

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM

October 13, 2020

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

THROUGH: Richard Groshong, Env. Programs Manager, Compliance & Enforcement

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

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

FROM: Iftekhar Hossain, P.E., New Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2016-0323-TVR3**
XTO Energy, Inc.
Hewitt Unit Waterflood Station
Facility ID: 532
Latitude: 34.20019° N, Longitude: 97.40483° W
Section 21, Township 4S, Range 2W, Carter County, Oklahoma.
Directions: From Ardmore, OK, go 15 miles west on US Hwy 70 then turn north on Dillard Road and travel 1.9 miles to facility.

SECTION I. INTRODUCTION

XTO Energy, Inc. (XTO), has submitted an application for renewal of their Part 70 operating permit for the Hewitt Unit Waterflood Station (facility) (SIC 1311/NAICS 211120). The facility is a Prevention of Significant Deterioration (PSD)-major source located in an attainment area and an area source of Hazardous Air Pollutants (HAPs). The facility is currently operating under Permit No. 2010-060-C (M-2), issued March 31, 2020, and Permit No. 2010-060-TV2 (M-1) issued July 8, 2013.

During review of this Title V renewal application (No. 2016-0323-TVR3), which was submitted by the applicant on April 4, 2016, it was discovered that the facility removed the vapor recovery unit (VRU) in 2005 without applying for any permit modification. As a result, Oklahoma Department of Environmental Quality (ODEQ) opened an Enforcement Case (No. 8751) on May 10, 2017. In order to fulfil the requirements of enforcement case, XTO submitted a construction permit application on May 29, 2018, and installed a utility flare to control volatile organic compound (VOC) emissions from one (1) tank (Tankgood) under construction Permit No. 2010-060-C (M-2), issued March 31, 2020. In addition, XTO got authorization in that permit to add two (2) compressor engines (ENG-8 and ENG-9) which have not been installed yet.

The facility emits more than 100 tons per year (TPY) of a regulated pollutant, it is therefore subject to Part 70 permitting requirements. The renewal process needs to go through **Tier II** permitting process. Therefore, public notice and Environmental Protection Agency (EPA) review will be required. XTO requests that the permit be available for concurrent public review and EPA review.

Emission units (EUs) have been arranged into Emission Unit Groups (EUGs) as shown in the "Equipment" section (SECTION III). Pipeline-grade natural gas is the primary fuel with the facility being operated continuously.

SECTION II. FACILITY DESCRIPTION

The facility gathers produced liquids from wells located in the Hewitt Field and separates the inlet stream into three parts. Initially, the inlet streams enter the facility and travel through separate liquid packed free water knockout (FWKO) vessels. That allows the crude oil to be separated from the produced water. The produced water is then routed through several coalescers and then into a 10,000-barrel (bbl) produced water tank. Any crude oil that is separated in coalescers are routed to the Wet Oil storage tank. The produced water is then re-injected into the formation for enhanced oil recovery.

The oil from the 10,000-bbl Wet Oil storage tank and FWKO vessels are routed into the heater-treater where majority of the gas is liberated from the liquid streams. The off-gases from the heater-treater are routed to the sales pipeline. The oil is then routed to the 10,000-bbl Good Oil storage tank where the crude oil is stored prior to the pipeline sales.

The Wet Oil and Good Oil tanks were installed prior to any applicable federal standards, so there are no current emissions limitations associated with these units. The installed flare controls the VOC emissions from Good Oil tank. The injection pumps will be driven by one new Caterpillar G3516 compressor engine (either ENG-8 or ENG-9) and five White Superior 8GT825 compressor engines (1,100-horsepower (hp) each). White Superior compressor engines were installed in 1971. Therefore, there are no current emission testing requirements for these units. In addition to these natural gas driven engines, there are two 800-hp electric motors for two of the injection pumps.

SECTION III. EQUIPMENT

Emission units have been arranged into EUGs as follows.

EUG 1A. Grandfathered Engines

EU ID	Point	Make/Model	HP	Serial #	Installed Date
ENG-3	P-Stack-3	White Superior 8GT825	1,100	19646	Before 1971
ENG-4	P-Stack-4	White Superior 8GT825	1,100	20107	Before 1971
ENG-5	P-Stack-5	White Superior 8GT825	1,100	19643	Before 1971
ENG-6	P-Stack-6	White Superior 8GT825	1,100	19642	Before 1971
ENG-7	P-Stack-7	White Superior 8GT825	1,100	19641	Before 1971

EUG 1B. Emission-Limited Engines

ENG-8*	P-Stack-8	Caterpillar G3516 ULB ¹	1,380	TBD	TBD
ENG-9*	P-Stack-9	Caterpillar G3516 TALE ²	1,340	TBD	TBD

*Not constructed yet. ¹ Equipped with oxidation catalyst. ² Equipped with oxidation catalyst.

EUG 2A. Storage Tanks (Manufactured Before 1972)

EU ID	Point	Capacity, Barrels	Material Stored	Manufacture Date
Tankwet	P-Tkvent1	10,000	Wet crude oil	1968
Tanklube	P-Tkvent3	100	Lube oil	1968

Note: The 10,000-barrel produced water tank and FWKO vessel located at the facility are not vented to the atmosphere and is not considered an emission source.

EUG 2B. Storage Tanks (Manufactured After 1972)

EU ID	Point	Capacity, Barrels	Material Stored	Manufacture Date
Tankgood*	P-Tkvent1	10,000	Good crude oil	1968
Tankskim	P-Tkvent2	2,500	Skim crude oil	1993

*subject to throughput and emission limits, and no longer qualified as "grandfathered".

EUG 3. Fugitive Components

EU ID	Components	Number of Components ⁽¹⁾	
		Gas	Light Liquid
E-Fugitives	Valves	150	90
E-Fugitives	Flanges	500	500
E-Fugitives	Connectors	500	500
E-Fugitives	Other	3	3

⁽¹⁾ Estimated component count.

