MEMO TO : Arrow Midstream Holdings, LLC
Station 8 Compressor Station
McKenzie County

FROM : David Stroh
Manager, Permit Program
Division of Air Quality

RE : Reevaluation of ACP-17857 v1.1 source information and conditions resulting from 2022 self-audit and 2024 Department inspection

DATE : DRAFT March 2025

Arrow Midstream Holdings, LLC (Arrow) – Station 8 Compressor Station (facility) is an existing compressor station located in McKenzie County. The facility currently operates under Permit to Operate (PTO) No. AOP-28048 v1.0 issued on December 23, 2019. The facility submitted a PTO renewal package to the North Dakota Department of Environmental Quality – Division of Air Quality (Department) on September 23, 2024. The Department will complete the PTO renewal following issuance of a second amendment to permit to construct (PTC) No. ACP-17857.

An amendment to ACP-17857 is required to correct for discrepancies between the ACP-17857 v1.1 and AOP-28048 v1.0. This PTC amendment, ACP-17857 v1.2, captures the corrective actions implemented as a result of the self-audit completed from March 14, 2022, through September 10, 2022, with final corrective actions completed on July 25, 2023. Arrow submitted a PTC application requesting changes to ACP-17857 v1.1 resulting from the audit findings on September 8, 2022. Upon Department confirmation that audit conditions were met, the audit file was closed on April 1, 2024. A follow-up facility inspection was performed on August 15, 2024.

The source information and conditions associated with ACP-17857 v1.1 that are included in ACP-17857 v1.2 include:

- Condition I Table 1B is rescinded and replaced to reflect the actual equipment onsite. Table 1B contained outdated information at the time of permit issuance which was overlooked by the Department prior to issuance. This change will provide consistency between the PTC and PTO (upon renewal).
- Condition I Table 2B is rescinded and replaced to reflect the actual equipment layout constructed under approval from ACP-17857 v1.1. AOP-28048 v1.0 does not currently contain any equipment approved with issuance of ACP-17857 v1.1.
- Condition II.A Table 3 and Table 4 have been updated to include the appropriate limits for all equipment. These limits will be incorporated into the PTO (upon renewal).
- Condition II.D is updated to include reference to equipment subject to the various new sources performance standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP).
- Condition II.D fuel restrictions is updated to note that the Triethylene glycol (TEG) reboiler #2 (EU H2) serves as the control device for the TEG dehydration unit #2 still vent (EU Dehy2-still).

- A new condition in ACP-17857 v1.2, Condition 2.D, is added. ACP-17857 v1.2 Condition 2.D details the closed vent system (CVS) and vapor recovery unit (VRU) requirements which are necessary to follow to ensure the system is designed and operated to meet the requirements of NSPS Kb and representations made in the permit application[1].

There are no physical changes at the facility and no changes to regulatory applicability. Changes to the facility's potential to emit (PTE) were identified in the 2022 audit and were include in the September 2022 PTC application. With the addition of the CVS and VRU control efficiency requirement of 98%, the facility will be reclassified as a synthetic minor source. The facility will remain a prevention of significant deterioration (PSD) and Title V minor source. The new facility PTE is included in the Table on the following page.

A complete review of the proposed project indicates that the facility is expected to comply with the applicable federal and state air pollution rules and regulations. The Department will make a final recommendation on the issuance of a Permit to Construct for the facility following completion of a 30-day public comment period. The public comment period will run from March 20, 2025, through April 19, 2025.

Update Post Comment Period
[Reserved]

[1] See "Station 8 Emission Calculations PDFs" received on September 8, 2022.

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	Total PM	PM_{10}	$PM_{2.5}$	Total HAPs
TEG dehydrator #1	Dehy1-still	FL2				4.22				0.10
TEG dehydrator #1 BTEX flare	FL2		0.49	0.25	0.00	0.01	--	--	--	0.00
TEG reboiler #1	H1	H1	0.45	0.54	0.00	0.03	0.04	0.01	0.01	0.01
TEG dehydrator #2	Dehy2-still	H2				4.61				0.23
TEG reboiler #2	H2		0.54	0.64	0.00	0.04	0.05	0.01	0.01	0.01
Condensate tanks	TK-CS1 through TK-CS4	N/A [B]				48.02				1.41
Produced water tanks	TK-WT1, TK-WT2					0.5248				0.02
Condensate truck loading	L1					1.34				0.04
Produced water loading	L2	L2				0.25				0.01
High pressure flare	FL1	FL1	2.57	1.29	0.01	0.05	0.07	0.07	0.07	0.01
Compressor MSS blowdowns and rod packing	EC-1 through EC-5		1.13	0.562	0.00	0.02	0.03	0.03	0.02	0.01
Fugitive Emissions	FUG	FUG				38.82				5.06
Total (without Fugitives):			**5.2**	**3.3**	**0.0**	**59.1**	**0.2**	**0.1**	**0.1**	**1.8**
Total (with Fugitives):			**5.2**	**3.3**	**0.0**	**97.9**	**0.2**	**0.1**	**0.1**	**6.9**

[A] Abbreviations:
Total PM: filterable and condensable particulate matter
PM_{10}: particulate matter with an aerodynamic diameter less than or equal to 10 microns (≤10 µm) including $PM_{2.5}$
$PM_{2.5}$: particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (≤2.5 µm)
SO_2: sulfur dioxide
NO_X: oxides of nitrogen
CO: carbon monoxide
VOCs: volatile organic compounds
HAPs: hazardous air pollutants as defined in Section 112(b) of the Clean Air Act

[B] EUs TK-CS1 through TK-CS4, TK-WT1, TK-WT2, and L1 utilize a shared closed vent system and vapor recovery unit. Emissions represented above assume a 98% control efficiency.

DES: