

Crestwood Equity Partners, LP
Arrow Pipeline, LLC – 1, 2, 3, 4, 5 and 6 Compressor Stations
Full Compliance Evaluation (FCE)
On-Site Inspection

Inspection Date: June 15, 2023

Inspection Report Date: September 6, 2023

EPA Representatives: Youn Joo Kim, Environmental Scientist, US EPA Region 8
Katelyn Bergl, Environmental Scientist, US EPA Region 8

Tribal Representatives: None

Company Representatives: Josh Swann, Environmental Construction Manager

Inspection Report Prepared By: Youn Joo Kim, Environmental Scientist, US EPA Region 8
Lindsey Barnes, Scientist, US EPA Region 8

Inspection Report Reviewed By: Scott Patefield, Manager, Enforcement and Compliance
Assurance Division, Air and Toxics Enforcement Branch

Last Inspection: June 16, 2016

Operating Status: Operating

Applicable Requirements: Title V, Part 71 Operating Permit #V-TAT-000367-2015.01 Issued July 20, 2021
Synthetic Minor New Source Review Permit Issued August 25, 2020
40 CFR Part 60, Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR Part 60, Subpart OOOOA-Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced after September 18, 2015
40 CFR Part 63, Subpart ZZZZ- National Emission Standards for Hazardous Air Pollutants from Reciprocating Internal Combustion Engines

Permit Number: V-TAT-00367-2015.01
Replaces Permit: V-TAT-00367-2015.00

Issue Date: July 20, 2021
Effective Date: May 10, 2021

Expiration Date: May 10, 2026

Facility Information and Emission Unit Identification

Parent Company Name: Crestwood Equity Partners, LP
Mailing Address: 811 Main Street, Suite 3400 Houston, Texas 77002
Facility Contact: Patricia Whitenight, Air Quality Manager
Facility Operator & Name: Arrow Pipeline, LLC: Station 1, 2, 3, 4, 5 and 6 Compressor Stations
Facility Location: Station 1 - Latitude 47.759800N, Longitude -102.725922W
Station 2 - Latitude 47.723781N, Longitude -102.694333W
Station 3 - Latitude 47.729061N, Longitude -102.590211 W
Station 4 - Latitude 47.667064N, Longitude -102.545058W
Station 5 - Latitude 47.666366N, Longitude -102.72803W
Station 6 - Latitude 47.730086N, Longitude -102.356544W
County, State: McKenzie and Dunn Counties, North Dakota
Reservation: Fort Berthold Indian Reservation
Tribe: MHA Nation (Three Affiliated Tribes)
Responsible Official: Jeff Stovall, Senior Vice President, Bakken Operations
SIC Code: 4922- Pipeline Transportation of Natural Gas
4612- Crude Petroleum Pipelines
ICIS ID: Station 1- AIR 080000003805300124
Station 2- AIR 080000003805300125
Station 3- AIR 080000003802500045
Station 4- AIR 080000003802500046
Station 5- AIR 080000003802500047
Station 6- AIR 080003805321
Other CAA Permits: There are no other CAA permits for this facility.

Enforcement History

This is the first full compliance evaluation of Title V operating permit (#V-TAT-000367-2015.01 issued July 20, 2021) at Stations 1-6. Previously the facilities were evaluated under the synthetic minor new source permit issued on August 25, 2020. During the inspection conducted on June 16, 2016, EPA inspectors observed emissions from closed vent system on storage tanks at Station 2 and determined that facility wide Potential to Emit exceeds Title V threshold.

Inspection Findings/Areas of Concern

- On the day of the inspection, some of the differential pressure readings for engine catalyst were not recorded for the month of June (the sites with readings had recordings on 6/1/2023) operating Stations 1, and 5.
- In the records of engine monitoring provided by the operator from September 2022 to May 2023,

there were multiple incidences where the catalyst differential pressure exceeded +/- 2 inches of H₂O compared to the baseline set from the most recent performance test. The records of incidences exceeding the monitoring limit from September 2022 to June 2023 (including the record collected on the day of the inspection) is highlighted yellow in the summarized table below in Table 1.

- In the records of engine monitoring provided by the operator, there were few incidences where catalytic differential pressure was not recorded.
- The catalyst differential pressure on engine 262 and engine 462 were being monitored in psi instead of inches of H₂O. The facility representative confirmed change of the monitoring devices post EPA inspection in the email on July 3, 2023.
- The catalytic differential pressure readings were not taken for units 162 and 562 in 2022.

Table 1. Summary of Catalyst Bed Pressure Drop Readings

MONTHS				SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Station	Engine	Date	Baseline	Catalytic Differential Pressure (+/- 2 inches H ₂ O)									
1	161	May 2022	1	7	8	10	1	6	6	8	8		
		May 2023	2									7	0
	162	May 2022	No Test	2	6	3.8	2.1	0.5	0.5	1.5	1	1.4	0.04
	163	July 2022	1.9	3	6	8	7.3	1	1	9.5	10		
		May 2023	3									5	1
2	260	January 2022	0										
				0	1.5	0	0						
	261	January 2023	0.6										Inspector did not record
								0	0	6	No Record	0	
	262	May 2022	2				No Record						
				2	2	3		4	3	3	4		
3	360	May 2022	3.6	4	1	1	1	0.5	0.5	0.5	0.5		
		May 2023	3.6									0.5	0.5
	361	May 2022	3	3	0	0	0	0	0	0	2		
		May 2023	4.3									0	0
	362	July 2022	1.6	2	-128	-127.29	-122.39	-121.43	1.5	1.5	0.2	0.2	1
4	460	January 2022	3	0	1	2	0						

		January 2023	3					1	0	0	0.5	0.5	3.5
	461	May 2022	3.9	3									
				5	0	0	0	0	0	0	0		
		May 2023	2.9									0	3
	462	January 2022	2	0	4	8	6						
		January 2023	2.5					7	4	1	4	4	3
	463	November 2022	0.3	4	2.3								
		November 2022	-0.3			0	0.23	0.1	0.29	0.32	0.31	1.5	0.35 psi (9.69 in H ₂ O)
5	560	July 2022	2.3	3	2	2	1	2.5	2	1	30	1	0.5
	561	July 2022	2.2	2	5	5	8	7	7	7	7	4	0.5
	562	January 2022	No Test	2	12	30	30						
		January 2023	4					2.5	30	30	3	0	1.5

- Inspection findings regarding emissions from tanks and flares observed during the inspection are summarized in Table 2. The facility representative confirmed maintenance work performed on tanks and flares to mitigate emissions observed during the EPA inspections in the email received on July 3, 2023.

A copy of this report, which highlights EPA's areas of concern, will be provided to Crestwood, LP upon finalization.

Description of Operations

Stations 1-6 transport natural gas via pipeline from the various production wells in the area to a Central Delivery Point (CDP) or a natural gas processing plant located off the Fort Berthold Indian Reservation. The typical process flow at each station is as follows.

Natural gas first enters the compressor station through a gas system receiver, where the natural gas passes through a slug catcher to "knock out" excess liquids. Further removal of liquids from the natural gas is carried out by a filter separator, after which the gas is routed to the screw-type compressor unit(s) for compression. The compressor units each consist of an inlet filter separator, a compressor, a finned fan heat exchanger and a natural gas-fired engine to power the compressor. Gas entering an individual compressor unit first passes through the filter separator to further remove liquids from the gas stream before compression, after which the gas is compressed by the compressor. Compressed gas is then routed to a splitter, with most of the gas routed to the gas pipeline exiting the station and the remainder routed to a fuel gas coalescer. Gas from the fuel gas coalescer will be routed to and combusted by 6

individual screw-type compressor engines and/or natural gas-fired electrical generator engines designed to provide primary or backup power to the station.

Condensate and water removed from the natural gas via the slug catcher and/or filter separator(s) is routed to on-site storage tanks. Truck load out area(s) are used to load tanker trucks with water and condensate for transit offsite. Furthermore, the design of Stations 1-6 does not allow crude oil to be handled in the emissions units; rather, crude oil remains in underground pipelines located at or near Stations 1-6 for further transport to the CDP.

In addition, a condensate stabilizer system consisting of a condensate stabilizer tower and natural gas fired heater is used at Station 2. Raw condensate is piped from the inlet separation equipment to the condensate stabilizer tower. Light hydrocarbon components flash off and rise to the top of the tower as vapor that is transferred to the gas gathering line. Heavier hydrocarbons fall to the bottom of the tower as liquid that is transferred into the oil gathering line. Process heat is provided to the system by a standard natural gas-fired burner rated at 5.0 million British thermal units per hour (MMBtu/hr). The system is a completely closed system and, other than the combustion emissions from the burner, does not have any process vents that are vented to atmosphere.

The design of each station is relatively similar and involves similar equipment. Bypass valves allow the routing of the primary natural gas pipelines past an individual station and on down the pipeline to the next station or to a pipeline that travels off of the Fort Berthold Indian Reservation.

In order to provide Arrow with the flexibility to relocate emissions units (i.e., compressors, pumps and electrical generator engines) between the various locations, the synthetic Minor New Source Review Permit (MNSR) (#SMNSR-TAT-000367-2021.005) limits the maximum natural gas-fired reciprocating internal combustion engine (RICE) horsepower (hp) to 9,100 at an individual station.

General Inspection Observations and Commentary

Opening Conference:

On June 15, 2023, at 7:50 AM, EPA inspectors Youn Joo Kim, and Katelyn Bergl met with Crestwood LP/Arrow Pipelines LLC representative Josh Swann onsite at Compressor Station 6. An opening conference was conducted, during which EPA inspectors presented credentials. A brief safety orientation was also completed, and EPA inspectors informed Josh Swann that the site would be surveyed using a forward looking infrared (FLIR) camera and confirmed no hot work permit was required to use the equipment. General inspection observations are in the order of sites visited on June 15, 2023. A summary of arrival and departure times as well as general observations of tanks and flares can be found in Table 2. The summary of engines inspected is in Table 3.

The meteorological condition during the inspection is described below:

- Temperature: 63 degrees Fahrenheit
- Wind Speed: 8 mph

- Wind Direction: West
- Cloud Coverage: Cloudy

Station 6:

At the time of the inspection Station 6 was not operating. Josh Swann explained that Station 6 was commissioned but has never operated. Inspectors confirmed gas lines were blinded and all the equipment on site were cold. No emissions were observed with FLIR from Station 6.

Station 4:

During the time of inspection from 9:14 AM to 9:43 AM, EPA inspectors observed a small flame on the flare. EPA inspectors observed trails of unburned hydrocarbon from the flare and recorded the observation with the FLIR. The footage was shared with Josh Swann immediately after the recording.

Station 5:

During the time of the inspection, from 10:00 AM to 10:29 AM, Station 5 was continuously flaring due to the downstream facility (Station 8) having an emergency shut down (ESD). EPA inspectors observed trails of unburned hydrocarbon from the flare and recorded the observation with the FLIR. The footage was shared with Josh Swann immediately after the recording.

