

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

MEMORANDUM

June 13, 2022

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

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

THROUGH: Junru Wang, E.I., Existing Source Permits Section

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

SUBJECT: Evaluation of Permit No. **2021-0442-O**
HPH Oklahoma Gathering, LLC
Wildlife Compressor Station (SIC 1311, NAICS 211130)
Facility ID No. 524
Latitude: 35.02680°N, Longitude: 95.41438°W
Section 4, Township 6N, Range 18E; Latimer County, Oklahoma
Directions: From Quinton, go west 7 miles on Highway 31, south 2.5 miles
at James Collins Wildlife Management Area sign, east 2 miles, south 2
miles on Iron Post Mountain Road. The road turns north, go east 0.25 of a
mile to the facility.

SECTION I. INTRODUCTION

HPH Oklahoma Gathering, LLC (HPH Oklahoma or applicant) has applied for an individual minor source operating permit for their Wildlife Compressor Station. This facility is currently operating under individual minor source operating Permit No. 92-001-O (M-3), issued on August 25, 2005. The facility submitted an NOI to Construct under the General Permit for Oil and Gas Facilities (GP-OGF) on September 24, 2021, which was assigned as Authorization No. 2021-0442-NOI. The NOI authorized two engine replacements, updated federal rule requirements for the facility, and updated emissions estimates from various processes at the facility.

Based on data provided by HPH Oklahoma, the facility has controlled emissions of 92.57 TPY NO_x, 73.19 TPY CO, 47.55 TPY VOC, and 6.99 TPY HAPs, the most significant HAP being 3.59 TPY of formaldehyde. Emissions from the facility are below the major source thresholds. This facility, therefore, qualifies for a “synthetic minor” permit because the controlled emissions of each of the criteria pollutants are below the major source threshold of 100 TPY and the HAP emissions are below the 10 TPY threshold for a single HAP and below the 25 TPY threshold for any combination of HAPs.

The applicant has requested to be permitted as a synthetic-minor facility with emissions limitations on NO_x, CO, and VOC. On issuance, this permit will be a FESOP.

SECTION II. PROCESS DESCRIPTION

The Wildlife Compressor Station is a natural gas gathering compressor station responsible for the compression of natural gas into a pipeline. Natural gas dehydration and storage of produced water/condensate (negligible) occurs on-site, as well. Natural gas is transported to the facility via a pipeline gathering system. The gas stream enters the facility through inlet separators, where produced water/condensate is removed from the inlet stream. The gas stream is then compressed by one 1,340-hp Caterpillar G3516 TALE and three 1,478-hp Waukesha L7042G natural gas-fired engine-driven compressors equipped with oxidation catalysts. After the inlet gas passes through the compressors, the gas enters the glycol dehydrator before exiting the facility for transmission via pipeline.

SECTION III. EQUIPMENT

The following is a list of current equipment.

Facility-Wide Emission Units

ID#	Equipment Type	Size / Rating	Serial #	Mfg. Date
C-338	Caterpillar G3516 TALE ⁽¹⁾	1,340-hp	WPW00942	5/16/2007
C-1071	Waukesha 7042GSI ⁽²⁾	1,478-hp	385956	6/1984
C-1075	Waukesha 7042GL ⁽¹⁾	1,478-hp	C-10643/2	9/1992
C-1076	Waukesha 7042GSI ⁽²⁾	1,478-hp	C-12237/2	12/9/1996
DEHY1	Glycol Dehydrator	40-MMSCFD	-	1994
HEAT1	Glycol Dehydrator Reboiler	0.85-MMBTUH	-	1994
TANK1	Produced Water Tank	400-bbl	-	1994
TANK2	Produced Water Tank	400-bbl	-	1994
LOAD1	Truck Loading Operations	300,000-gal/yr	-	-
FUG	Process Piping Fugitives	varies	-	1994

⁽¹⁾ – Equipped with an oxidation catalyst.

⁽²⁾ – Equipped with a catalytic converter.

SECTION IV. FACILITY-SPECIFIC OR REPRESENTATIVE SAMPLE

TANKS

The facility has provided a facility-specific sample that is less than three years old for each piece of equipment whose emissions are based on a sample.

DEHYDRATION UNIT

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

FUGITIVES

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

SECTION V. EMISSIONS

Unless otherwise stated emissions are based on 8,760 hours per year of operation with combustion sources firing field-grade natural gas with a maximum sulfur content of 162 ppmv.

