

US EPA ARCHIVE DOCUMENT

**PREVENTION OF SIGNIFICANT DETERIORATION PERMIT
FOR GREENHOUSE GAS EMISSIONS
ISSUED PURSUANT TO THE REQUIREMENTS AT 40 CFR § 52.21**

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6

PSD PERMIT NUMBER: PSD-TX-101616-GHG

PERMITTEE: Targa Midstream Services LLC
1000 Louisiana St., Suite 4300
Houston, TX 77002

FACILITY NAME: Mont Belvieu Plant

FACILITY LOCATION: 10319 Highway 146
Mont Belvieu, TX 77523

Pursuant to the provisions of the Clean Air Act (CAA), Subchapter I, Part C (42 U.S.C. Section 7470, *et. Seq.*), and the Code of Federal Regulations (CFR) Title 40, Section 52.21, and the Federal Implementation Plan at 40 CFR § 52.2305 (effective May 1, 2011 and published at 76 FR 25178), the U.S. Environmental Protection Agency, Region 6 is issuing a *Prevention of Significant Deterioration* (PSD) permit to Targa Midstream Services LLC – Mont Belvieu Plant for Greenhouse Gas (GHG) emissions. The Permit authorizes the construction of a new fractionation train at the existing Mont Belvieu Plant in Mont Belvieu, Chambers County, Texas.

Targa is authorized to modify the existing natural gas liquids Fractionator and construct a new fractionation train (Train 5) as described herein, in accordance with the permit application (and plans submitted with the permit application), the federal PSD regulations at 40 CFR § 52.21, and other terms and conditions set forth in this PSD permit in conjunction with the corresponding Texas Commission on Environmental Quality (TCEQ) minor NSR permit No. 101616. Failure to comply with any condition or term set forth in this PSD Permit may result in an enforcement action pursuant to Section 113 of the Clean Air Act (CAA). This PSD Permit does not relieve Targa of the responsibility to comply with any other applicable provisions of the CAA (including applicable implementing regulations in 40 CFR Parts 51, 52, 60, 61, 72 through 75, and 98) or other federal and state requirements (including the state PSD program that remains under approval at 40 CFR § 52.2303).

In accordance with 40 CFR §124.15(b), this PSD Permit becomes effective 30 days after the service of notice of this final decision unless review is requested on the permit pursuant to 40 CFR §124.19.

Wren Stenger, Director
Multimedia Planning and Permitting Division

Date

**Targa Midstream Services LLC
 Mont Belvieu Plant (PSD-TX-101616-GHG)
 Prevention of Significant Deterioration Permit
 For Greenhouse Gas Emissions
 Draft Permit Conditions**

PROJECT DESCRIPTION

The Targa Midstream Services Mont Belvieu Fractionation Plant is designed to fractionate natural gas liquids into various products. With this project, Targa plans to build a new fractionation train (Train 5). The feed consists of mixed natural gas liquids (NGLs), which are a mixture of ethane, propane, butane, heavier hydrocarbons, carbon dioxide (CO₂), and small amounts of hydrogen sulfide (H₂S)). The feed is sent to the deethanizer to separate ethane. The overhead off the deethanizer will be treated in the amine unit to remove the non-hydrocarbon gases (CO₂ and H₂S). Then water is removed from the ethane in the TEG dehydration unit. The heavier fraction from the deethanizer is fed to the depropanizer to separate propane product. The heavier fraction of the depropanizer is further fed to the debutanizer to separate the mixed butane product from natural gasoline. The butane product is then sent through the deisobutanizer to separate normal and iso-butane. The proposed fractionation train is designed to handle 100,000 barrels per day (BPD) of inlet liquid. The actual production rates will fluctuate based on customer demand and inlet composition. Targa approximates the average liquid products based on an inlet of 100,000 BPD to be: 50,000 BPD ethane; 22,000 BPD propane; 5,000 BPD iso-butane; 12,000 BPD butane; and 11,000 BPD natural gasoline. All the specification NGL products are transported from the fractionation plant by pipelines.

EQUIPMENT LIST

The following devices are subject to this GHG PSD permit.