EUG 4. Heater

EU ID	Point	Description	MMBtu/hr	Serial #	Date Manufactured
Heater	P-Stack8	Heater treater	4.0	S1050-425	1968

EUG 5. Flare

EU ID	Point	Description	MMBtu/hr	Serial #	Date Manufactured
FL-1	P-Flare	Utility Flare	1.99	S1050-425	2018

SECTION IV. EMISSIONS

All emissions estimates are based on continuous operation.

EUG 1. Engines

Engine emission factors for nitrogen oxides (NO_x), carbon monoxide (CO), VOC, and formaldehyde (H₂CO) for White Superior compressor engines are based on AP-42 (7/00), Table 3.2-3. The factors for the Caterpillar G3516 ULB compressor engine with an oxidation catalyst (OC) are based on manufacturer's data with catalyst efficiency of 59% for CO and 77% for H₂CO. The factors for the Caterpillar G3516 TALE compressor engine with a catalytic converter (CC) are based on manufacturer's data with catalyst efficiency of 75% for CO, 61% for VOC, and 60% for H₂CO. VOC emission factor of each Caterpillar engine includes H₂CO.

Table 1: Emission Factors

Engine Make/Model	Type	Fuel Consumption	Emission Factors				Units*
		Btu/hp-hr	NO _x	CO	VOC	H ₂ CO	
White Superior 8GT825	4SRB	8,300	2.27	3.51	0.03	0.0205	lb/MMBtu
Caterpillar G3516 ULB	4SLB	8,260	0.50	1.00	0.58	0.10	g/hp-hr
Caterpillar G3516 TALE	4SLB	8,346	2.00	1.00	0.39	0.10	g/hp-hr

* lb/MMBtu = pound per million British Thermal Units; g/hp-hr = gram per horsepower-hour

Table 2: Estimated Engine Emissions

EU ID	NO _x		CO		VOC		H ₂ CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
ENG-3	20.73	90.78	32.05	140.36	0.27	1.20	0.19	0.82
ENG-4	20.73	90.78	32.05	140.36	0.27	1.20	0.19	0.82
ENG-5	20.73	90.78	32.05	140.36	0.27	1.20	0.19	0.82
ENG-6	20.73	90.78	32.05	140.36	0.27	1.20	0.19	0.82
ENG-7	20.73	90.78	32.05	140.36	0.27	1.20	0.19	0.82
ENG-8	1.52	6.66	3.04	13.33	1.76	7.73	0.30	1.33
ENG-9	5.91	25.88	2.95	12.94	1.15	5.05	0.30	1.29

EUG 2. Storage Tanks

Estimated potential VOC emissions from the wet oil and good oil tanks are based on ProMax process simulation software. Tankwet VOC emissions are uncontrolled. Tankgood VOC emissions are controlled by a flare with a vapor capture efficiency of 98% and destruction efficiency of 98%. Emissions from the open top skim oil tank (~ 1.96 TPY), the lube oil tank (~ 0.01 TPY), and any truck loading of skimmed oil (~ 0.02 TPY) are negligible. There is a 10,000-barrel produced water tank and FWKO vessel located at the facility that is not vented to the atmosphere and is not considered an emission sources.

Table 3A: Tankwet Emissions

Parameter	Data
Throughput, gal/yr	153,300
Contents	Crude Oil
Working/Breathing/ Flash Calculation Method/Tool	ProMax
Total Uncontrolled VOC Emissions, TPY	17.51
Control Type	None
Total VOC Emissions, TPY	17.51

Table 3B: Tankgood Emissions

Parameter	Data
Throughput, gal/yr	31,395,840
Contents	Crude Oil
Working/Breathing Method/Tool	ProMax
Flash Calculation Method/Tool	ProMax

Parameter	Data
Total Uncontrolled VOC Emissions, TPY	336.21
Control Type	Flare
Capture Efficiency	98%
Destruction Efficiency	98%
VOC Emissions Emitted at Tank, TPY ⁽¹⁾	6.72
VOC Emissions Emitted at Flare, TPY ⁽²⁾	6.59
VOC Emissions, TPY	13.31

⁽¹⁾ Includes uncaptured working, breathing, and flashing emissions.

⁽²⁾ Includes VOC from uncombusted working, breathing, and flashing emissions.

EUG 3. Fugitive Components

Fugitive VOC emissions from equipment components are based on the EPA document, “Protocol for Equipment Leak Emission Estimates” (EPA-453/R-95-017), 35.89-wt% of VOC in gas streams, and 100-wt% VOC in hydrocarbon liquid streams.

Table 4: Fugitive Counts and Emission Factors

Components	Emission Factor (lb/hr-source)			Component Count			VOC Emissions	
	Gas	Light Oil	Water/ Light Oil	Gas	Light Oil	Water/ Light Oil	lb/hr	TPY
Valves	0.00992	0.00550	0.000216	150	90	100	1.05	4.60
Flanges	0.00086	0.00024	0.0000062	500	-	500	0.16	0.69
Connectors	0.00044	0.00046	0.000243	500	-	500	0.20	0.88
Other	0.01940	0.01650	0.03090	3	3	-	0.07	0.31
Totals							1.48	6.48

EUG 4. Heater

Estimated emissions from the heater are based on emission factors for natural gas combustion in AP-42 (7/98), Table 1.4-1, a fired duty of 4.0 MMBtu/hr, and a fuel gas higher heating value (HHV) of about 1,000 Btu/scf. The heater is “grandfathered” (constructed prior to any applicable rule).

