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-903-GHG

PERMITTEE: BASF FINA Petrochemicals LP
State Hwy 366, Gate 99
Port Arthur, TX 77642

FACILITY NAME: BASF FINA Petrochemicals LP
NAFTA Region Olefins Complex

FACILITY LOCATION: State Hwy 366, Gate 99
Port Arthur, TX 77642

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 BASF FINA Petrochemicals LP for Greenhouse Gas (GHG) emissions. The Permit applies to the addition of a new ethylene cracking furnace and modifications to existing supporting units at their facility located in Port Arthur, Texas.

BASF is authorized to construct ethylene furnace 10 and modify existing units 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) PSD permit No. PSD-TX-903M5. Failure to comply with any condition or term set forth in this PSD Permit may result in enforcement action pursuant to Section 113 of the Clean Air Act (CAA). This PSD Permit does not relieve BASF 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)(3), this PSD Permit becomes effective immediately upon issuance of this final decision.

Carl E. Edlund, Director
Multimedia Planning and Permitting Division

08/24/12
Date

BASF FINA Petrochemicals LP (PSD-TX-903-GHG)
Prevention of Significant Deterioration Permit
For Greenhouse Gas Emissions
Final Permit Conditions

PROJECT DESCRIPTION

The proposed modification will add a 10th ethylene cracking furnace to the existing ethylene cracking train at the BASF FINA Petrochemicals LP (BFLP) Facility in Port Arthur, Texas. The 10th furnace will be capable of cracking multiple hydrocarbon feedstocks, but will be optimized to handle ethane gas. The energy required for cracking gaseous feedstocks is inherently less than that required for cracking liquids, such as naphtha, and thus the ethylene furnace will fire at a reduced rate while cracking gaseous feedstocks. The reduced rate will limit the amount of heat recovery and subsequent steam generation that would otherwise take place while the unit is cracking liquid feedstocks. The loss in heat recovery steam generation capacity under the gaseous operating mode will be supplemented by existing support facilities. For this reason, the permit also authorizes modifications to existing support facilities to provide steam needed to operate other plant equipment/processes while cracking gaseous feedstocks. The ethane feedstock will also increase the facility's production of hydrogen, a secondary product resulting from the ethylene cracking process. With this construction permit, BASF intends to increase the total production of ethylene at the BFLP facility to 2.87 billion pounds per year.

EQUIPMENT LIST

The following devices are subject to this GHG PSD permit.

Emission Unit Id. No.	EPN	Description
H-1000	N-16	Ethylene Cracking Furnace No. 10 (Combustion Unit). Unit has a maximum design heat input rate of 498 MMbtu/hr, is capable of combusting multiple fuels, and will be equipped with a Selective Catalytic Reduction (SCR) system.
B-7280 B-7290	N-24A N-24B	2 Steam Package Boilers (Combustion Units). Each unit has a maximum design heat input rate of 425.4 MMbtu/hr, and is equipped with Selective Catalytic Reduction (SCR) controls.
DB-1 DB-2	N-20A N-20B	2 Auxiliary Gas Turbine Duct Burners (Combustion Units). Each unit has a maximum design heat input rate of 310.4 MMbtu/hr, and is equipped with Selective Catalytic Reduction (SCR) controls.
D-1801	N-18	Decoking Drum (10th Furnace Operations Only)
P-FUG	F-1	Process Fugitives (10th Furnace Project Only)
HFC-FUG	F-5	HFC Containing Equipment, consisting of a new CEMS cabinet AC with a 22 ounce charge of R-422D, and 6 new 6-ton electrical equipment cooling units each with a 12 lb. charge of R-410A. (10th Furnace Project Only)

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 maintenance, Permittee shall, to the extent practicable, 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 and III of this permit.