ENGINES

Emissions of NO_x, CO, VOC, and H₂CO from the engines are calculated based on manufacturer data and catalyst control efficiencies. Since the manufacturer supplied emission factor for VOC does not include H₂CO, H₂CO is added to the VOC emissions shown in the facility-wide emissions summary to represent total VOC for the engines. Potential H₂CO from the engines is 8.93 TPY.

Uncontrolled Engine Emission Factors

ID#	NO_x	CO	VOC	H₂CO
	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr
C-338	1.50	1.90	0.46	0.26
C-1071	13.0	9.0	0.30	0.05
C-1075	1.50	2.65	1.00	0.29
C-1076	13.0	9.0	0.30	0.05

Controlled Engine Emission Factors and Control Percentage

ID#	NO_x		CO		VOC		H₂CO	
	g/hp-hr	% control	g/hp-hr	% control	g/hp-hr	% control	g/hp-hr	% control
C-338	1.50	0	1.00	47	1.00	0	0.14	46
C-1071	1.70	87	1.70	81	0.44	0	0.018	64
C-1075	1.70	0	0.80	70	0.44	56	0.088	70
C-1076	1.70	87	1.70	81	0.44	0	0.018	64

Engine Emissions

ID#	NO_x		CO		VOC		H₂CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
C-338	4.43	19.41	2.95	12.94	2.95	12.94	0.41	1.81
C-1071	5.54	24.26	5.54	24.26	1.43	6.28	0.06	0.26
C-1075	5.54	24.26	2.61	11.42	1.43	6.28	0.29	1.26
C-1076	5.54	24.26	5.54	24.26	1.43	6.28	0.06	0.26

DEHYDRATION UNIT

Emission estimates from the TEG dehydration unit's regenerator vent are based on the Gas Research Institute (GRI) program GLYCalc Version 4.0, an inlet gas analysis and continuous operation.

Dehydration Unit

Parameter	Data
Type of Glycol	TEG
Dry Gas Flow Rate, MMSCFD	40
Glycol Pump Type	Gas
Lean Glycol Pump Design Capacity, gpm	7.5
Lean Glycol Recirculation Rate Input, gpm	7.5
Total Emissions, TPY	
VOC	10.74
Benzene	0
Toluene	0.90
Ethylbenzene	0
Xylene	1.77
n-Hexane	0.73
Total HAP	3.40

REBOILER

Emissions are based on AP-42 (7/98), Section 1.4, a gas heating value of 1,020 BTU/SCF, and the rating shown in the following table.

Reboiler Emission Factors

ID#	NO _x	CO	VOC
	lb/MMSCF	lb/MMSCF	lb/MMSCF
HEAT1	100	84	5.5

Reboiler Emissions

ID#	Rating	NO _x		CO		VOC	
	MMBTUH	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
HEAT1	0.85	0.09	0.37	0.07	0.31	<0.01	0.02

TANKS

Working and breathing emissions from the produced water tanks were calculated using AP-42 (6/20), Section 7.1 methods, a facility specific liquid analysis, and the listed throughput. Flash emissions from the produced water tanks were calculated using the Vasquez-Beggs calculation method.

Tank Emissions (Combined)

Parameter	TANK 1 and TANK2 Data
Throughput, gal/yr	300,000
Liquid in Tank(s)	Produced Water
Working/Breathing Method/Tool	AP-42 (6/20), Section 7.1

Parameter	TANK 1 and TANK2 Data
Flash Calculation Method/Tool	Vasquez-Beggs
Working/Breathing Emissions, TPY	1.64
Flashing Emissions, TPY	0.17
Total VOC Emissions, TPY	1.81

LOADING

Emissions from loading produced water into tank trucks were estimated using AP-42 (6/08), Section 5.2, Equation 1, and the parameters listed in the table below. The vapor pressure, molecular weight, and temperature listed are from AP-42 (11/19), Section 7.1 defaults for Tulsa, Oklahoma and Motor Gasoline (RVP 7).

