KKK, for each affected facility located on-site. [40 CFR §§ 60.630 to 60.636]

a. The owner/operator shall comply with the requirements of §§ 60.482-1(a), (b), and (d) and § 60.482-2 through § 60.482-10 except as provided in § 60.633. [§ 60.632(a)]
   (i) The owner/operator shall demonstrate compliance with §§ 60.482-1 to 60.482-10 for all affected equipment within 180 days of initial startup which shall be determined by review of records, reports, performance test results, and inspection using methods and procedures specified in § 60.485 unless the equipment is in vacuum service and is identified as required by § 60.486(e)(5). [§ 60.482-1(a), (b), & (d)]
   (ii) The owner/operator shall comply with the monitoring, inspection, and repair requirements, for pumps in light liquid service, of §§ 60.482-2(a), (b), and (c) except as provided in §§ 60.482-2(d), (e), (f), and 60.633(d).
   (iii) Information and data used to demonstrate that a reciprocating compressor is in wet gas service or is not in VOC service shall be recorded in a log that is kept in a readily accessible location. [§§ 60.633(f), 60.635(c), and 60.486(j)]
   (iv) The owner/operator shall comply with the operation and monitoring requirements, for pressure relief devices in gas/vapor service, of §§ 60.482-4(a) and (b) except as provided in § 60-482-4(c) and § 60.633(b).
   (v) Sampling and connection systems are exempt from the requirements of § 60.482-5. [§ 60.633(c)]
   (vi) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.632(c). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall be closed at all other times. [§ 60.482-6]
   (vii) The owner/operator shall comply with the monitoring, inspection, and repair requirements, for valves in gas/vapor service and light liquid service, of §§ 60.482-7(b) through (e), except as provided in §§ 60.633(d), 60.482-7(f), (g), and (h), §§ 60.483-1, 60.483-2, and 60.482-1(c). [§ 60.482-7(a)]
   (viii) The owner/operator shall comply with the monitoring and repair requirements, for pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors, of §§ 60.482-8(a) through (d). [§ 60.482-8]
   (ix) Delay of repair of equipment is allowed if it meets one of the requirements of §§ 60.482-9(a) through (e).

(x) The owner/operators using a closed vent system and control device to comply with these provisions shall comply with the design, operation, monitoring and other requirements of §§ 60.482-10(b) through (g). [§ 60.482-10(a)]

b. An owner/operator may elect to comply with the alternative requirements for valves of §§ 60.483-1 and 60.483-2. [§ 60.632(b) & § 60.482-1(b)]

c. An owner/operator may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in NSPS Subpart KKK. In doing so, the owner or operator shall comply with requirements of § 60.634. [§ 60.632(c)]

d. The owner/operator shall comply with the test method and procedures of § 60.485 except as provided in §§ 60.632(f) and 60.633(h). [§ 60.632(d)]

e. The owner/operator shall comply with the record-keeping requirements of § 60.486 and the reporting requirements of § 60.487 except as provided in §§ 60.633, 60.635, and 60.636. [§ 60.632(e)]

f. The owner/operator shall comply with the record-keeping requirements of §§ 60.635(b) and (c) in addition to the requirements of § 60.486. [§ 60.635(a)]

g. The owner/operator shall comply with the reporting requirements of §§ 60.636(b) and (c) in addition to the requirements of § 60.487. [§ 60.636(a)]

13. The permittee shall comply with the Standards of Performance for Natural Gas Sweetening Units, NSPS Subpart LLL, for the amine unit located on-site. [40 CFR §§ 60.640 to 60.648]

a. Keep, for the life of the facility, a record demonstrating that the facility's design capacity is less than 2 LT/D of H_2S expressed as sulfur as required by §§ 60.640(b) and 60.647(c).

14. The owner/operator shall comply with all applicable requirements of the NESHAP: Reciprocating Internal Combustion Engines, Subpart ZZZZ, for each affected facility including but not limited to: [40 CFR §§ 63.6580 through 63.6675]

<u>What This Subpart Covers</u>

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?

<u>Emission and Operating Limitations</u>

e. § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

f. § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?

<u>General Compliance Requirements</u>

g. § 63.6605 What are my general requirements for complying with this subpart?

<u>Testing and Initial Compliance Requirements</u>

h. § 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site

rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

i. § 63.6615 When must I conduct subsequent performance tests?
j. § 63.6620 What performance tests and other procedures must I use?
k. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
l. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

Continuous Compliance Requirements

m. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
n. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

Notifications, Reports, and Records

o. § 63.6645 What notifications must I submit and when?
p. § 63.6650 What reports must I submit and when?
q. § 63.6655 What records must I keep?
r. § 63.6660 In what form and how long must I keep my records?