EPN	Description
F-07	Hot Oil Heater rated at 144.45 MMBtu/hr
F-08	Hot Oil Heater rated at 144.45 MMBtu/hr
RTO-5	One Regenerative Thermal Oxidizer for control of waste gas streams.
RTO-5 MSS	Emissions associated with RTO maintenance, startup, and shutdown (MSS)
FLR-5	Flare-5 pilot and control of amine treater during RTO downtime.
FLR5-MSS	Flare used for control of Maintenance, Startup, and Shutdown (MSS) emissions.
FUG-FRAC-5	Fugitive emissions from Train 5 fugitive components.
ATM-MSS	Emissions to the atmosphere associated maintenance and shutdown.

I. GENERAL PERMIT CONDITIONS

A. PERMIT EXPIRATION

As provided in 40 CFR §52.21(r), this PSD Permit shall become invalid if construction:

1. is not commenced (as defined in 40 CFR §52.21(b)(9)) within 18 months after the approval takes effect; or
2. is discontinued for a period of 18 months or more; or
3. is not completed within a reasonable time.

Pursuant to 40 CFR §52.21(r), EPA may extend the 18-month period upon a written satisfactory showing that an extension is justified.

B. PERMIT NOTIFICATION REQUIREMENTS

Permittee shall notify EPA Region 6 in writing or by electronic mail of the:

1. date construction is commenced, postmarked within 30 days of such date;
2. actual date of initial startup, as defined in 40 CFR §60.2, postmarked within 15 days of such date; and
3. date upon which initial performance tests will commence, in accordance with the provisions of Section V, postmarked not less than 30 days prior to such date. Notification may be provided with the submittal of the performance test protocol required pursuant to Condition V.B.

C. FACILITY OPERATION

At all times, including periods of startup, shutdown, and malfunction, Permittee shall maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA, which may include, but is not limited to, monitoring results, review of operating maintenance procedures and inspection of the facility.

D. MALFUNCTION REPORTING

1. Permittee shall notify EPA by mail within 48 hours following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in GHG emissions above the allowable emission limits stated in Section II of this permit.
2. Within 10 days of the restoration of normal operations after any failure described in

I.D.1., Permittee shall provide a written supplement to the initial notification that includes a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in Section II and III, and the methods utilized to mitigate emissions and restore normal operations.

3. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or any law or regulation such malfunction may cause.

E. RIGHT OF ENTRY

EPA authorized representatives, upon the presentation of credentials, shall be permitted:

1. to enter the premises where the facility is located or where any records are required to be kept under the terms and conditions of this PSD Permit;
2. during normal business hours, to have access to and to copy any records required to be kept under the terms and conditions of this PSD Permit;
3. to inspect any equipment, operation, or method subject to requirements in this PSD Permit; and,
4. to sample materials and emissions from the source(s).

F. TRANSFER OF OWNERSHIP

In the event of any changes in control or ownership of the facilities to be constructed, this PSD Permit shall be binding on all subsequent owners and operators. Permittee shall notify the succeeding owner and operator of the existence of the PSD Permit and its conditions by letter; a copy of the letter shall be forwarded to EPA Region 6 within thirty days of the letter signature.

G. SEVERABILITY

The provisions of this PSD Permit are severable, and, if any provision of the PSD Permit is held invalid, the remainder of this PSD Permit shall not be affected.

H. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER ENVIRONMENTAL LAWS

Permittee shall construct and operate this project in compliance with this PSD Permit, the application on which this permit is based and all other applicable federal, state, and local air quality regulations. This PSD permit does not release the Permittee from any liability for compliance with other applicable federal, state and local environmental laws and regulations, including the Clean Air Act.

I. ACRONYMS AND ABBREVIATIONS

BACT	Best Available Control Technology
bbf	Barrel
BPD	Barrels per Day
Btu	British Thermal Unit
CAA	Clean Air Act
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CGA	Cylinder Gas Audit
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DRE	Destruction and Removal Efficiency
dscf	Dry Standard Cubic Foot
EPN	Emission Point Number
FR	Federal Register
GHG	Greenhouse Gas
gr	Grains
HHV	High Heating Value
hp	Horsepower
Hr	Hour
IFR	Internal Floating Roof
LDAR	Leak Detection and Repair
LHV	Lower Heating Value
Lb	Pound
MMBtu	Million British Thermal Units
MMSCFD	Million Standard Cubic Feet per Day
MSS	Maintenance, Start-up and Shutdown
NGL	Natural Gas Liquids
N ₂ O	Nitrous Oxides
NSPS	New Source Performance Standards
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance and/or Quality Control
RATA	Relative Accuracy Test Audit
RTO	Regenerative Thermal Oxidizer
SCFH	Standard Cubic Feet per Hour
SCR	Selective Catalytic Reduction
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPY	Tons per Year
VRU	Vapor Recovery Unit
USC	United States Code

