

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

MEMORANDUM

March 10, 2022

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

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

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

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

FROM: Anne Smith, P.E., New Source Permits Section

SUBJECT: Evaluation of General Permit Application No. **2017-1636-O**
Authorization to Operate under the General Permit for Oil and Gas Facilities (GP-OGF)
Citizen Energy III, LLC
Collins CTB (SIC 1311, NAICS 211120)
Facility ID No. 18195
Latitude: 35.26102°N, Longitude: 97.70563°W
Section 14, Township 9N, Range 5W, Grady County, Oklahoma
Directions: From the intersection of OK-4N and I-44W near Bridge Creek, OK, travel north 2.9 miles on OK-4, turn right onto CR 1210/Tecumseh Rd. and travel east 1 mile. The facility is on the southeast corner of the intersection of Tecumseh Rd. and County Street 2970/S. Sara Rd.

SECTION I. INTRODUCTION

Citizen Energy III, LLC (Citizen or applicant) has applied for an Authorization to Operate under the GP-OGF for their Collins CTB facility, previously owned by Roan Resources, LLC (Roan). A request for transfer of ownership was submitted by Citizen on January 8, 2020. This facility is currently operating under the GP-OGF NOI to Construct Authorization No. 2017-1636-NOI, received and issued on September 21, 2017. The applicant has requested to incorporate their Notice of Modification (NOM) submitted on May 21, 2020, into the application for Authorization No. 2017-1636-O, which includes the replacement of two (2) compressor engines and removal of two (2) oil storage tanks.

Global Enforcement Cases 9235 and 9672 were opened in response to a self-disclosure submitted by Roan on June 15, 2018, and May 6, 2019, respectively. The details of this case are discussed in SECTION VIII (Compliance).

The facility has demonstrated it is eligible for coverage based on the criteria listed in Part 1, Section III of the GP-OGF. This is a “synthetic minor” facility, since all authorizations under the GP-OGF are covered as “synthetic minor” facilities.

SECTION II. PROCESS DESCRIPTION

The facility is an oil and gas exploration and production station, responsible for the production of oil and natural gas. Storage of condensate and produced water occurs on-site as well. The facility is located at the wellheads (Collins 10-3-9-5 1XH, Collins 11-2-9-5 1XH, Collins 14-9-5 1H, and Collins 15-9-5 1H).

The well stream enters the facility through the free water knockout where water is initially removed from the inlet streams and is sent to the produced water storage tanks. The inlet streams are then sent to the separators, where the condensate and water are removed, and transported to the heater treaters. From the heater treaters, the liquid is sent to the storage tanks where the condensate and produced water are stored prior to being unloaded by trucks. The storage tanks are controlled by combustors. The well stream is compressed by natural gas-fired compressor engines prior to exiting the facility for transmission via pipeline. The engines are equipped with non-selective catalytic reduction.

SECTION III. EQUIPMENT

The following is a list of current equipment.

ID#	Equipment Type	Size / Rating	Serial #	Manufacture Date
ENG-1	Caterpillar G3406NA ⁽¹⁾	215-hp	4FD04158	1/4/2012
ENG-2	Caterpillar G3406NA ⁽¹⁾	215-hp	4FD04570	6/20/2013
HT-1	Heater Treater	0.50-MMBTUH	-	-
HT-2	Heater Treater	0.50-MMBTUH	-	-
HT-3	Heater Treater	0.50-MMBTUH	-	-
HT-4	Heater Treater	0.50-MMBTUH	-	-
T-1	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-2	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-3	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-4	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-5	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-6	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-7	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-8	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-9	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-10	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-11	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-12	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015

ID#	Equipment Type	Size / Rating	Serial #	Manufacture Date
T-13	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
T-14	Condensate Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-1	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-2	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-3	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-4	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-5	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-6	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-7	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
PW-8	Produced Water Storage Tank ⁽²⁾	400-bbl	-	Post 9/18/2015
F-1	Flare	11.7-MMBTUH ⁽³⁾	-	-
F-2	Flare	11.7-MMBTUH ⁽³⁾	-	-
F-3	Flare	11.7-MMBTUH ⁽³⁾	-	-
LOAD-1	Condensate Truck Loading	-	-	-
LOAD-2	Produced Water Truck Loading	-	-	-
FUG-1	Fugitive Emissions	-	-	-

⁽¹⁾ – Equipped with NSCR.

⁽²⁾ – Emissions are controlled by the flares.

⁽³⁾ – Maximum design rating.

SECTION IV. REPRESENTATIVE SAMPLE

TANKS

The facility submitted a Representative Sample in accordance with the guidance.

No.	All Sample Considerations	Yes	No
1	Is sample more than three (3) calendar years old?		X
If the above answer is yes, a new sample is required, or the sample shall be evaluated on a case-by-case basis.			

No.	Calculated Emission Considerations	Yes	No
2	For true minor and synthetic minor facilities, are VOC emissions more than 80 TPY and then do storage tank and truck loading VOC emissions account for more than 50% of facility-wide VOC emissions?		X
3	Are individual storage tank emissions, not controlled by a combustion device, more than 4 TPY VOC?		X
4	Are facility-wide emissions of a single HAP greater than 8 TPY or are total HAP emissions greater than 20 TPY? (Excluding HAP emissions from engines)		X
If any of the above answers are yes, a facility-specific sample is required.			

No.	Throughput Considerations	Yes	No
5a	Is facility-wide throughput less than 10 bbl/day? ⁽¹⁾		X
5b	Is facility-wide throughput less than 1,200 bbl/day and controlled by more than 95% with a VRU and/or combustion device? ⁽²⁾	X	
If either of the above answers is yes, the representative sample does not have to meet the requirements of distance, sampling point and operating parameters.			

⁽¹⁾ – This applies to Well Sites and Natural Gas Compressor Station (Gathering and Transmissions).

⁽²⁾ – This applies to Well Sites and Natural Gas Compressor Stations (Gathering).

FUGITIVES

The facility did not submit a gas or liquid sample and assumed 100% VOC content for the gas and liquid service components.

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.

ENGINES

Emissions of NO_x, CO, and VOC from the engines are calculated based on NSPS Subpart JJJJ. Emissions of H₂CO from the engines are calculated based on manufacturer data. Since the NSPS Subpart JJJJ emission limit for VOC does not include H₂CO, H₂CO is added to the VOC emissions shown in the facility-wide emissions summary to represent total VOC.

Engine Emission Factors

ID#	Rating	NO _x	CO	VOC	H ₂ CO
	hp	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr
ENG-1 ⁽¹⁾	215	1.00	2.00	0.70	0.27
ENG-2 ⁽¹⁾	215	1.00	2.00	0.70	0.27

⁽¹⁾ – Fuel consumption 7,902-BTU/hp-hr.