Other Requirements and Information

s. § 63.6665 What parts of the General Provisions apply to me?
t. § 63.6670 Who implements and enforces this subpart?
u. § 63.6675 What definitions apply to this subpart?

15. The gasoline dispensing facility (GDF) is subject to the NESHAP for GDF 40 CFR Part 63, Subpart CCCCCC and shall comply with all applicable requirements including but not limited to:

[40 CFR §§ 63.11110 to 63.11320]

What This Subpart Covers

a. § 63.11110 What is the purpose of this subpart?
b. § 63.11111 Am I subject to the requirements in this subpart?
c. § 63.11112 What parts of my affected source does this subpart cover?
d. § 63.11113 When do I have to comply with this subpart?

Emission Limitations and Management Practices

e. § 63.11115 What are my general duties to minimize emissions?
f. § 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

Notifications, Records, and Reports

g. § 63.11130 What parts of the General Provisions apply to me?
   (i) 40 CFR Part 63, Subpart CCCCCC, Table 3 shows which parts of the General Provisions apply to you.
h. § 63.11131 Who implements and enforces this subpart?
i. § 63.11132 What definitions apply to this subpart?

16. The following records shall be maintained on-site to verify insignificant activities. No record-keeping is required for those operations which qualify as Trivial Activities.

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

a. For 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).
b. For fluid storage tanks with a capacity of less than 39,894 gallons and a true vapor pressure less than 1.5 psia: records of capacity of the tanks, and true vapor pressure of contents.
c. 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).

17. 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 for each engine.
b. Operating hours for each engine if less than 220 hours per quarter and not tested.
c. For fuel(s) burned, the appropriate document(s) as described in Specific Condition No. 2.
d. Summary of O&M records for any engine not tested in each 6 month period.
e. Records as required by NSPS, Subparts KKK and LLL.
f. Throughput of the amine unit (annual daily average).
g. H_2S concentration of the facility inlet gas (annual).
h. Throughput of the glycol dehydration unit (annual daily average).
i. Condensate throughput.
j. Records of insignificant activities.
k. Records as required by NESHAP, Subparts HH, ZZZZ, and CCCCCC.
l. Records as required by CAM.

18. No later than 30 days after each anniversary date of the issuance of the original Title V operating permit (March 29, 1999), 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)]

19. This permit supersedes all other Air Quality operating permits for this facility, which are now cancelled.

20. This facility is considered an existing Prevention of Significant Deterioration (PSD) facility. As such, the facility is subject to the provisions of OAC 252:100-8-36.2(c) for any project as defined therein. [OAC 252:100-8-36.2(c)]

21. 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 57, Primary Nonferrous Smelter Orders
b. 40 CFR Part 60, New Source Performance Standards (NSPS), Subpart K
c. 40 CFR Part 60, NSPS, Subpart Ka

d. 40 CFR Part 60, NSPS, Subpart Kb
e. 40 CFR Part 60, NSPS, Subpart GG
f. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP)
g. 40 CFR Part 63, NESHAP, Subpart HHH
h. 40 CFR Parts 72-78, Acid Rain Program
i. OAC 252:100-7, Permits for Minor Facilities
j. OAC 252:100-8-4 (a)(2), Case-by-Case MACT
k. OAC 252:100-15, Mobile Sources
l. OAC 252:100-17, Incinerators
m. OAC 252:100-23, Cotton Gins
n. OAC 252:100-24, Grain Elevators
o. OAC 252:100-39, Nonattainment Areas
p. OAC 252:100-47, Municipal Solid Waste Landfills
q. OAC 252:100-33, Control of Emissions of Nitrogen Oxides
r. OAC 252:100-35, Control of Emission of Carbon Monoxide

22. All of the engines in EUG1 equipped with catalytic converters are subject to Compliance Assurance Monitoring (CAM) and shall comply with all applicable requirements and shall perform monitoring as approved in Table 1, Appendix A of this permit. The glycol dehydration and amine units in EUG4 are controlled by E-FLR1, which is subject to Compliance Assurance Monitoring (CAM) and shall comply with all applicable requirements and shall perform monitoring as approved in Table 2, Appendix A of this permit. [40 CFR Part 64]