Table 5: Heater Estimated Emissions

EU ID	NO _x		CO		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Heater	0.40	1.75	0.34	1.47	0.02	0.10

EUG 5. Flare

NO_x and CO emissions from combustion of the waste gas in the open flare are based on TCEQ publication RG-360-A/11 (02/2012), Table A-6, TCEQ Air Permits Flare Emission Factors. The calculated annual flow to the flare is 1.89 million British thermal units per hour (MMBtu/hr). This is based on actual production, not the capacity of the flare (which is 18.08 MMBtu/hr). NO_x, CO,

and VOC emissions from combustion of pilot gas in the open flare are based on AP-42 (7/98), Section 1.4 and an estimated heat input of 0.10 MMBtu/hr.

Table 8: Flare Emissions

Unit ID #	Annual Flow to Flare	Emissions Factors (lb/MMBtu)			Emissions (TPY)		
		NOx	CO	VOC	NOx	CO	VOC
FLARE-1	1.89	0.138	0.55	--	1.14	4.55	6.59
		Emissions Factors lb/10 ⁶ scf					
Pilot Gas	0.10	100	84	5.5	0.04	0.04	<0.01
Totals	1.99				1.18	4.59	6.60

Table 9: Facility-Wide Air Emissions

Equipment	EU ID	NOx		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
White Superior 8GT825	ENG-3	20.73	90.78	32.05	140.36	0.27	1.20
White Superior 8GT825	ENG-4	20.73	90.78	32.05	140.36	0.27	1.20
White Superior 8GT825	ENG-5	20.73	90.78	32.05	140.36	0.27	1.20
White Superior 8GT825	ENG-6	20.73	90.78	32.05	140.36	0.27	1.20
White Superior 8GT825	ENG-7	20.73	90.78	32.05	140.36	0.27	1.20
Caterpillar G3516 ULB	ENG-8	1.52	6.66	3.04	13.33	1.76	7.73
Caterpillar G3516 TALE	ENG-9	5.91	25.88	2.95	12.94	1.15	5.05
Tankwet	Tankwet	-	-	-	-	4.00	17.51
Tankgood	Tankgood	-	-	-	-	3.04	13.31
Fugitive Components	E-Fugitives	-	-	-	-	1.48	6.48
Heater	E-Heater	0.40	1.75	0.34	1.47	0.02	0.10
Flare	FL-1	-	1.18	-	4.59	-	6.60
Totals		111.48	489.37	166.58	734.13	12.80	62.78

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the previous application and listed in Oklahoma Administrative Code (OAC) 252:100-8, Appendix I, are listed below. Record keeping for activities indicated with "*" is listed in the permit 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. * 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. There is one lube oil tank.
2. * Activities having the potential to emit no more than 5.0 TPY of any criteria pollutant. The open top skim oil tank and any truck loading of skimmed oil are in this category.

SECTION VI. OKLAHOMA AIR QUALITY 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 Air Quality Division (AQD) and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant; and
- 2 TPY of any one 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.

All of the existing equipment at this facility is “grandfathered” and not subject to emission limits, except for the skim oil tank, which has insignificant emissions. Emission estimates are from the TV renewal applications and/or the original Part 70 permit.

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 Code of Federal Regulations (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 From Fuel-burning Equipment) [Applicable]
Subchapter 19 specifies a particulate matter (PM) emissions limitation of 0.6 lb/MMBtu from existing fuel burning equipment with a rated heat input of 10 MMBtu/hr or less. AP-42 (7/00) Table 3.2-2 lists the total PM emissions from 4-cycle, lean-burn, natural gas-fired engines to be 0.01 lbs/MMBtu. AP-42 (7/00) Table 3.2-3 lists the total PM emissions from 4-stroke, rich burn, natural gas-fired engines as 0.0095 lb/MMBtu. AP-42 (7/98) Table 1.4-2 lists total PM emissions as 0.0076 lb/MMBtu for natural gas combustion. The permit requires the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

This subchapter also limits emissions of PM from industrial processes. Per AP-42 factors, there are no significant PM emissions from any other industrial activities at this facility.

OAC 252:100-25 (Visible Emissions and Particulate Matter) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. The permit will require that any on-site equipment be fueled only with natural gas to ensure compliance with this requirement.

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

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 2 limits the ambient air impact of hydrogen sulfide (H₂S) emissions from any new or existing source to 0.2 parts per million (ppm) for a 24-hour average (equivalent to 280 µg/m³). Based on modeling conducted for the general permit for oil and gas facilities, the ambient impacts of H₂S from oil and gas facilities combusting natural gas with a maximum H₂S content of 343 ppmv and storing condensate or sweet crude oil will be in compliance with the H₂S ambient air concentration limit.

Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels, the limit is 0.2 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.

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

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds)

[Applicable]

Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5-pounds per square inch absolute (psia) at maximum storage temperature to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The 2,500-barrel skim tank is not subject to this part, because the facility is located prior to lease custody transfer and is exempt from this requirement. The two (2) 10,000-barrel oil tanks are exempt from this requirement based on construction dates. Part 3 requires storage vessels constructed after December 28, 1974, with a capacity of 40,000 gallons or more and storing a VOC with a vapor pressure greater than or equal to 1.5 psia to be a pressure vessel or to be equipped with an external floating roof, or a fixed roof with an internal floating cover, or to be equipped with a vapor recovery system capable of collecting 85% of the uncontrolled VOC. The 2,500-barrel skim tank is not subject to this part, because the facility is located prior to lease custody transfer and is exempt from this requirement.

Part 3 requires VOC loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. The skimmed oil loading operation is not the type of loading operation affected by Part 3.

Part 5 limits the VOC content of coatings from any coating line or other coating operation. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment. The VOC emissions are less than 100 pound per day and so is exempt.

Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. Temperature and available air must be sufficient to provide essentially complete combustion. The engines at this location are subject to this requirement.

Part 7 requires all effluent water separator openings which receive water containing more than 200 gallons per day of any VOC, to be sealed or the separator to be equipped with an external floating roof or a fixed roof with an internal floating roof or a vapor recovery system. The FWKO is considered an effluent water separator and it is sealed with the off-gases controlled. Therefore, FWKO at this facility is subject to this part and satisfied the requirements of Part 7 by being a sealed vessel.

