OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **May 12, 2025**

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

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

THROUGH: Jennie Doan, E.I., Engineering Section, ROAT

FROM: Alexandria Mills, E.I., Engineering Section

SUBJECT: Evaluation of Permit Application Number **2024-0514-C**
Argo Development Partners
Facility: Oklahoma Bioprocessing Project (SIC 2869/NAICS 325120)
Facility ID: 24162
Section 3, Township 28N, Range 23E, Ottawa County
Latitude: 36.94066ºN, Longitude: 94.81652ºW
Address: US Hwy 69 Alternative & S. 592 Rd., Quapaw, OK

SECTION I. INTRODUCTION

Argo Development Partners (Argo) has applied for an individual minor source construction permit for their Oklahoma Bioprocessing Project. This facility will be a new bioprocessing plant (SIC 2869/NAICS 325120) in Ottawa County. This facility has no prior permits.

Based on the projected operations at this facility, facility-wide emissions are estimated to be 61.7 TPY of NO_X, 55.0 TPY of CO, 3.2 TPY of VOC, 22.4 TPY of SO_2, 2.3 TPY of PM_{10}, 1.9 TPY of $PM_{2.5}$, and 0.98 TPY of HAPs. Therefore, this facility qualifies for a "synthetic minor" permit.

SECTION II. FACILITY DESCRIPTION

Argo is proposing to construct a bioprocessing plant that will receive an average of 164,000 tons annually of poultry litter. Poultry litter consisting of poultry manure and bedding material will be used to feed an anaerobic digestion process to produce pipe-line quality renewable natural gas (RNG) and commercial fertilizer. Renewable natural gas is often called biomethane and is a type of biogas that has been processed and upgraded to produce a pipe-line quality gas. The bioprocessing plant is expected to produce an estimated 619,000 MMBtu of RNG, 8 million gallons of liquid fertilizer, and 60,000 tons of solid fertilizer per year.

The facility will consist of six (6) subsystems as listed below:

Subsystem 1000: Front End Processing

Each litter truck is weighed upon entering and exiting the facility. Once backed inside the enclosed receiving building, litter trucks are unloaded using a belt trailer into a storage pit built into the building floor. The receiving building will be operated under negative pressure and connected to the odor-control system described under Subsystem 9000 below. Front-end loaders transfer the dumped litter to storage on an as-needed basis. In preparation for the digestion process, litter is loaded into a hopper for grinding, mixing and dilution. The pretreated feed slurry is transferred to hydrolysis tanks to begin the first step of anaerobic digestion and accelerate methanogenesis (biogas production).

Subsystem 2000: Anaerobic Digesters

Effluent from the hydrolysis tank is continuously transferred to the anaerobic digesters and mixed with impellers. The hydrolysis and acidogenesis steps continue the methanogenesis stage of anaerobic digestion. Raw biogas produced in the digesters is stored in biogas holders located at the top of each digester. Emergency vents are utilized during process disruption.

Subsystem 3000: Solids Separation

The feed is moved into the solids separation area by pump. A proprietary set of operations are used to remove solids from the digestate. Liquids are filtered prior to being sent to Subsystem 4000.

The solids are transferred by conveyor to a dryer, which reduces the moisture content to 10% or less. The dryers operate with controlled ventilation to create negative pressure, eliminating dust. An odor control system is used to remove ammonia and other constituents. The system utilizes a condenser for the evaporated water and dust control system that operates on pressurized water.

Subsystem 4000: Liquids Separation

The permeate undergoes a proprietary process to recover ammoniacal nitrogen at high purity. The effluent stream, which still has high total dissolved solids is sent to a membrane operation which recovers pure water that is recycled for dilution. The concentrate is stored in a buffer tank and then sent to a thermal unit which further removes moisture.

The liquid fertilizer is stored onsite in dedicated temperature-controlled tanks. The storage tank will be chilled as needed to maintain a temperature at which the product will not off-gas or release ammonia to the atmosphere. A nitrogen blanket will be supplied to the tank to prevent oxygen intrusion and maintain a positive low pressure in the headspace by use of nitrogen generators. Any venting of the headspace will flow through an ammonia scrubber to mitigate exposure to the atmosphere. This storage will be used until offloaded by use of a discharge pump at the outlet of the tank.

Subsystem 5000: Biogas Upgrading

Blower units are used to move the biogas from the digesters to Subsystem 5000. The biogas upgrading operations include feed compressors, H_2S, CO, CO_2 and O_2 removal, and a dryer to remove moisture. An enclosed flare is used to destroy non-used biogas.

Subsystem 9000: Supporting Equipment
This subsystem consists of the equipment used to support operations at the facility including:

- Chiller – used to maintain cool water temperatures for the air scrubber.
- Hot Water Boiler – a closed loop natural gas-fired hot water boiler used to provide hot water primarily to the hydrolysis tank and anaerobic digesters.
- Steam Boiler – natural gas-fired steam boiler use to provide steam to Subsystem 3000.
- Backup Generator – natural gas-fired emergency generator set used to maintain controlled shutdown and safe handling of biological processes/biogas in an emergency.
- Odor Control System (ODR-9901) – consists of three packed scrubbing columns operating in parallel. Circulating air from the receiving building is routed through the dryers and subsequently to ODR-9901. The scrubbing process uses sulfuric acid to remove ammonia and impurities from the air. Air is exhausted to the atmosphere after scrubbing. The liquid byproduct is 40% ammonium sulfate solution. The liquid byproduct will be stored onsite prior to being removed from the facility.

SECTION III. EQUIPMENT

The following is a list of proposed equipment.

ID#	Equipment Type	Size/Rating	Manufacture Date	Subject to NSPS or NESHAP Subpart
GEN-9001	Emergency Generator	1,341-hp	TBD	NSPS JJJJ/ NESHAP ZZZZ
HWB-9301	Hot Water Boiler	7-MMBtu/hr	TBD	-
STB-9401	Steam Boiler	15-MMBtu/hr	TBD	NSPS Dc
FLR-5801	Enclosed Flare	95-MMBtu/hr	TBD	-
DIG-2000	Biogas Start-Up Vent	400-acfm	TBD	-
GMBR-5501	RNG Membranes - Tail Gas Vent	950-acfm	TBD	-
ODR-9901	Odor Control System	161,850-acfm	TBD	-
STP-4101	Ammonia Stripper	-	TBD	-
RCT-5201	H_2S Removal - Biological Scrubber	534-acfm	TBD	-
EVP-4401	Evaporator - Cooling Tower	700-gpm	TBD	-

SECTION IV. EMISSIONS

Unless otherwise stated emissions are based on 8,760 hours per year of operation with combustion sources firing pipeline-grade natural gas.

ENGINE
Emissions of NO_X, CO, and VOC are calculated based on NSPS Subpart JJJJ. H_2CO emissions are calculated based on AP-42 (7/00) Table 3.2-2 for uncontrolled, 4SLB engines. Since the NSPS Subpart JJJJ emission limit for VOC does not include H_2CO, H_2CO is added to the VOC emissions

shown in the facility-wide emissions summary to represent total VOC for GEN-9001. Emissions are based on a rating of 1,341-hp (11.475 MMBtu/hr) and 200 hours of operation per year.

Emergency Generator Emission Factors

ID#	NO_X	CO	VOC [1]	SO_2	$PM_{10/2.5}$	H_2CO
	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBtu	lb/MMBtu	g/hp-hr
GEN-9001	2.0	4.0	1.0	5.88E-04	9.99E-03	0.072

[1] Does not include formaldehyde emissions.

Emergency Generator Emissions

ID#	NO_X		CO		VOC [1]		SO_2		$PM_{10/2.5}$		H_2CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
GEN-9001	6.00	0.60	11.99	1.20	3.00	0.30	0.01	<0.01	0.11	0.01	0.61	0.06

[1] Does not include formaldehyde emissions.

BOILERS

Emissions of NO_X, CO, VOC and SO_2 are based on AP-42 (7/98), Section 1.4, Table 1.4-1 through Table 1.4-2 for small commercial boilers, the rating listed below, and a fuel heating value of 1,020-BTU/SCF. Emissions of PM_{10} and $PM_{2.5}$ are based on USEPA Revisions to PM Emissions from Natural Gas Combustion by Roy Huntley, March 2012, SCC 10200603.

Boiler Emission Factors

ID#	NOx	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$
	lb/MMSCF	lb/MMSCF	lb/MMSCF	lb/MMSCF	lb/MMSCF	lb/MMSCF
HWB-9301 & STB-9401	100.0	84.0	5.5	0.6	0.52	0.43

Boiler Emissions

ID#	Rating	NO_X		CO		VOC		SO_2		PM_{10}		$PM_{2.5}$	
	MMBTUH	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
HWB-9301	7.0	0.69	3.01	0.58	2.52	0.04	0.17	<0.01	0.02	<0.01	0.02	<0.01	0.01
STB-9401	15.0	1.47	6.44	1.24	5.41	0.08	0.35	0.01	0.04	0.01	0.03	0.01	0.03

FLARE

The flare will be used to control produced biogas during maintenance and/or destroy off-spec product. In scenario 1, biogas will be sent to the flare after H_2S removal (876 hours per year). In scenario 2, biogas will be sent to the flare prior to H_2S removal (438 hours per year).

Emission factors of NO_X and CO are based on manufacturer data. Emissions of SO_2 and H_2S are based on a biogas H_2S concentration of 100-ppmv and 3,500-ppmv for scenario 1 and 2, respectively, and a biogas heating value of 630 Btu/scf. Emissions of VOC are based on AP-42 (11/98) for Municipal Solid Waste Landfills, Table 2.4-2, and a biogas heating value of 630 Btu/scf. Emission factors of $PM_{10/2.5}$ are based on AP-42 (11/98) for Municipal Solid Waste Landfills, Table 2.4-5, and a biogas heating value of 630 Btu/scf.

Flare Combustion Emissions (Scenario 1)

ID#	Pollutants	Emission Factors	Control	Emissions	
				lb/hr	TPY (1)
FLR-5801	NO_X	0.25 lb/MMBTU	-	23.75	10.40
	CO	0.25 lb/MMBTU	-	23.75	10.40
	VOC	595 ppmv (2)	99%	0.17	0.08
	SO_2	100 ppmv H_2S (2), (3)	-	2.72	1.19
	$PM_{10/2.5}$	17.0 lb/MMSCF	-	2.56	1.12
	H_2S	100 ppmv (2)	98%	0.03	0.01

(1) Based on 876 annual hours of operation.
(2) Calculated using mass balance.
(3) Assuming 100% of H_2S is converted to SO_2.

Flare Combustion Emissions (Scenario 2)

ID#	Pollutants	Emission Factors	Control	Emissions	
				lb/hr	TPY (1)
FLR-5801	NO_X	0.25 lb/MMBTU	-	23.75	5.20
	CO	0.25 lb/MMBTU	-	23.75	5.20
	VOC	595 ppmv (2)	99%	0.17	0.04
	SO_2	3,500 ppmv H_2S (2), (3)	-	95.32	20.88
	$PM_{10/2.5}$	17.0 lb/MMSCF	-	2.56	0.56
	H_2S	3,500 ppmv (2)	98%	1.02	0.22

(1) Based on 438 annual hours of operation.
(2) Calculated using mass balance.
(3) Assuming 100% of H_2S is converted to SO_2.

Total flare combustion emissions are based on the combined annual emissions from Scenario 1 and 2 as summarized in the table below. Hourly emissions will remain the same for both scenarios with the exception of SO_2 and H_2S. These are based on the worst-case hourly emissions.

Flare Combustion Emissions

ID#	Operating Scenario	NO_X		CO		VOC		SO_2		$PM_{10/2.5}$		H_2S	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
FLR-5801	Scenario 1	23.75	10.40	23.75	10.40	0.17	0.08	2.72	1.19	2.56	1.12	0.03	0.01
	Scenario 2	23.75	5.20	23.75	5.20	0.17	0.04	95.32	20.88	2.56	0.56	1.02	0.22
Total		**23.75**	**15.60**	**23.75**	**15.60**	**0.17**	**0.11**	**95.32**	**22.07**	**2.56**	**1.68**	**1.02**	**0.23**

Biogas Start-Up Vent

Emissions occur during start-up. Emissions are based on 144 hours per year and a flow rate of 400-scfm. Emissions of H_2S are based on a biogas H_2S concentration of 3,500-ppmv and a density of H_2S of 0.04805 lb/scf. Emissions of VOC are based on AP-42 (11/98) for Municipal Solid Waste Landfills, Table 2.4-2, and a default landfill gas VOC concertation (as hexane) of 0.24 lb/scf.

Biogas Start-Up Vent Emissions

ID#	Pollutants	Emission Factors	Control	Emissions	
				lb/hr	TPY (1)
DIG-2000	VOC	595 ppmv (2)	-	3.43	0.25
	H_2S	3,500 ppmv (2)	-	8.07	0.58

(1) Based on 144 annual hours of operation. (2) Calculated using mass balance.

RNG Membrane Tail Gas Vent

Emissions of H_2S are based on a biogas H_2S concentration of 10-ppmv, a flow rate of 950-scfm, and a density of H_2S of 0.0961 lb/scf.

RNG Membrane Tail Gas Vent Emissions

ID#	Pollutants	Emission Factor	Control	Emissions	
				lb/hr	TPY
GMBR-5501	H_2S	10 ppmv (1)	-	0.05	0.24

(1) Calculated using mass balance.

Odor Control System

Emissions are based on the collection of exhaust air from the Receiving Building (89,250-scfm), the Digestate Dewatering Building (12,600-scfm), and the solids dryer (60,000-scfm). The odor control system is equipped with a packed ammonia wet scrubber. Dryer combustion emissions were assumed to pass through the scrubber without control.

Emissions of NO_X, CO, VOC, and SO_2 are based on AP-42 (7/98), Section 1.4, Table 1.4-1 through Table 1.4-2 for small commercial boilers, a combined rating of 84 MMBtu/hr for seven (7) dryers, and a fuel heating value of 1,020-BTU/SCF. Emissions of PM_{10} and $PM_{2.5}$ are based on USEPA Revisions to PM Emissions from Natural Gas Combustion by Roy Huntley, March 2012, SCC 39000689. Emissions of NH_3 are based on a mass balance, flow rate of 161,850-scfm, and a control efficiency of 99%.

Odor Control System Emissions

ID#	Pollutants	Emission Factors	Control	Emissions	
				lb/hr	TPY
ODR-9901	NO_X	100 lb/MMSCF	-	8.24	36.07
	CO	84 lb/MMSCF	-	6.92	30.30
	VOC	5.5 lb/MMSCF	-	0.45	1.98
	SO_2	0.6 lb/MMSCF	-	0.05	0.22
	PM_{10}	0.52 lb/MMSCF	-	0.04	0.19
	$PM_{2.5}$	0.43 lb/MMSCF	-	0.04	0.16
	NH_3	3,850 lb/day (1)	99%	1.60	7.03

(1) Calculated using mass balance.

Ammonia Stripper

Emissions of NH_3 are based on mass balance of raw poultry litter in the anerobic digestors and 99.99% control efficiency by a water scrubber and acid bath.

Ammonia Stripper Emissions

ID#	Pollutants	Emission Factor	Control	Emissions	
				lb/hr	TPY
STP-4101	NH_3	- (1)	99.99%	<0.10	<0.10

(1) Based on mass balance.

H_2S Removal - Biological Scrubber

Emissions of H_2S are based on a biogas H_2S concentration of 1-ppmv, a flow rate of 534-scfm, and a density of H_2S of 0.0961 lb/scf.

H_2S Removal - Biological Scrubber Emissions

ID#	Pollutants	Emission Factor	Control	Emissions	
				lb/hr	TPY
RCT-5201	H_2S	1 ppmv (1)	-	<0.01	0.01

(1) Calculated using mass balance.

Evaporative Cooling Tower

Total particulate emissions are based on guidance from the New Mexico Environment Department, Air Quality Bureau, a circulation rate of 700-gpm, a drift of 0.02%, and total dissolved solids of 1,800 ppm. PM_{10} is assumed to be equivalent to 70.509% PM_{total} and $PM_{2.5}$ is assumed to be 0.226% PM_{total}.

Evaporative Cooling Tower Emissions

ID#	Throughput	PM_{10}		$PM_{2.5}$	
	gpm	lb/hr	TPY	lb/hr	TPY
EVP-4401	700	0.09	0.39	<0.01	<0.01

FACILITY-WIDE EMISSIONS

Facility-Wide Hourly Emissions Summary

ID#	Sources	NO_X	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$	H_2S	NH_3
		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
GEN-9001	Emergency Generator	6.00	11.99	3.61(1)	0.01	0.11	0.11	-	-
HWB-9301	Hot Water Boiler	0.69	0.58	0.04	<0.01	<0.01	<0.01	-	-
STB-9401	Steam Boiler	1.47	1.24	0.08	0.01	0.01	0.01	-	-
FLR-5801	Enclosed Flare	23.75	23.75	0.17	95.32	2.56	2.56	1.02	-
DIG-2000	Biogas Start-Up Vent	-	-	3.43	-	-	-	8.07	-
GMBR-5501	RNG Membranes - Tail Gas Vent	-	-	-	-	-	-	0.05	-
ODR-9901	Odor Control System	8.24	6.92	0.45	0.05	0.04	0.04	-	1.60
STP-4101	Ammonia Stripper	-	-	-	-	-	-	-	<0.1
RCT-5201	H_2S Removal - Biological Scrubber	-	-	-	-	-	-	<0.01	-
EVP-4401	Evaporator - Cooling Tower	-	-	-	-	0.09	<0.01	-	-
Total Emissions		**40.15**	**44.48**	**7.78**	**95.39**	**2.81**	**2.72**	**9.14**	**1.70**

(1) Includes formaldehyde emissions.

Facility-Wide Annual Emissions Summary

ID#	Sources	NO_X	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$	H_2S	NH_3
		TPY	TPY	TPY	TPY	TPY	TPY	TPY	TPY
GEN-9001	Emergency Generator	0.60	1.20	0.36(1)	<0.01	0.01	0.01	-	-
HWB-9301	Hot Water Boiler	3.01	2.52	0.17	0.02	0.02	0.01	-	-

ID#	Sources	NO_X	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$	H_2S	NH_3
		TPY	TPY	TPY	TPY	TPY	TPY	TPY	TPY
STB-9401	Steam Boiler	6.44	5.41	0.35	0.04	0.03	0.03	-	-
FLR-5801	Enclosed Flare	15.60	15.60	0.11	22.07	1.68	1.68	0.23	-
DIG-2000	Biogas Start-Up Vent	-	-	0.25	-	-	-	0.58	-
GMBR-5501	RNG Membranes - Tail Gas Vent	-	-	-	-	-	-	0.24	-
ODR-9901	Odor Control System	36.07	30.30	1.98	0.22	0.19	0.16	-	7.03
STP-4101	Ammonia Stripper	-	-	-	-	-	-	-	<0.1
RCT-5201	H_2S Removal - Biological Scrubber	-	-	-	-	-	-	0.01	-
EVP-4401	Evaporator - Cooling Tower	-	-	-	-	0.39	<0.01	-	-
Total Emissions		**61.72**	**55.03**	**3.22**	**22.35**	**2.32**	**1.89**	**1.06**	**7.13**

(1) Includes formaldehyde emissions.

HAP EMISSIONS

HAP emissions for the emergency generator (GEN-9001) are based on AP-42 (7/00) Table 3.2-2, a heat input rating of 11.475 MMBtu/hr, and 200 hours per year.