Loading Parameters and Emissions

Parameter	LOAD1
Liquids Loaded	Produced Water
Throughput, gal/yr	300,000
Saturation Factor	0.6
Temp., °F	60
TVP, psia	8.5
MW, lb/lbmol	60
VOC, wt. %	1
Emission Factor, lb/10 ³ gal ⁽¹⁾	0.0733
VOC, TPY	0.01

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

FUGITIVES

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

Fugitive Emissions

ID#	VOC, TPY
FUG	3.19

FACILITY-WIDE EMISSIONS

ID#	Description	NOx	CO	VOC	HAPs
		TPY	TPY	TPY	TPY
C-338	1,340-hp Caterpillar G3516 TALE ^(1,3)	19.41	12.94	12.94	1.81
C-1071	1,478-hp Waukesha 7042GSI ^(2,3)	24.26	24.26	6.28	0.26
C-1075	1,478-hp Waukesha 7042GL ^(1,3)	24.26	11.42	6.28	1.26
C-1076	1,478-hp Waukesha 7042GSI ^(2,3)	24.26	24.26	6.28	0.26
DEHY1	40-MMSCFD Dehydration Unit	-	-	10.74	3.40
HEAT1	0.85-MMBTUH Glycol Reboiler	0.37	0.31	0.02	-
TANK1	400-bbl Produced Water Tank	-	-	1.81	-
TANK2	400-bbl Produced Water Tank				
LOAD1	Truck Loading Operations	-	-	0.01	-
FUG	Fugitive Emissions	-	-	3.19	-
92-001-O (M-3) Emissions		97.41	45.99	94.63	13.91
Current Total Emissions		92.56	73.19	47.55	6.99
Change in Emissions		(4.85)	27.20	(47.08)	(6.92)

⁽¹⁾ – Equipped with an oxidation catalyst.

⁽²⁾ – Equipped with a catalytic converter.

⁽³⁾ – VOC emissions include formaldehyde.

Since emissions of all criteria pollutants are less than 100 TPY, potential emissions of any single HAP are less than 10 TPY, and potential emissions of total HAP are less than 25 TPY, the facility is not a major source and is eligible for coverage under the GP-OGF.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

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

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

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in “attainment” of these standards.

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

OAC 252:100-7 (Permits for Minor Facilities) [Applicable]
 This facility qualifies as a “synthetic minor” facility since total emissions of each criteria pollutant with controls do not exceed 100 TPY and HAP emissions do not exceed the 10/25 TPY threshold. As such, major source BACT consideration and public review are not required.

OAC 252:100-9 (Excess Emission and Malfunction Reporting Requirements) [Applicable]
 Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, and 63.

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

OAC 252:100-19 (Particulate Matter (PM)) [Applicable]
Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. Fuel-burning equipment is defined in OAC 252:100-19 as any internal combustion engine or gas turbine, or other combustion device used to convert the combustion of fuel into usable energy. Thus, the engines and reboiler are subject to the requirements of this subchapter. OAC 252:100, Appendix C specifies a PM emission limitation of 0.60 lbs/MMBTU for all equipment at this facility with a heat input rating of 10-MMBTUH or less. OAC 252:100, Appendix C specifies a PM emission limitation for all equipment at this facility with a heat input rating of greater than 10-MMBTUH, but less than 1,000-MMBTUH based on the following calculation: $E = 1.0428080X^{-0.238561}$, where E is the allowable emission rate and X is the maximum heat input. Table 3.2-2 of AP-42 (7/00) lists the total PM emissions from 4-stroke, lean-burn, natural gas-fired engines to be 0.01 lbs/MMBTU. This permit requires the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

Point	Equipment	Maximum Heat Input (MMBTUH)	Emissions (lbs/MMBTU)	
			Appx. C	Potential
C-338	1,340-hp Caterpillar G3516	10.11	0.60	0.01
C-1071 & C-1076	1,478-hp Waukesha 7042GSI	11.79	0.58	0.01
C-1075	1,478-hp Waukesha 7042GL	11.01	0.59	0.01
HEAT1	Glycol Reboiler	0.85	0.60	<0.01

Section 19-12 limits emissions of particulate matter from industrial processes and direct-fired fuel-burning equipment based on their process weight rates. Since there are no significant particulate

emissions from the nonfuel-burning processes at the facility compliance with the standard is assured without any special monitoring provisions.

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

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

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 2 limits the ambient air concentration of H₂S emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 µg/m³. Based on modeling conducted for the general permit for oil and gas facilities, the ambient impacts of H₂S from oil and gas facilities combusting natural gas with a maximum H₂S content of 162 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 gas-fired 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 a fuel sulfur content of 1,203 ppmv. Gas produced from oil and gas wells having 162 ppmv or less total sulfur will ensure compliance with Subchapter 31. The permit requires the use of pipeline-grade natural gas or field gas with a maximum sulfur content of 162 ppmv for all fuel-burning equipment to ensure compliance with Subchapter 31.

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

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
This facility has none of the affected sources: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing VOC with a vapor pressure above 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The vapor pressures of the water tank and the lube oil tank are less than 1.5 psia.

