

MEMO TO : File
 WBI Energy Transmission, Inc.
 Manning Compressor Station
 Dunn County

FROM : Kari Thorsteinson
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 Division of Air Quality

RE : Reevaluation of Existing Emission Limits

DATE : January 7, 2025

WBI Energy Transmission, Inc. (WBI Energy) operates the Manning Compressor Station under Air Permit to Operate (PTO) No. AOP-27865 v4.0. During the minor source PTO renewal, the North Dakota Department of Environmental Quality – Division of Air Quality (Department) reevaluated the emission limits associated with the facility. This PTC includes various emission limits on the compressor engines that are needed to limit the facility’s emissions below Title V major source threshold and/or limit a unit’s emissions below an applicable new source performance standard (e.g., NSPS Subpart JJJJ) for the engines. Per recent EPA guidance¹, limits such as these are considered synthetic minor limits.

Air Permit to Construct (PTC) No. ACP-18260 v1.0 establishes the facility as a synthetic minor source. The lb/hr limits were administratively revised to the equivalent grams/hp-hr limits to represent the limits in terms of the regulatory standard(s) for engines. An air quality effects analysis is not needed as there are no physical changes at the facility, changes to regulatory applicability, new permit requirements, or changes in potential emissions with this permit action. Upon PTC issuance, a synthetic minor PTO will be issued for the facility.

Current/Proposed Engine Emission Limits:

Emission Unit Description	EU	Pollutant/Parameter	Current Emission Limit	Proposed Emission Limit
Waukesha engine	1	NO _x	6.0 lb/hr	1.3 grams/hp-hr
		CO	9.2 lb/hr	2.0 grams/hp-hr
		Opacity	20% ^A	20% ^A

¹ https://www.epa.gov/system/files/documents/2021-09/johndeere_52.21r4.pdf (last visited 11/22/2024)

Emission Unit Description	EU	Pollutant/Parameter	Current Emission Limit	Proposed Emission Limit
Waukesha engine	2	NO _x	6.0 lb/hr	1.3 grams/hp-hr
		CO	9.2 lb/hr	2.0 grams/hp-hr
		Opacity	20% ^A	20% ^A
Caterpillar engine	3	NO _x	7.3 lb/hr & 2.0 grams/hp-hr or 160 ppmvd ^B	0.70 grams/hp-hr ^C
		CO	1.88 lb/hr & 4.0 grams/hp-hr or 540 ppmvd ^B	0.18 grams/hp-hr ^C
		VOC	2.31 lb/hr & 1.0 gram/hp-hr or 86 ppmvd ^B	0.22 grams/hp-hr ^C
		Opacity	20% ^A	20% ^A
Boiler	4	Opacity	20% ^A	20% ^A

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

^B Emission limits provided as g/hp-hr and ppmvd (@ 15 % O₂) are from 40 CFR 60, Subpart JJJJ.

^C The engine must also comply with any applicable emission limits established by 40 CFR 60, Subpart JJJJ and 40 CFR 63, Subpart ZZZZ.

As shown in the table below, the PTE for the facility is below 100 tons per year (tpy) for all criteria air pollutants. The facility PTE is based on enforceable emissions restrictions put in place limiting the allowable amount of NO_x, CO, and VOC. These restrictions mean the facility will be a synthetic minor source of air pollution, as the emissions are limited to below major source thresholds for both the prevention of significant deterioration (PSD) and Title V programs.

Emission Unit Description	EU	NO _x	CO	VOCs	SO ₂	PM
Waukesha engine	1	26.2	40.4	10.1	0.0	0.0
Waukesha engine	2	26.2	40.4	10.1	0.0	0.0
Caterpillar engine	3	32.0	8.2	10.1	0.0	0.0
Boiler	4	0.7	0.6	0.0	0.0	0.1
Total:		85.2	89.6	30.3	0.0	0.1

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