Emergency Generator HAP Emissions

HAP	Emission Factor	Emissions (1)	
	lb/MMBtu	lb/hr	TPY
Acetaldehyde	8.36E-03	0.10	0.01
Acrolein	5.14E-03	0.06	0.01
Benzene	4.40E-04	0.01	<0.01
Formaldehyde	5.28E-02	0.61	0.06
Methanol	2.50E-03	0.03	<0.01
Hexane	1.11E-03	0.01	<0.01
Total	**-**	**0.83**	**0.08**

(1) Based on 200 hours per year.

HAP emissions for the boilers (HWB-9301 & STB-9401) are based on AP-42 (7/98), Table 1.4-2 through 1.4-4, a natural gas heating value of 1,020 Btu/scf, and heat rating of 7 MMBtu/hr for the hot water boiler and 15 MMBtu/hr for the steam boiler. HAP emissions from the odor control system (ODR-9901) are based on AP-42 (7/98), Table 1.4-2 through 1.4-4, a natural gas heating value of 1,020 Btu/scf, and a combined dryer heat rating of 84 MMBtu/hr. Only emissions greater than 1.0E-3 (lb/hr and TPY) are listed.

Boiler and Odor Control System HAP Emissions

HAP	Emission Factor	Emissions (1)					
		HWB-9301		STB-9401		ODR-9901	
	lb/MMscf	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Formaldehyde	0.075	<0.01	<0.01	<0.01	<0.01	0.01	0.03
Hexane	1.80	0.01	0.05	0.03	0.12	0.15	0.65
Total	**-**	**0.01**	**0.06**	**0.03**	**0.12**	**0.16**	**0.68**

(1) Based on 8,760 hours per year.

HAP emissions for the enclosed flare (FLR-5801) are based on AP-42 (11/98), Table 2.4-1 and 2.4-3, a heat rating of 95 MMBtu/hr, a biogas heating value of 630 Btu/scf and 1,314 hours per year. HAP emissions from the biogas start-up vent (DIG-2000) are based on AP-42 (11/98), Table 2.4-1, a flow rate 400 scfm, a density of hexane of 0.2400 lb/scf, and 144 hours per year.

Enclosed Flare and Start-Up Vent HAP Emissions

HAP	Emission Factor	Emissions			
		FLR-5801		DIG-2000	
	ppmv	lb/hr	TPY[1]	lb/hr	TPY[2]
1,1,1-Trichloroethane (methyl chloroform)	0.48	<0.01	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	1.11	<0.01	<0.01	0.01	<0.01
1,1-Dichloroethane (ethylidene dichloride)	2.35	<0.01	<0.01	0.01	<0.01
1,1-Dichloroethene (vinylidene chloride)	0.2	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane (ethylene dichloride)	0.41	<0.01	<0.01	<0.01	<0.01
1,2-Dichloropropane (propylene dichloride)	0.18	<0.01	<0.01	<0.01	<0.01
Acrylonitrile	6.33	<0.01	<0.01	0.04	<0.01
Carbon disulfide	0.58	<0.01	<0.01	<0.01	<0.01
Carbon tetrachloride	0.004	<0.01	<0.01	<0.01	<0.01
Carbonyl sulfide	0.49	<0.01	<0.01	<0.01	<0.01
Chlorobenzene	0.25	<0.01	<0.01	<0.01	<0.01
Chloroethane (ethyl chloride)	1.25	<0.01	<0.01	0.01	<0.01
Chloroform	0.03	<0.01	<0.01	<0.01	<0.01
Dichloromethane (methylene chloride)	14.3	0.01	<0.01	0.08	0.01
Ethylbenzene	4.61	<0.01	<0.01	0.03	<0.01
Hexane	6.57	<0.01	<0.01	0.04	<0.01
Mercury (total)	0.000292	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	1.87	<0.01	<0.01	0.01	<0.01
Perchloroethylene (tetrachloroethylene)	3.73	<0.01	<0.01	0.02	<0.01
Trichloroethylene (trichloroethene)	2.82	<0.01	<0.01	0.02	<0.01
Vinyl chloride	7.34	<0.01	<0.01	0.04	<0.01
Xylenes	12.1	<0.01	<0.01	0.07	0.01
Total	**-**	**0.02**	**0.01**	**0.39**	**0.03**

[1] Based on 1,314 hours per year and a destruction efficiency of 99%.
[2] Based on 144 hours per year.

The total HAP emissions from the equipment at the facility are 0.98 TPY. Therefore, the individual and the total emissions of HAPs do not exceed the major source thresholds of 10/25 TPY.

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

OAC 252:100-7 (Permits for Minor Facilities) [Applicable]
Subchapter 7 sets forth the permit application fees and the basic substantive requirements of permits for minor facilities. Since criteria pollutant emissions are less than 100 TPY for each pollutant, and emissions of HAP will not exceed 10 TPY for any one HAP, or 25 TPY for any aggregate of HAP, the facility is defined as a synthetic minor source. As such, BACT is not required.

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

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

OAC 252:100-19 (Particulate Matter) [Applicable]
Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. Fuel-burning equipment is defined in OAC 252:100-19 as any internal combustion engine or gas turbine, or other combustion device used to convert the combustion of fuel into usable energy. Thus, the emergency generator, boilers and dryers are subject to the requirements of this subchapter. This subchapter specifies a PM emissions limitation of 0.6 lb/MMBTU from fuel-burning equipment with a rated heat input of 10 MMBTUH or less. OAC 252:100, Appendix C specifies a PM emission limitation for 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 lb/MMBTU. Table 1.4-2 of AP-42 (7/98) lists the total PM emissions for natural gas-fired heaters to be 7.6 lb/MMft^3 or about 0.0075 lb/MMBTU. This permit requires the use of natural gas for all fuel-burning equipment to ensure compliance with Subchapter 19.

Comparison of PM Emission Rates to Allowable Emission Rates Under OAC 252:100 Appendix C for the Fuel-Burning Equipment

ID#	Equipment	Maximum Heat Input (MMBTUH	Emissions (lb/MMBTU)	
			Appendix C	Potential
GEN-9001	Emergency Generator	11.475	0.58	0.01
HWB-9301	Hot Water Boiler	7.0	0.60	0.01
STB-9401	Steam Boiler	15.0	0.55	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. OAC 252:100, Appendix G specifies a PM emission limitation for equipment at this facility with a process weight rate of 30 TPH or less based on the following calculation: $E = 4.10P^{0.67}$, where E is the allowable emission rate and P is the maximum process weight rate. OAC 252:100, Appendix G specifies a PM emission limitation for equipment at this facility with a process weight rate of greater than 30 TPH based on the following calculation: $E = (55.00P^{0.11})-40$, where E is the allowable emission rate and P is the maximum process weight rate.

Comparison of PM Emission Rates to Allowable Emission Rates Under OAC 252:100 Appendix G for the Solids Dryers

ID#	Equipment	Process Weight (TPH)	Emissions (lb/hr)	
			Appendix G	Potential
ODR-9901	Seven (7) Solids Dryers	18.72[(1)]	29.19	0.04

[(1)] Based on the annual process weight of 164,000 tons of poultry litter.

Comparison of PM Emission Rates to Allowable Emission Rates Under OAC 252:100 Appendix G for the Cooling Tower

ID#	Equipment	Throughput (gal/hr)	Process Weight (TPH)	Emissions (lb/hr)	
				Appendix G	Potential
EVP-4401	Evaporative Cooling Tower	42,000 gal/hr	175.14[(1)]	57.08	0.13

[(1)] Based on the circulation rate above and a density of water of 8.34 lb/gal.

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. The permit will require that the fuel burning equipment be fueled only with natural gas to ensure compliance with this requirement. Exhaust air from the Receiving Building,

the Digestate Dewatering Building, and the solids dryer are controlled by a packed ammonia wet scrubber. The permit will require maintenance of the control device to ensure compliance with the opacity standard.

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 originated 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 to interfere with the maintenance of air quality standards. Under normal operating conditions, this facility has negligible potential to violate this requirement; 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 H_2S emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 µg/m^3. The applicant submitted H_2S modeling based on a maximum concentration of 7,000 ppmv H_2S in the biogas using AERMOD (version 23132) for the facility-wide emission rates as listed in the table below.

ID#	Equipment	H_2S Emission Rate (lb/hr)	Release Height (ft)	Flow Rate (acfm)
DIG-2000	Biogas Vents	16.14	94	400
GMBR-5501	RNG Membrane Tail Gas Vent	0.05	19	950
FLR-5801	Enclosed Flare	2.03	50	522,569
RCT-5201	H_2S Removal System Scrubber	0.00303	25	534

The modeled maximum 24-hr total impact from the facility was 35.2 µg/m^3 (0.02 ppm) based on a maximum H_2S concentration of 7,000 ppmv. Therefore, this facility as a whole would be in compliance with this part. Though modeling at concentration of 7,000 ppmv H_2S indicates compliance with this part, the facility will be permitted for a maximum concentration of 3,500 ppmv H_2S.

Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. The permit requires all fuel-burning equipment shall only be fueled with pipeline quality natural gas as defined in Part 72 having 0.5 grains sulfur/100 scf or less to ensure compliance with Subchapter 31.
Part 5 also limits hydrogen sulfide emissions from new petroleum or natural gas process equipment (constructed after July 1, 1972). Removal of hydrogen sulfide in the exhaust stream, or oxidation to sulfur dioxide, is required unless hydrogen sulfide emissions would be less than 0.3 lb/hr for a two-hour average. Hydrogen sulfide emissions shall be reduced by a minimum of 95% of the hydrogen sulfide in the exhaust gas. Direct oxidation of hydrogen sulfide is allowed for units whose emissions would be less than 100 lb/hr of sulfur dioxide for a two-hour average. Biogas does not meet the definition of natural gas. Therefore, the equipment at this facility does not meet the definition of "petroleum or natural gas process equipment" and is not subject to this requirement.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.2 lb of NOx per MMBTU, three-hour average. Fuel-burning equipment is defined in OAC 252:100-1 as any boiler, furnace, gas turbines or other combustion devices used to convert the combustion of fuel into usable energy. The enclosed flare does not meet the definition of "fuel-burning equipment." Therefore, there is no fuel-burning equipment that exceeds 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 reforming unit, or petroleum catalytic cracking unit.

OAC 252:100-37 (Volatile Organic Compounds) [Part 7 Applicable]
Part 3 requires VOC storage tanks constructed after December 28, 1974, with a size of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. This facility does not have any VOC storage tanks.
Part 3 requires VOC loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility does not have any VOC storage tanks or loading activities.
Part 5 limits the organic solvent content of coating of parts and products. This facility will not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is not an affected operation.
Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. Temperature and available air must be sufficient to provide essentially complete combustion. The emergency generator is considered fuel-burning or refuse-burning equipment, therefore, it is subject to this requirement.
Part 7 requires all effluent water separator openings, which receive water containing more than 200 gallons per day of any VOC, to be sealed or the separator to be equipped with an external floating roof or a fixed roof with an internal floating roof or a vapor recovery system. No effluent water separators are located at this facility.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates TAC that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated anywhere in the state, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All

required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

SECTION VI. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60 [Subparts Dc and JJJJ Applicable]

Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units. This subpart affects each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of between 10 MMBTUH and 100 MMBTUH. The steam boiler (STB-9401) has a maximum design heat input capacity of 15.0 MMBTUH. The steam boiler is subject to the notification and recordkeeping requirements of this subpart.

Subpart Kb, Volatile Organic Liquid (VOL) Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813-gal (75 m^3) capacity and built after July 23, 1984. This facility does not have any VOL storage vessels.

Subpart VVa, Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. This facility does not produce any of the chemicals listed in §60.489. Therefore, this facility is not subject to this subpart.

Subpart III, VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. This subpart applies to air oxidation reactors located at synthetic organic chemical manufacturing facilities which produce chemicals listed in this subpart. This facility does not produce any of the chemicals listed in §60.617. Therefore, this facility is not subject to this subpart.

Subpart NNN, VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. This subpart applies to facilities that produce chemicals listed in this subpart where the facility is equipped with a distillation unit constructed after December 30, 1983. This facility does not produce any of the chemicals listed in §60.667. Therefore, this facility is not subject to this subpart.

Subpart RRR, VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. This subpart applies to facilities that produce chemicals listed in this subpart where the facility is equipped with a reactor process unit constructed after June 29, 1990.

This facility does not produce any of the chemicals listed in §60.707. Therefore, this facility is not subject to this subpart.

Subpart IIII, Stationary Compression Ignition Internal Combustion Engines. There are no stationary compression ignition internal combustion engines at this facility.

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 1,341-hp emergency generator (GEN-9001) was constructed after June 12, 2006, and manufactured after January 1, 2009, the regulatory applicability date for emergency engines with greater than 25-hp. Therefore, the emergency generator is subject to this subpart, and the permit requires compliance with all applicable requirements of this subpart.

Emission Standards from Table 1, Subpart JJJJ, g/hp-hr
For Stationary Emergency Engines >25 HP

Rated Power (HP)	NO_X	CO	VOC
≥ 130 HP	2.0	4.0	1.0

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 benzene. Subpart J, Equipment Leaks of Benzene, only affects process streams, which contain more than 10% benzene by weight. All process streams at this facility are below this threshold.

NESHAP, 40 CFR Part 63 [Subpart ZZZZ Applicable]
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 a new or reconstructed RICE located at an area source 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).

GEN-9001 was constructed after June 12, 2006, and is a new stationary RICE located at an area source of HAPs. GEN-9001 will comply with NESHAP Subpart ZZZZ by complying with the requirements of NSPS Subpart JJJJ for SI engines.

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 of HAPs, this subpart does not apply.

Subpart JJJJJJ, 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. Boilers (STB-9401 and HWB-9301) meet the definition of gas-fired boilers; therefore, they are not subject to this subpart.

SECTION VII. COMPLIANCE

TIER CLASSIFICATION AND PUBLIC REVIEW

This application has been determined to be **Tier I** based on the request for a minor construction permit. Information on all permit actions is available for review by the public in the Air Quality Section of the DEQ web page: *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 application involves only land owned by the applicant.

The draft permit has undergone public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA had 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/.

During the comment period described above, DEQ received comments and multiple requests for a public meeting on the draft permit. DEQ agreed to the public meeting request. The applicant published the "Notice of Public Meeting" in the Miami News Record, a legal newspaper in Miami, OK, on February 28, 2025. The notice stated that a public meeting would occur at the City of Miami Civic Center Banquet Hall on April 2, 2025, from 5:30-7:30PM.

Per Oklahoma Statute 27A 2-14-303, any person may submit oral or written statements and data concerning the draft permit at a public meeting. The applicant or a representative of the applicant shall be present at the meeting to respond to questions. The DEQ, after considering the comments, shall prepare a response to comments and issue the draft permit as is, as amended, or make final denial.

All comments received during the above mentioned comment periods are addressed in Section VIII. After review of the comments, the following changes were made to the permit:

(1) The maximum H_2S concentration in the digester biogas was lowered to 3,500 ppm.
(2) Emissions in Section IV and limitations in the Specific Conditions for the biogas start-up vent (DIG-2000) were reduced to 144 hours of operation per year and a maximum H_2S concentration of 3,500 ppm. This reflects only start-up emissions not routed to the flare. The biogas start-up vent (DIG-2000) was previously referred to as the biogas emergency vent.
(3) Emissions in Section IV and limitations in the Specific Conditions for the enclosed flare (FLR-5801) were updated based on maximum H_2S concentration of 3,500 ppm..
(4) Additional requirements were added for monitoring the biogas H_2S concentration. The facility will be required to perform monthly stain tube testing on the digester biogas.
(5) Additional monitoring requirements were added for the enclosed flare (FLR-5801). The facility will be required to monitor the pilot flame to ensure the flare is operating properly.
(6) Additional reporting requirements were added in the Specific Conditions to require the facility to submit an annual report of all records required in Specific Condition No. 17.

DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

FEE PAID
A fee of $2,000 for an individual minor source construction permit was paid.

COMPLIANCE AND ENFORCEMENT CASE
There are no active Air Quality compliance or enforcement issues concerning this facility.

INSPECTION
An inspection was determined to not be necessary as part of this review.

SECTION VIII. RESPONSE TO PUBLIC COMMENTS

The following comments were received from the public during the public review period, DEQ has addressed all significant issues related to Air Quality Permitting that were raised in written comments or at the public meeting. DEQ received comments from over 250 individuals and organizations. Additionally, comments were received from two tribal nations. The majority of comments share similar concerns. Due to the volume of similar comments received, these concerns have been summarized below by topic. All written comments and the public meeting transcript are part of the permit record and available upon request from the DEQ central records.

WRITTEN COMMENTS:

Public Comment No. 1:

The DEQ received several comments that described the historic and continued environmental/health impacts of sites including the Picher mines, the Goodrich facility, GRDA, J-M Farms, as well as the local agriculture industry. Commenters were concerned the proposed project would further harm air and water quality. Commenters complained the local agricultural industries, including J-M Farms, have contributed to increased allergies and asthma complications. In addition, these industries produce an offensive odor. Commenters were concerned the proposed project would further deteriorate local respiratory health and air odor pleasantness.

DEQ Response No. 1:

The Department of Environmental Quality (DEQ), Air Quality Division (AQD) mission is to protect and improve public health and our environment. AQD accomplishes this mission through a State Implementation Plan (SIP) to implement and enforce the various air quality programs under the Clean Air Act for which Oklahoma has delegated authority from the U.S. Environmental Protection Agency (EPA). Many of these are covered in this minor source construction permit. In addition, the SIP includes State-only requirements which were deemed necessary at the time of the SIP development or to ensure continued compliance with the National Ambient Air Quality Standards (NAAQS). The NAAQS were developed and under constant review to ensure protection of public health within an adequate margin of safety and protection of the environment including: visibility, damage to crops, vegetation, buildings, and animals.

This minor source construction permit package documents the types and amounts of emissions in pound per hour and ton per year based on the accepted methodologies. Regulatory limits were reviewed based on the applicable criteria of each potentially applicable standard or requirement. The facility was required to submit H_2S modeling to ensure compliance with Part 2 of OAC 252:100-31. As discussed in Section V of this memorandum, modeling indicated the maximum 24-hour total impact from the facility was 35.2 µg/m^3 (0.02 ppm) based on a maximum H_2S concentration of 7,000 ppmv. The facility demonstrated impacts to the ambient air concentration would be well within the standard of 283 µg/m^3 (0.2 ppm) on a 24-hour average. Additionally, DEQ reviewed the facilities' potential impact at ground level on a 1-hour average. Modeling indicated the maximum 1-hour impact at ground level and at 2 meters above ground level was 0.5 ppmv. Modeling on a 24-hour average and a 1-hour average indicate operations will not threaten public health or the environment.

Note the above-mentioned modeling was performed at an H_2S concentration of 7,000 ppmv. Argo has voluntarily revised their assumptions regarding the maximum expected H_2S concentration to 3,500 ppmv. Impact on a 24-hour average and on a 1-hour average will be further reduced. Additionally, Argo has indicated the facility and personnel will be equipped with four gas monitors in order to detect and alarm personnel in the presence of H_2S.

The EPA and AQD have regulatory requirements to address cumulative impacts from multiple facilities located in close proximity. The requirements are triggered under the prevention of significant deterioration (PSD) program when a new major source or major modification is proposed. Emissions associated with this permit action do not rise to the major source threshold, as it is for a minor source construction permit, therefore no cumulative impact reviews are triggered for this permit action.

Furthermore, this permit only addresses air quality. It does not, and cannot, address regulatory issues related to other media (e.g., discharges to waterbodies) or other concerns outside of DEQ's jurisdictional authority. As such, this comment response cannot address those issues. Neither the EPA nor DEQ have regulatory requirements to address nuisance odor and, as such, this permit cannot address specific odor issues.

