MEMO TO : File
Nesson Gathering System, LLC
Rough Rider Compressor Station
Williams County, North Dakota

FROM : Russell Martin
Environmental Scientist
Division of Air Quality

RE : August 8, 2025, application for a Permit to Construct

DATE : January 21, 2026

Nesson Gathering System, LLC (Nesson) submitted an updated permit to construct application for the existing Rough Rider Compressor Station (facility) to the North Dakota Department of Environmental Quality – Division of Air Quality (Department) on August 8, 2025. The facility was initially constructed under Air Permit to Construct No. ACP-17970 v1.0 and is located in Williams County, North Dakota.

The application requested (Project) that the synthetic minor source limits for the natural gas-fired compressor engines be updated and to correct the fuel membrane heater (HTR3) rating from 2.0 MMBtu/hr to 2.5 MMBtu/hr. No emission units will be added, removed, or modified with the Project. The complete list of emissions units permitted at the Rough Rider Compressor Station is shown in Table 1 of ACP-17970 v1.1.

The facility will be considered a synthetic minor source upon Project completion. The facility's potential to emit (PTE) is shown below in Table 1.

Current & Proposed Engine Emission Limits:

Unit	Pollutant/ Parameter	Current Emission Limits [A]	Proposed Emission Limit [A]
Eight Caterpillar engines	NO_X	1.65 lb/hr and 1.0 g/hp-hr or 82 ppmvd at 15% O_2	0.40 g/hp-hr [B]
	CO	2.43 lb/hr and 2.0 g/hp-hr or 270 ppmvd at 15% O_2	0.44 g/hp-hr [B]
	VOC	1.43 lb/hr and 0.7 g/hp-hr or 60 ppmvd at 15% O_2	0.42 g/hp-hr [B]
	Opacity	20% [C]	20% [C]

A Emission limits apply to each individual emission point.

B Less restrictive 40 CFR 60 Subpart JJJJ limits also apply as follows: NO_X of 1.0 g/hp-hr or 82 ppmvd @ 15% O_2, CO of 2.0 g/hp-hr or 270 ppmvd @ 15% O_2, and VOC of 0.7 g/hp-hr or 60 ppmvd @ 15% O_2.

C 40% opacity is permissible for not more than one six-minute period per hour

Table 1 – Facility-wide PTE (tons per year) [A]

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NOx	SO_2	VOCs	Total PM	Total HAPs
Caterpillar G3608 TALE	ENG1	ENG1	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG2	ENG2	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG3	ENG3	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG4	ENG4	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG5	ENG5	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG6	ENG6	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG7	ENG7	10.62	9.66	0.05	10.14	0.86	1.70
Caterpillar G3608 TALE	ENG8	ENG8	10.62	9.66	0.05	10.14	0.86	1.70
Low pressure combustor (tanks and truck loading)	LP COMB	LP COMB	5.17	2.59	0.00	11.40	0.07	0.47
Dehydration unit combustor	DEHY COMB	DEHY COMB	0.09	0.05	0.00	1.08	0.00	0.39
Two TEG dehy units	DEHY1 and DEHY2	HP FLARE & DEHY COMB [B]	See HP FLARE for flash tank & DEHY COMB for still column					
TEG regen reboiler	HTR1	HTR1	0.39	0.46	0.01	0.03	0.03	0.01
TEG regen reboiler	HTR2	HTR2	0.39	0.46	0.01	0.03	0.03	0.01
Heater rated at 2.5 MMBtu/hr	HTR3	HTR3	1.29	1.53	0.02	0.08	0.12	0.03
Gun barrel	T001	LP COMB	See LP COMB					
Four 400-barrel condensate storage tanks	T002 through T005	LP COMB						
Two 400-barrel produced water storage tanks	T006 and T007	LP COMB						
Condensate and produced water truck loading	LOAD	LP COMB						
Emergency flare	HP FLARE	HP FLARE	1.00	0.50	0.00	0.60	0.02	0.01

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	Total PM	Total HAPs
Compressor blowdowns	MSS	BD VENT [C]	---	---	---	4.01	---	0.42
Fugitive emissions	FUG	FUG	---	---	---	19.99	---	0.94
Total (without Fugitives):			**93.29**	**82.87**	**0.44**	**98.35**	**7.15**	**14.94**
Total (with Fugitives):			**93.29**	**82.87**	**0.44**	**118.34**	**7.15**	**15.88**

[A] Abbreviations:
Total PM: filterable and condensable particulate matter, assumes $PM=PM_{10}=PM_{2.5}$
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] TEG Dehy flash tanks normally routed to inlet suction. However, during pigging events, it may be routed to the emergency flare.

[C] Compressor blowdowns are normally routed to inlet suction or the emergency flare. However, certain maintenance blowdown events may vent to atmosphere.

The facility PTE is based on the enforceable emission restriction put in place on the compressor engines, limiting the allowable amount of NO_x, CO, and VOCs. This restriction means the facility is a synthetic minor source of air pollution, as the emissions are limited to below major source thresholds for the Title V program.

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 Rough Rider Compressor Station following completion of a 30-day public comment period. The public comment period will run from January 28, 2026, through February 27, 2026.

RSM:tas