OAC 252:100-42 (Toxic Air Contaminants (TAC))

[Applicable]

This subchapter regulates TAC that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated, 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 [Not Applicable]
 Total emissions for NO_x and CO are greater than the major source threshold level of 250 TPY. Any future emission increases must be evaluated for PSD if they exceed a significance level (100 TPY CO, 40 TPY NO_x, 40 TPY VOC, 40 TPY SO₂, 25 TPY PM, 15 TPY PM₁₀, 10 TPY PM_{2.5}, 10 TPY H₂S, or 75,000 TPY CO_{2e}).

NSPS, 40 CFR Part 60 [Not Applicable]
Subpart K, Ka, Kb, VOL Storage Vessels. All storage tanks at this site were constructed prior to the effective dates of these Subparts K, Ka, and Kb, except for the 2,500-barrel open top skim tank. This tank is exempt as it handles hydrocarbon liquids prior to custody transfer.
Subpart GG, Stationary Gas Turbines. This subpart sets standards for stationary gas turbines; however, the compressors here are powered by reciprocating engines.
Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. The equipment is not in a SOCOMI plant.
Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for which construction, reconstruction, or modification commenced after January 20, 1984, and prior to 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. The facility was constructed prior to publication of this subpart and does not engage in natural gas processing.

Subpart LLL, SO₂ Emissions. This subpart affects sweetening units and sweetening units followed by a sulfur recovery unit which commences construction or modification after January 20, 1984, and prior to August 23, 2011. There is no natural gas sweetening operation at this site.

Subpart JJJJ, Stationary Spark Ignition (SI) Internal Combustion Engines (ICE). This subpart promulgates emission standards for all new SI engines ordered after June 12, 2006 and all SI engines modified or reconstructed after June 12, 2006, regardless of size. Stationary SI ICE manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 100-hp under the voluntary manufacturer certification program must certify those engines to the emission standards in Table 1 of Subpart JJJJ. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100-hp must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

Emission Standards from Table 1, Subpart JJJJ, g/hp-hr (ppmvd @ 15%O₂)

Engine Type & Fuel	Max Power (hp)	Mfg. Date	NO _x	CO	VOC
Non-Emergency SI Natural Gas ¹	hp ≥ 500	7/1/2007	2.0 (160)	4.0 (540)	1.0 (86)
		7/1/2010	1.0 (80)	2.0 (270)	0.7 (60)

¹ – except lean burn engines 500 ≤ HP < 1,350

The two (2) Caterpillar compressor engines (ENG-8 and ENG-9) have not been constructed yet and therefore have not been evaluated in this permit. These engines are then not subject to this subpart at this moment.

Subpart OOOO, Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification, or reconstruction commenced after August 23, 2011, and on or before September 18, 2015. This subpart affects the following onshore affected facilities:

- (a) Each gas well affected facility, which is a single natural gas well.
- (b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.
- (c) Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.
- (d) Each pneumatic controller affected facility, which is:
 - (1) For the oil production segment (between the wellhead and the point of custody transfer to an oil pipeline): a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
 - (2) For the natural gas production segment (between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not including natural gas processing plants): a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
 - (3) For natural gas processing plants: a single continuous bleed natural gas-driven pneumatic controller.
- (e) Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission

and storage segment, that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water and has the potential for VOC emissions equal to or greater than 6 TPY.

- (f) The group of all equipment, except compressors, within a process unit located at an onshore natural gas processing plant is an affected facility.
- (g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.

There are no wells, centrifugal compressors, or sweetening units located at this facility and this facility is not a gas plant. The storage tanks at the facility were constructed before August 23, 2011, and have not been modified or reconstructed. Therefore they are not subject to this subpart.

The reciprocating compressors of engines ENG-3 through ENG-7 were manufactured before August 23, 2011, and have not been modified or reconstructed. Therefore, they are not subject to this subpart.

Subpart OOOOa, Crude Oil and Natural Gas Facilities for which construction, modification, or reconstruction commenced after September 18, 2015. This subpart affects the following onshore affected facilities:

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

- (i) The collection of fugitive emissions components at a well site, as defined in §60.5430a, is an affected facility, except as provided in §60.5365a (i)(2).
- (j) The collection of fugitive emissions components at a compressor station, as defined in §60.5430a, is an affected facility.

There are no wells, centrifugal compressors, or sweetening units located at this facility and this facility is not a gas plant. The storage tanks were constructed before September 18, 2015, and have not been modified or reconstructed. Therefore, they are not subject to this subpart.

The reciprocating compressors associated with engines ENG-3 through ENG-7 were manufactured before September 18, 2015, and have not been modified or reconstructed. Therefore, they are not subject to this subpart.

The two (2) Caterpillar compressor engines (ENG-8 and ENG-9) have not been constructed yet and therefore have not been evaluated in this permit. These engines are then not subject to this subpart at this moment.

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 63 [Subpart ZZZZ Applicable]
Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to triethylene glycol (TEG) dehydration units at area sources and affected emission points that are located at facilities that are major sources of HAP emissions and either process, upgrade, or store hydrocarbons prior to the point of custody transfer or prior to which the natural gas enters the natural gas transmission and storage source category. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer. This facility has no affected sources; therefore, it is not subject to this subpart.

Subpart HHH, affects Natural Gas Transmission and Storage Facilities, which are a major source of HAPs. This facility is not a major source of HAPs.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart affects new and existing RICE located at major and area sources of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. The following table differentiates existing, new, or reconstructed units based on their construction dates.

	Construction/Reconstruction Dates	
	Engines >500 hp	Engines ≤ 500hp
Existing Unit		
Located at Major HAP Source	Before 12/19/02	Before 6/12/06
Located at Area HAP Source	Before 6/12/06	
New or Reconstructed Unit		
Located at Major HAP Source	On and After 12/19/02	On and After 6/12/06
Located at Area HAP Source	On and After 6/12/06	

The two (2) Caterpillar compressor engines (ENG-8 and ENG-9) have not been constructed yet and therefore have not been evaluated in this permit. These engines are then not subject to this subpart at this moment.

Five (5) White Superior compressor engines (ENG-3 through ENG-7) were constructed before June 12, 2006, and are subject to the compliance requirements of this subpart as an existing engine at an area source. All applicable requirements have been incorporated into the permit.

Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources of HAPs. As per §63.11195 (e) gas-fired boilers are not subject to this subpart. Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. The heater at this facility meets the definition of gas fired boilers and is not subject to this subpart.

Compliance Assurance Monitoring (CAM), 40 CFR Part 64 [Applicable]
CAM 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 of 100 TPY of any criteria pollutant, 10 TPY of any HAP, or 25 TPY of HAPs.

None of the existing engines at this facility use a control device to achieve compliance with the applicable emission limits or standards for any regulated air pollutant. The VOC emissions of Tankgood emitted at the flare will have uncontrolled emissions greater than 100 TPY. Therefore, the flare is subject to the requirements of CAM. No other emission unit is subject to CAM requirements. The applicant has submitted a CAM plan for the flare as described below. All applicable requirements of CAM plan have been incorporated into this permit renewal.

The CAM Plan

The CAM Plan should reflect the actual site conditions. Indicators and indicator ranges included in the monitoring approach should be determined during testing, and refined during periodic monitoring. Monitoring plans are based on an assumption that there is a reasonable assurance of compliance with emissions limits so long as the emission unit is operated under the conditions anticipated, and the control equipment, which has been shown to be capable of complying, continues to be operated and maintained properly. Thus, 40 CFR Part 64 requires the monitoring of one or more indicators of the performance of the applicable control device. XTO provided the CAM plan that has tighter acceptable operating ranges, based on actual site conditions, operations, emissions, and the monitoring.

I. Background

A. Emissions Unit_Description: Flare

AQD ID: FL-1

Facility: Hewitt Unit, Carter County, Oklahoma

B. Applicable Requirement, Emission Limits, and Monitoring Requirements

i. Requirement:

AQD Permit No. 2016-0323-TVR3

ii. Emission limits:

See indicator range in Table A.

iii. Monitoring requirements

Pilot flame, visible emissions, inlet flow rate, net heating value, and inspection/preventive maintenance (I/PM) plan.

C. Control technology

i. Flare

II. Monitoring Approach

A. The key elements of the monitoring approach are presented in Table A.

III. Response to Excursion

A. Excursions outside of the indicator range will trigger an inspection, corrective action, and reporting. Maintenance personnel will inspect the thermocouple and flare within 24 hours of receiving notification of an excursion and make needed repairs as soon as practicable. See Table A for additional details. Operation will return to normal upon completed corrective action.

Criterion	Non-Assist Flares
Indicator #1	Presence of flare pilot flame
Measurement Approach	Monitor the presence of a flare pilot flame using a thermocouple or other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. Maintain records of alarm events and duration of alarm events. Each monitoring device shall be accurate to within manufacturer’s recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer’s specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.
Indicator Range	The indicator range is selected as per manufacturer’s specifications. Excursions trigger corrective action, logging and reporting in semiannual report.

Criterion	Non-Assist Flares
Data Collection Procedure	Presence of flare pilot flame shall be electronically recorded every 15 minutes indicating the presence of the flare pilot flame for the entire 15-minute period or the absence of the flare pilot flame for any minute within the 15-minute period.
Monitoring Frequency	The presence of a flare pilot flame shall be monitored continuously.
Averaging Period	No averaging.
Indicator #2	Visible Emissions
Measurement Approach	Visible emissions observations shall be made and recorded in accordance with the requirements specified in 40 CFR § 64.7(c). Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.
Indicator Range	No visible emissions. If visible emissions are observed, then the owner/operator of the facility shall either report an excursion or determine visible emissions consistent with Test Method 22 or Test Method 9.
Data Collection Procedure	Visible emissions observations shall be made and recorded in the flare operation log. A daily notation in the flare operation log should include the time of day and whether or not the flare had visible emissions. The flare operator shall record at least 98% of these required observations. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes.
Monitoring Frequency	Once per day.
Averaging Period	No averaging.

Indicator #3	Inlet Flow Rate
Measurement Approach	The facility flare is low-pressure; thus, inlet flow rate cannot be accurately measured. Instead, the daily inlet flow rate will be estimated by a GOR multiplied by the daily production.
Monitoring Frequency	Once per day
Averaging Period	No averaging
Indicator #4	Net Heating Value
Measurement Approach	Calculate the net heating value of the gas being combusted using the procedures and specifications of 40 CFR § 60.18(f)(3). The sample points should be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed.
Indicator Range	The minimum net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) for steam-assisted or air-assisted flares. The minimum net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) for non-assisted flares. The minimum net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf) for steam-assisted and non-assisted flares designed for and operated with an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec). Excursions trigger corrective action, logging and reporting in semiannual report.
Monitoring Frequency	Once per day
Averaging Period	No averaging
Indicator #5	Inspection/Preventive Maintenance (I/PM)
Measurement Approach	Monthly inspection according to I/PM plan; maintenance performed as needed.
Indicator Range	Excursions trigger corrective action, logging and reporting in semi-annual report.
Monitoring Frequency	Monthly inspection in accordance with I/PM plan.
Averaging Period	No averaging

Monitoring Approach Justification

I. Background

The monitoring approach outlined here applies to the thermocouple, visible emissions, net flow rate, and heating value at this facility.

II. Rationale for Selection of Performance Indicators

The presence of a pilot flame is to be measured on a continuous basis by a thermocouple as it is the destruction element within the flare. An auto igniter will also be an integral part of the flare to ensure that the flare is lit any time emissions are actively flowing to it. It will be routinely monitored and serviced according to the manufacturer's specifications.