II. Annual Facility Emission Limits

Annual emissions, in tons per year (TPY) on a 365-day total, rolled daily, shall not exceed the following:

Table 1. Facility Emission Limits¹

FIN	EPN	Description	GHG Mass Basis		TPY CO ₂ e ^{2,3}	BACT Requirements
				TPY ²		
F-07	F-07	Hot Oil Heater	CO ₂	73,954	74,027	4.06 lb CO ₂ /bbl NGL processed. See permit condition III.A.2.a.
			CH ₄	1.39		
			N ₂ O	0.14		
F-08	F-08	Hot Oil Heater	CO ₂	73,954	74,027	4.06 lb CO ₂ /bbl NGL processed. See permit condition III.A.2.b.
			CH ₄	1.39		
			N ₂ O	0.14		
RTO-5, RT5-MSS	RTO-5, RTO5-MSS	Regenerative Thermal Oxidizer	CO ₂	10,882	10,882	Good combustion practices and annual compliance testing. See permit condition III.B.1.
			CH ₄	0.01		
			N ₂ O	Negligible ⁴		
FLR-5, FLR5-MSS	FLR-5, FLR5-MSS	Flare	CO ₂	1,301	1,301	Good combustion practices and annual compliance testing. See permit condition III.C.1.
			CH ₄	0.07		
			N ₂ O	Negligible ⁴		
FUG-FRAC-5	FUG-FRAC-5	Plant-wide Fugitive Components	CO ₂	No Numerical Limit Established ⁵	No Numerical Limit Established ⁵	Implementation of LDAR Program. See permit condition III.D.1.
			CH ₄	No Numerical Limit Established ⁵		
ATM-MSS	ATM-MSS	MSS Emissions to Atmosphere	CH ₄	No Numerical Limit Established ⁶	No Numerical Limit Established ⁶	Implementation of LDAR Program. See permit condition III.D.2.
Totals⁷			CO₂	160,091	160,241	
			CH₄	3.05		
			N₂O	0.28		

1. Compliance with the annual emission limits (tons per year) is based on a 12-month rolling average basis.
2. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities.
3. Global Warming Potentials (GWP): CH₄ = 21, N₂O = 310
4. All values indicated as negligible are less than 0.01 TPY with appropriate rounding.
5. Fugitive process emissions are estimated to be 0.01 TPY CO₂, 0.11 TPY CH₄, and 2.32 TPY CO₂e.
6. MSS emissions to the atmosphere are estimated to be 0.08 TPY CH₄ and 1.68 TPY CO₂e.
7. The total emissions for CH₄ and CO₂e include the PTE for process fugitive emissions of CH₄. These totals are given for informational purposes only and do not constitute emission limits.

III. Special Permit Conditions

A. Hot Oil Heaters (EPNs: F-07 and F-08)

1. Heater Work Practice and Operational Requirements

- a. Targa will install two hot oil heaters (EPNs: F-07 and F-08) rated at no greater than 144.45 million British thermal units per hour (MMBtu/hr) each for Train 5. Both process heaters shall be equipped with Selective Catalytic Reduction (SCR) technology using aqueous NH_3 and the heaters shall be equipped with low NO_x burners.
- b. Permittee shall calculate for each heater, on a daily basis, the amount of CO_2 emitted from combustion of natural gas in tons/yr using the equation at 40 CFR 98.33(a)(2)(i). Compliance shall be based on a 365-day rolling total. Records shall be kept for a period of five years of the daily fuel combusted. Compliance shall be based on a 365-day rolling total.
- c. Permittee shall calculate the CH_4 and N_2O emissions on a 365-day rolling basis. Permittee shall determine compliance with the CH_4 and N_2O emissions limits contained in this section using the default CH_4 and N_2O emission factors contained in Table C-2 and equation C-9a of 40 CFR Part 98 and the measured actual heat input (HHV).
- d. Permittee shall calculate the CO_2e emissions on a 365-day rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, as published on October 30, 2009 (74 FR 56395).
- e. Primary fuel for the heaters shall be limited to pipeline quality natural gas with a fuel sulfur content of up to 5 grains of sulfur per 100 dry standard cubic feet (gr S/100 dscf). The fuel gross calorific value (GCV) [high heat value (HHV)] of the fuel shall be determined, at a minimum, semiannually by the procedures contained in 40 CFR Part 98.34(a)(6) and records shall be maintained of the semiannual fuel GCV for a period of five years. Upon request, Permittee shall provide a sample and/or analysis of the fuel that is fired in the heaters or shall allow a sample to be taken by EPA for analysis.
- f. The flow rate of the fuel combusted in natural gas-fired combustion emission units identified in this section shall be measured and recorded using an operational non-resettable elapsed flow meter at the inlet. The flow meter must be calibrated on an annual basis. As an alternative, a coriolis flow meter can be used. A coriolis meter must undergo field verification checks, which include meter zero verifications, sensor diagnostic checks, and transmitter diagnostic checks at least annually. A computer that collects, sums, and stores electronic data from continuous fuel flow meters is an acceptable totalizer.
- g. The Permittee shall install and operate oxygen analyzers on the combustion chamber to continuously monitor and record oxygen concentration in the hot oil heaters (EPNs: F-07 and F-08). Oxygen readings shall be reduced to an averaging period of 6 minutes or less and record it at that frequency.
- h. A relative accuracy test audit (RATA) of the stack O_2 analyzer is required once every four quarters in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.1.
- i. The oxygen analyzers shall be quality-assured at least quarterly using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2.
- j. The Permittee shall not allow the excess air in the combustion chamber of the heaters to exceed 15%.

