

## AIR POLLUTION CONTROL PERMIT TO CONSTRUCT

<b>Permittee:</b> <b>Name:</b> Andeavor Field Services LLC	<b>Permit Number:</b> ACP-18309 v1.0
<b>Address:</b> 1515 Arapahoe St, Tower 1, Ste 1600 Denver, CO 80202	<b>Permit Description:</b> Synthetic Minor (Current Title V PTO)
<b>Source Name &amp; Location:</b> Robinson Lake Gas Plant NW ¼, NW ¼, Sec. 23, T153N, R91W Belden, North Dakota 58784 Mountrail County	<b>Source Type:</b> Natural Gas Processing
<b>Date of Application:</b> August 18, 2025	

Pursuant to Chapter 23.1-06 of the North Dakota Century Code, the North Dakota Air Pollution Control Rules (North Dakota Administrative Code [NDAC] 33.1-15), and in reliance on statements and representations heretofore made by the permittee (i.e., owner) designated above, a Permit to Construct (PTC, also referred to as ‘permit’) is hereby issued authorizing such permittee to construct and initially operate the source unit(s) at the location designated above. The source may be operated under this PTC until a Permit to Operate (PTO) is issued. This PTC is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Environmental Quality (Department), state and federal regulations, and to any conditions specified below:

Date: \_\_\_\_\_

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 James L. Semerad  
 Director  
 Division of Air Quality

**1. Project and Facility Emissions Units:**

The facility is requesting federally enforceable requirements to be incorporated into this PTC. A more detailed report of the regulation analysis and a simplified set of requirements is discussed in the Air Quality Effects Analysis (AQEA) Memo (see “ACP-18309 v1.0\_AQEA-Memo” for details). Table 1-1 lists all emission units associated with this permit.

*Table 1-1: Facility Emission Units Associated with this Permit*

<b>Emission Unit Description <sup>A</sup></b>	<b>Emission Unit (EU)</b>	<b>Emission Point (EP)</b>	<b>Air Pollution Control Equipment</b>
Two ethylene glycol (EG) dehydration units rated at 87.5 MMscfd each	DEHY-1 & DEHY-2	FLARE-3 <sup>B</sup>	Still Vent-Condenser & FLARE-3
Triethylene glycol (TEG) dehydration unit rated at 60.0 MMscfd (MACT HH)	DEHY-3	FLARE-2 <sup>B</sup> & RBLR-3	Flash tank overheads routed to RBLR-3 as fuel gas. Condenser & FLARE-2 <sup>C</sup>
TEG natural gas-fired reboiler rated at 0.75 MMBtu/hr (MACT HH)	RBLR-3 <sup>D</sup>		
Two deethanizer towers (T-3510 & T-7600) (NSPS NNN)	DIST-1 & DIST-2 <sup>D</sup>	FLARE-1	FLARE-1
Depropanizer tower (T-600) (NSPS NNN)	DIST-3 <sup>D</sup>	FLARE-1	FLARE-1
Debutanizer tower (T-601) (NSPS NNN)	DIST-4 <sup>D</sup>	FLARE-1	FLARE-1
Facility process & emergency flare	FLARE-1	FLARE-1	N/A
TEG dehydrator flare (40 CFR 63.11(b))	FLARE-2	FLARE-2 <sup>E</sup>	N/A
Tanks & EG dehydrator flare	FLARE-3	FLARE-3 <sup>E,F</sup>	N/A
Fourteen reciprocating compressors (NSPS OOOOa)	C-2700 through C-2713	FUG-1	Leak Detection and Repair Program (LDAR)
Fugitive emissions (NSPS OOOOa)	FUG-1	FUG-1	LDAR Program

<sup>A</sup> All emission unit ratings are considered nominal ratings.

<sup>B</sup> FLARE-2 and FLARE-3 are connected by a manual carseal valve that allows rerouting of effluent as needed (e.g., maintenance & emergency).

<sup>C</sup> Flash tank overheads are routed to RBLR-3 as fuel gas under normal operation; when there is no heat demand for the reboiler, the vapors go to FLARE-2.

<sup>D</sup> Insignificant emission source (no specific emission limit).

<sup>E</sup> When either FLARE-2 or FLARE-3 is capable of controlling emissions from DEHY-3 or flash tank vapors (MACT HH), it is subject to 40 CFR 63.11(b).

