AIR QUALITY EFFECTS ANALYSIS
FOR
PERMIT TO CONSTRUCT
ACP-18286 v1.0

Applicant:

Hiland Partners Holdings, LLC
1001 Louisiana Street, Suite 1000
Houston, TX 77002

Facility Location:

Watford City Gas Plant
14933 35th St NW
Alexander, North Dakota 58831
SE ¼, Sec. 6, T151N, R102W

Introduction (and Background):

Hiland Partners Holdings, LLC submitted a permit to construct application to the North Dakota Department of Environmental Quality – Division of Air Quality (Department) on January 15, 2025. The application requests approval for the construction (Project) of a new triethylene glycol (TEG) dehydration system, which will be controlled by an existing benzene, toluene, ethylbenzene, and xylene (BTEX) combustor. Additionally, the project includes the replacement of one compressor engine with a higher horsepower unit (1900 bhp) at the existing facility in McKenzie County, North Dakota.

Upon project completion, the Watford City Gas Plant will remain a synthetic minor source under federal New Source Review (NSR) Prevention of Significant Deterioration (PSD) regulations and under 40 CFR Part 63.

The Watford City Gas Plant (facility) was originally issued a Permit to Construct on March 8, 2011, and has undergone several expansions to increase production. The facility is a natural gas processing plant utilizing a cryogenic separation process to extract natural gas liquids and currently operates under Title V operating permit AOP-28406 v2.0 (historically T5-O14013). Please note that as part of this permit action, the Department will update the emission limits for several previously permitted units to improve clarity and ensure compliance with limits below regulatory standards. These updates will not require change in the operation of the facility units in any way.

Table 1-1 in ACP-18286 v1.0 lists the new and modified emission units associated with the Project.

Table 1-2 in ACP-18286 v1.0 lists the emission units upon completion of the Project.

Facility Wide Emissions Profile
Potential to Emit (PTE)

Table 1 - PTE (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
Waukesha 7044 GSI S5 (Inlet #1)	EU1	1	16.51	16.51	0.04	11.93	1.33	1.33	1.33	0.43
Waukesha L-5794 GSI (Residue #1)	EU2	2	8.66	8.66	0.03	9.33	0.88	0.88	0.88	0.28
Waukesha 7044 GSI (Residue #2)	EU3	3	10.54	10.54	0.04	11.36	1.22	1.22	1.22	0.39
Hot Oil Heater - 41.65 MMBtu/hr	EU4	4	15.02	17.89	0.11	0.98	1.36	1.36	1.36	0.34
TEG Dehydration Unit (30 MMscfd)	EU5	COM-1				1.67				0.17
Condensate Tank (210 bbl)	EU6	24				0.11				
Process/Emergency Flare	EU8	8	39.82	8.81	0.00	19.09	0.02	0.02	0.02	0.03
Waukesha 7044 GSI (Residue #3)	EU9	9	10.54	10.54	0.04	11.36	1.22	1.22	1.22	0.39
Waukesha 7044 GSI (Residue #4)	EU10	10	10.54	10.54	0.04	11.36	1.22	1.22	1.22	0.39
Waukesha 7044 GSI (Residue #5)	EU11	11	10.54	10.54	0.04	11.36	1.22	1.22	1.22	0.39
Waukesha 7044 GSI (Inlet #2)	EU12	12	10.54	10.54	0.04	11.36	1.22	1.22	1.22	0.39
Hot Oil Heater - 38.72 MMBtu/hr	EU13	13	13.97	8.32	0.10	0.91	1.26	1.26	1.26	0.31
Condensate Tank (400 bbl)	EU15	24				0.21				
Condensate Tank (400 bbl)	EU16	24				0.21				
Condensate Tank (400 bbl)	EU17	24				0.21				
Hot Oil Heater - 43.5 MMBtu/hr	EU18	18	15.69	18.68	0.11	1.03	1.42	1.42	1.42	0.35
TEG Dehydration Unit (4 MMscfd)	EU19	COM-1				0.01				0.00
Waukesha 7044 GSI (Residue #6)	EU20	20	32.45	16.22	0.04	11.36	1.22	1.22	1.22	0.39
Hot Oil Heater - 37.75 MMBtu/hr	EU21	21	6.73	6.63	0.10	3.14	1.23	1.23	1.23	0.31
Hot Oil Heater - 21.0 MMBtu/hr	EU22	22	7.57	9.02	0.05	0.50	0.69	0.69	0.69	0.17
Condensate Truck Loading Rack #2	EU23	23				0.93				
Tank Combustor	EU24	24	0.22	0.23	0.00	0.09	0.02	0.02	0.02	
TEG Dehydration Unit (40 MMscfd)	EU25	COM-1				5.93				0.08