Station 3:

During the time of the inspection, from 10:41 AM to 11:00 AM, Station 3 was continuously flaring due to the downstream facility (Station 8) having an emergency shut down (ESD). At 10:53 AM, EPA inspectors observed reduced and discontinued flaring intermittently. At 11:06 AM, as EPA inspectors were driving away from the site, Station 3 was continuously flaring again. EPA inspectors observed trails of unburned hydrocarbon from the flare and recorded the observation with the FLIR. The footage was shared with Josh Swann immediately after the recording.

Station 2:

Upon arrival to Station 2 at 11:16 AM, EPA inspectors observed continuous flaring with black smoke. Method 22 was conducted from 11:21 AM to 11:22 AM by Katelyn Bergl, who is certified Method 9 inspector. EPA inspectors observed and recorded continuous emissions from 3 produced water/ condensate tanks with the FLIR. The footage was shared with Josh Swann immediately after the recording.

Station 1:

During the time of the inspection, EPA inspectors observed and recorded unburned hydrocarbon emission from the flare. The flame was lit however the trails of unburned hydrocarbon was detected by FLIR. The footage was shared with Josh Swann immediately after the recording.

Table 2: Stations 1-6 General Inspection Observations

Station	Arrival Time	Departure Time	IR		Detectable Odors
			Tanks Emissions	Flare Emissions	
6	7:50 AM	8:02 AM	No	No	No

4	9:14 AM	9:43 AM	No	Yes	No
5	10:00 AM	10:29 AM	No	Yes	No
3	10:41 AM	11:00 AM	No	Yes	No
2	11:16 AM	12:00 PM	Yes	Yes, with Smoke	No
1	12:16 PM	12:55 PM	No	Yes	No

Table 3: Stations 1-6 Engine Inspection Data

Station	Unit	Serial Number	Catalyst Inlet Temperature (F)	Catalyst D/P (inH ₂ O)
1	161	528305538	898	0
	162	WAU-1644532	970	0.04
	163	5283705531	848	1.0
2	260	5283702610	Engine not inspected during the inspection	
	261	5283702080	908	1.0
	262	5283702081	766	39 psi (1079.52 in H₂O)
	263	3217423	Not Operating	
3	360	5283702011	896	0.5
	361	5283702083	881	0
	362	5283702041	871	1.0
4	460	5283702084	824	3.5
	461	5283705532	Not recorded by the inspector	3
	462	5283705532	855	3
	463	WAU-1653545	1015	0.35 psi (9.69 in H₂O)
5	560	5283702040	862	0.5
	561	528370181892	965	0.5
	562	5283705545	944	1.5

Table 4. Media Log

Station	Media	Description
1	MOV_0248.mp4	Unburned hydrocarbon traces on the flare
2	MOV_0246.mp4, MOV_0247.mp4	Continuous emissions from 3 out of 4 produced water/natural gas condensate tanks
3	MOV_0242.mp4	Unburned hydrocarbon traces on the flare
4	MOV_0236.mp4	Unburned hydrocarbon traces on the flare
5	MOV_0240.mp4	Unburned hydrocarbon traces on the flare

Permit Number V-TAT-00367-2015.01 Requirements and Compliance Status

Inspector notes discussing compliance status will follow each relevant permit requirement in **bold blue** font. Only the observations during the inspection and observation made from the requested data will have a comment.

II. Standards of Performance for Stationary Spark Ignition Internal Combustion Engines - 40 CFR Part 60, Subpart JJJJ

A. Applicability [40 CFR 60.4230(a)(4)(i) and (ii)]

40 CFR part 60, subpart JJJJ (Subpart JJJJ) applies to the following emissions units:

1. Waukesha L-7042GSI S4 4SRB RICE identified as ENG-5283702041 in Table 2 of this permit;
2. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702081 in Table 2 of this permit;
3. Waukesha F-3521G 4SRB RICE identified as ENG-401656 in Table 2 of this permit;
4. Waukesha L-7042GSI S4 4SRB RICE identified as ENG-3217425 in Table 2 of this permit;
5. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702083 in Table 2 of this permit;
6. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702011 in Table 2 of this permit;
7. Waukesha F-3521G 4SRB RICE identified as ENG-C-10392/1A in Table 2 of this permit;
8. Waukesha F-3521G 4SRB RICE identified as ENG-289683A in Table 2 of this permit;
9. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702084 in Table 2 of this permit;
10. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702042 in Table 2 of this permit;
11. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702080 in Table 2 of this permit;
12. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702040 in Table 2 of this permit;
13. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283701892 in Table 2 of this permit;
14. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283705532 in Table 2 of this permit;
15. Waukesha L-7044GSI 4SRB RICE identified as ENG-5283705545 in Table 2 of this permit;
16. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283705531 in Table 2 of this permit; and
17. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283705538 in Table 2 of this permit.

B. General Provisions [40 CFR 60.4246]

1. The Facility is subject to the requirements of 40 CFR part 60, subpart A – General Provisions as specified in Table 3 of Subpart JJJJ. Notwithstanding conditions in this permit, the Permittee shall comply with all applicable requirements of 40 CFR part 60, subpart A.
2. All reports required under 40 CFR part 60, subpart A shall be sent to the EPA at the following address as listed in §60.19:

Branch Chief, Air and Toxics Enforcement Branch, 8ENF-AT
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202–1129

Reports may be submitted on electronic media where applicable through the Compliance and Emissions Reporting Data Interface (CEDRI).

EPA Region 8 has electronically received 40 CFR Part 60, Subpart JJJJ Testing reports required under 40 CFR part 60, subpart A on April 11, 2023, and May 25, 2023.

C. Engine Requirements

As provided in 40 CFR 71.6(a)(3)(i)(A), the EPA has authority to specify a streamlined set of

monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining. Therefore, as appropriate in Section II of this permit, the EPA has streamlined monitoring, record keeping and reporting requirements for all applicable SI ICE listed above with equivalent synthetic MNSR permit requirements in Section V.B of this permit.

The EPA has determined that the requirements of Section V.B. of this permit are adequate to ensure compliance with the applicable requirements of Subpart JJJJ. Therefore, the Permittee may demonstrate compliance with Subpart JJJJ by complying with Section V.B. of this permit.

III. Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 – 40 CFR Part 60, Subpart OOOOa

A. Applicability [40 CFR 60.5365a(j)]

40 CFR part 60, subpart OOOOa (Subpart OOOOa) applies to the following fugitive emissions affected facilities:

1. The collection of all fugitive emissions components at each of the following compressor stations: Station 1, Station 2, Station 3, Station 4 and Station 5. Each compressor station is an affected facility as defined at §60.5430a.

Notwithstanding conditions in this permit, the Permittee shall comply with all applicable requirements of Subpart OOOOa for fugitive emissions components affected facilities.

B. General Compliance Requirements [40 CFR 60.5370a]

At all times, including during startup, shutdown and malfunction, the Permittee shall maintain and operate any affected facility including air pollution control and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source. The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to this subpart.

Arrow Pipelines LLC has submitted AVO conducted daily for operating facilities (Stations 1, 2, 3, 4, and 5). Facility personnel, Josh Swan confirmed that Arrow Pipelines LLC does not monitor leaks with FLIR cameras. During the time of the inspection, EPA inspectors observed VOC emissions from tanks at Station 2 and unburned hydrocarbon emission at Stations 1, 2, 3, 4, 5 using the FLIR.

C. VOC Standards for the Collection of Fugitive Emissions Components [40 CFR 60.5397a]

The Permittee shall reduce volatile organic compounds (VOC) emissions by complying with the requirements in §§60.5397a(a)-(j) within 60 days of the start of production and monitoring quarterly thereafter the initial survey at the compressor station.

Josh Swann confirmed that the facility does not have FLIR camera to actively monitor fugitive emissions from tanks onsite.

D. Initial Compliance Requirements for Fugitive Emissions Components Affected Facilities [40 CFR 60.5410a(j)]

1. The Permittee shall achieve initial compliance with the fugitive emission standards for each collection of fugitive emissions components by complying with §§60.5410a(j)(1) - (5).

E. Continuous Compliance Requirements for Fugitive Emissions Components Affected Facilities [40 CFR 60.5415a(h)]

1. The Permittee shall demonstrate continuous compliance for each collection of fugitive emission components according to §60.5415a(h).

F. Notification, Reporting and Recordkeeping Requirements [40 CFR 60.5420a(a), (b) and (c)]

1. The Permittee shall submit annual reports for the collection of fugitive emissions components at a compressor station containing the information specified in §§60.5420a(b)(1), (7), and (11-13).

2. The Permittee shall maintain all records identified for the collection of fugitive emissions components at a compressor station as specified in §60.7(f) and in §§60.5420a(c)(6), and (14-15) as applicable.

G. General Standards [40 CFR 60.5425a]

1. The General Provisions at 40 CFR part 60, subpart A apply as specified in Table 3 of Subpart OOOa. Not with standing conditions in this permit, the Permittee shall comply with all applicable requirements of 40 CFR part 60, subpart A.

2. All reports required under 40 CFR part 60, subpart A shall be sent to the EPA either via the EPA's CEDRI as specified in 60.5420a or at the following address as listed in §60.4:

Branch Chief, Air Enforcement and Toxics Branch,
8ENF-AT Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202-1129

IV. National Emission Standards for Hazardous Air Pollutants from Reciprocating Internal Combustion Engines - 40 CFR Part 63, Subpart ZZZZ

A. Applicability [40 CFR 63.6585]

40 CFR part 63, subpart ZZZZ (Subpart ZZZZ) applies to the following emissions units:

1. Waukesha L-7042GSI S4 4SRB RICE identified as ENG-5283702041 in Table 2 of this permit;
2. Waukesha F-18GLEngine identified as Emission Unit ENG-C-16685/1 in Table 2 of this permit;
3. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702081 in Table 2 of this permit;
4. Waukesha L-7042GSI S4 4SRB RICE identified as ENG-3217425 in Table 2 of this permit;

5. Waukesha F-3521G 4SRB RICE identified as ENG-401656 in Table 2 of this permit;
6. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702083 in Table 2 of this permit;
7. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702011 in Table 2 of this permit;
8. Waukesha F-3521G 4SRB RICE identified as ENG-C-10392/1A in Table 2 of this permit;
9. Waukesha F-3521G 4SRB RICE identified as ENG-289683A in Table 2 of this permit;
10. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702084 in Table 2 of this permit;
11. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702042 in Table 2 of this permit;
12. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702080 in Table 2 of this permit;
13. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283702040 in Table 2 of this permit;
14. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283701892 in Table 2 of this permit;
15. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283705532 in Table 2 of this permit;
16. Waukesha L-7044GSI 4SRB RICE identified as ENG-5283705545 in Table 2 of this permit;
17. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283705531 in Table 2 of this permit; and
18. Waukesha L-7042GSI 4SRB RICE identified as ENG-5283705538 in Table 2 of this permit.