Part 3 requires loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility does not have the physical equipment (loading arm and pump) to conduct this type of loading. Therefore, this requirement is not applicable.

Part 5 limits the organic solvent content of coating of parts and products. Any painting operation will involve maintenance coatings of buildings and equipment and emit less than 100 pounds per day of VOCs and so is exempt.

Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location is subject to this requirement.

Part 7 requires effluent water separators, which receive water containing more than 200 gallons per day of any VOC, to be equipped with vapor control devices. There is no water effluent separator at this location.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

SECTION VII. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60

[Subparts JJJJ and OOOOa Applicable]

Subparts K, Ka, VOL Storage Vessels. All storage tanks at this facility are below the de minimis of 40,000 gallons for these subparts, so they do not apply to this facility.

Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813 gallons capacity and built after July 23, 1984. The tanks at this site are below this threshold; therefore, this subpart is not applicable.

Subpart GG, Stationary Gas Turbines. There are no turbines at this facility.

Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI). This facility is not a SOCMI plant.

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

Subpart LLL, Onshore Natural Gas Processing: SO₂ Emissions. There is no natural gas sweetening operation at this site.

NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Combustion Engines. This subpart promulgates emission standards for all new CI engines ordered after July 11, 2005, and all CI engines modified or reconstructed after July 11, 2005.

There are no CI engines at this facility, therefore this subpart does not apply.

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

The Waukesha engines at the facility (C-1071, C-1075, and C-1076) were manufactured prior to July 1, 2007, and have not undergone reconstruction or modification as defined in 40 CFR 60.14 and 60.15 since June 12, 2006, therefore the requirements of this subpart do not apply. The Caterpillar engine (C-338) was constructed after June 12, 2006, and manufactured prior to July 1, 2008, and is therefore subject to this subpart as a gap engine. However, there are currently no applicable requirements under this subpart for gap engines.

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

- (a) Each gas well affected facility, which is a single natural gas well.
- (b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.
- (c) Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.
- (d) Each pneumatic controller affected facility, which is:
 - (1) For the oil production segment (between the wellhead and the point of custody transfer to an oil pipeline): a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
 - (2) For the natural gas production segment (between the wellhead and the point of custody

- transfer to the natural gas transmission and storage segment and not including natural gas processing plants): a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 SCFH.
- (3) For natural gas processing plants: a single continuous bleed natural gas-driven pneumatic controller.
 - (e) Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment, that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water and has the potential for VOC emissions equal to or greater than 6 TPY.
 - (f) The group of all equipment, except compressors, within a process unit located at an onshore natural gas processing plant is an affected facility.
 - (g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.

There are no gas wells at this facility, there are no natural gas-driven pneumatic controllers operating at a natural gas bleed rate greater than 6 SCFH at this facility, this facility is not a gas plant, and there are no sweetening units at this facility. The compressors and storage tanks at the facility were manufactured prior to August 23, 2011, therefore this facility is not subject to this subpart.

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

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

- (g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.
- (h) Each pneumatic pump affected facility:
 - (1) For natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven diaphragm pump.
 - (2) For well sites, each pneumatic pump affected facility, which is a single natural gas-driven diaphragm pump.
- (i) The collection of fugitive emissions components at a well site, as defined in §60.5430a, is an affected facility, except as provided in § 60.5365a(i)(2).
- (j) The collection of fugitive emissions components at a compressor station, as defined in § 60.5430a, is an affected facility.

There are no gas wells at this facility, there are no natural gas-driven pneumatic controllers operating at a natural gas bleed rate greater than 6 SCFH at this facility, this facility is not a gas plant, and there are no sweetening units at this facility. The storage tanks at the facility commenced construction before September 18, 2015, and are not subject to NSPS Subpart OOOOa. At a compressor station, modification occurs when: (1) An additional compressor is installed; or (2) One or more compressors at a compressor station is replaced by one or more compressors of greater total horsepower than the compressor(s) being replaced [40 CFR 5365a(j)]. One replacement engine has increased horsepower (hp). Therefore, NSPS Subpart OOOOa is applicable.

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) concerns only process streams, which contain more than 10% benzene by weight. Analysis of Oklahoma natural gas indicates maximum benzene content of less than 1%.

NESHAP, 40 CFR Part 63

[Subparts HH and ZZZZ Applicable]

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

Subpart HHH, affects Natural Gas Transmission and Storage Facilities. Since this facility is a production facility, this subpart does not apply.