Visible emissions are to be observed daily. The presence of visible emissions may indicate faulty performance of the flare.

Inlet flow rate and net heating value are to be calculated on a daily basis. The facility flare is low-pressure; thus, inlet flow rate cannot be accurately measured. Instead, the daily inlet flow rate will be estimated by a GOR multiplied by the daily production.

III. Rationale for Selection of Indicator Ranges

The indicator ranges for measuring the presence of the pilot flame and monitoring visible emissions were selected because both performance indicators may be monitored visually and audibly by way of the thermocouple.

The inlet flow rate should be calculated to insure that the thermocouple's calibration frequency is within the manufacturer's specifications for optimal performance.

The net heating value should be calculated according to the specifications of 40 CFR §60.18(f)(3) so that samples from the vent stream to the flare are accurately measured and analyzed.

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. The definition of a stationary source also does not include naturally occurring hydrocarbon reservoirs. 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. This facility does not process or store more than the threshold quantity of any regulated substance (Section 112r of the Clean Air Act 1990 Amendments). More information on this federal program is available on the web page: www.epa.gov/rmp.

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

disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.

This facility does not utilize any Class I & II substances.

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 and Public Review

This application has been determined to be a **Tier II** based on the fact that this is a permit renewal request to an existing major source facility. 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 real property. Information on all permits is available for review by the public in the Air Quality Section of DEQ Web Page: <http://www.deq.ok.gov>.

The applicant will publish the “Notice of Filing a Tier II Application” and the “Notice of Tier II Draft Permit” in a local newspaper in the Carter County, Oklahoma. The notices will state that the application and the draft permit may be reviewed at the DEQ Air Quality Division’s Main Office in Oklahoma City, Oklahoma. The application and draft permit will also be available for public review on the Air Quality section of the DEQ web page at <http://www.deq.ok.gov>.

The facility is located within 50 miles of the Oklahoma-Texas border. The state of Texas will be notified of the draft permit.

The permit will also be sent as “Proposed” to EPA Region VI for a 45-day review.

Inspection

A full compliance evaluation was conducted on July 21, 2017, by Andrew Thomas, Environmental Programs Specialist, Air Quality Division. Travis Nipp, EHS Coordinator, and Ethan Welch, Lease Operator, represented XTO. The facility was operating as described in the permit application and supplemental materials. Operational records, calibration, repair and test data are maintained on-site.

Fee Paid

A Part 70 operating permit renewal fee of \$7,500 was paid on April 4, 2016.

SECTION IX. SUMMARY

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

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

XTO Energy, Inc.

Hewitt Unit Waterflood Station

Permit Number 2016-0323-TVR3

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on April 4, 2016, and supplemental materials received thereafter. The Evaluation Memorandum dated October 13, 2020, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

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

EUG 1A: The engines are “grandfathered” (constructed prior to any applicable rule) and are limited to the existing equipment as is.

EU ID	Point	Make/Model	HP	Serial #
ENG-3	P-Stack-3	White Superior 8GT825	1,100	19646
ENG-4	P-Stack-4	White Superior 8GT825	1,100	20107
ENG-5	P-Stack-5	White Superior 8GT825	1,100	19643
ENG-6	P-Stack-6	White Superior 8GT825	1,100	19642
ENG-7	P-Stack-7	White Superior 8GT825	1,100	19641

EUG 2A: The following storage tanks are “grandfathered” (constructed prior to any applicable rule) and are limited to the existing equipment as is.

EU ID	Point	Capacity, barrel	Material Stored
Tankwet	P-Tkvent1	10,000	Wet crude oil
Tanklube	P-Tkvent3	100	Lube oil

Note: A 10,000-barrel produced water tank located at the facility is not vented to the atmosphere and is not considered an emission source.

EUG 2B: The 10,000-bbl Good crude oil tank, Tankgood, is subject to the following throughput and emission limitation requirements. Therefore it is no longer a “grandfathered” source. The 2,500-bbl skim tank, Tankskim, is not “grandfathered”, but emissions are insignificant.

EU ID	Point	Capacity, bbl	Throughput, bbl/yr	VOC, TPY
Tankgood	P-Tkvent1	10,000	747,520	13.31
Tankskim	P-Tkvent2	2,500	---	---*

* - insignificant activity.

- (a) All emissions from Tankgood crude oil storage tank shall be routed to the flare.
- (b) The Tankgood crude oil throughput shall not exceed 747,520 barrel in any 12-month period.

- (c) The Tankgood crude oil storage tank shall be equipped with an external floating roof, or a fixed roof with an internal floating cover, or to be equipped with a vapor recovery system capable of collecting 85% of the uncontrolled VOC.

EUG 3: Fugitive emissions are insignificant and do not have specific limits.

EU ID	Components	Components Count ⁽¹⁾		
		Gas	Light Oil	Water/ Light Oil
E-Fugitives	Valves	150	90	100
E-Fugitives	Flanges	500	-	500
E-Fugitives	Connectors	500	-	500
E-Fugitives	Other	3	3	-

⁽¹⁾ Estimate only, not a limit.

EUG 4: The heater is “grandfathered” (constructed prior to any applicable rule) and is limited to the existing equipment as is.

EU ID	Point	Description	MMBtu/hr	Serial #
Heater	P-Stack8	Heater treater	4.0	S1050-425

EUG 5: The flare is subject to the following emissions limitations and requirements.

