

# BAKER BOTTS LLP

98 SAN JACINTO BLVD.  
SUITE 1500  
AUSTIN, TEXAS  
78701-4078

TEL +1 512.322.2500  
FAX +1 512.322.2501  
BakerBotts.com

ABU DHABI	HOUSTON
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June 16, 2014

*Via E-Filing*

Ms. Bridget Bohac  
Chief Clerk (MC 105)  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

Derek R. McDonald  
TEL +1 512.322.2667  
FAX +1 512.322.8342  
derek.mcdonald@bakerbotts.com

Re: TCEQ Docket No. 2013-1191-AIR; SOAH Docket No. 582-13-5205;  
*Application of Corpus Christi Liquefaction LLC for Air Quality Permit Nos.  
105710 and PSD-TX-1306 for the Construction of a New Natural Gas  
Liquefaction and Export Terminal with Regasification Capabilities*

Dear Ms. Bohac:

Enclosed for filing in the above-referenced and numbered proceeding is Applicant  
Corpus Christi Liquefaction, LLC's Reply to Exceptions.

If you have any questions concerning this filing, please do not hesitate to call.

Sincerely,



Derek R. McDonald

Enclosure

cc: Honorable Tommy L. Broyles (*Via E-Filing*)  
Lisa Serrano (*Microsoft Word version via Email*)  
David Frederick (*Via Email and U.S. mail*)  
Nathan Matthews (*Via Email and U.S. mail*)  
Booker Harrison (*Via Email and U.S. mail*)  
Garrett Arthur (*Via Email*)

**SOAH DOCKET NO. 582-13-5205  
TCEQ DOCKET NO. 2013-1191-AIR**

<b>APPLICATION OF CORPUS CHRISTI</b>	§	<b>BEFORE THE STATE OFFICE</b>
<b>LIQUEFACTION, LLC FOR AIR</b>	§	
<b>QUALITY PERMIT NOS. 105710 AND</b>	§	
<b>PSD-TX-1306 FOR THE</b>	§	
<b>CONSTRUCTION OF A NEW</b>	§	<b>OF</b>
<b>NATURAL GAS LIQUEFACTION</b>	§	
<b>AND EXPORT TERMINAL WITH</b>	§	
<b>REGASIFICATION CAPABILITIES</b>	§	
	§	<b>ADMINISTRATIVE HEARINGS</b>

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**APPLICANT CORPUS CHRISTI LIQUEFACTION, LLC’S  
REPLY TO EXCEPTIONS**

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TO THE HONORABLE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

Applicant Corpus Christi Liquefaction, LLC (“CCL”) files this Reply to Exceptions and respectfully urges the Commission to deny the exceptions of the Sierra Club, grant the exceptions of CCL and the Executive Director (“ED”), and adopt the Order proposed by Administrative Law Judges (“ALJs”) Tommy L. Broyles and Kerrie Jo Qualtrough, subject to CCL’s and ED’s exceptions.

**I. Introduction**

On June 4, 2014, CCL, Sierra Club, and the ED each filed briefs and/or exceptions to the Proposal for Decision (“PFD”) and Order of the State Office of Administrative Hearings (“SOAH”). While CCL supports the exceptions of the ED, CCL urges the Commission to reject the Sierra Club’s general exceptions as the ALJs did when Sierra Club asserted these very same arguments at SOAH. Notably, Sierra Club does not except to any specific finding of fact or conclusion of law.

## II. CCL Supports the ED's Exceptions

As urged by both the ED and CCL, neither the arguments of Sierra Club's counsel nor Mr. Davidson's affidavit constitute record evidence. Therefore, any discussion, findings, or conclusions relating to whether Mr. Davidson is an affected person should be stricken from the PFD and order. *See* Tex. Gov't Code § 2001.141(c) ("Findings of fact may be based only on the evidence and on matters that are officially noticed").

In addition, the ED and CCL agree that "simply because a hearing requestor has a residence within the [Radius of Impact] does not, in and of itself, create a personal justiciable interest. Similarly, simply because a project's emissions are above a [Significant Impact Level] does not create a personal justiciable interest; rather, it would be an interest common to the general public." Executive Director's Exceptions and Proposed Revisions at 2. Any findings or conclusions suggesting otherwise should be stricken.