B. General Provisions [40 CFR 63.6665]

1. The General Provisions at 40 CFR part 63, subpart A apply as specified in Table 8 of Subpart ZZZZ. Notwithstanding conditions in this permit, the Permittee shall comply with all applicable requirements of 40 CFR part 63, subpart A.

2. All reports required under 40 CFR part 63, subpart A shall be sent to the EPA at the following address as listed in §63.13:

Branch Chief, Air Enforcement and Toxics Branch, 8ENF-AT
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202-1129

C. Emission and Operating Limitations for ENG-C-16685/1 [40 CFR 63.6603(a)]

1. Engine unit ENG-C-16685/1 shall meet the following operating requirements according to Table 2d.7 for non-emergency, non-black start 4SLB stationary RICE with less than 500 hp to Subpart ZZZZ:

- (a) Change oil and filter every 1,440 hours of operation or annually, whichever comes first;
- (b) Inspect spark plugs every 1,440 hours of operation or annually, and replace as necessary;
- (c) Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replaces as necessary; and
- (d) Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

D. General Compliance Requirements for ENG-C-16685/1 [40 CFR 63.6605(a) and (b)]

At all times, including periods of startup, shutdown and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, and be in

compliance with the emission limitations, operating limitations and other requirements in this subpart that apply. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA which may include but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

E. Continuous Compliance Requirements for ENG-C-16685/1 [40 CFR 63.6640(a), (b), (e) and Table 6]

1. The Permittee, as the owner and operator of an existing non-emergency 4SLB stationary RICE less than 500 hp located at an area source of hazardous air pollutants (HAP), shall demonstrate continuous compliance with each operating limitation and other requirements in Table 2d.7 to this subpart that apply according to the either of following work or management practices as specified in Table 6.9:

(a) Operating and maintaining the stationary RICE according to the manufacturer's emission related operation and maintenance instructions; or

(b) Develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

2. The Permittee shall report each instance in which the Permittee did not meet each operating limitation in Table 2d to this subpart that apply.

3. The Permittee shall also report each instance in which the Permittee did not meet the requirements in Table 8 to this subpart that apply.

F. Notifications, Reports and Records for ENG-C-16685/1

[40 CFR 63.6645, 63.6650, 63.6655, 63.6660]

1. The Permittee must submit notifications as specified in §63.6645(a) and (b).

2. The Permittee must submit reports as specified in §63.6650(a)-(f).

3. The Permittee must keep records as specified in §63.6655(a), (d) and (e).

4. The Permittee must keep the records in the format and for the duration as specified in §63.6660.

G. Requirements for the Remaining Engines [40 CFR 63.6590(c)(4)]

For all other engines (Emissions units ENG-5283702041, ENG-5283702081, ENG-401656, ENG-5283702083, ENG-5283702011, ENG-C-10392/1A, ENG-5283702084, ENG-289683A, ENG-5283702042, ENG-5283702080, ENG-5283701892, ENG-5283705532, ENG-5283705545, ENG-5283705531 and ENG-5283705538) the Permittee shall meet the requirements of Subpart ZZZZ by meeting the requirements of Subpart JJJJ, for stationary SI engines. No further requirements apply to these emissions units under 40 CFR part 63. The applicable requirements of Subpart JJJJ are specified in Section II of this permit.

V. Synthetic Minor New Source Review Permit Issued July 20, 2021 [40 CFR 49.151]

This source is subject to the requirements of the synthetic MNSR permit SMNSR-TAT-000367-2021.005, herein referred to as the synthetic MNSR permit, issued by the EPA and effective on July 20, 2021, in accordance with the requirements at 40 CFR 49.158. The synthetic MNSR permit requirements establish legally and practically enforceable facility-wide requirements and requirements for engines,

tanks, control systems for hydrocarbon emissions, truck loading operations, pneumatic pump, pneumatic controller, compressor blowdowns, equipment leaks from closed-vent systems and fugitive dust. The requirements of the synthetic MNSR permit allow Stations 1-6 to have the operational flexibility to move emissions units from different compressor stations depending on compression requirements at the compressor stations. The synthetic MNSR permit also was requested to maintain emissions limits on criteria pollutants at Stations 1-6 below Prevention of Significant Deterioration (PSD) thresholds as a minor source with regards to the New Source Review (NSR) permitting program. Notwithstanding conditions in the MNSR permit, the permittee shall comply with all applicable requirements of the MNSR permit.

A. Facility-Wide Requirements

1. Emission Limits

- (a) Total facility-wide VOC emissions shall not exceed 245 tons during any consecutive 12-month period.
- (b) Total facility-wide nitrogen oxides (NO_x) emissions shall not exceed 245 tons during any on consecutive 12-month period.
- (c) Total facility-wide carbon monoxide (CO) emissions shall not exceed 245 tons during any consecutive 12-month period.
- (d) Total facility-wide carbon dioxide equivalent (CO₂e) emissions shall not exceed 98,000 tons during any consecutive 12-month period.
- (e) Total facility-wide HAP emissions shall not exceed 24.5 tons during any consecutive 12-month period.
- (f) Facility-wide individual HAP emissions shall not exceed 9.8 tons during any consecutive 12-month period.
- (g) Emission limits shall apply at all times, unless otherwise specified in this permit.

2. Construction and Operational Limits

- (a) The Permittee shall only construct at the locations specified in this permit.
- (b) Each station shall not exceed a combined maximum engine capacity of up to 9,100 hp. All engine capacities shall be based on the manufacturer's maximum site-rated hp of each engine.
- (c) The Permittee shall only install engines that are operated and controlled as specified in this permit.
- (d) The Permittee shall only install natural gas condensate storage tanks that are operated and controlled as specified in this permit.
- (e) The Permittee shall only install produced water tanks that are operated and controlled as specified in this permit.
- (f) All-natural gas condensate, produced water, and natural gas collection, storage and handling operations, regardless of size, shall be designed, operated and maintained by the Permittee so as to minimize leakage of hydrocarbon emissions to the atmosphere.

3. Testing Requirements

Within 1 year of the first day that operations begin at each station, the Permittee shall obtain an extended laboratory analysis of the natural gas condensate and produced water received at each station to confirm the accuracy of the emissions estimates provided in the application for this permit. Thereafter, the Permittee shall obtain an extended laboratory analysis of the natural gas condensate and produced water received at each station every 5 years and use the new data for emissions calculations required in this permit.

4. Monitoring Requirements

(a) The Permittee shall monitor the maximum engine capacity at each station upon commencement of operations, at the end of each calendar year, and any time an engine is installed, moved or replaced. All engine capacities shall be based on the maximum site rated hp of each engine.

EPA inspector has confirmed site rated HP of each engine observed at five operating facilities.

(b) The Permittee shall measure the total facility-wide volume of produced water and natural gas condensate processed through the station as specified in this permit.

(c) The Permittee shall calculate, at the end of each calendar month, the facility-wide VOC, NO_x, CO, CO_{2e} and HAP emissions, beginning with the first calendar month that permitted operations commence. Prior to 12 full months of operation, the Permittee shall, at the end of each month, add the emissions for that month to the calculated emissions for all previous months since operations commenced and record the total. Thereafter, the Permittee shall, at the end of each month, add the emissions for that month to the calculated emissions for the preceding 11 months and calculate a new 12-month total.

(d) Emissions from all controlled and uncontrolled emission sources shall be included in the monthly and consecutive 12-month calculations, including, but not limited to: the natural gas condensate storage tanks; produced water storage tanks; truck loadout operations; natural gas condensate, produced water, natural gas system receivers; fuel gas coalescers; slug catchers; filter separators; pig launchers and receivers; pneumatic pumps; pneumatic controls; compressor blowdowns; engines; equipment leaks; enclosed combustors; utility flares; or any other EPA-approved control device.

(e) Emissions from each approved emitting unit shall be calculated by the Permittee as specified in this permit.

(f) Where sufficient to meet the monitoring requirements of the MNSR permit, the Permittee may use a Supervisory Control and Data Acquisition (SCADA) system to monitor the needed data in this permit.

(g) Alternative monitoring methods may be used by the Permittee upon EPA approval.

5. Recordkeeping Requirements

(a) The Permittee shall maintain a record of the location of each engine at each station upon commencement of operations and any time an engine is installed, moved or replaced. The records shall include the type of engine (i.e., 4-stroke rich-burn or 4-stroke lean-burn) and maximum hp rating.

(b) The Permittee shall maintain a record of the location of the natural gas condensate storage tanks and produced water storage tanks upon commencement of operations and any time a natural gas condensate storage tank or produced water storage tank is installed, moved or replaced. The records shall include the type and size of the tank.

(c) The Permittee shall maintain a record of the monthly and consecutive 12-month barrels of natural gas condensate received at each station.

(d) The Permittee shall maintain a record of the total facility-wide monthly and consecutive 12-month barrels of natural gas condensate received.

(e) The Permittee shall maintain a record of the monthly and consecutive 12-month total

facility-wide VOC, NO_x, CO, CO_{2e} and HAP emissions, in tons per year (tpy).

(f) The Permittee shall maintain a record of the results of each extended laboratory analysis of the natural gas condensate and produced water received at each station.

(g) The Permittee shall maintain a record of all input parameters and calculations used to determine the monthly emissions from all controlled and uncontrolled emission sources.

(h) The Permittee shall maintain a record of all deviations from the requirements of the MNSR permit.

(i) Where sufficient to meet all the recordkeeping requirements of the MNSR permit, the Permittee may use a SCADA system to record the needed data in the MNSR permit.

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(j) Alternative methods of recordkeeping may be used by the Permittee upon EPA approval.

B. Requirements for Engines

1. Emission Limits

(a) Emissions from each natural gas-fired lean-burn engine shall not exceed the following:

(i) NO_x: 2.0 grams/horsepower-hour (g/hp-hr);

(ii) CO: 1.3 g/hp-hr;

(iii) VOC: 0.3 g/hp-hr; and

(iv) Formaldehyde (CH₂O): 0.2 g/hp-hr.

(b) Emissions from each natural gas-fired rich-burn engine shall not exceed the following:

(i) NO_x: 1.0 g/hp-hr;

(ii) CO: 2.0 g/hp-hr;

(iii) VOC: 0.7 g/hp-hr; and

(iv) CH₂O: 0.1 g/hp-hr.

2. Construction and Operational Requirements

(a) The Permittee shall ensure that rich burn engines are equipped with a catalytic control system capable of reducing uncontrolled emissions, at the maximum operating rate (90% to 110% of the maximum engine capacity at site elevation), as follows:

(i) NO_x: 95%;

(ii) CO: 90%;

(iii) VOC: 80%; and

(iv) CH₂O: 90%.