Unit ID #	Emissions (TPY)		
	NOx	CO	VOC
FLARE-1	1.14	4.55	6.59
Pilot Gas	0.04	0.04	0.01

- (a) The flare shall be operated at all times when emissions may be vented to it.
 - (b) The volume of gas from Tankgood tank routed to the flare shall not exceed 7.44 MMscf in any 12-month period.
 - (c) The emissions from Tankgood tank shall be routed to the flare with an overall control efficiency of 96% (98% collection and 98% destruction) or more.
 - (d) The flare shall be operated as follows:
 - (i) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
 - (ii) Records of pilot flame(s) outages shall be maintained along with the time and duration of all periods during which the pilot flame is/are absent.
2. The fuel-burning equipment shall be fired with pipeline grade natural gas or other gaseous fuel with a sulfur content less than 343 ppmv. Compliance can be shown by the following methods: for pipeline grade natural gas, a current gas company bill; for other gaseous fuel, a current lab analysis, stain-tube analysis, gas contract, tariff sheet, or other approved methods. Compliance shall be demonstrated at least once in a calendar year. [OAC 252:100-31]
3. The permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6 (a)]

4. Each engine at the facility shall have a permanent identification plate attached, which shows the make, model number, and serial number. [OAC 252:100-43]
5. The permittee is authorized to replace any internal combustion engine or turbine with emissions limitations specified in this permit with an engine or turbine that meets the following requirements: [OAC 252:100-8-6(f)(2)]
- (a) The replacement engine or turbine shall comply with the same emissions limits as the engine or turbine that it replaced. This applies to lb/hr and TPY limits specified in this permit.
 - (b) The authorization of replacement of an engine or turbine includes temporary periods of 6 months or less for maintenance purposes.
 - (c) The permittee shall notify AQD in writing not later than 7 days prior to start-up of the replacement engine or turbine. Said notice shall identify the old engine and shall include the new engine 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. The test report shall include the engine 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.
 - (h) Turbines whose installation and operation are authorized under this Specific Condition which are subject to 40 CFR Part 60, Subpart KKKK shall comply with all applicable requirements.

6. The owner/operator shall comply with all applicable requirements of 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAP) Reciprocating Internal Combustion Engines, Subpart ZZZZ, for each affected facility including but not limited to:

[40 CFR §§63.6580 through 63.6675]

- a. § 63.6580 What is the purpose of subpart ZZZZ?
- b. § 63.6585 Am I subject to this subpart?
- c. § 63.6590 What parts of my plant does this subpart cover?
- d. § 63.6595 When do I have to comply with this subpart?
- e. § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
- f. § 63.6605 What are my general requirements for complying with this subpart?
- g. § 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?
- h. § 63.6615 When must I conduct subsequent performance tests?
- i. § 63.6620 What performance tests and other procedures must I use?
- j. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
- k. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
- l. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
- m. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
- n. § 63.6645 What notifications must I submit and when?
- o. § 63.6650 What reports must I submit and when?
- p. § 63.6655 What records must I keep?
- q. § 63.6660 In what form and how long must I keep my records?
- r. § 63.6665 What parts of the General Provisions apply to me?
- s. § 63.6670 Who implements and enforces this subpart?
- t. § 63.6675 What definitions apply to this subpart?

7. The following records shall be maintained on-site or at a local field office to verify Insignificant Activities. No recordkeeping is required for those operations that qualify as Trivial Activities.

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

- a. 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 contents.
- b. 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).

8. No later than 30 days after each anniversary date of the issuance of the initial Title V operating permit (October 30, 1998), 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)]

9. Compliance Assurance Monitoring Requirements and Specifications For flare (FL-1).

Criterion	Non-Assist Flares
Indicator #1	Presence of flare pilot flame
Measurement Approach	Monitor the presence of a flare pilot flame using a thermocouple or other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. Maintain records of alarm events and duration of alarm events. Each monitoring device shall be accurate to within manufacturer’s recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer’s specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.
Indicator Range	The indicator range is selected as per manufacturer’s specifications. Excursions trigger corrective action, logging and reporting in semiannual report.
Data Collection Procedure	Presence of flare pilot flame shall be electronically recorded every 15 minutes indicating the presence of the flare pilot flame for the entire 15-minute period or the absence of the flare pilot flame for any minute within the 15-minute period.
Monitoring Frequency	The presence of a flare pilot flame shall be monitored continuously.
Averaging Period	No averaging.
Indicator #2	Visible Emissions
Measurement Approach	Visible emissions observations shall be made and recorded in accordance with the requirements specified in 40 CFR § 64.7(c). Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.
Indicator Range	No visible emissions. If visible emissions are observed, then the owner/operator of the facility shall either report an excursion or determine visible emissions consistent with Test Method 22 or Test Method 9.

Criterion	Non-Assist Flares
Data Collection Procedure	Visible emissions observations shall be made and recorded in the flare operation log. A daily notation in the flare operation log should include the time of day and whether or not the flare had visible emissions. The flare operator shall record at least 98% of these required observations. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes.
Monitoring Frequency	Once per day.
Averaging Period	No averaging.
Indicator #3	Inlet Flow Rate
Measurement Approach	The facility flare is low-pressure; thus, inlet flow rate cannot be accurately measured. Instead, the daily inlet flow rate will be estimated by a GOR multiplied by the daily production.
Monitoring Frequency	Once per day
Averaging Period	No averaging
Indicator #4	Net Heating Value
Measurement Approach	Calculate the net heating value of the gas being combusted using the procedures and specifications of 40 CFR § 60.18(f)(3). The sample points should be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed.
Indicator Range	The minimum net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) for steam-assisted or air-assisted flares. The minimum net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) for non-assisted flares. The minimum net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf) for steam-assisted and non-assisted flares designed for and operated with an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec). Excursions trigger corrective action, logging and reporting in semiannual report.
Monitoring Frequency	Once per day
Averaging Period	No averaging
Indicator #5	Inspection/Preventive Maintenance (I/PM)
Measurement Approach	Monthly inspection according to I/PM plan; maintenance performed as needed.