2. In addition, Permittee shall notify EPA in writing within 10 days of any such failure described under Section I.D.1. of this permit. Within 10 days of the restoration of normal operations, Permittee shall provide a written supplement to the 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 of this permit, 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 this project in compliance with this PSD Permit, the application on which this permit is based, the TCEQ PSD Permit PSD-TX-903M5 (when issued) 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

AC	Air Conditioner
BACT	Best Available Control Technology
BFLP	BASF Fina Petrochemicals LP
CAA	Clean Air Act
CC	Carbon Content
CCS	Carbon Capture and Sequestration
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH_4	Methane
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
dscf	Dry Standard Cubic Foot
EF	Emission Factor
EPN	Emission Point Number
FR	Federal Register
GCV	Gross Calorific Value
GHG	Greenhouse Gas
gr	Grains
GWP	Global Warming Potential
HHV	High Heating Value
hr	Hour
HRSG	Heat Recovery Steam Generating
LAER	Lowest Achievable Emission Rate
lb	Pound
LDAR	Leak Detection and Repair
MMBtu	Million British Thermal Units
MSS	Maintenance, Start-up and Shutdown
N_2O	Nitrous Oxides
NSPS	New Source Performance Standards
OC	Oxidation Catalyst
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance and/or Quality Control
RATA	Relative Accuracy Test Audit
SCFH	Standard Cubic Feet per Hour
SCR	Selective Catalytic Reduction
HFC	Hydro Fluorocarbon
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPY	Tons per Year
USC	United States Code
VOC	Volatile Organic Compound

II. Annual Emission Limits

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

Table 1. Annual Emission Limits[1]

Unit ID	EPN	Description	GHG Mass Basis		TPY CO_2e[2,3]	BACT Requirements
				TPY[2]		
H-1000	N-16	Ethylene Cracking Furnace	CO_2	255,735	256,914	Flue Gas Exhaust Temperature ≤ 309 °F. See permit condition III.B.1.j.
			CH_4	14.2		
			N_2O	2.8		
B-7280 and B-7290	N-24A N-24B	2 Steam Package Boilers[4]	CO_2	420,095	421,399	Minimum Thermal Efficiency of 77%. See permit condition III.B.2.h.
			CH_4	22.0		
			N_2O	4.4		
GTG1-DB	N-20A	Gas Turbine Auxiliary Duct Burner	CO_2	117,786	118,329	Minimum Thermal Efficiency of 60%. See permit condition III.B.3.g.
			CH_4	6.5		
			N_2O	1.3		
GTG2-DB	N-20B	Gas Turbine Auxiliary Duct Burner	CO_2	117,786	118,329	Minimum Thermal Efficiency of 60%. See permit condition III.B.3.g.
			CH_4	6.5		
			N_2O	1.3		
D-1801	N-18	10th Furnace Decoking Drum Operations	CO_2	571	571	Proper furnace design and operation. See permit conditions III.B.1.f.
P-FUG	F-1	Fugitive Process Emissions	CH_4	Not Applicable	Not Applicable	Implementation of LDAR Program. See permit condition III.B.4.a.
Totals			**CO_2**	**911,451**	**CO_2e 915,542**	
			CH_4	**49**		
			N_2O	**10**		

1. Compliance with the annual emission limits (tons per year) is based on a 365-day total, rolled daily.
2. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions only from the facility during all operations and include MSS activities.
3. Global Warming Potentials (GWP): $CH_4 = 21$, $N_2O = 310$
4. The steam package boilers have a combined annual refinery fuel gas (RFG) firing limit equivalent to one boiler firing RFG at capacity for 8,760 hrs per year.

III. SPECIAL PERMIT CONDITIONS

A. Fuel Use Conditions, Monitoring, and Recordkeeping

Table 2. Permitted Fuel Types and Average Parameters[1]

Fuel ID	Description	HHV (btu/scf)[2]	CO_2 EF (lb/MMbtu)[2]	Carbon Content (CC) (kg C / kg of fuel)[2]
1	Pipeline Quality Natural Gas (NG)	1020	115.93	0.7267
2	Low Pressure Fuel Gas (LPFG)	979	105.59	0.7262
3	High Pressure Fuel Gas (HPFG)	1023	119.09	0.7267
4	Refinery Fuel Gas (RFG)[3]	1180	133.20	0.7393
5	FCCU Supply Fuel Gas (FCCU SFG)[3]	1165	130.27	0.7131
6	FCCU Return Fuel Gas (FCCU RFG)[3]	900	115.12	0.5966
7	High Hydrogen Fuel (HHF)	373	24.89	0.2818

1. These average parameters are descriptive only, and are not enforceable parameters.
2. CC and HHV will be calculated according to equation C-2b as specified in 40 CFR Part 98 Subpart C §98.33(a)(2)(ii)(A).
3. Fuel supplied from adjacent TOTAL refinery.