Review of all the requirements contained in the current SIP plan indicated the facility is in compliance.

Argo Response No. 1:
Argo is responsible for designing the Oklahoma Bioprocessing Project to have adequate air controls under Oklahoma's SIP and maintain compliance with the NAAQS. To that end, we engaged professionally credentialed experts (i.e Professional Engineers/Scientists) who in some cases are global experts, throughout the development process. While not strictly required, we ensured that the engineering team incorporated vendor data from key equipment manufacturers rather than using generic assumptions. Because of the depth of expertise brought to bear on the design, the community can be confident in the Project's ability to comply with the NAAQS and meet standards.

Argo understands the sensitivity for nuisance odor. We know that odor is a key concern for the community. For that reason, we have included an odor control system in the design that has been used in other communities across the globe to control detectable odors at the property boundary/ fence line.

Argo has developed lifecycle analysis (LCA) models as part of the overall business case for the project. One aspect that directly benefits local air quality is that the anaerobic digestion (AD) project reduces the land-application of poultry litter on farmland, which in turn reduces ammonia and particulate matter (PM) emissions overall in the community. The project will prevent up to 1,200 tons per year ammonia from volatizing from fields into the atmosphere, which creates a net reduction in $PM_{2.5}$ of 400 tons per year. We believe this is important information for those concerned about allergies and asthma to consider.

Public Comment No. 2:

The DEQ received several comments opposing development by the permittee in their area commonly termed NIMBY or "not in my backyard". These comments did not include additional justification for their opposition.

DEQ Response No. 2:
Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to site procurement, real estate, or leasing activities that would influence the location of a facility and as such cannot address those issues.

Public Comment No. 3:

The DEQ received several comments concerning the local infrastructure. Commenters were concerned the operation of the facility would result in increased traffic creating hazardous driving conditions for locals. Further, commenters were concerned the local infrastructure including roads and water utilities would be incapable of supporting activity from the proposed facility.

DEQ Response No. 3:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to infrastructure nor utilities and as such cannot address those issues.

Argo Response No. 3:

Argo is coordinating traffic impact and water supply with the correct regulatory authorities, namely ODOT and Rural Water District (RWD) #4. We are also working with the local Native American Tribes to ensure they have the correct information.

Public Comment No. 4:

The DEQ received several comments concerning local economic interests such as property values and tourism. Commenters are concerned that potential property buyers and tourists would be deterred due to offensive odors, noise, and environmental concerns. Lack of desirability would subsequently decrease property values and decrease revenue from tourism.

DEQ Response No. 4:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to site procurement, real estate, or leasing activities that would influence the location of a facility and as such cannot address those issues.

Argo Response No. 4:

Argo agrees that the site selection is outside the scope of the air permit review, however in the spirit of trying to provide answers to all questions, please consider the below.

Argo held an open house/town hall meeting on March 11 in Miami; one of the key items addressed in the presentation and the Q&A was the overall fit of this type of project in an area that has residential, agricultural, and cultural sites within a few miles. Of note, there are more than 2,000 anaerobic digester projects in the U.S., including some in densely populated areas such as Brooklyn, New York City. In that presentation, we detailed how that digester has been successfully operated with more than 300,000 residents in a 2 mile radius. There are many instances of successful digester operation in the U.S. and globally, without an adverse affect on property values, and while providing good construction and operations jobs and creating a large long term tax base. The project also supports local agriculture and improves nutrient management in the watershed. All of the benefits will be additions to the local community. We will continue providing additional information for community members that have questions on these topics.

Public Comment No. 5:

The DEQ received several comments concerning the spread of avian flu. Commenters were concerned the mishandling of contaminated poultry waste could lead to a community outbreak of disease. One commenter expressed concern that pathogens would be able to survive the anaerobic digestion process and continue to be active in the digestate.

DEQ Response No. 5:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to infectious diseases nor activities associated with concentrated animal feeding operations and as such cannot address those issues. Operations at concentrated animal feeding operations are regulated by the Department of Agriculture, Food, and Forestry.

Argo Response No. 5:

According to our poultry growers, in the event of avian influenza, poultry litter would not be able to leave the farms and Argo would not receive any contaminated poultry litter. For information – studies have shown thermal inactivation of avian influenza occurs in 1 day at about 23 degrees Celsius in manure; Argo's digesters operate at around 40 degrees Celsius and has a residence time of over 20 days, meaning Argo's process operates at 17 degrees above the inactivation threshold, for 19 days longer than this standard.

Public Comment No. 6:

The DEQ received a couple comments concerning the potential explosion and fire risk associated with methane gas. Commenters are concerned about the health and safety risks associated with a methane gas explosion. Additionally, they are concerned Ottawa County would not have the ability to respond to an emergency situation.

DEQ Response No. 6:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency response situations such as explosions, and as such cannot address those issues.

Argo Response No. 6:

Argo is coordinating emergency response with the Quapaw Nation Office of Emergency Management and confirming any impact on other parties. The Planning & Response Assessment that was performed has no impact on the air permit. We agree that emergency response is outside the scope of the air permit review. However, in the spirit of striving to answer all the questions, please note that the facility design does not include any compressed or liquefied natural gas storage, which reduces the risk of a gas explosion.

Public Comment No. 7:

The DEQ received a comment from the LEAD Agency concerning issues related to the agriculture industry as well as environmental justice. The commenter stated:

We request that the Oklahoma Department of Environmental Quality ("DEQ") deny Argo's permit application for the reasons detailed below. DEQ cannot allow the project to proceed because it poses unacceptable risks to the natural environment and creates unacceptable human health risks for communities already overburdened by environmental health hazards.

The project would also further entrench and incentivize the factory farm industry in the region and the enormous amount of waste and pollution it generates. Argo's proposal is entirely dependent on the continued generation of highly pollutive poultry industry waste. Processing waste through anaerobic digesters is known to exacerbate nutrient pollution like nitrate contamination because it chemically alters the waste, making pollutants more likely to run off into surface waters and

leach into groundwater. Importing likely from Arkansas yet more waste and pollution to generate methane gas, and amplifying its potential to harm the environment and public health, will only make things worse for Ottawa County.

Notwithstanding common parlance, methane gas from biomass/bioprocessing is not renewable. It depends upon the poultry industry's production of chicken litter wastes, at the present scale. Large concentrated production poultry "farms" in Ottawa and Delaware Counties constructed in the past few years were facilitated by ODAFF, and they have admitted this. The result was, and continues to be, a loss of small farms in the vicinity of these facilities. Neighbors that remain, continue to complain about odor, as well as on-going pollution of streams and Grand Lake (similar to the pollution of the Illinois River and Lake Tenkiller). Grand Lake suffers from nutrient loading as a result of poultry operations across the border in MO and well as the large poultry growing facilities in Oklahoma. The problem this facility attempts to fix is the vast quantity of poultry waste that currently is used as a fertilizer for agricultural lands, contributing to water quality problems. LEAD Agency, and our allies, believe these concentrated poultry facilities are a bad model for raising these birds. This model was designed to produce mass quantities of poultry products for the world, so, mainly for export. As the general public now realizes that eating fresh/locally is the healthiest choice, (which also increases market value for the farmer, as well as incentivizing buying direct, with opportunities for increased value added production), the industry is coming up with more creative ideas for sustaining their market for this mega production style (requiring concentration in mega-barns).

It is against (and in dependency on) this landscape that Argo steps in. This biomass facility proposed for Ottawa County claims to offer a solution to the waste problem associated with the spread of these wastes. If DEQ permits this facility, it will be fueling this bad agricultural model to the detriment of Oklahoma's environment and public health. Permitting this facility would likely do nothing to reduce Oklahoma's overabundance of polluting poultry litter. Large quantities of waste will still be applied by area farmers because Argo's fertilizers will be sold as a premium "organic" fertilizer beyond the financial reach of most area farmers.

LEAD Agency has engaged in extensive research and community engagement, which shows that the project poses serious environmental injustice concerns. The nearest residential and commercial properties are located within 1 mile of the property. Within one mile of the project, community members are in the 79th percentile in Oklahoma for exposure to air toxics meaning that the immediate area is already burdened by hazardous air pollutants with carcinogenic and other negative health impacts. They are in the 81st percentile nationally for $PM_{2.5}$. Also, those living within one mile of the project are in the 94th percentile for the state with respect to proximity to Superfund sites needing long-term clean up from emergency and hazardous wastes. The Superfund statistic is even more stark considering the project's proposed location (and, indeed all of Ottawa County) is within the Tar Creek superfund site, which poses significant health and environmental hazards throughout the region. Within five miles of the project, residents of color make up 39% of the population. Residents living in poverty make up 45% of those living within five miles of the project. These disparities indicate environmental and economic injustices already exist.

Local communities are already affected by health disparities and overburdened by pollution. Residents within five miles are in the 94th percentile nationally for heart disease, the 90th percentile

nationally for asthma, the 80th percentile for cancer, and the 87th percentile for low life expectancy. One quarter (25%) of this community are children under the age of 5 and adults over the age of 64, segments of the population more vulnerable to risks from exposure to existing pollution. Argo's proposal would only compound these negative health impacts.

So-called biogas production from factory farm waste is a known environmental justice issue where it has become established. For example, in North Carolina where "factory farm gas" production has been embraced and fostered by state policies for years, the environmental justice harms have come into stark relief. The push to install anerobic digesters and other technologies to address to much factory farm waste have been largely unsuccessful at mitigating local pollution problems and instead have elicited strong opposition and legal actions from impacted community members. In January of 2022, the U.S. Environmental Protection Agency agreed to investigate North Carolina for possible violations of federal Civil Rights Act in permitting biogas operations at hog factory farms. The experience in North Carolina is not unique; "impacted environmental justice communities around the country have organized against the proliferation of biogas."

Nonetheless, DEQ has failed to address environmental injustice in its review of Argo's application. DEQ has a duty to protect the most vulnerable members of the community. Allowing the project to proceed as proposed would run afoul of that duty.

These emissions are added to the emissions of the other permitted facilities in the area. LEAD Agency is an Environmental Justice (EJ) organization operating in a county that is considered by the EPA to be an environmental justice area. EJ areas are not to be subjected to increased permitting of regulated facilities that could further degrade the environment and/or public health.

Odor is the biggest problem (combined with J-M Farms). H_2S and ammonia are already causing odor complaints and potential health problems in the area. Area residents try to avoid driving through the area of J-M Farms because of the intense odors (despite their new scrubbers). The Argo facility down the road from J-M will increase this odor, which we and area residents see as a public nuisance, at the very least. The particulate matter (PM) produced, along with H_2S and ammonia combine with J-M for an increase of public health concerns.

Increased truck traffic that could add to dust issues and PM exposure, added to the PM10/2.5 emissions in the area. We question the health safety related to increased truck traffic in this area. Given concerns above, the dust from the trucks, as well as, emissions from the trucks exhaust will add to the overall odor and emissions of pollutants from the area, and the City of Miami during certain wind direction.

Addition pollution to this Environmental Justice area: poultry fertilizer contains antibiotics, growth hormones and other contaminants that are not destroyed by anerobic digestion. These wastes, including PFAS and microplastics are now contaminating the farms and watershed in Northeast Oklahoma. This facility is not an answer to this problem, and, again exacerbates the standing of Ottawa County as an Environmental Justice area.

DEQ Response No. 7:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to the agriculture industry including application of fertilizers nor concentrated animal feeding operations. Concentrated animal feeding operations and the application of poultry waste are regulated by the Department of Agriculture, Food, and Forestry.

In order to protect human health and the environment for all Oklahomans, all DEQ permits undergo a review and approval process to ensure environmental requirements are met. DEQ consistently implements and enforces environmental laws and regulations throughout Oklahoma, including proper notice and public comment procedures.

Argo Response No. 7:

Argo has been communicating with L.E.A.D. Agency directly since the initial air permit public comment period; we intend to continue to provide information and address questions and/or concerns.

Public Comment No. 8:

The DEQ received a comment concerning the reliability of biogas. The commenter stated:

I work in this industry. I helped Weishaupt America design and install burners for digester gas. Digester gas is not reliable. I have implemented it with many companies. Our area of Miami is already plagued by major pollutant facilities. We have minimal air permit requirements. With the little air permit requirements we force companies to have we should not allow this facility in our area. We should not allow it in our state. Biogas is a disgusting and terrible business. The waste runoff along with the air pollutant will drive people further away from our towns. We already loose due to the mushroom farm. Do not permit this industry to start here. If you would like data and engineering stats for this let me know. Currently Volvo trucks has contracted me to be their third party inspector for their digester gas project. We are turning them away from this. I can provide insight into what Argo is proposing with more knowledge than most.

DEQ Response No. 8:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to the reliability of digester gas and as such cannot address those issues.

Argo Response No. 8:

The comment appears to be related to burning raw biogas. The Oklahoma Bioprocessing Project does not burn raw biogas in normal operations.

Public Comment No. 9:

The DEQ received a comment concerning environmental modeling and health impact study. The commenter stated:

Granting the minor source air permit for this chemical processing company without further environmental modeling and potential public health impacts is short-sited. The permit lacks a risk-based approach for determining impacts. I encourage DEQ to take a closer look at the widespread impacts that such a facility contributes to an already polluted area and community.

DEQ Response No. 9:

Please refer to DEQ Response No. 1.

Argo Response No. 9:

Argo believes that the original permit application included modeling and engineering to establish fence line compliance with the hydrogen sulfide standard in OAC 252:100-31-7 and used EPA methods or methodology approved by a Professional Engineer for calculating emissions.

Public Comment No. 10:

The DEQ received a comment concerning the longevity of the facility and potential hazardous cleanup. The commenter stated:

The US EPA provides a downloadable Excel Spreadsheet (AgSTAR Livestock Anaerobic Digester Database) regarding open and closed digesters. According to the data, there have been 571 total digesters in the US and 98 total digesters have shut down (or 17%). There are only 10 open and 7 shut down poultry digesters. Of concern, only 2% of digesters involve poultry, yet 41% of poultry digesters have shut down. What if the Argo poultry digester were to be approved, then shuts down and environmental remediation is needed? Ottawa County does not need the additional environmental hazards in our area. Please do not risk placing a digester in our county.

Please do not allow the digester to operate in Ottawa County. If the digester closes, who will be responsible for any cleanup, especially if there are hazards remaining. Mining companies went bankrupt to avoid paying for their damage. Do you truly believe this company can repair the damage if there is an instance of fire, explosion or asphyxiation? How much is a human life worth?

DEQ Response No. 10:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to a facility's lifecycle nor unexpected emergency situations and as such cannot address those issues. Further, this permit only addresses air quality regulations, any potential future need for remediation is outside the scope of this permit.

Argo Response No. 10:

Argo held an open house/town hall meeting on March 11 in Miami; one of the key items addressed in the presentation and the Q&A was the decommissioning bond, which is a financial instrument that protects the landowner and community in event of plant closure. This is not a regulatory requirement but an "above and beyond" requirement that the landowner requested to de-risk the project's impact on the community in any future scenario where project ownership changes and/or unforeseen events occur.

Public Comment No. 11:

The DEQ received a comment concerning the definition of biogas and OAC 252: 100-31. The commenter stated:

Section 2, paragraph 1: Argo states that the facility will "produce pipe-line quality renewable natural gas (RNG)."

However, under SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES, OAC 252:100-31 (Sulfur Compounds), Argo states, "Biogas does not meet the definition of natural gas. Therefore, the equipment at this facility does not meet the definition of "petroleum or natural gas process equipment" and is not subject to this requirement."

"Pipeline quality" means a gas is physically and chemically indistinguishable from natural gas sourced from wells. They are clearly trying to represent that they are providing natural gas from renewable sources, while simultaneously arguing that what they process is not natural gas, in order to exempt themselves from an air quality regulation. This is nonsensical and disingenuous, and does nothing to recommend them as a responsible, well-intended enterprise. I assert that their process and equipment are subject to OAC 252:100-31 (Sulfur Compounds), as they in fact are processing natural gas, whatever its origin. Furthermore, because they try to duck an emission requirement in order to vent a lethal H_2S concentration (7000 ppm; H_2S becomes lethal below 1000 ppm) directly to the atmosphere, it appears they have a callous disregard for safety and well-being of the residents of Ottawa County. Their application should be denied for this reason alone.

DEQ Response No. 11:

The equipment at this facility does not meet the definition of "petroleum or natural gas process equipment"

OAC 252:100-31 defines "petroleum and natural gas process equipment" as the process equipment used to convert crude petroleum and/or natural gas into refined products. Petroleum and natural gas process equipment includes, but is not limited to, distillation columns, treating columns, catalytic cracking units, catalytic reforming units, sulfur removal equipment, petroleum coke units, flares, heat exchangers, reboilers, jet ejectors, compressors, recompressors, and any other auxiliary equipment pertinent to the process. Petroleum and natural gas process facilities include petroleum refiners and natural gas processing plants (as defined by 40 CFR § 60.631), but do not include

petroleum and natural gas production, gathering, and transportation facilities. 40 CFR § 60.631 defines a natural gas processing plant to mean any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. Renewable natural gas is often called biomethane and is a type of biogas that has been processed and upgraded to produce a pipe-line quality gas. Actual pipeline gas quality specifications may vary for specific pipelines but generally they limit the maximum allowable content of each minor and trace component, set an acceptable range of heating value (typically 950 – 1,150 British thermal units per standard cubic foot), and require that the gas be free of water and hydrocarbons in liquid form (at delivery and pressure conditions) and solid particles that can be detrimental to the equipment. There is no requirement that it be physically and chemically indistinguishable from that produced from field gas.

Based on these definitions, the biogas production facility is excluded from the definition of a natural gas process facility. However, the facility remains subject to Part 2 of OAC 252:100-31.

Public Comment No. 12:

The DEQ received a comment concerning the release of ammonia in a failure. The commenter stated:

I'm a nearby resident of the proposed site, and I am not in favor of this project. Though the created jobs would be amazing, the possible contamination of the environment is too high. The proposal mentions an odor control system to remove ammonia, but what happens if there is a machine failure? If there's a leak, ammonia is then released into the atmosphere? How will that effect the workers and nearby residents? How can the company insure that there will never be an issue with the storage facilities? If there's a failure anywhere down the line. It's the local workers and communities that will be affected.

DEQ Response No. 12:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency response situations and as such cannot address those issues. In the event of an excess emissions event, Argo is required to immediately notify the DEQ per OAC 252:100-9.

Argo Response No. 12:

The Oklahoma Bioprocessing Project’s engineers and operators are required to maintain plans, equipment and protocols in place to prevent uncontrolled releases of ammonia or other hazardous chemicals into the environment, whether in a liquid or vapor phase. These approaches have been used at facilities across the world and developed through decades of operational projects. These approaches also include redundancy, monitoring and control to ensure equipment meets design intent. We believe the air permit application demonstrates the rigor required to ensure safe operations.

Public Comment No. 13:

The DEQ received a comment from the Mimia Tribe concerning the release of criteria air pollutants and hazardous air pollutants. The comment stated:

The Miami Tribe is informed Argo plans to use European technology with this bioprocessing plant, and Argo represents there won't be any associated plant smell until a person opens the door into the plant. That simply cannot be true. We are informed Argo plans to receive 164,000 tons of poultry liter annually. We assert that the transportation, storage and use of this magnitude of a vile smelling substance is not containable and creates grave air quality, water quality and public safety concerns.

