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-1304-GHG
PERMITTEE:	Cheniere Corpus Christi Pipeline, L.P. 700 Milam Street, Suite 800 Houston, TX 77002
FACILITY NAME:	Cheniere Corpus Christi Pipeline, L.P. Sinton Compressor Station
FACILITY LOCATION:	3 miles north of Sinton, Texas Via U.S. Hwy 77 and Edwards Road Sinton, TX 78387

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 Cheniere Corpus Christi Pipeline, L.P. (CCCP) for Greenhouse Gas (GHG) emissions. The Permit authorizes the construction of the Sinton Compressor Station, located in San Patricio County, Texas, approximately 3 miles northeast of the city of Sinton.

CCCP is authorized to construct the Sinton Compressor Station 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 PSD-TX-1304. 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 CCCP 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 — Date
Multimedia Planning and Permitting Division

Cheniere Corpus Christi Pipeline, L.P. (PSD-TX-1304-GHG)
Prevention of Significant Deterioration Permit
For Greenhouse Gas Emissions
Draft Permit Conditions

PROJECT DESCRIPTION

Pursuant to the conditions of this permit, CCCP will construct the Sinton Compressor Station to serve its Corpus Christi Pipeline which will interconnect five inter- and intrastate pipelines. The compressor station is designed for an annual average throughput capacity of 2.0 billion cubic feet (ft^3)/day. Natural gas will be conveyed to the compressor station via the interconnecting pipelines. Condensate will be separated and stored in an onsite storage tank for eventual removal/disposal. Two natural gas-fired turbines will compress the gas for onward transport throughout the Corpus Christi Pipeline. The compressed natural gas will pass through cooling units before discharge into the pipeline. Suction and discharge blowdown stacks, as well as unit blowdown stacks will be constructed for use in the event of process upsets. Additionally, the facility will house an emergency generator. GHG emissions will be primarily generated as a result of combustion in the turbines and the emergency generator.

EQUIPMENT LIST

The following devices are subject to this GHG PSD permit:

Emission Unit Id. No.	Description
EQT001	Unit A Blowdown Stack
EQT002	Unit B Blowdown Stack
EQT003	Station Suction Blowdown Stack
EQT004	Station Discharge Blowdown Stack
EQT005	Emergency Generator Engine
EQT006	Combustion Turbine Unit A
EQT007	Combustion Turbine Unit B
FUG01	Fugitive Emissions

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
bbl	Barrel
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_2e	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_2O	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
SCFH	Standard Cubic Feet per Hour
SCR	Selective Catalytic Reduction
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TO	Thermal Oxidizer
TPY	Tons per Year
USC	United States Code
VRU	Vapor Recovery Unit
WHRU	Waste Heat Recovery Unit

II. Annual Facility Emission Limits

Annual emissions, in tons per year (TPY) on a 12-month rolling total, shall not exceed the following:

Table 1. Facility Emission Limits[1]

EPN	FIN	Description	GHG Mass Basis		TPY CO_2e[2,3]	BACT Requirements
				TPY[2]		
EQT006	SCPLC1	Combustion Turbine Unit A	CO_2	83,644	83,721	1.18 lb CO_2/hp-hr for each turbine on a 12-month rolling average. See permit conditions III.A.2.
			CH_4	1.41		
			N_2O	0.14		
EQT007	SCPLC2	Combustion Turbine Unit B	CO_2	83,644	83,721	
			CH_4	1.41		
			N_2O	0.14		
EQT001	SCBDS1	Unit A Blowdown Stack	CO_2	1.26	1,145	Seal gas booster system; use of blowdown gas as fuel in turbines. See permit conditions III.A.3.
			CH_4	45.76		
EQT002	SCBDS2	Unit B Blowdown Stack	CO_2	1.26	1,145	
			CH_4	45.76		
EQT003	SSBDS	Station Suction Blowdown Stack	CO_2	2.26	2,062	
			CH_4	82.4		
EQT004	SDBDS	Station Discharge Blowdown Stack	CO_2	3.4	3,101	
			CH_4	123.91		
EQT005	SCGEN1	Emergency Generator	CO_2	57	57	Good combustion practices, 100 hrs/yr non-emergency use, and use of pipeline quality natural gas See permit condition III.A.4.
			CH_4	No Numerical Limit Established[4]		
			N_2O	No Numerical Limit Established[4]		
FUG01	SCFUG01	Fugitive Emissions	CH_4	No Numerical Limit Established[5]	No Numerical Limit Established[5]	Implementation of enhanced LDAR program See permit condition III.A.5.
Totals[6]			**CO_2**	**167,535**	**CO_2e 175,134**	
			CH_4	**308**		
			N_2O	**0.28**		