Engine Emissions

ID#	NO _x		CO		VOC ⁽¹⁾		H ₂ CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
ENG-1	0.47	2.08	0.95	4.15	0.33	1.45	0.13	0.56
ENG-2	0.47	2.08	0.95	4.15	0.33	1.45	0.13	0.56

⁽¹⁾ – Does not include H₂CO. H₂CO is added to the VOC emissions estimates in the facility-wide emissions summary.

HEATERS

Emissions from the heater treaters are based on emission factors from AP-42 (07/98), Section 1.4, a gas heating value of 1,020 BTU/SCF, and the ratings shown.

Heater Emission Factors

ID#	NO _x	CO	VOC
	lb/MMSCF	lb/MMSCF	lb/MMSCF
HT-1, HT-2, HT-3, and HT-4	100	84	5.5

Heater Emissions

ID#	Rating	NO _x		CO		VOC	
	MMBTUH	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
HT-1	0.50	0.05	0.22	0.04	0.18	<0.01	0.01
HT-2	0.50	0.05	0.22	0.04	0.18	<0.01	0.01
HT-3	0.50	0.05	0.22	0.04	0.18	<0.01	0.01
HT-4	0.50	0.05	0.22	0.04	0.18	<0.01	0.01

TANKS

Working, breathing, and flashing emissions for the condensate and produced water storage tanks were estimated based on the ProMax process simulator, a representative sample, and the listed throughputs. Flash emissions at the condensate and produced water storage tanks result as liquids under pressure enter the tanks at atmospheric pressure. All the breathing, working, and flashing emissions from the condensate and produced water storage tanks are routed to one of the flares, which have a capture efficiency of 98% and a destruction efficiency of 98%. To be conservative, flashing losses for the water storage tanks were calculated using 1% of the condensate properties.

Tank Emissions (per tank)

Parameter	T-1 through T-14 Data	PW-1 through PW-8 Data
Throughput, gal/yr	406,245	1,025,194
Working/Breathing Method/Tool	ProMax	ProMax
Flash Calculation Method/Tool	ProMax	ProMax
Working/Breathing Emissions, TPY	3.67	6.41
Flashing Emissions, TPY	13.37	0.34
Control Type	Flare	Flare
Capture Efficiency, %	98	98
Control Efficiency, %	98	98
Tank VOC Emitted at Tank, TPY	0.34	0.14
Tank VOC Emitted at Flare, TPY	0.33	0.13
Total VOC Emissions, TPY	0.67	0.27

LOADING

Emissions from loading condensate and produced water into tank trucks were estimated using AP-42 (6/08), Section 5.2, Equation 1, and the parameters listed in the table on the following page. The vapor pressure, molecular weight, and temperature listed are from AP-42 (11/06), Section 7.1 defaults for Oklahoma City, Oklahoma and Crude Oil (RVP 10). Produced water truck loading emissions were calculated with inputs adjusted to reflect a 99% water and 1% oil mixture.

Loading Parameters and Emissions

Parameter	LOAD-1 Data	LOAD-2 Data
Liquids Loaded	Condensate	Produced Water
Throughput, gal/yr	5,687,430	8,201,550
Saturation Factor	0.6	0.6
Temp., °F	63.27	63.27
TVP, psia	5.53	5.53
MW, lb/lbmol	50	50
VOC, wt. %	85	1
Emission Factor, lb/10 ³ gal ⁽¹⁾	3.95	0.04
VOC Emissions, TPY	9.56	0.16

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

FLARES

NO_x and CO emissions from waste gas combustion are based on emission factors are taken from AP-42 (02/18), Tables 13.5-1 and 13.5-2 for industrial flares and the average rate of waste gas routed to the flares. Pilot NO_x, CO, VOC emissions are based on emission factors taken from AP-42 (07/98), Section 1.4 and the pilot firing rate. VOC emissions from the condensate and produced water storage tanks are based on 98% destruction efficiency.

Flare Combustion Emissions

ID#	Average Waste Gas Combusted, MMBTUH	Emission Factor ⁽¹⁾ , lb/MMBTU		NO _x ⁽²⁾ , TPY	CO ⁽²⁾ , TPY
		NO _x	CO		
F-1	1.99	0.068	0.31	0.62	2.73
F-2	1.99	0.068	0.31	0.62	2.73
F-3	1.99	0.068	0.31	0.62	2.73

⁽¹⁾ – Based on AP-42 (02/18), Table 13.5-1 and 13.5-2 for industrial flares.

⁽²⁾ – Emissions include combustion of waste gas and the flare pilot. Pilot emissions are based on AP-42 (9/78), Section 1.4 and a pilot flow rate of 0.07 MMBTUH.

Flare VOC Emissions

ID#	Process Point(s)	VOC, TPY
F-1	Flare Pilot ⁽¹⁾	<0.01
F-1	Condensate Storage Tanks (T-1 through T-8)	2.64
F-1	Produced Water Storage Tanks (PW-1 through PW-4)	0.52
F-2	Flare Pilot ⁽¹⁾	<0.01
F-2	Condensate Storage Tanks (T-9 through T-14)	2.64
F-2	Produced Water Storage Tanks (PW-5 through PW-8)	0.52
F-3	Flare Pilot ⁽¹⁾	<0.01

⁽¹⁾ – Based on AP-42 (9/78), Section 1.4 and a pilot flow rate of 0.07 MMBTUH.

FUGITIVES

Emissions from fugitive equipment leaks are based on EPA's "Protocol for Equipment Leak Emission Estimates" (11/95, EPA-453/R-95-017) and an estimated number of components. Emissions assume a VOC content of 100% for the gas and liquid service components.

Fugitive Emissions

ID#	VOC, TPY
FUG-1	8.57

FACILITY-WIDE EMISSIONS

ID#	Description	NOx	CO	VOC
		TPY	TPY	TPY
ENG-1	215-hp Caterpillar G3406NA ⁽¹⁾	2.08	4.15	2.01
ENG-2	215-hp Caterpillar G3406NA ⁽¹⁾	2.08	4.15	2.01
HT-1	0.50-MMBTUH Heater Treater	0.22	0.18	0.01
HT-2	0.50-MMBTUH Heater Treater	0.22	0.18	0.01
HT-3	0.50-MMBTUH Heater Treater	0.22	0.18	0.01
HT-4	0.50-MMBTUH Heater Treater	0.22	0.18	0.01
T-1	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-2	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-3	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-4	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-5	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-6	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-7	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-8	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-9	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-10	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-11	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-12	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-13	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
T-14	400-bbl Condensate Storage Tank ⁽²⁾	-	-	0.34
PW-1	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-2	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-3	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-4	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-5	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-6	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-7	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
PW-8	400-bbl Produced Water Storage Tank ⁽²⁾	-	-	0.13
F-1	11.7-MMBTUH Flare ⁽³⁾	0.62	2.73	3.16
F-2	11.7-MMBTUH Flare ⁽³⁾	0.62	2.73	3.16
F-3	11.7-MMBTUH Flare ⁽³⁾	0.62	2.73	<0.01
LOAD-1	Condensate Truck Loading	-	-	9.56
LOAD-2	Produced Water Truck Loading	-	-	0.16

ID#	Description	NOx	CO	VOC
		TPY	TPY	TPY
FUG-1	Fugitive Emissions	-	-	8.57
Totals		6.90	17.21	34.47

⁽¹⁾ – Equipped with NSCR and VOC emissions include H₂CO.