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	CO	NO_X	SO_2	VOCs	PM	PM_{10}	$PM_{2.5}$	Total HAPs
BTEX Combustor	COM-1	COM-1	1.24	1.47	0.01	0.06	0.11	0.11	0.11	
Compressor Blowdowns	BD	BD				19.70				0.03
Fugitive Emissions	FUG 1	FUG1				84.78				0.06
Total (without Fugitives):			**210.61**	**165.15**	**0.77**	**144.17**	**15.62**	**15.62**	**15.62**	**4.84**
Total (with Fugitives):			**210.61**	**165.15**	**0.77**	**228.95**	**15.62**	**15.62**	**15.62**	**4.89**

[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

As shown in Table 1, the facility wide PTE is below 250 tons per year (tpy) for all criteria air pollutants, below 10 tpy for any single hazardous air pollutant (HAP), and below 25 tpy for the combined HAP emissions. Detailed calculations have been provided in the permit application received on January 15, 2025. The Department has reviewed these calculations and believes they accurately represent the proposed facility operations.

The facility PTE is based on enforceable emissions restriction placed on the inlet compressor engine as part of this project. This restriction will not affect the facility's status as a Title V source. The facility continues to remain below major source thresholds for the Prevention of Significant Deterioration (PSD).

Project Emissions Changes

Table 2-Project Emissions Change (in tons per year)

Facility-Wide Emissions	CO	NO_X	SO_2	VOCs	Total PM	PM10	PM2.5	Total HAPs
Existing Site	199.11	153.66	0.75	216.50	15.34	15.34	15.34	7.04
Standalone Project	16.51	16.51	0.04	17.86	1.33	1.33	1.33	0.51
Post Project Total	210.61	165.15	0.77	228.95	15.62	15.62	15.62	4.89
Change in Emissions	11.49	11.49	0.02	12.45	0.28	0.28	0.28	-2.14

Rules Analysis
Potentially Applicable Rules and Expected Compliance Status

A. NDAC 33.1-15-01 – General Provisions:

Multiple topics are included in the General Provisions chapter: entry onto premises - authority, variances, circumvention, severability, land use plans and zoning regulations (only to provide air quality information), measurement of air contaminants, shutdown and malfunction of an installation - requirements for notification, time schedule for compliance, prohibition of air pollution, confidentiality of records, enforcement, and compliance certifications.

Applicability and Expected Compliance

Based on the review of the information provided, the facility will comply with all applicable sections of this rule.

B. NDAC 33.1-15-02 – Ambient Air Quality Standards:

The facility must comply with the North Dakota and Federal Ambient Air Quality Standards (AAQS). In addition to these standards, compliance with the "Criteria Pollutant Modeling Requirements for a Permit to Construct" guidelines[1].

Applicability and Expected Compliance

The facility is not subject to PSD, nor does the facility's PTE trigger the modeling thresholds listed in the "Criteria Pollutant Modeling Requirements for a Permit to Construct", therefore, preconstruction modeling for this facility was not required. Based on the facility PTE and proposed stack heights, compliance with the ambient air quality standards is expected to be maintained.