We note in the permit information that "Venting from the biogas emergency vent (DIG-2000) shall be limited to 1,460 hours of operation per year…." That could translate into the release of noxious fumes an average of four hours a day for 365 days. That means nitrogen oxide, carbon monoxide, sulfur dioxide, hydrogen sulfide and ammonia may and likely will be released into our community. The application at pages 3-9 ("Section VI. Emissions") describes additional anticipated emission of several compounds that are hazardous to human health, including but not limited to the following:

Formaldehyde - CH_20
Exposure can cause myeloid leukemia and cancers of the paranasal sinuses, nasal cavity, and naso-pharynx. National Cancer Institute
https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/formaldehyde (last viewed 1.22.25).

Benzene - C_6H_6
Exposure increases risks of leukemia and other blood disorders. National Cancer Institute
https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/benzene (last viewed 1.22.25).

Nitrogen Dioxide – NOx
A component causing acid rain, nitrogen-generated algae and other noxious growth, and enhanced greenhouse effects. United States Environmental Protection Agency
https://www3.epa.gov/ttncatc1/dir1/fnoxdoc.pdf (last viewed 1.22.25).

Acetaldehyde - C_2H_4O
A probable human carcinogen, long-term exposure creating symptoms consistent with chronic alcoholism. United States Environmental Protection Agency
https://www.epa.gov/sites/default/files/2016-09/documents/acetaldehyde.pdf (last viewed 1.22.25).

Methanol - CH_3OH
Acute and long-term exposure causes blurred vision, headaches, dizziness, and nausea. United States Environmental Protection Agency, https://www.epa.gov/sites/default/files/2016-09/documents/methanol.pdf (last viewed 1.22.25). May cause birth defects of the central nervous system, Center for Disease Control, https://www.cdc.gov/niosh/ershdb/emergencyresponsecard_29750029.html#:~:text=Methanol%20may%20cause%20birth%20defects,stomach%20disturbances%2C%20and%20visual%20failure (last viewed 1.22.25).

Hexane - C_6H_{14}
Chronic exposure in air is associated with polyneuropathy in humans, with numbness in the extremities, muscular weakness, blurred vision, headache, and fatigue observed. Neurotoxic effects have also been exhibited in rats. United States Environmental Protection Agency, https://www.epa.gov/sites/default/files/2016-09/documents/hexane.pdf (last viewed 1.22.25).

Acrolein C_3H_4O
Intensely disagreeable odor and cause for respiratory irritation and congestion. United States Environmental Protection Agency, https://www.epa.gov/sites/default/files/2016-08/documents/acrolein.pdf (last viewed 1.22.25).

Not only do we not want to smell this project, but we certainly do not want to suffer the negative and very real health and environmental consequences threatened by this type of project. The Miami Tribe therefore requests prompt and meaningful consultation on the application before the DEQ takes any action. In addition to these comments, the Tribe joins in the comments and objections of the Quapaw Nation of Oklahoma, the government of jurisdiction over the project, the Wyandotte Nation, and the L.E.A.D. Agency as though fully set forth herein.

Miami, Oklahoma has been home to the Miami Tribe for more than 150 years. The Ottawa County community is already negatively impacted in water, soil and air quality issues from past mining practices; we endure periodic uncontrolled flooding events; we endure foul odorous emissions from the mushroom plant on 69 Highway – our community certainly does not deserve to suffer the negative impacts from the Argo project.

DEQ Response No. 13:

Please refer to DEQ Response No. 1. As detailed in DEQ Response No. 1, DEQ regulates the release of criteria air pollutants and hazardous air pollutants. DEQ does not have regulatory authority to address issues related to odor and as such cannot address those issues. The applicant has demonstrated the ability to comply will all applicable air quality rules and regulations. After review of the comments, the following changes were made to the permit:

(1) The maximum H_2S concentration in the digester biogas was lowered to 3,500 ppm.
(2) Emissions in Section IV and limitations in the Specific Conditions for the biogas start-up vent (DIG-2000) were reduced to 144 hours of operation per year and a maximum H_2S concentration of 3,500 ppm. This reflects only start-up emissions not routed to the flare.

The biogas start-up vent (DIG-2000) was previously referred to as the biogas emergency vent.

(3) Emissions in Section IV and limitations in the Specific Conditions for the enclosed flare (FLR-5801) were updated based on maximum H_2S concentration of 3,500 ppm.
(4) Additional requirements were added for monitoring the biogas H_2S concentration. The facility will be required to perform monthly stain tube testing on the digester biogas.
(5) Additional monitoring requirements were added for the enclosed flare (FLR-5801). The facility will be required to monitor the pilot flame to ensure the flare is operating properly.
(6) Additional reporting requirements were added in the Specific Conditions to require the facility to submit an annual report of all records required in Specific Condition No. 17.

Oklahoma is currently evaluating the impact of, and any necessary response to, EPA's January 2025 decision to replace Oklahoma's existing SAFETEA approval with a conditional approval. In the meantime, DEQ intends to continue its ongoing tribal coordination and enhanced notification efforts. Working closely with our tribal partners is a priority for DEQ; consequently, in early 2021, DEQ proactively developed a policy and process to provide enhanced notification to Covered Tribes when undertaking permitting, rulemaking, and other relevant actions potentially impacting areas that fall within a Covered Tribe's boundaries. DEQ staff review all comments received during the process and respond to each in writing. DEQ values input from our tribal partners and looks forward to building upon our beneficial relationships as we all work to protect and improve human health and the environment in a manner that supports and advances a prosperous Oklahoma for current and future generations.

Argo Response No. 13:
Refer to Argo Response No. 1. As detailed in Argo Response No. 1 and others, Argo has demonstrated the ability to comply with all applicable air quality rules and regulations, specifically the Oklahoma SIP and the NAAQS.

Public Comment No. 14:

The DEQ received a second comment from the Miami Tribe concerning the biogas venting (DIG-2000), flaring requirements, and emergency situations. The comment stated:

The Tribe in this letter reiterates the seriousness of the potential impacts of this facility on our reservation and citizens. There are gaps in Argo's descriptions of its venting and flaring practices that could cause hydrogen sulfide releases not currently accounted for in the draft construction permit. Hydrogen sulfide is an odorous gas that can have serious health impacts. It is also flammable and corrosive, creating the potential for explosions or failure of pipes or tanks. These impacts affect the Tribe's ability to protect the health, safety, and welfare of its citizens. In-depth consultation is necessary to ensure the Tribe's interests are protected, and specific permit conditions are needed as described in this letter.

1. ***The Miami Tribe of Oklahoma Would be significantly Impacted by the Proposed Bioprocessing Plant:*** *The Miami Tribe of Oklahoma is a federally recognized tribe with over 7,000 citizens. Our reservation borders the reservation of the Quapaw Nation, where the Argo project is proposed. The project site is near Miami Tribe member housing and*

less than six miles from the Miami Tribe's seat of government. Given the Tribe's governmental offices are inundated with smells from a mushroom facility over four miles away, it is likely that the Tribe would be significantly affected by smells, air emissions, and safety hazards associated with this proposed bioprocessing plant.

2. ***The Construction and Operation of this Facility Are of Public Health Concern:*** *Anaerobic digesters are sometimes labeled as a "green" technology, but they can carry heavy environmental consequences. The biogas produced by these digesters is a mixture of methane and carbon dioxide from the bacterial decomposition of organic materials. Raw biogas contains various impurities harmful to human health, including hydrogen sulfide, nitrogen dioxide, ammonia, volatile organic compounds ("VOCs"), and carbon monoxide. Biogas is also highly combustible, and there are numerous examples of explosions from biodigesters that leaked or were not properly managed. These facilities are controversial. In Europe, the public initially supported biogas production, but biogas soon fell out of favor as the public saw negative environmental consequences. Anaerobic digesters have been controversial in the United States as well. For example, lawsuits are pending in Iowa over permits issued for a bioprocessing project there.*
3. ***The Construction and Operating Permit Applications Require Heightened Scrutiny, Because this is an Unprecedented Proposal and the Developer Lacks Experience in Bioprocessing:*** *Anaerobic digestion of poultry lister is a relatively new process, with only a few facilities in the United States. Anaerobic digestion remains uncommon in the poultry industry due to the technical challenges required to incorporate these systems with typical manure management practices. The chemistry and composition of poultry manure is different than other feedstocks. Poultry manure is high in nitrogen, which creates ammonia. It also tends to be high in sulfur compared to cattle manure, which leads to higher hydrogen sulfide formation in the anaerobic digestion process. Hydrogen sulfide is hazardous to human health and carries a "rotten egg" smell at low levels. Its properties also create a risk of explosion or catastrophic systems failure. This proposal is of particular concern because the project developers lack direct experience constructing or operating biodigesters. Argo Development Partners is a New Hampshire company, first incorporated in 2021. Its LinkedIn profile lists four employees, and its sole officer is Managing Director Miles Walker. Walker has a degree in engineering and an "MBA focused on corporate growth and project development." His portfolio includes roles at Spring Lane Capital and other firms. He has a background in solar development and other start-ups, but no apparent experience with bioprocessing plants at all. Proper operation and management are essential to minimizing the serious health and safety risks associated with biodigesters. Given the untested nature of this proposal and Argo's relative lack of experience, heightened scrutiny is required to ensure that all permits are adequately protective. Robust oversight during the facility's operation is also warranted, including frequent inspections and stringent requirements for reporting to Oklahoma DEQ and affected Tribes.*
4. ***Specific Comments on the Proposed Construction Permit****: Because consultation has not yet materialized, the Miami Tribe submits specific additional comments on the draft construction permit here. The Tribe reserves the right to raise additional concerns as more information becomes available. Any permit issued by the Oklahoma DEQ must conform with the Oklahoma Clean Air Act and federally enforceable requirements incorporated into Oklahoma's SIP under the federal Clean Air Act. These laws authorize Oklahoma*

DEQ to "[e]stablish and enforce reasonable permit conditions," including but not limited to emission limitations, operating procedure, performance standards, provisions relating to entry and inspection, and compliance plans and schedules. Clear operational and reporting requirements are essential to ensure compliance with air-quality laws. "[A]t a minimum," Oklahoma DEQ must require, "that emission control devices on stationary sources be reasonably maintained and properly operated." Oklahoma DEQ must also require prompt reporting of deviations from permit requirements. The draft permit as currently written does not adequately account for potential spikes in hydrogen sulfide emissions, does not establish operating procedures, and falls short on reporting requirements. Before issuing a construction permit, Oklahoma DEQ should require more information on emissions related to emergency events or failures, equipment specifications, and Argo's planned operating procedures. That information should then be used to develop specific construction permit conditions.

5. ***Modeling and Emission Estimates Must Account for Short-Term Spikes in Emissions:*** *Hydrogen sulfide is a "vexing" byproduct of anaerobic digestions. Hydrogen sulfide is an extremely toxic, potentially lethal gas. At sufficiently high concentrations, even short-term exposure can cause serious eye and respiratory irritation, potentially leading to respiratory paralysis and unconsciousness, or even death. Long-term exposure can cause lasting neurological and cardiological effects. Biogas is also very flammable, ignitable in the air by a static charge. Hydrogen sulfide or methane can build up in stored waste unnoticed, then released at dangerous levels during mixing process. There have been numerous incidents in which these gases have ignited, causing digesters to explode. Some of these explosions have caused serious human injury or release of waste slurry over a several-mile radius.*
    a. *In 2013, a small Oregon manure digestor exploded, likely caused by a spark igniting methane that leaked from the digester.*
    b. *In 2014, an anerobic digester explosion at a university in the UK, leaking slurry onto surrounding farmland.*
    c. *In 2017, a pulp digester exploded in Pensacola, raining waste product ("black liquor") over an estimated 10-mile radius.*
    d. *In 2017, an anerobic digester explosion in the UK seriously injured two men and released slurry into the environment.*
    e. *In 2023, another biodigester exploded in the UK, causing a large fire. It is believed that lightning struck one of the gas containers.*
    f. *In 2020, a silo containing biosolids at a wastewater recycling facility in the UK exploded killing four workers.*
    g. *In 2020, a Maine pulp digester exploded.*

    Short-term blowout events can cause hydrogen sulfide spikes causing severe injury or even death. Argo estimates average ambient air concentrations of hydrogen sulfide over 24 hours "at standard conditions," but Argo's documentation does not explain how spikes in hydrogen sulfide from improper flaring practices or "emergency venting" would impact those emissions. As discussed below, the impact of flaring and venting processes may be significant. Calculations of 24-hour emissions averages must explicitly account for spikes from these processes, and the effects of spike events should be specifically modeled.

6. ***The Draft Permit Allows Significant Biogas Venting, Which Could Cause Hydrogen Sulfide Levels to Spike:*** *Argo plans to vent raw biogas from the anaerobic digesters during startup or when downstream equipment has failed. Although Argo has said that venting would occur only on an "emergency" basis, the draft permit would allow up to 1,460 hours per year of venting, which is equivalent to over 60 days out of the year if venting continuously over a 24-hour period. The application assumes hydrogen sulfide concentrations up to 7,000-ppmv in the vented gas. Concentrations at this amount are highly dangerous. A hydrogen sulfide concentration of 1,000 to 2,000 ppm causes deadly respiratory paralysis. Exposure for a long period to even 50 ppm of hydrogen sulfide can cause fluid build-up in the lungs. Although hydrogen sulfide commonly smells of rotten eggs at low concentrations, olfactory sensation is lost once concentrations exceed 150 to 200 ppm, making humans unable to detect potentially deadly concentrations. Even at concentrations of less than 150 ppm, symptoms of inability to think logically and incoherence have been reported. The emissions estimates and modeling in support of Argo's application must specifically account for the effect of venting in the amount contemplated in the application. As the application is currently written, it is not clear how emergency venting is accounted for. Because the effects of venting are significant, Argo should provide information on emissions both with and without emergency venting events. Argo should also provide information on the expected frequency of start-up venting and how long start-up venting events are expected to last.*
7. ***The Draft Permit Does Not Adequately Account for Flaring Practices:*** *Argo proposes to use a natural-gas fired flare to destroy unused biogas and manage releases of hydrogen sulfide and methane. A flare is intended to combust pollutants so they are not released into the environment. But in practice, infrequent monitoring and improper operation of flares are common, leading to spikes of pollutants that the flaring is intended to control. EPA investigations have found some flares combust so poorly that, in reality, they are venting pollutants directly into the air. The draft permit contemplates a significant amount of flare use. It includes two "scenarios."*
    a. *Up to 876 hours (equivalent to over 36 full 24-hour days) per year of flaring gas after hydrogen sulfide removal, at which point Argo estimates the biogas would have a concentration of 100 ppmv of hydrogen sulfide.*
    b. *Up to 438 hours (equivalent to over 18 fuel 24-hour days) per year of flaring gas without hydrogen sulfide removal, in which case Argo estimates a hydrogen sulfide concentration of up to 7,000 ppmv.*

    If proper flaring practices are not assured, actual emissions could far exceed what the application predicts. Oklahoma DEQ must incorporate proper operating specifications, monitoring, and reporting into the construction permit to prevent that from happening.
8. ***Argo Should Calculate and Model Emissions in the Event of Incomplete Combustion:*** *Argo should account for the amount of hydrogen sulfide that will be released if proper combustion does not occur. It does not appear that Argo's modeling evaluates the amount of hydrogen sulfide that would be released if the flare fails. In the event of a partial or complete failure, it is possible that hydrogen sulfide would be released at a much higher rate than Argo predicts.*
9. ***Argo Must Disclose of the Specifics of Proposed Flaring:*** *EPA has emphasized that proper monitoring and controls are essential to ensure that flares are operated safely and effectively, and a number of studies have identified best practices for flare use to minimize*

the chance of failure. But the application and draft permit contain minimal specifications about Argo's planned flare operation, let alone any mandatory controls. Oklahoma DEQ must require Argo to produce specific plans for flaring and provide that information to the Tribe. To the extent that Argo claims this information is proprietary, Oklahoma's statutes do not allow for withholding of this information that is crucial to permit issuance. To qualify as a "trade secret," the information must "derive [] independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and" be "the subject of efforts that are reasonable under the circumstances to maintain its secrecy." "The term 'trade secret' shall not be construed to include data concerning the amount, emission rate or identification of any air contaminant emitted by any source, nor shall it include the contents of any proposed or final permit." And Oklahoma DEQ may require disclosure "trade secrets necessary to determine compliance with the Oklahoma Clean Air Act or any rule promulgated thereunder, or any permit condition prescribed or order issued pursuant thereto."

10. ***The Permit Must Require Specific Best Practices for Flaring:*** *The draft permit does not currently incorporate any best practices for flare management either. As currently written, the draft permit's only condition on flaring operation is the number of hours that the flare may be operated. The purpose of a construction permit is to ensure that a facility is built to ensure emissions control. EPA has emphasized that best practices, including design and operation to control factors like temperature and air flow, are essential to properly controlling emissions from flaring. Because there are no specifics about flare design or operation in Argo's application or the draft permit, the Tribe is unable to assess whether Argo is planning to use any of the recommended best practices. Oklahoma DEQ is required to include conditions to ensure proper operation and maintenance of emission control devices. Given the frequency with which regulators have encountered problems associated with flaring, Oklahoma DEQ must ensure sound practices at the outset.*
11. ***Argo Must Provide More Information About the Proposed Biodigester System, And Oklahoma DEQ Must Include Permit Conditions that Ensure the System Does Not Fail:*** *The presence of hydrogen sulfide within an anaerobic digestion system creates a risk of system failure. Under certain conditions, sulfuric acid can form, corroding the digester walls and potentially leading to structural collapse. System failure could lead to the release of hazardous air and water emissions that would impact the Tribe and its citizens. Because Argo's application provides sparse information about their biodigester system, the Tribe is unable to evaluate the potential for this system failure to occur. Argo must provide details about its operating specifications, and Oklahoma DEQ must impose conditions to ensure that those operating specifications are robust.*
12. ***The Permit Should Require Argo to Report Regularly to Oklahoma DEQ and Affected Tribes:*** *The draft construction permit requires Argo to record, but not necessarily report information on its use of the biogas emergency vent and flare, maintenance records, and other important data about the facility's emissions and operations. According to the draft language, Argo would only have to provide the information when affirmatively requested by "regulatory personnel." But without ready access to this information, neither the Tribes nor Oklahoma DEQ would be able to readily spot any red flags as to the facility's compliance. Given the hazardous nature of hydrogen sulfide, the degree of anticipated venting, and the effects of operating practices on flare efficiency, it is essential for the Tribe*

to have ready and prompt access to this information. The permit should require Argo submit this data to Oklahoma DEQ and to affected Tribes at regular intervals. These reports and data should be submitted to the Environmental Director at the Miami Nations Department of Environmental Quality.

a. *At a minimum, emergency biogas venting data, data on flare uses, and scrubber maintenance logs should be provided on a monthly basis.*
b. *For processes that require data collection on an annual basis, annual reporting may be appropriate.*
c. *Any excess emissions reports Oklahoma DEQ receives from this facility should also be immediately submitted to the Miami Tribe.*

All of these reporting requirements should be explicitly included in the permit to ensure clarity.

