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SOAH DOCKET NO. 582-06-1502
TCEQ DOCKET NO. 2006-0195-AIR

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AIR PERMIT NO. 76474 AND	§	
PSD-TX-1056	§	ADMINISTRATIVE HEARINGS

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TO THE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

COMES NOW Applicant Oak Grove Management Company LLC ("***Applicant***" or "***Oak Grove***") and files these exceptions to the Administrative Law Judges' ("***ALJs***") Proposal for Decision ("***PFD***") in the above-captioned matter. The ALJs' recommendation that the Texas Commission on Environmental Quality ("***TCEQ***" or "***the Commission***") deny Oak Grove's application is factually and legally flawed and should not be accepted. Because Oak Grove proved compliance with all legal and regulatory requirements, its permit application should be granted by the Commission.

The PFD results from an incorrect interpretation of law, rules, and TCEQ policy regarding compliance with the requirement under the Texas Clean Air Act ("***TCAA***") for proposed facilities to utilize the best available control technology ("***BACT***") to reduce or eliminate emissions.[1] More specifically, the ALJs incorrectly believe that the technical practicability element of the two-part BACT analysis requires a proposed emissions control technology to have been previously utilized in commercial applications identical to that proposed by the applicant. The PFD overlooks the fact that the same state-of-the-art coal-fired electric power plant control technologies have been approved for Wyoming

[1] *See* TEX. HEALTH & SAFETY CODE § 382.0518(b)(1).

Powder River Basin ("***PRB***") coal and unjustifiably places too much emphasis on the fact that this will be the first application of these new technologies on Texas lignite. By law, the ALJs were required to consider and properly apply Commission rules and policy.[2] TCEQ BACT policy states that "[e]ngineering principles and agency experience, concerning the practicability and reasonableness of an emission reduction option are used in [a BACT] determination." This policy makes it very clear that the Agency must evaluate new technologies and recent permits for similar applications on other processes. Yet, it is evident that the very foundation of the ALJs' analysis in this case is a flawed and insupportable interpretation of "technical practicability" that wrongly deviates from Commission rule, policy, and practice.

Furthermore, both Oak Grove's and the TCEQ Executive Director's expert witnesses provided extensive evidence regarding the technical practicability of the controls proposed for the Oak Grove Steam Electric Station ("***OGSES***") and concluded that the suite of state-of-the-art emission controls proposed by Oak Grove is technically practicable and will achieve the emission limits established in the OGSES draft permit proposed by the TCEQ staff.[3] The evidence in the record overwhelmingly demonstrates that the emission limits proposed by TCEQ permitting staff and accepted by Oak Grove satisfy BACT requirements and constitute BACT for the OGSES. Furthermore, the PFD inexplicably recommends dismissal of EPA's conclusion that SCR technology is technically feasible for lignite and fails to acknowledge applied engineering solutions to emissions reduction challenges. The only contradictory evidence to any of these points

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2 *See* TEX. GOV'T CODE § 2001.058(b), (e)(1).

3 *See* Oak Grove Ex. 35, p. 21, line 18 to p. 23, line 4, p. 23, lines 18-19, p. 24, lines 2-5 (Cichanowicz); Tr. p. 502, lines 10-13 (Cichanowicz); Oak Grove Ex. 40, pp. 21-22, 26-27 (Hamilton).

came from a single witness, Richard Furman, who testified on behalf of Protestant Robertson County: Our Land, Our Lives ("***Protestant***"). Mr. Furman gave contradictory and conclusory opinions based on other testimony but failed to demonstrate any expertise in Texas lignite emission control capabilities, and provided no basis whatsoever for calling into question the technical practicability of the emission controls proposed by Oak Grove.

For the foregoing reasons, as set forth more fully below, the ALJs' proposed finding regarding the technical practicability of the controls proposed in Oak Grove's application is contrary to TCEQ rules and policy and the overwhelming evidence contained in the evidentiary record, and, therefore, should not be accepted by the Commission.

Additionally, the ALJs' ultimate recommendation that Oak Grove's permit be denied is contrary to law. Although Oak Grove disputes the ALJs' findings regarding the technical impracticability of the nitrogen oxide ("***NO_x***") and mercury controls proposed for the OGSES, should the Commission accept those findings, the remedy provided by statute is not denial of Oak Grove's application. Instead, by law, the Commission must first set forth its specific objections to the plans for the proposed facility and allow Oak Grove the opportunity to alter those plans to address the Commission's objections.[4]

Ironically, if the ALJs' findings are accepted, the outcome will be issuance of a permit for the OGSES that contains *higher* emission limits than those that are currently in the draft permit now under consideration. Specifically, if the ALJs were correct that Selective Catalytic Reduction ("***SCR***") for the control of NO_x and activated carbon

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4 *See* TEX. HEALTH & SAFETY CODE § 382.0518(d), (e).

injection ("*ACI*") for the control of mercury are not technically practicable controls for a lignite-fueled boiler, the Commission must issue a report that instructs Oak Grove to remove these controls from the application, which, in turn, would result in less control and, obviously, greater emissions of these pollutants.

While there is no question that Oak Grove has demonstrated, and would be able to further demonstrate, compliance with all applicable federal and state air quality standards even without the proposed controls at issue, which will lower emissions of NO_x and mercury, Oak Grove does not believe that increasing allowable emissions of these pollutants is warranted or desirable. Oak Grove has demonstrated, and the TCEQ staff has confirmed, that the NO_x and mercury emission rates in the draft permit are achievable, and Oak Grove has committed to operating the OGSES below those state and federally enforceable emission limits. The Commission should not accept a recommendation from the ALJs that would increase emissions above the limits that have been proven to be achievable, and that the applicant has committed to achieve.