C. NDAC 33.1-15-03 – Restriction of Emission of Visible Air Contaminants:

This chapter requires all non-flare sources from new facilities to comply with an opacity limit of 20% except for one six-minute period per hour when 40% opacity is permissible. This chapter also requires facility flares to comply with an opacity limit of 20% except for one six-minute period per hour when 60% opacity is permissible. Lastly, this chapter restricts the opacity of fugitive emissions transported off property to 40% except for one six-minute period per hour when 60% opacity is permissible. This chapter also contains exceptions under certain circumstances and provides the method of measurement to determine compliance with the referenced limits.

[1] See October 6, 2014, Criteria Pollutant Modeling Requirements for a Permit to Construct. Available at: https://www.deq.nd.gov/publications/AQ/policy/Modeling/Criteria_Modeling_Memo.pdf

Applicability and Expected Compliance

The proposed engine (EU 1) and existing engines will be fired on natural gas (or equivalent) and will undergo routine maintenance; therefore, the units are expected to operate well below the 20% limit stated in the rule. Additionally, based on Department experience with flares, the existing emergency flare is expected to continue compliance with the requirements in 40 CFR §60.18(c) through (f).

D. NDAC 33.1-15-04 – Open Burning:

No person may dispose of refuse and other combustible material by open burning, or cause, allow, or permit open burning of refuse and other combustible material, except as provided for in Section 33.1-15-04-02 or 33.1-15-10-02, and no person may conduct, cause, or permit the conduct of a salvage operation by open burning.

Applicability and Expected Compliance

The facility is subject to this chapter and will comply with all open burning regulations.

E. NDAC 33.1-15-05 – Emissions of Particulates Matter Restricted:

This chapter establishes particulate matter emission limits and restrictions for industrial process equipment and fuel burning equipment used for indirect heating.

Applicability and Expected Compliance

The project will emit particulate matter which results from industrial process equipment. The facility is subject to allowable rates of emissions as shown in 33.1-15-05-01.2 Table 3: Maximum Allowable Rates of Emission of Particulate Matter from Industrial Processes.

Since the fuel burning equipment used for indirect heating is fired on gaseous fuels, the particulate matter limits in this chapter do not apply. It should be noted that the combustion of gaseous fuels in the units is expected to result in extremely low particulate matter emissions that are well below the allowable levels established by this chapter.

F. NDAC 33.1-15-06 – Emissions of Sulfur Compounds Restricted:

This chapter applies to any installation in which fuel is burned and the SO_2 emissions are substantially due to the sulfur content of the fuel; and in which the fuel is burned primarily to produce heat. This chapter is not applicable to installations which are subject to an SO_2 emission limit under Chapter 33.1-15-12, Standards for Performance for New Stationary Sources, or installations which burn pipeline quality natural gas.

Applicability and Expected Compliance

The facility is exempt from this chapter since the proposed engine (EU 1) and existing engines will be fired on gas containing no more than 2 grains of sulfur per 100 standard cubic feet.

G. NDAC 33.1-15-07 – Control of Organic Compounds Emissions:

This chapter establishes requirements for the construction of organic compound facilities and the disposal of organic compounds gas and vapor generated as waste resulting from storage, refining, or processing operations at the facility.

Applicability and Expected Compliance

For leak detection and repair (LDAR) of equipment in VOC and greenhouse gas (GHG) service (EU FUG 1 - Process Unit 4 (LP Inlet)), the facility will comply with the applicable requirements under New Source Performance Standard (NSPS) Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022.

Additionally, the facility will also comply with the requirements for pumps and compressors by installing and maintaining appropriate seals for their service and operating conditions.

The emissions from the new TEG dehydration unit (EU 25) will be controlled by the existing BTEX combustor.

H. NDAC 33.1-15-08 – Control of Air Pollution from Vehicles and Other Internal Combustion Engines:

This chapter restricts the operation of internal combustion engines which emit from any source unreasonable and excessive smoke, obnoxious or noxious gas, fumes or vapor. This chapter also prohibits the removal or disabling of motor vehicle pollution control devices.