## III. Sierra Club Impermissibly Demands that TCEQ Redefine the Source

The ALJs properly rejected Sierra Club's allegations that the BACT review should have considered electric motors to replace CCL's proposed natural gas-fired turbines because "[t]his issue was clearly determined in *Blue Skies Alliance*." PFD at 28. Sierra Club makes no new arguments in its exceptions.

In *Blue Skies Alliance*, the Texas court of appeals concluded that "the BACT definition clearly provides that only those control technologies that can be **applied** to the **proposed** major source be considered in the BACT analysis." *Blue Skies Alliance v. TCEQ*, 283 S.W.3d 525, 535 (Tex. App.—Amarillo 2009, no pet.) (emphasis in original). All parties acknowledge that BACT does not require an applicant to redefine a proposed emissions source. Exceptions of Protestant Sierra Club at 3. Here, CCL chose the ConocoPhillips Optimized Cascade<sup>®</sup> Process and the associated natural gas-fired turbine sources to meet its fundamental

business objectives to operate a safe, reliable, efficient, and large-capacity liquefaction facility. Electric motors cannot be **applied to** CCL's natural gas-fired turbines; electric motors would replace those turbines. *See* Sierra Club's Closing Brief at 10 ("Replacing these turbines with electric motors would eliminate the primary source of emissions from the project"). For this reason, electric motors fail to meet *Blue Skies's* definition of BACT and need not have been considered in CCL's BACT analysis. PFD at 28-30; *see also* Applicant's Exceptions to Prefiled Testimony and Exhibits (Jan. 17, 2014); Order No. 7 (Jan. 30, 2014).

In addition, according to EPA, consideration of alternative production processes is usually not required during a BACT analysis because such alternatives generally constitute redefinition of source. Applicant's Ex. 204 at B.13-14 (NSR Workshop Manual) (noting that "[f]or example, applicants proposing to construct coal-fired electric generator, have not been required by EPA as part of a BACT analysis to consider building a natural-gas fired electric turbine although the turbine may be inherently less polluting per unit product"). CCL's expert confirmed that the definition of BACT "requires consideration of inherently lower-polluting production processes, but *only to the limited extent that those lower-polluting processes can be applied to the collection of pollutant-emitting activities proposed by the applicant.*" Applicant's Ex. 400 at 9:14-17 (C. Campbell) (emphasis added). Again, because electric motors would replace—not apply to—CCL's proposed turbines, CCL did not have to consider electric motors during its BACT review.

Further, the ALJs correctly note that *Desert Rock* and the other Environmental Appeals Board ("EAB") cases Sierra Club references are distinguishable from this case, in addition to being contrary to Commission precedent and Texas case law on this very point. PFD at 29-30. For instance, coal-fired power plants generally need not consider using integrated

gasification combined cycle (“IGCC”) technology. *In re: Desert Rock Energy Co. LLC*, PSD Appeal No. 08-03, 2009 WL 5326323 (E.P.A. Sept. 24, 2009). However, in *Desert Rock*, the facility *did* consider IGCC as part of its business objectives. As a result, the EAB concluded that it was proper in that case—and not a redefinition of the emissions source—to include IGCC in the facility’s BACT analysis.<sup>1</sup> *Id.* The analogy to *Desert Rock* is therefore inapplicable.

Sierra Club wrongfully characterizes the ALJs as supporting CCL’s chosen turbines based solely on a factual comparison between the refrigeration compression that could be provided by gas-fired turbines and electric motors. In fact, the record reflects that the specific LNG process and gas-fired turbines were carefully selected by CCL to provide the required safety, reliability, efficiency, and capacity. *See* PFD at 30-31. As Finding of Fact 189 provides:

The ConocoPhillips Optimized Cascade<sup>®</sup> Process was chosen for the CCL Project to accomplish several fundamental business objectives. CCL selected this process for many reasons, including: only this LNG process has a successful track record using aeroderivative gas-fired turbines, which are more fuel efficient than the industrial heavy-duty gas-fired turbines used in other processes; the design provides a wide range of production rates because of the 2+2+2 refrigerant compressor configuration (for example, CCL can run only half the compressors very efficiently if market demands require a temporary reduction in LNG production); during shutdowns of the ConocoPhillips Optimized Cascade<sup>®</sup> Process liquefaction trains, CCL can maintain the refrigerants in storage under pressure, without having to vent or flare; and CCL can take advantage of a standardized, proven "template" design developed by ConocoPhillips and CCL’s contractor Bechtel. This design has been well proven, fits the limited area available at the CCL Project Site, produces about 4.5 million tonnes of LNG per year (which matches CCL's marketing plans), reduces engineering, construction, and maintenance costs, and duplicates the design being used by CCL's affiliated company at the Sabine Pass Liquefaction (“SPL”) project (as well as at other similar plants currently operating and under construction outside the United States).

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<sup>1</sup> In its Closing Brief, Sierra Club cited two additional EAB cases, which were distinguished by CCL and the ALJs. *See* PFD at 29-30; CCL’s Reply Brief at 6, fn. 3 (Mar. 21, 2014).

CCL has never stated that electric motors satisfy CCL's business objectives or its proposed facility design because the CCL Project design is premised on the use of proven technology in the form of gas-fired turbines to drive the necessary refrigeration compressors. *See* PFD at 31 ("This evidence amply demonstrates that the gas-fired turbines are essential to meet CCL's fundamental purpose and basic design of its proposed Facility"). The use of electric motors to drive the refrigeration compressors in the ConocoPhillips Optimized Cascade<sup>®</sup> Process in existing or proposed liquefaction facilities is simply unprecedented. Applicant's Ex. 100 at 19 (A. Chartrand).

When undertaking the BACT analysis, the ED properly respected the proposed CCL Project, designed by CCL to include three ConocoPhillips Optimized Cascade<sup>®</sup> Process LNG liquefaction trains, each with six GE LM2500+G4 Single Annular Combustor ("SAC") turbines. *See* Finding of Fact 187 ("The starting point for CCL's case-specific BACT analysis was the gas-fired turbines it proposed based on its fundamental business objectives"). Critically, gas-fired turbines will provide CCL with a proven template design for powering CCL's chosen ConocoPhillips Optimized Cascade<sup>®</sup> Process LNG liquefaction trains. *See* Finding of Fact 189. Sierra Club's position, however, would require TCEQ not only to consider the use of electric motors with CCL's proposed design but other liquefaction processes that could accommodate electric motors. Exceptions of Protestant Sierra Club at 2 ("either using electric motors in conjunction with the proposed ConocoPhillips Optimized Cascade design *or using another facility design*") (emphasis added). The ALJs were never required to engage in such a potentially endless inquiry because the BACT review properly began with the project, as designed by CCL, which included the natural gas-fired turbines.<sup>2</sup> There is no disputed issue;

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<sup>2</sup> Sierra Club's proffered testimony related to electric motors was properly deemed irrelevant and therefore inadmissible. Order No. 7 (Jan. 30, 2014).

even Sierra Club admitted that electric motors would “replace” the gas-fired turbine emission sources proposed by CCL. Sierra Club’s Closing Brief at 10. Therefore, Sierra Club’s BACT argument fails.

#### **IV. 28VHP LDAR Represents BACT for Fugitive Emissions at the CCL Project**

Both the record and longstanding TCEQ experience and guidance fully support the ED’s determination that 28VHP LDAR represents BACT for fugitive emissions at the CCL Project. *See* PFD at 36-37 (discussing Mr. O’Brien’s testimony regarding the 28VHP LDAR program); Findings of Fact 227-230; Applicant’s Ex. 102 at CCL 00072 (Application); Executive Director’s Ex. ED-16 (TCEQ Guidance on Fugitives). But while the CCL Project is indisputably located in an attainment area, Sierra Club complains that TCEQ fails to require CCL to implement TCEQ’s nonattainment area LDAR program, 28-LAER, for fugitive emissions. As opposed to the extensive record support for the 28VHP LDAR program as BACT for the CCL Project, Sierra Club offers no evidence that the 28-LAER program is economically reasonable, technically feasible, would result in either a lower VOC emissions limitation, or would result in lower overall VOCs.<sup>3</sup>

