

US EPA ARCHIVE DOCUMENT

**From:** [Andrew Chartrand](#)  
**To:** [Wilson, Aimee](#)  
**Cc:** [David.Ayers@cheniere.com](mailto:David.Ayers@cheniere.com)  
**Subject:** RE: BACT Limit for Turbines CCL  
**Date:** Friday, May 24, 2013 11:54:02 AM

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Aimee,

Below is a response to your questions from this e-mail:

**Comment:** In the supplement dated March 22, 2013, for Comment 2, it is stated that the BACT limit proposed was consistent with the limits in other approved permits. What permits were used for comparison?

***Response:** CCL reviewed several permits on the EPA website, which are identified in the table below, to determine that the proposed BACT limit in CCL's application was consistent with other permits. In some cases, the approved BACT limits were provided in different units; CCL has provided the equivalent limit in tons of CO<sub>2</sub>/MMBtu to compare to the proposed BACT limit of 0.058 tons of CO<sub>2</sub>/MMBtu for the turbines.*

<b>Permit</b>	<b>BACT Limit</b>	<b>Equivalent BACT Limit</b>
Copano Processing, LP – Houston Central Gas Plant	0.84 lb CO <sub>2</sub> e/hp-hr	0.058 ton CO <sub>2</sub> /MMBtu
Energy Transfer Company – Jackson County Gas Plant	1871.7 lb CO <sub>2</sub> /MMscf (per plant)	0.058 ton CO <sub>2</sub> /MMBtu
PL Propylene LLC*	117 lb CO <sub>2</sub> /MMBtu	0.058 ton CO <sub>2</sub> /MMBtu

*\*PL Propylene LLC does not have a final permit issued. The draft permit was used for comparison.*

**Comment:** Since the ethylene turbines will have WHRU, would CCL be open to having a minimum thermal efficiency for those units?

***Response:** The WHRU's provide all of the heating required for the LNG Trains, which are based upon a design CO<sub>2</sub> inlet composition of 2.0 mole %. The actual CO<sub>2</sub> inlet composition is expected to vary significantly up to this limit, so the required heat load for the WHRU will vary correspondingly with the AGRU reboiler duty required to remove CO<sub>2</sub> from the natural gas. With such variable heat load requirements, monitoring thermal efficiency of the WHRU is not considered practical.*

Andrew J. Chartrand  
Cheniere Energy, Inc.  
700 Milam St., Suite 800  
Houston, TX 77002  
Phone: (713) 375-5429  
Fax: (713) 375-6429  
Cell: (832) 358-5535

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**From:** Wilson, Aimee [mailto:Wilson.Aimee@epa.gov]  
**Sent:** Thursday, May 02, 2013 12:20 PM  
**To:** Andrew Chartrand  
**Subject:** BACT Limit for Turbines CCL

Andrew,

In the supplement dated March 22, 2013, for Comment 2, it is stated that the BACT limit proposed was consistent with the limits in other approved permits. What permits were used for comparison? Also, since the ethylene turbines will have WHRU, would you be open to also having a minimum thermal efficiency for those units?

Thanks,  
Aimee

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