Table 3. Combustion Unit Fuel Restrictions and Heat Input Limits

Unit ID	Unit Description	Allowable Fuels (ID)[1]	Annual Average Firing Rate (MMbtu/hr)[2]
N-16	Ethylene Cracking Furnace	1, 2, 3, 7	490.69[3]
N-24A N-24B	Steam Package Boilers	1, 2, 3, 4, 5, 6, 7	380[4]
N-20A N-20B	Gas Turbine Auxiliary Duct Burners	1, 2, 3, 7	226[5]

1. Fuel ID numbers are from Table 1.
2. Maximum firing rates based on the units design capacity. Rates shown are per unit.
3. Has a maximum hourly firing rate of 498 MMbtu/hr.
4. Has a maximum hourly firing rate of 425.4 MMBtu/hr.
5. Has a maximum hourly firing rate of 310.4 MMBtu/hr.

1. All fuel combustion units subject to the GHG limits contained in Table 1 shall be limited to combusting the individual or any combination of the specific fuels listed for each unit in Table 3.
2. Any of the hydrogen-rich product stream not slated to fulfill contract commitments shall be utilized to the maximum extent possible by the plant equipment as fuel to supplement operational Btu requirements.
3. All fuel combustion units identified in this permit shall have fuel metering for each individual fuel, either combusted alone or in combination with any other allowable fuels, and Permittee shall:

a. Measure and record the fuel flow rate using an operational non-resettable elapsed flow meter for fuel fired in ethylene cracking furnace (N-16) and standard flow meters for the steam package boilers (N-24A and N-24B) continuously.
b. Record the total fuel combusted for each type of authorized fuel monthly.
c. Conduct monthly fuel sampling and analysis for each fuel type combusted during the calendar month using an approved method identified at 40 CFR 98.244(b)(4). The analysis shall at a minimum allow for the determination of the fuels volumetric heat content, carbon content, and molecular composition. The profile shall be used to determine the fuel molecular weight.
d. The fuel gross calorific value [high heat value (HHV)], carbon content and, if applicable, molecular weight, shall be determined, at a minimum, semiannually by the procedures contained in 40 CFR Part 98.34(b)(3). Records of the fuel gross calorific value shall be maintained for a minimum period of five years. Upon request, Permittee shall provide a sample and/or analysis of the fuel that is fired in any unit covered by this permit at the time of the request, or shall allow a sample to be taken by EPA for analysis.
e. Pipeline Quality Natural Gas (Fuel ID 1) shall be exempt from this requirement (III.A.3.c.) provided Permittee receives and maintains monthly records of the vendor's analysis, and the data is of sufficient quality to yield further analysis as required above.
f. Permittee shall update monthly, and maintain a 12 month rolling total of the units firing rate to demonstrate compliance with the heat input limits established in Table 3. The annual (12-month total) heat input shall be calculated in accordance with equation 1.

Equation 1 - Heat Input (MMbtu) for units covered under Table 3:

$$\sum_{i=1}^{12}\sum_{j=1}^{k} FF_j * HHV_j * 10^{-6}$$

where:
- i = Start of 12 month rolling total period (current month, previous year)
- 12 = End of 12 month rolling total period (previous calendar month)
- j = Combusted fuel type (1 iteration for each fuel type combusted)
- k = Total number of fuels combusted during compliance month
- FF = Monthly fuel flow (scf) for fuel j
- HHV = High heating value (btu/scf) for fuel j

4. Combinations of unmetered individual fuel streams may also be fed to the combustion units identified in this permit provided each combined fuel stream is metered and analyzed as required for the individual fuel streams in condition III.A.3 of this permit.