TABLE 1. ONEOK FIELD SERVICES COMPANY, L.L.C. COMPLIANCE ASSURANCE MONITORING FOR THE ENGINES WITH CATALYTIC CONVERTERS

	Indicator No. 1	**Indicator No 2**	**Indicator No. 3**
I. Indicator	Temperature of inlet gas into catalyst	Pressure differential of exhaust gas (press. in - press. out across catalyst)	Inspection & Preventative Maintenance (I/PM) See enclosed PM plan.
Measurement Approach	Exhaust gas temperature is measured continuously using a thermocouple and translated by a temp. scanner or other end device.	Pressure differential shall be measured weekly using a water column (w.c.) or gauge or other device indicating pressure for inlet and outlet pressure.	Monthly inspection according to PM plan; maintenance performed as needed.
II. Indicator Range	The indicator range is above 700ºF, but lower than 1,250ºF. Excursions trigger corrective action, logging and reporting in semiannual report.	The indicator range differential is ± 2 inches of water from the baseline differential pressure. Excursions trigger corrective action, logging and reporting in semiannual report.	Excursions trigger corrective action, logging and reporting in semiannual report.
III. Performance Criteria A. Data Representativeness	Temperature is measured at the inlet to the catalyst by a thermocouple with a minimum accuracy of +/-5ºF.	Pressure shall be measured at the inlet and outlet of the catalyst by pressure gauge with a minimum accuracy of +/- 0.1 inches w.c.	Inspections are performed on the engine, AFR, and the catalyst.
B. Verification of Operational Status	Guarantee from thermocouple manufacturer	Guarantee from gauge manufacturer	After 3,000 hours, the AFR system is tested for operability and the AFR set points are verified. Monthly PM inspections verify operating characteristics of the system.
C. QA/QC Practices and Criteria	Thermocouple scanner or other end device is calibrated annually.	Gauge or other end device is calibrated annually.	Qualified personnel perform inspections.
D. Monitoring Frequency	Temperature measured continuously and recorded on log sheets once daily. Compliance assumed daily if no corrective action events occur.	Pressure Differential shall be measured weekly and recorded on log sheets. Compliance assumed weekly if no corrective action events occur.	Monthly inspection in accordance with PM plan.
Data Collection Procedures	Temperature data recorded on log sheet once daily. Otherwise, excursions trigger corrective action, logging, and reporting in semiannual report.	Pressure data recorded on log sheet once weekly. Otherwise, excursions trigger corrective action, logging, and reporting in semiannual report.	Records are maintained to document the monthly inspections and any required maintenance. Record any excursions that required corrective action. If no excursions, compliance is assumed on a monthly basis.
Averaging period	None, not to exceed minimums and maximums.	None, not to exceed minimums and maximums.	NA

TABLE 2. ONEOK FIELD SERVICES COMPANY, L.L.C. COMPLIANCE ASSURANCE MONITORING FOR THE GLYCOL DEHYDRATION AND AMINE UNITS

	Indicator No. 1 (Condenser/Flare)	Indicator No. 2 (Condenser/Flare)
I. Indicator	Flare flame indicator	Inspection & Preventative Maintenance (I/PM)
Measurement Approach	Flame monitor is monitored continuously using an inline thermocouple or flame sensor and translated by a temp. scanner or other end device.	Monthly inspection according to PM plan; maintenance performed as needed.
II. Indicator Range	The indicator range is positive only. Excursions trigger corrective action, logging and reporting in semiannual report.	Excursions trigger corrective action, logging and reporting in semiannual report.
III. Performance Criteria A. Data Representativeness	Presence of flame is monitored at the flare outlet by monitor or temperature sensor.	Inspections are performed on the condenser system.
B. Verification of Operational Status	Guarantee from sensor mfr.	Monthly PM inspections verify operating characteristics of the system.
C. QA/QC Practices and Criteria	Presence of flame is verified weekly and recorded on a log sheet once a week. Compliance is assumed weekly if no corrective action events.	Qualified personnel perform inspections.
D. Monitoring Frequency	Data recorded on log sheets once weekly. Compliance assumed weekly if no corrective action events occur.	Monthly inspection in accordance with PM plan.
Data Collection Procedures	Data recorded on log sheet once weekly. Otherwise, excursions trigger corrective action, logging and reporting in semiannual report.	Records are maintained to document the monthly inspections and any required maintenance. Record any excursions that required corrective action. If no excursions, compliance is assumed on a monthly basis.
Averaging period	None, not to exceed minimums.	NA