<sup>F</sup> To ensure NSPS OOOOa exemption, tank effluent controlled with FLARE-3 shall operate with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

## 2. **Applicable Requirements:**

### A. Shutdown of Dehydrator-1, -2, and -3 at Robinson Lake Gas Plant.

At all times when Dehydrator-1, -2, and -3 are operating at Robinson Lake Gas Plant, the permittee must operate Flare-3 or Flare-2, as required by 40 C.F.R. § 63.771(d)(4)(i). If Dehydrators-1, -2, or -3 over-pressurize, the CPMS must automatically Shutdown the over-pressurized Dehydrators at Robinson Lake. If Flare-2 and Flare-3 are non-operational, as indicated by unlit pilot flames observed during an OVA inspection, the permittee shall immediately manually Shutdown Dehydrators-1, -2, and -3, and initiate an Alarm.<sup>1</sup> If Flare-2 and Flare-3 are non-operational, as indicated by the CPMS, failure of the monitoring equipment, local control panel, or PLC, then the CPMS for Flare-2 and Flare-3 must Alarm the permittee personnel, and the CPMS automatically Shutdown the affected Dehydrators<sup>2</sup> at Robinson Lake, as described in the Site-Specific Monitoring Plan.<sup>3</sup> Dehydrator-1, -2, and -3 must remain Shutdown until the permittee performs the following: (i) corrective action(s), and (ii) confirm that Flare-2 and Flare-3 are operating as required by 40 C.F.R. § 63.771(d)(4)(i). The permittee personnel shall conduct follow-up OVA inspections of Flare-2 and Flare-3 for no less than fifteen minutes while Dehydrator-1, -2, and -3 are operating to validate a successful restart and following completion of correction action(s). If Dehydrator-1, -2, or -3 fails to automatically Shutdown, the permittee shall conduct a Root Cause Analysis.

### B. MACT HH as it applies to all Dehydrators and Flares at Robinson Lake Gas Plant

Robinson Lake Gas Plant is already subject to MACT HH in their current operating permit (AOP-28404 v1.0 issued November 16, 2021). Additionally, ACP-18215 v1.0 (issued May 28, 2024) established federally enforceable operational limits on the glycol units to ensure the facility remains an area source of hazardous air pollutants.

### C. Subpart OOOOa as it applies to Robinson Lake Gas Plant

The permittee shall accept applicability of and comply with 40 C.F.R. Part 60, Subpart OOOOa at all Affected Facilities at Robinson Lake Gas Plant. The following equipment shall be considered

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<sup>1</sup> “Alarm” shall mean a sensor that instantaneously and remotely notifies the permittee of a variance in a monitored parameter.

<sup>2</sup> “Affected Dehydrators” shall mean those dehydrators that supply effluent to the non-operational flares.

<sup>3</sup> The Site-Specific Monitoring Plan for Robinson Lake Gas Plant is in Appendix B.

affected facilities under 40 CFR Part 60, Subpart OOOOa, and comply with all applicable requirements:

- Reciprocating Compressors [§60.5365a(c)]; this includes the 14 compressor units (EUs C-2700 through C-2713).
- Process Unit Affected Facilities (fugitive leaks) [§60.5365a(f)].

D. OGI as it applies to Robinson Lake Gas Plant<sup>4</sup>

- 1) OGI Protocol. The permittee shall develop a protocol for OGI monitoring of all Covered Equipment,<sup>5</sup> and Fin Fan Unit plugs in light liquid and/or gas/vapor service (as defined in 40 C.F.R. § 60.481a), at Robinson Lake Gas Plant. The OGI Protocol shall ensure:
  - a) Use of an optical gas imaging instrument (“OGI Instrument”) that complies with the requirements of 40 C.F.R. § 60.18(i)(1);
  - b) Consideration of parameters such as viewing distance, thermal background, wind speed, interferences (e.g., steam), and operator training, unless sufficiently addressed by the instrument manufacturer’s operating parameters. If the permittee is relying on manufacturer’s operating parameters, those parameters must be included in the OGI Protocol;
  - c) An instrument check that complies with the requirements of 40 C.F.R. § 60.18(i)(2) is performed on the OGI Instrument each day it is used to ensure that the OGI Instrument can effectively detect Leaks under the conditions outlined in Paragraph 2.D.1)(b) above;
  - d) Maintenance of the OGI Instrument is performed in accordance with the manufacturer’s recommendations;
  - e) Operation of the OGI Instrument is performed in accordance with the manufacturer’s operating parameters;
  - f) OGI Leaks are defined as “Any emissions imaged by an OGI instrument”; and
  - g) Performance of OGI monitoring by a technician certified to detect

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<sup>4</sup> The EPA-approved OGI-Protocol (January 29, 2024) is attached as Appendix A.