(b) The Permittee shall install temperature sensing devices (e.g., thermocouple or resistance temperature detectors) before the catalytic control system on each engine in order to continuously monitor the exhaust temperature to the inlet of the catalyst bed. Each temperature sensing device shall be calibrated and operated by the Permittee according to manufacturer specifications.

EPA Inspectors confirmed the installation of temperature sensing devices and the monitoring data for inlet temperatures at all five facilities.

(c) Except during startups, which shall not exceed 30 minutes, the engine exhaust temperature of each engine, at the inlet to the catalyst bed, shall be maintained at all times the engines operate with an inlet temperature of at least 450 °F and no more than 1,350 °F.

From the engine daily and monthly data provided by Arrow Pipelines LLC, EPA inspectors confirmed inlet temperatures at least 450 °F and no more than 1,350 °F for all engines from September 2022 to May 2023.

(d) If the exhaust temperature at the inlet to the catalyst bed deviates from the ranges required by this permit, then the Permittee shall take the following actions: (i) Immediately upon determining a deviation of the inlet temperature, corrective action shall be taken on that engine to assess performance problems and/or tuning issues and the catalytic control system shall be inspected for possible damage and problems affecting catalyst effectiveness (including, but not limited to, plugging, fouling, destruction or poisoning of the catalyst bed). Investigation may include monitoring of NO_x, CO, VOC and/or CH₂O emissions to ensure the catalytic control system is functioning and testing the temperature sensing devices;

(ii) If the problem can be corrected by following the engine and/or the catalytic control system manufacturer recommended procedures (or equivalent procedures provided they bring the inlet temperature to the catalyst bed back within the acceptable temperature range), then the Permittee shall correct the problem within 24 hours of inspecting the engine and catalyst control system;

(iii) If the problem cannot be corrected using the manufacturer's recommended procedures, then the affected engine shall cease operating immediately and shall not be returned to routine service until the inlet temperature to the catalyst bed is measured and found to be within the acceptable temperature range for that engine. Corrective action may include removal and cleaning of the catalyst according to manufacturer methods, replacement of the catalyst or replacement of the catalytic control system; and

(iv) The Permittee's completion of any or all of these actions shall not constitute, nor qualify as, an exemption from any other emission limits in this permit.

(e) The Permittee shall monitor the pressure drop across each catalyst bed during normal operations on a monthly basis.

During the time of the inspection, and in the follow-up data provided by Arrow Pipelines LLC, EPA inspectors observed missing monthly data.

(f) During operation, the pressure drop across the catalyst bed on each engine shall be maintained to within 2 inches of water from the baseline pressure drop reading taken during the most recent performance test.

During the time of the inspection, and in the follow-up data provided by Arrow Pipelines LLC, EPA inspectors observed pressure drop readings above 2 inches of water from the baseline pressure. The summary of engine data with pressure drop readings above 2 inches of water is in Table 1.

(g) If the pressure drop exceeds 2 inches of water from the baseline pressure drop reading taken during the most recent performance test, then the following actions shall be taken by the Permittee:

(i) Immediately upon determining a deviation of the pressure drop, corrective action shall be taken to assess performance problems for possible damage and problems affecting catalytic control systems effectiveness (including, but not limited to, plugging, fouling, destruction or poisoning of the catalyst in the catalyst bed). Investigation may include monitoring of NO_x, CO, VOC and/or CH₂O emissions to

ensure the catalytic control system is functioning and testing the pressure transducers. If the cause is determined to be the catalyst, then the catalyst shall be inspected and cleaned or replaced, if necessary;

(ii) If the problem can be corrected by following the engine and/or the catalytic control system's manufacturer recommended procedures, or equivalent procedures provided they bring the pressure drop across the catalyst bed back to within 2 inches of water from the baseline pressure drop reading taken during the most recent performance test, then the Permittee shall correct the problem within 24 hours of inspecting the catalytic control system;

(iii) If the problem cannot be corrected using manufacturer recommended procedures, then the affected engine shall cease operating immediately and shall not be returned to routine service until the pressure drop across the catalyst bed is measured and found to be within the acceptable pressure drop range. Corrective action may include removal and cleaning of the catalyst according to manufacturer methods, replacement of the catalyst or replacement of the catalytic control system; and

(iv) The Permittee's completion of any or all of these actions shall not constitute, nor qualify as, an exemption from any other emission limits in this permit.

(h) The Permittee shall only fire the engines covered by the MNSR permit with natural gas, except that propane may be used as an alternative fuel solely during emergency operations for a maximum of 100 hours in any consecutive 12-month period.

During the time of the inspection, all operating engines were using natural gas.

(i) The Permittee shall follow, for each engine and any respective catalytic control system, manufacturer recommended maintenance schedules and procedures to ensure optimum performance of each engine and its respective catalytic control system.

(j) The Permittee may overhaul or replace an existing permitted engine with an engine of the same hp rating and configured to operate in the same manner as the engine being replaced. Any emission limits, requirements, control technologies, testing or other provisions that apply to the permitted engines that are replaced shall also apply to the replacement engines.

(k) The Permittee may resume operation without the catalytic control system during an engine "break-in" period, not to exceed 5 days, for overhauled and replacement engines.

(l) The total facility-wide operational hours for all lean-burn and rich-burn engines shall be limited as necessary to demonstrate that engine emissions do not cause the Permittee to exceed the facility-wide emission limits in Condition V.A.1. of this Title V permit, as specified in Condition V.B.5. of this Title V permit.

3. Testing Requirements

(a) Performance tests shall be conducted on each engine for measuring NO_x, CO, VOC and CH₂O emissions to demonstrate compliance with each emission limit. The performance tests shall be conducted in accordance with appropriate reference methods specified in 40 CFR part 63, appendix A and 40 CFR part 60, appendix A. The Permittee may submit to the EPA a written request for approval of an alternate test method but shall only use that alternate test method after obtaining approval from the EPA.

The EPA has received the performance test results on July 5, 2023, for each engine measuring NO_x, CO, VOC and CH₂O emissions to demonstrate compliance with each emission limit.

- (i) The initial performance test shall be conducted within 90 calendar days of startup of an engine.
- (ii) Subsequent performance tests for VOC and CH₂O emissions shall be performed within 12 months of the most recent performance test.
- (iii) Performance tests for NO_x, CO, VOC and CH₂O emissions shall be conducted within 90 calendar days of startup of all overhauled engines, replacement engines, catalyst replacement and engines restarted after correction of a deviation of the temperature to the inlet of the catalyst or pressure drop across the catalyst that resulted in a required shut down according to this permit.
- (b) The Permittee shall not perform engine tuning or make any adjustments to engine settings, catalytic control system settings, processes or operational parameters the day of the engine testing or during the engine testing for the purpose of passing a performance test. Any such tuning or adjustments may result in a determination by the EPA that the test is invalid. The Permittee shall record the reason for and result of any adjustments made on the day of or during any performance test. Artificially increasing an engine load to meet testing requirements is not considered engine tuning or adjustments.
- (c) All performance tests performed for NO_x, CO, VOC and CH₂O emissions shall meet the following requirements:
 - (i) The pressure drop across each catalyst and the inlet temperature to the catalyst shall both be measured during all performance tests;

In the data range requested for the engine catalyst data, EPA inspectors discovered that catalyst differential pressure readings were not taken during 2022 performance tests for unit 162 and 562.

- (ii) All tests for CO and NO_x emissions shall be performed simultaneously;
- (iii) All tests shall be performed within 10% of 100% peak (or highest achievable) load on the day of the test. The Permittee may submit to the EPA a written request for approval of an alternate load level for testing, but shall only test at that alternate load level after obtaining approval from the EPA;
- (iv) During each test run, data shall be collected on all parameters necessary to document how emissions were measured or calculated (such as test run length, minimum sample volume, volumetric flow rate, moisture and oxygen corrections, etc.);
- (v) Each test shall consist of at least three 1-hour or longer valid test runs. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of the emission limits;
- (vi) Performance test plans for NO_x, CO, VOC and CH₂O shall be submitted to the EPA for approval 60 calendar days prior to the date the test is planned. The plans shall include and address the following elements:
 - (A) Purpose of the test;
 - (B) Engines and catalytic control systems to be tested;
 - (C) Expected engine operating rate(s) during test;
 - (D) Schedule/dates for the test;
 - (E) Sampling and analysis procedures (sampling locations, test methods, laboratory identification);
 - (F) Quality assurance plan (calibration procedures and frequency, sample recovery and field documentation, chain of custody procedures); and
 - (G) Data processing and reporting (description of data handling and quality control procedures, report content).

- (d) The Permittee shall notify the EPA in writing at least 30 calendar days prior to scheduled performance testing; and
- (e) If a permitted engine is not operating, the Permittee does not need to start up the engine solely to conduct a performance test. The performance test requirements apply when the facility begins operating again.

A notice of testing was submitted to the EPA on May 25, 2023.

4. Monitoring Requirements

- (a) The Permittee shall measure NO_x and CO emissions from each engine at least quarterly, and every time the catalyst is changed out to demonstrate compliance with each engine's emission limits. To meet this requirement, the Permittee shall:
 - (i) Measure NO_x and CO emissions using a portable analyzer and a monitoring protocol approved by the EPA;
 - (ii) Submit the analyzer specifications and monitoring protocol to the EPA for approval at least 45 calendar days prior to the date of initial portable analyzer monitoring; and
 - (iii) Commence monitoring for NO_x and CO emissions during the first calendar quarter following the submittal of the initial performance test results for NO_x and CO emissions to the EPA.
- (b) For any one engine: If the results of two consecutive quarterly portable analyzer measurements are less than 80% of the CO emission limit, the required test frequency shall change from quarterly to semi-annual. If the results of two consecutive semi-annual portable analyzer measurements are less than 80% of the CO emission limit, the required monitoring frequency shall change from semi-annual to annual. If the results of any single portable analyzer measurement are more than 80% of the CO emission limit, the required test frequency shall change back to quarterly.
- (c) For any one engine: If the results of two consecutive quarterly portable analyzer measurements are less than 80% of the NO_x emission limit, the required test frequency shall change from quarterly to semi-annual. If the results of two consecutive semi-annual portable analyzer measurements are less than 80% of the NO_x emission limit, the required monitoring frequency shall change from semi-annual to annual. If results of any single portable analyzer measurement are more than 80% of the NO_x emission limit, the required test frequency shall change back to quarterly.
- (d) The Permittee shall not perform engine tuning or make any adjustments to engine settings, catalytic control system settings, processes or operational parameters immediately prior to the engine testing or during the engine testing. Any such tuning or adjustments may result in a determination by the EPA that the test is invalid.
- (e) Engine emissions shall be calculated based on the following:
 - (i) The most recent performance test or portable analyzer results;
 - (ii) The greenhouse gas emission factors provided in 40 CFR part 98 subpart C, Tables C-1 and C-2, for the combustion of natural gas;
 - (iii) The maximum site-rated hp of each engine; and
 - (iv) Assuming full-time operation of 8,760 hours per year for each engine.