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
7-1-20

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
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
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
COM	Continuous Opacity Monitor
D	Day
DEF	Diesel Exhaust Fluid
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
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)
HAP	Hazardous Air Pollutants
HC	Hydrocarbon
HCFC	Hydroclorofluorocarbon
HON	Hazardous Organic NESHAP
HP	Horsepower (hp)
HR	Hour (hr)
H_2S	Hydrogen Sulfide
I&M	Inspection and Maintenance
IBR	Incorporation by Reference
IC	Internal Combustion
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
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
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
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

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

VMT Vehicle Miles Traveled
VOC Volatile Organic Compound
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

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]

DRAFT

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Ms. Jenny Ellette, Environmental Specialist
ONEOK Field Services Company, L.L.C.
P.O. Box 871
Tulsa, OK 74102

SUBJECT: Permit No. **2019-1082-TVR4**
Leedey Gas Plant
ODEQ Facility ID: 1679
Section 32, Township 16N, Range 21W; Roger Mills County, Oklahoma

Dear Ms. Ellette:

Enclosed is the renewal permit authorizing operations at 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 the permit writer at kyle.walker@deq.ok.gov or at (405) 702-4193.

Sincerely,

Phillip Fielder

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

Enclosures

DRAFT

PART 70 PERMIT

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

Permit No. 2019-1082-TVR4

ONEOK Field Services Company, L.L.C.,

having complied with the requirements of the law, is hereby granted permission to operate the Leedey Gas Plant in Section 32, T16N, R21W, Roger Mills County, Oklahoma subject to the Standard Conditions dated June 21, 2016, and Specific Conditions, both of which are attached.

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

Kendal Stegmann, Division Director **Date**

Air Quality Division

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

OneOK Field Services Company, L.L.C.
Attn: Ms. Jenny Ellette, Environmental Specialist
P.O. Box 871
Tulsa, Oklahoma 74102

Permit Number: 2019-1082-TVR4
Permit Writer: Kyle Walker

Re: Permit Application No. 2019-1082-TVR4
Leedey Gas Plant (FAC ID 1679)
Hammon, Roger Mills 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. If you have any questions, please refer to the permit number above and contact me or the permit writer at (405) 702-4100.

Sincerely,

Phillip Fielder

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

enclosures

NOTICE OF DRAFT PERMIT
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 draft permit has been prepared by 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. Note that if either the applicant or the public requests a public meeting, this must be arranged through the Customer Services Division of the DEQ.

REQUIRED CONTENT (27A O.S. § 2-14-302 and OAC 252:4-7-13(c))

1. A statement that a Tier II or Tier III draft permit has been prepared by DEQ;
2. Name and address of the applicant;
3. Name, address, driving directions, 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, including an estimate of emissions from the facility;
6. Location(s) where the application and draft permit 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;
9. A 30-day opportunity to request a formal public meeting on the draft permit.

SAMPLE NOTICE on page 2.

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

DEQ NOTICE OF TIER *…II or III…* **DRAFT PERMIT**

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), driving directions, and legal description including county…..*

In response to the application, DEQ has prepared a draft permit [modification] (Permit Number: *…xxxxxxxx-x…***), which may be reviewed at** *…locations (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 draft permit is also available for review in the Air Quality Section of DEQ's Web Page: https://www.deq.ok.gov/**
sgov
This draft permit would authorize the facility to emit the following regulated pollutants: *(list each pollutant and amounts in tons per year (TPY))*

The public comment period ends 30 days after the date of publication of this notice. Any person may submit written comments concerning the draft permit to the Air Quality Division contact listed below. [Modifications only, add: **Only those issues relevant to the proposed modification(s) are open for comment.**] **A public meeting on the draft permit [modification] may also be requested in writing at the same address. Note that all public meetings are to be arranged and conducted by DEQ staff.**

In addition to the public comment opportunity offered under this notice, this draft permit is subject to U.S. Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 70.8. [For Construction Permits, add: **The requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process. Therefore, no additional opportunity to provide comments or EPA review, EPA objection, and petitions to EPA will be available to the public when requirements from the construction permit are incorporated into the Title V permit.**]

If the Administrator (EPA) does not object to the proposed permit, the public has 60 days following the Administrator's 45 day review period to petition the Administrator to make such an objection as provided in 40 CFR 70.8(d) and in OAC 252:100-8-8(j). Information on all permit actions and applicable review time lines is available in the Air Quality section of the DEQ Web page: https://www.deq.ok.gov/.

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 N. Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone No. (405) 702-4100.**