Applicability and Expected Compliance

The proposed engine (EU 1) and existing engines are subject to opacity requirements under NDAC 33.1-15-03-02 and subject to the requirements of NSPS Subpart JJJJ. As a result of expected compliance with these provisions, the engines are not expected to emit any unreasonable and excessive smoke, obnoxious or noxious gases, fumes, or vapor.

I. NDAC 33.1-15-09 – [repealed]

J. NDAC 33.1-15-10 – Control of Pesticides:

This chapter provides restrictions on pesticide use and restrictions on the disposal of surplus pesticides and empty pesticide containers.

Applicability and Expected Compliance

The facility is subject to this chapter and is expected to comply with all applicable requirements should pesticides be used.

K. NDAC 33.1-15-11 – Prevention of Air Pollution Emergency Episodes:

When an air pollution emergency episode is declared by the Department, the facility shall comply with the requirements in Chapter 33.1-15-11 of the North Dakota Air Pollution Control (NDAPC) rules.

L. NDAC 33.1-15-12 – Standards of Performance for New Stationary Sources [40 Code of Federal Regulations Part 60 (40 CFR Part 60)]:

This chapter adopts most of the Standards of Performance for New Stationary Sources (NSPS) under 40 CFR Part 60. The Watford City Gas Plant is subject to the following subparts under 40 CFR Part 60 which have been adopted by North Dakota as of July 1, 2019:

Subpart A – General Provisions

Subpart A contains general requirements for plan reviews, notification, recordkeeping, performance tests, reporting, monitoring and general control device requirements.

Applicability and Expected Compliance

The facility will comply with the general provisions of Subpart A through submission of timely notifications, performance testing, reporting, and following the general control device and work practice requirements under Subpart A. In addition, any changes to the facility after it is built will be evaluated with respect to this subpart as well as others.

Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart details information on the applicability, definitions, standards, compliance, performance test methods, emission monitoring, and reporting and record keeping requirements for small steam generating units. The subpart applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

Applicability and Expected Compliance

The units subject to Subpart Dc are the existing hot oil heaters (EUs 4, 13, 18, 21, and 22). These steam boilers will comply with NSPS Dc by exclusively firing natural gas containing no more than 2.0 grains of sulfur per 100 standard cubic feet and maintaining fuel records.

Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Subpart JJJJ establishes emissions standards (NO_X, CO, VOC) and compliance schedules for all new, modified and reconstructed stationary spark ignition (SI) internal combustion engines (ICE) and equipment manufactured on or after July 1, 2007, regardless of size.

The subpart applies to manufactures, owners, and operators of such engines and equipment. SI ICE are categorized in this subpart by usage, size and fuel type.

Applicability and Expected Compliance

Existing units already subject to this subpart will continue to comply. The proposed natural gas compressor engine (EU 1) is subject to the requirements of NSPS Subpart JJJJ. The facility engine is rated at 1,900 brake horsepower (bhp), was constructed in 2019, and will be equipped with non-selective catalytic reduction (NSCR) control. The catalyst manufacturer (Waukesha) guarantees design control efficiency of 92.4% for NOX, 90.7% for CO, and 20% for VOC.

EU 1 is subject to comply with the following emissions standards:
- NOx of 0.9 g/hp-hr
- CO of 0.9 g/hp-hr
- VOC of 0.65 g/hp-hr

To demonstrate compliance with the above limits, the facility must conduct emissions testing every 8,760 hours of operations or every three years, whichever comes first.

The facility is also expected to comply with Subpart JJJJ requirements by properly maintaining and operating an air-to-fuel ratio controller and keeping a maintenance plan and records of conducted maintenance and, to the extent practicable, will maintain and operate the engines in a manner consistent with good air pollution control for minimizing emissions.