- k. The hot oil heaters (EPNs: F-07 and F-08) will be equipped with low-NO_x staged/quenching (flue gas recirculating) burners with burner management systems.
- l. The heaters shall be tuned for thermal efficiency on an annual basis.
- m. The heaters are not expected to have GHG emissions in excess of the allowed emission rates during periods of startup, shutdown, or maintenance. The fuel firing rates will be below the maximum rate for normal operations.

2. Heater BACT Emission Limits

- a. On or after the date of initial startup, the Permittee shall not discharge or cause the discharge of emissions from the hot oil heater (EPN: F-07) in excess of 4.06 lbs CO₂/barrel (bbl - a barrel contains 42 gallons) of NGL processed on a 365-day rolling average. To determine achievement of this BACT emission limit, the Permittee shall divide the value of the measured input mass rate of CO₂ from the natural gas GCV analysis required in Special Condition II.B.1.e. by the measured daily natural gas liquids processed from the Train 5 unit (bbl) required in Special Condition IV.B.
- b. On or after the date of initial startup, the Permittee shall not discharge or cause the discharge of emissions from the hot oil heater (EPN: F-08) in excess of 4.06 lbs CO₂/barrel (bbl - a barrel contains 42 gallons) of NGL processed on a 365-day rolling average. To determine achievement of this BACT emission limit, the Permittee shall divide the value of the measured input mass rate of CO₂ from the natural gas GCV analysis required in Special Condition II.B.1.e. by the measured daily natural gas liquids processed from the Train 5 unit (bbl) required in Special Condition IV.B.

B. Requirements for Regenerative Thermal Oxidizer (EPNs: RTO-5 and EPN RTO5-MSS)

1. RTO Work Practice and Operational Requirements (EPN RTO-5)

- a. Targa will install a regenerative thermal oxidizer and the regenerative thermal oxidizer (EPN: RTO-5) may combust pipeline quality natural gas and waste gas vented from the amine unit. The RTO is the primary control device for the amine unit.
- b. The RTO-5 shall have an initial stack test, and annual compliance testing, to verify hydrocarbon destruction and removal efficiency (DRE) of at least 99.0%.
- c. For burner combustion, natural gas fuel usage during start up (scf) will be recorded using an operational non-resettable elapsed flow meter at the RTO.
- d. The flow rate of the waste gas combusted shall be measured and recorded using an operational non-resettable elapsed flow meter at RTO-5.
- e. Waste gas will be sampled and analyzed on a quarterly basis for composition. The sampled data will be used to calculate GHG emissions to show compliance with the limits specified in Table 1.
- f. Permittee shall calculate CO₂ emissions, on a monthly basis, using equation W-3 consistent with 40 CFR Part 98, Subpart W [98.233(d)(2)].
- g. Periodic maintenance will help maintain the efficiency of RTO-5 and shall be performed at a minimum annually or more often as recommended by the manufacturer specifications.