B. Emission Unit Work Practice Standards, Operational Requirements, and Monitoring

1. Ethylene Cracking Furnace (N-16)

   a. Furnace 10 (N-16) is limited to an annual production rate of 420,000,000 pounds of ethylene. Compliance with this limit shall be demonstrated based on monthly production totals summed on a 12-month rolling basis.
   b. Compliance with the Annual Emission Limit shall be demonstrated on a rolling 12-month basis calculated in accordance with 40 CFR Part 98 Subpart C, equation C-5 for CO_2. CH_4 and N_2O emissions shall be calculated in accordance with 40 CFR Part 98 Subpart C §98.33(c) on a12-month rolling basis.
   c. Permittee shall maintain all production data, on a daily basis, to include: records of daily feedstock process rates (type of feedstock and the mass or volume of each feedstock processed) and daily ethylene production (mass basis).
   d. Permittee shall calibrate and perform preventative maintenance check of the fuel gas flow meters and document annually.
   e. Permittee shall perform preventative maintenance check of oxygen control analyzers and document quarterly.
   f. The furnace coils shall be decoked, using decoking drum (N-18), no more than 13 times on a 12 month rolling basis.
   g. One-hour maximum firing rates shall be recorded daily to demonstrate compliance with the maximum firing rate of 498 MMBtu/hr.
   h. The ethylene cracking furnace shall have an annual average firing rate, not to exceed, 490.69 MMBtu/hr.
   i. A rolling 12 month average and the one-hour maximum firing rates shall be calculated daily to demonstrate compliance with the firing rates in III.B.1.f.and III.B.1.g.
   j. Permittee shall continuously monitor and record the flue gas exhaust temperature hourly and limit the temperature to less than or equal to 309 °F on a 365-day rolling average basis.

2. Steam Package Boilers (N-24A and N-24B)

   a. Permittee shall calibrate and perform preventative maintenance check of the fuel gas flow meters and document annually.
   b. Permittee shall perform a preventative maintenance check of oxygen control analyzers and document quarterly.
   c. Permittee shall perform boiler burner tune-ups at a minimum of annually.
   d. The two steam package boilers are limited to firing refinery fuel gas (RFG) to no more than 8,760 hours per year for both combined.
   e. The maximum firing rate for the boilers shall not exceed 425.4 MMBtu/hr per unit.
   f. The boilers shall have an annual average firing rate, not to exceed, 380 MMBtu/hr per unit.
   g. A rolling 12 month average and the one-hour maximum firing rates shall be calculated daily to demonstrate compliance with the firing rates in III.B.2.e. and III.B.2.f.

h. The permittee shall maintain a minimum overall thermal efficiency of 77% on a 12-month rolling average basis, calculated monthly, for emission units N-24A and N-24B.
i. Thermal efficiency shall be calculated using the following equation:

$$Boiler\ Efficiency = \frac{(steam\ flow\ rate\ x\ steam\ enthalpy) - (feedwater\ flowrate\ x\ feedwater\ enthalpy)}{Fuel\ firing\ rate\ x\ Gross\ Calorific\ Value\ (GCV)} * 100$$

3. Gas Turbine Auxiliary Duct Burners (N-20A and N-20B)

a. Permittee shall calibrate and perform preventative maintenance check of the fuel gas flow meters and document annually.
b. Permittee shall perform annual tune-ups of duct burners to maintain optimal thermal efficiency.
c. Permittee shall continue operation of the existing condensate recovery, HRSG blowdown heat recovery, and economizers to maintain optimal thermal efficiency.
d. The maximum firing rate for the duct burners shall not exceed 310.4 MMBtu/hr per unit.
e. The duct burners shall have an annual average firing rate, not to exceed, 226 MMBtu/hr per unit.
f. A rolling 12 month average and the one-hour maximum firing rates shall be calculated daily to demonstrate compliance with the firing rates in III.B.3.d. and III.B.3.e.
g. The permittee shall maintain a minimum overall thermal efficiency of 60% on a 12-month rolling average basis, calculated monthly, for emission units N-20A and N-20B.
h. Efficiency will be demonstrated by the following equation:

$$Unit\ Efficiency = \frac{Heat\ Content\ of\ Steam\ Produced + Heat\ Content\ of\ Power\ Produced}{Heat\ Content\ of\ Fuel\ Supply} * 100$$

4. Process Fugitives (F-1)

a. The permittee shall implement the TCEQ 28LAER leak detection and repair (LDAR) program for fugitive emissions of methane.