13. ***Argo Cannot Operate for More than 60 Days Without Applying for an Operating Permit:*** *The Tribe has been informed that the Oklahoma DEQ interprets its regulations to allow Argo to operate for 180 days before applying for an operating permit. But that amended rule is inconsistent with Oklahoma's SIP. The rule incorporated into Oklahoma's federally approved SIP still provides: "No person shall cause or authorize the operation of a new or modified minor facility for more than a 60-day period without applying for a DEQ permit to operate." Once a SIP is approved, it becomes "federal law, not state law." Thus, once a SIP is federally approved, "the existing SIP remains the 'applicable implementation plan' even after the State has submitted a proposed revision." A state is without power to alter a SIP without EPA approval and must continue enforcing all provisions of its SIP until revisions are approved. Therefore, as a matter of law, Argo cannot operate for more than 60 days without submitting an operating permit application.*
14. ***Oklahoma DEQ Must Require Testing Before Granting an Operating Permit:*** *Oklahoma DEQ has authority to require emissions testing before granting an operating permit. This would likely be the first facility of its kind in the United States – and certainly the first in this region, and it will emit concerning pollutants such as hydrogen sulfide. Testing is needed to verify that the equipment will function as expected. The emissions factors used for the purpose of the construction permit are not derived from direct testing, and some of them are based on guidance for other types of facilities that may not be directly analogous to this proposed digester. For the flaring, Argo's selected emissions factors for nitrogen dioxides and carbon monoxide based on the manufacturer's data, and their emissions factors for VOCs, PM10, and PM2.5 are derived from guidance for solid waste landfills. For emergency biogas venting also, Argo also selected a VOC emissions factor based on municipal solid waste landfills. Emission factors based on direct testing would be more accurate and reflective of this unique facility. The production of methane, hydrogen sulfide, ammonia, and other constituents from the digestion process is highly dependent on the composition of feedstock. The properties of the litter are also influenced by housing system, type of bedding, and farming style. Because poultry litter is a less frequently used feedstock for biodigesters, there is less hard data available on the emissions produced by bio digestion of poultry litter. Accordingly, direct testing is needed to develop a precise understanding of the emissions from digestion of this litter. Testing should also account for start-up and shut-down events, which can cause significant spikes in emissions that may not otherwise be reflected in calculations. Testing should additionally be performed with and without flaring, as well as with and without emergency venting. Only then can*

Oklahoma DEQ and the Tribe develop a full and accurate understanding of this facility's emissions.

DEQ Response No. 14:

1. Please refer to DEQ Response No. 1. DEQ regulates the release of criteria air pollutants and hazardous air pollutants. The applicant has demonstrated the ability to comply will all applicable air quality rules and regulations. DEQ does not have regulatory authority to address issues related to odor and as such cannot address those issues.
2. Please refer to DEQ Response No. 1. DEQ regulates the release of criteria air pollutants and hazardous air pollutants. The applicant has demonstrated the ability to comply will all applicable air quality rules and regulations.
3. Please refer to DEQ Response No. 1. DEQ regulates the release of criteria air pollutants and hazardous air pollutants. The applicant has demonstrated the ability to comply will all applicable air quality rules and regulations. DEQ does not have regulatory authority to address issues related to odor, unexpected emergency situations, nor developer experience and as such cannot address those issues.
4. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801). Standard Condition F.3 requires that Argo immediately report deviations that result in emissions exceeding those allowed in this permit per the requirements of OAC 252:100-9, Excess Emission Reporting Requirements.
5. As discussed in Section V of this memorandum, modeling indicated the maximum 24-hour total impact from the facility was 35.2 $\mu g/m^3$ (0.02 ppm). H_2S AERMOD modeling performed by Argo assumed a worst-case H_2S concentration of 7,000 ppm. The modeled maximum 24-hr total impact from the facility was 35.2 $\mu g/m^3$ (0.02 ppm) this included emissions from the biogas emergency vent, RNG membrane tail gas vent, enclosed flare, and H_2S removal system scrubber. Additionally, DEQ reviewed the facilities' potential impact at ground level on a 1-hour average assuming the H_2S concentration was 7,000 ppmv. Modeling indicated the maximum 1-hour impact at ground level and at 2 meters above ground level was 0.5 ppmv. Modeling on a 24-hour average and a 1-hour average indicate operations will not threaten public health or the environment. In response to the comments received, Argo has reduced assumptions regarding the maximum H_2S concentration to 3,500 ppmv and revised Biogas Emergency Venting (DIG-2000) to be based on 144 hours per year including only start-up events.
6. See the previous response.
7. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801) to ensure proper operation.
8. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801) to ensure proper operation including the requirement to monitor for the presence of a pilot flame.
9. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801) to ensure proper operation. Argo submitted a complete application which included all required forms and support documentation. Confidential information pertained to the process description, process flow diagram, and facility site plan. The confidential information did not include data concerning the amount, emission rate or identification of any air contaminant emitted by any source, nor shall it include the contents of any proposed or final permit.

10. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801) to ensure proper operation.
11. Please refer to DEQ Response No. 1. DEQ regulates the release of criteria air pollutants and hazardous air pollutants. The applicant has demonstrated the ability to comply will all applicable air quality rules and regulations. DEQ does not have regulatory authority to address unexpected emergency situations and as such cannot address those issues.
12. Argo is required to file an annual emission inventory and pay annual operating fees based on the inventory per OAC 252:100-5. Argo is required to immediately report deviations that result in emissions exceeding those allowed in this permit per OAC 252:100-9. Argo has voluntarily agreed to submit an annual report of all records required in Specific Condition No. 7. This information is available to the public upon request.
13. OAC 252:100-7-18(a)(1) states "no person shall cause or authorize the operation of a new minor facility for more than a 180-day period after commencement of operation without applying for a DEQ-issued air quality operating permit." This has been an effective state rule since 2012 and is currently awaiting approval by EPA for inclusion in the SIP. SIP approval would grant federal enforceability, but it remains a state-enforceable rule as it stands. As a matter of policy, DEQ consistently implements and enforces regulations at the state-level prior to SIP approval. Allowing the 180 days is consistent with the Part 70 program. A construction permit as described in OAC 252:100-7-15 requires the permittees to comply with all applicable air pollution rules and establishes permit conditions and limitations as necessary to assure compliance with all air pollution control rules. The construction permit will continue in effect even after the minor facility has commenced operating. A violation of the limitations or conditions contained in the construction permit shall subject the owner or operator of a facility to any or all available enforcement measures, including permit revocation, available under the Oklahoma Clean Air Act and Air Pollution Control Rules (OAC 252:100-7-15(e)). The operating permit will incorporate the emission limitations established and made part of the construction permit (OAC 252:100-7-18(f)). Thus, a minor facility may operate under its construction permit until an operating permit is issued and be subject to essentially the same limits and conditions as those contained in its operating permit when it is subsequently issued. Allowing 180 days to submit an operating permit application would not directly result in increased emissions or a relaxation of air emission standards and limits.
14. The final permit will require Argo to perform periodic testing of the H_2S concentration in the digester biogas.

Public Comment No. 15:

The DEQ received a comment from the Quapaw Nation concerning H_2S emissions and odor from the biogas emergency vent and vehicle staging. The commenter stated:

Biogas Emergency Vent: In the memorandum for the permit application dated December 23, 2024, the biogas emergency vent is estimated to operate 1,460 hours per year. When activated, this emergency vent allows the emissions of hydrogen sulfide (H_2S) directly to the atmosphere, without the benefit of any reduction from the biological scrubber for H_2S control. This process is only supposed to be engaged during start-up or process disruptions (i.e., as an emergency measure). 1,460 hours of estimated operation per year represents 17% or more of the operating hours for

this source; in other words, on average, one or more out of every six hours of operation are expected to result in uncontrolled emissions of H_2S through an "emergency" measure.

The permit does not contain any restriction or requirement to reduce these hours of operation and Argo has no incentive to reduce incidents of process disruptions. Per the memorandum, DEQ's modeling determined that H_2S emissions with operation of the biogas vent would yield 35.2 micrograms per cubic meter ($\mu g/m^3$) or 0.02 parts per million (ppm) over a 24-hour period. While this is below the regulatory threshold of 283 $\mu g/m^3$, it is well within the H_2S odor threshold of 0.008 to 0.1 ppm. The proposed location for this source, is within 2 miles of the Nation's casino, government offices, and capital of Quapaw.

We request a copy of DEQ's modeling to better understand the impacts of H_2S on our lands. Additionally, we request the DEQ require the project to utilize a separate air pollution control during start-up or process disruptions. A non-regenerative fixed bed carbon adsorber using activated carbon would provide an excellent ancillary form of H_2S control for relatively low cost. This would reduce the impacts of H_2S odors on our people and the enjoyment of our lands without a significant burden on Argo.

Vehicle Staging: For the project to receive 164,000 tons annually of poultry litter, a minimum of 7,454 tractor trailers will be required. This represents at least one truck every hour, with potentially a higher frequency of trucks during operating hours. Each truck will contain 20 or more tons of poultry litter, with an accompanying odor associated with poultry litter.

Although these trucks are mobile sources and do not represent an emissions unit subject to air permitting requirements, it is very likely that, during the expected 1,460 hours of process disruptions, trucks will have to stage outside of the project while they wait to unload. It is also highly likely that the odor from natural decay of the poultry litter within these vehicles will be a source of strong ammonia odors, especially in the hot summer months. We acknowledge that vehicle staging is not normally included in DEQ air permits, but poultry litter represents a novel source of odors. The permit should limit the number of vehicles allowed onsite waiting to unload (i.e., staging) and prohibit Argo from allowing vehicles to stage outside of the project awaiting weighing and acceptance.

DEQ Response No. 15:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to odor and as such cannot address those issues. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Argo Response No. 15:

H_2S is a constituent in raw biogas that is actively managed during operations to ensure it remains at a level that can be vented during emergencies without causing danger to operators or the surrounding environment. This will be done by managing the nutrients and additives into the anaerobic digestion process. We are also utilizing a nitrogen purge. In the event that raw biogas

cannot be upgraded to RNG, the biogas would be flared and H_2S would be combusted to water and SO_2 per the air permit.

The 1,460 hours and concentrations reflects a "maximum allowable" i.e. a form of worst-case scenario. This is done to ensure the worst case at the plant complies with Oklahoma's SIP and the NAAQS. It is not anticipated we will vent this amount during start-up and is only a worst case for permitting. We have minimized vents to reduce the number of hours of venting during startup and working with global experts that operate these project in the United States and Germany in other sensitive communities. This amount of emergency venting would make the plant uneconomic and be in default of our loan. The biogas containing the H_2S is the key revenue stream for the business.

Also, see Argo Response No. 1 for more detail about the odor control scrubbers.

ORAL COMMENTS: (received during public meeting on April 2, 2025)

Oral Comment No. 16:

So Karen, actually, if you could go back up there for a second, I'd like to see your slide, "Local Examples of Major Sources" again. My name is Kelda Lorax, and I'm an organic farmer. I think it was slide, maybe, 9. And basically, what I think would help us here is we -- the facilities are compared --yeah, that one. If you could have J-M Farms as one of them, that would help us a lot, and so I'll just leave that comment at that. And even if it's, like, they're similar, then zoom in more and show the comparison between those. And, potentially, also nuisance odor, if that can be captured in some kind of -- I know that's difficult, but that would help because I don't think -- yeah, we just need to see something more local than that.

DEQ Response No. 16:

Please refer to DEQ Response No. 1.

Oral Comment No. 17:

My name is Carolyn Allen, I'm a Commerce resident. I've got a question. How many exactly of these chicken litter facilities are there in the United States and -- so we can look up and compare? Do we have an answer? Well, I mean in the United States. We need to look at something we can compare. Just like she was saying with J-M Farms, something that's realistic in our world that we can compare it to so we're not comparing apples and oranges.

DEQ Response No. 17:

Please refer to DEQ Response No. 1.

Oral Argo Response No. 17:

There are no facilities exactly like this in the United States. There are digesters, there are 2,000 digesters in the United States. So there are 2,000 digesters like this in the United States. The

reason poultry litter hasn't ever been put into the digester before is there's an economic case for the litter. The litter's been used as a – sort of in agriculture for decades, and there's just a new business model that hasn't really come to the United States. It's been done in Europe for multiple decades, but it's a new business model with the technology that they built 2,000 in the United States.

Oral Comment No. 18:

Erin Barnes with the Peoria Tribe. Kind of relating to slide eight, on the NO_X, the emergency venting is a large concern of ours. If you add all of that up, that just seems like an excessive amount. So if it's an emergent -- and I mean, I get you're saying that nobody wants to go over the amount because that's costing you money, but it's also affecting our health. So one, every time there's an emergency vent, are you learning from it, are you taking the data of why it happened? What are you doing to reduce that so you don't have emergency vents again? Also, if there is a long period of emergency venting because, in the permit, it doesn't state -- it states a year's worth of venting, not a weekly allowance of venting. So that's something we would like to see made for a weekly rate, not a yearly rate. But also, are you going to notify the public if there's a large emergency venting? And realistically, how much if there's -- an emergency venting session would happen? And also, the top limit seems excessive, we would like to see that be significantly lowered.

DEQ Response No. 18:

Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Oral Comment No. 19:

Hi, my name's Heather Webb, and I'm with the Miami Tribe. I have so many questions, but I'm trying to decide which one I really want to ask. So the emergency venting at 16 percent of the operating time allowed, all of those numbers for hydrogen sulfide are above the Oklahoma standard. So I guess my question is during this emergency venting, you know, say for X amount of time, that now exceeds the limit. Is the public going notified, is ODEQ going to be notified? How does the community know when the emergency is happening and this hydrogen sulfide is being released? Like, would we find out then, months later, a year later when the annual report comes out?

DEQ Response No. 19:

Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Oral Argo Response No. 19:

(Miles Walker) So at a high level, we'll have a full-time environmental engineer, EMS coordinator, we'll have an integrated contingency plan or some sort of response plan. We'll be doing, like, the tier two and that sort of stuff, but we can set up a notification system that's within the hour or something like that, we can set some limits that are quick, we can set up a website to notify. The digesters I've worked at have never vented, right, so this is a scenario that's, like, very unlikely. You permit because it's possible, right, but we're happy to do it within an hour or so. I know it's

not in the permit, but we can do something like that. And we're going to have an integrated contingency plan, which is basically a plan to coordinate the local EMS folks. So we'll plan to do that, and our hope is to do that with some of the Tribes.

(Karen McCurdy) Just one thing I'd like to say, just I mean, in the spirit of all -- of sharing proper information, the standard is not exceeded by this, so I think everything he said is true. There are upset condition reporting requirements in the permit if there's an upset condition that gets reported, and yeah, it doesn't just keep happening over and over again. But the comment that the Oklahoma standard is exceeded by this venting is not correct, and that was shown by the modeling results that I showed you, that's how we demonstrated. Those are 24-hour ambient air concentrations are the standards, and that's what is shown to be an order of magnitude below the standard. So I just want to make sure that we're all talking about the same thing.

Oral Comment No. 20:

Hi, I'm Brenda Murray. I'm a member of the Quapaw Tribe, but I live in Joplin, and I grew up in the Quapaw area. And what I'm worried about is the aquifer and them using so much water. I was told it was 100,000 gallons a day, and where does that water go after they use it? And the air quality is a bit concerning for the residents around there that are elderly in our elder housing that the Quapaw has. And also, we're building a new casino, and as bad as the J-M Farms are, I hate to see another something like that to go in there that's going to be so toxic, and that's my opinion of it. And I'm worried about the water quality and what's going to happen with that. Where are they going to -- when this water comes, out where does it go and how does it -- to keep from polluting the other water that's in the ground? If they use that much water, they've got to get rid of some of it. Okay. My second thing is -or third or whatever - Joplin has a rendering plant, it's been there for over 10 years. It is taking them almost 10 years to get -- for this to really be clean, and every few years they have to come in and redo their cleaning or filtering and all that. And they have even had class action lawsuits on residents within two miles of that, and they had to pay several thousand dollars to every household over the odor, and it's regulated by the government.

DEQ Response No. 20:

Please see DEQ Response No. 1. Argo does not have an industrial discharge permit from DEQ. This permit addresses only requirements associated with air quality rules and regulations. As such this permit cannot address issues associated with water quality.

Oral Argo Response No. 20:

Well, there's an evaporator on the -- if you look at the units, there's an evaporator there, too; so we're going to evaporate a lot of water.

Oral Comment No. 21:

Rachael Rhodes, there's no affiliation, I'm a resident of Ottawa County. You said that you -- the department of the DEQ or the OEQ, you guys test them once a year, is that correct, for their emissions and make sure that they're in -- like, within the limits? And so who -- like, so once a

year, they're the ones who are giving you guys the information? So there's no one, like, checking to make sure that information is correct or….So how often do these spot checks happen? Okay. And are they told, like, 'Hey, they're going to be coming out to check us this week or next week'? Are they told, like, beforehand or is that, like, random?

DEQ Response No. 21:

Argo is required to submit an annual emissions inventory through DEQ's electronic reporting system. Emissions inventories are based on the emission factors developed for this permit as well as actual hours of operation. In the final permit, the facility will be required to test the digester biogas for H_2S periodically. Once in operation this facility will be subject to periodic unannounced compliance and enforcement inspections. In the final permit, the facility will be required to periodically test the H_2S concentration of the digester biogas.

Oral Comment No. 22:

Thank you. My name is Grace Goodeagle. I've been to the presentations, and I know a lot of what the company is proposing to do. One thing that occurred to me as I was listening to the comments this evening is, is there any noise connected with this? You're going to have these semi-trucks bringing in tons of litter, and the boilers, those are huge. Do they make any noise?

DEQ Response No. 22:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to noise and as such cannot address those issues.

Oral Argo Response No. 22:

The facility's all enclosed; so the fence line impact of the noise will be less than, like, say, 5 decibels, it's relatively enclosed. We actually have a design that – the state doesn't have one, but we have one based on European projects we're copying. So we modeled it all for both impact and ear tones; so I don't if anybody's heard, like, a squeaking noise before? So when you look for noise, you're going to look at total impact and then ear tones, and we modeled for both.

Oral Comment No. 23:

My name's Sonia Ipock, I've been a registered nurse 36 years, I've worked in this area, I was a home health nurse 16 years. And the first lung fungus patient I had, I thought, 'Wow, this is really rare', then I got another one, then I got another one. I went and talked to a local physician, and he said that is more lung funguses than we should have per our population. Also I was a school nurse, and the pediatrician was giving out inhalers like M&M's. I went and talked to him and I'm like, 'What's going on?', and he said, 'I don't know, but we're having a lot of respiratory illnesses'. I know of one person that had lung fungus, they eradicated it, but he was still left over with respiratory illness. COPD is what they call it, that's a catch-all term. He had to resign his job, he couldn't walk across the floor, he has since passed away. And these lung funguses are believed to come from the mushroom plant, they've been isolated. So we already have a respiratory deterrent

here, we have a lot of respiratory patients, I can vouch to that. I am one of them, I have asthma. What's this going to do to us? It's a big risk, people, real big. Thank you.

DEQ Response No. 23:

Please refer to DEQ Response No. 1. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Oral Comment No. 24:

Heather Webb, Miami Tribe. On the permitting side of this, so this -- you said this was the construction permit and there'll be an operating permit later. Does the public get to comment on that permit? Okay. Also, how many days after operation do they submit it? Okay. And then so after the operating permit's, you know, out, it's gone out for public comment, how often after that does the public get a chance to comment on their air? Is it every year, like you said, or they just submit you a report every year that we don't get to see or comment on?

DEQ Response No. 24:

The final permit will require the permittee submit an application for an operating permit within 180 days of commencement of operation of any emission source whose construction has been authorized by this permit. The public will have a 30-day opportunity to comment on the subsequent operating permit. If the permittee applies for a subsequent construction/operating permit to change operations, the public will again have a 30-day opportunity to comment on the draft construction/operating permit. The permittee is required to submit an annual emissions inventory. There is no comment period associated with the submittal of an emissions inventory. However, these are available for public review.

Oral Comment No. 25:

Kelda Lorax, organic farmer, again. And so I don't like the idea of tying this to the chicken factory industry even more, and so I'm curious, like, how this kind of facility could be -- other products coming in, other products going out, could be adapted if we are successful in changing the chicken industry in this state, which I think sort of needs to change.

DEQ Response No. 25:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to the agriculture industry including concentrated animal feeding operations.