5. Emissions Calculations

The Permittee shall ensure that total facility-wide engine VOC, NO_x, CO, CO_{2e}, CH₂O and HAP

emissions do not cause the Permittee to exceed the facility-wide emission limits in Condition V.A.1. of this Title V permit, as follows:

- (a) The operational hours of all engines of the same hp shall be recorded at the end of each calendar month and summed.
- (b) Engine emissions shall be calculated based on the following:
 - (i) The most recent performance test or portable analyzer results. Emissions of NO_x, CO, VOC and CH₂O shall be calculated for each engine by converting the most recent performance test or portable analyzer results for each pollutant in g/hp-hr to pounds per hour (lb/hr);
 - (ii) The greenhouse gas emission factors provided in 40 CFR part 98 subpart C, Tables C-1 and C-2 for the combustion of natural gas;
 - (iii) The maximum site-rated hp of each engine;
 - (iv) The number of operating hours for the engine for that month; and
 - (v) Monthly emissions calculations shall account for any engine break-in period where the engine was operated without the catalytic control system installed.
- (c) Engine emissions calculations shall be made at the end of each calendar month. The Permittee shall at the end of each month add the emissions for that month to the calculated emissions for the preceding 11 months and calculate a new 12-month total.

6. Recordkeeping Requirements

- (a) Records shall be kept of manufacturer specifications for each engine, catalytic control system, temperature sensing device and pressure measuring device.
- (b) Records shall be kept of all calibration and maintenance conducted in accordance with manufacturer recommendations for each engine, catalytic control system, temperature sensing device and pressure measuring device.
- (c) Records shall be kept of all temperature measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.
- (d) Records shall be kept of all pressure drop measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.
- (e) Records shall be kept of all required testing and monitoring in this permit. The records shall include the following:
 - (i) The date, place, and time of sampling or measurements;
 - (ii) The date(s) analyses were performed;
 - (iii) The company or entity that performed the analyses;
 - (iv) The analytical techniques or methods used;
 - (v) The results of such analyses or measurements; and
 - (vi) The operating conditions as existing at the time of sampling or measurement.
- (f) Records shall be kept of all catalytic control system replacements or repairs, engine overhauls and engine replacements.
- (g) Records shall be kept of each overhauled or replaced engine "break-in" period pursuant to the requirements of the MNSR permit.
- (h) Records shall be kept of each time an engine is shut down due to a deviation in the inlet temperature to the catalyst or pressure drop across a catalyst. The Permittee shall include in the record the cause of the problem, the corrective action taken and the timeframe for bringing the pressure drop and inlet temperature range into compliance.

- (i) Records shall be kept of the hours of operation for each engine for each month and consecutive 12-month period, beginning with the first month that the MNSR permit is effective.
- (j) Records shall be kept of the VOC, NO_x, CO, CO_{2e} and CH₂O emissions calculations for each engine.
- (k) Records shall be kept of the total facility-wide VOC, NO_x, CO, CO_{2e} and CH₂O emissions calculations for all engines for each consecutive 12-month period, beginning with the first month that the MNSR permit is effective, as specified in Condition V.B.5. of this Title V permit. Records shall be sufficient to demonstrate that emissions for all engines do not result in exceedances of the emission limits in Condition V.A.1. of this Title V permit.
- (l) Records shall be kept that are sufficient to demonstrate that the fuel for the engines is natural gas or propane for a maximum of 100 hours per year per engine when natural gas is unavailable. Records of propane use shall include the total hours used in each consecutive 12-month period.

The total facility wide engine emissions calculation is submitted in a semi annual and annual certification report. The most recent report submitted on March 30, 2023, showed compliance with facility wide emissions limit in Condition V.A.1. of this Title V permit.

C. Requirements for Tanks

- 1. All natural gas condensate storage tanks and produced water storage tanks are covered by the MNSR permit.
- 2. The Permittee shall follow, for each tank, manufacturer recommended maintenance schedule and operating procedures to ensure good air pollution control practices for minimizing emissions.
- 3. The Permittee shall install, maintain and operate each tank such that all the emission limits in the MNSR permit will be met.
- 4. The Permittee shall limit the tank emissions using one or more of the following techniques:
 - (a) Route all working, breathing and flashing losses through a closed-vent system to an operating system designed to recover and inject the emissions into a natural gas gathering pipeline system for sale or other beneficial purpose; and/or
 - (b) Route all working, breathing and flashing losses through a closed-vent system to a control device as specified in this permit.

During the inspection, EPA inspectors observed VOC emissions from tanks. The observations are summarized in Table 2 with the corresponding FLIR video images.

- 5. Covers: The Permittee shall equip all openings on each tank with a cover to ensure that all hydrocarbon emissions are efficiently being routed through a closed-vent system to a natural gas pipeline system for sale or other beneficial purpose and/or a control device as specified in this permit.
 - (a) The Permittee shall ensure that each cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) form a continuous impermeable barrier over the entire surface area of the tanks.

During the inspection, EPA inspectors observed hydrocarbon emissions from the top of the tanks in Station 2.

- (b) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in a tank on which the cover is installed except during those times when it is necessary to use an opening as follows:
- (i) To add material to, or remove material from the tank (this includes openings necessary to equalize or balance the internal pressure of the tank following changes in the level of the material in the tank);
 - (ii) To inspect or sample the material in the tank; or
 - (iii) To inspect, maintain, repair or replace equipment located inside the tank.
- (c) Each thief hatch cover shall be weighted and properly seated.
- (d) Pressure relief valves shall be set to release at a pressure that will ensure that all hydrocarbon emissions are routed through the closed-vent system to a natural gas pipeline system for sale or other beneficial purpose and/or a control device as specified in the MNSR permit under normal operating conditions.

6. Monitoring Requirements

- (a) The Permittee shall perform quarterly visual inspections of tank thief hatches, covers, seals, pressure relief valves and closed vent systems to ensure proper condition and functioning and repair any damaged equipment. The quarterly inspections shall be performed while the tanks are being filled.

Arrow Pipelines LLC performs monthly audio, visual and olfactory inspections on tanks. The EPA has received and reviewed monthly records from December 2022 to May 2023 which also includes volume of produced water and natural gas condensate. During the inspection Josh Swann confirmed that the visual inspections are not performed with FLIR as they do not own a FLIR camera.

- (b) The Permittee shall perform quarterly visual inspections of the peak pressure and vacuum values in each closed vent system and control device of each tank as specified in the MNSR permit to ensure that the pressure and vacuum relief set-points are not being exceeded in a way that has resulted, or may result, in venting and possible damage to equipment. The quarterly inspections shall be performed while the tanks are being filled.
- (c) The Permittee shall calculate the VOC, CO₂e and HAP emissions from each tank. The VOC and HAP emissions at each station shall be determined using: the measured monthly volume of produced water and natural gas condensate routed to the tanks; the most recent extended laboratory analysis of the produced water and natural gas condensate entering the station as required in this permit; E&P Tanks V2.0 and/or EPA Tanks 4.0.9d as appropriate; and the most recent tested control efficiency of the control device being used, as required in this permit. Other calculation methods may be used upon prior written approval by the EPA.

7. Record Keeping Requirements

- (a) The Permittee shall maintain records of the monthly volume of produced water and natural gas condensate handled by each tank.
- (b) The Permittee shall maintain a record of all quarterly inspections. All inspection records shall include, at a minimum, the following information:
- (i) The date of the inspection;
 - (ii) The findings of the inspection;
 - (iii) Any required repairs; and

- (iv) The inspector's name and signature.
- (c) The Permittee shall maintain records of the date of installation of each tank, the manufacturer specifications and all scheduled maintenance and repairs.
- (d) The Permittee shall maintain records of the VOC, CO₂e and HAP emissions calculations for each tank.

The EPA has received monthly tanks records from December 2022 to May 2023. The Arrow Pipelines LLC records volume with tank levels. The tank logs sheets do not include any repairs made as there are no records of leaks detected during the requested time frame of the data.

D. Requirements for Control Systems for Hydrocarbon Emissions

1. Closed-Vent Systems: The Permittee shall meet the following requirements for closed-vent systems:

- (a) Each closed-vent system shall route all hydrocarbon emissions from the natural gas condensate storage tanks and produced water storage tanks to a natural gas pipeline system for sale or other beneficial purpose and/or a control device as specified in this section of the permit;
- (b) All vent lines, connections, fittings, valves, pressure relief valves or any other appurtenance employed to contain and collect hydrocarbon emissions to transport them to a natural gas pipeline system for sale or other beneficial purpose and/or a control device as specified in this section of the permit, shall be maintained and operated properly at all times;
- (c) Each closed-vent system shall be designed to operate with no detectable hydrocarbon emissions, as required in this permit;

During the inspection, EPA inspectors observed hydrocarbon emissions from the top of the tanks in Station 2.

- (d) If any closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the hydrocarbon emissions, from entering a natural gas pipeline system for sale or other beneficial purpose and/or a control device as specified in this section of the permit, the Permittee shall meet one of following requirements for each bypass device:
 - (i) At the inlet to the bypass device that could divert the hydrocarbon emissions away from a natural gas pipeline or a control device and into the atmosphere, properly install, calibrate, maintain, and operate a flow indicator that is capable of taking continuous readings and sounding an alarm when the bypass device is open such that hydrocarbon emissions are being, or could be, diverted away from a natural gas pipeline or a control device and into the atmosphere; or
 - (ii) Secure the bypass device valve installed at the inlet in the non-diverting position using a car-seal or a lock-and-key type configuration.
- (e) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines and safety devices are not subject to the requirements applicable to bypass devices.

2. Enclosed Combustors and Utility Flares: The Permittee shall meet the following requirements for enclosed combustors and utility flares:

- (a) Follow, for each enclosed combustor or utility flare, manufacturer written operating instructions, procedures, and maintenance schedule to ensure good air pollution control practices for minimizing emissions;
- (b) Ensure, for each enclosed combustor or utility flare, that there is sufficient capacity to

reduce the mass content of VOCs in the hydrocarbon emissions routed to it by at least 95% for the minimum and maximum volumetric flow rate and British thermal unit (BTU) content routed to the device;

During the inspection, EPA inspectors detected trails of unburned hydrocarbon from Arrow Pipelines LLC compressor stations. EPA inspectors observed smoke from the flare located in Station 2 and conducted Method 22 from 11:21 AM to 11:22 AM. The observations made in the field is summarized in Table 2. The observation was also confirmed with Josh Swann during the inspection. After the inspection, Arrow Pipelines LLC addressed flare combustion issue by adjusting fuel pressure and pilot pressure and communicated the work performed on July 3, 2023 by email response.

