

US EPA ARCHIVE DOCUMENT

Response to Margin Comments

Draft

Prevention of Significant Deterioration Permit for Greenhouse Gas Emissions

Freeport LNG Liquefaction Project

Freeport LNG Development, L.P

August 15, 2013

The following is provided to address comments embedded in the initial draft Greenhouse Gas Permit (Margin Comments) and are intended to provide additional information or clarification to support the draft permit. The comment numbers shown below correspond to the numbers as shown in the Draft Permit document provided by the EPA on 31 July 2013.

Page 1 - Permit Number: PSD-TX-1302 -GHG

Margin Comment [AW1]: Getting 2 PSD permits from TCEQ - Other is #1282; This one is for the pretreatment facility

Freeport LNG Response:

The proposed permit number “PSD-TX-1302-GHG” corresponds to the proposed permit number “PSD-TX-1302” for the proposed Pretreatment Facility. However, as discussed in the Statement of Basis (SOB), the proposed GHG PSD permit for the Freeport LNG Liquefaction Project applies to the construction of a natural gas liquefaction plant contiguous to Freeport LNG’s existing Liquefied Natural Gas Terminal facility on Quintana Island and a natural gas pretreatment facility to be located approximately six 3.5 miles from the Quintana Island Terminal, both in Brazoria County, Texas. The corresponding Texas Commission on Environmental Quality (TCEQ) permits are PSD permit No. PSD-TX-1302 and Nonattainment New Source Review (NNSR) permit No. N170 for the pretreatment facility and permit No. PSD-TX-1282 and N150 for the liquefaction plant.

Page 8, Table 1, Margin Comment [AW3]: Get in Gross?

Freeport LNG Response:

For the Combustion Turbine, Freeport LNG is proposing an output-based CO₂ limit based on equivalent useful energy produced of 738 pounds CO₂ per megawatt-hour. This is based on an adjusted Gross CT Energy Heat Rate with consideration of equivalent energy produced for the CT of 5,210 Btu per kilowatt-hour (Btu/kWh) after allowances for initial and long-term degradation in equipment performance.

Page 14, Item B.1.a. Margin Comment [AW4]: Should we get based on gross?

Freeport LNG Response:

See previous comment.

Page 14, Item B.1.d. Margin Comment [AW6]: Is net or gross going to be more appropriate?

Freeport LNG Response:

See previous comment.

Page 17, Margin Comment [AW7]: 85 is stated as max on page 5-5 of the application

Freeport LNG Response:

As discussed in the Update to the Application for Prevention of Significant Deterioration (PSD) Permit for Greenhouse Gas Emissions submitted to the EPA by letter dated 5 April 2013, instead of the ten process heaters, Freeport is proposing the use of five process heaters (EPNs: 65B-81A, 65B-81B, 65B-81C, 65B-81D, and 65B-81E), each with a maximum heat input capacity of 130 MMBtu/hr.

Page 18, Margin Comment [AW8]: They have 5 MMBtu/hr in the application, but not sure if that is based on natural gas or waste gas.

Freeport LNG Response:

The Regenerative Thermal Oxidizer combustion burner will have a maximum heat input capacity of 5 MMBtu/hr when fired with natural gas, BOG or a natural gas/BOG blend.

Page 19, Margin Comment [AW9]: Check with company for technical basis

Freeport LNG Response:

Per the vendor providing information for an RTO that is representative of the one contemplated for this project, a temperature of about 1525 °F is required to achieve a DRE of 99% for VOC.

Page 21, Margin Comment [CSV12] Is there a corresponding heat input rating? Not sure that the heat input limits are needed for any of the engines, since you have limits on hours of operation, but since you have them for the others...

Freeport LNG Response:

The Emergency Generator Engine, LIQEG-6, will have a rated capacity of 400 hp which converts to a heat input capacity of 2.80 MMBtu/hr. This information was provided in Attachment 6, Page 6, Updated Emission Summary Tables, submitted to the EPA by letter dated of the 5 April 2013. However, the MMBtu/hr value shown in the permit application for each engine is based on the rated horsepower converted using an average factor from AP-42. The actual brake-specific fuel consumption factor may vary with each engine. Thus, the use of a MMBtu/hr heat input limitation is not appropriate.

Page 21, Margin Comment [CSV13]: Is there any frequency associated with this – any requirement to document corrective action taken if leaks are discovered?

Freeport LNG Response:

Freeport proposes to conduct an inspection by Audio/Visual/Olfactory means at least monthly by operating personnel walk-through. Per the TCEQ's 28MID Leak Detection and Repair Program, the results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected. However, Freeport LNG will keep maintain records of Audio/Visual/Olfactory checks conducted.