AIR POLLUTION CONTROL PERMIT TO CONSTRUCT

Permittee: **Name**: Hiland Partners Holdings, LLC **Address**: 1001 Louisiana Street, Ste #1000 Houston, Texas 77002	**Permit Number**: ACP-18287 v 1.0 **Permit Description**: Synthetic Minor
Source Name & Location: Norse Gas Plant 10370 88th Street McGregor, North Dakota 58755 Lat/Long: 48.692442/-102.921722 SE ¼, SW ¼, Sec. 11, T160N, R95W Divide County	**Source Type**: Natural Gas Processing
Date of Application: October 25, 2024	

Pursuant to Chapter 23.1-06 of the North Dakota Century Code (NDCC), and the Air Pollution Control Rules of the State of North Dakota (Article 33.1-15 of the North Dakota Administrative Code or NDAC), and in reliance on statements and representations heretofore made by the permittee (i.e., owner) designated above, a Permit to Construct is hereby issued authorizing such permittee to construct and initially operate the source unit(s) at the location designated above. This Permit to Construct is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Environmental Quality (Department) and to any conditions specified below:

Date: _____

James L. Semerad
Director
Division of Air Quality

1. Project and Facility Emissions Units:

This Permit to Construct allows the construction and initial operation of the herein-mentioned new or modified equipment at the source. The source may be operated under this Permit to Construct until a Permit to Operate is issued unless this permit is suspended or revoked. The source is subject to all applicable rules, regulations, and orders now or hereafter in effect of the North Dakota Department of Environmental Quality and to the conditions specified herein.

Table 1-1 lists the emissions units that are being removed from the permit.

Table 1-2 lists the new emissions units associated with the Project.

Table 1-3 lists all emissions units associated with the facility upon Project completion.

Table 1-1: Emissions Units Removed

Emission Unit Description [A]	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Waukesha 3521G natural gas-fired compressor engine rated at 515 bhp (South Line Booster) (MACT ZZZZ)	22 [B]	22	Catalytic Converter

[A] All emission unit ratings are considered nominal ratings.
[B] This emission unit was never installed or operated.

Table 1-2: Project Emissions Units

Emission Unit Description [A]	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Waukesha L7044GSI (4SRB) natural gas-fired compressor engine rated 1,900 bhp (Inlet #6) (2019) (NSPS JJJJ & MACT ZZZZ) (NSPS OOOOa) [B]	27	27	Non-Selective Catalytic Reduction (NSCR)
Produced water truck loading [C]	TL-1	TL-1	None
NGL truck loading [C]	TL-2	TL-2	None
Fugitive emissions (NSPS OOOOa)[C]	FUG [D]	FUG	Leak Detection and Repair (LDAR) Program

[A] All emission unit ratings are considered nominal ratings.
[B] The compressor driven by the natural gas-fired engine is subject to NSPS OOOOa.
[C] Existing source incorporated in this permit action for table completeness.
[D] Insignificant or fugitive emission source (no specific emission limits).

Table 1-3: Facility Emissions Units upon Project Completion

Emission Unit Description [A]	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Waukesha L5794GSI (4SRB) natural gas-fired compressor engine rated at 1,380 bhp (Inlet #1) (2012) (NSPS JJJJ & MACT ZZZZ) (NSPS OOOO) [B]	1 [C]	1	Non-Selective Catalytic Reduction (NSCR)
Tri-ethylene glycol (TEG) dehydration unit rated at 30.0 x 10^6 scfd* (NESHAP HH)	3 [D]	4	Condenser and TEG Reboiler
TEG reboiler rated at 0.75 x 10^6 Btu/hr and fired on natural gas	4	4	None
400 bbl condensate storage tank (West tank)	7	7	Submerged Fill Pipe
400 bbl condensate storage tank (Middle tank)	8	8	Submerged Fill Pipe
Emergency flare	9	9	None
Waukesha L7044GSI (4SRB) natural gas-fired compressor engine rated at 1,680 bhp (Refrigeration #1) (2003) (MACT ZZZZ)	10 [C]	10	NSCR
Ajax DPC-2801 LE (2SLB) natural gas-fired compressor engine rated at 192 bhp (Residue #1) (2008) (MACT ZZZZ)	11 [C]	11	None
Hot oil heater rated at 1.5 x 10^6 Btu/hr and fired on natural gas	13	13	None
Ethylene glycol heat transfer/regen heater rated at 0.87 x 10^6 Btu/hr and fired on natural gas	14	14	None
Ajax DPC-720 LE (2SLB) natural gas-fired compressor engine rated at 720 bhp (Inlet #3) (1996) (MACT ZZZZ)	15 [C]	15a & 15b	None