- h. MSS emissions from the RTO-5 startup shall be minimized through the implementation of good operational practices.
- i. The RTO shall not be out of service for maintenance no more than 152 hours per year.
- j. Records of each MSS activity shall be maintained to include the date, time, and duration of each MSS event.
- k. The Permittee shall maintain the RTO-5 firebox exit temperature at a minimum of 1,400 °F as required by the TCEQ minor NSR Permit No. 101616. Temperature monitoring of RTO-5 will ensure proper operation. The Permittee shall install and maintain a temperature recording device with an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^{\circ}\text{C}$.
- l. The RTO-5 exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes and record it at that frequency.
- m. The Permittee shall install and operate oxygen analyzers on the exhaust stack to continuously monitor and record oxygen concentration when waste gas is directed to RTO-5. Oxygen readings shall be reduced to an averaging period of 6 minutes or less and recorded at that frequency.
- n. A relative accuracy test audit (RATA) of the stack O₂ analyzer is required once every four quarters in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.1.
- o. The oxygen analyzers shall be quality-assured at least quarterly using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2.

C. Flare Emission Sources (EPN FLR-5 and EPN FLR5-MSS)

1. Flare Work Practice and Operational Requirements (EPNs: FLR-5 and FLR5-MSS)

- a. MSS emissions from Train 5 shall be vented to Flare-5 (EPN FLR-5).
- b. Flare-5 (EPN FLR-5) is an intermittent use flare used to control emissions from MSS activities, the Amine Unit during startup and RTO maintenance downtime, and the TEG Dehydrator during startup and upset conditions. The flare also combusts pilot gas as a continuous stream.
- c. Emissions due to the control of the Amine Unit are limited to 193 tpy CO₂e.
- d. The flare shall have a minimum destruction and removal efficiency (DRE) of 99% based on flowrate and gas composition measurements as specified in 40 CFR Part 98 Subpart W § 98.233(n).
- e. The flare shall be designed and operated in accordance with 40 CFR 60.18 including specifications of minimum heating value of the waste gas, maximum tip velocity, and pilot flame monitoring. An infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes.
- f. Flare header flow meter will measure flow at least once each 15 minutes. The flow meter shall be calibrated or certified at least biannually.
- g. The flare shall be equipped with a gas composition analyzer. The analyzer shall measure the gas composition at least once per hour and be calibrated monthly.
- h. The flow meter and analyzers used for flare compliance shall be operational at least 95% of the time when waste gases are directed to the flare for control.

- i. Permittee must record the time, date, HHV in MMBtu/hr and duration of each MSS event resulting in flaring. The records must include hourly CH₄ emission levels as measured by the in-line gas analyzer (Gas chromatograph or equivalent with volumetric stack gas flowrate) and the calculations based on the actual heat input for the CO₂, N₂O, and CH₄ emissions during each MSS event. Process knowledge and engineering calculations are acceptable if the in-line gas analyzer is not operational during the MSS event. These records must be kept for five years following the date of each event.
- j. CO₂ emissions are calculated using equation Y-1 found in 40 CFR Part 98 Subpart Y, §98.253(b)(1)(ii)(A). CH₄ and N₂O emissions are calculated using equations Y-4 and Y-5 as found in 40 CFR Part 98 Subpart Y.
- k. Compliance with the annual emission limit shall be determined on a 365-day total, rolled daily.

D. Fugitive Emission Sources (EPN FUG-FRAC-5)

1. Fugitive Emission Sources Work Practice and Operational Requirements

- a. The Permittee shall implement the TCEQ 28VHP Leak Detection and Repair (LDAR) program and shall conduct quarterly monitoring of flanges and connectors for fugitive emissions from streams containing greater than 10% methane by volume.
- b. The Permittee shall use dry compressor seals instead of wet seals to reduce leaks.
- c. The Permittee shall use rod packing for reciprocating compressors and will conduct annual inspections of the packing materials.
- d. The Permittee shall use low-bleed gas-driven pneumatic controllers which emit less gas or compressed air-driven pneumatic controllers which do not emit GHGs.

2. Emissions from MSS Activities to Atmosphere (EPN ATM-MSS)

- a. MSS emissions shall be minimized through the implementation of good operational practices.
- b. When possible, venting to the atmosphere shall occur only when the hydrocarbon concentration in process vessels is below 10,000 ppmv, as determined by a Lower Explosive Limit (LEL) meter or Organic Vapor Analyzer.
- c. Records of each MSS activity that results in direct venting of emissions to the atmosphere shall be maintained to include the date, time, and duration of each MSS event.
- d. For MSS emissions that are released to atmosphere, the Permittee shall also include a record of the hydrocarbon concentration as measured by the LEL meter or Organic Vapor Analyzer with the records required in III.D.2.c.