- (c) Operate each enclosed combustor or utility flare such that the mass content of VOCs in the hydrocarbon gas emissions routed to it are reduced by at least 95%;
- (d) Ensure that each utility flare is designed and operated in accordance with requirements of the General Provisions for the New Source Performance Standards (NSPS A) at §60.18(b), for such flares except for §§60.18(c)(2) and 60.18(f)(2) for those utility flares operated with an auto-ignition system;
- (e) The Permittee shall ensure that each enclosed combustor is:
 - (i) A model demonstrated by a manufacturer to meet the 95% VOC destruction efficiency requirements of the NSPS for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 CFR part 60, subpart OOOO (NSPS OOOO), using the procedure specified in §60.5413(d), by the due date of the first annual report; or
 - (ii) Demonstrated to meet the 95% VOC destruction efficiency requirements of NSPS OOOO using EPA-approved performance test methods specified in §60.5413(b).
- (f) The Permittee shall ensure that each enclosed combustor and utility flare is:
 - (i) Operated properly at all times that hydrocarbon emissions are routed to it;
 - (ii) Operated with a liquid knock-out system to collect any condensable vapors (to prevent liquids from going through the control device);
 - (iii) Equipped with a flash-back flame arrestor;
 - (iv) Equipped with one of the following:
 - (A) A continuous burning pilot flame, a thermocouple, and a malfunction alarm and notification system if the pilot flame fails; or
 - (B) An electronically controlled auto-ignition system with a malfunction alarm and notification system if the flame fails while hydrocarbon gas emissions are flowing to the enclosed combustor or utility flare;
 - (v) Equipped with a continuous recording device, such as a chart recorder, data logger or similar device, or connected to a SCADA system to monitor and document proper operation of the enclosed combustor or utility flare;
 - (vi) Maintained in a leak-free condition; and
 - (vii) Operated with no visible smoke emissions, as defined in EPA Reference Method 22 of 40 CFR part 60, appendix A.

During the inspection, EPA inspectors did not observe any smoke from the flares.

3. Other Control Devices: Upon written approval by the EPA, the Permittee may use control devices other than those listed above that are capable of reducing the mass content of VOCs in the hydrocarbon gas routed to it by at least 95%, provided that:

(a) In operating such control devices, the Permittee shall follow the manufacturer's written operating instructions, procedures and maintenance schedule to ensure good air pollution control practices for minimizing emissions;

(b) The Permittee shall ensure there is sufficient capacity to reduce the mass content of VOCs in the hydrocarbon gas emissions routed to such other control devices by at least 95% for the minimum and maximum natural gas volumetric flow rate and BTU content routed to each device; and

(c) The Permittee shall operate such a control device to reduce the mass content of VOCs in the produced natural gas and natural gas emissions routed to it by at least 95%.

EPA inspectors did not observe any other control devices.

4. Testing Requirements

Within 180 days after initial startup at each station, and every 5 years thereafter, the Permittee shall conduct a performance test of the closed-vent system to demonstrate that it is operating in a leak-free condition, and a performance test of the control device to which hydrocarbon emissions are routed to demonstrate 95% destruction efficiency.

(a) Testing of the closed vent system shall be conducted in accordance with EPA Reference Method 21, listed in 40 CFR part 60, appendix A.

(b) Testing of the enclosed combustor VOC destruction efficiency shall be conducted in accordance with EPA Reference Method 25A, listed in 40 CFR part 60, appendix A.

(c) A 95% destruction efficiency can be assumed for utility flares provide they are designed and operated in accordance with §60.18(b).

(d) The Permittee may submit a written request to the EPA for an alternate testing method but shall only use that test method upon receipt of written approval by the EPA.

5. Monitoring Requirements

(a) The Permittee shall monitor the operation of each enclosed combustor and utility flare to confirm proper operation as follows:

(i) Continuously monitor the enclosed combustor and utility flare operation using a malfunction alarm and notification system for failures, and checking the alarm and notification system for proper operation whenever an operator is on site at a minimum quarterly;

(ii) Monitor for visible smoke during operation of any enclosed combustor, utility flare, or pit flare each time an operator is on site, at a minimum quarterly. Upon observation of visible smoke, use EPA Reference Method 22 of 40 CFR part 60, appendix A, to confirm that no visible smoke emissions are present. The observation period shall be 1 hour. Visible smoke emissions are present if smoke is observed emitting from the enclosed combustor, utility flare or pit flare for more than 2 minutes in any 1 hour; and

(iii) Respond to any observation of improper monitoring equipment operation or any malfunction and notification alarm system to ensure the monitoring equipment is returned to proper operation as soon as practicable and safely possible after an observation or an alarm sounds.

(b) Where sufficient to meet the monitoring requirements the Permittee may use a SCADA system to monitor and record the required data.

- (c) The Permittee shall calculate VOC, NO_x, CO, CO_{2e} and HAP emissions from each enclosed combustor and utility flare using the following:
- (i) The monitored volume of standing, working, breathing and flashing gases from the natural gas condensate storage tanks and produced water storage tanks, as required in this permit;
 - (ii) The most recent extended laboratory analysis of the natural gas condensate received at each station;
 - (iii) The most recent performance test results of the closed-vent system and control device;
 - (iv) The emission factors in AP-42 Chapter 1.4, Natural Gas Combustion; and
 - (v) The emission factors provided in 40 CFR part 98, subpart C, Tables C-1 and C-2, for the combustion of natural gas.

6. Recordkeeping Requirements

The Permittee shall keep records of the following:

- (a) The site-specific design input parameters provided by the manufacturer or vendor and used to properly size each control device to assure the minimum 95% reduction requirements;
- (b) All required monitoring of the control device operations;
- (c) Any deviations from the operating parameters specified in the manufacturer or vendor site-specific designs. The records shall include the control's total operating time during the calendar month in which the exceedance occurred, the date, time and length of time that the parameters were exceeded, and the corrective actions taken and any preventative measures adopted to operate the controls within that operating parameter;
- (d) Any instances in which any closed-vent system or control device was bypassed or down in each calendar month, the reason for each incident, its duration, and the corrective actions taken, and any preventative measures adopted to avoid such bypasses or downtimes;
- (e) Any instances in which the pilot flame is not present in an enclosed combustor or the utility flare while hydrocarbon emissions are vented to it, the date and times that the pilot was not present and the corrective actions taken or any preventative measures adopted to improve the operation of the pilot flame;
- (f) Any instances in which the thermocouple (or other heat sensing monitoring device) installed to detect the presence of a flame in an enclosed combustor or engineered flare while hydrocarbon emissions are vented to it is not operational, the time period during which it was not operational, and the corrective measures taken;
- (g) Any instances in which the recording device installed to record data from the thermocouple is not operational;
- (h) Any time periods in which visible emissions are observed emanating from a control system; and
- (i) The VOC, NO_x, CO, CO_{2e} and HAP emissions calculations included in the consecutive 12-month total for all units covered by this permit.

EPA inspectors received Station Equipment Logs for Stations 1-5 which includes Visible Emissions from Flare and the flare operating hours. There are no notes regarding pilot flame or any deviations.

E. Requirements for Truck Loading Operations

The Permittee shall operate truck loading operations such that the emission limits in the MNSR permit are met.

1. The Permittee shall install, operate and maintain a piping system designed for submerged loading by either bottom loading or loading through a submerged fill pipe. The submerged fill pipe shall be no more than 12 inches from the bottom of the truck tank. The Permittee shall not conduct truck loading operations unless submerged loading is used.
2. Monitoring Requirements: VOC, CO_{2e} and HAP emissions from the truck loading operations for each calendar month shall be calculated by the Permittee using the following:
 - (a) The total facility-wide measured volume of natural gas condensate, in barrels, loaded for the month;
 - (b) The actual physical and chemical properties of the liquid and its associated vapors from the most recent extended laboratory analysis of the natural gas condensate and produced water received at the station;
 - (c) The procedures outlined in AP-42 Chapter 5.2, Transportation and Marketing of Petroleum Liquids for the actual method of truck loading for VOC and HAP emissions; and
 - (d) The procedures outlined in 40 CFR part 98 – Mandatory Green House Gas Reporting -for CO_{2e} emissions.
3. Recordkeeping Requirements
 - (a) Records shall be kept by the Permittee of the manufacturer specifications and all scheduled maintenance and repairs on the truck-loading equipment.
 - (b) Records shall be kept of the VOC, CO_{2e} and HAP emissions calculations included in the consecutive 12-month total for all units covered by this permit.

F. Requirements for Pneumatic Pumps, Pneumatic Controllers, Compressor Blowdowns

1. Pneumatic Pumps and Controllers
 - (a) The Permittee shall install, maintain and operate any pneumatic pumps and controllers such that the consecutive 12-month emission limit requirements in the MNSR permit will be met. This shall be achieved by meeting one or more of the following emission control techniques:
 - (i) Operate air-actuated controllers and pneumatic pumps;
 - (ii) Operate solar or electric-actuated controllers and pneumatic pumps;
 - (iii) Operate low-bleed with natural gas actuated controllers (6 standard cubic feet per hour);
 - (iv) Operate no-bleed with natural gas actuated controllers;
 - (v) Route the emissions discharge streams to an operating system designed to recover and inject the emissions into a natural gas gathering pipeline system for sale or other beneficial purpose, such as fuel supply; and/or
 - (vi) Route the discharge stream to a control device as specified in this permit.
 - (b) Each natural gas actuated pneumatic pump and controller shall be operated and maintained according to the manufacturer specifications.
 - (c) Records shall be kept of the date of installation, the manufacturer specifications and all scheduled maintenance and repairs for each natural gas actuated pneumatic pump and controller.
 - (d) Records shall be kept of a description of the steps taken to minimize the emissions from any natural gas actuated pneumatic pump and controller, and a description of emission estimation methods used to calculate VOC, CO_{2e} and HAP emissions.
 - (e) Emissions from all natural gas actuated pneumatic pumps and controllers shall be included in the facility-wide consecutive 12-month total.
2. Compressor Blowdowns

- (a) During manual and automated blow down episodes associated with maintenance or repair, hydrate clearing, emergency operations, equipment depressurization, etc., the Permittee shall limit emissions such that the emission limits in the MNSR permit are met.
- (b) The Permittee's personnel shall remain on site during manual blow downs.
- (c) The Permittee shall keep a record of the date and time of each compressor blowdown event; the volume of gas released during the episode, calculated based on a representative emission factor; and a description of emission estimation methods used to calculate the VOC, CO_{2e} and HAP emissions.
- (d) Compressor blowdown emissions shall be included in the consecutive 12-month total of all units covered by this permit.