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

Subpart OOOOa establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities in the crude oil and natural gas production source category that commence construction, modification, or reconstruction after September 18, 2015.

Applicability and Expected Compliance

The new compressor engine (EU 1) was compliant with OOOOa at its former location and the relocation does not initiate a modification per 40 CFR 60.14(e)(6). Other existing sources already subject to this subpart will continue to comply with the requirements of this subpart.

EU's 15-17 are being evaluated for potential OOOOa applicability based on 2016 reported VOC emissions being over 6 tons. The tanks are controlled by Tank Combustor EU 24, which will comply with the requirements of 40 CFR 60.5412a(d) if OOOOa is applicable.

Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022

Subpart OOOOb establishes emission standards and compliance schedules for the control of the pollutant greenhouse gases (GHG). The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after December 6, 2022. This subpart also establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after December 6, 2022.

Applicability and Expected Compliance

The fugitive emissions (EU FUG 1 - Process Unit 4 (LP Inlet) and affected TEG dehydration unit EU 25 components) components that have a potential to emit GHGs and VOCs are considered affected facilities under Subpart OOOOb. The facility is expected to comply with the applicable fugitive emissions GHG and VOC standards through development and implementation of a leak detection and repair (LDAR) program in compliance with Subpart OOOOb requirements. The LDAR program, at a minimum, shall require monitoring, reporting, and recordkeeping.

The following table provides a list of the compressor manufacture dates for OOOO, OOOOa, OOOOb applicability:

Emission Unit	Compressor Manufacture Date	Compressor Regulatory Applicability
EU 1	9/2019	OOOOa
EU 2	11/2008	NA
EU 3	10/2010	NA
EU 9	9/2011	NA
EU 10	9/2011	NA
EU 11	11/2011	OOOO
EU 12	8/2010	NA
EU 20	10/2017	OOOOa

M. NDAC 33.1-15-13 – Emission Standards for Hazardous Air Pollutants [40 Code of Federal Regulations Part 61 (40 CFR Part 61)]:

This chapter discusses emission standards for hazardous air pollutants. It specifically incorporates a majority of the subparts and appendices of the National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR Part 61 as of July 2, 2010.

Applicability and Expected Compliance

The facility does not appear to have any applicable requirements under this chapter.

N. NDAC 33.1-15-14 – Designated Air Contaminant Sources, Permit to Construct, Minor Source Permit to Operate, Title V Permit to Operate:

This chapter designates that federally regulated sources are required to obtain a Permit to Construct and a Permit to Operate and comply with specific emission control and air quality standards.

Applicability and Expected Compliance

The facility has submitted an application for a permit to construct and has met all requirements necessary to obtain a permit to construct. The facility currently emits, and after completion of the project will continue to emit, more than 100 tons of NOx, CO, and VOC emissions. The facility is currently subject to Title V operating under Permit to Operate AOP-28406 v2.0.

The permit must undergo public comment per NDAC 33.1-15-14-06.5.a.

Once the facility completes construction and meets the permit to construct requirements, a facility inspection will be performed by the Department. Pending a satisfactory facility inspection, the facility will be issued a permit to operate by the Department.

O. NDAC 33.1-15-15 – Prevention of Significant Deterioration of Air Quality [40 CFR 52.21]:

This chapter adopts the federal provisions of the Prevention of Significant Deterioration of air quality (PSD) program (40 CFR 52.21). A facility is subject to PSD review if it is classified as a "major stationary source" under Chapter 33.1-15-15.

Applicability and Expected Compliance

This facility is not classified as a "major stationary source" under 40 CFR 52.21(b)(1)(i)(a) and is therefore only subject to PSD review if emissions of a regulated new source review (NSR) pollutant[2] exceed 250 tpy (excluding fugitive emissions). The PTE for this facility, as shown in Table 3, is below the 250 tpy threshold and therefore not subject to PSD review.