⁽²⁾ – Included uncaptured breathing, working, and flashing losses.

⁽³⁾ – VOC emissions include uncombusted emissions from the condensate and produced water tanks.

FACILITY-WIDE HAPS

The primary HAP emission from the engines (ENG-1 and ENG-2) is H₂CO. Emissions of H₂CO from the engines are based on manufacturer's data.

H₂CO Emissions

ID#	Source	H ₂ CO Emissions	
		lb/hr	TPY
ENG-1	215-hp Caterpillar G3406NA ⁽¹⁾	0.13	0.56
ENG-2	215-hp Caterpillar G3406NA ⁽¹⁾	0.13	0.56
Total		0.26	1.12

⁽¹⁾ – Equipped with NSCR.

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. FEDERAL REGULATORY REVIEW

NSPS Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels. This subpart regulates storage vessels with a capacity greater than or equal to 75 m³ (472 bbl) that are used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984.

This subpart does not apply to vessels with a design capacity less than or equal to 1,589,874 m³ (~ 10,000 bbl) used for petroleum or condensate stored, processed, or treated prior to custody transfer. The condensate storage tanks (T-1 through T-14) each have a capacity less than the applicable threshold. Therefore, the condensate storage tanks (T-1 through T-14) are not subject to this subpart. This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ (~ 950 bbl) storing a liquid with a maximum true vapor pressure less than 3.5 kPa (~ 0.51 psi). The produced water storage tanks (PW-1 through PW-8) each have a capacity less than the applicable threshold. Therefore, the produced water storage tanks (PW-1 through PW-8) are not subject to this subpart.

NSPS Subpart JJJJ, Standards of Performance for Stationary 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.

The engines, ENG-1 and ENG-2, were constructed after June 12, 2006, and manufactured after July 1, 2008, and are subject to this subpart.

NSPS Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015.

All applicable equipment at the facility was either manufactured after September 18, 2015, or prior to August 23, 2011. Therefore, this subpart does not apply.

NSPS Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After September 18, 2015.

NSPS Subpart OOOOa Applicability

§60.5365a section	Applicable? Y/N	Affected Facility	Comment
(a)	Y	Well	Subject
(b)	N	Centrifugal compressor using wet seals	At a well site, not applicable
(c)	N	Reciprocating compressor	At a well site, not applicable
		Pneumatic controller:	
(d)	N	(1) not located at a plant, bleed rate > 6 SCFH	Devices are low bleed
	N	(2) located at a gas plant, continuous bleed	Not a gas plant
(e)	Y	Storage vessel with the potential for VOC emissions \geq 6 TPY	Subject, T-1 through T-14 and PW-1 through PW-8.
(f)	N	Group of all equipment in a process unit located at a gas plant	Not at a gas plant
(g)	N	Sweetening units located at gas processing plants	Not at a gas plant
		Pneumatic pump:	
(h)	N	(1) gas-driven diaphragm pump at a gas plant	Not at a gas plant
	N	(2) gas-driven diaphragm pump at a well site	None present
(i)	Y	Fugitive emissions components at a well site	Subject
(j)	N	Fugitive emissions components at a compressor station	Not at a compressor station

NESHAP Subpart ZZZZ, Stationary RICE. This subpart affects any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions.

The engines, ENG-1 and ENG-2, were manufactured after June 12, 2006, and shall comply with this subpart by demonstrating compliance with NSPS Subpart JJJJ.

SECTION VII. ADMINISTRATIVE

PREVIOUS PERMITS

The facility is currently operating under the GP-OGF NOI to Construct Authorization No. 2017-1636-NOI, received and issued on September 21, 2017. On issuance of this Authorization to Operate (2017-1636-O), all previous Air Quality authorizations and/or permits will be superseded and cancelled.

TIER CLASSIFICATION AND PUBLIC REVIEW

This application has been determined to be **Tier II** based on the request for a “synthetic minor” operating permit for an existing potential major source facility.

The applicant is required to publish a “Notice of Filing a Tier II Application” in a local newspaper in order to give public notice that a Tier II permit application has been filed with DEQ.

The applicant will publish a “Notice of Tier II Draft Permit” in a local newspaper in Grady County where the facility is located. The notice will state that the draft authorization to operate will be available for public review at the facility or the DEQ office in Oklahoma City. The notice will also state that the draft authorization to operate will be available for public review in Grady County, Oklahoma. Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page: <https://www.deq.ok.gov>.

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 lease given to accomplish the permitted purpose.

FEE PAID

Per the Global Enforcement Cases, discussed in SECTION VIII (Compliance), a Title V application fee of \$7,500 was paid to achieve compliance.

SECTION VIII. COMPLIANCE

ENFORCEMENT CASE

Global Enforcement Cases 9235 and 9672 were opened in response to a self-disclosure submitted by Roan on June 15, 2018, and May 6, 2019, respectively. This facility, along with other Roan facilities, did not perform engine tests as required under NSPS Subpart JJJJ. Roan provided the NSPS Subpart JJJJ test results shown in the following subsection. In addition, the facility did not perform engine tests for engines that operated more than 220 hours in a quarter as required under Part 2.IV.E.2 of the General Permit for Oil and Natural Gas Facilities.

Roan also failed to obtain a permit prior to operation of the facility. Emissions were evaluated and it was determined that the facility was determined that the facility had potential-to-emit (PTE) above major source levels for more than 180 days of operation. A Title V application fee has been collected, and the permit will require Compliance and Enforcement review when processing. The operating permit will be issued as an Authorization to Operate under GP-OGF. A request for transfer of ownership was submitted by Citizen on January 8, 2020. Citizen will continue to maintain monthly records of emissions as required. There are no further compliance issues associated with this facility that would prevent the issuance of this permit.

PERFORMANCE TESTING

The engines (ENG-1 and ENG-2) are controlled and are considered emissions limited engines under the GP-OGF. The GP-OGF requires initial and quarterly emissions testing for all emissions limited engines. The most recent quarterly testing has been submitted. 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
ENG-1	09/08/2021	0.47	0.95	<0.01	0.30
ENG-2	08/05/2021	0.47	0.95	<0.01	0.20

The engines (ENG-1 and ENG-2) are subject to NSPS Subpart JJJJ, and the engine family has not been issued an EPA Certificate of Conformity; therefore, testing is required to the standards set forth in the subpart. The NSPS Subpart JJJJ test results are shown in the following table and demonstrates compliance with applicable limits.