Emission Unit Description [A]	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Salt bath heater rated at 6.0 x 10^6 Btu/hr and fired on natural gas	19	19	None
Waukesha L5790G (4SRB) natural gas-fired compressor engine rated at 842 bhp (Residue #3) (1977) (MACT ZZZZ)	21 [C]	21	NSCR
Waukesha L5794GSI (4SRB) natural gas-fired compressor engine rated at 1,380 bhp (Inlet #2) (2011) (NSPS JJJJ & MACT ZZZZ) (NSPS OOOO) [B]	23 [C]	23	NSCR
Waukesha L7042GSI (4SRB) natural gas-fired compressor engine rated at 1,233 bhp (Inlet #4) (1996) (MACT ZZZZ)	24 [C]	24	NSCR
400 bbl condensate storage tank (East tank)	25	25	Submerged Fill Pipe
Waukesha L5794GSI (4SRB) natural gas-fired compressor engine rated at 1,380 bhp (Inlet #8) (2012) (NSPS JJJJ & MACT ZZZZ) (NSPS OOOO) [B]	26 [C]	26	NSCR
Waukesha L7044GSI (4SRB) natural gas-fired compressor engine rated 1,900 bhp (Inlet #6) (2019) (NSPS JJJJ & MACT ZZZZ) (NSPS OOOOa) [E]	27 [F]	27	NSCR
Produced water truck loading	TL-1 [G]	TL-1	
NGL truck loading	TL-2 [G]	TL-2	
Fugitive emissions (NSPS OOOOb)	FUG [G]	FUG	Leak Detection and Repair (LDAR) Program

[A] All emission unit ratings are considered nominal ratings.
[B] The compressor driven by the natural gas-fired engine is subject to NSPS OOOO.
[C] Emission unit description modified with this permit action. No physical modifications or regulatory applicability changes to these emission units with this permit action.

Emission Unit Description [A]	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment

[D] Emissions from the TEG dehydration unit flash tank are recompressed or recycled back into the process. Emissions from the regenerator are controlled by a condenser and non-condensable gases exiting the condenser are combusted in the TEG reboiler firebox.

[E] The compressor driven by the natural gas-fired engine is subject to NSPS OOOOa.

[F] New unit associated with this permit action.

[G] Insignificant or fugitive emission source (no specific emission limits).

2. Applicable Standards, Restrictions and Miscellaneous Conditions:

A. New Source Performance Standards (NSPS):

The permittee shall comply with all applicable requirements of the following NSPS subparts, in addition to Subpart A, as referenced in Chapter 33.1-15-12 of the North Dakota Air Pollution Control Rules and 40 CFR 60.

1) 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (EUs 1, 23, 26, & 27).

2) 40 CFR 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015. The compressors driven by EUs 1, 23, and 26 are subject to this subpart. (Applicability to this subpart is not affected with this permit action.)

3) 40 CFR 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, and on or Before December 6, 2022. The compressor driven by EU 27 is subject to this subpart.

4) 40 CFR 60, Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022 (EU FUG).

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Source Categories/Maximum Achievable Control Technology (MACT):

The permittee shall comply with all applicable requirements of the following MACT subparts, in addition to Subpart A, as referenced in Chapter 33.1-15-22 of the North Dakota Air Pollution Control Rules and 40 CFR 63.