1. Compliance with the annual emission limits (tons per year) is based on a 12-month rolling total.
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): CH_4 = 25, N_2O = 298
4. The emissions are less than 0.01 TPY with appropriate rounding. The emission limit will be a design/work practice standard as specified in the permit.
5. Fugitive process emissions from EPN FUG01 are estimated to be 7.29 TPY of CH_4, and 182 TPY CO_2e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.
6. The total emissions for CH_4 and CO_2e include the PTE for process fugitive emissions of CH_4. These totals are given for informational purposes only and do not constitute emission limits.

III. Special Permit Conditions

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

1. Combustion Turbines (EPNs: EQT006 and EQT007)

a. The Permittee shall install two (2) 15.5 MW natural gas-fired turbines or their equivalent.
b. The Permittee shall implement good combustion practices, including annual tune-ups and preventive maintenance per manufacturer's recommendations.
c. The turbines shall combust 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), and gas recovered from the blowdown stacks.
d. The turbines shall have fuel metering for each fuel, and Permittee shall:
    i. Measure and record the fuel flow rate using an operational non-resettable elapsed flow meter or by recording the flow rate data in an electronic format with individual flow measurements being taken no less frequently than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping purposes.
    ii. Record the total fuel combusted for each fuel monthly.
    iii. 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 Section 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 combustion turbines or shall allow a sample to be taken by EPA for analysis.
    iv. The fuel flow of the fuel fired in the combustion turbines shall be continuously monitored and recorded.
e. Permittee shall calibrate and perform preventative maintenance check of the fuel gas flow meters and document annually.
f. All analyzers identified in this section III.A.1. shall achieve 95% on-stream time or greater.

2. BACT Limits for Turbines (EPNs: EQT006 and EQT007)

a. On or after initial startup, the Permittee shall not discharge or cause the discharge of emissions in excess of 1.18 lbs CO_2e/hp-hr, from <u>each</u> turbine, based on a 12-month rolling average.
b. Permittee shall calculate, on a monthly basis, the amount of CO_2 emitted from combustion in tons/yr using equation C-2a in 40 CFR Part 98 Subpart C, converted to short tons. Compliance shall be based on a 12-month rolling basis to be updated by the last day of the following month.
c. Permittee shall calculate the CH_4 and N_2O emissions on a 12-month rolling basis to be updated by the last day of the following month. 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, converted to short tons.

d. Permittee shall calculate the CO_2e emissions on a 12-month 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 November 29, 2013 (78 FR 71904). The record shall be updated by the last day of the following month.

3. Blowdown Stacks (EPNs: EQT001, EQT002, EQT003, and EQT004)

a. The compressor station will be equipped with four blowdown stacks: Unit A blowdown stack, Unit B blowdown stack, the station suction blowdown stack, and the station discharge blowdown stack. The station shall be equipped with a seal gas booster system in order to reduce the use of the blowdown stacks.
b. The compressor station shall be required to burn potential blowdown gas as fuel in the combustion turbines.
c. CCCP shall maintain a record of each system upset which results in the blowdown stacks being used, as well as the amount of GHG vented to the atmosphere. CO_2e emissions shall be calculated using the global warming potentials in Table A-1 of 40 CFR Part 98.
d. The Permittee shall not discharge or cause the combined discharge of emissions from each of the blowdown stacks as follows:
    i. Unit A Blowdown Stack – 1,145 tons CO_2e/year – discharge limited to 180 minutes/year
    ii. Unit B Blowdown Stack – 1,145 tons CO_2e/year – discharge limited to 180 minutes/year
    iii. Station Suction Blowdown Stack – 2,062 tons CO_2e/year – discharge limited to 60 minutes/year
    iv. Station Discharge Blowdown Stack – 3,101 tons CO_2e/year – discharge limited to 60 minutes per year

