

**SOAH DOCKET NO. 582-09-2005
TCEQ DOCKET NO. 2009-0033-AIR**

APPLICATION OF LAS BRISAS	§	BEFORE THE STATE OFFICE
ENERGY CENTER, LLC	§	
FOR STATE AIR QUALITY PERMIT;	§	OF
NOS. 85013, HAP48, PAL41,	§	
AND PSD-TX-1138.	§	ADMINISTRATIVE HEARINGS

**APPLICANT LAS BRISAS ENERGY CENTER LLC'S
EXCEPTIONS TO THE ADMINISTRATIVE LAW JUDGES'
PROPOSAL FOR DECISION ON REMAND**

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TO THE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

COMES NOW Applicant Las Brisas Energy Center, LLC ("*Applicant*" or "*Las Brisas*") and, pursuant to 30 Tex. Admin. Code § 80.257(a), files these exceptions to the Administrative Law Judges' ("*ALJs*") Proposal for Decision ("*PFD*") On Remand in the above-captioned matter. The ALJs' finding that Applicant has not made the necessary compliance demonstration should be rejected. Because Las Brisas proved compliance with all legal and regulatory requirements, its permit application to construct the Las Brisas Energy Center ("*LBEC*") should be granted by the Texas Commission on Environmental Quality ("*TCEQ*" or "*Commission*").

I. ARGUMENT

A. **WHETHER THERE WILL BE ANY INCREASE IN PARTICULATE MATTER (PM) FROM OFF-SITE MATERIAL HANDLING SOURCES ABOVE WHAT WAS MODELED, OR IF THE ULTIMATE CONCLUSIONS FROM THE IMPACTS ANALYSIS WOULD BE UNCHANGED BY SECONDARY SOURCES.**¹

The ALJs mistakenly conclude, without discussion,² that there will be an increase in particulate matter (“*PM*”) emissions from off-site material handling sources above what was originally modeled by Applicant.³ Because the ALJs do not provide the basis of their conclusion, Applicant concludes that the ALJs have surmised that Applicant was required to demonstrate that there will not be any increase in PM emissions from any *individual source*, rather than collectively considering the overall emissions from off-site material handling sources.⁴ As set forth below, consideration of the basis for the Commission’s ordering provision reveals that the ALJs’ apparent interpretation is contrary to the intent of the provision.

A review of the briefing following the ALJs’ first PFD reveals that Ordering Provision 2(a) – “Whether there will be any increase in particulate matter (PM) from material handling sources above what was modeled, or if the ultimate conclusions from the impacts analysis would be unchanged by secondary sources” – was based on the theory Applicant espoused in its

¹ Ex. ED-48 at 2, ¶(2)(a).

² The ALJs summarize Applicant’s position, the Executive Director’s position, and Protestants’ position on this issue, but the ALJs later state their conclusion without engaging in a substantive discussion. *See* PFD at 5-7 for the parties’ positions; *see also* PFD at 39 for the ALJs’ conclusion.

³ *See* PFD at 39.

⁴ Applicant acknowledges that, as pointed out by the ALJs, both Mr. Jamieson and Mr. Hamilton testified that the mere existence of off-site material handling sources that were not included in the original modeling necessarily means that there will be an increase in emissions from those sources. *See* PFD at 16-17, 39; *see also* Trial Tr. at 2785:2-13 (Jamieson) and 3024:15-24 (Hamilton). However, as the ALJs explain, when making a legal determination, such as when determining the legal meaning of the Commission’s ordering provision, the opinions of Mr. Jamieson and Mr. Hamilton “are not afforded great weight as they are not legally trained” PFD at 22.

briefing following the initial hearing, specifically in Applicant’s Closing Argument and Response to Closing Arguments.⁵ At that stage, the Executive Director agreed with Applicant’s theory, stating in its Reply to Closing Arguments: “[T]he ED concurs that if there is no increase in particulate matter emissions from off-site material handling sources above what was modeled by the Applicant, or if the ultimate conclusions from the impacts analysis are unchanged, the permit should be issued.”⁶ Moreover, when recommending remand in its Exceptions to the PFD, the Executive Director acknowledged that the no emissions increase theory was Applicant’s own, explaining that “LBEC would meet its burden of proof on this issue” if, under “*LBEC’s underlying rationale . . . there will be no increase in PM emissions from off-site material handling sources above what was modeled, or if the ultimate conclusions from the impacts analysis are unchanged by secondary sources . . .*”⁷ Accordingly, the meaning of the Commission’s ordering provision should be gleaned from Applicant’s “underlying rationale.”

As explained by Applicant in its Response to Closing Arguments, its underlying rationale has always been that the cumulative allowable emissions modeled for the existing off-site material handling operations are sufficient to accommodate the LBEC’s off-site material handling needs. Specifically, Applicant’s theory has always been that “the modeled emissions from the [Port of Corpus Christi Authority (“*PCCA*”)] Dock 2 permit alone are more than sufficient to cover the . . . emissions necessary to accommodate the LBEC’s material handling

⁵ See Applicant’s Closing Argument at 20 (“In short, if no increase in particulate matter emissions from off-site material handling sources above what was modeled by Applicant is necessary, or if the ultimate conclusions from the impacts analysis are unchanged, the Permit should be issued.”); see also Applicant’s Response to Closing Arguments at 17-18 (“Therefore, if no increase in particulate matter emissions from off-site material handling sources above what was modeled by Applicant is necessary, or if the ultimate conclusions from the impacts analysis would be unaltered, the Permit should be issued.”).

⁶ Executive Director’s Reply to Closing Arguments at 3.

⁷ Executive Director’s Exceptions to the ALJs’ Proposal for Decision at 10 (emphasis added).

needs.”⁸ Accordingly, Applicant’s burden on remand was simply to demonstrate that the modeled emissions from PCCA Dock 2 are sufficient to cover the emissions necessary to accommodate the LBEC’s material handling needs. To satisfy this burden Applicant asked Mr. Ellis to “calculate total emissions from each of two possible material handling scenarios that PCCA may permit to serve LBEC and to evaluate whether the maximum allowable PM₁₀ emissions from the current PCCA Bulk Dock 2 permit in pounds per hour (7.85 lbs/hr when hourly emissions from stockpiles are considered) and tons per year (4.88 tons/yr) added to the PM₁₀ emissions contemplated in pounds per hour and tons per year from each of the two possible material handling scenarios total more than the 14.07 lbs/hr and 17.36 tons/yr modeled by Mr. Kupper in the original application modeling for the Bulk Dock 2 permit.”⁹ Mr. Ellis performed that evaluation and, in his prefiled testimony, concluded that “[i]n each of the two material handling scenarios, the maximum allowable PM₁₀ emissions from the current PCCA Bulk Dock 2 permit in pounds per hour and tons per year combined with the PM₁₀ emissions contemplated in pounds per hour and tons per year for each of the two possible material handling scenarios did not total more than 14.07 lbs/hr and 17.36 tons/yr in any one scenario.”¹⁰ Because Mr. Ellis’s conclusion has not been contested, it is undisputed that Applicant has proven that, pursuant to its “underlying rationale,” there will be no increase in PM emissions from off-site material handling sources above what was modeled. Accordingly, Applicant has met its burden

⁸ Applicant’s Response to Closing Arguments at 19.

⁹ Las Brisas Ex. 700 at 8:14-22 (Ellis).

¹⁰ Las Brisas Ex. 700 at 16:19-23 (Ellis)

of proof with respect to the Commission's first ordering provision and, in fact, has done so without relying on any modeling addressing potential secondary emissions.¹¹

B. REVIEW OF ADDITIONAL MODELING PERFORMED BY APPLICANT IN SUPPORT OF THE APPLICATION¹²

The issue of primary focus in this remand proceeding is analysis of the PM₁₀ 24-hour prevention of significant deterioration (“PSD”) increment (“*PM₁₀ 24-hour increment*”). With respect to the PM₁₀ 24-hour increment, Applicant is required to demonstrate that PM₁₀ emissions from proposed project sources will not cause or contribute to an exceedance of the PM₁₀ 24-hour increment of 30 µg/m³ at a time and place where the proposed project sources, i.e., the LBEC sources, are significant.¹³ Despite the Commission's Interim Order specifically compelling review of Applicant's modeling, and despite the fact that the Executive Director has concluded that the permit can issue,¹⁴ the ALJs mistakenly conclude that a substantial portion of

¹¹ Although Applicant's demonstration that there will be no increase in PM emissions from off-site material handling sources above what was modeled is sufficient, on its own, to address the first issue remanded by the Commission, Applicant has also proven, through modeling, that the ultimate conclusions from its PM₁₀ increment analysis – particularly that PM₁₀ emissions from proposed project sources will not cause or contribute to an exceedance of the PM₁₀ 24-hour increment of 30 µg/m³ at a time and place where the proposed project sources are significant – is unchanged by potential secondary emissions. *See* Las Brisas Ex. 700 at 18:10-17 (Ellis). Although the ALJs conclude that, as a factual matter, “the facility will meet applicable air quality standards if operated as proposed by LBEC[,]” they also claim that they are unable to reach this conclusion without relying on Mr. Jamieson's modeling in violation of Tex. Water Code § 5.228. *See* Cover Letter to PFD at 1; PFD at 39. Applicant's exceptions to the ALJs' conclusions regarding Mr. Jamieson's review of Applicant's modeling are addressed herein in Section I.B.

¹² Ex. ED-48 at 2, ¶(2)(b).

¹³ *See* Las Brisas Ex. 102 at 00045-47; *see also* Sierra Club Ex. 205 at C.52; *Order Regarding the Applications by NRG Texas Power LLC for State Air Quality Permit 79188, Prevention of Significant Deterioration Air Quality Permit PSD-TX-1072, and Hazardous Air Pollutant Major Source Permit No. HAP-14*; TCEQ Docket Nos. 2007-1820-AIR and 2008-1210-AIR; SOAH Docket Nos. 582-08-0861 and 581-08-4013 at 17-18 (Dec. 11, 2009) [hereinafter *NRG Order*] (It is clear from the Findings of Fact in the NRG Order that a project's PM₁₀ emissions only cause or contribute to an exceedance of the PM₁₀ 24-hour increment of 30 µg/m³ when the contribution from the project sources is greater than de minimis, or greater than the significance level.); 40 C.F.R. Part 51, Appendix W (2009).

¹⁴ *See* Trial Tr. at 3034:6-24 (Hamilton).

Mr. Jamieson's modeling review cannot be considered by the Commission under the theory that the Executive Director improperly assisted Applicant in meeting its burden of proof in violation of Texas Water Code § 5.228(e).¹⁵

As set forth by Applicant in previous filings, the ALJs' position is not only contrary to the Commission's Order, it is also counter to TCEQ's evidentiary rules.¹⁶ In fact, the very reason the Commission's Order included "[r]eview of additional modeling performed by Applicant in support of the Application" among the remanded items was the Executive Director's express position that verification of Applicant's modeling was required.¹⁷ Clearly, therefore, Mr. Jamieson's modeling audit is a review "that the executive director is required by statute or rule to perform."¹⁸ Furthermore, Mr. Jamieson's August 25, 2010 modeling audit memorandum, which was the second modeling audit memorandum issued for this project, is an "agency document determined by the Executive Director to be necessary to reflect the . . . technical review of the application."¹⁹ Accordingly, pursuant to 30 Tex. Admin. Code § 80.127(h), testimony concerning Mr. Jamieson's modeling audit and his August 25th audit memorandum "shall not constitute assistance to the permit applicant in meeting its burden of proof."

¹⁵ See Cover Letter to PFD at 1-2; *see also* PFD at 31-32.

¹⁶ See Applicant's Remand Closing Arguments at 15-18.

¹⁷ See Executive Director's Exceptions to PFD at 11 ("As stated in his reply to closing arguments, the ED did not have the opportunity to audit the revised modeling submitted during rebuttal. Because federal guidance requires the ED to verify the Applicant's modeling prior to issuance of the permit, it is appropriate to remand this portion of the application to allow evidence of the modeling audit.")

¹⁸ 30 TEX. ADMIN. CODE § 80.127(h).

¹⁹ 30 TEX. ADMIN. CODE § 80.118(a).

1. The PFD Does Not Analyze The Sequence Of Events In This Matter, Which Clearly Demonstrates That Mr. Jamieson’s Modeling Cannot Possibly Constitute Impermissible Assistance To Applicant.

The ALJs’ recommendation to the Commission overlooks the sequence of events in this matter, which clearly demonstrates that Mr. Jamieson’s modeling was conducted pursuant to a regulatory duty and, accordingly, that his modeling cannot constitute impermissible assistance to Applicant. The following timeline is instructive:

- **May 19, 2008:** Las Brisas filed its application with the TCEQ.²⁰
- **November 12, 2008:** Las Brisas submitted modeling in support of its original application.²¹
- **December 16, 2008:** The Air Dispersion Modeling Team (“*ADMT*”), prior to issuing a draft permit, issued its first audit memorandum *approving* Applicant’s modeling.²² This audit memorandum was initialed by Daniel Jamieson of the *ADMT*.²³
- **January 7, 2009:** The Executive Director issued the draft permit.²⁴
- **November 2, 2009:** The original hearing on the merits convened.
- **November 3, 2009:** Along with a litany of other complaints, Environmental Defense Fund (“*EDF*”) claimed that discrepancies existed in Applicant’s

²⁰ See Las Brisas Ex. 3. Las Brisas supplemented its application on October 3, October 29, November 12, November 24, December 11, December 19, December 29, and December 31, 2008 and January 5, 2009. See Las Brisas Exs. 4-6, 10, and 13-17.

²¹ See Las Brisas Ex. 7. Las Brisas supplemented its initial modeling on November 20, December 1, and December 8, 2008. See Las Brisas Exs. 8, 9, 11, and 12.

²² See Ex. ED-18.

²³ *Id.*

²⁴ See Las Brisas Ex. 27. The Executive Director revised the draft permit on June 11, 2009 as part of its response to public comments. See Las Brisas Ex. 31.

modeling.²⁵ Specifically, counsel for EDF, during cross-examination of Mr. Kupper, pointed to **three** off-site emission points, out of the hundreds that Applicant modeled, that were allegedly mislocated.²⁶

- **November 11, 2009:** Mr. Jamieson, on redirect, testified that the discrepancies noted by Protestants would *not* alter the ADMT’s position regarding the ultimate outcome²⁷ and that “it is common to see potential differences in the modeling” analyses submitted by applicants.²⁸
- **November 12, 2009:** Applicant introduced rebuttal modeling that remedied the allegedly²⁹ mislocated sources noted by EDF alone on cross-examination.³⁰
- **November 12, 2009:** The original evidentiary hearing on the merits concluded.
- **December 14, 2009:** The Executive Director asserted in its post-hearing briefing that Applicant’s “analysis complies with applicable federal guidance which allows the permitting agency, upon verification of the demonstration, to approve the permit” but that the Executive Director required additional time in order to verify Applicant’s rebuttal modeling.³¹

²⁵ See Trial Tr. at 414:25 to 440:12.

²⁶ See Trial Tr. at 414:25 to 440:12.

²⁷ See Trial Tr. at 2092:25 to 2098:11 (Jamieson) (testifying that, based on his experience, the discrepancies “would not change the overall results”).

²⁸ Trial Tr. at 2097:4-9 (Jamieson).

²⁹ The Applicant uses the term “allegedly” merely to indicate that the types of sources in discussion are mobile and their location can vary. When modeling a source whose location may change on a daily basis, such as a front-end loader, there are “any number of ways to model it.” Trial Tr. at 2934:13-19 (Jamieson).

³⁰ See Trial Tr. at 2167:19 to 2193:10, 2148:5 to 2151:2, and 2270:21 to 2271:18 (Kupper); Las Brisas Ex. 65.

³¹ See Executive Director’s Closing Argument at 5-6 (citing Ex. ED-4 at 284, “When a violation of any NAAQS or increment is predicted at one or more receptors in the impact area, the applicant can

- **February 1, 2010:** The record for the first hearing closed and the ALJs began their deliberations.
- **March 29, 2010:** The ALJs issued their first PFD and transmitted the matter back to the Commission for decision.
- **April 2010:** While the hearing record was closed and no new evidence could be admitted to either assist or deter Applicant, Mr. Jamieson, in preparing for the eventual agenda setting, conducted his review of Applicant’s rebuttal modeling and confirmed that there were no exceedances of the PM₁₀ 24-hour increment of 30 µg/m³ at a time and place where the proposed project sources, i.e., the LBEC sources, are predicted to be significant.³² At that point, Mr. Jamieson began performing additional review, including a “source culpability analysis,” because “at that stage, the State has a responsibility to further evaluate and substantiate” the modeled predictions greater than 30 µg/m³.³³
- **April 29, 2010:** While the ALJs strongly disagreed in their responsive filing, in its briefing to the Commission, Applicant noted that the decision to grant an air

determine whether the net emissions increase from the proposed source will result in a significant ambient impact at the point (receptor) of each predicted violation, and at the time the violation is predicted to occur. The source will not be considered to cause or contribute to the violation if its own impact is not significant at any violating receptor at the time of each predicted violation. In such a case the permitting agency, upon verification of the demonstration, may approve the permit...”); *see also Proposal for Decision Regarding The Application Of Las Brisas Energy Center, LLC For State Air Quality Permit No. 85013, HAP 48, PAL 41, And PSD-TX-1138*; TCEQ Docket No. 2009-0033-AIR; SOAH Docket No. 582-09-2005 at 54-55 (“The ED concurs with Mr. Kupper’s opinion that the predicted exceedance of 32.6 µg/m³ is not problematic if it occurred on a day when emissions from the LBEC would not be significant. However, federal guidance allows the permitting agency to approve the demonstration only after the agency has verified the modeling. . . . The ALJs recommend that the Application be remanded, based on the ED’s assertion that PSD permits require all modeling be reviewed by the permitting authority and the ED’s modelers did not have that opportunity.”) [hereinafter Original PFD].