NSPS Subpart JJJJ Testing

ID#	Test Date	Subpart JJJJ Limit (g/hp-hr)			Test Result (g/hp-hr)		
		NO _x	CO	VOC	NO _x	CO	VOC
ENG-1	11/01/2012	1.00	2.00	0.70	0.32	0.49	<0.01
ENG-2	03/10/2014	1.00	2.00	0.70	0.03	0.41	<0.01

INSPECTION

No inspection is required prior to issuance of an Authorization to Operate for facilities with projected emission levels of less than 50 TPY of NO_x and CO.

SECTION IX. OTHER REQUIREMENTS

Emission limitations are established in this Authorization as a facility-wide emissions cap in order to avoid other applicable requirements, i.e., Part 70 requirements. This cap is established at a level to not equal or exceed major source thresholds. Compliance with these emission limitations will be determined on a calendar year basis.

EMISSION LIMITATIONS ALLOWED UNDER PART 2, SECTION I, B.

The engines (ENG-1 and ENG-2) require hourly emission limits because they are controlled engines. The following hourly emission limits (lb/hr) of NO_x and CO shall apply to the engines.

Hourly Emission Limits

ID#	Source	NO _x	CO
		lb/hr	lb/hr
ENG-1	215-hp Caterpillar G3406NA ⁽¹⁾	0.47	0.95
ENG-2	215-hp Caterpillar G3406NA ⁽¹⁾	0.47	0.95

⁽¹⁾ – Equipped with NSCR.

LIMITATIONS ALLOWED UNDER PART 1, SECTION III, C.

The storage tanks listed below and on the following page are subject to NSPS Subpart OOOOa per the effective dates shown:

NSPS Subpart OOOO and OOOOa Relevant Dates

Tank Category	Commenced Construction, Modification, or Reconstruction	Emission Limitation Date ⁽¹⁾
OOOO Group 1	After 8/23/11 and on or before 4/12/13	October 15, 2013, or prior to installation, whichever is later
OOOO Group 2	After 4/12/13 and on or before 9/18/15	April 15, 2014, or 30 days after startup, whichever is later
OOOOa	After 9/18/15	September 18, 2015, or 30 days after startup, whichever is later

⁽¹⁾ - Dates do not reflect NSPS Subpart OOOO and Subpart OOOOa compliance dates.

Tank Emission Limits

OOOOa	Control, %
T-1: 400-bbl Condensate Storage Tank	Flare, > 95%
T-2: 400-bbl Condensate Storage Tank	Flare, > 95%
T-3: 400-bbl Condensate Storage Tank	Flare, > 95%
T-4: 400-bbl Condensate Storage Tank	Flare, > 95%
T-5: 400-bbl Condensate Storage Tank	Flare, > 95%
T-6: 400-bbl Condensate Storage Tank	Flare, > 95%
T-7: 400-bbl Condensate Storage Tank	Flare, > 95%
T-8: 400-bbl Condensate Storage Tank	Flare, > 95%
T-9: 400-bbl Condensate Storage Tank	Flare, > 95%
T-10: 400-bbl Condensate Storage Tank	Flare, > 95%
T-11: 400-bbl Condensate Storage Tank	Flare, > 95%
T-12: 400-bbl Condensate Storage Tank	Flare, > 95%
T-13: 400-bbl Condensate Storage Tank	Flare, > 95%
T-14: 400-bbl Condensate Storage Tank	Flare, > 95%
PW-1: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-2: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-3: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-4: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-5: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-6: 400-bbl Produced Water Storage Tank	Flare, > 95%

OOOOa	Control, %
PW-7: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-8: 400-bbl Produced Water Storage Tank	Flare, > 95%

APPLICABLE REQUIREMENTS AND MONITORING AND RECORDKEEPING REQUIREMENTS

Applicable requirements and monitoring and recordkeeping requirements for all eligible sources were identified and evaluated in development of the GP-OGF. As a summary, and for informational purposes only, the table at the end of this memorandum lists whether or not a particular condition of the permit and any specific monitoring and recordkeeping requirement pertains to a particular emission unit presently operated under this Authorization.

NSPS Subpart OOOOa contains requirements for fugitive emissions from well sites and compressor stations. Since this facility was constructed after September 18, 2015, the work practice standards for monitoring and repair of fugitive leaks are applicable to this facility.

SECTION X. SUMMARY

The facility is operating as described in the application for an Authorization to Operate. Ambient air quality standards are not threatened at the site. Issuance of the Authorization to Operate is recommended, contingent on public review.

SUMMARY OF STANDARDS, MONITORING, and/or RECORDKEEPING REQUIREMENTS					
EUG	Specific Condition	Applicable? Y/N	Description	Standard, Monitoring, and/ or Recordkeeping	Comments
Emissions Limitations	Part 2.I.A	Y	Facility-wide cap	Annual calculations and records	
	Part 2.I.B	Y	Hourly limits	Quarterly testing and records	ENG-1 and ENG-2
Storage Tanks	Part 2.II.A	Y	VOC/HAP emission calculations	Annual calculations and records	
	Part 2.II.B	N	VOC/HAP emission calcs with default factors	Annual calcs & records (condensate excluded)	ProMax
	Part 2.II.C	N	Routine inspections	Inspection, maintenance, and repair records	
	Part 2.II.D	N	SC 37-15 & 39-41	Permanent submerged fill pipe	Facility located at wellhead
	Part 2.II.E	N	SC 37-15(a)	Pressure vessel or external floating roof	
	Part 2.II.F	N	SC 39-30 (Tulsa & Oklahoma Co.)	Additional requirements for tanks	
	Part 2.II.G	N	40 CFR Part 60, Subpart K, Ka, or Kb	Per NSPS K, Ka, Kb	
	Part 2.II.H	Y	Contents	Records of contents, throughput, and other items	
VOC Loading Operations	Part 2.III.A	Y	VOC/HAP emission calculations	Annual calculations and records	VOC
	Part 2.III.B	Y	VOC/HAP emission calcs with default factors	Annual calculations and records	HAP
	Part 2.III.C	N	SC 37	Submerged filling of tank truck or trailers	No loading arm or pump on-site
Combustion Equipment	Part 2.IV.A	Y	NO _x , CO, VOC, & H ₂ CO emissions	Annual calculations and records	
	Part 2.IV.B	N	Hour meter or fuel flow recorder	Records of hours of operation	See Note 1
	Part 2.IV.C	Y	Initial emissions test	Records and copy to AQD	ENG-1 and ENG-2
	Part 2.IV.D	N	Emissions testing for uncontrolled engines not at a True Minor Facility	Quarterly testing initially up to annual if in compliance; records of testing	
	Part 2.IV.E.1	Y	Controlled 4SRB engines	Monthly inspection and maintenance of AFRC, quarterly emissions testing, and records	ENG-1 and ENG-2
	Part 2.IV.E.2	N	Controlled 2SLB and 4SLB engines	Quarterly emissions testing and records	
	Part 2.IV.F	Y	Non-compliance with lb/hr limits for engines	Operating adjustments & excess emissions report	ENG-1 and ENG-2
	Part 2.IV.H	N	Addition, modification, reconstruction, or replacement of an Emergency Use Engine	Engine records	
	Part 2.IV.I	N	Addition, modification, reconstruction, or replacement of any Uncontrolled Engine at a True Minor Facility	Engine records and initial test	
	Part 2.IV.J	Y	Addition, modification, reconstruction, or replacement of an Emissions Limited Engine	Engine records, hourly emission rates, and testing	ENG-1 and ENG-2
	Part 2.IV.K	Y	Engine identification plate	Make, model, and serial number	
	Part 2.IV.L	Y	SC 37-36 VOC emissions	Operate and maintain to minimize emissions	
	Part 2.IV.N	N	Emergency Use Engines	Non-resettable hour meter; no more than 500 hours per year operation; operating hours records	
	Part 2.IV.O	N	40 CFR Part 60, Subpart Dc	Per NSPS Subpart Dc	
	Part 2.IV.P	N	40 CFR Part 60, Subpart IIII (CI engines)	Per NSPS Subpart IIII	No applicable equipment
Part 2.IV.Q	N	40 CFR Part 60 Subpart GG (turbines)	Per NSPS Subpart GG	No applicable equipment	
Part 2.IV.R	N	40 CFR Part 60 Subpart KKKK (turbines)	Per NSPS Subpart KKKK	No applicable equipment	