Subpart YYYY, Stationary Combustion Turbines. This subpart affects stationary gas turbines located at a major source of HAP emissions. There are no combustion turbines at this facility.

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

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

Engines C-1071, C-1075, and C-1076 meet the definition of “existing”, remote, four-stroke lean-burn or rich-burn engines greater than 500-hp located at an area source of HAPs and are required to comply with the maintenance practices of Table 2d.

Engine C-338 was manufactured after June 12, 2006, and shall comply with this subpart by demonstrating compliance with NSPS Subpart JJJJ. However, there are no applicable requirements for C-338 under NSPS Subpart JJJJ.

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

Subpart JJJJJ, Industrial, Commercial, and Institutional Boilers. This subpart affects new and existing boilers located at area sources of HAP, except for gas-fired boilers. Boiler means an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam or hot water. The glycol reboiler is gas-fired.

SECTION VIII. COMPLIANCE

PREVIOUS PERMITS

The facility is currently operating under an individual minor source operating permit, Permit No. 92-001-O (M-3), issued on August 25, 2005, and GP-OGF Authorization No. 2021-0442-NOI, received and issued on September 24, 2021. On issuance of this Authorization to Operate (2021-0442-O), all previous Air Quality authorizations and/or permits will be superseded and cancelled.

FEE PAID

A minor source operating permit application fee of \$2,250 was paid. The applicant owed \$2,000 for the individual construction permit and \$750 for the individual operating permit. The applicant paid \$500 for an NOI to Construct (Authorization No. 2021-0442-NOI, received and issued on September 24, 2021) which left a balance of \$2,250, which was paid on March 8, 2022.

TIER CLASSIFICATION AND PUBLIC REVIEW

This application has been determined to be Tier I based on the request for a modification of a minor source operating permit that did not undergo the FESOP Enhanced NSR Process.

The draft permit will undergo public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA will have 30 days to comment on the draft permit. Permits available for public review and comment are found at this location: <https://www.deq.ok.gov/permits-for-public-review/>. Upon issuance this permit will be a FESOP.

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

COMPLIANCE AND ENFORCEMENT CASE

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

INSPECTION

No inspection was determined to be necessary for this facility.

PERFORMANCE TESTING

The most recent quarterly testing results for the engines have been provided. The results are shown in the following table and demonstrate compliance to permitted limits.

Engine Performance Testing

ID#	Test Date	Permit Limits (lb/hr)		Test Results (lb/hr)	
		NO _x	CO	NO _x	CO
C-338	Not yet tested	4.43	2.95	Not applicable	Not applicable
C-1071	Not yet tested	5.54	5.54	Not applicable	Not applicable
C-1075	1/11/2022	5.54	2.61	2.56	0.05
C-1076	12/14/2021	5.54	5.54	3.39	3.46

SECTION IX. SUMMARY

The facility was constructed and is operating as described in the permit application. There are no active Air Quality compliance or enforcement action concerning this facility. Ambient air quality standards are not threatened at this site. Issuance of the operating permit is recommended, contingent on public review.

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

**HPH Oklahoma Gathering, LLC
Wildlife Compressor Station**

FESOP No. 2021-0442-O

The permittee is authorized to operate in conformity with the specifications submitted to the Air Quality Division, on March 8, 2022. The Evaluation Memorandum dated June 13, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

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

FACILITY EMISSIONS

ID #	Emission Unit	NO _x		CO		VOC	
		Lb/hr	TPY	Lb/hr	TPY	Lb/hr	TPY
C-338	1,340-hp Caterpillar G3516 TALE ^(1,3)	4.43	19.41	2.95	12.94	2.95	12.94
C-1071	1,478-hp Waukesha 7042GSI ^(2,3)	5.54	24.26	5.54	24.26	1.43	6.28
C-1075	1,478-hp Waukesha 7042GL ^(1,3)	5.54	24.26	2.61	11.42	1.43	6.28
C-1076	1,478-hp Waukesha 7042GSI ^(2,3)	5.54	24.26	5.54	24.26	1.43	6.28
DEHY1	40 MMSCFD Glycol Dehydrator	--	--	--	--	--	10.74
HEAT1	0.85-MMBTUH Reboiler	--	0.37	--	0.31	--	0.02
TANK1	400-bbl Produced Water Tank	--	--	--	--	--	1.81
TANK2	400-bbl Produced Water Tank						
LOAD1	Truck Loading Operations	--	--	--	--	--	0.01

⁽¹⁾ – Equipped with an oxidation catalyst.

⁽²⁾ – Equipped with a catalytic converter.