³² See Trial Tr. at 2774:22 to 2777:4 (Jamieson).

³³ See Trial Tr. at 2776:6 to 2778:12 (Jamieson).

permit is to be based on “the information available to the commission”³⁴ and that, in this case, the information available to the Commission, including the Executive Director’s review of the rebuttal modeling and the PCCA permit alteration, addressed the ALJs’ concerns regarding demonstration of compliance with the PM₁₀ 24-hour increment.³⁵

- **June 2, 2010:** The ALJs issued a letter response to exceptions, disagreed “strongly” with Applicant’s position, and asserted that the Commission must make its decision based on the evidentiary record in the case as it existed when the record closed.³⁶
- **Prior to June 30, 2010:** Before the matter was remanded to the State Office of Administrative Hearings (“*SOAH*”) and while no case was pending at SOAH, Mr. Jamieson completed his less conservative “base” PM₁₀ 24-hour increment modeling analysis to satisfy the State’s “responsibility to further evaluate and substantiate” the modeled predictions greater than 30 µg/m³.³⁷ As part of this exercise, Mr. Jamison relocated sources and it is these relocated sources that now concern the ALJs.

³⁴ Applicant’s Reply to Exceptions at 5, 18-19; *see also* TEX. HEALTH & SAFETY CODE §382.0518(b)

³⁵ *See* Applicant’s Reply to Exceptions at 5, 18-19.

³⁶ *See* ALJs’ Response to Exceptions at 2 (“Moreover, the ALJs disagree strongly with Applicant’s assertion that the Commission is not bound by the evidentiary record in this case in making its decision. The Administrative Procedure Act (APA) requires that administrative decisions be based upon findings of fact and conclusions of law, and that such findings of fact must be based only upon evidence in the record or matters officially noticed ”)

³⁷ *See* Trial Tr at 2776·6 to 2778·12 (Jamieson)

- **June 30, 2010:** The Commission considered Las Brisas’s application and voted to remand the matter to SOAH, for the first time indicating that the contested case hearing evidentiary record would reopen.³⁸
- **July 1, 2010:** The Commission issued an Interim Order remanding the matter to SOAH pursuant to 30 Tex. Admin. Code § 80.265 and Tex. Gov’t. Code § 2003.047(m), “solely for the purpose of reopening the record to take additional evidence” on seven specific issues, including “review of additional modeling performed by Applicant in support of the Application.”³⁹
- **July 12, 2010:** With the hearing resumed and the record to be reopened, Applicant received Mr. Jamieson’s modeling and handwritten notes through an expert disclosure. Upon review of Mr. Jamieson’s modeling and his notes, Applicant noted that Mr. Jamieson’s efforts were directed at addressing the State’s responsibility to further evaluate and substantiate the modeled predictions greater than 30 µg/m³ at times and places where the LBEC sources were not significant.
- **July 15, 2010:** Applicant prefiled its direct case on remand,⁴⁰ which included the results of Applicant’s modeling of two potential off-site material handling scenarios.⁴¹

³⁸ See Ex. ED-48 at 1.

³⁹ See Ex. ED-48 at 1. The Commission’s Interim Order also found “that the primary boilers for the proposed project are not subject to case-by-case MACT preconstruction requirements.” *Id.*

⁴⁰ See Order No. 18. Applicant revised its prefiled direct case on July 28, 2010 and October 4, 2010.

⁴¹ See Las Brisas Ex. 700 at 17:5 to 19:6 (Ellis); Las Brisas Ex. 704.

- **July 15 – August 25, 2010:** Mr. Jamieson performed a review of Applicant’s scenario modeling, using his post-close-of-the-evidentiary record, pre-remand modeling as a starting point.⁴²
- **August 25, 2010:** The week before the hearing was originally scheduled to begin, Applicant received Mr. Jamieson’s second modeling audit memorandum.⁴³
 - a. *The ADMT And Mr. Jamieson Found Applicant’s Modeling Acceptable And Demonstrative Of At Least One Valid Predicted Violation Occurring At A Time And Place Other Than Those When The Proposed Sources Were Significant Before Proceeding To Address The State’s State Implementation Plan (“SIP”) Concerns*

The ALJs conclude that, “if Mr. Jamieson had found LBEC’s modeling to be acceptable and demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were significant, then he would have had the duty to proceed and to address the state’s SIP concerns. But Mr. Jamieson did not make such a finding.”⁴⁴ The timeline presented above clearly demonstrates that the ALJs are incorrect. At the outset of this matter and before a draft permit was issued, the ADMT found that Applicant’s modeling was acceptable. In evaluating the rebuttal modeling in preparation for the Commission’s June 30, 2010 agenda, Mr. Jamieson apparently learned that Applicant’s original and rebuttal modeling each predicted at least one PM₁₀ 24-hour increment violation at a time and place other than those where LBEC sources were significant. It was then, and only then, that Mr. Jamieson proceeded to address the State’s SIP concerns.

⁴² See Trial Tr. at 2782:22 to 2783:6 (Jamieson).

⁴³ See Ex. ED-51.

⁴⁴ PFD at 24.

On December 16, 2008 the ADMT issued its first audit memorandum *approving* Applicant's modeling.⁴⁵ On November 2, 2009 the original hearing convened. During the hearing, EDF alone noted three off-site emission points, out of the hundreds that Applicant modeled, that were allegedly mislocated in Applicant's modeling.⁴⁶ Mr. Jamieson testified, however, that the alleged discrepancies noted by EDF⁴⁷ would *not* alter the ADMT's position regarding the ultimate outcome.⁴⁸ Nevertheless, on the last day of the hearing, Applicant submitted rebuttal modeling that remedied the allegedly mislocated sources identified by EDF.⁴⁹ While Applicant's rebuttal modeling yielded a high-second-high less than the PM₁₀ 24-hour increment of 30 µg/m³ at a time and place where the proposed project sources were significant, it yielded a high-second-high of 32.6 µg/m³ at a time when LBEC was not a significant contributor.⁵⁰ In its post-hearing briefings, the Executive Director requested additional time⁵¹ to review Applicant's rebuttal modeling because "**applicable guidance and historical agency**

⁴⁵ See Ex. ED-18.

⁴⁶ See Trial Tr. at 414:25 to 440:12 (Kupper).

⁴⁷ It is unclear when EDF identified these discrepancies, but neither EDF's expert modeler nor Sierra Club's expert modeler corrected source locations in their respective modeling, but instead used Applicant's PM₁₀ modeling input files. See EDF Ex. 100 at 16:10-11 (Hunt) ("I utilized the same PM₁₀ input files generated by LBEC; thereby using the same modeling parameters as LBEC."); Sierra Club Ex. 299 at 20:9-11 (Sears) ("For my analysis, I started with the AERMOD model used by the Applicant, with the same meteorological data files, and the same input files used for assessing 24-hour PM₁₀ PSD increment compliance . . .").

⁴⁸ See Trial Tr. at 2092:25 to 2098:11 (Jamieson) (testifying that, based on his experience, the discrepancies "would not change the overall results").

⁴⁹ See Trial Tr. at 2167:19 to 2193:10, 2148:5 to 2151:2, and 2270:21 to 2271:18 (Kupper).

⁵⁰ See Trial Tr. at 2277:14-21 (Kupper).

⁵¹ Executive Director's Reply to Closing Arguments at 4; see also *id.* n.13 ("ED counsel testified that the modeling experts had not had access to all of the computer software they would need to review the modeling but were prepared to tell the ALJs how long it would take to do so. Tr. 9 at 2161:25-2162:12."); see also EDF's Reply to Exceptions to Proposal for Decision at 35 ("The ED is requesting remand on the basis that 'federal guidance requires the ED to verify the Applicant's modeling prior to issuance of the permit.' See ED's Exceptions at 11. Further, the ED's Exceptions filed April 19, 2010 make clear that the ED still believes remand on this issue is appropriate.").

policy require ED verification of the applicant’s modeling prior to approval and issuance of a PSD permit.”⁵² In furtherance of that regulatory duty, after the original hearing concluded in November 2009, and in order to prepare for the Commission’s June 30, 2010 agenda, Mr. Jamieson conducted an analysis of Applicant’s rebuttal modeling.⁵³

Mr. Jamieson’s pre-agenda analysis of Applicant’s rebuttal modeling, as discussed more fully in the next section of these exceptions, was unquestionably done at a time when the evidentiary record was closed; so, according to the ALJs pre-remand position, Mr. Jamieson’s associated modeling was *not* done at a time that could have assisted Applicant in meeting its burden of proof. Furthermore, Mr. Jamieson’s evaluation, which he performed in between April 1 and June 29, 2010,⁵⁴ consisted of two phases. First, in April 2010, Mr. Jamieson “reviewed the output files associated with the rebuttal modeling” to “verify if the changes that had been noted for [the] rebuttal modeling ... matched up ... with respect to the original modeling.”⁵⁵ Mr. Jamieson concluded that, with respect to the rebuttal modeling, “the output ... reflected predicted concentrations – high-second-high concentrations – greater than 30,” but that “there were no time periods in which the proposed sources were significant with those modeled predictions.”⁵⁶ Thus, at this point, consistent with the first ADMT modeling audit memorandum approving Applicant’s modeling, Mr. Jamieson verified Applicant’s rebuttal modeling.

⁵² Executive Director’s Reply to Exceptions at 5 (emphasis added).

⁵³ See Trial Tr. at 2993:5-24 (Jamieson) (Q (Riley): The -- between the applicant's rebuttal modeling and the agenda presentation in June 2010, you performed some analysis of the rebuttal modeling --applicant's rebuttal modeling. Correct? A Correct. ... Q The purpose of that review, as I understand it, was to prepare for the agenda in the event that the commissioner had -- commissioners had any questions of the executive director regarding the rebuttal modeling or any other modeling issue in the case. Is that true? A That's correct.); see also Exs. ED-44 and ED-45.

⁵⁴ Trial Tr. at 2774:15 to 2775:21 (Jamieson).

⁵⁵ Trial Tr. at 2774:22 to 2775:5 (Jamieson).

⁵⁶ Trial Tr. at 2775:5 to 2775:13 (Jamieson), 2776:12-14 (Jamieson).

Then, only *after* Mr. Jamieson found that Applicant’s modeling was “demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were significant,”⁵⁷ he concluded that “the State has a responsibility to further evaluate and substantiate” the modeled predictions greater than 30 µg/m³.⁵⁸ Accordingly, prior to the Commission’s June 30, 2010 agenda Mr. Jamieson performed “additional modeling to address those issues – those time periods where there were predicted exceedances of the increment but the applicant's proposed sources were not significant.”⁵⁹ This modeling, described by Mr. Jamieson as a “source culpability analysis” was conducted to “determine the source contributions to those modeled predictions to get an idea if there were any culpable sources to those model predictions.”⁶⁰ In other words, the ADMT and Mr. Jamieson did exactly what the ALJs say was required: the agency “found LBEC’s modeling to be acceptable and demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were significant,” and, at that point, the Executive Director began performing additional analysis pursuant to “the duty to proceed and to address the state’s SIP concerns.”⁶¹ Accordingly, Mr. Jamieson’s efforts between April 1 and June 29, 2010 cannot, as Protestants and the ALJs contend, constitute improper assistance to Applicant.

After Applicant prefiled its direct case on remand and with his pre-agenda constructed model in hand, Mr. Jamieson performed another review, this time of Applicant’s scenario

⁵⁷ PFD at 24.

⁵⁸ Trial Tr. at 2776:8-16 (Jamieson).

⁵⁹ Trial Tr. at 2777:11-12 (Jamieson).

⁶⁰ Trial Tr. at 2777:15-18 (Jamieson).

⁶¹ PFD at 24.

modeling.⁶² As with Applicant’s rebuttal modeling, because Applicant’s more conservative inputs for its scenario modeling yielded high-second-high values greater than the PM₁₀ 24-hour increment of 30 µg/m³, Mr. Jamieson first confirmed that the proposed project sources were not significant for the time periods when the exceedances occurred.⁶³ Then, only *after* Mr. Jamieson found that Applicant’s scenario modeling was “demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were significant,”⁶⁴ he concluded that “there was the responsibility of the State to further substantiate those model predictions and to conduct an evaluation into those.”⁶⁵ Here again, Mr. Jamieson did exactly what the ALJs say he was required to do, performing additional analysis only after he “found LBEC’s modeling to be acceptable and demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were significant.”⁶⁶ And he performed that additional analysis because “there was the responsibility of the State to further substantiate those model predictions and to conduct an evaluation into those.”⁶⁷ Accordingly, as with Mr. Jamieson’s pre-agenda review, his review of Applicant’s scenario modeling cannot constitute improper assistance to Applicant even if Mr. Jamieson’s modeling using different source locations “corrected” Applicant’s model – which it did not.⁶⁸

⁶² See Trial Tr. at 2782:22 to 2783:6 (Jamieson).

⁶³ See Trial Tr. at 2790:4-18 (Jamieson).

⁶⁴ PFD at 24.

⁶⁵ Trial Tr. at 2790:16-18 (Jamieson).

⁶⁶ PFD at 24.

⁶⁷ Trial Tr. at 2790:16-18 (Jamieson).

⁶⁸ Having built a model with different source locations that he used to address SIP concerns, Mr. Jamieson now apparently considered and referred to the differences in source locations between his and Applicant’s models as “discrepancies” in his audit report. However, according to TCEQ guidance, “[i]f additional refinement is needed, then only the level of refinement necessary to achieve the modeling demonstration’s goal is required.” Las Brisas Ex. 102 at 00023. Applicant’s modeling demonstration

b. *Mr. Jamieson's Verification Of Applicant's Rebuttal Modeling Did Not Take Place During The Contested Case Hearing*

The ALJs insist that Mr. Jamieson's efforts were impermissible because: a) Mr. Jamieson performed modeling of his own;⁶⁹ and b) his modeling took place during the contested case hearing setting.⁷⁰ While the ALJs attribute great significance to the fact that Mr. Jamieson performed his own modeling and insist that Mr. Jamieson was required to simply model Applicant's inputs as-is, they also acknowledge that, during the first hearing, "both applicant and ADMT ran modeling when some source parameters were found to be incorrect" and that the ALJs "do not fully understand when and why ADMT conducts its own modeling."⁷¹ As discussed above and as explained in the Executive Director's briefing, after the first hearing concluded Mr. Jamieson was under a regulatory duty to "verify" Applicant's rebuttal modeling demonstration. The term "verify" cannot, as the ALJs assert, constrain the permitting authority to reviewing only an applicant's modeling inputs. In fact, the ALJs' interpretation is contrary to TCEQ guidance, which states that,

"If the ADMT staff finds errors or discrepancies [in an applicant's model inputs], they attempt to *evaluate* them and determine whether they would cause a significant change in the magnitude or location of predicted concentrations--that is, whether the

was conducted in order to demonstrate compliance with the increment when the proposed project sources are predicted to be significant in time and space. *See* Las Brisas Ex. 700 at 9:1-4. Mr. Jamieson's goal, on the other hand, was to demonstrate compliance with the increment *at any time*, whether or not the proposed project sources are significant. *See* Trial Tr. at 2790:11-18. Consequently, Mr. Jamieson was required to take a less conservative approach and make more refinements in order to demonstrate that all predicted concentrations at all receptors in the AOI were under 30 $\mu\text{g}/\text{m}^3$ on all days during the modeled five-year period.

⁶⁹ *See* PFD at 25 ("At the point Mr. Jamieson found LBEC's modeling to be deficient, he should have reported as much and left any actions to correct those deficiencies to LBEC, rather than making the demonstration himself.").

⁷⁰ *See* PFD at 28 (The statute prohibits the ED from assisting a permit applicant in meeting its burden of proof "while a matter is in a contested case hearing before SOAH.").

⁷¹ PFD at 27 n.50.

concentrations would be technically representative and usable by the staff to determine whether the permit should be issued. The ADMT will work closely with the permit engineer and the applicant's modeler to *resolve* omissions, unclear documentation, or other problems.”⁷²

Clearly, therefore, TCEQ guidance leaves room for some degree of independent evaluation by the ADMT. Considering that Mr. Jamieson left more than 94% of Applicant's modeled source parameters intact, it is an exaggeration to claim that Mr. Jamieson modeled on behalf of Applicant.⁷³ In fact, Mr. Jamieson did *not* construct a model at all. Instead, Mr. Jamieson utilized Applicant's model and, for a small percentage of sources, he exercised his professional judgment to revise source parameters and, in the end, verified that all receptors (not just the one where impacts from the LBEC sources were significant) modeled concentrations under 30 µg/m³. Moreover, as explained above, Mr. Jamieson's evaluation of this small percentage of sources was performed in an effort to resolve the SIP issue, which is a *State* obligation and *not* a showing that Applicant is required to make.

The ALJs also state that, while they “do not fully understand when and why ADMT conducts its own modeling...so long as ADMT's actions do not occur while the case is in a contested case *hearing*, ADMT's actions would not violate Section 5.228 of the Water Code.”⁷⁴ As demonstrated by the timeline above, Mr. Jamieson's verification of Applicant's *rebuttal* modeling did *not* occur while this matter was in a contested case hearing.⁷⁵ In this case, “[t]he

⁷² See Las Brisas Ex. 102 at 00083 (emphasis added).

⁷³ See PFD at 30. Applicant modeled more than 335 sources and, of those sources, only 20, or less than 6%, are at issue.

⁷⁴ PFD at 27 n 50 (emphasis added); see also TEX WATER CODE § 5.228(e) (“The executive director . . . may not assist a permit applicant in meeting its burden of proof *in a hearing* before the commission or the State Office of Administrative Hearings . . .”) (emphasis added)

⁷⁵ TCEQ's rules clearly indicate that “Post Hearing Procedures” begin when the hearing record closes. See 30 TEX. ADMIN CODE §§ 80 252-80 279

hearing concluded on November 12, 2009, and the record closed on February 1, 2010, after written closing arguments were filed.”⁷⁶ Furthermore, the Commission did not vote to remand this matter back to SOAH until June 30, 2010.⁷⁷ Accordingly, between February 1, 2010 and June 30, 2010, the record was closed and this matter was awaiting a decision by the Commission. The ALJs’ suggestion that Mr. Jamieson’s work during this period would be purged of its assisting-the-applicant quality had the Commission remanded the application to the Executive Director, as opposed to SOAH, is without legal foundation and the ALJs do not identify any basis for their conclusion that a contested matter remanded to the Executive Director is distinguishable from a contested matter remanded to SOAH for purposes of § 5.228(e) of the Water Code. Therefore, because Mr. Jamieson’s April 2010 verification of Applicant’s rebuttal modeling occurred after the first hearing closed and well before the Commission remanded this matter to SOAH for further evidence, it cannot constitute impermissible assistance to Applicant.

Furthermore, while Mr. Jamieson’s verification of Applicant’s *remand* modeling (also referred to as Applicant’s scenario modeling) *was* conducted after the remand to SOAH and before the actual hearing, as explained below, other than using the “base” modeling developed prior to the agenda, Mr. Jamieson’s verification did not include making any changes other than those made by Applicant itself. Accordingly, Mr. Jamieson’s verification of Applicant’s remand modeling using his own pre-remand model supplemented with Applicant’s additional sources was also permissible.

All of the “differences” between Mr. Jamieson’s modeling and Applicant’s modeling were the result of actions taken by Mr. Jamieson outside the contested case hearing as part of his

⁷⁶ PFD at 1.

⁷⁷ *See* Ex. ED-48.

pre-agenda modeling review. This fact is confirmed by a comparison of Mr. Jamieson's pre-agenda and August 2010 modeling reviews, which reveals that *all but three* of the "differences" between Mr. Jamieson's modeling and Applicant's modeling were incorporated by Mr. Jamieson in his pre-agenda modeling review.⁷⁸ In other words, between June 30, 2010 and August 25, 2010, Mr. Jamieson made only three additional modifications to his modeling, *which he obtained from Applicant's prefiled testimony and exhibits*:⁷⁹ 1) Applicant identified a source of PM emissions on the Valero refinery property (source 940) and Mr. Jamieson added this source into his modeling;⁸⁰ 2) Mr. Jamieson modeled the two potential material handling scenarios provided by Applicant (Option 1 and Option 2) and reported a value of 29.2 $\mu\text{g}/\text{m}^3$ associated with the Option 2 scenario;⁸¹ and 3) Mr. Jamieson adopted the method used by Applicant in its prefiled direct case and combined all unique receptors from the "days" grid into one comprehensive grid to encompass all five years for which modeling was performed.⁸² All three of these changes to Mr. Jamieson's model were based on changes made by Applicant – not *vice versa*. Consequently, neither Mr. Jamieson's pre-agenda modeling review nor his August 25, 2010 modeling review constitute impermissible assistance to Applicant.

⁷⁸ Compare Ex. ED-44 and Ex. ED-45 with Las Brisas Ex. 910; *see also* Las Brisas Ex. 915; Trial Tr. at 2997:18 to 3000:6 (Jamieson) (testifying that he made four changes from his June 30, 2010 modeling to his August 25, 2010 modeling but that only three of these changes would impact the high-second-high of 29.2 $\mu\text{g}/\text{m}^3$).

⁷⁹ See Trial Tr. at 3019:3-13 (Jamieson) (testifying that "[t]here were additional updates that the applicant had made as part of their prefiled modeling. **I did not identify those on my own.** It was information presented by the applicant as part of their additional modeling.") (emphasis added); *see also* Trial Tr. at 2997:13 to 3000:6 (Jamieson).

⁸⁰ See Trial Tr. at 2997:8 to 2998:6 (Jamieson).

⁸¹ See Trial Tr. at 2998:7-14 (Jamieson).

⁸² See Trial Tr. at 2999:6-12 (Jamieson).

Moreover, Mr. Jamieson's verification of Applicant's rebuttal modeling, while not conducted during a contested case hearing, was presented during the remand contested case hearing because the ALJs insisted it was required by law. On April 29, 2010, Applicant argued in a brief to the Commission that the Commission is not limited to considering the evidentiary record established through a contested case hearing when granting an air permit.⁸³ Rather, the decision to grant an air permit is to be based on "the information available to the commission"⁸⁴ and Applicant pointed out that, in this case, the information available to the Commission addressed the ALJs' concerns regarding Applicant's demonstration of compliance with the PM₁₀ 24-hour increment.⁸⁵ In other words, the Commission could have questioned Mr. Jamieson about his April 2010 review during the June 30, 2010 agenda and was not required to remand the matter back to SOAH for further proceedings. The ALJs, however, disagreed "strongly" with Applicant's position and opined in their letter response to exceptions that the Commission must make its decision based on the evidentiary record in the case.⁸⁶ In other words, Mr. Jamieson conducted his review outside of the SOAH contested case process and he could have been afforded the opportunity to present that review before the Commission at its June 30, 2010 agenda. Instead, however, the ALJs' point of view persuaded the Commission that Mr. Jamieson's additional review must come in as part of the evidentiary record before SOAH. Now that Mr. Jamieson's additional review has been put in evidence, the ALJs insist that consideration of this evidence is impermissible for a different reason, thereby making the entire remand exercise a perfect Catch-22: Mr. Jamieson's review of Applicant's modeling cannot be

⁸³ See Applicant's Reply to Exceptions at 5, 18-19.

⁸⁴ See *id.*; see also TEX. HEALTH & SAFETY CODE § 382.0518(b).

⁸⁵ See Applicant's Reply to Exceptions at 5, 18-19.

⁸⁶ See ALJs' Response to Exceptions at 2.

considered because it is not in the evidentiary record but putting it into the evidentiary record is a violation of “the Texas Legislature’s directive that the ED not assist a permit applicant in meeting its burden of proof while a matter is in a contested case hearing before SOAH.”⁸⁷ Fortunately, the facts do not support a finding that Mr. Jamieson’s modeling work was anything other than in performance of a duty of the State and outside of the contested case hearing.

c. Applicant’s Modeling Decisions And Its Decision Not To Adopt Mr. Jamieson’s Modeling As Its Own Are Justified

Two weeks after the Commission issued its Order remanding this matter to SOAH, Applicant was required to prefile its direct case, including its revised air dispersion modeling. On that occasion, Applicant faced a choice: whether to substitute Mr. Jamieson’s modeling for its own, or whether to proceed with the modeling conducted by its own experts. At the time, Applicant possessed both: a) the ADMT’s first audit memo, an official agency determination that approved of Applicant’s application modeling, which was especially strong in light of Mr. Jamieson’s testimony at the original hearing; and b) Mr. Jamieson’s unofficial notes based on his April 2010 modeling, which he performed pursuant to “the duty to proceed and to address the state’s SIP concerns.”⁸⁸ Faced with this information, Applicant chose to proceed with its own modeling inputs, as corrected in rebuttal.

On August 25, 2010, the week before the hearing was slated to begin, Applicant received Mr. Jamieson’s second modeling audit. This modeling audit was ADMT’s first notice to the

⁸⁷ PFD at 28 (Mr. Jamieson’s review is a violation of “the Texas Legislature’s directive that the ED not assist a permit applicant in meeting its burden of proof while a matter is in a *contested case hearing before SOAH.*”).

⁸⁸ PFD at 24.

Applicant that its modeling was anything less than acceptable.⁸⁹ Certainly, to show even lower results for comparison, Applicant could have substituted Mr. Jamieson's pre-agenda modeling inputs for its own and reported these more favorable, less conservative results in Applicant's prefiled direct case. However, there simply was no reason to do so because: a) Mr. Jamieson was answering a different question (i.e., the SIP question) than the one required to be analyzed by Applicant, and b) the resulting outputs were substantially lower than what Applicant reported considering the times and places the LBEC sources were significant.⁹⁰ Had Applicant chosen to substitute Mr. Jamieson's results for its own, Applicant's choice would, no doubt, have been attacked by Protestants on these grounds.⁹¹ Instead, Applicant chose *not* to adopt Mr. Jamieson's less conservative modeling analysis.

Moreover, the differences between Mr. Jamieson's modeling and Applicant's modeling are attributable to differences in professional judgment. As testified to by Mr. Jamieson, it is common to see differences in the modeling analyses submitted by applicants and the Executive

⁸⁹ Applicant notes that the question of whether an application comports with all applicable statutory and regulatory requirements is a legal question. Thus, while Mr. Jamieson, as an expert witness, may opine as to factual issues related to Applicant's modeling, he may not opine on a question of law because such a question is exclusively for the Commission to decide. See *Great W Drilling, Ltd v. Alexander*, 305 S.W.3d 688, 696 (Tex.App.—Eastland 2009, no pet.) (citing *Mega Child Care, Inc v Tex Dep't of Protective & Regulatory Servs.*, 29 S.W.3d 303, 309 (Tex.App.—Houston [14th Dist.] 2000, no pet.). Accordingly, his opinions related to alleged "deficiencies" in Applicant's modeling do not answer the legal question of whether the application complies with all applicable statutory and regulatory requirements

⁹⁰ See Trial Tr at 3183:1-11 (Ellis).

⁹¹ According to TCEQ guidance, "[i]f additional refinement is needed, then only the level of refinement necessary to achieve the modeling demonstration's goal is required." Las Brisas Ex. 102 at 00023. The goal of Applicant's modeling demonstration was to demonstrate compliance with the increment when the proposed project sources are predicted to be significant in time and space. See Las Brisas Ex. 700 at 9:1-4 (Ellis). Mr. Jamieson's focus, on the other hand, was to demonstrate compliance with the increment *at any time*, whether or not the proposed project sources are significant. See Trial Tr at 2790:11-18. Consequently, Mr. Jamieson was required to take a less conservative approach and make more refinements, such as application of wind speed scalars and the urban option, in order to demonstrate that all predicted concentrations at all receptors in the AOI were under 30 µg/m³ on all days during the modeled five-year period

Director⁹² and reasonable experts may disagree on the exact protocol that should be utilized to conduct air dispersion modeling. Notably, EDF's modeler, as the first step in his scope of work, evaluated Applicant's inputs.⁹³ When his evaluation was complete, he chose *not* to make any changes to those inputs as it pertains to either the source parameters or source locations.⁹⁴

The real question is thus whether the party submitting the model can justify its decisions.⁹⁵ In this case, the question is whether Applicant can justify the decisions it made in modeling off-property sources. The answer is yes. Applicant built many layers of conservatism⁹⁶ into its model so that its model would tend to over-predict or maximize off-site impacts.⁹⁷ Moreover, Applicant, in building its model, followed TCEQ guidance.⁹⁸ Finally,

⁹² Trial Tr. at 2097:4-9 (Jamieson).

⁹³ See Trial Tr. at 2616:25 to 2618:6 (Gasparini).

⁹⁴ See Trial Tr. at 2616:25 to 2618:6 (Gasparini); see also Trial Tr. at 2626:4-14 (Gasparini) (testifying that, when he evaluated Applicant's inputs, he did not make any changes and that he did not "pull out permits and evaluate source inputs and verify that the sources were input into the model exactly as they are represented in various permits and things like that").

⁹⁵ See Trial Tr. at 2936:16 to 2937:10 (Jamieson).

⁹⁶ See Trial Tr. at 3164:9 to 3169:5 (Ellis) (testifying that collocating existing and future sources when existing sources are likely to be replaced by future sources is a conservative approach); *id* at 3181:24 to 3182:16, 3173:21 to 3174:4 (Ellis) (same); see also Trial Tr. at 2652:14-21 (Gasparini) (agreeing that the combination of changes made by the Executive Director result in lower off-site impacts than those predicted by Applicant's modeling); Las Brisas Ex. 909 at 128:5 to 130:6 (Robert Osborn) (testifying that Applicant's modeling is more conservative than Mr. Jamieson's modeling); Trial Tr. at 3011:3-15 (Jamieson) (testifying that inclusion of sources that likely are not increment consuming is a conservative approach). Applicant's modeling is more conservative than Mr. Jamieson's modeling because Mr. Jamieson's goal was to address the SIP issue and Applicant's goal was to demonstrate that it met its burden. In other words, Applicant's modeling focused on demonstrating compliance with the increment when the proposed project sources are significant in time and space. See Las Brisas Ex. 700 at 9.1-4 (Ellis). This approach resulted in an examination of a very small number of days over the five-year period. Mr. Jamieson's focus, on the other hand, was to demonstrate compliance with the increment *at any time*, whether or not the proposed project sources are significant. See Trial Tr. at 2790:11-18 (Jamieson) Thus, Mr. Jamieson was required to examine a much larger set of days. Consequently, Mr. Jamieson was required to take a less conservative approach and make more refinements, such as application of wind speed scalars and the urban option, in order to demonstrate that all predicted concentrations at all receptors in the AOI were under 30 µg/m³ on all days during the modeled five-year period.

⁹⁷ See Trial Tr. at 2648:3-10 (Gasparini); 3011:14-15 (Jamieson); 3173:21 to 3174:4 (Ellis)

despite the hours Mr Jamieson spent researching permit files, even Mr. Jamieson’s modeling is not “perfect”⁹⁹ because there can be no such thing. Building a model requires and employs professional judgment and, despite the ALJs’ lack of confidence, Applicant’s originally ADMT-approved modeling demonstrates compliance with the PM₁₀ 24-hour increment.

2. Applicant Already Introduced The Very Evidence That The ALJs’ Claim Is Necessary To Meet Its Burden

The ALJs conclude that Applicant has not met its burden of proof, but suggest that Applicant could do so in yet another remand proceeding by merely submitting modeling similar to what the Executive Director has already offered.¹⁰⁰ The ALJs characterize such an exercise as “pointless,” and “one which would seem to be a waste of state and private resources.”¹⁰¹ Applicant agrees wholeheartedly, but notes that further waste in the form of another remand hearing is not required because Applicant already introduced the very evidence that the ALJs claim is necessary to meet its burden.

Applicant, in preparation for the remand hearing, post-processed Mr. Jamieson’s modeling in order to reach the answer that, according to the ALJs, matters: What is the high-second-high value when the proposed LBEC sources are predicted to be significant?¹⁰² More

⁹⁸ See Las Brisas Ex. 102 at 00031; see also Las Brisas Ex. 7 at 23-24, Apps. C and E; Trial Tr. at 417:22 to 418:7, 532:4 to 533:8, and 547:23 to 548:14 (Kupper); Las Brisas Ex. 700 at 8:9-11 (Ellis) (testifying that his scope of work included review of the sources of PM₁₀ emissions identified in the rebuttal modeling and a determination of whether there were any additional sources of PM₁₀ emissions in the area.).

⁹⁹ See Trial Tr. 2940:14 to 2954 17 (Jamieson).

¹⁰⁰ See Cover Letter to PFD at 2, see also PFD at 4 (“Thus, if the Commission disagrees with the ALJs and finds that it may rely on the ED’s modeling to find that the NAAQS and PSD Increment will not be violated, then the ALJs find no other deficiencies on remand with the application”).

¹⁰¹ See Cover Letter to PFD at 2

¹⁰² See PFD at 21 (“LBEC failed to demonstrate that a 24-hr PM₁₀ Increment violation would not occur at a significant receptor when considering both time and space Because of this, LBEC failed to meet all of the requirements to have the Application approved”), see also Trial Tr at 3177 22 to 3178:25

importantly, Applicant already offered the result into evidence as part of its remand rebuttal case.¹⁰³ As explained by Applicant's expert on rebuttal, Mr. Jamieson reported in his August 25, 2010 audit memorandum a GLCmax, which is the high-second-high at *any receptor* in the area of impact, of 29.2 $\mu\text{g}/\text{m}^3$.¹⁰⁴ Applicant's post-processing of Mr. Jamieson's modeling yielded a result of 16.7 $\mu\text{g}/\text{m}^3$, which is the high-second-high *when the proposed LBEC sources are predicted to be significant*.¹⁰⁵ Mr. Ellis's testimony is the *only* evidence in the record that makes this critical and required demonstration. Mr. Jamieson's modeling, which was focused on addressing the SIP issue, was not aimed at reaching this result, and Dr. Gasparini's entire modeling approach was discredited by Applicant and the Executive Director and dismissed by the ALJs.¹⁰⁶ Accordingly, the ALJs' conclusion that Applicant has not met its burden of proof is mistaken because it overlooks the fact that Applicant, and only Applicant, introduced into the record the very evidence that the ALJs claim is missing from the required demonstration.

C. ORDERING LANGUAGE REGARDING OFF-SITE MATERIAL HANDLING OPTIONS.

The ALJs recommend that the Commission bind Applicant to the hypothetical off-site material handling options it presented on remand by including additional ordering language that requires Applicant to use the off-site material-handling options it modeled.¹⁰⁷ Secondary emissions, by definition, "must be specific, well-defined, [and] quantifiable."¹⁰⁸ Applicant has

(Ellis) (testifying that the post-processed result of Mr. Jamieson's August 25, 2010 modeling, which yields the high-second-high when Las Brisas sources are predicted to be significant, is 16.7 $\mu\text{g}/\text{m}^3$).

¹⁰³ See Trial Tr. at 3178:1 to 3180:6 (Ellis).

¹⁰⁴ See Ex. ED-51 at 3; *see also* Trial Tr. at 3175:10-22 (Ellis).

¹⁰⁵ See Trial Tr. at 3177:9 to 3178:23 (Ellis).

¹⁰⁶ See PFD at 12-14.

¹⁰⁷ See PFD at 37-38.

¹⁰⁸ See 30 TEX. ADMIN. CODE § 116.12(32); 40 C.F.R. § 52.21(b)(18).

consistently maintained that there will be no secondary emissions associated with the LBEC precisely because any off-site emissions increases are not “specific, well-defined, [and] quantifiable.”¹⁰⁹ Nevertheless, in the remand proceeding, Applicant developed and modeled two hypothetical scenarios strictly for demonstrative purposes¹¹⁰ to address concerns raised by Protestants and echoed by the ALJs.¹¹¹ Now, by suggesting that Applicant be bound to those hypothetical scenarios, the ALJs are recommending that secondary emissions be created where none exist. Specifically, Applicant has argued throughout this proceeding that off-site material handling emissions are out of its control and, consequently, are not specific, well-defined, and quantifiable. More importantly, the hypothetical emissions cannot and will not be authorized in this proceeding.

Furthermore, the scenarios were designed to be extremely conservative and, accordingly, are unrealistic in several respects.¹¹² For example, the modeling conducted by Applicant contemplates that all current authorizations will remain “as is.”¹¹³ In other words, all existing operations and associated allowable emissions were treated by Applicant as though they will continue as they do now, and the hypothetical material handling scenarios were added “on top of” the existing sources.¹¹⁴ Specifically, the modeling conducted by Applicant co-located the existing, decades old gantry crane with a hypothetical, new gantry crane despite the fact that, in

¹⁰⁹ See Applicant’s Exceptions at 18-39.

¹¹⁰ See Trial Tr. at 3134:5-18 (Brogan); see also Las Brisas Ex. 700 at 8:12-22 (Ellis).

¹¹¹ See PFD at 37-47.

¹¹² See Las Brisas Ex. 700 at 9:19 to 10:8 (Ellis); see also Trial Tr. at 3161:15 to 3169:5 (Ellis).

¹¹³ See Las Brisas Ex. 700 at 9:19 to 10:8 (Ellis).

¹¹⁴ *Id.*

reality, the two are not likely to be co-located.¹¹⁵ Applicant's expert estimated that this co-location results in an overestimation of the final emissions from that source by more than a factor of two.¹¹⁶

Moreover, Las Brisas cannot exercise control over these off-site sources sufficient to assure the ALJs and the Commission of the location of hypothetical facilities for sources it does not control and cannot permit. As the ALJs discussed at length in the PFD, Applicant has no control over the PCCA's operations. There is no common ownership between the PCCA and the LBEC; there is no right of operational control, through a contract or voting interest, by LBEC over the PCCA; there exists no contract for service that would give LBEC control over the operation of the material-handling options; and there is no support/dependency relationship between LBEC and PCCA that would give LBEC control over the material handling operations.¹¹⁷

Finally, a permit provision is not required because, if changes to the PCCA facilities or the construction of new facilities are necessary to supply the LBEC, the PCCA will be required to apply to TCEQ for authorization to construct those facilities.¹¹⁸ Accordingly, the Commission should not include an ordering provision binding Applicant to the scenarios that it developed for purely demonstrative purposes.

¹¹⁵ See Trial Tr. at 3161:15 to 3169:5 (Ellis).

¹¹⁶ See Trial Tr. at 3166:18-23 (Ellis).

¹¹⁷ See PFD at 12-14.

¹¹⁸ See Applicant's Exceptions at 34-35.

D. BACT EMISSION LIMITS FOR MERCURY

Las Brisas reiterates that the Commission recently voted to approve the air permit for the White Stallion Energy Center with a single mercury emissions limit of 0.86×10^{-6} lb/MMBtu.¹¹⁹ Moreover, the Executive Director has concluded that 0.86×10^{-6} lb/MMBtu is the proper BACT emission limit for mercury.¹²⁰ Accordingly, Las Brisas does not object to the lowering of the mercury limit for the LBEC CFB boilers from 2.0×10^{-6} lb/MMBtu to 0.86×10^{-6} lb/MMBtu, but does not believe that a limit lower than 0.86×10^{-6} lb/MMBtu is justified.¹²¹

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Commission's Interim Order requires that a Proposed Order be submitted to the Commission incorporating the additional evidence, as appropriate, and the other findings made by the Commissioners at the June 30, 2010 agenda meeting. For convenience, Applicant's revised proposed Findings of Fact and Conclusions of Law, provided as Attachment 1 to these exceptions, are presented as a redline version of the ALJs' Proposed Findings of Fact and Conclusions of Law.

III. CONCLUSION

As set forth above, Las Brisas proved compliance with all applicable statutory and regulatory requirements. Accordingly, its permit application to construct the LBEC should be granted by the Commission without further delay. Therefore, Las Brisas respectfully requests

¹¹⁹ See Trial Tr. at 2354:6-13 (Cabe); Trial Tr. at 3044:24 to 3045:13 (Hamilton).

¹²⁰ See Executive Director's Remand Closing Argument at 12.

¹²¹ While Las Brisas recognizes that the White Stallion permit application represented a mercury limit of 0.57×10^{-6} lb/MMBtu when burning petroleum coke, the record evidence clearly establishes that the 0.57×10^{-6} lb/MMBtu limit is not contained in the permit approved by the Commission. See Trial Tr. at 3047:25 to 3048:3, 3061:21 to 3062:7 (Hamilton).

that the Commission issue an order adopting Las Brisas's proposed findings of fact and conclusions of law as filed with these exceptions, and granting TCEQ State Air Quality Permit Nos. 85013, HAP48, and PSD-TX-1138.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that, on this the 21st day of December 2010, a true and correct copy of the foregoing document has been served via hand delivery, facsimile, electronic mail, overnight mail, U.S. Mail, and/or Certified Mail, Return Receipt Requested, on the parties on the following service list.

FOR SOAH:

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Administrative Law Judge
The Honorable Craig R. Bennett
Administrative Law Judge
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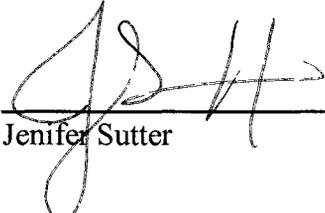
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

ORDER

**REGARDING THE APPLICATION BY LAW BRISAS ENERGY CENTER, LLC FOR
STATE AIR QUALITY PERMIT NO. 85013, HAZARDOUS AIR POLLUTANT MAJOR
SOURCE PERMIT NO. HAP 48, AND PREVENTION OF SIGNIFICANT
DETERIORATION PERMIT NO. PSD-TX-113879188
TCEQ DOCKET NOS. 2009-0033-AIR
SOAH DOCKET NOS. 582-09-2005**

On _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of Las Brisas Energy Center, L.L.C., for State Air Quality and federal Prevention of Significant Deterioration permits to construct four new petroleum coke-fired circulating fluidized-bed (CFB) steam electric generating units or boilers, each with a maximum heat input of 3,080 MMBtu/hour, and the related support facilities. A Proposal for Decision and a Proposal for Decision on Remand were presented by Administrative Law Judges (ALJs) Tommy L. Broyles and Craig R. Bennett of the State Office of Administrative Hearings (SOAH), who conducted hearings in this matter. The record closed on November 8, 2010.

After considering the Proposals for Decision, the Commission makes the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

Introduction and Procedural History

1. Las Brisas Energy Center, LLC (Las Brisas) requested state air quality, Prevention of Significant Deterioration (PSD), Plant-wide Applicability Limit (PAL), and Hazardous Air Pollutant § 112(g) (HAP) authorizations for the construction of the Las Brisas Energy Center (LBEC). The request for a PAL permit was subsequently withdrawn.

2. The LBEC will consist of four petroleum coke-fired circulating fluidized-bed (CFB) steam electric generating units or boilers, each with a maximum heat input of 3,080 MMBtu/hour, and related support facilities.
3. The LBEC will be located at a site on the Corpus Christi ship channel industrial development corridor within the Corpus Christi Industrial District in Corpus Christi, Nueces County, Texas.
4. Pursuant to Section 116.111(a)(1) of the Commission's rules, Las Brisas filed a PI-1 General Application with supporting information (Permit Application) with the TCEQ May 19, 2008. Las Brisas also provided TCEQ with various updates to the Permit Application throughout the application review process.
5. The Permit Application was declared administratively complete on May 23, 2008, and technically complete on January 7, 2009.
6. Las Brisas published "Notice of Receipt of Application and Intent to Obtain Air Permit" in the *Corpus Christi Caller Times* on June 19, 2008.
7. Las Brisas published "Notice of Application and Preliminary Decision for Air Quality Permits" in the *Corpus Christi Caller Times* on January 14, 2009.
8. Las Brisas posted notice signs along the perimeter of the proposed site, declaring the filing of the Permit Application and stating the manner in which TCEQ could be contacted for further information.
9. The Permit Application was made available for public inspection at the Corpus Christi Public Library in Corpus Christi, Nueces County, Texas, during the entire public notice period.

10. Notice of the Permit Application was given to all agencies, regulatory bodies, and other entities to which notification is required.
11. After publication of public notice, a preliminary hearing was held in Corpus Christi, Texas on February 17, 2009. The preliminary hearing was presided over by ALJ Tommy L. Broyles who determined that SOAH's jurisdiction had been properly established.
12. ALJs Broyles and Craig R. Bennett conducted the hearing on the merits in Corpus Christi, Texas from November 2 through November 6 and November 9 through November 13, 2009. The following parties appeared and participated in the hearing: (1) Las Brisas; (2) Environmental Defense Fund, Inc.; (3) Sierra Club; (4) Texas Clean Air Cities Coalition; (5) the Corpus Christi Cardiology Association; (6) Dr. Greg Silverman; (7) the San Patricio Aransas Refugio Medical Society; (8) the Nueces County Medical Society; (9) the League of United Latin American Citizens Council No. 1; (10) various individuals including Roger Landress, Patrick Nye, Connie Vallie, and Wilson Wakefield; (11) the Commission's Executive Director, and (12) the Commission's Public Interest Council.
13. The hearing record closed on January 11, 2010, after written closing arguments were filed, and a Proposal for Decision (PFD) was issued.
14. The Commission considered the PFD at its June 30, 2010 Agenda and found that the primary boilers for the proposed project are not subject to case-by-case MACT preconstruction permitting requirements. The Commission also remanded the matter to SOAH for further consideration of the following seven issues:

- a) Whether there will be any increase in particulate matter (PM) from off-site material handling sources above what was modeled, or if the ultimate conclusions from the impacts analysis would be unchanged by secondary sources;
 - b) Review of additional modeling performed by Applicant in support of the Application;
 - c) The ability of Applicant to design and install a conveyer system that will not be a source of emissions;
 - d) The ability of Applicant to design and install a system for ash loading into trucks that will not be a source of emissions;
 - e) Whether the modeling inputs, with respect to moisture content, for the Port of Corpus Christi Authority facilities are proper;
 - f) What are the proper BACT emission limits for total particulate matter (PM/PM₁₀) and mercury; and
 - g) The proper revisions to Special Condition 44 to address any changes in BACT limits.
15. The remand hearing was held in Austin, Texas, from October 18-21, 2010, and the record closed on November 8, 2010, after closing arguments were filed.
16. The evidence and argument taken at the remand hearing were limited to the seven issues remanded by the Commission in its July 1, 2010 Interim Order.
17. Las Brisas no longer urges issuance of the PAL permit, which is Special Condition 44 of the Draft Permit.¹ Accordingly, Special Condition 44 should be removed from the Draft

¹ See Trial Tr. at 3236:1-8 (Riley); Applicant's Remand Closing Argument at 23.

Permit. Furthermore, because of its deletion, no revisions to Special Condition 44 are required to address changes in BACT limits.

18. Las Brisas submitted a complete Form PI-1 General Application signed by John Upchurch, an authorized representative of Las Brisas. The Permit Application also was signed by Shanon DiSorbo, a Texas registered professional engineer.
19. Las Brisas remitted a permit fee of \$75,000 with the Permit Application.
20. Las Brisas included all supplemental information required by TCEQ's Form PI-1 in the Permit Application.
21. The Permit Application and additional information submitted by Applicant on remand addressed failed to address all sources of air emissions associated with the LBEC that are subject to permitting under TCEQ rules, including potential sources of secondary emissions, but on remand, additional information was submitted that completed the inclusion.
22. TCEQ staff reviewed the Permit Application to determine whether it complied with all applicable rules and policies and documented the conclusions of that review in the Construction Permit Review Analysis and Technical Review for Permit No. 79188/PSD-TX-1072.

Demonstrations Under 30 TEX. ADMIN. CODE §116.111: Protection of Public Welfare Las Brisas's Air Dispersion Modeling

23. Las Brisas performed air dispersion modeling, which was summarized in its November 12, 2008 Air Quality modeling Analysis Report,² and in follow-up submittals dated November 20, 2008,³ December 1, 2008,⁴ and December 8, 2008.⁵

² See Las Brisas Ex. 7.

24. Las Brisas performed air dispersion modeling to support its application using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD), Version 07026.
25. ~~The initial modeling that was included in the Application was deficient, so~~ During the November 2009 hearing, Applicant prepared additional modeling for its rebuttal case (rebuttal modeling).
26. The Port of Corpus Christi ~~Authority/Association~~ modified its permits after issuance of the PFD but before the Commission remanded the case to SOAH for additional evidence.
27. After the Commission remanded the case to SOAH, Applicant prepared a third round of modeling (remand modeling).
28. ~~To date, Applicant has failed to perform modeling that is~~ The modeling that was included in the Permit Application, as well as subsequent modeling analyses, were performed in accordance with applicable air quality rules and guidance,⁶ and in accord with guidance received from TCEQ's air dispersion modeling team specific to this project.⁷
- ~~26. To date, Applicant's modeling has not been verified by TCEQ's air dispersion modeling team as is required by the PSD program.~~
29. There are no schools located within 3,000 feet of the LBEC facilities to be authorized by the Permit Application.
30. In performing the air dispersion modeling, Las Brisas modeled emissions from all sources of emissions associated with the LBEC except fuel storage tanks.

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³ See Las Brisas Exs. 8 and 9.

⁴ See Las Brisas Ex. 11.

⁵ See Las Brisas Ex. 12.

⁶ See Las Brisas Ex. 100 at 11:7 to 14 (Kupper).

⁷ See Las Brisas Ex. 100 at 14:5-9 (Kupper).

31. Fuel storage tanks were appropriately excluded from the modeling because their emissions are low and the chemicals emitted are not particularly toxic.
32. Las Brisas did not model road dust emissions.
33. Under TCEQ's modeling guidance, modeling of road dust emissions is explicitly excluded for short-term averaging periods.
34. Under TCEQ's modeling guidance, modeling of plant road dust emissions is excluded for long-term averaging periods if the emissions will not be generated in association with transport, storage, or transfer of road-base aggregate materials and if best management practices are used to control dust emissions.
35. Las Brisas will be transporting no road-base aggregate materials at the LBEC and will employ best management practices for minimizing dust, such as paving of most roads and watering of unpaved road segments.
36. Las Brisas's air dispersion modeling was conservative, that is, it tended to over-predict off property ambient concentrations.⁸
37. Las Brisas assumed that all sources at the LBEC would be operating simultaneously and emitting their maximum rates at the same time, which will not occur in practice.⁹
38. Las Brisas assumed that the worst-case dispersion conditions occur simultaneously with the worst-case emissions scenario.¹⁰
39. Las Brisas used conservative background concentrations in the modeling analyses.¹¹

⁸ See Las Brisas Ex. 100 at 21:3-6, 15-22 (Kupper).

⁹ See Las Brisas Ex. 100 at 21:10-14 (Kupper).

¹⁰ See Las Brisas Ex. 100 at 21:8-10 (Kupper).

¹¹ See Las Brisas Ex. 100 at 37:21-23 (Kupper).

40. Las Brisas properly relied on the pre-processed meteorological data supplied by the TCEQ in conducting its modeling.
41. TCEQ's modeling staff performed an initial audit of Las Brisas's initial modeling and found it acceptable.
- ~~36. Las Brisas' initial modeling was found to be deficient after the initial evidentiary hearing.~~
- ~~37. TCEQ's modeling staff performed an audit of Las Brisas' remand modeling and found it deficient.~~
42. The standards and guidelines applicable to the Permit Application's maximum modeled pollutant concentrations are: National Ambient Air Quality Standards ("NAAQS"), PSD increments, Net Ground Level Concentration (NGLC) or "state property-line" standards, and Effects Screening Levels (ESLs).

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NAAQS Analysis

43. NAAQS are federal standards representing concentrations at which no adverse health or welfare impacts are expected to occur.
44. EPA has established both primary and secondary NAAQS.
- a) Primary NAAQS are designed to protect public health with an adequate margin of safety.
 - b) Secondary NAAQS are designed to protect the public welfare from any known or anticipated adverse effects of a designated pollutant.
45. EPA has established primary and secondary NAAQS for seven air contaminants, referred to as the "criteria" pollutants: sulfur dioxide (SO₂), particulate matter consisting of particles with diameters less than or equal to 10 microns (PM₁₀), particulate matter consisting of particles with diameters less than or equal to 2.5 microns (PM_{2.5}), ozone,

nitrogen dioxide (NO₂), carbon monoxide (CO) and lead. The NAAQS are expressed as ambient concentrations in units of parts per million (ppm) or micrograms per cubic meter (µg/m³) averaged over a specific time period, such as 24 hours or a calendar quarter.

46. Under TCEQ's Air Quality Modeling Guidelines, a PSD NAAQS demonstration is required for emissions of criteria pollutants for which the project emissions increase exceeds the PSD significance threshold. A state NAAQS demonstration is required for emissions of criteria pollutants for which the project emissions increase falls below the significance threshold.
47. The Permit Application included an acceptable PSD NAAQS demonstration for SO₂, NO₂, CO, PM₁₀, PM_{2.5}, and ozone.
48. Las Brisas conducted modeling to perform a state NAAQS analysis for lead.
49. Las Brisas directly modeled the LBEC's emissions of SO₂, NO_x, CO, PM₁₀, and lead for the purpose of demonstrating compliance with the NAAQS.
50. For the pollutants and averaging times for which maximum modeled concentrations resulting from emissions at the LBEC were above de minimis levels, Las Brisas modeled non-LBEC emissions and added an ambient background concentration to consider the influence of other sources affecting the LBEC impact areas.
51. The ambient background concentrations used by Las Brisas for the area of the LBEC are conservative and in accordance with TCEQ guidance.
52. Las Brisas has demonstrated compliance with all NAAQS in place while the permit was in technical review.

NAAQS Analysis: SO₂

53. At the time the Draft Permit was issued, SO₂ NAAQS existed for three averaging periods: three-hour (1300 µg/m³), 24-hour (365 µg/m³), and annual (80 µg/m³).
54. Background concentrations for SO₂ were obtained from concentrations measured at monitoring site CAMS 98, which is located approximately 2.9 miles to the southeast of the LBEC site.
55. The maximum modeled 3-hour SO₂ concentration resulting from the combined effect of the emissions from the LBEC and sources affecting the LBEC impact area is 749.7 µg/m³; and the ambient background concentration is 115 µg/m³.
56. The modeled SO₂ emissions, when added to the background level of ambient SO₂, will not cause or contribute to an exceedance of the 3-hour SO₂ NAAQS of 1,300 µg/m³.
57. The maximum modeled 24-hour SO₂ concentration resulting from the combined effect of the emissions from the LBEC and sources affecting the LBEC impact area is 192.4 µg/m³; and the ambient background concentration is 16 µg/m³.
58. The modeled SO₂ emissions, when added to the background level of ambient SO₂, will not cause or contribute to an exceedance of the 24-hour SO₂ NAAQS of 365 µg/m³.
59. The maximum modeled annual SO₂ concentration resulting from the combined effect of the emissions from the LBEC and sources affecting the LBEC impact area is 59.6 µg/m³; and the ambient background concentration is 3.5 µg/m³.
60. The modeled SO₂ emissions, when added to the background level of ambient SO₂, will not cause or contribute to an exceedance of the annual SO₂ NAAQS of 80 µg/m³.

NAAQS Analysis: NO₂

61. At the time the Draft Permit was issued, NO₂ NAAQS existed for one averaging period: annual (100 µg/m³).
62. There are no TCEQ-operated NO₂ monitors located in Nueces County.
63. A screening background concentration for NO₂ was used in Las Brisas' modeling demonstration.
64. The maximum modeled annual average NO₂ concentration resulting from the combined effect of the emissions from the LBEC and sources affecting the LBEC impact area is 19.6 µg/m³; and the ambient background concentration is 35 µg/m³.
65. The modeled NO₂ emissions, when added to the background level of ambient NO₂, will not cause or contribute to an exceedance of the annual-average NO₂ NAAQS of 100 µg/m³.

NAAQS Analysis: CO

66. CO NAAQS exist for two averaging periods: 1-hour (40,000 µg/m³) and 8-hour (10,000 µg/m³).
67. The maximum modeled 1-hour average CO concentration resulting from the LBEC's emissions at any off-site location is 779.5 µg/m³, which is below the *de minimis* level for 1-hour average CO of 2,000 µg/m³.
68. The impact of the LBEC's CO emissions on 1-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 1-hour average CO NAAQS of 40,000 µg/m³.

69. The maximum modeled 8-hour average CO concentration resulting from the LBEC's emissions at any off-site location is $120.5 \mu\text{g}/\text{m}^3$, which is below the *de minimis* level for 8-hour average CO of $500 \mu\text{g}/\text{m}^3$.
70. The impact of the LBEC's CO emissions on 8-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 8-hour average CO NAAQS of $10,000 \mu\text{g}/\text{m}^3$.

NAAQS Analysis: Lead

71. Lead NAAQS exist for one averaging period: calendar quarter ($0.00008 \mu\text{g}/\text{m}^3$).
72. A screening background concentration for lead from Nueces County was used in Las Brisas's modeling demonstration.
73. The maximum lead quarterly concentration from the LBEC sources was determined by multiplying the modeled annual concentration by four.
74. The maximum quarterly lead concentration resulting from the LBEC's emissions at any off-site location is $0.00008 \mu\text{g}/\text{m}^3$; and the ambient background concentration is $0.1 \mu\text{g}/\text{m}^3$.
75. The modeled lead emissions, when added to the background level of ambient lead, will not cause or contribute to an exceedance of the calendar quarter lead NAAQS of $0.15 \mu\text{g}/\text{m}^3$.

NAAQS Analysis: PM₁₀

76. PM₁₀ NAAQS exist for two averaging periods: 24-hour ($150 \mu\text{g}/\text{m}^3$) and annual ($50 \mu\text{g}/\text{m}^3$).

77. Background concentrations for PM_{10} were obtained from concentrations measured at monitoring site CAMS 635, which is located approximately 0.9 miles to the southeast of the LBEC site.
78. The maximum modeled 24-hour average PM_{10} concentration resulting from the combined effect of the emissions from the LBEC and sources affecting the LBEC impact area is $83.7 \mu\text{g}/\text{m}^3$; and the maximum ambient background concentration is $55 \mu\text{g}/\text{m}^3$.
79. The LBEC's PM_{10} emissions, when added to the background level of ambient PM_{10} , will not cause or contribute to an exceedance of the 24-hour PM_{10} NAAQS of $150 \mu\text{g}/\text{m}^3$.
80. The maximum modeled annual average PM_{10} concentration resulting from the combined effect of the emissions from the LBEC and sources affecting the LBEC impact area is $8.3 \mu\text{g}/\text{m}^3$; and the maximum ambient background concentration is $27 \mu\text{g}/\text{m}^3$.
81. The LBEC's PM_{10} emissions, when added to the background level of ambient PM_{10} , will not cause or contribute to an exceedance of the annual PM_{10} NAAQS of $50 \mu\text{g}/\text{m}^3$.

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NAAQS Analysis: $PM_{2.5}$

82. Both EPA and TCEQ accept demonstration of compliance with the PM_{10} NAAQS as a surrogate for demonstration of compliance with the $PM_{2.5}$ NAAQS.
83. The LBEC's emissions of PM_{10} will not cause or contribute to an exceedance of the PM_{10} NAAQS.
84. The LBEC's emissions of $PM_{2.5}$ will not cause or contribute to an exceedance of the $PM_{2.5}$ NAAQS.

NAAQS Analysis: Ozone

85. The LBEC will emit NO_x and volatile organic compounds (VOCs), which, in the presence of sunlight, can form ozone in the atmosphere.

86. TCEQ requires that an ozone impact analysis be performed to determine whether a proposed source will cause ozone exceedances in the local attainment area.
87. If the ambient ozone concentration is less than 75 parts per billion (ppb) and the source's VOC/NO_x ratio is less than 2:1, then local ozone impacts will be insignificant and the analysis is deemed complete.
88. Las Brisas performed an ozone impact analysis and determined that ambient ozone levels are less than 75 ppb and that the LBEC's VOC/NO_x ratio is less than 2:1.
89. Las Brisas demonstrated that there would not be a significant increase in the current ozone levels in the local attainment area due to the LBEC.

NAAQS Summary

90. Emissions from the LBEC will not cause or measurably contribute to an exceedance of any NAAQS.

PSD Increment Analysis

91. PSD increments are allowable incremental changes in off-property concentrations of certain pollutants for which PSD review has been triggered. Concentration increases in excess of these levels are considered by EPA as significantly deteriorating air quality.
92. Las Brisas performed a PSD increment demonstration for emissions of SO₂, NO₂, and PM₁₀ from the LBEC.
93. Maximum modeled concentrations resulting from emissions from the LBEC were above *de minimis* levels for SO₂ (3-hour, 24-hour, and annual averaging periods), NO₂ (for the annual averaging period), and PM₁₀ (for the 24-hour and annual averaging periods).

94. For the above pollutants and averaging times, Las Brisas incorporated emissions data for other PSD increment-consuming sources from TCEQ's Point Source Database into the model.
95. In addition to the Point Source Database data, Las Brisas incorporated emissions data for sources of PM₁₀ emissions located adjacent to the LBEC site on Port of Corpus Christi property that were not included in the Point Source Database.
96. For each of the above pollutants and averaging periods, SO₂ (3-hour, 24-hour, and annual averaging periods), NO₂ (for the annual averaging period), and PM₁₀ (for the annual averaging period), the combined impacts from the LBEC's maximum modeled concentrations and the PSD increment-consuming sources are less than the applicable PSD increment.

PSD Increment Analysis: SO₂

97. The maximum modeled 3-hour average SO₂ concentration resulting from the combined effect of the emissions from the LBEC and other PSD increment-consuming sources in the area is 236 µg/m³.
98. The LBEC's SO₂ emissions will not cause or contribute to an exceedance of the 3-hour average SO₂ PSD increment of 512 µg/m³.
99. The maximum modeled 24-hour average SO₂ concentration resulting from the combined effect of the emissions from the LBEC and other PSD increment-consuming sources in the area is 78.4 µg/m³.
100. The LBEC's SO₂ emissions will not cause or contribute to an exceedance of the 24-hour average SO₂ PSD increment of 91 µg/m³.

101. The maximum modeled annual average SO₂ concentration resulting from the combined effect of the emissions from the LBEC and other PSD increment-consuming sources in the area is 8.7 µg/m³.
102. The LBEC's SO₂ emissions will not cause or contribute to an exceedance of the annual average SO₂ PSD increment of 20 µg/m³.

PSD Increment Analysis: NO₂

103. The maximum modeled annual average NO₂ concentration resulting from the combined effect of the emissions from the LBEC and other PSD increment-consuming sources in the area is 6.6 µg/m³.
104. The LBEC's NO₂ emissions will not cause or contribute to an exceedance of the annual average NO₂ PSD increment of 25 µg/m³.

PSD Increment Analysis: PM₁₀

105. In the original application modeling, Las Brisas's maximum value considered for evaluation of the 24-hour average PM₁₀ concentration resulting from modeling the combined effect of the emissions from the LBEC and other PSD increment-consuming sources in the area was 29.7 µg/m³.¹²
106. In the original application modeling, Applicant adjusted emissions for PCCA Bulk Dock 2, in part, by increasing the moisture content that was inputted into the emission factor calculation from 2% to 4.8%.¹³
107. On May 24, 2010, Special Condition 5 of PCCA Bulk Dock 2 Permit No. 9498 was altered to state that “[a]ll material handled at the permitted facilities shall have a

¹² See Las Brisas Ex. 12 at 2; Ex. ED-36 at 15:12-13 (Jamieson).

¹³ See Las Brisas Ex. 7 at 44.

minimum moisture content of 4.8 percent,” which removes any question as to the appropriateness of Applicant’s moisture content adjustment.

108. The May 24, 2010 alteration to PCCA Bulk Dock 2 Permit No. 9498 also revised the maximum allowable emission rates to reflect the higher moisture content of material handled at Bulk Dock 2 and to remove sources from the permit that are either no longer in use or authorized by other permits. The total worst-case PM₁₀ emissions were reduced to 7.85 lbs/hr (when hourly emissions from stockpiles are considered) and 4.88 tons/yr.¹⁴
109. On remand, Applicant developed two material handling scenarios that the PCCA could employ to serve the LBEC.
110. Both scenarios are feasible options for meeting the LBEC’s material handling and storage needs, and both are capable of execution by PCCA.
111. The total worst case emission rates from each of the two material handling scenarios are 3.96 lbs/hr and 6.25 tons/yr.¹⁵
112. As illustrated by the table below, there will be no increase in PM emissions from off-site material handling sources in proximity to the LBEC above what was modeled by Applicant as part of its application or as part of its rebuttal case in the initial hearing.¹⁶

<u>Total PM/PM₁₀ Emission Rates From Off-Site Material Handling Sources (lbs/hr)</u>	<u>Application Modeling¹⁷</u>	<u>Rebuttal Modeling</u>	<u>Total Emissions Including Off-Site Material Handling Scenarios</u>
	<u>27.08¹⁸</u>	<u>23.83¹⁹</u>	<u>21.57²⁰</u>

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¹⁴ See Las Brisas Ex. 803 at 7-9; see also Las Brisas Ex. 700 at 8:12-22 (Ellis).

¹⁵ See Las Brisas Ex. 700 at 17:3-4 (Ellis).

¹⁶ See Las Brisas Ex. 906.

¹⁷ See Las Brisas Ex. 37; Trial Tr. at 558:11-19 (Kupper); see also Las Brisas Ex. 700 at 8:12-22 (Ellis).

¹⁸ See Trial Tr. at 636:9 to 637:1 (Kupper); see also Las Brisas Ex. 37.

¹⁹ See Trial Tr. at 636:9 to 637:11 (Kupper); see also Las Brisas Ex. 37.

113. The LBEC and the PCCA do not constitute a single stationary source, because: (i) the two are not under common control; and (ii) the LBEC and the PCCA do not belong to the same Standard Industrial Classification (“SIC”) grouping. The LBEC falls under SIC Major Group 49: Electric, Gas, and Sanitary Services; the PCCA falls under SIC Major Group 44: Water Transportation.²¹
114. The two material handling scenarios proposed on PCCA property are properly considered if at all, as ~~secondary~~ sources of secondary emissions.
- a) As sources of secondary emissions, the material handling scenarios do not affect the determination of the Area of Impact.²²
 - b) Only two modeling analyses – Applicant’s and the Executive Director’s –modeled the proposed Option 1 and Option 2 sources as sources of secondary emissions.²³
 - c) The correctly performed analyses of Applicant demonstrate that, after accounting for potential secondary emissions, the proposed LBEC sources will not cause or contribute to a violation of the PM₁₀ 24-hour increment at a time and place where the proposed project sources are predicted to be significant.²⁴

²⁰ See Las Brisas Ex. 37; *see also* Las Brisas Ex. 700 at 17:1-4 (Ellis); *see also* Las Brisas Ex. 803; *see also* Trial Tr. at 2686:14 to 2687:18 (Gasparini accepting calculation as represented).

²¹ See Las Brisas Remand Closing Argument at 7-8.

²² See Las Brisas Ex. 904; Trial Tr. at 2659:5-18, 2661:2-6 (Gasparini).

²³ See Trial Tr. at 2803:11-15 (Jamieson) (indicating that Applicant correctly conducted its modeling pursuant to the 1990 NSR Workshop Manual); 2825:17-18 (Jamieson) (“From my understanding, I consider the potential [Bulk Dock 1] and [Bulk Dock 3] scenarios as secondary emissions.”); 3031:17-22 (Hamilton) (agreeing that the Option 1 and Option 2 proposed sources constitute secondary emissions.).

²⁴ See Las Brisas Ex. 700 at 22:10-18 (Ellis); Trial Tr. at 2790:4 to 2791:23 (Jamieson) (testifying that, at the time stamps for which the proposed project sources were significant, the modeled predictions were less than 30 µg/m³); *see also* Trial Tr. at 2794:11 to 2795:2 (Jamieson) (testifying that the high-second-high prediction associated with the potential [Bulk Dock 3] scenario is 29.2 µg/m³, and that if the

- d) Specifically, Applicant demonstrated that:
- i. Considering the Option 1, or Bulk Dock 1 scenario, the high-second-high at a time when the proposed project sources are predicted to be significant is 26.12 $\mu\text{g}/\text{m}^3$.²⁵
 - ii. Considering the Option 2, or Bulk Dock 3 scenario, the high-second-high at a time when the proposed project sources are predicted to be significant is 24.2 $\mu\text{g}/\text{m}^3$.²⁶
 - iii. Considered the Option 2, or Bulk Dock 3 scenario, the high-second-high at a time when the proposed project sources are predicted to be significant, taking into account Mr. Jamieson's changes, is 16.7 $\mu\text{g}/\text{m}^3$.²⁷

115. The LBEC's PM_{10} emissions will not cause or contribute to an exceedance of the 24-hour average PM_{10} PSD increment of 30 $\mu\text{g}/\text{m}^3$ because, at times and locations where the LBEC sources are significant, there are no receptors over the PSD increment of 30 $\mu\text{g}/\text{m}^3$.²⁸
116. The ultimate conclusions from Applicant's PM_{10} increment analysis – particularly that PM_{10} emissions from proposed project sources will not cause or contribute to an exceedance of the PM_{10} 24-hour increment of 30 $\mu\text{g}/\text{m}^3$ at a time and place where the

high-second-high prediction is less than 30, “it shows a demonstration that the increment is met”) (emphasis added).

²⁵ See Trial Tr. at 3181:12-23 (Ellis).

²⁶ See Trial Tr. at 3181:12-23 (Ellis).

²⁷ See Trial Tr. at 3178:14-18 (Ellis). (Mr. Jamieson's modeling considered only the Option 2, or Bulk Dock 3, scenario).

²⁸ See Las Brisas Ex. 12 at 2; Ex. ED-36 at 15:12-14 (Jamieson); see also Las Brisas Ex. 910 at 3; Las Brisas Ex. 12 at 3; see also Trial Tr. at 2790:4-18 (Jamieson testifying that his modeling results demonstrated that the high-second-high values for all receptors in the AOI were below 30 $\text{M-g}/\text{m}^3$); 2794:11 to 2795:2 (Jamieson testifying that the high-second-high prediction associated with the potential Bulk Dock 3 scenario is 29.2 $\mu\text{g}/\text{m}^3$, and that if the high-second-high prediction is less than 30, “it shows a demonstration that the increment is met”) (emphasis added).

proposed project sources are significant – is unchanged by potential secondary emissions.²⁹

117. The maximum value considered for evaluation of the annual average PM₁₀ concentration resulting from modeling the combined effect of the emissions from the LBEC and other PSD increment-consuming sources in the area is 4.44 µg/m³.
118. The LBEC's PM₁₀ emissions will not cause or contribute to an exceedance of the annual average PM₁₀ PSD increment of 17 µg/m³.

Review of Additional Modeling Performed By Applicant In Support Of The Application

119. At the conclusion of the first hearing, the Executive Director indicated that it had not had an opportunity to verify Applicant's rebuttal modeling as required by guidance.³⁰
120. In April 2010, after the original hearing concluded and before the Commission remanded this matter to SOAH, the TCEQ Air Dispersion Modeling Team ("ADMT") analyzed Applicant's rebuttal modeling and verified that that there were no exceedances of the PM₁₀ 24-hour increment of 30 µg/m³ at a time and place where the proposed project sources, i.e., the LBEC sources, were predicted to be significant.³¹

²⁹ Analysis of the PM₁₀ 24-hour increment was the issue of concern raised in the prior hearing and addressed by the parties on remand. *See, e.g.*, Las Brisas Ex. 700 at 8:1 to 9:4 (Ellis) (describing scope of work performed for this remand hearing); EDF Exs. 405, 411 (reporting results of PM₁₀ 24-hour increment modeling); Las Brisas Ex. 910 (Air Quality Modeling Team's memorandum regarding results of PM₁₀ 24-hour increment modeling audit).

³⁰ Executive Director's Reply to Closing Arguments at 4; *see also id.* n.13 ("ED counsel testified that the modeling experts had not had access to all of the computer software they would need to review the modeling but were prepared to tell the ALJs how long it would take to do so. Tr. 9 at 2161:25-2162:12."); *see also* EDF's Reply to Exceptions to Proposal for Decision at 35 ("The ED is requesting remand on the basis that 'federal guidance requires the ED to verify the Applicant's modeling prior to issuance of the permit.' See ED's Exceptions at 11. Further, the ED's Exceptions filed April 19, 2010 make clear that the ED still believes remand on this issue is appropriate.").

³¹ *See* Trial Tr. at 2774:22 to 2777:4 (Jamieson).

121. Also prior to the June 30, 2010 agenda, but only after ADMT found that Applicant's rebuttal modeling was demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were predicted to be significant, ADMT conducted additional analyses, including a source culpability analysis, pursuant to the State's responsibility to further evaluate and substantiate the modeled predictions greater than 30 µg/m³ at times when the LBEC sources are not predicted to be significant.³²
122. On July 15, 2010, Applicant prefiled its direct case on remand,³³ which included the results of Applicant's modeling of two potential off-site material handling scenarios.³⁴
123. On August 25, 2010, ADMT issued its second modeling audit memorandum, which reflected the ADMT's review of the PM₁₀ 24-hr increment modeling files and the potential scenario modeling files that were submitted by the applicant on rebuttal during the first hearing and on remand.³⁵
124. The ADMT's analysis of Applicant's potential scenario modeling verified that that there were no exceedances of the PM₁₀ 24-hour increment of 30 µg/m³ at a time and place where the proposed project sources, i.e., the LBEC sources, were predicted to be significant

³² *Id.*

³³ *See* Order No. 18. Applicant revised its prefiled direct case on July 28, 2010 and October 4, 2010.

³⁴ *See* Las Brisas Ex. 700 at 17:5 to 19:6 (Ellis); Las Brisas Ex. 704.

³⁵ Las Brisas Ex. 910.

125. While reviewing Applicant's potential scenario modeling, the ADMT noted that the output contained predicted values greater than 30 µg/m³ at times when the proposed project sources were not significant.³⁶
126. Then, only after ADMT found that Applicant's scenario modeling was demonstrative of at least one valid predicted violation occurring at a time and place other than those when LBEC source emissions were significant,"³⁷ ADMT conducted additional analyses pursuant to the State's responsibility to further evaluate and substantiate the modeled predictions greater than 30 µg/m³ at times when the LBEC sources are not predicted to be significant.³⁸
127. The further evaluations conducted by the ADMT yielded a result of 29.2 µg/m³ (less than 30 µg/m³) for all receptors in the area of impact.³⁹
128. The Executive Director fulfilled his obligation to verify Applicant's modeling and concluded that the permit can issue.⁴⁰

PSD Increment Analysis: Summary

129. Emissions from the LBEC will not cause or contribute to exceedances of any PSD increments.⁴¹
130. The LBEC's PM₁₀ emissions will not cause or contribute to an exceedance of the 24-hour average PM₁₀ PSD increment of 30 µg/m³ because, as demonstrated by the Applicant, at

³⁶ See Trial Tr. at 2790:4-18 (Jamieson).

³⁷ PFD at 24.

³⁸ Trial Tr. at 2790:14-18 (Jamieson).

³⁹ See Las Brisas Ex. 910 at 3; see also Trial Tr. at 2805:17 to 2806:2 (Jamieson testifying that, based on his modeling, all receptors in the AOI were below 30 µg/m³).

⁴⁰ See Trial Tr. at 3034:6 to 3034:24 (Hamilton).

⁴¹ See Las Brisas Ex. 100 at 41:1-3 (Kupper); Las Brisas Ex. 12 at 2; Ex. ED-36 at 15:9-11, 22-23 (Jamieson).

times and locations where the LBEC sources are significant, there are no receptors over the PSD increment of 30 µg/m³.

131. The Executive Director's August 25, 2010 modeling⁴² yielded a result of 29.2 µg/m³ regardless of whether the proposed LBEC sources were significant at the time and thus verified that there is no violation of the PM₁₀ 24-hour increment.⁴³

~~111. Given the deficiencies in its modeling listed below, Las Brisas failed to sufficiently demonstrate that a 24 hr PM₁₀ Increment violation would not occur at a significant receptor when considering both time and space:~~

~~a) Many sources associated with the tenant leasing pad sites from the Port of Corpus Christi Authority, as well as the sources associated with the Port of Corpus Christi Authority Dock I permit were not consistent with their respective permit representations.~~

~~Insufficient supporting data was provided for the determination of the worst case operating scenario combination for the Port of Corpus Christi Authority Dock 2 sources relied on in the modeling analyses.~~

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PSD Monitoring Analysis

132. Of the criteria pollutants that will be emitted by the LBEC in PSD-significant amounts, PSD monitoring *de minimis* levels exist for SO₂ (24-hour averaging period); NO₂ (annual averaging period), CO (8-hour averaging period), and PM₁₀ (24-hour averaging period).

⁴² See Las Brisas Ex. 910 at 3; *see also* Trial Tr. at 2794:15-22 (Jamieson).

⁴³ See Trial Tr. at 2806:8 to 2807:4 (Jamieson); *see also* Trial Tr. at 2790:4-18 (Jamieson testifying that his modeling results demonstrated that the high-second-high values for all receptors in the AOI were below 30 M-g/m³); 2794:11 to 2795:2 (Jamieson testifying that the high-second-high prediction associated with the potential Bulk Dock 3 scenario is 29.2 µg/m³, and that if the high-second-high prediction is less than 30, "it shows a demonstration that the increment is met") (emphasis added).

133. Maximum modeled concentrations resulting from the LBEC's emissions are below all applicable PSD monitoring *de minimis* levels except for 24-hour SO₂ and 24-hour PM₁₀, for which Las Brisas used existing monitoring data.

State Property Line Analysis

134. State property-line standards are maximum air concentrations that are allowed to result from all sources on a contiguous site.
135. State property-line standards exist for total sulfuric acid (H₂SO₄) for 1-hour and 24-hour averaging periods and for SO₂ for a 30-minute averaging period.
136. Las Brisas modeled site-wide emissions from the LBEC for comparison to applicable property-line standards.
137. Las Brisas's maximum off-property modeled concentrations were below the applicable state property line standards.

Property-Line Standard: H₂SO₄

138. The maximum 1-hour average H₂SO₄ concentration resulting from site-wide emissions at any off-property location is 25.5 µg/m³.
139. The site-wide H₂SO₄ emissions will not cause an exceedance of the 1-hour H₂SO₄ property line standard of 50 µg/m³.
140. The maximum 24-hour average H₂SO₄ concentration resulting from site-wide emissions at any location is 4.7 µg/m³.
141. The site-wide H₂SO₄ emissions will not cause an exceedance of the 24-hour H₂SO₄ property line standard of 15 µg/m³.

Property-Line Standard: SO₂

- 142. The maximum 30-minute average SO₂ concentration resulting from site-wide emissions at any off-property location is 265.6 µg/m³.
- 143. The site-wide SO₂ emissions will not cause an exceedance of the 30-minute SO₂ property line standard of 1,021 µg/m³.

Property-Line Standard Summary

- 144. The LBEC will not cause an exceedance of any applicable state property-line standard.

ESL Analysis

- 145. The TCEQ uses ESLs as part of the state effects review of an air permit application, as conservative guideline levels to evaluate the potential for effects to public health, welfare or property as a result of exposure to air pollutants for which there is no state or federal air quality standard.
- 146. Health-based ESLs are set by starting with exposure levels that have been shown to cause no adverse health effects or very minor health effects in humans or animals, and then applying generous safety factors to establish levels that will be protective of the most sensitive members of the general public. Health-based ESLs are frequently set at levels that are 100 to 1000 times lower than exposure levels that are designed to be safe for workers exposed to airborne chemicals in occupational settings.
- 147. ESLs are set very conservatively and are designed to protect even the most sensitive members of the population, including children, the elderly, and people with pre-existing conditions.
- 148. Maximum modeled air concentrations that do not exceed the ESL will not cause adverse health or welfare effects from the public's exposure to that chemical, and concentrations

above the ESLs will not necessarily cause adverse health or welfare effects, but may require further study.

149. It is common for an applicant's maximum modeled concentrations to exceed some ESLs and nevertheless receive authorization from TCEQ, as long as the steps outlined in TCEQ's Effects Evaluation Procedure are followed and the ground level concentrations are deemed acceptable by the TCEQ.
150. An ESL analysis is conducted only for sources on the applicant's property.
151. ESLs are set sufficiently conservatively such that if a source's maximum predicted off-property concentration is below the ESL, there will be no adverse health or welfare effects from exposure to that concentration even if there are also naturally occurring background concentrations or contributions from nearby sources.
152. The ESL system currently used by TCEQ adequately protects the health and welfare of the public.
153. Las Brisas modeled the LBEC's emissions of the following non-criteria pollutants: ammonia, aluminum, arsenic, beryllium, cadmium, calcium, hydrogen chloride (HCl), chromium, copper, hydrogen fluoride (HF), iron, magnesium, manganese, mercury, nickel, potassium, selenium, silica, sodium, titanium, and vanadium.
154. Las Brisas compared the maximum concentrations of the modeled non-criteria pollutants to the ESLs contained in TCEQ's September 15, 2008 ESL list.
155. For ammonia, the maximum modeled 1-hour average concentration from the LBEC's emissions is $20.8 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for ammonia of $170 \mu\text{g}/\text{m}^3$.

156. The maximum modeled annual average concentration resulting from the LBEC's emissions of ammonia is $0.2 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for ammonia of $17 \mu\text{g}/\text{m}^3$.
157. For aluminum, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.012 \mu\text{g}/\text{m}^3$, which is below the applicable 1-hour ESL for aluminum of $50 \mu\text{g}/\text{m}^3$.
158. The maximum modeled annual average concentration resulting from the LBEC's emissions of aluminum is $0.0004 \mu\text{g}/\text{m}^3$, which is less than the applicable annual ESL for aluminum of $5 \mu\text{g}/\text{m}^3$.
159. For arsenic, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.002 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for arsenic of $0.1 \mu\text{g}/\text{m}^3$.
160. The maximum modeled annual average concentration resulting from the LBEC's emissions of arsenic is $0.00001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for arsenic of $0.01 \mu\text{g}/\text{m}^3$.
161. For beryllium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.0004 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for beryllium of $0.02 \mu\text{g}/\text{m}^3$.
162. The maximum modeled annual average concentration resulting from the LBEC's emissions of beryllium is less than $0.00001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for beryllium of $0.002 \mu\text{g}/\text{m}^3$.
163. For cadmium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.001 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for cadmium of $0.1 \mu\text{g}/\text{m}^3$.

164. The maximum modeled annual average concentration resulting from the LBEC's emissions of cadmium is less than $0.00001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for cadmium of $0.01 \mu\text{g}/\text{m}^3$.
165. For calcium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.005 \mu\text{g}/\text{m}^3$, which is below the applicable 1-hour ESL for calcium of $20 \mu\text{g}/\text{m}^3$.
166. The maximum modeled annual average concentration resulting from the LBEC's emissions of calcium is $0.0002 \mu\text{g}/\text{m}^3$, which is less than the applicable annual ESL for calcium of $2 \mu\text{g}/\text{m}^3$.
167. For HCl, the maximum modeled 1-hour average concentration from the LBEC's emissions is $20.6 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for HCl of $75 \mu\text{g}/\text{m}^3$.
168. The maximum modeled annual average concentration resulting from the LBEC's emissions of HCl is $0.0185 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for HCl of $7.5 \mu\text{g}/\text{m}^3$.
169. For chromium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.017 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for chromium of $1 \mu\text{g}/\text{m}^3$.
170. The maximum modeled annual average concentration resulting from the LBEC's emissions of chromium is $0.0001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for chromium of $0.1 \mu\text{g}/\text{m}^3$.
171. For copper, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.001 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for copper of $10 \mu\text{g}/\text{m}^3$.

172. The maximum modeled annual average concentration resulting from the LBEC's emissions of copper is less than $0.0001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for copper of $1 \mu\text{g}/\text{m}^3$.
173. For HF, the maximum modeled 1-hour average concentration from the LBEC's emissions is $1.8 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for HF of $5 \mu\text{g}/\text{m}^3$.
174. The maximum modeled annual average concentration resulting from the LBEC's emissions of HF is $0.0017 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for HF of $0.5 \mu\text{g}/\text{m}^3$.
175. For iron, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.063 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for iron of $50 \mu\text{g}/\text{m}^3$.
176. The maximum modeled annual average concentration resulting from the LBEC's emissions of iron is $0.0015 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for iron of $5 \mu\text{g}/\text{m}^3$.
177. For magnesium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.002 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for magnesium of $50 \mu\text{g}/\text{m}^3$.
178. The maximum modeled annual average concentration resulting from the LBEC's emissions of magnesium is $0.0001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for magnesium of $5 \mu\text{g}/\text{m}^3$.
179. For manganese, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.16 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for manganese of $2 \mu\text{g}/\text{m}^3$.
180. The maximum modeled annual average concentration resulting from the LBEC's emissions of manganese is $0.0001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for manganese of $0.2 \mu\text{g}/\text{m}^3$.
181. For mercury, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.001 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for mercury of $0.25 \mu\text{g}/\text{m}^3$.

182. The maximum modeled annual average concentration resulting from the LBEC's emissions of mercury is less than $0.0001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for mercury of $0.025 \mu\text{g}/\text{m}^3$.
183. For nickel, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.148 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for nickel of $0.15 \mu\text{g}/\text{m}^3$.
184. The maximum modeled annual average concentration resulting from the LBEC's emissions of nickel is $0.007 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for nickel of $0.015 \mu\text{g}/\text{m}^3$.
185. For potassium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.007 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for potassium of $50 \mu\text{g}/\text{m}^3$.
186. The maximum modeled annual average concentration resulting from the LBEC's emissions of potassium is $0.0003 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for potassium of $5 \mu\text{g}/\text{m}^3$.
187. For selenium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.07 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for selenium of $2 \mu\text{g}/\text{m}^3$.
188. The maximum modeled annual average concentration resulting from the LBEC's emissions of selenium is $0.00001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for selenium of $0.2 \mu\text{g}/\text{m}^3$.
189. For silica, the maximum modeled 1-hour average concentration from the LBEC's emissions is $1.97 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for silica of $14 \mu\text{g}/\text{m}^3$.
190. The maximum modeled annual average concentration resulting from the LBEC's emissions of silica is $0.14 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for silica of $0.33 \mu\text{g}/\text{m}^3$.

191. For sodium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.016 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for sodium of $20 \mu\text{g}/\text{m}^3$.
192. The maximum modeled annual average concentration resulting from the LBEC's emissions of sodium is $0.0006 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for sodium of $2 \mu\text{g}/\text{m}^3$.
193. For titanium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.0002 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for titanium of $50 \mu\text{g}/\text{m}^3$.
194. The maximum modeled annual average concentration resulting from the LBEC's emissions of selenium is $0.00001 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for selenium of $5 \mu\text{g}/\text{m}^3$.

ESL Analysis: Vanadium

195. For vanadium, the maximum modeled 1-hour average concentration from the LBEC's emissions is $0.707 \mu\text{g}/\text{m}^3$, which is approximately 1.4 times the 1-hour ESL for vanadium of $0.5 \mu\text{g}/\text{m}^3$.
196. The maximum modeled 1-hour average concentration for vanadium is predicted to exceed the 1-hour ESL for only three hours per year, at any point off property.
197. The maximum modeled 1-hour average concentration for vanadium at any non-industrial receptor is predicted to exceed the 1-hour ESL by 1.2 times and only for two hours per year.
198. The short-term ESL for vanadium is conservative.
199. The maximum modeled annual average concentration resulting from the LBEC's emissions of vanadium is $0.032 \mu\text{g}/\text{m}^3$, which is below the annual ESL for vanadium of $0.05 \mu\text{g}/\text{m}^3$.

200. No adverse health or welfare effects will result from the public's exposure to emissions of vanadium from the LBEC.

ESL Summary

201. No adverse public health or welfare effects will result from the LBEC's emission of air contaminants for which no air quality standard exists.

Additional Findings Concerning Air Emissions

202. The LBEC stationary vents will not exceed the opacity limit of 20 percent over a six-minute period established in 30 TEX. ADMIN. CODE § 111.111(a)(1)(B).
203. The LBEC will comply with limits on the emission rate of particulate matter from the auxiliary boilers, propane vaporizers, diesel engines, and material handling baghouses, established under 30 TEX. ADMIN. CODE § 111.151.
204. Emissions of particulate matter from the LBEC CFB boilers will not be greater than 0.3 pound total suspended particulates per MMBtu heat input over a two-hour period during solid fuel firing.
205. Emissions of particulate matter from the LBEC CFB boilers will not be greater than 0.1 pound total suspended particulates per MMBtu heat input over a two-hour period during natural gas or propane firing.
206. Emissions of SO₂ from the LBEC CFB boilers will not be greater than 3.0 pound per MMBtu heat input over a three-hour period during solid fuel firing.
207. TCEQ disaster review requirements were triggered for the LBEC as a result of the on-site storage of anhydrous ammonia, which will be used as a reagent in the selective non-catalytic reduction (SNCR) NO_x emission control equipment.

208. The Permit Application included a Disaster Review Checklist identifying the process controls, mitigation systems, monitoring/detection systems, and emergency response plan measures that Las Brisas will implement to minimize the disaster potential associated with the storage of anhydrous ammonia and to protect the public health and welfare.

Summary of Protection of Public Health and Welfare

209. The proposed emissions from the LBEC will comply with all ambient air contaminant standards and guidelines at off-property locations.

Unregulated Substances

210. Carbon dioxide is not currently subject to regulation under the Federal Clean Air Act (FCAA) and has not previously been subject to regulation.

211. Carbon dioxide is not currently subject to regulation under the Texas Clean Air Act (TCAA) and has not previously been subject to regulation.

212. The LBEC will emit some substances that are not presently regulated under the FCAA or the TCAA, such as water vapor, nitrogen, methane, ethane, and carbon dioxide.

Measurement of Emissions: 30 TEX. ADMIN. CODE § 116.111(a)(2)(B)

213. Las Brisas will install, operate, and maintain continuous emissions monitoring systems (CEMS) to provide a continuous demonstration of compliance with limits of NO_x, CO, SO₂, and NH₃ from the LBEC CFB boiler stacks.

214. Las Brisas will install, operate, and maintain a continuous opacity monitoring system (COMS) to provide a continuous demonstration of compliance with the limitation on opacity from the LBEC CFB boiler stacks.

215. Las Brisas will install, operate, and maintain CEMS or a sorbent trap to provide a continuous demonstration of compliance with limits of mercury from the LBEC CFB boiler stacks.
216. Las Brisas will perform initial emission testing; sample petroleum coke quarterly to determine the heat content and trace metal concentrations; perform annual stack testing on the CFB boilers for pollutants not monitored with a CEMS; and undertake other actions at various emission points throughout the LBEC site to ensure that emissions are within permit limits and comply with the terms of the Draft Permit.
217. Las Brisas's proposed methods for measuring emissions from the LBEC facilities are adequate to assure compliance with the permit conditions and emissions limitations of the Draft Permit.
218. The Draft Permit contains appropriate emissions-measuring provisions for each type of emission from each emission point, with consideration given to the relative significance of each and to any applicable emissions measurement requirements of federal programs such as the New Source Performance Standards (NSPS).

Best Available Control Technology (BACT): 30 TEX. ADMIN. CODE § 116.111(a)(2)(C)

219. The TCEQ has provided a draft guidance document entitled "Evaluating Best Available Control Technology (BACT) in Air Permit Applications," setting forth guidance for evaluation of BACT proposals submitted in a New Source Review air permit application.
220. Under the draft guidance document relied on by the Executive Director in evaluating BACT, the BACT evaluation is conducted using a tiered analysis approach, involving three different tiers. A Tier I evaluation involves a comparison of the applicant's BACT proposal to emission reduction performance levels accepted as BACT in recent permit

reviews involving the same process or industry, with an evaluation of new technical developments necessary in some cases. A Tier II evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry. A Tier III evaluation is a detailed technical and quantitative economic analysis of all emission reduction options available for the process under review. The guidance document also notes that the Tier III evaluation is rarely necessary because technical practicability and economic reasonableness have usually been firmly established by industry practice as identified in the first two tiers.

221. Las Brisas's BACT analysis identified recently approved permits for several petroleum coke-fired CFB boilers as well as support facilities similar to those that will be used as part of the LBEC.
222. Las Brisas's BACT analysis was conducted under Tier I, although Las Brisas went beyond Tier I and provided information to TCEQ demonstrating that selective catalytic reduction (SCR) technology is not technically feasible for the control of NO_x emissions from petroleum coke-fired CFB boilers.
223. Las Brisas's BACT analysis was performed in accordance with TCEQ guidance.
224. For the CFB boilers, Las Brisas will use SNCR to minimize NO_x emissions; a fabric filter baghouse to control emissions of PM and trace metals; limestone injection and a polishing scrubber to control emissions of SO₂, HCl, HF, and H₂SO₄; and limestone injection, fabric filters, and an activated carbon injection system to control mercury emissions.
225. For the auxiliary boilers, operation of which will be limited to an annual capacity factor of 28.5 percent each based on heat input, low-NO_x burners will be used to minimize NO_x

emissions, pipeline quality natural gas will be used to minimize SO₂ and PM emissions, and efficient combustion technology will be used to minimize VOC and CO emissions.

226. For the propane vaporizers, operation of which will be limited to an annual capacity factor of 28.5 percent each based on heat input, propane will be used to minimize PM, VOC, and SO₂ emissions.
227. For the material handling sources, a combination of fabric filters and enclosed conveyor systems will be used to control the emissions of PM and PM₁₀.
228. Petroleum coke and limestone will be transported on-site via a conveyor that will originate off-site.⁴⁴
229. The on-site petroleum coke and limestone conveyor will transport petroleum coke and limestone to the Material Transfer Tower that feeds the Petroleum Coke Silos and Limestone Bunkers.⁴⁵
230. The entire length of the on-site petroleum coke and limestone conveyor will be totally enclosed in a tube.
231. Because of the enclosure, there will be no emissions from the on-site petroleum coke and limestone conveyor.
232. The only emissions that will result from the on-site transfer of petroleum coke and limestone to and within the Material Transfer Tower are those emissions that will be exhausted through the Petroleum Coke Silo baghouses. Because the emissions from the Petroleum Coke Silo baghouses were represented in Las Brisas's permit application and

⁴⁴ See Las Brisas Ex. 600 at 28:16-17 (Cabe).

⁴⁵ See Las Brisas Ex. 600 at 28:17-19 (Cabe).

are accounted for in the Draft Permit, the on-site petroleum coke and limestone conveyor will not be a source of unauthorized emissions.⁴⁶

233. Applicant has the ability to design and install an on-site petroleum coke and limestone conveyor system that will not be a source of emissions.⁴⁷

234. For the diesel-fired emergency generators, fire water pumps, and boiler feed water pumps, operation of which will be limited to 500 non-emergency hours per year each, the low sulfur fuel will be used to minimize SO₂ emissions.

235. The diesel engines will meet applicable NSPS for Stationary Compression Ignition Internal Combustion Engines.

236. For the cooling tower, PM emissions will be minimized through the cooling tower design and by utilizing mist eliminators on the tower.

237. For the diesel storage tanks, VOC emissions will be minimized by the low vapor pressure of fuel stored in the tanks and by utilizing submerged filling.

238. For the ammonia handling and storage facilities, ammonia emissions will be minimized by storing the ammonia in high pressure tanks and by conducting daily Audio/Visual/Olfactory inspections to detect leaks.

239. For the ash loading systems, a combination of a sealed loading spout and a fabric shroud will be used to control the emissions of PM and PM₁₀.

240. The fly ash and bottom ash loading systems will utilize a loading spout that creates a seal so that there will be no leakage of fly ash or bottom ash during the loading of tank trucks.

⁴⁶ See Las Brisas Ex. 600 at 30:13-17 (Cabe); see also Las Brisas Exhibit 3, Figure 4-1 at 00029.

⁴⁷ See Las Brisas Ex. 600 at 28:14 to 31:1; see also Las Brisas Ex. 603; OPIC's Closing Argument at 6 ("There is no testimony to controvert the evidence presented by the Applicant and the ED on this issue"). Moreover, the Executive Director has reviewed this type of conveyor before and has opined that Applicant has the ability to design a conveyor system that will not be a source of emissions. See Trial Tr. at 3034:12 to 3037:10 (Hamilton); Executive Director's Closing Argument at 7-8.

- a) The loading spout will utilize a fabric shroud to pull the dust or ash laden air from the tank truck back into the ash silos.⁴⁸
- b) This air will be exhausted through the silo baghouses.⁴⁹

241. The only emissions that will occur from the fly ash and bottom ash loading systems are those that will be routed through the ash silo baghouses, which were represented in Las Brisas's permit application and are accounted for in the Draft Permit.⁵⁰

- a) Because the emissions from the ash silo baghouses were represented in Las Brisas's permit application and are accounted for in the Draft Permit, the fly ash and bottom ash loading systems will not be a source of unauthorized emissions.⁵¹
- b) Applicant has the ability to design and install a system for ash loading into trucks that will not be a source of emissions.⁵²

BACT for CFB Boilers

242. Utilization of good combustion practices with an emission rate of 0.11 lb/MMBtu on a 12-month rolling average basis is BACT for CO emissions from the CFB boilers.

⁴⁸ See Las Brisas Ex. 600 at 30:22-23 (Cabe).

⁴⁹ See Las Brisas Ex. 600 at 31:23 to 32:2 (Cabe); *see also* Las Brisas Exhibit 3, Figure 4-1 at 00029.

⁵⁰ See Las Brisas Ex. 600 at 31:23 to 32:5 (Cabe); *see also* Las Brisas Ex. 3 at 00032, 00087.

⁵¹ See Las Brisas Ex. 600 at 32:2-5 (Cabe); *see also* Las Brisas Ex. 3 at 00032, 00087.

⁵² See Las Brisas Ex. 600 at 31:3 to 34:13; *see also* Las Brisas Exs. 604, 605, 606, and 607; OPIC's Closing Argument at 7 ("There is no testimony to controvert the evidence presented by the Applicant and ED on this issue"). Moreover, the Executive Director has reviewed this type of system before and has opined that Applicant has the ability to design an ash loading system that will not be a source of emissions. See Trial Tr. at 3037:11 to 3039:11 (Hamilton); Executive Director's Closing Argument at 8-9.

243. The CFB boiler design and the application of SNCR to meet NO_x emission limits of 0.10 lb/MMBtu over an hourly average and 0.070 lb/MMBtu over a 30-day rolling average is BACT for NO_x emissions from the CFB boilers.
244. The use of SCR was rejected as BACT for NO_x emissions from the CFB boilers because it has not been shown to be technically feasible.
245. Application of limestone injection and polishing scrubbers with emission rates of 0.144 lb/MMBtu over a 30-day rolling average and 0.086 lb/MMBtu over a 12-month rolling average is BACT for SO₂ emissions from the CFB boilers.
246. Application of fabric filter baghouses with a filterable PM/PM₁₀ emission rate of 0.011 lb/MMBtu and a total PM/PM₁₀ emission rate of 0.025 lb/MMBtu over a 3-hour average is BACT for PM and PM₁₀ emissions from the CFB boilers.
247. Application of good combustion practices with an emission rate of 0.0050 lb/MMBtu over a 3-hour average is BACT for VOC emissions from the CFB boilers.
248. Application of limestone injection and polishing scrubbers with an emission rate of 0.022 lb/MMBtu over a 3-hour average is BACT for H₂SO₄ emissions from the CFB boilers.
249. Application of limestone injection and polishing scrubbers with an emission rate of 0.0038 lb/MMBtu over a 3-hour average is BACT for fluorine emissions (primarily in the form of HF) from the CFB boilers.
250. Application of limestone injection and polishing scrubbers with an emission rate of 0.0044 lb/MMBtu over a 3-hour average is BACT for HCl, emissions from the CFB boilers.

251. Application of limestone injection, fabric filters, and the use of activated carbon with an emission rate of $5.70.86 \times 10^{-67}$ lb/MMBtu over a 12-month rolling average is BACT for mercury emissions from the CFB boilers.
252. Application of a fabric filter baghouses is BACT for lead emissions from the CFB boilers.
253. Application of operational control systems with an emission rate of 10 ppm over an hourly average and 5 ppm over a 12-month rolling average is BACT for emissions of ammonia from the CFB boilers.

BACT for Auxiliary Boilers

254. Application of low-NO_x burners to meet a NO_x emission limit of 0.035 lb/MMBtu represents BACT for the auxiliary boilers.
255. Because the auxiliary boilers are limited by a 28.5-percent annual capacity limitation, additional controls are not cost effective. Therefore the use of low-NO_x burners, natural gas, and efficient combustion technology represent BACT for the auxiliary boilers.

BACT for Propane Vaporizers

256. There are no low-NO_x burners available for the propane vaporizers. Therefore the use of propane represents BACT for the propane vaporizers.

Material Handling BACT

257. Use of enclosed conveyors and fabric filters designed to achieve emission limits of 0.005 and 0.01 grain PM/dry standard cubic foot is BACT for emissions of PM/PM₁₀ from the material handling sources.

Diesel Engine BACT

258. The use of diesel engines that meet the requirements of NSPS Subpart III, limiting operations no more than 500 hours per year, and the use of low sulfur diesel fuel represents BACT for the diesel engines associated with the emergency generators, fire water pumps, and boiler feed water pumps.

Cooling Tower BACT

259. The design of the cooling towers and utilization of mist eliminators to limit drift to 0.0005-percent is BACT for emissions of PM from the cooling towers.

Diesel Storage Tanks BACT

260. Submerged filling and the low vapor pressure of fuel stored in the tanks is BACT for emissions of VOCs from the diesel storage tanks.

Ammonia Handling and Storage-Facilities BACT

261. Storing the ammonia in high pressure tanks and conducting daily Audio/Visual/Olfactory inspections to detect leaks is BACT for the ammonia handling and storage facilities.

BACT Summary

262. The above emission limitations and controls are BACT.

NSPS: 30 TEX. ADMIN. CODE § 116.111(a)(2)(D)

263. The CFB boilers are expected to comply with NSPS Subpart Db.

264. The diesel engines are expected to comply with NSPS Subpart III.

265. Compliance with all applicable NSPS requirements is a condition of the Draft Permit. Special Condition 3 of the Draft Permit needs to be revised to reflect that NSPS Subpart

Db, not Subpart Da, applies to the CFB boilers due to revisions to NSPS Subpart Da that occurred after the Draft Permit was issued by TCEQ.

NESHAPs: 30 TEX. ADMIN. CODE § 116.111(a)(2)(E)

266. There are no national emissions standards for hazardous air pollutants (NESHAPs) applicable to facilities of a type comprising the LBEC.

NESHAPs for Source Categories: 30 TEX. ADMIN. CODE § 116.111(a)(2)(F)

267. The LBEC diesel engines are expected to comply with 40 CFR Part 63, Subpart ZZZZ, the requirements for NESHAPs for source categories, or maximum achievable control technology (MACT) standards, for stationary reciprocating internal combustion engines.

268. MACT Subpart DDDDD for Industrial/Commercial/Institutional Boilers and Process Heaters, which would have applied to the auxiliary boilers and propane vaporizers, has been vacated. The case-by-case MACT analysis filed by Las Brisas makes a case-by case MACT demonstration for the auxiliary boilers and propane vaporizers.

Performance Demonstration: 30 TEX. ADMIN. CODE § 116.111(a)(2)(G)

269. The Draft Permit contains provisions for demonstrating achievement of the performance specified in the Permit Application, such as conducting performance testing of emissions from the CFB boiler, auxiliary boiler, and propane vaporizer stacks and selected material handling baghouses once the LBEC is constructed and operating.

270. Provisions for demonstrating achievement of the performance specified in the application will adequately demonstrate the performance of the LBEC facilities.

Nonattainment Review: 30 TEX. ADMIN. CODE § 116.111(a)(2)(H)

271. The LBEC will be located in Nueces County, which is classified as attainment or not classifiable for all criteria pollutants.
272. Because the LBEC is not located in an area that is designated nonattainment for any air contaminant, the LBEC is not subject to nonattainment review requirements.