SUMMARY OF STANDARDS, MONITORING, and/or RECORDKEEPING REQUIREMENTS					
EUG	Specific Condition	Applicable? Y/N	Description	Standard, Monitoring, and/ or Recordkeeping	Comments
Combustion Equipment (cont'd)	Part 2.IV.S	Y	40 CFR Part 60 Subpart JJJJ (SI engines)	Per NSPS Subpart JJJJ	ENG-1 and ENG-2
	Part 2.IV.T	Y	40 CFR Part 63 Subpart ZZZZ (RICE)	Per NESHAP Subpart ZZZZ	ENG-1 and ENG-2
	Part 2.IV.U	Y	If malfunction prevents emissions testing	Record and report to AQD	ENG-1 and ENG-2
	Part 2.IV.V	N	Actual annual hours of operation	Records of actual hours of operation	See Note 1
	Part 2.IV.W	Y	Engines	Record of max HP @ ISO, de-rating factors	
Glycol Dehydration Unit Process Vents	Part 2.V.A	N	VOC emissions	Annual calculations and records	
	Part 2.V.B	N	HAP emissions	Annual calculations and records	
	Part 2.V.C	N	Emissions calculations not required	Only if vapors are routed to combustion device	
	Part 2.V.D	N	Still vent condenser	Design standard, inspection, and monitoring	
	Part 2.V.E	N	40 CFR Part 63 Subpart HH for area source	Per NESHAP Subpart HH (See Note 2)	
Fugitive Emission Sources	Part 2.V.F	N	Wet gas rate and PTE	Records	
	Part 2.VI.A	N	VOC emissions	Annual calculations and records	Only if K or Ka tank
	Part 2.VI.B	N	40 CFR Part 60 Subpart KKK	Per NSPS Subpart KKK (LDAR standard)	Facility is not a gas plant
	Part 2.VI.C	Y	Fugitive source inventory	Records of approximate inventory, type, EF, etc.	Facility-wide
Facility-wide Requirements	Part 2.VII.A	Y	Emissions sources qualified as a de minimis facility	Calculate emissions or assume emissions are 5 TPY for each RAP emitted by each listed source.	Other than storage tanks and combustion equipment
	Part 2.VII.B	Y	Gas fuel total sulfur content limits	LPG or 343-ppmvd, compliance methods	
	Part 2.VII.C	N	Liquid fuel total sulfur content limits	No. 2 thru No. 6 fuel oil, max 0.6 wt % sulfur	Natural gas-fired only
	Part 2.VII.D	Y	Open burning	Prohibited except per OAC 252:100-13	
	Part 2.VII.E	Y	Emissions units and control devices	Comply with Appendix A & OAC 252:100-43	
	Part 2.VII.F	Y	Install, use, and maintain control equipment	Comply with Appendix A	
	Part 2.VII.G	Y	Testing requirements	Comply with 40 CFR 51, 60, 61, 63 and/or permit	ENG-1 and ENG-2
	Part 2.VII.H	Y	SC 29 Fugitive dust	Implement reasonable precautions to minimize	
	Part 2.VII.I	N	Amine unit exemption	Monitor H ₂ S concentration and gas throughput	
	Part 2.VII.J	N	40 CFR Part 63 Subpart BBBB	Per NESHAP Subpart BBBB	
	Part 2.VII.K	Y	Emissions and compliance demonstrations	Keep records	
	Part 2.VII.L	Y	Fuel sulfur content	Records	
	Part 2.VII.M	Y	Equipment inventory	Records	

1. Installation of hour meters or fuel flow meter and records of hours operated is only required if actual hours of operation are used to calculate annual emissions instead of assuming continuous operation.
2. General NESHAP Subpart HH requirements for TEG glycol dehydrators are:
 - a. Units with an actual annual average natural gas flow rate of less than 3 MMSCFD or with benzene emissions of less than 1 TPY are exempt from control standards and reporting, but must keep annual records demonstrating such exemption.
 - b. Units not exempt and not located in an Urban Area (UA) plus offset and Urban Cluster (UC) boundary must determine the optimum glycol circulation rate and operate the unit such that the actual glycol circulation rate does not exceed the optimum rate. An initial notification must be submitted with the following information: (1) documentation that the source is not located in an Urban Area plus offset and in an Urban County including the source's latitude and longitude, (2) the determination of optimum glycol circulation rate or alternate rate, (3) the glycol pump manufacturer and model, and (4) a statement by a responsible official certifying that the facility will always operate the unit using the optimum glycol circulation rate.
 - c. Units not exempt and located in an UA plus offset and UC boundary are subject to a control standard and must reduce benzene emissions by at least 95%. Initial notification; a startup, shutdown, and malfunction (SSM) plan, monitoring, and recordkeeping requirements apply.