1) 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EUs 1, 10, 11, 15, 21, 23, 24, 26, & 27). The North Dakota Department of Environmental Quality has not adopted the area source provisions of this subpart. Please send all required reports and documentation to EPA Region 8 at the address listed below.

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

C. Fuel Restrictions:

Natural gas-fired engines (EUs 1, 10, 11, 15, 21, 23, 24, 26, & 27), heaters (EUs 13, 14, & 19), and reboiler (EU 4) are restricted to combusting only natural gas containing no more than 2 grains of sulfur per 100 standard cubic feet.

3. Emission Unit Limits:

Emission limits from the operation of the source unit(s) identified in Table 1-1 of this Permit to Construct (hereafter referred to as "permit") are as follows. Source units not listed are subject to the applicable emission limits specified in the North Dakota Air Pollution Control Rules.

Table 3-1: Permit Emissions Limits

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Pollutant / Parameter	Emission Limit
Waukesha compressor engine	1	1	NO_X	0.5 g/hp-hr [A, B]
			CO	0.75 g/hp-hr [A, B]
			VOC	0.7 g/hp-hr or 60 ppmvd @ 15% O_2 [A]
			Opacity	20% [C]
TEG reboiler [D]	4	4	Opacity	20% [C]
Emergency flare [D]	9	9	Opacity	20% [E]
Waukesha compressor engine	10	10	NO_X	0.5 g/hp-hr [A]
			CO	0.75 g/hp-hr [A]
			VOC	0.7 g/hp-hr [A]
			Opacity	20% [C]

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Pollutant / Parameter	Emission Limit
Ajax compressor engine	11	11	NO_X	2.12 g/hp-hr [A]
			CO	2.4 g/hp-hr [A]
			VOC	0.7 g/hp-hr [A]
			Opacity	20% [C]
Hot oil heater [D]	13	13	Opacity	20% [C]
Ethylene glycol heat transfer/regen heater [D]	14	14	Opacity	20% [C]
Ajax compressor engine	15	15a & 15b	NO_X	2.0 g/hp-hr [A]
			CO	1.0 g/hp-hr [A]
			Opacity	20% [C]
Salt bath heater [D]	19	19	Opacity	20% [C]
Waukesha compressor engine	21	21	NO_X	0.5 g/hp-hr [A]
			CO	1.0 g/hp-hr [A]
			VOC	0.7 g/hp-hr [A]
			Opacity	20% [C]
Waukesha compressor engines	23 & 26	23 & 26	NO_X	0.65 g/hp-hr [A, B]
			CO	0.65 g/hp-hr [A, B]
			VOC	0.7 g/hp-hr or 60 ppmvd @ 15% O_2 [A]
			Opacity	20% [C]
Waukesha compressor engine	24	24	NO_X	1.0 g/hp-hr [A]
			CO	1.0 g/hp-hr [A]
			VOC	0.7 g/hp-hr [A]
			Opacity	20% [C]

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Pollutant / Parameter	Emission Limit
Waukesha compressor engine	27 [F]	27	NO_X	0.9 g/hp-hr [A, B]
			CO	0.55 g/hp-hr [A, B]
			VOC	0.65 g/hp-hr [A, B]
			Opacity	20% [C]
Fugitives	FUG	FUG	VOC/GHG	Per NSPS Subpart OOOOb

[A] Compliance determined via emissions testing.
[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.
[D] Not affected with this permit action. Included for ease of permit revision or renewal.
[E] 60% opacity is permissible for not more than one six-minute period per hour.
[F] New unit associated with this permit action.

4. Emission Testing Requirements:

A. Initial testing:

All initial testing will require a minimum of three runs, one hour each, unless otherwise specified in a federal subpart.