PSD Review: 30 TEX. ADMIN. CODE § 116.111(a)(2)(I)

273. As part of Texas's State Implementation Plan, EPA has approved TCEQ's program for using Chapter 116 new source review permits as the vehicle for undertaking the demonstrations required by the federal PSD program.
274. The LBEC has the potential to emit more than 100 tons of any single regulated air contaminant and the following pollutants in "significant" quantities as defined in 40 C.F.R. §52.21(b)(23): NO_x, SO₂, CO, PM, PM₁₀, VOC, and H₂SO₄.
275. Las Brisas conducted a source impact analysis showing that allowable emissions from the LBEC will not cause or measurably contribute to air pollution in violation of any NAAQS or PSD increment.
276. Las Brisas conducted an appropriate additional impacts analysis that assessed the potential impairment to visibility, soils, and vegetation as a result of the LBEC and associated commercial, residential, and industrial growth, and assessed air quality impacts as a result of such growth.
277. The LBEC will not generate sufficient growth in the area to significantly increase air contaminants from secondary sources.
278. Off-site material handling operations and PM₁₀ emissions from such operations will not necessarily increase as a result of the LBEC and, in any event, any potential increases in

PM₁₀ emissions from these sources are not specific, well-defined, and quantifiable; therefore there are no secondary emissions associated with the LBEC. ~~increase and the~~ two scenarios presented by Las Brisas for the POCC are secondary emissions.⁵³

279. To the extent that off-site material handling operations have the potential to result in secondary emissions, Applicant has demonstrated that potential emissions from these sources would not change the ultimate conclusions of the impacts analysis.⁵⁴

280. Modeling of the LBEC's emissions shows concentrations that will be protective of soils and vegetation.

281. The LBEC will not have adverse impacts on visibility because the nearest Class I area is more than 100 kilometers away.

282. A Class I area visibility analysis is not required because the nearest Class I area is more than 100 km from the site of the LBEC.

Air Dispersion Modeling or Ambient Monitoring: 30 TEX. ADMIN. CODE § 116.111(a)(2)(J)

283. Las Brisas performed computerized air dispersion modeling in order to demonstrate the air impacts from the LBEC.

Federal Standards of Review for Constructed or Reconstructed Major Sources of Hazardous Air Pollutants (HAPs): 30 TEX. ADMIN. CODE § 116.111(a)(2)(K) (Case-By-Case MACT)

284. Las Brisas prepared an FCAA § 112(g) Case-by-Case MACT analysis to establish case by-case MACT requirements for the LBEC auxiliary boilers and propane vaporizers.

⁵³ See Las Brisas Ex. 7 at 101.

⁵⁴ See Applicant's Closing Argument at 5-11.

285. Las Brisas performed the Case-by-Case MACT analysis in two steps. In the first step, Las Brisas established the “MACT floor” or the most stringent limitation achieved in practice by the best controlled similar source. In the second step, Las Brisas performed a “beyond the floor” analysis of the other methods for potentially reducing emissions to a greater degree, considering such factors as the cost of achieving such emissions reductions and any non-air quality health and environmental impacts and energy requirements to establish whether further reductions are achievable.
286. Various metallic and organic HAPs are emitted by the LBEC auxiliary boilers and propane vaporizers.
287. Filterable PM is an appropriate surrogate pollutant for HAP metals because filterable PM and non-mercury HAP metals have common formation mechanisms and control techniques.
288. CO is an appropriate surrogate pollutant for organic HAP emissions because CO and organic HAPs have common formation mechanisms and control technologies.
289. The Case-by-Case MACT emission limit for HAP metal emissions from the LBEC auxiliary boilers and propane vaporizers corresponds to a Filterable PM emission limit of 0.0019 lb/MMBtu.
290. The Case-by-Case MACT emission limit for organic HAP emissions from the LBEC auxiliary boilers corresponds to a CO emission limit of 50 ppm.
291. The Case-by-Case MACT emission limit for organic HAP emissions from the LBEC propane vaporizers corresponds to a CO emission limit of 100 ppm.

292. Section 112(n)(1) of the FCAA states that electric utility steam generating units (EUSGUs) shall be regulated under FCAA § 112 only if EPA finds that such regulation is appropriate and necessary.⁵⁵
293. The LBEC CFB boilers are petroleum coke-fired EUSGUs.⁵⁶
294. While EPA has found it appropriate and necessary to regulate coal- and oil-fired EUSGUs under § 112 of the FCAA, it has not made such a finding for petroleum coke-fired EUSGUs.⁵⁷
295. 30 TEX. ADMIN. CODE § 116.402(a) explains that TCEQ's rules implementing § 112(g) of the FCAA do not apply to EUSGUs that have not been added to the source category list under § 112(c)(5) of the FCAA.⁵⁸

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Emissions Cap and Trade: 30 TEX. ADMIN. CODE § 116.111.(a)(2)(L)

296. The LBEC will not be located in the Houston/Galveston ozone nonattainment area.
297. The LBEC is not subject to the Mass Emissions Cap and Trade program.

Compliance History

298. Las Brisas's compliance history classification is average by default because Las Brisas is a new entity.

Permit

299. The maximum allowable emission rate table (MAERT) in the Draft Permit lists all sources of air contaminants regulated under the permit.

⁵⁵ See Las Brisas Ex. 1 at 83:16-18 (DiSorbo); Las Brisas Ex. 13 at 23.

⁵⁶ See Las Brisas Ex. 13 at 00008-00009.

⁵⁷ See Las Brisas Ex. 1 at 83:18-20 (DiSorbo); Las Brisas Ex. 13 at 23.

⁵⁸ See Las Brisas Ex. 1 at 84:1-3 (DiSorbo); Las Brisas Ex. 13 at 23.

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300. The LBEC has been planned to comply with the emission limits specified in the Draft Permit's MAERT.
301. The LBEC facilities can be operated to meet the permit requirements.
302. The Draft Permit prescribes requirements for demonstrating initial and ongoing compliance with all applicable requirements of the permit and the TCAA.

Transcript Costs

303. The transcription costs for this case are \$35,830.54, which Las Brisas has paid.
 304. The transcription costs for the remand hearing totaled \$11,802.00, which Las Brisas paid.
 305. Protestants' collective participation in the hearing exceeded that of Las Brisas.
- ~~275. Many of the concerns addressed during the hearings on this matter were raised by the Protestants early in this proceeding and well before the original hearing. This demonstrates that the length of the hearings likely could have been shortened if LBEC had properly addressed those concerns before the original hearing.~~
- ~~276. LBEC is the party that initially requested that an expedited transcript be available each day during the hearing, thus showing it expected to receive a great benefit from the transcript.~~
- ~~277. With the exception of EDF, Sierra Club, and CACC, the other Protestants are generally groups of individuals or small non-profit organizations with a lesser likely financial ability to pay costs.~~
- ~~278. LBEC is a for-profit corporate entity and likely has the greatest financial ability to pay costs.~~

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CONCLUSIONS OF LAW

1. The Commission has jurisdiction over ~~the~~ Las Brisas's permit application pursuant to TEX. HEALTH & SAFETY CODE Chapter 382 and TEX. WATER CODE Chapter 5.

2. Las Brisas's permit application was directly referred to SOAH pursuant to TEX. WATER CODE § 5.557.
3. Pursuant to TEX. GOV'T CODE § 2003.047, SOAH has jurisdiction to conduct a hearing and to prepare a proposal for decision in this matter.
4. Notice of Las Brisas's permit application was provided pursuant to 30 TEX. ADMIN. CODE § 39.601, et seq., and TEX. GOV'T CODE §§ 2001.051 and 2001.052.
5. Las Brisas submitted its permit application pursuant to 30 TEX. ADMIN. CODE §§ 116.110(f) and 116.140.
6. Pursuant to 30 TEX. ADMIN. CODE § 80.17(a), in a contested case hearing involving an air quality permit application, the burden of proof is on the applicant to prove by a preponderance of the evidence that it satisfies all statutory and regulatory requirements.
7. Pursuant to 30 TEX. ADMIN. CODE § 116.111, Las Brisas demonstrated that the emissions from the LBEC will comply with all Commission rules and regulations and with the intent of the Texas Clean Air Act, including the protection of the health and physical property of the people, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.

Protection of Public Health and Welfare

8. A demonstration of compliance with the PM₁₀ NAAQS suffices to demonstrate compliance with the PM_{2.5} NAAQS.
9. When the maximum modeled concentration of a pollutant from a project is less than a NAAQS *de minimis* level, it is unnecessary to incorporate background levels or emissions from other sources in the area in the analysis of that pollutant because the maximum predicted concentration level is insignificant.

10. Pre-construction monitoring is not required to evaluate the cumulative impact of the LBEC's emissions of SO₂ and PM₁₀ because of the availability of existing conservative monitoring data.
11. No pre-construction monitoring is required for any of the air contaminants for which Las Brisas's maximum modeled concentrations were below PSD monitoring significance levels.
12. For NO₂ and CO, pre-construction monitoring is not required because the predicted concentrations of these pollutants are less than their respective PSD monitoring significance levels.
13. The proposed emissions from the LBEC will not cause or contribute to air pollution.
14. The proposed emissions from the LBEC will not cause adverse public health or welfare effects, including nuisance conditions.
15. Based on the above Findings of Fact, the proposed emissions from the LBEC will comply with the opacity limits and particulate matter emission rates set forth in 30 TEX. ADMIN. CODE Chapter 111 concerning control of air pollution from visible emissions and particulate matter.
16. Based on the above Findings of Fact, the proposed emissions from the LBEC will comply with the sulfur compound emission requirements set forth in 30 TEX. ADMIN. CODE Chapter 112 concerning control of air pollution from sulfur compounds.
17. Based on the above Findings of Fact, Las Brisas will comply with all applicable standards adopted by reference in 30 TEX. ADMIN. CODE Chapter 113.
18. The proposed LBEC diesel fuel tanks will only store diesel that meets the specifications set forth in 30 TEX. ADMIN. CODE Chapter 114.

19. The unloading of diesel fuel from trucks into storage tanks at the LBEC will comply with applicable control, inspection, and recordkeeping requirements set forth in 30 TEX. ADMIN. CODE Chapter 115.
20. The LBEC is not subject to the rules set forth in 30 TEX. ADMIN. CODE Chapter 117 regarding the control of NOx because it will not be located in an ozone nonattainment area and will be placed into service after December 31, 1995.
21. The LBEC is required to operate in compliance with any orders of the Commission relating to generalized and localized air pollution episodes under 30 TEX. ADMIN. CODE Chapter 118.
22. The LBEC is not subject to the emission reduction plan requirements of 30 TEX. ADMIN. CODE Chapter 118.
23. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(A)(i), emissions from the LBEC will comply with all Commission rules and regulations and the intent of the TCAA, including protection of the health and property of the public, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.
24. Carbon dioxide is not currently subject to regulation under the FCAA or TCAA.
25. Las Brisas is not required to evaluate any impacts from the LBEC's emissions of substances that are not regulated under the FCAA or TCAA, such as water vapor, nitrogen, methane, ethane, and carbon dioxide.

Measurement of Emissions: 30 TEX. ADMIN. CODE § 116.111(a)(2)(B)

26. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(B), the LBEC will have provisions for measuring the emission of air contaminants as determined by the Commission's Executive Director.

BACT: 30 TEX. ADMIN. CODE § 116.111(a)(2)(C)

27. An applicant that is proposing to construct a CFB boiler power plant is not required to include other electric generation technologies, such as integrated gasification/combined cycle (IGCC) technology, in its BACT analysis.
28. Las Brisas is not required to perform a BACT analysis with regard to the LBEC's emissions of substances that are not regulated under the FCAA or TCAA, such as water vapor, nitrogen, methane, ethane, and carbon dioxide.
29. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(C), the LBEC will utilize BACT, with consideration given to the technical practicability and economic reasonableness of reducing or eliminating emissions from the facilities of which it will be comprised.

NSPS: 30 TEX. ADMIN. CODE § 116.111(a)(2)(D)

30. There will be three types of equipment at the LBEC that will be subject to two different NSPS: the CFB boilers; the auxiliary boilers; and the diesel-fired emergency generators, fire water pumps, and boiler feed water pumps. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(D), the emissions from the LBEC will meet the requirements of any applicable NSPS as listed under Title 40 C.F.R. Part 60, promulgated by the EPA under authority granted under Section 111 of the FCAA, as amended.

NESHAPS: 30 TEX. ADMIN. CODE § 116.111(a)(2)(E)

31. No requirement set forth at 30 TEX. ADMIN. CODE § 116.111(a)(2)(E) regarding compliance with NESHAPS is applicable to the LBEC.

NESHAPS for Source Categories: 30 TEX. ADMIN. CODE § 116.111(a)(2)(F)

32. The LBEC diesel engines are the only type of equipment at the LBEC subject to a NESHAPs for source categories. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(F), the emissions from the LBEC will meet the requirements of any applicable MACT standards as listed under Title 40 C.F.R. Part 63, promulgated by the EPA under authority granted under Section 112 of the FCAA, as amended, or as listed under 30 TEX. ADMIN. CODE Chapter 116.

Performance Demonstration: 30 TEX. ADMIN. CODE §116.111(a)(2)(G)

33. In accordance with 30 TEX. ADMIN. CODE § 116.111 (a)(2)(G) the LBEC facilities will achieve the performance specified in the permit application.

Nonattainment Review: 30 TEX. ADMIN. CODE §116.111(a)(2)(H)

34. Nonattainment review requirements are not applicable to the LBEC.

PSD Review: 30 TEX. ADMIN. CODE § 116.111 (a)(2)(I)

35. The LBEC constitutes a new major source because it emits more than 100 tons per year of any single criteria pollutant; therefore, PSD review is triggered.

36. In accordance with with 30 TEX. ADMIN. CODE §116.111(a)(2)(I), the LBEC complies with all applicable requirements of Chapter 116 regarding PSD review.

Air Dispersion Modeling or Ambient Monitoring: 30 TEX. ADMIN. CODE § 116. 111(a)(2)(J)

37. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(J), computerized air dispersion modeling was performed as required to determine the air impacts from the LBEC.

38. The Executive Director's verification of Applicant's rebuttal and remand modeling constitutes an analysis, study, or review that the executive director is required by statute or rule to perform pursuant to 30 TEX. ADMIN. CODE § 80.127(h). Additionally, the ADMT's August 25, 2010 modeling audit memorandum is an agency document determined by the Executive Director to be necessary to reflect the technical review of the application pursuant to 30 TEX. ADMIN. CODE § 80.118(a). Accordingly, evidence regarding the ADMT's review of Applicant's modeling does not constitute impermissible assistance to Applicant in meeting its burden of proof in violation of TEX. WATER CODE §5.228(e); and therefore, it may be considered.

HAPs: 30 TEX. ADMIN. CODE § 116.111(a)(2)(K)

39. The LBEC will be a major source of HAPs.
40. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(K), a case-by-case MACT analysis was conducted to establish federally enforceable MACT emission limits for LBEC auxiliary boilers and propane vaporizers.
41. The LBEC petroleum coke-fired CFB boilers are exempt from case-by-case MACT review pursuant to 30 TEX. ADMIN. CODE § 116.402(a).
42. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(K), the LBEC complies with all applicable requirements of Chapter 116 regarding case-by-case MACT review.

Mass Cap and Trade Allocations: 30 TEX. ADMIN. CODE 116.111(a)(2)(L)

43. The requirement set forth at 30 TEX. ADMIN. CODE § 116.111(a)(2)(L) is not applicable to the LBEC.

Las Brisas's Permit

44. The special conditions in the permit are appropriately added under 30 TEX. ADMIN. CODE §§ 116.115(c)(1) and 116.186(c) and are consistent with the TCAA.
45. No changes to the permit should be made on the basis of compliance history in accordance with 30 TEX. ADMIN. CODE § 116.110(c), because Las Brisas has an “average” compliance history rating as determined in accordance with 30 TEX. ADMIN. CODE Chapter 60.
46. Based on the above Findings of Fact and Conclusions of Law, Las Brisas has made all demonstrations required under applicable federal and state laws and regulations, including 30 TEX. ADMIN. CODE § 116.111 regarding air permit applications, to be issued an air quality permit with PSD review.
47. In accordance with TEX. HEALTH & SAFETY CODE § 382.0518(b)(1), the LBEC facilities ~~as modified by this Order~~ will use at least BACT, considering the technical practicability and economic reasonableness of reducing or eliminating its emissions.
48. In accordance with 30 TEX. ADMIN. CODE § 116.400, the LBEC auxiliary boilers and propane vaporizers will employ the MACT emissions limitations for new sources.
49. In accordance with Tex. Health & Safety Code § 382.0518(b)(2), emissions from the LBEC will not contravene the intent of the TCAA and will be protective of the public's health and physical property, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.
50. In accordance with Tex. Health & Safety Code §382.0518(b), the application for Air Quality Permit Nos. 85013, HAP48, and PSD-TX-1138 should be approved and Air Quality Permit Nos. 85013, HAP48, and PSD-TX-1138 should be issued.

Transcription Costs

51. Transcription costs should be apportioned equally among paid solely by Las Brisas and the participating Protestants.

NOW, THEREFORE, IT IS ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

(Additional ordering paragraphs to be included by Commission)

1. The application of Las Brisas Energy Center, LLC for Air Quality Permit Nos. 85013, HAP48, and PSD-TX-1138 is approved and the permit is issued on this, the ___ day of December, 2010.
2. The Executive Director's Response to Public Comments is adopted; however, if there is any conflict between this Order and the Executive Director's Response to Comments, this Order prevails.
3. Las Brisas shall comply with all Findings of Fact and Conclusions of Law contained herein.
4. EDF, Sierra Club, TCACC, the Medical Group, CEC, and the Individual Protestants shall each reimburse Las Brisas for 14% of the transcription and reporting costs.
5. ~~The two material handling scenarios offered by Las Brisas during the remand hearing are included in the Permit Application for purposes of preconstruction authorization and deviations from those plans must be approved by the Executive Director in the ordinary course of construction changes.~~
6. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied for want of merit.

7. The effective date of this Order is the date the Order is final, as provided by 30 TEX. ADMIN CODE § 80.273 and TEX. GOV'T CODE § 2001.144.
8. The Chief Clerk of the Commission shall forward a copy of this Order to all parties.
9. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this Order.

ISSUED:

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

Bryan W. Shaw, Ph.D., Chairman
For the Commission