G. Requirements for Equipment Leaks from Closed-Vent Systems

- 1. The Permittee shall minimize leaks of hydrocarbon gases from each connector, valve, pump, flange, open ended line or any other appurtenance employed to contain and collect vapors and transport them such that the emission limits in the MNSR permit are met.
- 2. The Permittee shall develop a written inspection protocol, approved by the EPA, based on audio, visual and olfactory inspection.
- 3. The Permittee shall visit each station on a quarterly basis to inspect all closed-vent systems for leaks using the EPA approved inspection protocol and document the inspection.
- 4. Any leaks detected in any closed-vent system shall be addressed immediately unless the repair requires resources not currently available. If the resources are not available, the leak shall be addressed as soon as practical, but no longer than before the next quarterly inspection.
- 5. Emissions from equipment leaks shall be determined by assuming 8,760 hours of operation in a year and with maximum leakage of all components. The annual VOC emissions rate from equipment leaks shall be no more than 9.4 tpy.

H. Requirements for Minimizing Fugitive Dust

- 1. Work Practice and Operational Requirements
 - (a) The Permittee shall take all reasonable precautions to prevent fugitive dust emissions at each station and shall construct, maintain and operate each station to minimize fugitive dust emissions. Reasonable precautions include, but are not limited to the following:
 - (i) Use, where possible, of water or chemicals for control of dust during construction and operations, grading of roads or clearing of land;
 - (ii) Application of asphalt, water or other suitable chemicals on unpaved roads, materials stockpiles and other surfaces, located at the facilities, that can create airborne dust;
 - (iii) The prompt removal from paved surfaces, located at the station, of earth or other material that does or may become airborne; or
 - (iv) Restricting vehicle speeds.
 - (b) The Permittee shall prepare and implement a written fugitive dust emission prevention plan, approved by the EPA, that specifies the reasonable precautions to be taken and the procedures to be followed to prevent fugitive dust emissions.
- 2. Monitoring Requirements
 - (a) The Permittee shall survey the station during construction and operation to determine if there are obvious visible dust plumes. This survey must be done at a minimum once per week in all active areas and during daylight hours.

(b) The Permittee shall document the results of the survey, including the date and time of the survey, identification of the cause of any visible dust plumes observed and the precautions taken to prevent continued fugitive dust emissions.

3. Recordkeeping Requirements

The Permittee shall maintain records for 5 years that document the fugitive dust prevention plan, the periodic surveys, and the reasonable precautions that were taken to prevent fugitive dust emissions.

VI. Facility-Wide Requirements [40 CFR 71.6(a)(1)]

Conditions in this section of this permit apply to all emissions units located at the source, including any units not specifically listed in this permit.

A. Recordkeeping Requirements [40 CFR 71.6(a)(3)(ii)]

The Permittee shall comply with the following generally applicable recordkeeping requirements: 1. If the Permittee determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more HAPs is not subject to a relevant standard or other requirement established under 40 CFR part 63, the Permittee shall keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall include an analysis (or other information) that demonstrates why the Permittee believes the source is unaffected (e.g., because the source is an area source). [40 CFR 63.10(b)(3)]

2. Records shall be kept of off permit changes, as required by the Off Permit Changes section of this permit.

B. Reporting Requirements [40 CFR 71.6(a)(3)(iii)]

1. The Permittee shall submit to the EPA all reports of any required monitoring under this permit semiannually. The first report shall cover the period from the effective date of this permit through December 31, 2021. Thereafter, the report shall be submitted semi-annually, by April 1st and October 1st of each year. The report due on April 1st shall cover the 6-month period ending on the last day of December before the report is due. The report due on October 1st shall cover the 6-month period ending on the last day of June before the report is due. All instances of deviations from permit requirements shall be clearly identified in such reports. All required reports shall be certified by a responsible official consistent with the Submissions section of this permit.

To help Part 71 Permittees meet reporting responsibilities, the EPA has developed a form "SIXMON" for 6-month monitoring reports. The form may be found on the EPA's website at:

<https://www.epa.gov/title-v-operating-permits/epa-issued-operating-permits>

2. "Deviation" means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined by observation or through review of data obtained from any testing, monitoring, or recordkeeping established in accordance with §71.6(a)(3)(i) and (a)(3)(ii). For a situation lasting more than 24 hours which constitutes a deviation, each 24-hour period is considered a separate deviation. Included in the meaning of deviation are any of the following:

(a) A situation where emissions exceed an emission limitation or standard;

(b) A situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met; or

(c) A situation in which observations or data collected demonstrate noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.

3. The Permittee shall promptly report to the EPA deviations from permit requirements, including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. "Prompt" is defined as follows:

(a) Any definition of "prompt" or a specific time frame for reporting deviations provided in an underlying applicable requirement as identified in this permit.

(b) Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a HAP or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence.

(ii) For emissions of any regulated air pollutant, excluding a HAP or a toxic air pollutant that continues for more than 2 hours in excess of permit requirements, the report shall be made within 48 hours.

(iii) For all other deviations from permit requirements, the report shall be submitted with the semi-annual monitoring report.

(c) If any of the conditions in (i) or (ii) of paragraph (b) above are met, the Permittee shall notify the EPA by telephone (1-800-227-6312), facsimile (303-312-6409), or by email to r8airreportenforcement@epa.gov based on the timetables listed above. *[Notification shall specify that this notification is a deviation report for a Part 71 permit]*. A written notice, certified consistent with the Submissions section of this permit shall be submitted within ten working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required under Condition 1 in this section of this permit.

[Explanatory note: To help Part 71 Permittees meet reporting responsibilities, the EPA has developed a form "PDR" for prompt deviation reporting. The form may be found on the EPA's website at:

<https://www.epa.gov/title-v-operating-permits/epa-issued-operating-permits>]

VII. General Provisions

A. Annual Fee Payment [40 CFR 71.9]

1. The Permittee shall pay an annual permit fee in accordance with the procedures outlined below.

2. The Permittee shall pay the annual permit fee each year no later than April 1st. The fee shall cover the previous calendar year.

3. The fee payment shall be in United States currency and shall be paid by money order, bank draft, certified check, corporate check, or electronic funds transfer payable to the order of the U.S. Environmental Protection Agency.

4. The Permittee shall send fee payment and a completed fee filing form to:

U.S. Environmental Protection Agency
OCFO/OC/ACAD/FCB
Attn: Collections Team
1300 Pennsylvania Ave NW
Mail Code 2733R
Washington, D.C. 20004

The Permittee shall send an updated fee calculation worksheet form and a photocopy of each fee payment check (or other confirmation of actual fee paid) submitted annually by the same deadline as required for fee payment to the address listed in the Submissions section of this permit.

[Explanatory note: The fee filing form “FF” and the fee calculation worksheet form “FEE” may be found on the EPA’s website at: <https://www.epa.gov/title-v-operating-permits/epa-issued-operatingpermits/>]

5. Basis for calculating annual fee:

(a) The annual emissions fee shall be calculated by multiplying the total tons of actual emissions of all “regulated pollutants (for fee calculation)” emitted from the source by the presumptive emissions fee (in dollars per ton) in effect at the time of calculation.

(i) “Actual emissions” means the actual rate of emissions in tpy of any regulated pollutant (for fee calculation) emitted from a Part 71 source over the preceding calendar year. Actual emissions shall be calculated using each emissions unit’s actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year.

(ii) Actual emissions shall be computed using methods required by the permit for determining compliance, such as monitoring or source testing data.

(iii) If actual emissions cannot be determined using the compliance methods in the permit, the Permittee shall use other federally recognized procedures.

[Explanatory note: The presumptive fee amount is revised each calendar year to account for inflation, and it is available from the EPA prior to the start of each calendar year.]

(b) The annual emissions fee shall be increased by a greenhouse gas (GHG) fee adjustment for any source that has initiated an activity listed in table at §71.9(c)(8) since the fee was last paid. The GHG fee adjustment shall be equal to the set fee provided in the table at §71.9(c)(8) for each activity that has been initiated since the fee was last paid.

(c) The Permittee shall exclude the following emissions from the calculation of fees:

(i) The amount of actual emissions of each regulated pollutant (for fee calculation)

that the source emits in excess of 4,000 tpy;

(ii) Actual emissions of any regulated pollutant (for fee calculation) already included in the fee calculation; and

(iii) The quantity of actual emissions (for fee calculation) of insignificant activities [defined in 40 CFR 71.5(c)(11)(i)] or of insignificant emissions levels from emissions at the source identified in the Permittee’s application pursuant to 40CFR 71.5(c)(11)(ii).

6. Fee calculation worksheets shall be certified as to truth, accuracy, and completeness by a responsible official.

[Explanatory note: The fee calculation worksheet form already incorporates a section to help you meet this responsibility.]

7. The Permittee shall retain fee calculation worksheets and other emissions-related data used to determine fee payment for 5 years following submittal of fee payment. [Emission-related data include, for example, emissions-related forms provided by the EPA and used by the Permittee for fee calculation purposes, emissions-related spreadsheets, and emissions-related data, such as records of emissions monitoring data and related support information required to be kept in accordance with 40 CFR 71.6(a)(3)(ii).]

8. Failure of the Permittee to pay fees in a timely manner shall subject the Permittee to assessment of penalties and interest in accordance with 40 CFR 71.9(l).

9. When notified by the EPA of underpayment of fees, the Permittee shall remit full payment within 30 days of receipt of notification.

10. A Permittee who thinks an EPA-assessed fee is in error and who wishes to challenge such fee, shall provide a written explanation of the alleged error to the EPA along with full payment of the EPA assessed fee.

EPA Region 8 has received annual emissions report and fee payment on 3/29/2023 for the previous calendar year.

B. Annual Emissions Inventory [40 CFR 71.9(h)(1) and (2)]

1. The Permittee shall submit an annual emissions report of its actual emissions for both criteria pollutants and regulated HAPs for this source for the preceding calendar year for fee assessment purposes. The annual emissions report shall be certified by a responsible official and shall be submitted each year to the EPA by April 1st.

2. The annual emissions report shall be submitted to the EPA at the address listed in the Submissions section of this permit.

[Explanatory note: An annual emissions report, required at the same time as the fee calculation worksheet by 40 CFR 71.9(h), has been incorporated into the fee calculation worksheet form as a convenience.]

The EPA has received Annual Emissions Inventory from Arrow Pipelines LLC on March 29, 2023.

C. Compliance Requirements [40 CFR 71.6(a)(6), Section 113(a) and 113(e)(1) of the CAA, and 40 CFR 51.212, 52.12, 52.33, 60.11(g) and 61.12]

1. Compliance with the Permit

(a) The Permittee must comply with all conditions of this Part 71 permit. Any permit noncompliance constitutes a violation of the CAA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(b) It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(c) For the purpose of submitting compliance certifications in accordance with §71.6(c)(5), or establishing whether or not a person has violated or is in violation of any requirement of this permit, 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.

2. Compliance Schedule [40 CFR 71.5(c)(8)(iii)]

(a) For applicable requirements with which the source is in compliance, the source will continue to comply with such requirements.

