MEMO TO : File
Energy Transfer, LP
Latchem Compressor Station
McKenzie County

FROM : Raina Cardwell
Environmental Scientist
Division of Air Quality

RE : July 24, 2024, request for permit modifications

DATE : [RESERVED]

The North Dakota Department of Environmental Quality – Division of Air Quality (Department) received a request from Energy Transfer, LP on July 24, 2024, for changes to their current permit, Air Permit to Operate No. AOP-28516 v1.0, for the Latchem Compressor Station located in McKenzie County, North Dakota.

Upon Department review, it was made aware that the Caterpillar natural gas-fired compressor engine (EU ENG-1) is rated 1,380 brake horsepower (bhp). In addition, the emission limits established in Air Permit to Construct No. ACP-17924 v1.0 (PTC19020) were reevaluated, and Energy Transfer, LP requested new emission limits for the facility compressor engines. There are no equipment changes or changes to regulatory applicability proposed in this permit, Air Permit to Construct No. ACP-18248 v1.0.

The facility PTE is based on enforceable emissions restrictions put in place on the natural gas-fired engines, limiting the allowable amount of NO_X and CO emissions. 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. There are no significant changes in the potential emissions from the facility with this permitting action.

A complete review of the facility indicates that the Latchem Compressor Station is expected to comply with the applicable federal and state air pollution rules and regulations. The Department will make a final recommendation regarding the issuance of a Permit to Construct for Latchem Compressor Station following the completion of a 30-day public comment period. The public comment period will run from March 13, 2024, and end on April 12, 2024.

Table 1 shows the Potential to Emit (PTE) for the facility compressor engines calculated using the new emission limits. Table 2 shows the facility-wide PTE for Latchem Compressor Station.

Table 1 – PTE for the Facility Compressor Engines (tons per year) [A]

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	PM	Total HAPs
Caterpillar engine rated 1380 hp	ENG-1	ENG-1	9.3	9.3	0.0	9.3	0.4	0.7
Caterpillar engine rated 1380 hp	ENG-3	ENG-3	9.3	9.3	0.0	9.3	0.4	0.7
Caterpillar engine rated 1380 hp	ENG-4	ENG-4	9.3	9.3	0.0	9.3	0.4	0.7
Caterpillar engine rated 1380 hp	ENG-5	ENG-5	9.3	9.3	0.0	9.3	0.4	0.7
Caterpillar engine rated 1380 hp	ENG-6	ENG-6	9.3	9.3	0.0	9.3	0.4	0.7
Caterpillar engine rated 1380 hp	ENG-7	ENG-7	9.3	9.3	0.0	9.3	0.4	0.7
Caterpillar engine rated 1380 hp	ENG-8	ENG-8	9.3	9.3	0.0	9.3	0.4	0.7
Total (with Fugitives):			**65.3**	**65.3**	**0.2**	**65.3**	**3.1**	**4.6**

[A] Abbreviations:
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

Table 2 – Facility-Wide PTE for NSR Pollutants (tons per year) [A]

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	PM	PM_{10}	$PM_{2.5}$	Total HAPs	Formaldehyde (Largest HAP)
Caterpillar engine rated 1380 hp	ENG-1	ENG-1	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4
Caterpillar engine rated 1380 hp	ENG-3	ENG-3	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4
Caterpillar engine rated 1380 hp	ENG-4	ENG-4	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	PM	PM_{10}	$PM_{2.5}$	Total HAPs	Formaldehyde (Largest HAP)
Caterpillar engine rated 1380 hp	ENG-5	ENG-5	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4
Caterpillar engine rated 1380 hp	ENG-6	ENG-6	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4
Caterpillar engine rated 1380 hp	ENG-7	ENG-7	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4
Caterpillar engine rated 1380 hp	ENG-8	ENG-8	9.3	9.3	0.0	9.3	3.0	3.0	3.0	0.7	0.4
TEG reboiler	RBLR-1	RBLR-1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TEG dehy unit	DEHY-1	BURN-1	-	-	-	0.6	-	-	-	0.1	-
Indirect heater	HTR-1	HTR-1	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
400-bbl Condensate tank	CT-1	FLR-1	-	-	-	0.8	-	-	-	0.1	-
400-bbl Condensate tank	CT-2		-	-	-	0.8	-	-	-	0.1	-
400-bbl Produced water tank	PW-1		-	-	-	0.0	-	-	-	0.0	-
400-bbl Produced water tank	PW-2		-	-	-	0.0	-	-	-	0.0	-
Glycol tank	Various	Various	-	-	-	Insig. [B]	-	-	-	Insig. [B]	-
Various lube/waste oil tanks											
Various jacket water tanks											
Various methanol tanks											
Truck loadout	TL-1	TL-1	-	-	-	3.1	-	-	-	0.1	-

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	PM	PM_{10}	$PM_{2.5}$	Total HAPs	Formaldehyde (Largest HAP)
Truck loadout	TL-2	TL-2	-	-	-	0.1	-	-	-	0.0	-
Tank flare	FLR-1	FLR-1	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compressor blowdowns	MSS-COMP	MSS-COMP	-	-	-	8.4	-	-	-	0.3	-
Vessel blowdowns	MSS-VESSEL1	MSS-VESSEL1	-	-	-	1.1	-	-	-	0.0	-
Fugitive emissions	FUGL	FUGL	-	-	-	20.7	-	-	-	1.7	-
Total (without Fugitives):			**66.5**	**66.1**	**0.2**	**70.7**	**21.4**	**21.4**	**21.4**	**4.9**	**2.8**
Total (with Fugitives):			**66.5**	**66.1**	**0.2**	**101.0**	**21.4**	**21.4**	**21.4**	**7.0**	**2.8**

[A] Abbreviations:
PM: filterable and condensable particulate matter
$PM_{2.5}$: filterable and condensable particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (≤2.5 µm)
PM_{10}: filterable and condensable particulate matter with an aerodynamic diameter less than or equal to 10 microns (≤10 µm) including $PM_{2.5}$
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] Insignificant source of emissions.

RLC:er