E. Continuous Emissions Monitoring Systems (CEMS)

1. As an alternative to Special Conditions III.A.2, Permittee may install a CO₂ CEMS and volumetric stack gas flow monitoring system with an automated data acquisition and handling system for measuring and recording CO₂ emissions discharged to the atmosphere, and use these values to show compliance with the annual emission limit in Table 1.
2. Permittee shall ensure that all required CO₂ monitoring system/equipment are installed and all certification tests are completed on or before the earlier of 90 unit operating days or 180 calendar days after the date the unit commences operation.

3. Permittee shall ensure compliance with the specifications and test procedures for CO₂ emission monitoring system at stationary sources, 40 CFR Part 75, or 40 CFR Part 60, Appendix B, Performance Specification numbers 1 through 9, as applicable.
4. Permittee shall meet the appropriate quality assurance requirements specified in 40 CFR Part 60, Appendix F for the CO₂ emission monitoring system.

IV. Recordkeeping Requirements

- A. In order to demonstrate compliance with the GHG emission rates, the Permittee will monitor the following parameters and summarize the data on a calendar month basis.
 - a. Operating hours for all air emission sources;
 - b. The natural gas fuel usage for all combustion sources, using continuous fuel flow monitors (a group of equipment can utilize a common fuel flow meter, as long as actual fuel usage is allocated to the individual equipment based upon actual operating hours and maximum firing rate);
 - c. Semi-annual fuel sampling for natural gas, quarterly fuel sampling of waste gas; and
 - d. The daily natural gas liquids processing rate for Train 5.
- B. Permittee shall maintain the daily production volumes of natural gas liquids fed to Train 5 in barrels per day (bbl/day). Records shall be maintained for a period of five years.
- C. Permittee will implement the TCEQ 28VHP leak detection and repair (LDAR) program and keep records of the monitoring results, as well as the repair and maintenance records.
- D. At least once per quarter, the Permittee will obtain an updated analysis of the waste gas from the amine unit. This analysis will be considered to be representative of the gas streams for the quarter during which it was taken and will be used to estimate the amine unit waste gas vent emissions, Higher Heating Value (HHV), and Lower Heating Value (LHV).
- E. Each day, the Permittee will calculate the 365-day rolling GHG facility emission limits for comparison to the facility emissions found in Table 1.
- F. The Permittee will also maintain site-specific procedures for best/optimum maintenance practices and vendor-recommended operating procedures and O&M manuals. These manuals must be maintained with the permit and located on-site.
- G. Permittee shall maintain a file of all records, data, measurements, reports, and documents related to the operation of the facility, including, but not limited to, the following: all records or reports pertaining to significant maintenance performed on any system or device at the facility; the occurrence and duration of any startup, shutdown, or malfunction, annual tuning of heaters; all records relating to performance tests and monitoring of combustion equipment; calibrations, checks, duration of any periods during which a monitoring device is inoperative, and corresponding emission measurements; and all other information required by this permit recorded in a permanent form suitable for inspection. The file must be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records.
- H. Permittee shall maintain records of the following for GHG emissions from the Equipment List (excluding fugitives): all records or reports pertaining to significant maintenance performed; duration of startup, shutdown; the initial startup period for the emission units;

malfunctions; all records relating to performance tests, calibrations, checks, and monitoring of combustion equipment; duration of an inoperative monitoring device and emission units with the required corresponding emission data; and all other information required by this permit recorded in a permanent form suitable for inspection. These records may be maintained in electronic databases. The Permittee shall provide the records upon request by the Agency or authorized representative.

- I. Records related to fugitive emissions must be maintained to meet the requirements of the TCEQ 28VHP LDAR Program. The Permittee shall provide the records upon request by the Agency or authorized representative.
- J. Permittee shall maintain records and submit a written report of all excess emissions to EPA semi-annually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator or authorized representative, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. The report is due on the 30th day following the end of each semi-annual period and shall include the following:
 1. Time intervals, data and magnitude of the excess emissions, the nature and cause (if known), corrective actions taken and preventive measures adopted;
 2. Applicable time and date of each period during which the monitoring equipment was inoperative (monitoring down-time);
 3. A statement in the report of a negative declaration; that is; a statement when no excess emissions occurred or when the monitoring equipment has not been inoperative, repaired or adjusted; and
 4. Any failure to conduct any required source testing, monitoring, or other compliance activities.
- K. Excess emissions shall be defined as any period in which the facility emission exceeds a maximum emission limit set forth in this permit.
- L. Excess emissions indicated by GHG emission source certification testing or compliance monitoring shall be considered violations of the applicable emission limit for the purpose of this permit.
- M. All records required by this PSD Permit shall be retained for not less than 5 years following the date of such measurements, maintenance, and reports.