Except as otherwise prohibited or limited by the General Permit for Oil and Gas Facilities (GP-OGF) or this Authorization, the permittee is hereby authorized to operate the following emission sources and/or conduct the following activities at the referenced site as described in the application received on September 21, 2017, and supplemental materials submitted on May 21, 2020, and September 22, 2021. The Evaluation Memorandum, dated March 10, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction or operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

I. Emission Units and Emission Limitations

Emission limitations are established in this Authorization as a facility-wide emissions cap in order to avoid other applicable requirements, i.e., Part 70 requirements. This cap is established at a level to not equal or exceed major source thresholds. Compliance with these emission limitations will be determined on a calendar year basis.

The following hourly emission limits (lb/hr) of NO_x and CO shall apply to the engines (ENG-1 and ENG-2):

Hourly Emission Limits

ID#	Source	NO _x	CO
		lb/hr	lb/hr
ENG-1	215-hp Caterpillar G3406NA ⁽¹⁾	0.47	0.95
ENG-2	215-hp Caterpillar G3406NA ⁽¹⁾	0.47	0.95

⁽¹⁾ – Equipped with NSCR.

The storage tanks listed below and on the following page are subject to NSPS Subpart OOOOa per the effective dates shown:

NSPS Subpart OOOO and OOOOa Relevant Dates

Tank Category	Commenced Construction, Modification, or Reconstruction	Emission Limitation Date ⁽¹⁾
OOOO Group 1	After 8/23/11 and on or before 4/12/13	October 15, 2013, or prior to installation, whichever is later
OOOO Group 2	After 4/12/13 and on or before 9/18/15	April 15, 2014, or 30 days after startup, whichever is later
OOOOa	After 9/18/15	September 18, 2015, or 30 days after startup, whichever is later

⁽¹⁾ - Dates do not reflect NSPS Subpart OOOO and Subpart OOOOa compliance dates.

Tank Emission Limits

OOOOa	Control, %
T-1: 400-bbl Condensate Storage Tank	Flare, > 95%
T-2: 400-bbl Condensate Storage Tank	Flare, > 95%
T-3: 400-bbl Condensate Storage Tank	Flare, > 95%

OOOOa	Control, %
T-4: 400-bbl Condensate Storage Tank	Flare, > 95%
T-5: 400-bbl Condensate Storage Tank	Flare, > 95%
T-6: 400-bbl Condensate Storage Tank	Flare, > 95%
T-7: 400-bbl Condensate Storage Tank	Flare, > 95%
T-8: 400-bbl Condensate Storage Tank	Flare, > 95%
T-9: 400-bbl Condensate Storage Tank	Flare, > 95%
T-10: 400-bbl Condensate Storage Tank	Flare, > 95%
T-11: 400-bbl Condensate Storage Tank	Flare, > 95%
T-12: 400-bbl Condensate Storage Tank	Flare, > 95%
T-13: 400-bbl Condensate Storage Tank	Flare, > 95%
T-14: 400-bbl Condensate Storage Tank	Flare, > 95%
PW-1: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-2: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-3: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-4: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-5: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-6: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-7: 400-bbl Produced Water Storage Tank	Flare, > 95%
PW-8: 400-bbl Produced Water Storage Tank	Flare, > 95%

A compliance demonstration shall be done on an annual basis using methods in Part 2, Section II of the General Permit. The compliance demonstration shall include the 96% overall control efficiency for all tanks only when records from Section III of this Authorization document the control device was operational.

II. Monitoring and Recordkeeping Requirements

The permittee shall demonstrate continued compliance with any emission limitations or any operational conditions as specified in the GP-OGF.

III. Additional Requirements

1. The permittee shall comply with all applicable requirements in 40 CFR Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015, for all affected facilities located at this site.

- a. § 60.5360 What is the purpose of this subpart?
- b. § 60.5365 Am I subject to this subpart?
- c. § 60.5370 When must I comply with this subpart?
- d. § 60.5375 What standards apply to gas well affected facilities?
- e. § 60.5380 What standards apply to centrifugal compressor affected facilities?
- f. § 60.5385 What standards apply to reciprocating compressor affected facilities?
- g. § 60.5390 What standards apply to pneumatic controller affected facilities?

- h. § 60.5395 What standards apply to storage vessel affected facilities?
- i. § 60.5400 What equipment leak standards apply to affected facilities at an onshore natural gas processing plant?
- j. § 60.5401 What are the exceptions to the equipment leak standards for affected facilities at onshore natural gas processing plants?
- k. § 60.5402 What are the alternative emission limitations for equipment leaks from onshore natural gas processing plants?
- l. § 60.5405 What standards apply to sweetening units at onshore natural gas processing plants?
- m. § 60.5406 What test methods and procedures must I use for my sweetening units affected facilities at onshore natural gas processing plants?
- n. § 60.5407 What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities at onshore natural gas processing plants?
- o. § 60.5408 What is an optional procedure for measuring hydrogen sulfide in acid gas-Tutwiler Procedure?
- p. § 60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
- q. § 60.5411 What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing emissions from storage vessels, reciprocating compressors and centrifugal compressor wet degassing systems?
- r. § 60.5412 What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my storage vessel or centrifugal compressor affected facility?
- s. § 60.5413 What are the performance testing procedures for control devices used to demonstrate compliance at my storage vessel or centrifugal compressor affected facility?
- t. § 60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?
- u. § 60.5416 What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my storage vessel, centrifugal compressor and reciprocating compressor affected facilities?
- v. § 60.5417 What are the continuous control device monitoring requirements for my storage vessel or centrifugal compressor affected facility?
- w. § 60.5420 What are my notification, reporting, and recordkeeping requirements?
- x. § 60.5421 What are my additional recordkeeping requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?
- y. § 60.5422 What are my additional reporting requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?
- z. § 60.5423 What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities at onshore natural gas processing plants?
- aa. § 60.5425 What parts of the General Provisions apply to me?
- bb. § 60.5430 What definitions apply to this subpart?

2. The permittee shall comply with all applicable requirements in 40 CFR Part 60, Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After September 18, 2015, for all affected facilities located at this site.

- 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?
3. When a flare/combustor is used to maintain emissions below the threshold in Section I, the flare shall be operated as follows.
- a. The presence of a flare/combustor pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
 - b. Records of pilot flame(s) outages shall be maintained along with the time and duration of all periods during which the pilot flame is/was absent.

IV. Equipment Additions / Authorization Modifications

The permittee shall obtain a major source construction permit for any modification that would cause an existing facility to no longer be classified as a minor facility.

The permittee shall obtain a minor source construction permit for any modification listed under Part 1, Section III.C of the GP-OGF. All other facility modifications may be constructed without a new Authorization, or without a construction permit, so long as facility-wide emissions do not exceed that amount which would cause the facility to be classified as a major source. The permittee shall notify the DEQ in writing of the modification within 10 days following the start of operation.