4. Emergency Generator Engine (EPN: EQT005)

a. The emergency generator engine purchased will be certified to meet the applicable emission standards of 40 CFR 60.4205(b).
b. The engine shall be fired with 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).
c. The Permittee shall install a non-resettable hour meter prior to start-up of the engine.
d. The engine may be operated for the purpose of maintenance checks and readiness testing for up to 100 hours per year on a 365-day rolling total.
e. The Permittee shall implement good combustion practices, including annual tune-ups and preventive maintenance per manufacturer's recommendations.

f. The Permittee shall maintain records of engine maintenance, tune-ups, as well as run times.
g. On or after initial startup, the Permittee shall not discharge or cause the discharge of emissions in excess of 57 tons CO_2e/year, based on a 12-month rolling average.
h. Permittee shall calculate, on a monthly basis, the amount of CO_2 emitted from combustion in tons/yr using equation C-2a in 40 CFR Part 98 Subpart C, converted to short tons. Compliance shall be based on a 12-month rolling basis to be updated by the last day of the following month.
i. Permittee shall calculate the CH_4 and N_2O emissions on a 12-month rolling basis to be updated by the last day of the following month. Permittee shall determine compliance with the CH_4 and N_2O emission 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, converted to short tons.
j. Permittee shall calculate the CO_2e emissions on a 12-month 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). The record shall be updated by the last day of the following month

5. Fugitive Emission Sources (EPN: FUG01)

a. The Permittee shall implement the TCEQ 28VHP Leak Detection and Repair (LDAR) program for fugitive emissions, and shall conduct quarterly monitoring of flanges and connectors.
b. The Permittee shall implement an as-observed AVO program to monitor for fugitive emissions between instrumented monitoring as required in III.A.5.a above.
c. The Permittee shall conduct monitoring for fugitive methane emissions on all flanges and connections using infrared sensing technology on an annual basis.

B. Continuous Emissions Monitoring Systems (CEMS)

A. As an alternative to Special Conditions III.A.2.b., 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.
B. 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.
C. Permittee shall ensure compliance with the specifications and test procedures for CO_2 emission monitoring systems at stationary sources, 40 CFR Part 75, or 40 CFR Part 60, Appendix B, Performance Specification numbers 1 through 9, as applicable.
D. 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 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.
   1. Operating hours for all air emission sources;
   2. 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);
   3. Annual fuel sampling for natural gas.
   4. The daily throughput of natural gas.

B. Permitee 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.

C. For each calendar month, the Permittee will calculate the 12-month rolling GHG emission rates for comparison to the Maximum Allowable Emission Rates Table (MAERT).

D. 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.

E. 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 combustion turbines and generator; 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.

F. 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.

G. Excess emissions shall be defined as any period in which the facility emission exceeds a maximum emission limit set forth in this permit. Emissions that exceed the limits established for blowdown events must also be reported.

H. 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.

I. 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 holder of this permit shall perform an initial stack test to establish the actual quantities of air contaminants being emitted into the atmosphere from emission units EQT006 and EQT007 to determine the initial compliance with the CO_2 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 CO_2 for the combustion turbines.

1. Multiply the CO_2 hourly average emission rate determined under maximum operating test conditions by 8,760 hours.
2. If the above calculated CO_2 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 CO_2 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 CO_2 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. Performance tests must be conducted under such conditions to ensure representative performance of the affected facility. The owner or operator must make available to the EPA such records as may be necessary to determine the conditions of the performance tests.

F. The owner or operator 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.

G. The owner or operator 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.

H. 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.

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