Criterion	Non-Assist Flares
Indicator Range	Excursions trigger corrective action, logging and reporting in semi-annual report.
Monitoring Frequency	Monthly inspection in accordance with I/PM plan.
Averaging Period	No averaging

10. 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)]

11. The permittee shall maintain records of operations as listed below. These records shall be retained on-site or at a local field office for a period of at least five years following dates of recording. [OAC 252:100-43]

- (a) Operation and maintenance (O&M) records for the “grandfathered” engines.
- (b) Operating hours for each engine if operating less than 220 hours per quarter and not tested.
- (c) For the fuel(s) burned, the appropriate document(s) as described in Specific Condition 2.
- (d) Facility oil/condensate throughputs (monthly and 12-month rolling total).
- (e) Volume of gases routed to the flare (monthly and 12-month rolling total).
- (f) Records of pilot flame(s) outages consisting of the time and duration of all periods during which the pilot flame is/are absent.
- (g) Records as required under NESHAP, 40 CFR Part 63, Subpart ZZZZ.

12. This permit supersedes all previous Air Quality operating permits for this facility, which are now cancelled. [OAC 252:100-8-6]

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

SECTION I. DUTY TO COMPLY

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

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

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

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

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

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

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

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

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

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

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

B. Records of required monitoring shall include:

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

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

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

[OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions.

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

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

[OAC 252:100-43]

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

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

G. Any owner or operator subject to the provisions of New Source Performance Standards ("NSPS") under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants

(“NESHAPs”) under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

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

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

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer’s instructions and in accordance with a protocol meeting the requirements of the “AQD Portable Analyzer Guidance” document or an equivalent method approved by Air Quality. [OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

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

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

SECTION IV. COMPLIANCE CERTIFICATIONS

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

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

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source. [OAC 252:100-8-6(c)(5)(C)(i)-(v)]

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

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

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

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

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

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit. [OAC 252:100-8-6(d)(1)]

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

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

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

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

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

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

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

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

SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.

[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued.

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

SECTION XI. DUTY TO PROVIDE INFORMATION

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

[OAC 252:100-8-6(a)(7)(E)]

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

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances:

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

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

[OAC 100-8-7.3(d)]

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

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

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited.

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

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

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

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

SECTION XIV. EMERGENCIES

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

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

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance.

[OAC 252:100-8-6(a)(3)(C)(iii)(II)]

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

[OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that:

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

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

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.

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

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.

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

SECTION XV. RISK MANAGEMENT PLAN

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

SECTION XVI. INSIGNIFICANT ACTIVITIES

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

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

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

SECTION XVII. TRIVIAL ACTIVITIES

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

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

SECTION XVIII. OPERATIONAL FLEXIBILITY

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

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

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

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or

condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

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

- (1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
- (2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBtu/hr or less shall exceed 0.6 lb/MMBtu. [OAC 252:100-19]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
 - (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
 - (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
 - (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
 - (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.
- (4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBtu. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

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

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

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

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

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

SECTION XXI. TITLE V APPROVAL LANGUAGE

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

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
- (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
- (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
- (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
- (6) The DEQ complies with 40 C.F.R. § 70.8(d).
- (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
- (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
- (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).
- (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

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

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [OAC 252:100-43-6]



PART 70 PERMIT

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

Permit No. 2016-0323-TV3

XTO Energy, Inc.,

having complied with the requirements of the law, is hereby granted permission to operate their Hewitt Unit Waterflood Station in Section 21, Township 4S, Range 2W, near Wilson, Carter County, Oklahoma, subject to the Standard Conditions dated June 21, 2016, and Specific Conditions, both of which are attached.

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

Kendal Stegmann, Division Director

Date



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Attn: Mr. John McMichael, Environmental Engineer
22777 Springwoods Village Pkwy
Spring, TX 77389

RE: Operating Permit **No. 2016-0323-TV3**
Hewitt Unit Waterflood Station
Facility ID: 532
Section 21, Township 4S, Range 2W, Carter County, Oklahoma

Dear Mr. McMichael:

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 iftekhar.hossain@deq.ok.gov or at (405) 702-4100.

Sincerely,

A handwritten signature in black ink that reads 'Phillip Fielder'. The signature is written in a cursive style with a large initial 'P'.

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

Enclosures





SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor





DRAFT/PROPOSED

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Attn: Mr. John McMichael, Environmental Engineer
22777 Springwoods Village Pkwy
Spring, TX 77389

RE: Operating Permit **No. 2016-0323-TVR3**
Hewitt Unit Waterflood Station
Facility ID: 532
Section 21, Township 4S, Range 2W, Carter County, Oklahoma

Dear Mr. McMichael:

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

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

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact the permit writer at lftekhar.hossain@deq.ok.gov or me at (405) 702-4100.

Sincerely,

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

Enclosures





SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Texas Commission on Environmental Quality
Operating Permits Divisions (MC 163)
P. O. Box 13087
Austin, Texas 78711-3087

RE: Operating Permit **No. 2016-0323-TVR3**
Hewitt Unit Waterflood Station
Facility ID: 532
Section 21, Township 4S, Range 2W, Carter County, Oklahoma
Permit Writer: Iftekhar Hossain

Dear Sir / Madame:

The subject facility has requested a Title V operating permit under 40 CFR Part 70. Air Quality Division has completed the initial review of the application and prepared a draft permit for public review. Since this facility is within 50 miles of the **Oklahoma-Texas** border, a copy of the proposed permit will be provided to you upon request. Information on all permit and a copy of this draft permit are available for review by the public in the Air Quality Section of DEQ Web Page: <http://www.deq.ok.gov>.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me or contact the permit writer at iftekhar.hossain@deq.ok.gov or at (405) 702-4100.

Sincerely,

A handwritten signature in black ink that reads "Phillip Fielder". The signature is written in a cursive, slightly slanted style.

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



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 a public meeting is requested by either the applicant or the public, 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;
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: ...xx-xxx-x...), which may be reviewed 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: <http://www.deq.state.ok.us/>

This draft permit would authorize the facility to emit the following regulated pollutants (list each pollutant and amounts in tons per year (TPY)).

This public notice shall include notice to the public that this permit is subject to Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 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.

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/CSD staff.

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