The permittee shall submit a Notice of Modification informing AQD of: (1) any modification or change of operations at the facility that would add a piece of equipment or a process that is subject to NSPS or NESHAP, or that would modify a piece of equipment or a process such that it becomes subject to NSPS or NESHAP, or that would change its facility classification (either from or to a True Minor Facility); or (2) any modification to add a storage tank with a capacity of 400 gallons or more storing VOC, a VOC Loading Operation, any combustion equipment, or any dehydration unit; or (3) any modification to change the hourly emissions limitations of an Emissions Limited Engine; or (4) any modification to add, modify, reconstruct, or replace an engine. Such notice shall contain calculations of the facility's new facility-wide potential to emit; the change in the facility's classification, if any; and the engine's potential to emit (g/hp-hr, lb/hr, and TPY) for all engines at the facility. Any emissions limits for NO_x and CO (lb/hr) cited in the latest Notice of Modification, for any Emissions Limited Engine, become permit limitations for that engine and an enforceable part of the existing Authorization to Operate. The permittee shall attach a copy of the latest Notice of Modification to a copy of the Authorization to Operate kept on-site, at a nearby manned facility, or at the nearest field office. The Notice of Modification must be submitted within 10 days following the start of operation.

V. Previous Permits and Associated Specific Conditions

On issuance of this Authorization to Operate (2017-1636-O), all previous Air Quality authorizations and/or permits will be superseded and cancelled.

VI. Equipment List

The following table shows equipment presently operated at the facility, other than de minimis activities. The permittee may change the actual equipment operated or change method of operations so long as potential facility-wide emissions do not exceed that amount which would cause the facility to be classified as a major source.

ID#	Equipment Type	Size / Rating
ENG-1	Caterpillar G3406NA ⁽¹⁾	215-hp
ENG-2	Caterpillar G3406NA ⁽¹⁾	215-hp
HT-1	Heater Treater	0.50-MMBTUH
HT-2	Heater Treater	0.50-MMBTUH
HT-3	Heater Treater	0.50-MMBTUH
HT-4	Heater Treater	0.50-MMBTUH
T-1	Condensate Storage Tank	400-bbl
T-2	Condensate Storage Tank	400-bbl
T-3	Condensate Storage Tank	400-bbl
T-4	Condensate Storage Tank	400-bbl
T-5	Condensate Storage Tank	400-bbl
T-6	Condensate Storage Tank	400-bbl
T-7	Condensate Storage Tank	400-bbl
T-8	Condensate Storage Tank	400-bbl
T-9	Condensate Storage Tank	400-bbl

ID#	Equipment Type	Size / Rating
T-10	Condensate Storage Tank	400-bbl
T-11	Condensate Storage Tank	400-bbl
T-12	Condensate Storage Tank	400-bbl
T-13	Condensate Storage Tank	400-bbl
T-14	Condensate Storage Tank	400-bbl
PW-1	Produced Water Storage Tank	400-bbl
PW-2	Produced Water Storage Tank	400-bbl
PW-3	Produced Water Storage Tank	400-bbl
PW-4	Produced Water Storage Tank	400-bbl
PW-5	Produced Water Storage Tank	400-bbl
PW-6	Produced Water Storage Tank	400-bbl
PW-7	Produced Water Storage Tank	400-bbl
PW-8	Produced Water Storage Tank	400-bbl
F-1	Flare	11.7-MMBTUH ⁽²⁾
F-2	Flare	11.7-MMBTUH ⁽²⁾
F-3	Flare	11.7-MMBTUH ⁽²⁾
LOAD-1	Condensate Truck Loading	-
LOAD-2	Produced Water Truck Loading	-
FUG-1	Fugitive Emissions	-

⁽¹⁾ – Equipped with NSCR.

⁽²⁾ –Maximum design rating.

VII. Definitions

The following definitions apply for terms used in this Authorization.

“Engine” means any reciprocating internal combustion engine or any gas-fired turbine.

“Emergency Use Engine” means any engine that drives an emergency power generator, peaking power generator, firewater pump, or other emergency use equipment, and operates less than or equal to 500 hours per year.

“Emissions Limited Engine” means any engine that has lb/hr emissions limitations specified under the conditions of an Authorization.

“Maximum Rated Horsepower” means an engine’s maximum horsepower at ISO or manufacturer’s standard conditions and maximum RPM, or an engine’s maximum horsepower at engine site conditions and maximum RPM.

“Notice of Modification” means a written notice informing AQD of: (1) any modification or change of operations at the facility that would add a piece of equipment or a process that is subject to NSPS or NESHAP, or that would modify a piece of equipment or a process such that it becomes subject to NSPS or NESHAP, or that would change its facility classification (either from or to a True Minor Facility); or (2) any modification to add a storage tank with a capacity of 400 gallons

or more storing VOC, a VOC Loading Operation, any combustion equipment, or any dehydration unit; or (3) any modification to change the hourly emissions limitations of an Emissions Limited Engine; or (4) any modification to add, modify, reconstruct, or replace an engine. Such notice shall contain calculations of the facility's new facility-wide potential to emit; the change in the facility's classification, if any; and the engine's potential to emit (g/hp-hr, lb/hr, and TPY) for all engines at the facility. Any emissions limits for NO_x and CO (lb/hr) cited in the latest Notice of Modification, for any Emissions Limited Engine, become permit limitations for that engine and an enforceable part of the existing Authorization to Operate. The permittee shall attach a copy of the latest Notice of Modification to a copy of the Authorization to Operate kept on-site, at a nearby manned facility, or at the nearest field office.

“Representative Extended Wet Gas Analysis” means an extended analysis (using GPA 2286 or similar approved methods) that provides speciated data for HAP components benzene, toluene, ethylbenzene, xylenes, and n-hexane. The sample must be representative of the maximum expected HAP content for normal operations of the glycol dehydrator.

“True Minor Facility” means a facility that has the potential to emit less than or equal to 80 TPY each of NO_x and CO.

“Uncontrolled Engine” means an engine, with or without an Air to Fuel Ratio Controller, that has no catalytic or oxidation catalyst control.

“VOC Loading Operation” means loading liquid VOC into a tank truck or trailer for transportation off-site or unloading of liquid VOC from a tank truck or trailer to a storage tank on-site. A VOC Loading Operation does not have the physical equipment (loading arm and pump) to conduct the type of loading regulated by OAC 252:100-37-16 and 100-39-41 for VOC loading facilities, even though it may or may not use tank trucks or trailers that meet the requirements for delivery vessels in OAC:252-100-39-41(d).