(b) For applicable requirements that will become effective during the permit term, the source shall meet such requirements on a timely basis.

3. Compliance Certifications [40 CFR 71.6(c)(5)]

(a) The Permittee shall submit to the EPA a certification of compliance with permit terms and conditions, including emission limitations, standards, or work practices annually by April 1st, and shall cover the same 12-month period as the two consecutive semi-annual monitoring reports.

[Explanatory note: To help Part 71 Permittees meet reporting responsibilities, the EPA has developed a reporting form for annual compliance certifications. The form may be found on the EPA's website at: <https://www.epa.gov/title-v-operating-permits/epa-issued-operating-permits>]

(b) The compliance certification shall be certified as to truth, accuracy, and completeness by a responsible official consistent with 40 CFR 71.5(d).

(c) The certification shall include the following:

(i) Identification of each permit term or condition that is the basis of the certification;

(ii) The identification of the method(s) or other means used for determining the compliance status of each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required in this permit. If necessary, the Permittee also shall identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the CAA, which prohibits knowingly making a false certification or omitting material information;

(iii) The status of compliance with each term and condition of the permit for the period covered by the certification based on the method or means designated in

(ii) above. The certification shall identify each deviation and take it into account in the compliance certification;

(iv) Such other facts as the EPA may require to determine the compliance status of the source; and

(v) Whether compliance with each permit term was continuous or intermittent.

D. Duty to Provide and Supplement Information [40 CFR 71.6(a)(6)(v), 71.5(a)(3), and 71.5(b)]

1. The Permittee shall furnish to the EPA, within a reasonable time, any information that the EPA may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the EPA copies of records that are required to be kept pursuant to the terms of the permit, including information claimed to be confidential. Information claimed to be confidential must be accompanied by a claim of confidentiality according to the provisions of 40 CFR part 2, subpart B.

2. The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. In addition, a Permittee shall provide additional information as necessary to address any requirements that become applicable after the date a complete application is filed, but prior to release of a draft permit.

E. Submissions [40 CFR 71.5(d), 71.6(c)(1) and 71.9(h)(2)]

1. Any document (application form, report, compliance certification, etc.) required to be submitted under this permit shall be certified by a responsible official as to truth, accuracy, and completeness. Such certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[Explanatory note: the EPA has developed a reporting form "CTAC" for certifying truth, accuracy and

completeness of Part 71 submissions. The form may be found on the EPA's website at:

<https://www.epa.gov/title-v-operating-permits/epa-issued-operating-permits/>

All fee calculation worksheets and applications for renewals and permit modifications shall be submitted to:

Part 71 Permit Contact, Air and Radiation Division, 8ARD-PM
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202

2. Except where otherwise specified, all reports, test data, monitoring data, notifications, and compliance certifications shall be submitted to:

Branch Chief, Air and Toxics Enforcement Branch, 8ENF-AT
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202-1129

3. CEDRI now has the capability to receive Part 71 documents that require certification by a responsible official. Specifically, we have added a form to CEDRI under "State/Local/Tribe Rule or Permit." The form allows for the user to submit four types of documents under Part 71: Clean Air Act 502(b)(10) change notification, a semi-annual monitoring report, a deviation notification, and a Title V application. The EPA is in the midst of announcing this new capability. The use of CEDRI for submitting these reports will not be mandatory but just provides an additional option. The job aide for how to submit reports in general can be found here:

https://www3.epa.gov/ttn/chief/cedri/Create_Reports_Job_Aide.pdf.

EPA Inspectors have reviewed and confirmed all submissions from Arrow Pipelines LLC or submissions on behalf of Arrow Pipelines LLC to be certified by a responsible official as to truth, accuracy and completeness.

F. Severability Clause [40 CFR 71.6(a)(5)]

The provisions of this permit are severable, and in the event of any challenge to any portion of this permit, or if any portion is held invalid, the remaining permit conditions shall remain valid and in force.

G. Permit Actions [40 CFR 71.6(a)(6)(iii)]

This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

H. Administrative Permit Amendments [40 CFR 71.7(d)]

The Permittee may request the use of administrative permit amendment procedures for a permit revision that:

1. Corrects typographical errors;
2. Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
3. Requires more frequent monitoring or reporting by the Permittee;

4. Allows for a change in ownership or operational control of a source where the EPA determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee has been submitted to the EPA;
5. Incorporates into the Part 71 permit the requirements from preconstruction review permits authorized under an EPA-approved program, provided that such a program meets procedural requirements substantially equivalent to the requirements of 40 CFR 71.7 and 71.8 that would be applicable to the change if it were subject to review as a permit modification, and compliance requirements substantially equivalent to those contained in 40 CFR 71.6; or
6. Incorporates any other type of change which the EPA has determined to be similar to those listed in (1) through (5) above.

[Note to Permittee: If 1 through 5 above do not apply, please contact the EPA for a determination of similarity prior to submitting your request for an administrative permit amendment under this provision.]

I. Minor Permit Modifications [40 CFR 71.7(e)(1)]

1. The Permittee may request the use of minor permit modification procedures only for those modifications that:

- (a) Do not violate any applicable requirement;
- (b) Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- (c) Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
- (d) Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - (i) A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I; and 41
 - (ii) An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA;
- (e) Are not modifications under any provision of Title I of the CAA; and
- (f) Are not required to be processed as a significant modification.

2. Notwithstanding the list of changes ineligible for minor permit modification procedures in 1 above, minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in an applicable implementation plan or in applicable requirements promulgated by the EPA.

3. An application requesting the use of minor permit modification procedures shall meet the requirements of 40 CFR 71.5(c) and shall include the following:

- (a) A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- (b) The source's suggested draft permit;

(c) Certification by a responsible official, consistent with 40 CFR 71.5(d), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and

(d) Completed forms for the permitting authority to use to notify affected states as required under 40 CFR 71.8.

4. The source may make the change proposed in its minor permit modification application immediately after it files such application. After the source makes the change allowed by the preceding sentence, and until the permitting authority takes any of the actions authorized by 40 CFR 71.7(e)(1)(iv)(A) through (C), the source must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time period, the source need not comply with the existing permit terms and conditions it seeks to modify. However, if the source fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against it.

5. The permit shield under 40 CFR 71.6(f) may not extend to minor permit modifications.

The facilities do not have any changes to trigger permit modifications at the date of the inspection.

J. Significant Permit Modifications [40 CFR 71.7(e)(3), 71.8(d), and 71.5(a)(2)]

1. The Permittee must request the use of significant permit modification procedures for those modifications that:

- (a) Do not qualify as minor permit modifications or as administrative amendments;
- (b) Are significant changes in existing monitoring permit terms or conditions; or
- (c) Are relaxations of reporting or recordkeeping permit terms or conditions.

2. Nothing herein shall be construed to preclude the Permittee from making changes consistent with Part 71 that would render existing permit compliance terms and conditions irrelevant.

3. Permittees must meet all requirements of Part 71 for applications, public participation, and review by affected states and tribes for significant permit modifications. For the application to be determined complete, the Permittee must supply all information that is required by 40 CFR 71.5(c) for permit issuance and renewal, but only that information that is related to the proposed change.

The facilities do not have any changes to trigger permit modifications at the date of the inspection.

K. Reopening for Cause [40 CFR 71.7(f)]

The permit may be reopened and revised prior to expiration under any of the following circumstances:

1. Additional applicable requirements under the CAA become applicable to a major Part 71 source with a remaining permit term of 3 or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 71.7(c)(3);

2. Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit;

3. The EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
4. The EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

L. Property Rights [40 CFR 71.6(a)(6)(iv)]

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

M. Inspection and Entry [40 CFR 71.6(c)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the EPA or an authorized representative to perform the following:
2. Enter upon the Permittee's premises where a Part 71 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
3. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
4. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

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5. As authorized by the CAA, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

N. Transfer of Ownership or Operation [40 CFR 71.7(d)(1)(iv)]

A change in ownership or operational control of this source may be treated as an administrative permit amendment if the EPA determines no other change in this permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee has been submitted to the EPA.

O. Off Permit Changes [40 CFR 71.6(a)(12) and 40 CFR 71.6(a)(3)(ii)]

The Permittee is allowed to make certain changes without a permit revision, provided that the following requirements are met, and that all records required by this section are kept for a period of 5 years:

1. Each change is not addressed or prohibited by this permit;
2. Each change shall meet with all applicable requirements and shall not violate any existing permit term or condition;
3. Changes under this provision may not include changes subject to any requirement of 40 CFR parts 72 through 78 or modifications under any provision of Title I of the CAA;
4. The Permittee must provide contemporaneous written notice to the EPA of each change, except for changes that qualify as insignificant activities under 40 CFR 71.5(c)(11). The written notice must describe each change, the date of the change, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change;
5. The permit shield does not apply to changes made under this provision;
6. The Permittee must keep a record describing all changes that result in emissions of any regulated air pollutant subject to any applicable requirement not otherwise regulated under this permit, and the emissions resulting from those changes;
7. The notice shall be kept on site and made available to the EPA on request, in accordance with the general recordkeeping provision of this permit; and
8. Submittal of the written notice required above shall not constitute a waiver, exemption, or shield from applicability of any applicable standard or PSD permitting requirements under 40 CFR 52.21 that would be triggered by the change.

P. Permit Expiration and Renewal [40 CFR 71.5(a)(1)(iii), 71.5(a)(2), 71.5(c)(5), 71.6(a)(11), 71.7(b), 71.7(c)(1), and 71.7(c)(3)]

1. This permit shall expire upon the earlier occurrence of the following events:
 - (a) Five (5) years elapse from the date of issuance; or
 - (b) The source is issued a 40 CFR part 70 or Part 71 permit under an EPA-approved or delegated permit program.
2. Expiration of this permit terminates the Permittee's right to operate unless a timely and complete permit renewal application has been submitted at least 6 months but not more than 18 months prior to the date of expiration of this permit.
3. If the Permittee submits a timely and complete permit application for renewal, consistent with 40 CFR 71.5(a)(2), but the EPA has failed to issue or deny the renewal permit, then all the terms and conditions of the permit, including any permit shield granted pursuant to 40 CFR 71.6(f) shall remain in effect until the renewal permit has been issued or denied.
4. The Permittee's failure to have a Part 71 permit is not a violation of this part until the EPA takes final action on the permit renewal application. This protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit any additional information identified as being needed to process the application by the deadline specified in writing by the EPA.
5. Renewal of this permit is subject to the same procedural requirements that apply to initial permit issuance, including those for public participation, affected state, and tribal review.
6. The application for renewal shall include the current permit number, description of permit revisions and off permit changes that occurred during the permit term, any applicable requirements that were promulgated and not incorporated into the permit during the permit term, and other information required by the application form.

The permit is current is up to date. The facilities do not have any changes to trigger permit modifications at the date of the inspection.