V. Performance Testing Requirements

- A. The Permittee shall perform an initial stack test to establish the actual quantities of air contaminants being emitted into the atmosphere from emission units EPN F-07 and EPN F-08 and to determine the initial compliance with the CO₂ emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b for the concentration of CO₂ for the heaters.
 1. Multiply the CO₂ hourly average emission rate determined under maximum operating test conditions by 8,760 hours.
 2. If the above calculated CO₂ emission total does not exceed the tons per year (TPY) specified on Table 1, no compliance strategy needs to be developed.
 3. If the above calculated CO₂ emission total exceeds the tons per year (TPY) specified in Table 1, the facility shall;
 - a. Document the exceedance in the test report; and

- b. Explain within the report how the facility will assure compliance with the CO₂ emission limit listed in Table 1.
- B. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility, performance tests(s) must be conducted and a written report of the performance testing results furnished to the EPA. Additional sampling may be required by TCEQ or EPA.
- C. Permittee shall submit a performance test protocol to EPA no later than 30 days prior to the test to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol, and any changes required by EPA.
- D. Performance testing must be conducted using a representative rate of operation.
- E. Fuel sampling for emission units EPN F-07 and EPN F-08 shall be conducted in accordance with 40 CFR Part 98.
- F. The Permittee shall perform initial performance demonstration testing of the regenerative thermal oxidizer (RTO) at the site. The RTO shall operate at the maximum production rate during stack emissions testing. The Permittee shall measure CH₄ concentrations in the regenerative thermal oxidizer inlet and exhaust streams to demonstrate a minimum destruction efficiency of 99.0% by weight at a minimum combustion chamber temperature of 1,400 °F.
- G. The Permittee shall record the combustion chamber temperature and combustion chamber set-point temperature during the performance test. These and any additional operational parameters shall be identified in the test protocol and recorded during testing. Following the performance test, the RTO shall be operated at or above the combustion chamber set-point temperature used to demonstrate compliance, and at all times greater than 1,400 °F.
- H. For the RTO the sampling site and velocity traverse point shall be selected in accordance with EPA Test Method 1 or 1A. The gas volumetric flow rate shall be measured in accordance with EPA Test Method 2, 2A, 2C, 2D, 2F, 2G, or 19. The dry molecular weight shall be determined in accordance with EPA Test Method 3, 3A or 3B. The stack gas moisture shall be determined in accordance with EPA Test Method 4. These methods must be performed, as applicable, during each test run.
- I. Performance tests must be conducted under such conditions to ensure representative performance of the affected facility. The Permittee must make available to the EPA such records as may be necessary to determine the conditions of the performance tests.
- J. The Permittee must provide the EPA at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the EPA the opportunity to have an observer present and/or to attend a pre-test meeting. If there is a delay in the original test date, the facility must provide at least 7 days prior notice of the rescheduled date of the performance test.
- K. The Permittee shall provide, or cause to be provided, performance testing facilities as follows:
1. Sampling ports adequate for test methods applicable to this facility,
 2. Safe sampling platform(s),
 3. Safe access to sampling platform(s), and
 4. Utilities for sampling and testing equipment.

- L. Unless otherwise specified, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For purposes of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply.
- M. Emissions testing, as outlined above, shall be performed every three years, or more frequently if identified above, to verify continued performance at permitted emission limits.

VI. Agency Notifications

Permittee shall submit GHG permit applications, permit amendments, and other applicable permit information to:

Multimedia Planning and Permitting Division
EPA Region 6
1445 Ross Avenue (6PD-R)
Dallas, TX 75202
Email: Group R6AirPermits@EPA.gov

Permittee shall submit a copy of all compliance and enforcement correspondence as required by this Approval to Construct to:

Compliance Assurance and Enforcement Division
EPA Region 6
1445 Ross Avenue (6EN)
Dallas, TX 75202