Oral Argo Response No. 25:

Yeah, and the current plan is it just to be poultry litter, but digesters are used -- a lot of digesters are used for other materials. A lot of people think food waste to a digester is much more sustainable than food waste to a landfill, or even, in some cases, compost, so -- from a GHG reduction

standpoint, but that's math we can talk about sometime. But the point is it could be adapted, but it's permitted for poultry litter.

Oral Comment No. 26:

Amy Hull, I'm a landowner in Ottawa County. I'm also a chemical engineer, and I have spent 40 years in the natural gas industry. I'm responsible for the design and construction of plants 10 times this size and with 10 times the amount of H_2S. I really appreciate the attention and care that the community is paying to all the risks and the hazards that may come with this particular plant. H_2S, to me, falls in a whole other category. And that's not to say that the microorganisms, the fungus that can get into your lungs or any other physical effect is not significant, it is, and personal experience in my family with industrial illness is horrible. This is a project that I really wanted to like, I really, really wanted to like. They're taking a waste product and they're upgrading it, it brings in income and it might bring some prosperity to the area, but I cannot endorse it. As an engineer, I cannot endorse it. In fact, I would warn against it. It's been represented that it's been designed according to good engineering practices, and I absolutely love that you all picked up on the H_2S release.

Quick review, or new for anybody who wasn't here last time, H_2S is deadly. It's not just toxic, it is lethal. At 500 parts, you are blinded, you can't walk; at 750 parts, the nerves in your lungs stop working; at 1,000 parts, you breathe 1,000 parts, one breath, you're down and you're dead. You don't go to the hospital, you go to the morgue. And that's not to say the industry can't responsibly manage H_2S hazards and risks, they can. My companies did, I was very fortunate to have management that supported me in doing what was right.

And the reason I cannot support this facility is I don't believe the engineering is good. Why in the world, why in the world would you release, in any amount, a stream that has 7,000 parts per million H_2S, seven times the amount that's required to kill you, 10 times the amount -- no, 15 times the amount that blinds you and leaves you staggering? Now, to be clear, the map that was shown, I don't know anything about what went into that, I'd like to think that it was done well and done righteously. The 7,000 parts that they would release into the atmosphere is not going to be what you find at the road, okay? Don't be worried about that, but I would be worried about my son if he worked there, or my son-in-law, my brother's grandchild.

So to say that it was designed in accordance with good engineering practices is just not so. And I would also say that I do recognize that engineering is not done. Even though it's been represented that the engineering is done, it's not. So I would recommend against the facility as it's currently designed. I do not understand why it needs to be released to the atmosphere. Why does it not go to the flare? Why is it uncontrolled? And I'm sure you have a good reason for that, but in my book, there is no excuse to expose anyone to that level of H_2S release and be subject to the vagaries of the wind and the temperature, precipitation and all that, to make sure they get out of it alive. And there are - I'm sorry - there are 60 days out of the year, 60 days out of the year that they're saying they want to be able to do this, they want to permit for that.

So if it does go forward, I would strongly recommend that at least that ceiling be brought down to a few days, maybe -- I don't know what. If it were me, I wouldn't allow it. I don't know what effect

this is going to have to share this information, but here's some other information I will share. If the plant goes forward, if there is an unfortunate event, if somebody else's son or grandson dies, I will make it my business to provide robust technical support to a criminal prosecution and civil liability suits.

DEQ Response No. 26:

Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Oral Comment No. 27:

Erin Barnes with the Peoria Tribe, I apologize. Last time, Argo, you guys mentioned that the engineering wasn't complete and you would be meeting with, I think, some folks from New York, maybe, that had a similar plant so your plans could change. So my question is if the engineering could change, how do we know for sure that the permit fits what will be put into place? And then, on top of that, doing a little bit of research, I believe it is smaller facility, but there is a facility in Maine - or, Maryland - that does chicken litter in smaller amounts. There is capped flaring so nothing is released during a flare, as she mentioned. So that's another question is please explain why the flare was chosen to control over technology and other potential controls. Is it because the cost, is it cheaper?

Please explain why the emergency release is 16.67 percent of the time. Why is maintenance occurring 10 percent of the time? Is that normal, is that off spec? Are you releasing 5 percent of the time, are you shutting down one at a time or is the whole facility shut down during maintenance? Because if everything's shut down, then I believe off spec would be released then. And what is the cause of off-spec'd product and, in particular, why can't it be recycled through the system or treated using another control device other than a flare, especially if the facility is not in start-up state and it can be changed?

Why -- kind of like she said, why is it okay and why would it be okay for the emergency venting to happen? And in the permit, it does say 7,000. Can the top limit not be dropped considerably if that's only emergency? And then ODEQ -- I know I'm getting close to my time here. I have questions, will ODEQ be doing any baseline air, water, soil testing before and after construction?

DEQ Response No. 27:

Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Oral Argo Response No. 27:

So first of all, the company listed there, the second company, Woodward & Curran, they actually helped operate that facility for a bit, the one in Delaware -- I think it mentioned Delaware, is that what it said? And it's not just chicken litter, it's actually a mix of, like, DAF, float, and litter; so it's not quite apples to apples, that's why we don't consider it apples to apples. So the second

company there was actually brought in to help turn around operations. The preference of water operations is the first place the gas goes is the pipeline, second place, it goes to the flare, absolute last case is it goes somewhere else. The only case it would get vented is if the flare, for some reason, isn't operating. I agree, this gas needs to be treated. And I think that when we did this, we thought it was possible under that scenario, under that scenario, under that, like, last-case scenario that we would do some venting, but that's not the standard order of operations. Does that make sense? I mean, we actually talked about it, and I don't have a problem dropping it. I don't know how hard that is administratively, but, like, again, when you do these permits, you tend to put in these worst-case scenarios, right? So you put in these worst-case scenarios; I'd have no problem dropping it.

Oral Comment No. 28:

Heather Webb, Miami Tribe. I think it would ease a lot of our concerns about the H_2S if that 7,000 parts per million can be explained, like, why that number is in here.

DEQ Response No. 28:

Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. The H_2S concentration in the digesters is based on maximum concentrations seen in practice as well as a factor of safety.

Oral Argo Response No. 28:

Yeah, so that -- I mean, Karen might be able to answer this better than I can, but that's a worst-case scenario. That drives the modeling of the fence line and the higher that number is, the more conservative the modeling is. And under normal operations, it will never get that high. So it's a worst-case design basis assumption, but it does drive a more conservative modeling.

Oral Comment No. 29:

Rachelle Tumnus, Peoria Tribe. I was curious about how long -- the lifetime of this construction permit. Does it stop when they put their operating permit into place, like, how often -- is it just an estimate? Can you kind of speak to that?

DEQ Response No. 29:

Per OAC 252:100-7-15(f), the authority to construct under this permit will terminate if construction is not commenced within 18 months of permit issuance or if work is suspended for more than 18 months after it has commenced. Additionally, this construction permit will be cancelled upon issuance of the subsequent operating permit.

Oral Comment No. 30:

Hi. My name's Kimberly Barker, I've been a journalist in this area for over a decade, and I am the communications director with LEAD Agency in Miami. There are a lot of serious unanswered

questions that the Argo permit doesn't address. Across communities in the United States and Europe, digesters have had issues with odor. How will Argo handle odor complaints? Argo's website doesn't even have a phone number listed for people to call. How will Argo be more transparent if this project moves forward? What type of third-party, independent monitoring of our air quality will be guaranteed once the facility's operational? What are Argo's flaring and reduction targets and does it have any? When you must flare, how are you inspecting and monitoring flares to ensure they are lit and functioning properly? Does a third party monitor the pipeline? What types of emergency first responder training does the Quapaw Nation have if there's a fire or an explosion in one of these digesters? Will Argo be able to provide any kind of written guarantee to pay the Quapaw Nation back if they were to respond to an emergency situation? Given everything that Ottawa County has gone through with pollution, and I know it's not required, but a cumulative impact study and an environmental impact study should, at the very least, be considered with this project. A biogas plant like this has never been built in the United States, let alone near a Superfund site. A disadvantaged community facing this much environmental harm shouldn't have to keep asking the state to be more proactive, the residences here deserve better. To reiterate what Amy said, when Argo makes a mistake - and they inevitably will because this is their first biogas plant of this kind - I'll be there with media to hold you accountable.

DEQ Response No. 30:

Please refer to DEQ Response No. 1. The facility is required to operate and maintain all emission units including the flare according to the requirements in the Specific Conditions. Additional monitoring requirements were added for the biogas H_2S concentration as well as for the enclosed flare (FLR-5801). DEQ does not have regulatory authority to address issues related to odor nor emergency response.

Oral Comment No. 31:

My name is Martin Lively, I work with LEAD Agency. You know, DEQ's fundamental mission is, as I understand it, to protect human health and the environment, and I would suggest that you have to take the community as you find them when you think about human health. This community is severely overburdened with asthma, with heart disease, with cancer, okay? When you ask the question would this permit, if issued, endanger human health, you cannot answer that question for some generic population anywhere in the state or a state average, you have to think about this community, right, will this community be harmed if this permit is issued. So I want to reframe this a little bit in those terms. So what are the potential harms of this permit? Well, we've heard a lot about that, right? We've heard about dangers of hydrogen sulfide, Argo has acknowledged that. But we also need to remember that 1 part per million under the limit and the threshold of this permit means no penalty for whatever harms come from that emission, right? This permit, which would allow 7,000 ppm from emergency venting, drastically endangers human health for the folks who live immediately to the south of this facility and for the folks who work in this facility and for anywhere the air may carry a deadly substance like hydrogen sulfide, okay? Now, for context, I did a little bit of research, too, and I went onto ATSDR's website and I looked up the tox facts sheet for hydrogen sulfide, all right? The OSHA and NIOSH standards for exposure in a workplace environment to hydrogen sulfide, just for context, are 10 in 20 parts per million, all right? In terms of smell, ATSDR says that you can smell hydrogen sulfide in concentrations as

small as .0005 ppm, all right, to 0.3 ppm. And we're looking at a permit that's asking permission from the state to release up to 7,000 ppm in an emergency venting situation, okay? An annual average to understand human health risks here does not serve this community. If Argo gets to 6,000 ppm emissions due to an uncontrolled emergency that day -- and by the way, as far as I can tell in this permit, all emergency venting is controlled. There are no scrubbers, as far as I can tell. And if I'm wrong about this, please correct me, but as far as I can tell, there are no scrubbers behind the emergency vents. There are scrubbers behind the flare, right? This is putting our community at risk. We are an environmental justice community, we are burdened by heavy metal contamination, we are burdened by pre-existing air contamination. We have extremely high rates of severe illness in this community. We have enough on our plates in terms of the risks that our human health and our environment face. I would love to see a way to reduce our dependence on fossil fuels, I support that, but we bear all the burden, and that burden disregards this community's human health, and it's -- and I am speaking strictly in terms of if an accident happens. If an accident happens, nobody at Argo is going to suffer medically from it, we will suffer medically from it, and the risk of that accident is too large for this community to bear. So I would ask that you deny this permit and live up to your mission to protect our health and our environment. Thank you.

DEQ Response No. 31:

Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Oral Comment No. 32:

I'm Paul Marquez. I'm actually retired, which is really cool. I do some part-time some stuff for the agency, however, and work on some of their projects. So I did get a chance to look at the slides that Miles showed earlier, before the meeting, and the first thing I thought of was, 'Miles, why couldn't you have brought us a solar project'? Solar projects. I'm like, 'Solar projects'. Okay. So I looked at the chart there and I read through the permit application quite some time back. I keep trying to wrap my mind around emissions, ppm, chemical formula, H_2S, and my mind just doesn't work that way. But it does work this way. I can't understand why natural gas -- I mean, it's a renewable energy, what Argo's proposal is, but it's not a clean energy, just cleaner. So what is that called -- did I miss something? So I learned the term greenwashing earlier - I think I said it right - this week, and I'm like, 'Okay, this is part -- natural gas is, I guess, greenwashing as a renewable energy'. And if you don't know what that is, Google it because that's what I did. Okay. So some stuff I can wrap my mind around, also, is poultry farms or industrialized farming. A question I haven't been able to get a definitive answer to is will that increase poultry farms in our area? And we're already getting quite a few. I don't know if you guys have gone on Google Earth, but there are quite a few out there already. I was looking -- I thought I saw a couple that I hadn't seen before just east of town about -- between here and the tech center, and I think I saw maybe six farms out there, and there are some also just surrounding us. And so since the facilities that Argo will be getting the poultry that are from are a great distance away, this may increase poultry farmers to come to our area and -- because it's cost-effective. I mean, you might say, 'Well, yeah, we already have contracts here', but if someone's closer and it's cheaper, I mean, you know, that's the way to go. So I -- so to Argo I would recommend, you know, if you can do some kind of agreement to not allow poultry -- or, not purchase from poultry farms within a certain radius of

our area, that might deter that behavior. I mean, I don't know if it will or not, but it's at least something, right? Explosions, I can understand explosions. So in defense of Argo, to the explosions I saw online were not very huge, like, they didn't take out a whole town or anything like that, but there were explosions and there was, you know, combustible there to be considered. And I really wish I could address more stuff that had to do with the, like, air to help DEQ, these are just real concerns that we have that I think should be a consideration. Evaporation. Evaporation was mentioned quite some time ago and, you know, then there's no emissions or something like that, but evaporation is an emission and, you know, the chemicals that are in there, I mean, something does not go into nothing; so something is going to be going out with evaporation. Accidents, I -- Martin mentioned we just can't absorb anymore, I mean, we have enough environmental issues. And though I think someone earlier said they really wish they could support this project because it does sound like it's really good, I really wish I could do that. Miles keeps asking me, 'Have I sold you yet, have I sold you yet?', and Miles, 'I just have to say no, I'm sorry. But yeah, if any accidents happen, we have enough environmental issues in our area. And we're trying to clean them up. That's the important thing, too. We are trying to clean up what we have now and make it better, so we don't need something else that could potentially make it worse and our job more difficult. Water. Someone mentioned the large amount of water. Our water is so delicate here. And I know - I think - in the last meeting, they mentioned where's it going to come from, maybe dig a new well, maybe we'll wind up tapping into something that we probably shouldn't tap into. I think they did mention that last time, but I'm not sure. No, they did. They did. Trust. If everything operates correctly -- and it's not easy to do this project correctly, but I mean, are we going to trust the company to not make any mistakes, right? I think that's it. Yeah. I tried to limit what I was going to say so I don't take up more than, like -- because last time, I took someone else's time, it was really cool. They said, 'Hey, your three minutes are up', and I said, 'I got their three minutes, too'.

DEQ Response No. 32:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to the agriculture industry including concentrated animal feeding operations nor water usage.

Oral Comment No. 33:

Mine's a very basic one, I'm just needing some -- oh, Gina Manders with LEAD Agency. I'm in community outreach and a GIS professional. Mine's a very simple question, but I just would like some clarification about the use of the generator. In the slides, it talked about 100 hours, there was something about 100 hours. What happens beyond 100 hours if there's a power outage?

DEQ Response No. 33:

Emergency use is not limited in accordance with NSPS, 40 CFR Part 60, Subpart JJJJ. The emergency generator (GEN-9001) shall be operated no more than 100 hours per year for non-emergency situations including maintenance and testing.

Oral Comment No. 34:
I just have a question. I was looking over my notes from the last meeting. I'm Sonia Ipock, I'm an RN. And somewhere, I have 42-year lease. So if we permit this to go through, we're stuck with it for 42 years? Is that correct or --

DEQ Response No. 34:

Please refer to DEQ Response No. 1. Per OAC 252:100-7-15(f), the authority to construct under this permit will terminate if construction is not commenced within 18 months of permit issuance or if work is suspended for more than 18 months after it has commenced. Additionally, this construction permit will be cancelled upon issuance of the subsequent operating permit. Minor source operating permits do not have an expiration. DEQ does not have regulatory authority to address issues related to leasing or real estate.

Oral Comment No. 35:

Thank you very much. My name's Rebecca Jim, and I really want to thank everyone for thinking through the questions that they brought. I know every one of them were thoughtful and heartfelt. Many people are here that didn't say anything, but feel it, and we know it or they wouldn't be here. They came because they're concerned. And we're concerned because the burden here is tough. It is an environmental justice area. We can't talk about environmental justice in our country anymore, but it doesn't take it away, it doesn't make it disappear. And the burden is high. We have -- when you have -- and I have visited with new EPA RPMs coming in, and the first time they see this place -- the thing that I quote is from Mike McAteer. He said he was absolutely shocked that what we've got here is in the air, it's in the water, it's in the soil. So everywhere we -- everything we are surrounded by is something that can harm us. And what I know is adding to the burden will be very, very easy for DEQ to do. It would be easy to approve the permit, but it is a burden that we will carry for the decades to come, that perhaps this will operate in such a way that we will be great neighbors, but any, any, any releases add to our burden, any day passing where we're sucking precious water out of our Roubidoux that we will need in the future and the future seven generations to come. When we think about the future, that's what we need DEQ to be there for. Not for this moment, but for what the moments may be decades from now, what's it going to be like here for us. You have a role to take, and we hope that you will listen to even the voices that said nothing. They're here and their presence tells you something. There's a great concern, and I – we leave it in your hands. We do. Thank you.

DEQ Response No. 35:

Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Oral Comment No. 36:

Rachelle Tumnus, Peoria Tribe. I have a two-part question. On page 7 of the draft permit, it talks about total particulate emissions are based on guidance from the New Mexico Environmental

Department Air Quality Bureau. Can you speak as to why that was chosen, out of just curiosity? Yes. And I think it was already touched on before, but I'm going to say it again. If we could kind of get an answer as to why the flare was chosen over other air control technologies. Was it the cost, like, what was the motivation for choosing that one specifically?

DEQ Response No. 36:

See Argo Response No. 36. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801) to ensure proper operation.

Oral Argo Response No. 36:

It's a methodology that calculates particulate matter from cooling towers, it's just more specific than what's in the AP-42 and is more accurate based on particle size and flow of particular -- of the size of the cooling unit.

The flare is a backup control, right, and it's an enclosed flare, which isn't the cheap -- it's not, the cheapest option is an open flare. So the enclosed flare is the more expensive option relative to flaring. And it is a backup, and again, the facilities I worked at and anybody else who's worked at a digester, they don't run the flares at all, really, the flare is truly a backup. And again, in terms of a backup option, it's the one that the industry is sort of normed around, I think that's the answer.

Oral Comment No. 37:

Nick Hargrove with the Peoria Tribe. I just wanted to reiterate the request for some preliminary soil, air, and water testing. It seems like a lot of the, you know, testing and research seems to happen after a disaster takes place. It would be nice to have some preliminary evidence.

DEQ Response No. 37:

Please refer to DEQ Response No. 1. Current regulations do not require preliminary soil, air or water testing prior to new source construction for minor source air quality permits. PSD facilities may trigger preconstruction monitoring requirements. This facility is not a PSD facility nor would it trigger preconstruction monitoring.

Oral Comment No. 38:

Rachael Rhodes, no affiliation, just an Ottawa County resident, concerned, a parent, daughter, as well. We, like others, have said, you know, we are already cleaning up after other things like Picher and all the lead, the Superfund site and all of that. Our water is not that good, there's lead everywhere. We also live in Tornado Alley. What's going to happen when a tornado comes through here and, you know, possibly destroys it? And someone was talking about trust. Also, like, what's -- you know, if something bad does happen, like, you know, what will they do for us, you know, in return? Will it be dragged out in court for a million years? So that's just a concern, so – and also the water, where are we getting this water from, so...

DEQ Response No. 38:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency situations and as such cannot address those issues.