DRAFT



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Citizen Energy III, LLC
Attn.: Jordan Brimm
320 S. Boston Ave., Suite 900
Tulsa, OK 74103

SUBJECT: GP-OGF Authorization to Operate
Authorization No. **2017-1636-O**
Collins CTB
Facility ID No. 18195
Section 14, Township 9N, Range 5W, Grady County, Oklahoma

Dear Mr. Brimm:

Enclosed is the Authorization to Operate the referenced facility. Please note that this Authorization is issued subject to standard and specific conditions in the GP-OGF. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections. A copy of the GP-OGF can be found on our website at https://www.deq.ok.gov/wp-content/uploads/air-division/GP_oil_and_gas_facilities_permit.pdf. If you are unable to obtain a copy and need to have one mailed to you, you can request it by letter or by calling our office at (405) 702-4100.

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 authorization number above and contact me at Anne.Smith@deq.ok.gov, or at (405) 702-4191.

Sincerely,

A handwritten signature in black ink that reads "Anne Smith".

Anne Smith, P.E.
New Source Permits Section
AIR QUALITY DIVISION

Enclosures





AUTHORIZATION TO OPERATE
PURSUANT TO THE TERMS OF THE
GENERAL PERMIT FOR OIL AND GAS FACILITIES

Air Quality Division
State of Oklahoma
Department of Environmental Quality
707 North Robinson
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

Authorization No.: 2017-1636-O

Facility Name: Collins CTB **SIC Code:** 1311

Facility Location: Section 14, Township 9N, Range 5W, Grady County, Oklahoma

Company Name: Citizen Energy III, LLC

Mailing Address: 320 S. Boston Ave., Suite 900, Tulsa, OK 74103

This Authorization is issued pursuant to OAC 252:100-7-15 and 252:100-7-18.

Authorization is hereby granted the above named entity to operate the emission units, emission points, and other processes listed herein which are located at the above described minor facility (Facility) pursuant to the terms of the General Permit for Oil and Gas Facilities as issued by the Oklahoma Department of Environmental Quality, Air Quality Division, on December 18, 2008. The Authorization addresses only those emission sources listed under Section V or provided for under Section III, and only while located at the Facility.

DRAFT

Kendal Stegmann, Division Director

Issuance Date



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Citizen Energy III, LLC
Attn.: Jordan Brimm
320 S. Boston Ave., Suite 900
Tulsa, OK 74103

SUBJECT: GP-OGF Authorization to Operate
Authorization No. **2017-1636-O**
Collins CTB
Facility ID No. 18195
Section 14, Township 9N, Range 5W, Grady County, Oklahoma

Dear Mr. Brimm,

Air Quality has received the permit application for the referenced facility and completed initial review. This application has been determined to be a Tier II application. In accordance with 27A O.S. 2-14-301 and 302 and OAC 252:4-7-13(c), the enclosed draft authorization is now ready for public review. The requirements for public review of the draft authorization 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. Submit sample notice and provide date of publication to **AQD 5 days prior to notice publishing**;
3. Provide for public review, for a period of 30 days following the date of the newspaper announcement, a copy of the application and draft authorization at a convenient location (preferentially at a public location) within the county of the facility;
4. Send AQD a signed affidavit of publication for the notice(s) from Item #1 above within 20 days of publication of the draft authorization. Any additional comments or requested changes you have for the draft authorization or the application should be submitted within 30 days of publication.

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

Sincerely,

A handwritten signature in black ink that reads "Lee Warden".

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



NOTICE OF DRAFT AUTHORIZATION OR REGISTRATION TIER II AIR QUALITY PERMIT APPLICATION

APPLICANT RESPONSIBILITIES

Permit applicants are required to give public notice that a Tier II draft permit has been prepared by DEQ. The notice must be published in one newspaper local to the site or facility. Note that if either the applicant or the public requests a public meeting, this must be arranged by the DEQ. The following steps are the applicant's responsibility:

1. Complete the public notice using the samples provided by AQD below;
2. Determine appropriate newspaper local to the facility for publishing;
3. Submit sample notice and provide date of publication to AQD 5 days prior to notice publishing; and
4. Upon publication, a signed affidavit of publication must be obtained from the newspaper and sent to AQD.

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

1. A statement that a Tier II draft authorization or registration 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 authorization may be reviewed (a location in the county where the site/facility is located must be included);
7. Name, address, and telephone number of the applicant and DEQ contacts;
8. Any additional information required by DEQ rules or deemed relevant by applicant;
9. A 30-day opportunity to request a formal public meeting on the draft authorization or registration acceptance.

SAMPLE NOTICE:General Permit

DEQ NOTICE OF TIER II DRAFT AUTHORIZATION TO OPERATE UNDER A GENERAL PERMIT AND CANCELLATION OF A TITLE V PERMIT

A Tier II application for a significant modification to a Title V permit 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 authorization to operate under an existing General Permit, ...general permit name..., Authorization Number: ...xxxx-xxxx-x..., which may be reviewed at ...locations (one must be in the county where the site/facility is located)... or at the Air Quality Division's main office (see address below). The draft authorization is also available for review under Permits for Public Review on the DEQ Web Page: <http://www.deq.ok.gov/>

This draft authorization to operate would authorize the facility to emit the following regulated pollutants: (list each pollutant and amounts in tons per year (TPY)) [For facility modifications only, either add: , which represents (identify the emissions change involved in the modification).

The public comment period ends 30 days after the date of publication of this notice. Any person may submit written comments concerning the draft authorization to the Air Quality Division contact listed below or as directed through the corresponding online notice. A public meeting on the draft authorization may also be requested in writing at the same address. Note that all public meetings are to be arranged and conducted by DEQ staff.

Information on all permit actions including draft permits, proposed permits, final issued permits and applicable review timelines are available in the Air Quality section of the DEQ Web page:

<http://www.deq.ok.gov/>.

For additional information, contact ...names, addresses and telephone numbers of contact persons for the applicant, or contact DEQ at: Chief Engineer, Air Quality Division, 707 N. Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone No. (405) 702-4100.



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Chickasaw Nation
Attn.: Bill Anoatubby, Governor
P.O. Box 1548
Ada, OK 74821

SUBJECT: Permit Application No. **2017-1636-O**
Citizen Energy III, LLC, Collins CTB (Facility ID No. 18195)
Section 14, Township 9N, Range 5W, Grady County, Oklahoma

Dear Mr. Anoatubby:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier II application referenced above. A Tier II application requires the facility provide a 30-day public comment period on the draft Tier II permit at a public location within the county of the facility. The process requires the facility to notify the public by newspaper notice in a newspaper in the county of the proposed project. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to the newspaper notice.

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

<https://www.deq.ok.gov/air-quality-division/air-permits/public-participation-issued-permits/>

If you prefer a copy of the draft and/or proposed 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
707 N Robinson
Oklahoma City, OK, 73102

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,

A handwritten signature in black ink, appearing to read "Lee Warden".

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



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		