P. NDAC 33.1-15-16 – Restriction of Odorous Air Contaminants:

This chapter restricts the discharge of objectionable odorous air contaminants which measures seven odor concentration units or greater outside the property boundary. The emission of hydrogen sulfide is also addressed with strict concentration limitations. The chapter also establishes the method of measurement using certified inspectors, scentometers, and other approved instruments.

Applicability and Expected Compliance

Based on Department experience with sources having similar emission units, processes, and low hydrogen sulfide concentrations, the facility is expected to comply with this chapter.

[2] See 40 CFR 52.21(b)(50). Available at: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-52/subpart-A/section-52.21#p-52.21(b)(50)

Q. NDAC 33.1-15-17 – Restriction of Fugitive Emissions:

This Chapter restricts fugitive emissions from particulate matter or other visible air contaminants and gaseous emissions that would violate Chapter 2 (ambient air quality standards), Chapter 15 (PSD), Chapter 16 (odor), or Chapter 19 (visibility).

Applicability and Expected Compliance

The facility will be required to take reasonable precautions to prevent fugitive emissions in violation of the above referenced NDAC chapters.

R. NDAC 33.1-15-18 – Stack Heights:

This chapter restricts the use of stack heights above good engineering practices (GEP). The chapter primarily adopts federal regulations listed under 40 CFR 51.100(ii). This chapter also restricts the use of dispersion techniques to affect the concentration of a pollutant in the ambient air. Demonstrations of good engineering practice stack heights must be made available for review.

Applicability and Expected Compliance

The stack heights of the engine (EU 1) and TEG dehydration unit (EU 25), emission points EP 1 and COM-1 respectively, shall be at least 1.5 times the nearby building height. A nearby building is any building located a distance of less than five times the building height from the stack. Constructing the stacks according to these specifications is necessary to meet Department guidelines and to avoid the need for preconstruction permit modeling. Should the stacks not be constructed to meet these conditions, modeling will be required to demonstrate compliance with the AAQS.[3]

S. NDAC 33.1-15-19 – Visibility Protection:

This chapter outlines regulations regarding visibility protection and applies to new major stationary sources as defined in Section 33.1-15-15-01. It contains provisions regarding visibility impact analysis, visibility models, notification requirements for permit applications, review by federal land managers, permit issuance criteria, and visibility monitoring.

Applicability and Expected Compliance

The facility is not a new major stationary source and therefore is not subject to the requirements of this chapter. Given the minor source levels of the visibility impairing air pollutants, such as NO_X, SO_2, and $PM_{2.5}$, it is expected that the facility will not adversely contribute to visibility impairment within the three units of the Theodore Roosevelt National Park (nearest federal Class I areas) or at the Lostwood National Wildlife Refuge.

[3] See October 6, 2014, Criteria Pollutant Modeling Requirements for a Permit to Construct. Available at: https://www.deq.nd.gov/publications/AQ/policy/Modeling/Criteria_Modeling_Memo.pdf

T. NDAC 33.1-15-20 – Control of Emissions from Oil and Gas Well Production Facilities:

The facility is not an oil or gas well facility and is, therefore, not subject to the requirements of this chapter.

U. NDAC 33.1-15-21 – Acid Rain Program:

This chapter adopts the acid rain provisions of the Clean Air Act specified under 40 CFR Parts 72-78. The facility is not subject to the acid rain provision as it is not an electric utility.

V. NDAC 33.1-15-22 – Emissions Standards for Hazardous Air Pollutants for Source Categories [40 Code of Federal Regulations Part 63 (40 CFR Part 63)]:

This chapter adopts most of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories under 40 CFR Part 63. These standards typically apply to major sources of air pollution that are in a regulated source category. In addition to the major source requirements, some of the regulations have "area source" standards (for non-major sources). Some of the area source standards have not been adopted by the Department and compliance will be determined by the United States Environmental Protection Agency (USEPA) (i.e. 40 CFR 63, Subpart ZZZZ area source provisions have not been adopted by the Department).