⁽³⁾ – VOC emissions include formaldehyde.

2. The permittee shall be authorized to operate the facility continuously (24 hours per day, every day of the year).
3. Each engine at the facility shall have a permanent identification plate attached, which shows the make, model number, and serial number.
4. The fuel-burning equipment shall use commercial-grade natural gas or field gas with sulfur content no greater than 162 ppmv. Compliance can be shown by the following methods: for pipeline grade natural gas, a current gas company bill; for other gaseous fuel, a current lab analysis, stain-tube analysis, gas contract, tariff sheet, or other approved methods. Compliance shall be demonstrated at least once annually.
5. Facility-wide produced water throughput shall be no more than 300,000 gallons in any rolling 12-month period.

6. At least once per calendar quarter, the permittee shall conduct tests of NO_x and CO emissions in the exhaust gases from each engine in Specific Condition No. 1 when operating under representative conditions for that period. Testing is required for the engine if it runs for more than 220 hours during a calendar quarter. Engines shall be tested no sooner than 20 days after the last test. Testing shall be conducted using a portable analyzer in accordance with a protocol meeting the requirements of the “AQD Portable Analyzer Guidance” document or an equivalent method approved by Air Quality. When four consecutive quarterly tests show an engine/turbine to be in compliance with the emissions limitations shown in the permit, then the testing frequency may be reduced to semi-annual testing. Likewise, when the following two consecutive semi-annual tests show compliance, the testing frequency may be reduced to annual testing. Upon any showing of non-compliance with emissions limitations or testing that indicates that emissions are within 10% of the emission limitations, the testing frequency shall revert to quarterly. Any reduction in the testing frequency shall be noted in the next required compliance certification. Reduced engine testing does not apply to engines with catalytic converters and oxidation catalysts.
7. When periodic compliance testing shows engine exhaust emissions in excess of the lb/hr limits in Specific Condition Number 1, the permittee shall comply with the provisions of OAC 252:100-9 for excess emissions.
8. The permittee shall comply with all applicable requirements of the NSPS for Stationary Spark Ignition Internal Combustion Engines, Subpart JJJJ, for each affected engine including but not limited to the following:
 - a. 60.4230 Am I subject to this subpart?
 - b. 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
 - c. 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?
 - d. 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?
 - e. 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - f. 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
 - g. 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - h. 60.4246 What parts of the General Provisions apply to me?
9. The permittee shall comply with NSPS, Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015.
 - a. § 60.5360a What is the purpose of this subpart?
 - b. § 60.5365a Am I subject to this subpart?
 - c. § 60.5370a When must I comply with this subpart?

- d. § 60.5375a What GHG and VOC standards apply to well affected facilities?
- e. § 60.5380a What GHG and VOC standards apply to centrifugal compressor affected facilities?
- f. § 60.5385a What GHG and VOC standards apply to reciprocating compressor affected facilities?
- g. § 60.5390a What GHG and VOC standards apply to pneumatic controller affected facilities?
- h. § 60.5393a What GHG and VOC standards apply to pneumatic pump affected facilities?
- i. § 60.5395a What VOC standards apply to storage vessel affected facilities?
- j. § 60.5397a What fugitive emissions GHG and VOC standards apply to the affected facility which is the collection of fugitive emissions components at a well site and the affected facility which is the collection of fugitive emissions components at a compressor station?
- k. § 60.5398a What are the alternative means of emission limitations for GHG and VOC from well completions, reciprocating compressors, the collection of fugitive emissions components at a well site and the collection of fugitive emissions components at a compressor station?
- l. § 60.5400a What equipment leak GHG and VOC standards apply to affected facilities at an onshore natural gas processing plant?
- m. § 60.5401a What are the exceptions to the equipment leak GHG and VOC standards for affected facilities at onshore natural gas processing plants?
- n. § 60.5402a What are the alternative means of emission limitations for GHG and VOC equipment leaks from onshore natural gas processing plants?
- o. § 60.5405a What standards apply to sweetening unit affected facilities at onshore natural gas processing plants?
- p. § 60.5406a What test methods and procedures must I use for my sweetening unit affected facilities at onshore natural gas processing plants?
- q. § 60.5407a What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities at onshore natural gas processing plants?
- r. § 60.5408a What is an optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure?
- s. § 60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
- t. § 60.5411a What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing emissions from centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels?
- u. § 60.5412a What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my centrifugal compressor, and storage vessel affected facilities?