Sierra Club also insists that CCL should have considered using only “leakless” components throughout the CCL Project. As the ALJs recognized, however, CCL minimized fugitive emissions sources wherever possible in its facility design. PFD at 36; Finding of Fact at 224-226; *see also* CCL’s Closing Brief at 21-25. Both the record and the PFD reflect that replacing every component with so-called “leakless” components would be technically infeasible as well as imprudent from a safety and maintenance perspective. PFD at 36; Finding of Fact

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<sup>3</sup> The ED’s witness Mr. Sean O’Brien noted that he was unsure whether lower leak detection requirements that could be imposed under a purportedly more stringent LDAR program would even result in lower overall emissions, and he noted that TCEQ guidance was developed with awareness of other EPA guidelines developed on LDAR, confirming that “[d]ata gathered from facilities making a first attempt at repair on valves with leaks above 100 or 200 ppm suggests that these attempts do not always reduce emissions.” 2 Tr. 196:20-23 (S. O’Brien); Applicant’s Cross Ex. 5 (EPA Summary of Comments and Responses on Performance Standards for VOCs from Equipment Leak Fugitives).

225. Even Sierra Club's own expert admitted that he was not aware of any "leakless" "relief valves," a component used extensively at the CCL Project. 2 Tr. 161:16-23 (W. Powers). CCL properly minimized potentially leaky components in its design process and, due to technical infeasibility, was not required to implement fully "leakless" components throughout the CCL Project as BACT. Findings of Fact 224-226.

**V. Conclusion**

For the reasons set forth above, Applicant Corpus Christi Liquefaction, LLC respectfully requests that the Commission grant its exceptions and those of the Executive Director, deny the exceptions of the Sierra Club, adopt the Order proposed by State Office of Administrative Hearings, subject to the granted exceptions, and issue Permit Nos. 105710 and PSD-TX-1306.

Respectfully submitted,

BAKER BOTTS L.L.P.

By:  \_\_\_\_\_  
Derek R. McDonald  
Bar No. 00786101  
derek.mcdonald@bakerbotts.com  
Carlos R. Romo  
Bar No. 24060518  
carlos.romo@bakerbotts.com  
Samia B. Rogers  
Bar No. 24088322  
98 San Jacinto Boulevard  
Suite 1500  
Austin, Texas 78701  
(512) 322-2500  
(512) 322-8342 Fax

ATTORNEYS FOR APPLICANT  
CORPUS CHRISTI LIQUEFACTION, LLC

**CERTIFICATE OF SERVICE**

I hereby certify that I have served a true and correct copy of the foregoing Applicant Corpus Christi Liquefaction, LLC's Reply to Exceptions on the following via email, hand delivery, and/or U.S. mail on this 16th day of June, 2014.

**SIERRA CLUB**

David Frederick  
Lowerre, Frederick, Perales, Allmon &  
Rockwell  
707 Rio Grande, Suite 200  
Austin, TX 78701  
Tel: 512-469-6000  
Fax: 512-482-9346  
Email: [dof@lf-lawfirm.com](mailto:dof@lf-lawfirm.com)

Nathan Matthews  
Sierra Club Environmental Law Program  
85 2nd Street, Second Floor  
San Francisco, CA 94105  
Tel: 415-977-5695  
Fax: 415-977-5793  
Email: [nathan.matthews@sierraclub.org](mailto:nathan.matthews@sierraclub.org)

**EXECUTIVE DIRECTOR OF THE TEXAS  
COMMISSION ON ENVIRONMENTAL  
QUALITY**

Booker Harrison  
Senior Attorney/Air  
Environmental Law Division (MC 173)  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087  
Tel: 512-239-4113  
Fax: 512-239-0606  
Email: [booker.harrison@tceq.texas.gov](mailto:booker.harrison@tceq.texas.gov)

**OFFICE OF PUBLIC INTEREST  
COUNSEL OF THE TEXAS  
COMMISSION ON ENVIRONMENTAL  
QUALITY**

Garrett Arthur  
Public Interest Counsel (MC 103)  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087  
Tel: 512-239-5757  
Fax: 512-239-6377  
Email: [garrett.arthur@tceq.texas.gov](mailto:garrett.arthur@tceq.texas.gov)



Derek R. McDonald