Oral Comment No. 39:

(Heather Webb) I know one of the questions in the first meeting, we talked about explosions and I think it kind of went sideways to the natural gas pipeline, but has Argo or, like, any digesters exploded or, like, what are the plans if something like that would happen in our case?

DEQ Response No. 39:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency situations and as such cannot address those issues.

Oral Argo Response No. 39:

Okay. Yeah. I mean, I think -- so the system is designed to NFPA standards, right? So there's NFPA standards that prevent incidents, right? So there's a Division 1 classification, and it's basically exclusionary as to the way that they're designed, and that design includes, like, explosion proof equipment to minimize. And it's relatively -- the digester is a relatively small amount of volume of gas; so I think it's very unlikely that there's a significant explosion from it just because of the volume that's actually available for explosion. So I think there's the NFPA standards for sort of design, and then there's physical limits to the gas that's actually available for explosion.

Oral Comment No. 40:

(Rebecca Jim) I do have a really interesting question for you, and it's really -- it really – it goes to you, but it goes to Argo, both, and that is we do flood here, and there are ways to get around a flood. But we also -- as Gina mentioned, we do have other weather. We have had three weeks without electricity and at a time in the winter, when the roads were too icy for any vehicles to travel. And it's not an air issue, but I do – it is a concern, if you don't mind sharing that.

DEQ Response No. 40:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency situations and as such cannot address those issues.

Oral Comment No.41:

(Heather Webb) One more, I promise, that's it. Will there be a cumulative impact study done by DEQ or Argo?

DEQ Response No. 41:

Please refer to DEQ Response No. 1.

Oral Comment No. 42:

Again, Kimberly Barker. So, Argo, you're saying that you want to be good community stewards. What written guarantees can you provide us that you will be good community stewards going forward? If there are issues with odor, will the residents be not held liable when property taxes go down and home values go down? We need some kind of written guarantee that, if you guys do move this in, that you will not pollute or mess up the quality of life here in Ottawa County. Thank you.

DEQ Response No. 42:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to odor or property taxes.

Oral Comment No. 43:

Thank you. I'll try to hold it together better this time. Amy Hull, I'm a landowner in Ottawa County, and I do have some technical questions. In the permit application, there's a statement about the applicability of H_2S requirements to this facility. And I can't believe I have to ask this, but it says that your gas does not meet the definition of natural gas, and I thought that was your whole brand. And so that particular regulation does not apply and you don't have to meet the SO_2. Does this ring a bell for anybody? I can give you chapter and verse. Yeah, Part 5 limits hydrogen sulfide emissions -- this is under OAC 252:100-31 (Sulfur Compounds) [Applicable]. Part 2 has to do with ambient air; Part 5 limits sulfur dioxide emissions from new fuel-burning equipment after 1972, et cetera, et cetera, et cetera; Part 5 limits hydrogen sulfide emissions from new petroleum or natural gas equipment. "Biogas does not meet the definition of natural gas. Therefore, the equipment at this facility does not meet the definition of 'petroleum or natural gas process equipment' and is not subject to this requirement." How does it not meet the definition of natural gas when you say you're going to get 70 percent of your revenue from natural gas pipeline-quality gas? I just -- that seemed odd to me, and it does make me question. I mean, it looks like you're trying to dodge a requirement. It looks very much like you're trying to dodge a regulation. So...

DEQ Response No. 43:

Please refer to DEQ Response No. 11.

Oral Comment No. 44:

Rachael Rhodes again. I've heard all the concerns and the things that might happen to the residents here of Ottawa County if this goes through; what I haven't heard is how does this even benefit anyone who lives here? So, yeah, what's the benefit to us?

DEQ Response No. 44:

Please refer to DEQ Response No. 1. Please refer to Argo Response No. 1 and No. 4.

Oral Comment No. 45:

Rachelle Tumnus, Peoria tribe. This is more towards Argo. You mentioned that you would be looking to work with local emergency management and the Tribes on what to do in case of an emergency situation. Do you have a sort of step for how you would reach out to us where we could talk about that? You know, what's the next process look like that for you?

DEQ Response No. 45:

Please refer to DEQ Response No. 1. Please see Oral Argo Response No. 45.

Oral Argo Response No. 45:

Yeah, we'd like to start that process. We've had a conversation, but it's just we haven't had a consolidated set of conversations. So we've had some conversations with different members of the Tribe, but I think we need to put together a comprehensive plan, so I think that's -- it's in progress. So we've had a series of meetings, we've probably had two meetings, a business meeting and others, but we haven't gotten to any real formal process stuff yet.

Oral Comment No. 46:

My name is Linda Davis, and I'm going to try to not get emotional about this, and if I do, I apologize. Born and raised here, was here for the first meeting, and to sum it up in the shortest words, I cannot support it at all, remotely. We are survivors of what's been left over from mining. I am a nurse, as well, I'm just not practicing at the moment; so I wholeheartedly agree with you, Ms. Ipock. I've witnessed the public health problems in this area, the increased asthma rate, just all the way around, all public health issues. And you, in turn, asked a question about economic -- what I've understood, when this is all said and done if this gets built and goes through, it lands with about 20 people getting a job on the plant side. Annual salary is 50, 60-ish, something like that, or 72, I don’t remember exactly. Again, 20. 20 people. You can get a two-year college degree at NEO, in nursing, and you can walk out the door and land a job and you can make that money with an associate's degree at anywhere from 50-to-$100,000. I cannot support it, I am sorry. I have tried, but I cannot, in good faith, sit in my chair any longer without speaking up and saying I do not support it. And I don't know what step needs to be taken next. And Miles, it's nothing -- again, I said this to you at the last meeting, it is nothing personally against you, but there are people in this room that I have to get up and face every day, not only as a community member, tribal member, church member, elected official of Quapaw Nation, and in good faith I cannot support something when I see our environmental department here already facing with a magnitude that has been left of the impact from mine tailings and all that. And to the other environmental people that are here tonight, God bless you, I am so excited that you are here. And to the other representatives from the Nation, Doug Lankford, thank you for being here; Linda Valliere, Quapaw Nation, Larry Ramsey, Quapaw Nation, thank you; LEAD Agency, Rebecca Jim, thank you; Grace Goodeagle,

one of our former tribal elder -- or, she's not a tribal elder, but one of our former leaders, thank you. And to every other community person that came out tonight, thank you. Because I don't know what has to be done, I will be learning what needs to be done, but you need to find a different backyard and not mine.

DEQ Response No. 46:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to employment.

Oral Comment No. 47:

(Heather Webb) Okay. I can't make any promises, apparently, I'm so sorry. So are there any - okay, a little bit technical - leak detection and, like, repair protocols and procedures?

DEQ Response No. 47:

Please see Oral Argo Response No. 47. Argo has implemented a leak detection and response program per PHMSA 192 for the pipeline portion of the facility. They have indicated that they will voluntarily apply this program to the whole facility.

Oral Argo Response No. 47:

Yeah. I mean, we'll have an LDAR program, like, leak detection program with periodic sampling, that sort of thing. Pretty standard for a plant like this. So, like, a sniff test. And I don't know exactly what you call it, so it's -- you go around the pipe diameter, LDAR program interval. Again, I'm not an expert on it, but I've done them on other projects.

Oral Comment No. 48:

(Gina Manders) Oh, one other question. What will happen if something would go wrong, for instance if the poultry industry tanks, you know, due to bird flu or anything happens and for some reason there's no fuel available to keep it going and it closes and there's all the chemicals and things there when it closes, who does the cleanup? I'm thinking about Tar Creek, you know, Tar Creek Superfund Site and also the Tri-State Mining District Superfund Sites and, you know, who does the cleanup?

DEQ Response No. 48:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency situations, poultry industry, avian influenza, or the closure of a facility.

Oral Argo Response No. 48:

I guess can I answer two questions at once? So first, I think on the tax standpoint, probably be the biggest taxpayer in the county based on the size of the project. So from a tax standpoint, we're likely to be the biggest taxpayer in the county. I'm not sure of that; that's one thing. The second thing that I think – and I'm going to keep saying this until someone says no, I think we're the first project in Oklahoma ever to have decommissioning bonds, right? So there's a thing called a decommissioning bond you can post as part of construction. So you post that before construction -- and if somebody's heard of one in Oklahoma, please speak up. This is very common in the states in New England, right? We are posting money that will be there if we're gone. So essentially, if we go away, there's a fund that can only be used for decommissioning that can be accessed to restore the site. So again, has anybody heard of that before?

Oral Comment No. 49:

(Kelda Lorax) Your concern is my concern, all these concerns are my concern, but to the -- like, what will benefit, like, what they're offering is cleaner. Like, a waste product that can potentially be cleaner. So I think they just need to make their case better, and I think all of us – you know, like, we just want to see the case made in a way that's not going to further these impacts.

DEQ Response No. 49:

Please refer to DEQ Response No. 1.

Oral Comment No. 50:

(Rebecca Jim) Yeah, I do want to comment about the Aspergillus fumigatus and how it has impacted our community. And thanks to the Peoria Tribe and a marvelous, marvelous research work they did on an -- with an air grant that they received, there's some real information of that, about how common it is here and how quickly it can impact people's lungs. I did talk with the administrator of the Indian Clinic, and he's -- when he heard about this facility, he was extremely worried because he can already -- he already has a hard time hiring doctors and dentists because when they come for an interview, there is an odor. And so that odor might not be yours, but there is this pervading fear, it is a fear that looms over this community of, don't bring us any more.

DEQ Response No. 52:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to odor.

Oral Comment No. 51:

Erin Barnes, Peoria Tribe. DEQ, one last time, I would really love to implore you to -- I know you said you weren't going to look at the cumulative impact, but please look at the cumulative impact. Miles, I just wanted to thank you for your, you know, working with the Quapaw Nation, but I

would also encourage you to bring all the local Tribes to the table along with the community, there's a lot of us here that would like to work to make sure that this doesn't impact our community negatively and to be the best thing possible. Also, thank you for saying that you would - and hopefully you will carry through with that - create a warning system so when those off gases that you don't intend to happen happen, that we know about them. So, thank you for committing to that.

DEQ Response No. 51:

Please refer to DEQ Response No. 1.
Oral Comment No. 52:

Zack Rendel, row crop producer. A question for DEQ. Is odor a regulated emission in the State of Oklahoma? No, it is not? Okay. Is agriculture odor a regulated emission anywhere in Oklahoma? It'd be considered odor through --

DEQ Response No. 52:

Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to odor.

Written Comment No 53: (Received during Public Meeting on 4/2/2025)

The DEQ received multiple comments/questions from the Miami Tribe concerning the release of criteria air pollutants and hazardous air pollutants. The comment stated:

1. Are you increasing the emissions of criteria air pollutants and other pollutants (i.e., H2S) to this community for the potential decrease nationally? Is that a good policy?
2. What is the national benefit compared to the environment “cost” to the surrounding community? Is this good for a community is still subject to adverse historic environmental stresses? You can easily see the scaring from nearby mining activities from an eye altitude of over 200 miles using Google Earth.
3. Why not require better controls at the source of generation? Could use smaller scale digestion or other technologies (i.e. change in feed, waste handling, etc.)
4. Why are there no controls on emergency releases from the digesters?
5. Why can’t other technologies be used to remove H2S from the gas streams immediately after the digesters? Why can’t the emergency releases be sent to a flare at least instead of being released untreated?
6. Potential alternatives? ex. require chicken litter digestors on individual farms rather than centralized industrial scale?
7. (Slide 3) Shows only 6 digester projects and 8 bioreactor projects. How have these projects impacted the proposed design of this proposed facility?
8. (Slide 3) Are there other technologies that other companies use to better reduce emissions from this type of facility? Is this proposal using the best technologies available?
9. (Slide 5) How many employees and their families from these support companies will live in the community near the facility?

10. (Slide 5) Is the facility designed such that any company CEO would be willing to live close to the facility?
11. (Slide 6) Argo needs to present the costs to the local community, not just the global benefits. Argo needs to show how the "benefits" were calculated. It seems that the benefits are global while the costs in terms of both criteria pollutants and other pollutants are local. Is this location the right place to shoulder the costs/burden?
12. (Slide 8) What monitoring will be done to ensure compliance with the NAAQS? Averaging over long periods of time do note protect communities from significant short term releases. What are the worst-case scenarios for releases from the facility if there are any upsets for any length of time? For example, can a couple hour release from a digester exceed the state limit for H2S emissions?
13. (Slide 9) All this shows is that there are other large sources in the state. Is this supposed to make the community feel good? Ponca City was built in 1918 long before environmental regulation existed, and some day may no longer exist. Grand River Energy Center is a coal fired power plant 1st unit built in 1978 second in 1985 to burn Wyoming Coal and then added natural gas combined cycle generator in 2012. Again, those energy sources might someday go away.
14. (Slide 9)Why not compare to a solar farm? What are the emissions of APC Solar in Miami, OK? What are the emissions of North Fork Solar in Snyder, OK?
15. (Slide 9)What impact will this operation have above existing air quality and other environmental issues that the community already has?
16. (Slide 10) What happens when 1 digestor has an uncontrolled release, which is projected to happen 16.67% of the year. Why does this facility have emergencies 16.67% of the year? Should Argo have a backup plan, like a secondary source for a nitrogen blanket or controls on what is released? The company should not be releasing pollutants such as H2S without controls especially if it can happen on a somewhat regular basis (16.67% of the time).
17. (Slide 10)There is a nitrogen blanket on the liquid separation portion, but does there need to be one on each digestor or on other parts of the system?
18. (Slide 11) How is uncontrolled emergency venting 16.67% of the time good engineering practices? At the very least, if this is initially the limit, then the permit must contain a requirement to do a root cause analysis for the emergency releases and Argo must make and follow recommendations that will reduce the emergency releases in the future if possible and there needs to be a provision in the permit to review and update (tighten) the permit limits as necessary.
19. (Slide 11) The statement that "It is typical for companies like Argo to operate much below these maximums. Argo's business plan is based on the plant operating well and avoiding upsets." Is little to no comfort to the community if there is a long/continuous emergency release which the permit would currently allow. Besides annual limits, the state should place short term maximum limits for any acute episodes of upsets or malfunctions. Additionally, lower permit limits will help to ensure that Argo does operate the plant well and avoids upsets. Limits that are set much higher than typical operations or short-term emergency potential releases does not provide an incentive to the facility to use good or best engineering practices, nor does it provide adequate protection of the community's health from additional releases.

20. Why does Argo need to send any gases to the flare prior to H2S removal? Explain why the H2S can't be removed or the gas recycled through the facility or parts of the facility, especially if maintenance is not done to the entire facility at one time.
21. (Slide 12) Please explain why the flare was chosen as a control technology over other potential control technologies? Is it mainly because of cost?
22. (Slide 12) Explain why there are emergency releases 16.67% of the time.
23. (Slide 12) Why is maintenance occurring 10% of the time?
24. (Slide 12) Why is off-spec product being generated 5% of the time? Why can't materials generated during those time be recycled through the facility operations?
25. (Slide 12) What is the cause of off-spec product and why can't it be recycled through the system or treated using another control device other than a flare, especially if the facility is not in a startup state and process units are at operating conditions.
26. (Slide 13) Why should the digester(s) be allowed to operate if a nitrogen blanket is not available and the facility is not designed to use another control measure to prevent the uncontrolled release of VOC and H2S?
27. (Slide 13) Flaring at 1,314 hours per year based on a P95 outage (whatever that is, unless they are referring to 5% of the time, they will need to flare instead of being able to send the biogas through the "upgrading" unit at the facility). If that 5% can result in 1,314 hours of flaring (438 hours of off-sec and 876 hours for maintenance) it seems like the limit needs to be set lower (even if it is an internal limit above which a root-cause analysis done for any episodes of flaring above that lower limit, and then have a higher limit above which there will be an enforceable violation and which will be reduced over time as root cause analyses are conducted, but in any case 1,314 hours of flaring seems to be excessive.
28. (Slide 14) Does this H2S modeling take into account the potential uncontrolled release from the digester(s)? Does the uncontrolled release have the potential to violate the state regulations? For example, in the permit application Argo assumes a 7,000 ppm for off-spec material or digester emergency venting. If the venting goes on for an hour or two would it violate the state's 24 hour limit? There is a rehab facility on the south border of the facility where H2S is predicted to be high.
29. (Slide 15) What is the removal efficiency for H2S?
30. (Slide 15) "As part of the Project's air permit, Crafton Tull performed an ambient air impact analysis to ensure the system complies with Oklahoma's hydrogen sulfide regulations." Please explain the analysis and whether it takes into account releases during any upset especially any long upsets?
31. (Slide 16) Should have some sort of a leak detection and repair (LDAR) program for lines/units prior to H2S removal, even if it is only sight sound smell (aka audio, visual, olfactory (OVA)).
32. (Slide 16) On page 11 of the permit, it mentions Visual Impairment may reach 20% but not to exceed 60%. What is causing this impairment? On days with low wind or high humidity, can this affect those on the highway or driving down the road? Is this a hazard on an already dangerous area of that highway (low train bridge)?
33. (Slide 18) If this is near the end of the process, Argo should be required to implement some leak detection and repair program for any lines/equipment that are in high H2S service (pre-control) given the corrosive nature of gases with a high concentration of H2S and the potential health impacts from exposure to H2S.

34. (Slide 19) The purpose is for more than gas that can't be upgraded during an upset since Argo say flaring may occur before or after H2S removal. The purpose also seems to be to use it during maintenance (it's not clear whether its during startup, shutdown, or both). Flares are cheap methods of changing a more hazardous pollutant to a lower hazard but it doesn't remove pollutants like other control technologies. For example, H2S can be removed prior to flaring and it can even be converted into elemental sulfur by some processes, but may not be economical for this use. Argo must explain why they chose a flare compared to other alternatives since the flare isn't the best technology for "improving public health and the environment."
35. (Slide 21) For the enclosed flare, this requirement isn't clear as to how it will be enforced. Are times kept separately for flaring because of maintenance versus flaring because of off-spec product? In any event, the limit is too high, should be reduced and there should be a second limit that addresses short term continuous use setting a maximum number of hours per week on a rolling average basis.
36. (Slide 21) Again, the hours for biogas venting is way too high especially if it seems like 95% of the time venting will not be necessary. Why can't there be a secondary source for a nitrogen blanket or instead of venting uncontrolled to the atmosphere, the gases are vented through a control device and or vent to the flare or recycled through a digester that does have a nitrogen blanket.
37. (Slide 21) There should be a permit requirement to perform root cause analysis for any upset conditions and take action to address the issue(s).
38. (Slide 21) Is there a HAZMAT plan drafted? Will this be something available to local hazmat teams and tribes? What other emergencies can arise that cause environmental releases? Ex. Digestor explosion, building fire, etc? What other chemicals/pollutants can be released in those types of emergencies?
39. (Slide 21) During a "emergency" flare release – what requirements will be given to extensive use- such as letting the public know if the flare is used longer than X amount of time in a day? The public should be aware of such "EMERGENCIES", correct?
40. (Slide 22) "…mission is to protect and improve public health and our environment…" It seems that this mission would suggest that just because a cumulative impact requirement isn't required for this permit action, given the historical stresses on the community, to be true to DEQ's mission, a cumulative impact needs to be considered!
41. (Slide 22) Can Argo or ODEQ do a cumulative impact study or assessment?
42. (ODEQ Enforcement) How often will this Air permit be reviewed? Is it a forever permit? If not, how often will it be reviewed by ODEQ and be put out for public comment?
43. (ODEQ Enforcement) After construction but before operations, will ODEQ be inspecting to ensure all environmental air control systems are operating correctly?
44. (ODEQ Enforcement) Operating permit: is it an OK requirement after 180 days of operation for an operating permit to be reviewed and be sent out for public comment? Federal (EPA) requires after 60 days – which is the case for Argo?
45. (ODEQ Enforcement) Will ODEQ be doing any baseline air, water, soil testing before construction or after?
46. (ODEQ Enforcement) How often is ODEQ being notified of emergency releases?
47. (ODEQ Enforcement) How often is an emissions inventory being made available to ODEQ and the public?