Applicability

The facility's potential HAP emissions are less than 10 tons/year of any single HAP and are less than 25 tons/year of any combination of HAPs, so the facility is an area (minor) source of HAPs. As shown in Table 3, total potential HAP emissions from the facility are approximately 4.89 tons/year.

Subpart A – General Provisions

Subpart A contains general requirements for prohibited activities and circumvention, preconstruction review and notification, standards and maintenance requirements, performance tests, monitoring, recordkeeping, reporting, and control device work practice requirements.

Applicability and Expected Compliance

The facility will comply with the general provisions of Subpart A through submission of timely notifications, performance testing, monitoring, recordkeeping, reporting, and following the control device work practice requirements under Subpart A.

Subpart HH – National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities

Subpart HH outlines regulations for emission control measures at oil and gas production sites, including requirements for equipment leaks, control devices, testing procedures,

monitoring, and compliance demonstrations to limit the release of hazardous air pollutants from these facilities.

Applicability and Expected Compliance

The new TEG dehydration unit (EU 25) is subject to the exemption recordkeeping requirements under this subpart. Existing units (EUs 5 and 19) will continue to comply with the exemption recordkeeping requirements of this subpart. This facility is an area source of HAP emissions. Even though the TEG dehydration units at this facility are considered an affected area source it is exempt from the requirements of § 63.764(d)(2) since the actual average emissions of benzene from the glycol dehydration unit process vents to the atmosphere are less than 1 TPY, as determined by the procedures specified in § 63.772(b)(2). However, the facility must maintain records of the de minimis determination as required in § 63.774(d)(1). Exemption status depends on proper operation of the BTEX Combustor (COM-1). COM-1 shall be operated with no visible emissions, except for periods not to exceed a total of 2 minutes during any hour. A visible emissions test shall be performed in accordance with Condition 4.B.3 of AOP-28406 v2.0.

The North Dakota Department of Environmental Quality has not adopted the area source provisions of this subpart. Please send all documentation to EPA at the following address:

U.S. EPA Region 8
1595 Wynkoop Street
Mail Code 8ENF-AT
Denver, CO 80202-1129

Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

Applicability and Expected Compliance

The new engine (EU 1) is subject to the requirements under this subpart. The requirements of Subpart ZZZZ for the engine are met by complying with the requirements of NDAC 33.1-15-12 [40 CFR 60] and Subpart JJJJ. Existing units (EUs 2 ,3, 9-12, 20) will continue to comply with this subpart.

W. NDAC 33.1-15-23 – Fees:

This chapter requires a filing fee of $325 for permit to construct applications, plus any additional fees based on actual processing costs. The additional fees based on processing costs will be assessed upon issuance of the draft permit to construct. The annual operating permit fee is also applicable.

The applicant has paid the $325 filing fee and may be required to pay the additional fees associated with the permit processing.

X. NDAC 33.1-15-24 – Standards for Lead-Based Paint Activities:

The facility will not perform any lead-based painting and is, therefore, not subject to this chapter.

Y. NDAC 33.1-15-25 – Regional Haze Requirements:

This chapter is specific to existing stationary sources or groups of sources which have the potential to "contribute to visibility impairment" as defined in Section 33.1-15-25-01.2. Existing stationary sources or groups of sources determined to contribute to visibility impairment may be required to implement emissions reduction measures to help the Department make reasonable progress toward North Dakota's reasonable progress goals established in accordance with 40 CFR 51.308.

Applicability and Expected Compliance

The facility is an existing source, but due to its low PTE of visibility impairment pollutants, it is not expected to contribute to visibility impairment. Therefore, the facility is not subject to the requirements of this chapter.

Summary:

A complete review of the proposed project indicates that the Watford City Gas Plant is expected to comply with the applicable federal and state air pollution rules and regulations. The Department recommends the issuance of a Permit to Construct.

Date of Draft Analysis: July 9, 2025
Date of Final Analysis: [Reserved]

Analysis By:

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