<sup>5</sup> “Covered Equipment” shall mean the following equipment in all Covered Process Units: All valves, pumps, pressure relief devices, and connectors in VOC or wet gas service that are regulated under any “equipment leak” provision of 40 C.F.R. Part 60. “Covered Process Unit” shall mean any process unit that is subject to the equipment leak provisions of 40 C.F.R. Part 60, Subpart OOOOa (and by reference 40 C.F.R. Part 60, Subpart VVa).

Leaks using OGI.

- 2) Semi-Annual OGI Monitoring Program.
  - a) OGI monitoring shall be conducted semi-annually.
    - 1] “Covered Equipment” shall mean the following equipment in all Covered Process Units: All valves, pumps, pressure relief devices, and connectors in VOC or wet gas service that are regulated under any “equipment leak” provision of 40 C.F.R. Part 60.
  - b) The permittee shall identify all Fin Fan Units at Robinson Lake Gas Plant that are in light liquid and/or gas/vapor service, as defined in 40 C.F.R. § 60.481a, and the permittee shall monitor all plugs on such Fin Fan Units, while operating, in accordance with the EPA-approved OGI Protocol.<sup>4</sup> OGI monitoring shall be conducted semi-annually.
- 3) Repairs of Leaks. This Paragraph applies to all Leaks that are detected during an OGI monitoring event regardless of whether such Leaks were found with the OGI Instrument or whether the Leaks are detected using OVA inspections during an OGI survey.
  - a) *Covered Equipment:* The permittee shall repair (or, if applicable, replace) and re-monitor Leaking Covered Equipment in accordance with the OGI Protocol.<sup>4</sup>
  - b) *Fin Fan Unit Plugs:* With respect to Leaking Fin Fan Unit plugs, the permittee shall:
    - 1] Perform a first attempt at repair no later than five Days after detecting a Leak;
    - 2] Repair the Leaking Fin Fan Unit plug (a) No later than 15 Days after detecting the Leak unless such repair requires a Process Unit Shutdown; or (b) If repair requires a Process Unit Shutdown, complete the repair no later than the end of the next Process Unit Shutdown; and
    - 3] Perform Repair Verification Monitoring in accordance with the OGI Protocol.<sup>4</sup>

E. Pilot-Operated Modulating Pressure Relief Valves (PORV)

- 1) The permittee shall install and operate Bottom Dome Vent Piping on any new PORV that is or will be subject to the requirements of Subpart OOOOa, with the exception of the PORV categories identified below:
  - a) Atmospheric PORVs that are not otherwise required to be routed through a closed-vent system; or
  - b) Snap-action PORVs.
- 2) The permittee shall monitor using Method 21 or the alternative work practice in accordance with 40 C.F.R. § 60.18(g)-(i), the PORVs subject to Subpart OOOOa on a quarterly frequency, unless: (i) more frequent monitoring is required by federal, state, or local laws or regulations; or (ii) the relevant Covered Process Unit has been permanently shut down.
- 3) The permittee shall repair all leaks of PORVs detected at or above 500 ppm in accordance with this Paragraph:
  - a) By no later than five Days after detecting a leak, the permittee shall perform a first attempt at repair of the PORV. By no later than 15 Days after detection, the permittee shall perform a final attempt at repair of the PORV or place it on the DOR list provided that the permittee has complied with all applicable regulations.
  - b) The permittee shall conduct Repair Verification Monitoring after repair of any leaks.
  - c) For all PORVs placed on the DOR list, the permittee shall:
    - 1] Require sign-off from the relevant process unit supervisor or person of similar authority that the PORV is technically infeasible to repair without a Process Unit Shutdown;
    - 2] Undertake monthly Method 21 monitoring of PORVs placed on the DOR list; and
    - 3] Repair the PORV within the time frame required by the applicable LDAR regulation.
- 4) The permittee shall install Bottom Dome Vapor Recovery Piping on any existing PORV, that is subject to Subpart OOOOa, and that has a Pre-existing Tap and Isolation Valve, with the exception of the PORV

categories identified in Paragraph 2.E.1).

- 5) For each leak identified under Paragraph 2.E.3) above, the permittee shall record the following information: the date the leak was identified and the Screening Value; the date of all repair attempts; the repair methods used during each repair attempt; the date, time, and Screening Values for all re-monitoring events; and, if applicable, documentation of compliance with Paragraph 2.E.3) for PORVs placed on the DOR list.

F. Subpart NNN as it applies to process units that are affected facilities

Robinson Lake Gas Plant shall comply with Subpart NNN as specified below at Distillation Units that are “affected facilities” as defined under 40 C.F.R. § 60.660. The permittee shall comply with 40 C.F.R. § 60.660(d) by complying with the provisions in 40 C.F.R. Part 65, Subpart D, to satisfy the requirements of 40 C.F.R. §§ 60.662 through 60.665 and 60.668.