Table 4-1: Initial Emissions Testing for Project

EU	EP	Contaminant	Method
27	27	NO_X	Per NSPS, Subpart JJJJ
		CO	
		VOC	

A signed copy of the test results shall be furnished to the Department within 60 days of the test date. The basis for this condition is NDAC 33.1-15-01-12 which is hereby incorporated into this permit by reference. To facilitate preparing for and conducting such tests, and to facilitate reporting the test results to the Department, the permittee shall follow the procedures and formats in the Department's Emission Testing Guideline.[1]

[1] See February 7, 2020, North Dakota Department of Environmental Quality Division of Air Quality Emissions Testing Guidelines. Available at: https://www.deq.nd.gov/publications/AQ/policy/PC/Emission_Testing_Guide.pdf

1) Test:

Within 180 days after initial startup, the permittee shall conduct emissions tests at the emission units listed in Table 4-1 using an independent testing firm, to determine the compliance status of the facility with respect to the emission limits specified in Table 3-1. Emissions testing shall be conducted for the pollutant(s) listed above in accordance with EPA Reference Methods listed in 40 CFR 60, Appendix A. Test methods other than those listed above may be used upon approval by the Department.

2) Notification:

The permittee shall notify the Department using the form in the Emission Testing Guideline, or its equivalent, at least 30 calendar days in advance of any tests of emissions of air contaminants required by the Department. If the permittee is unable to conduct the performance test on the scheduled date, the permittee shall notify the Department at least five days prior to the scheduled test date and coordinate a new test date with the Department.

3) Sampling Ports/Access:

Sampling ports shall be provided downstream of all emission control devices and in a flue, conduit, duct, stack or chimney arranged to conduct emissions to the ambient air. The ports shall be located to allow for reliable sampling and shall be adequate for test methods applicable to the facility. Safe sampling platforms and safe access to the platforms shall be provided. Plans and specifications showing the size and location of the ports, platform and utilities shall be submitted to the Department for review and approval.

4) Other:

a) The Department may require the permittee to have tests conducted to determine the emission of air contaminants from any source, whenever the Department has reason to believe that an emission of a contaminant not addressed by the permit applicant is occurring, or the emission of a contaminant in excess of that allowed by this permit is occurring. The Department may specify testing methods to be used in accordance with good professional practice. The Department may observe the testing. All tests shall be conducted by reputable, qualified personnel. A signed copy of the test results shall be furnished to the Department within 60 days of the test date.

All tests shall be made available, and the results calculated in accordance with test procedures approved by the Department. All tests shall be made under the direction of persons qualified by training or experience in the field of air pollution control as approved by the Department.

b) The Department may conduct tests of emissions of air contaminants from any source. Upon request of the Department, the permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants.

B. Sampling and Testing:

The Department may require the permittee to conduct tests to determine the emission rate of air contaminants from the source. The Department may observe the testing and may specify testing methods to be used. A signed copy of the test results shall be furnished to the Department within 60 days of the test date. The basis for this condition is NDAC 33.1-15-01-12 which is hereby incorporated into this permit by reference. To facilitate preparing for and conducting such tests, and to facilitate reporting the test results to the Department, the permittee shall follow the procedures and formats in the Department's Emission Testing Guideline.

5. General Conditions (Equipment):

A. Best Management Practices:

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

B. Operation of Air Pollution Control Equipment:

The permittee shall maintain and operate all air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

C. Stack Heights:

The stack height of (EU 27) 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.

D. Like-Kind Engine Replacement:

This permit allows the permittee to replace an existing engine with a like-kind unit. Replacement is subject to the following conditions:

1) The Department must be notified within 10 days after change-out of the unit.

2) The replacement unit shall operate in the same manner, provide no increase in throughput and have equal or less emissions than the unit it is replacing.

3) The date of manufacture of the replacement unit must be included in the notification. The facility must comply with any applicable federal standards (e.g. NSPS, MACT) triggered by the replacement.

4) The replacement unit is subject to the same state emission limits as the existing unit in addition to any NSPS or MACT emission limit that is applicable. Testing shall be conducted to confirm compliance with the emission limits within 180 days after start-up of the unit.

E. Organic Compound Emissions:

The permittee shall comply with all applicable requirements of NDAC 33.1-15-07 – Control of Organic Compounds Emissions.