- v. § 60.5413a What are the performance testing procedures for control devices used to demonstrate compliance at my centrifugal compressor and storage vessel affected facilities?
 - w. § 60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, and affected facilities at onshore natural gas processing plants?
 - x. § 60.5416a What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my centrifugal compressor, reciprocating compressor, pneumatic pump and storage vessel affected facilities?
 - y. § 60.5417a What are the continuous control device monitoring requirements for my centrifugal compressor and storage vessel affected facilities?
 - z. § 60.5420a What are my notification, reporting, and recordkeeping requirements?
 - aa. § 60.5421a What are my additional recordkeeping requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
 - bb. § 60.5422a What are my additional reporting requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
 - cc. § 60.5423a What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities at onshore natural gas processing plants?
 - dd. § 60.5425a What parts of the General Provisions apply to me?
 - ee. § 60.5430a What definitions apply to this subpart?
 - ff. § 60.5432a How do I determine whether a well is a low pressure well using the low pressure well equation?
10. The permittee shall comply with all applicable requirements of the NESHAP for Oil and Natural Gas Production, Subpart HH, for each affected dehydration unit including but not limited to the following:
- a. An owner or operator of a glycol dehydration unit that meets the exemption criteria of §63.764(e)(1) shall maintain the records specified in §63.774(d)(1) for that glycol dehydration unit.
11. The permittee shall comply with all applicable requirements of the NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE), Subpart ZZZZ, for each affected engine, including but not limited to:
- a. § 63.6580 What is the purpose of subpart ZZZZ?
 - b. § 63.6585 Am I subject to this subpart?
 - c. § 63.6590 What parts of my plant does this subpart cover?
 - d. § 63.6595 When do I have to comply with this subpart?
 - e. § 63.6600 What emission limitations and operating limitations must I meet?
 - f. § 63.6605 What are my general requirements for complying with this subpart?
 - g. § 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations?

- h. § 63.6615 When must I conduct subsequent performance tests?
 - i. § 63.6620 What performance tests and other procedures must I use?
 - j. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
 - k. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
 - l. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
 - m. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
 - n. § 63.6645 What notifications must I submit and when?
 - o. § 63.6650 What reports must I submit and when?
 - p. § 63.6655 What records must I keep?
 - q. § 63.6660 In what form and how long must I keep my records?
 - r. § 63.6665 What parts of the General Provisions apply to me?
 - s. § 63.6670 Who implements and enforces this subpart?
 - t. § 63.6675 What definitions apply to this subpart?
 - u. § 63.6580 What is the purpose of subpart ZZZZ?
 - v. § 63.6585 Am I subject to this subpart?
 - w. § 63.6590 What parts of my plant does this subpart cover?
 - x. § 63.6595 When do I have to comply with this subpart?
 - y. § 63.6600 What emission limitations and operating limitations must I meet?
 - z. § 63.6605 What are my general requirements for complying with this subpart?
 - aa. § 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations?
 - bb. § 63.6615 When must I conduct subsequent performance tests?
 - cc. § 63.6620 What performance tests and other procedures must I use?
 - dd. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
 - ee. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
 - ff. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
 - gg. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
 - hh. § 63.6645 What notifications must I submit and when?
 - ii. § 63.6650 What reports must I submit and when?
 - jj. § 63.6655 What records must I keep?
 - kk. § 63.6660 In what form and how long must I keep my records?
 - ll. § 63.6665 What parts of the General Provisions apply to me?
 - mm. § 63.6670 Who implements and enforces this subpart?
 - nn. § 63.6675 What definitions apply to this subpart?
12. Engines C-338 and C-1075 shall each be set to operate with the exhaust gases passing through a functional and properly operating oxidation catalyst. Engines C-1071 and C-1076 shall each be

set to operate with the exhaust gases passing through a functional and properly operating catalytic converter.

13. The glycol dehydration unit shall be installed and operated as follows:

- a. Maximum throughput of natural gas (monthly average) shall be no greater than 40-MMSCFD.
- b. Glycol circulation rate shall be 7.5 gallons/minute (GPM) or less.
- c. The permittee shall monitor and record the lean glycol circulation rate at least once a month. When three consecutive months show no exceedance of the limit, the frequency may be reduced to quarterly. Upon any showing of non-compliance, the monitoring and recordkeeping frequency shall revert to monthly. With each inspection the lean glycol circulation rate shall be recorded as follows:

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

The requirement to monitor and record glycol circulation rate shall not apply if the pump capacity does not exceed 7.5 GPM. If so, the manufacturer’s rating or the performance data for the model of pump that verifies the maximum pump rate at any operational conditions shall be maintained and available for inspection.