48. (PFAS) Federal regulations will be out soon. What systems are you putting in place NOW to reduce PFAS release?
49. (PFAS) In the case of a fire, is the PFAS Foam being used to exterminate? What controls are in place to ensure the PFAS from a fire is not being released into the environment?
50. Are there any calculations or modeling that account for hydrogen sulfide releases in the event of an accident, flare failure, or prolonged venting?
51. What constitutes the "worst-case scenario" that Argo has considered so far? Is Argo simply assuming that the facility will perform as expected, or has Argo done any calculations that would show what emissions would be in the event of a system failure?
52. How will Argo ensure that the flare is functioning properly? What are the planned testing and quality assurance protocols?
53. What process will Argo use to evaluate any system failures or unexpected uses of emergency venting?

DEQ Response No. 53:

Questions 1-7. Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. DEQ has determined that the facility as designed is in compliance with current regulatory and permit requirements.

Question 8. Please refer to DEQ Response No. 1. Part 70 (major source) construction permits must demonstrate that a control technology is the best available (BACT) for each pollutant per OAC 252:100-8-5. This facility is a minor source and as such is not required to complete a BACT determination.

Questions 9-11. Please refer to DEQ Response No. 1. Please refer to Argo Response No. 1 and No.4. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Question 12. Please refer to DEQ Response No. 1. The final permit will require periodic monitoring of H_2S in the digester biogas.

Question 13-14. This facility is considered a minor source since emissions of criteria pollutants and HAPs are below major source levels. The Grand River Energy Center and Ponca City Refinery both are Part 70 (major sources). A visual representation of all point sources in the state and more specifically in Ottawa County can be viewed using DEQ's GIS Maps (https://gis.deq.ok.gov/maps/). The most common point source in Ottawa County are emergency engines located at cell towers. Large-scale solar farms utilizing photovoltaic solar panels are not typically a source of emissions.

Question 15. Please refer to DEQ Response No. 1. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Question 16-19. Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. The primary purpose of a nitrogen blanket is to maintain an oxygen-free environment. Nitrogen blanketing is not a control method for emissions.

Question 20-26. Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. DEQ has determined that the facility is in compliance with current regulatory and permit requirements. Argo requested two operating scenarios for the enclosed flare in order to

provide the facility with operational flexibility in the event of an upset or maintenance. An enclosed flare is a common control technology. Please see Oral Argo Response No. 36 regarding the cost of the enclosed flare. In their application, Argo was required to demonstrate the facilities potential to emit based on the maximum capacity for each source to emit a pollutant under its physical and operational design. Specific Conditions were developed in the permit based the facility's potential to emit. The primary purpose of a nitrogen blanket is to maintain an oxygen-free environment. Nitrogen blanketing is not a control method for emissions.

Question 27. Flaring emissions and limitations were established based on how the facility intends to operate. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Question 28-31. Please see DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. Facility-wide emission calculations and modeling are based on the facility's potential to emit. This includes all potential controlled and uncontrolled emissions as well as upsets. DEQ has determined that the facility is in compliance with current regulatory and permit requirements. Argo has voluntarily implemented an LDAR program.

Question 32. This requirement comes from OAC 252:100-25 and is required of all permitted facilities. The fuel burning equipment and ammonia scrubber are subject to this requirement. The permit will require that the fuel burning equipment be fueled only with natural gas to ensure compliance with this requirement. Exhaust air from the Receiving Building, the Digestate Dewatering Building, and the solids dryer are controlled by a packed ammonia wet scrubber. The permit will require maintenance of the control device to ensure compliance with the opacity standard.

Question 33. Argo has implemented a leak detection and response program per PHMSA 192 for the pipeline portion of the facility. They have indicated that they will voluntarily apply this program to the whole facility.

Question 34-35. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. Argo is proposing a biological scrubber (RCT-5201) and an enclosed flare (FLR-5801) to control H_2S emissions. Argo requested two operating scenarios for the enclosed flare in order to provide the facility with operational flexibility in the event of an upset or maintenance. An enclosed flare is a common control technology. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Question 36. Please refer to DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit.

Question 37. Please refer to DEQ Response No. 1. DEQ has determined that the facility is in compliance with current regulatory and permit requirements. Argo will be required to immediately report all deviations that result in emissions exceeding those allowed in this permit.

Question 38-39. Please refer to DEQ Response No. 1. DEQ does not have regulatory authority to address issues related to unexpected emergency situations and as such cannot address those issues. Argo has indicated they have coordinated and submitted an emergency response plan with the Quapaw Nation.

Question 40-41. Please refer to DEQ Response No. 1.

Question 42. The permittee is required submit an application for an operating permit within 180 days of commencement of operation of any emission source whose construction has been authorized by this permit. The public will have a 30-day opportunity to comment on the subsequent operating permit. If the permittee applies for a subsequent permit to change operations, the public will again have a 30-day opportunity to comment on the draft construction/operating permit. The operating permit will have no expiration date.

Question 43. DEQ will inspect the facility upon receipt of an application for an operating permit and prior to issuance of the operating permit.

Question 44. Please see DEQ Response No. 14, subsection 13. The final permit will require Argo to submit an operating permit within 180 days of commencement of operation. The operating permit will incorporate the emission limitations established and made part of the construction permit. Thus a minor facility may operate under its construction permit until an operating permit is issued and be subject to essentially the same limits and conditions as those contained in its operating permit when it is subsequently issued

Question 45. Please refer to DEQ Response No. 1. AQD does not require preliminary soil, air or water testing prior to new source construction for minor source air quality permits. PSD facilities may trigger preconstruction monitoring requirements. This facility is not a PSD facility nor would it trigger preconstruction monitoring.

Question 46. Standard Condition F.3 requires that Argo immediately report deviations that result in emissions exceeding those allowed in this permit per the requirements of OAC 252:100-9, Excess Emission Reporting Requirements.

Question 47. Argo is required to submit an annual emissions inventory through DEQ's electronic reporting system per OAC 252:100-5. These reports are available to the public upon request.

Question 48-49. DEQ does not have regulatory authority to address issues related to PFAs and as such cannot address those issues.

Question 50-51. Please see DEQ Response No. 1. Please see Section VII or DEQ Response No. 13 for a list of updates to the permit. Facility-wide emission calculations and modeling are based on the facility's potential to emit. This includes all potential controlled and uncontrolled emissions as well as upsets. DEQ has determined that the facility is in compliance with current regulatory and permit requirements.

Question 52. Additional operating requirements were added to the final permit for the enclosed flare (FLR-5801) to ensure proper operation. The facility will be required to monitor the presence of a pilot flame.

Question 53. Argo has indicated they have developed an Operation Plan which includes specific sections for Spill & Leak Response, Equipment Maintenance & Repair and other O&M topics. This will inform our response to issues with our systems or equipment. All major equipment will be under warranty by the installers for the first year of operation. If a failure occurs, the warranty will be utilized to diagnose and repair the issue. Argo has indicated they will use a CMMS system to maintain the reliability and efficiency of its equipment at the facility. Any

system failures will be recorded in the CMMS along with the appropriate level of root cause analysis. The CMMS will help Argo adjust its preventative maintenance and other asset management activities. Emergency venting would generally be caused by upsets in the digester, the gas storage membrane and the flare. Argo's operators will be trained in compliance with OSHA standards including 29 CFR 1910 and will have portable gas monitors and other PPE required. The training will ensure operators are able to assess system failures and communicate the findings to the CMMS, Argo Management, and vendors as needed.

SECTION IX. SUMMARY

The facility has demonstrated the ability to comply with all applicable air quality rules and regulations. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the construction permit is recommended.

PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Argo Development Partners **Permit No. 2024-0514-C**
Oklahoma Bioprocessing Project

The permittee is authorized to construct in conformity with the specifications submitted to the Air Quality Division on June 7, 2024. The Evaluation Memorandum dated May 12, 2025, 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:

ID#	Sources	NO_X		CO		VOC		SO_2	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
GEN-9001	Emergency Generator(1)	-	-	-	-	-	-	-	-
HWB-9301	Hot Water Boiler	0.69	3.01	0.58	2.52	0.17	0.17	-	0.02
STB-9401	Steam Boiler	1.47	6.44	1.24	5.41	0.35	0.35	-	0.04
FLR-5801	Enclosed Flare	-	15.60	-	15.60	-	0.11	-	22.07
DIG-2000	Biogas Start-Up Vent	-	-	-	-	-	0.25	-	-
GMBR-5501	RNG Membranes - Tail Gas Vent	-	-	-	-	-	-	-	-
ODR-9901	Odor Control System	8.24	36.07	6.92	30.30	0.45	1.98	-	0.22
STP-4101	Ammonia Stripper	-	-	-	-	-	-	-	-
RCT-5201	H_2S Removal - Biological Scrubber	-	-	-	-	-	-	-	-
EVP-4401	Evaporator - Cooling Tower	-	-	-	-	-	-	-	-

(1) The emergency generator is limited under NSPS Subpart JJJJ and does not have specific lb/hr and TPY limits in this permit.

ID#	Sources	PM_{10}		$PM_{2.5}$		H_2S		NH_3	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
GEN-9001	Emergency Generator(1)	-	-	-	-	-	-	-	-
HWB-9301	Hot Water Boiler	-	0.02	-	0.01	-	-	-	-
STB-9401	Steam Boiler	-	0.03	-	0.03	-	-	-	-
FLR-5801	Enclosed Flare	-	1.68	-	1.68	-	0.23	-	-
DIG-2000	Biogas Start-Up Vent	-	-	-	-	-	0.58	-	-
GMBR-5501	RNG Membranes - Tail Gas Vent	-	-	-	-	-	0.24	-	-
ODR-9901	Odor Control System	-	0.19	-	0.16	-	-	-	7.03
STP-4101	Ammonia Stripper	-	-	-	-	-	-	-	<0.1
RCT-5201	H_2S Removal - Biological Scrubber	-	-	-	-	-	0.01	-	-

EVP-4401	Evaporator - Cooling Tower	-	0.39	-	-	-	-	-	-

(1) The emergency generator is limited under NSPS Subpart JJJJ and does not have specific lb/hr and TPY limits in this permit.

2. The fuel-burning equipment shall use pipeline-grade natural gas as defined in Part 72 having a sulfur limit of 0.5 grains sulfur/100 scf or less. Compliance can be shown by a current gas company bill or supplier conformance statement/tariff. Compliance shall be demonstrated at least once every calendar year.

3. Except for the emergency generator (GEN-9001), the permittee shall be authorized to operate the facility 24 hours per day, every day of the year (8,760 hours).

4. Throughput at the facility shall not exceed 164,000 tons of poultry litter/year (12-month rolling total).

5. The enclosed flare (FLR-5801) shall be limited as follows:

Operating Scenario	**Annual Hours of Operation**
Flaring with Prior H_2S Removal	876 hours of operation per year, 12-month rolling total
Flaring without Prior H_2S Removal	438 hours of operation per year, 12-month rolling total

6. The enclosed flare (FLR-5801) shall be operated as follows:

   a. The volume of gas routed to the enclosed flare shall not exceed 2,500 scfm, 12-month rolling total.
   b. The enclosed flare shall be operational at all times when emissions are routed to it.
   c. The presence of an enclosed flare pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame.
   d. 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.
   e. The enclosed flare shall be operated with an alarm system to signal non-combustion of exhaust gases.

7. The odor control system (ODR-9901) shall be equipped with a packed column scrubber with a 99% control efficiency for NH_3. The scrubber shall be operated and maintained according to the manufacturer's recommendations.

8. The ammonia stripper (STP-4101) shall be equipped with a water scrubber and acid bath with a 99.99% control efficiency for NH_3. The scrubber shall be operated and maintained according to the manufacturer's recommendations.

9. Venting from the biogas start-up vent (DIG-2000) shall be limited to 144 hours of operation per year and a flow rate not to exceed 400 scfm, 12-month rolling total.

10. The H_2S concentration of the digester biogas (DIG-2000) shall not exceed 3,500 ppmv. The permittee shall monitor, at least monthly, the digester biogas (DIG-2000) H_2S

concentration. The permittee shall monitor the H_2S concentration at the digester and prior to biogas upgrading using a "stain tube" analysis or similar method, according to the stain tube manufacturer's instructions and detection limits appropriate for the concentration of H_2S in the gas stream.

11. The emergency generator (GEN-9001) shall have permanent identification plates attached, which show the make, model number, and serial number.

12. The emergency generator (GEN-9001) shall be operated no more than 100 hours per year (12-month rolling total) for non-emergency situations including maintenance and testing. Emergency use is not limited in accordance with NSPS, 40 CFR Part 60, Subpart JJJJ.

13. The emergency generator (GEN-9001) shall be equipped with non-resettable hour meters, and the hours of operation shall be recorded monthly, along with a 12-month rolling total.

14. The permittee shall comply with all applicable requirements of the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, Subpart Dc, for each affected steam generating unit including but not limited to the following:

    a. § 60.40c Applicability and delegation of authority.
    b. § 60.41c Definitions.
    c. § 60.42c Standard for sulfur dioxide (SO_2).
    d. § 60.43c Standard for particulate matter (PM).
    e. § 60.44c Compliance and performance test methods and procedures for sulfur dioxide.
    f. § 60.45c Compliance and performance test methods and procedures for particulate matter.
    g. § 60.46c Emission monitoring for sulfur dioxide.
    h. § 60.47c Emission monitoring for particulate matter.
    i. § 60.48c Reporting and recordkeeping requirements.

15. 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. § 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?
    c. § 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?
    d. § 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
    e. § 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?
    f. § 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?
    g. § 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model years?

h. § 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?
i. § 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?
j. § 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?
k. § 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?
l. § 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?
m. § 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?
n. § 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
o. § 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
p. § 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
q. § 60.4246 What General Provisions and confidential information provisions apply to me?
r. § 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?
s. § 60.4248 What definitions apply to this subpart?

16. 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 if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
f. § 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

g. § 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?
h. § 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
i. § 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
j. § 63.6605 What are my general requirements for complying with this subpart?
k. § 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
l. § 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?
m. § 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I owner or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?
n. § 63.6615 When must I conduct subsequent performance tests?
o. § 63.6620 What performance tests and other procedures must I use?
p. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
q. § 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
r. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
s. § 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
t. § 63.6645 What notifications must I submit and when?
u. § 63.6650 What reports must I submit and when?
v. § 63.6655 What records must I keep?
w. § 63.6660 In what form and how long must I keep my records?
x. § 63.6665 What parts of the General Provisions apply to me?
y. § 63.6670 Who implements and enforces this subpart?
z. § 63.6675 What definitions apply to this subpart?

17. The permittee shall maintain records of operations as listed below. These records shall be stored on-site or at a local field office for at least five years after the date of recording, shall be provided to regulatory personnel upon request, and a summary report shall be submitted to Air Quality Division of DEQ no later than 30 days after each anniversary date of the issuance of the subsequent operation permit.

a. Facility-wide emissions of all criteria pollutants (monthly, 12-month rolling total) as specified by S.C. No. 1.
b. Record of poultry litter throughput (monthly,12-month rolling totals), as specified in S.C. No. 4.

c. Record of H_2S concentration in ppmv in the digester gas (monthly, 12-month rolling average), as specified in S.C. No. 10.
d. Record of hours of operation and corresponding operating scenario for the enclosed flare (monthly and 12-month rolling totals), as specified in S.C. No. 5.
e. Records of flowrate (scfm) and pilot flame(s) outages as specified in S.C. No. 6.
f. Record of hours of venting and flowrate (scfm) for the biogas start-up vent (monthly, 12-month rolling totals), as specified in S.C. No. 9.
g. Record of hours of operation for the emergency generator (monthly, 12-month rolling totals), as specified in S.C. No. 12.
h. For the fuel(s) burned, the appropriate document(s) as specified in S.C. No. 2.
i. Maintenance records for the scrubber.
j. Records required under NSPS 40 CFR Part 60, Subparts Dc and JJJJ.
k. Records required under NESHAP 40 CFR Part 63, Subpart ZZZZ.

18. The permittee shall submit an application for an operating permit within 180 days of commencement of operation of any emission source whose construction has been authorized by this permit.

Argo Development Partners
Attn.: Miles Walker
P.O. Box 6672
Laconia, NH 03247

SUBJECT: Permit No. **2024-0514-C**
Oklahoma Bioprocessing Project (Facility ID: 24162)
Section 3, Township 28N, Range 23E, Ottawa County, Oklahoma

Dear Miles Walker:

Enclosed is the permit authorizing the construction/operation of the referenced facility. 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 form or submittal process should be referred to the Emissions Inventory Staff at (405) 702-4100.

Thank you for your cooperation in this matter. If you have any questions, please refer to the permit number above and contact me at Alexandria.Mills@deq.ok.gov, or (405) 702-4195.

Sincerely,

Alexandria Mills, E.I.
Engineering Section
AIR QUALITY DIVISION

Enclosures

PERMIT

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

Permit No. 2024-0514-C

Argo Development Partners,

having complied with the requirements of the law, is hereby granted permission to construct the Oklahoma Bioprocessing Project located in Section 3, Township 28N, Range 23E, Ottawa County, Oklahoma, subject to Standard Conditions dated February 13, 2020, and Specific Conditions both attached.

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section B of the Standard Conditions.

Lee Warden

May 12, 2025

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

Issuance Date

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]

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
11-21-2024

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

NH_3	Ammonia
NMHC	Non-methane Hydrocarbon
NGL	Natural Gas Liquids
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NOI	Notice of Intent
NSCR	Non-Selective Catalytic Reduction
NSPS	New Source Performance Standards
NSR	New Source Review
O_3	Ozone
O&G	Oil and Gas
O&M	Operation and Maintenance
O&NG	Oil and Natural Gas
OAC	Oklahoma Administrative Code
OC	Oxidation Catalyst
OGI	Optical Gas Imaging
PAH	Polycyclic Aromatic Hydrocarbons
PAE	Projected Actual Emissions
PAL	Plant-wide Applicability Limit
Pb	Lead
PBR	Permit by Rule
PCB	Polychlorinated Biphenyls
PCE	Partial Compliance Evaluation
PEA	Portable Emissions Analyzer
PFAS	Per- and Polyfluoroalkyl Substance
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers
PM_{10}	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers
POM	Particulate Organic Matter or Polycyclic Organic Matter
ppb	Parts per Billion
ppm	Parts per Million
ppmv	Parts per Million Volume
ppmvd	Parts per Million Dry Volume
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
psia	Pounds per Square Inch Absolute
psig	Pounds per Square Inch Gage
RACT	Reasonably Available Control Technology
RATA	Relative Accuracy Test Audit
RAP	Regulated Air Pollutant 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
SNCR	Selective Non-Catalytic Reduction
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
SOP	Standard Operating Procedure
SRU	Sulfur Recovery Unit
T	Tons
TAC	Toxic Air Contaminant
TEG	Triethylene Glycol
THC	Total Hydrocarbons
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulates
TV	Title V of the Federal Clean Air Act
$\mu g/m^3$	Micrograms per Cubic Meter
US EPA	U. S. Environmental Protection Agency
VFR	Vertical Fixed Roof
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VOL	Volatile Organic Liquid
VRT	Vapor Recovery Tower
VRU	Vapor Recovery Unit
YR	Year
2SLB	2-Stroke Lean Burn
4SLB	4-Stroke Lean Burn
4SRB	4-Stroke Rich Burn