5. HFC - Fugitive Emission Sources

a. All HFC equipment identified and associated with the 10th furnace project shall be serviced by qualified technicians meeting the requirements of section 608 under the CAA.
b. All service records shall be maintained in accordance with the requirements under section III in this PSD permit.
c. Release of HFCs will be considered a malfunction or emergency event. Releases due to a malfunction are not authorized by this permit.

C. Continuous Emissions Monitoring System (CEMS)

1. As an alternative to Special Condition III.B.1. i, III.B.2.h, or III.B.3.g, permittee may install a CO_2 CEMS and volumetric stack gas flow monitoring system with an automated data acquisition and handling system for measuring and recording CO_2 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 CO_2 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 CO_2 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 CO_2 emission monitoring system.

IV. Recordkeeping

A. Records

1. In order to demonstrate compliance with the GHG emission limits in Table 1, 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. Records of the fuel type, from Table 2, consumed by each source
    c. The 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);
    d. Semi-annual fuel sampling for natural gas, daily fuel sampling of process gas; daily for blends of fuels, or other frequencies as allowed by 40 CFR Part 98 Subpart C §98.34(b)(3);
    e. The hourly ethylene processing rate; and
    f. Records of decoking cycle times in hours and frequency.

2. Permittee shall implement the TCEQ 28LAER leak detection and repair (LDAR) program and keep records of the monitoring results, as well as the repair and maintenance records.
3. Permittee shall maintain a file of all records, data, measurements, reports, and documents related to the operation of the facilities authorized by this permit, including, but not limited to, the following: all records or reports pertaining to significant maintenance performed on any system or device that is a part of a facility authorized by this permit; all records relating to performance tests and monitoring of combustion equipment; 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.
4. Permittee shall maintain records for 5 years that include the following: the occurrence and duration of any startup, shutdown, or malfunction, initial startup period for the emission units, performance testing, calibrations, checks, duration of any periods during which a monitoring device is inoperative, and corresponding emission measurements.
5. Permittee shall maintain records of all GHG emission units and CO_2 emission certification tests and monitoring and compliance information required by this permit.
6. 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:

    a. Time intervals, data and magnitude of the excess emissions, the nature and cause (if known), corrective actions taken and preventive measures adopted;
    b. Applicable time and date of each period during which the monitoring equipment

was inoperative (monitoring down-time);

c. 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
d. Any failure to conduct any required source testing, monitoring, or other compliance activities.

7. Excess emissions shall be defined as any period in which the facility emissions exceed a maximum emission limit set forth in this permit.
8. 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.
9. All records required by this PSD Permit shall be retained for not less than 5 years following the date of such measurements, maintenance, and reporting.

V. Initial Performance Testing Requirements:

A. The Permittee shall perform stack sampling and other testing to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the stacks of the Ethylene Cracking Furnace (EPN N-16), the Cogeneration Trains (EPNS N-20A and N-20B), and the Boilers B-7280 and B-7290 (EPNs N-24A and N-24B) for pollutants covered as required by the TCEQ issued PSD permit. Sampling and analysis for CO_2 shall be conducted during this testing, in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b, for CO_2 .

B. The Permittee shall also conduct an evaluation of the thermal efficiency of the Ethylene Cracking Furnace (N-16), the Cogeneration Trains (N-20A and N-20B), and the Boilers B-7280 and B-7290 (N-24A and N-24B) to verify compliance with minimum thermal efficiency requirements at III.B.1.i, III.B.2.h, and III.B.3.g. when performing testing as stated in V.A. above.

C. The results of the thermal efficiency evaluation shall be submitted to the EPA within 30 days of testing.

VI. Agency Notifications

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

Multi Media Planning and Permitting Division
EPA Region 6
1445 Ross Avenue (6 PD-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 and Enforcement Division
EPA Region 6
1445 Ross Avenue (6EN)
Dallas, TX 75202