F. Air Pollution from Internal Combustion Engines:

The permittee shall comply with all applicable requirements of NDAC 33.1-15-08-01 – Internal Combustion Engine Emissions Restricted.

G. Fugitive Emissions:

The release of fugitive emissions shall comply with the applicable requirements in NDAC 33.1-15-17.

6. General Conditions (Procedural):

A. Construction:

Construction of the above-described facility shall be in accordance with information provided in the permit application as well as any plans, specifications and supporting data submitted to the Department. The Department shall be notified 10 days in advance of any significant deviations from the specifications furnished. The issuance of this Permit to Construct may be suspended or revoked if the Department determines that a significant deviation from the plans and specifications furnished has been or is to be made.

Any violation of a condition issued as part of this permit to construct as well as any construction which proceeds in variance with any information submitted in the application, is regarded as a violation of construction authority and is subject to enforcement action.

B. Startup Notice:

A notification of the actual date of initial startup shall be submitted to the Department within 15 days after the date of initial startup.

C. Permit Invalidation:

This permit shall become invalid if construction is not commenced within 18 months after issuance of such permit, if construction is discontinued for a period of 18 months or more; or if construction is not completed within a reasonable time.

D. Source Operations:

Operations at the installation shall be in accordance with statements, representations, procedures and supporting data contained in the initial application, and any supplemental information or application(s) submitted thereafter. Any operations not listed in this permit are subject to all applicable North Dakota Air Pollution Control Rules.

E. Alterations, Modifications, or Changes:

Any alteration, repairing, expansion, or change in the method of operation of the source which results in the emission of an additional type or greater amount of air contaminants or which results in an increase in the ambient concentration of any air contaminant, must be reviewed and approved by the Department prior to the start of such alteration, repairing, expansion or change in the method of operation.

F. Recordkeeping:

The permittee shall maintain any compliance monitoring records required by this permit or applicable requirements. The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report or application. Support information may include all calibration and maintenance records and all original strip-chart recordings/computer printouts for continuous monitoring instrumentation, and copies of all reports required by the permit.

G. Annual Emission Inventory/Annual Production Reports:

The permittee shall submit an annual emission inventory report and/or an annual production report upon Department request, on forms supplied or approved by the Department.

H. Malfunction Notification:

The permittee shall notify the Department of any malfunction which can be expected to last longer than twenty-four hours and can cause the emission of air contaminants in violation of applicable rules and regulations.

I. Nuisance or Danger:

This permit shall in no way authorize the maintenance of a nuisance or a danger to public health or safety.

J. Transfer of Permit to Construct:

The holder of a permit to construct may not transfer such permit without prior approval from the Department.

K. Right of Entry:

Any duly authorized officer, employee or agent of the North Dakota Department of Environmental Quality may enter and inspect any property, premise or place at which the source listed in Condition 1 of this permit is located at any time for the purpose of ascertaining the state of compliance with the North Dakota Air Pollution Control Rules. The Department may conduct tests and take samples of air contaminants, fuel, processing material, and other materials which affect or may affect emissions of air contaminants from any source. The Department shall have the right to access and copy any records required by the Department's rules and to inspect monitoring equipment located on the premises.

L. Other Regulations:

The permittee of the source unit(s) described in Condition 1 of this permit shall comply with all State and Federal environmental laws and rules. In addition, the permittee shall comply with all local burning, fire, zoning, and other applicable ordinances, codes, rules and regulations.

M. Permit Issuance:

This permit is issued in reliance upon the accuracy and completeness of the information set forth in the application. Notwithstanding the tentative nature of this information, the conditions of this permit herein become, upon the effective date of this permit, enforceable by the Department pursuant to any remedies it now has, or may in the future have, under the North Dakota Air Pollution Control Law, NDCC Chapter 23.1-06.

7. State Enforceable Only Conditions (not Federally enforceable)

A. Odor Restrictions:

The permittee shall not discharge into the ambient air any objectionable odorous air contaminant which is in excess of the limits established in NDAC 33.1-15-16.