The permittee shall comply with 40 CFR Part 65, Subpart D as follows:

1. All applicable process vents shall be designated as Group 1 process vents.
2. All applicable process vents shall be routed to a flare which meets the applicable requirements of 40 CFR §65.142(b) as specified below:
  - a. Flares shall be operated at all times when emission are vented to them [40 CFR §65.147(a)(1)].
  - b. Flares shall be designed and operated with no visible emissions as determined by a 2-hour Method 22 of Appendix A of 40 CFR 60 test, except for periods not to exceed a total of 5 minutes during 2 consecutive hours [40 CFR §65.147(a)(2)].
  - c. Flares shall be operated with a flare flame or at least one pilot flame present at all times [40 CFR §65.147(a)(3)].
    - i. Monitoring shall be performed by a device capable of continuously detecting that at least one pilot flame or the flare flame is present [40 CFR §65.147(c)].
    - ii. The permittee shall keep records of the times and duration during which the flare flame and pilot flames are absent or are not operating. [40 CFR §§65.159(c) and (d)].

The following two points apply only for air-assisted flares only (i.e., Flare-1).

- d. The net heating value of the gas going to the flare must be greater than 300 btu/scf [40 CFR §65.147(a)(4)(ii)].
- e. The maximum exit velocity of the flare shall be designed and operated to be below the calculated Vmax as specified in 40 CFR §65.147(a)(7).

- f. An initial flare compliance determination shall be conducted as follows [40 CFR §65.147(b)(3)].<sup>6</sup>
- i. Method 22 of Appendix A of Part 60 shall be used to determine the compliance of flares with the visible emission provisions of this subpart [40 CFR §65.147(b)(3)(i)].
  - ii. The net heating value of the gas being combusted in a flare shall be calculated using Equation 147-4 of 40 CFR §65.147(b)(3)(ii).
  - iii. The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Method 2, 2A, 2C, or 2D of appendix A of 40 CFR Part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip [40 CFR §65.147(b)(3)(iii)].
  - iv. Flare flame or pilot monitors, as applicable, shall be operated during any flare compliance determination [40 CFR §65.147(b)(3)(iv)].

### **3. General Conditions:**

#### **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. Permit Invalidation:**

This permit shall be effective from the date of its issuance unless suspended, revoked or surrendered. The violation of any conditions of this permit may result in revocation or suspension of the permit or other appropriate enforcement action. This permit shall become invalid if construction does not commence within eighteen months after permit issuance, construction is discontinued for a period of eighteen months or more, or construction is not completed within a reasonable time. The Department may provide a time period greater than eighteen months when such extension is supported by sufficient documentation from the applicant. If any provision or application of a provision of this permit is held invalid in any circumstance, the remainder of this permit shall remain valid.

#### **C. Operation:**

Construction and operation of the facility shall be in accordance with the permit application—which includes technical supplements, revisions, and supporting data. Any operations not listed in this permit are subject to all applicable NDAC 33.1-15 requirements.

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<sup>6</sup> This demonstration has already been completed at the time of the application. However, the requirement must be included for reference.

D. Modification:

Any alteration, repair, expansion, or change in the method or physical 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, is considered a modification and must be reviewed and approved by the Department before implementation. The Department shall be notified ten days in advance of any significant deviations from the application. The issuance of this PTC may be suspended or revoked if the Department determines that a significant deviation has been or is to be made without the proper review or approval.

E. Title V Permit to Operate:

Within one year after permit issuance, the permittee shall submit a permit application for a Title V PTO for the facility.

F. Recordkeeping:

The permittee shall maintain any compliance monitoring records required by this permit or applicable requirements for a period of at least five years (unless otherwise stated) from the date of the monitoring sample, measurement, report or application. Support information may include all calibration and maintenance records, 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 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. Using empirical estimates of emission rates, the permittee shall conservatively estimate if the malfunction is able to cause noncompliance.

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 PTC may not transfer such permit without prior approval from the Department.

K. Right of Entry:

Any duly authorized officer, employee, or agent of the Department may enter and inspect any property, premise, or place at which the source is located at any time for the purpose of ascertaining

compliance with NDAC 33.1-15. The Department may inspect monitoring equipment, conduct tests, and take samples of air contaminants, fuel, processing material, and other materials which affect or may affect the emission of air contaminants from any source. The Department shall have the right to access and copy any records required by the Department.

**4. State Enforceable Conditions (Not Federally Enforceable)**

A. Emissions of Odorous Substances Restricted:

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.

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