14. The permittee shall maintain records of operations as listed below. These records shall be maintained on-site or at a local field office for at least five years after the date of recording and shall be provided to regulatory personnel upon request.

- a. Periodic emission testing for NOx and CO emissions for the engines.
- b. Operating hours for the engines if less than 220 hours per quarter and not tested.
- c. O&M records for any engine not tested in each 6 month period.
- d. For the fuel(s) burned, the appropriate document(s) as described in Specific Condition No. 4.
- e. Glycol pump circulation rate (monthly / quarterly) if applicable, based on Specific Condition No. 13(c).
- f. Produced water throughput (monthly and 12-month rolling total).
- g. Records required by NSPS Subparts JJJJ and OOOOa.
- h. Records required by NESHAP Subparts HH and ZZZZ.
- i. Records of natural gas throughput, MMSCFD (monthly average).

15. Upon issuance, FESOP No. 2021-0442-O replaces and supersedes all previous Air Quality authorizations and/or operating permits issued to this facility, which are now cancelled.

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

- A. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ) in accordance with and under the authority of the Oklahoma Clean Air Act. The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. This specifically includes compliance with the rules of the other Divisions of DEQ: Land Protection Division and Water Quality Division.
- B. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-7-15(g)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-7-15(f)]
- C. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-7-18(a)]
- D. Unless specified otherwise, the term of an operating permit shall be unlimited.
- E. Notification to the Air Quality Division of DEQ of the sale or transfer of ownership of this facility is required and shall be made in writing by the transferor within 30 days after such date. A new permit is not required. [OAC 252:100-7-2(f)]
- F. The following limitations apply to the facility unless covered in the Specific Conditions:
1. No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility. [OAC 252:100-3]
 2. All facilities that emit air contaminants are required to file an emission inventory and pay annual operating fees based on the inventory. Instructions are available on the Air Quality section of the DEQ web page. www.deq.ok.gov [OAC 252:100-5]
 3. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-9]
 4. Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning subchapter. [OAC 252:100-13]
 5. No particulate emissions from new fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lbs/MMBTU. [OAC 252:100-19]
 6. No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. [OAC 252:100-25]
 7. No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent

- properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
8. No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lbs/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
 9. Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with an organic material vapor-recovery system. [OAC 252:100-37-15(b)]
 10. All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]
- G. Any owner or operator subject to provisions of NSPS shall provide written notification as follows: [40 CFR 60.7 (a)]
1. A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
 2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
 3. A notification of the actual date of initial start-up of an affected facility postmarked within 15 days after such date.
 4. If a continuous emission monitoring system is included in the construction, a notification of the date upon which the test demonstrating the system performance will commence, along with a pretest plan, postmarked no less than 30 days prior to such a date.
- H. Any owner or operator subject to provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment. [40 CFR 60.7 (b)]
- I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by this subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least five years following the date of such measurements, maintenance, and records. [40 CFR 60.7 (f)]
- J. Any owner or operator subject to the provisions of NSPS shall conduct performance test(s) and furnish to AQD a written report of the results of such test(s). Test(s) shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up. [40 CFR 60.8]



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

FESOP No. 2021-0442-O

HPH Oklahoma Gathering, LLC,

having complied with the requirements of the law, is hereby granted permission to operate the Wildlife Compressor Station located in Section 4, Township 6N, Range 18E, near Quinton, Latimer County, Oklahoma, subject to Standard Conditions dated February 13, 2020, and Specific Conditions, both attached.

DRAFT

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

Issuance Date

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

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

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

HPH Oklahoma Gathering, LLC
Attn.: Mr. Howdy McCracken
1001 Louisiana Street, Suite 1000
Houston, TX 77002

Re: Evaluation of Individual Minor Source Operating Permit No. **2021-0442-O**
HPH Oklahoma Gathering, LLC
Wildlife Compressor Station (Facility ID: 524)
Section 4, Township 6N, Range 18E; Latimer County, Oklahoma

Dear Mr. McCracken:

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

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

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact the permit writer at kyle.walker@deq.ok.gov, or at (405) 702-4193.

Sincerely,

DRAFT

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

Enclosures

June 13, 2022

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

Re: Permit Application No. 2021-0442-O
HPH Oklahoma Gathering, LLC, Wildlife Compressor Station (FAC ID 524)
Latimer County
Date Received: March 8, 2022

Dear Chief Batton:

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

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

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

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

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

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

Sincerely,



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