For the foregoing reasons, as set forth more fully below, Oak Grove takes exception to the ALJs' failure to properly interpret and apply the Commission's BACT-related statutes, rules, and policy, and the ALJs' proposed findings of fact that are inconsistent with the weight of the evidence in the record. More specifically, Oak Grove takes exception to the ALJs' assertion that, to satisfy the technical practicability prong of the two-part BACT analysis, a proposed technology must have been previously operated on a commercial scale mirroring the commercial application proposed by the applicant. This erroneous interpretation of BACT is the sole basis for the ALJs' ultimate conclusion that the NO_x and mercury emission controls proposed for the OGSES are not technically

practicable. Oak Grove takes exception to this flawed conclusion and requests issuance of the OGSES permit.

I. SUMMARY OF ARGUMENT: THE PFD IS BASED ON A FUNDAMENTALLY INCORRECT INTERPRETATION OF BACT

The only issue of concern expressed by the ALJs in their PFD is whether Oak Grove, a wholly owned subsidiary of TXU Energy Company LLC ("***TXU Energy***"), proved that its BACT proposal for controlling NO_x and mercury emissions from the proposed OGSES is technically practicable and will achieve the performance standards contained in the application and draft permit. Specifically, the ALJs suggest that the proposed use of SCR for control of NO_x emissions and ACI for control of mercury emissions are not technically practicable because these controls have not previously been applied on a commercial scale to control emissions from the combustion of lignite. The PFD is based solely on a flawed interpretation of one prong of the two-part BACT requirement established in the TCAA, which provides, in pertinent part:

> The Commission shall grant ... a permit ... to construct a facility if, from the information available to the Commission, ... the Commission finds ... the proposed facility for which a permit ... is sought will use at least the best available control technology, considering the *technical practicability* and *economic reasonableness* of reducing or eliminating the emissions resulting from the facility ...[5]

To interpret the technical practicability element of the BACT analysis, the PFD relies on TCEQ's BACT guidance document, entitled "Evaluating Best Available Control Technology in Air Permit Applications (RG-383)" (the "***BACT Guidance***"). While Oak

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[5] TEX. HEALTH & SAFETY CODE § 382.0518(b)(1) (emphasis added). *See also* 30 TEX. ADMIN. CODE § 116.111(a)(2)(C) (requiring an applicant to demonstrate that the proposed facility "will utilize BACT, with consideration given to the technical practicability and economic reasonableness of reducing or eliminating the emissions from the facility").

Grove agrees that consideration of the BACT Guidance is proper,[6] the PFD is premised on an improper consideration of selective portions of this guidance and does not analyze the facts in light of the totality of the guidance. This selective reading of the BACT Guidance resulted in a fundamental misinterpretation of the technical practicability standard and a legally incorrect position that technically practicable control technologies must have been demonstrated to work based on *actual commercial operation under circumstances identical to those proposed in the application.*

The potential impacts of the Commission's acceptance of the PFD cannot be overstated. Acceptance of the ALJs' position will remove an essential element of the air emissions permitting process as contemplated by both the state and federal Clean Air Acts – the advancement of air pollution control technology and the progressive lowering of emissions through the BACT process. The basis for the PFD is that the use of new emission control technology is not acceptable under TCEQ's BACT requirements. Thus, the views espoused in the PFD, if accepted, will inevitably lead to the issuance of air permits that incorporate only less aggressive, but previously "proven," control technologies and result in significantly higher emissions. Simply stated, the ALJs' interpretation of the technical practicability element of the BACT analysis would categorically prevent the first-time application of new control technologies in Texas. TCEQ could not require the application of new control technologies to lower emissions, but rather would be forced to wait for such new technologies to be operated outside of the State before qualifying as BACT in Texas. Consequently, Texas would lag behind in the

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6 Oak Grove Ex. 1, p. 51, lines 21-22 (Moon).

development of lower-emitting electric generating capacity (not to mention other industrial facilities).

Oak Grove's application and the resulting draft permit reflect TXU Energy's more general commitment to meeting the growing power demands of the State through the construction of electric generating facilities equipped with first-time state-of-the-art pollution controls.[7] Moreover, TXU Energy's compliance history reflects an exemplary record of operating electric generating facilities throughout the State in compliance with permit requirements.[8] The team of experienced TXU Energy engineers that assisted in the development of the OGSES application and the proposed control technologies, the uncontroverted testimony of a nationally-renowned expert on power plant pollution control technologies, the testimony of the TCEQ Executive Director's witness offered by Oak Grove, and formal statements by the United States Environmental Protection Agency ("***EPA***") all support the technical practicability of the proposed controls.

Finally, it appears that the ALJs did not appreciate the evidence presented at the hearing, particularly with respect to the effectiveness of NO_x control from application of SCR on a lignite-fired pulverized coal boiler and the co-benefits of the proposed suite of emissions controls for other pollutants (SCR, wet scrubber, and fabric filter baghouse) in the reduction of mercury emissions. In both instances, there is absolutely no question that the proposed control technology will work.

For NO_x control, the chemical reaction that occurs with the introduction of anhydrous ammonia into the boiler flue gas across a catalyst is the same regardless of the

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7 TXU Energy has committed to reduce total key air emissions from its coal-fueled generation fleet by 20% from 2005 levels by January 1, 2011, while adding 9,079 megawatts of low-cost, coal-fueled power generation.

8 Oak Grove Ex. 31, p. 19, line 6 to p. 22, line 9 (Zweiacker).

type of fuel consumed and it is unquestionable that nitrogen oxides in the flue gas will be reduced to nitrogen and water. The reaction will be unfettered when the catalyst is new, but if the SCR catalyst's active sites are blocked or deactivated, the rate of reaction may be reduced and the amount of NO_x reduction will decline. If the catalyst becomes clogged or deactivated and NO_x emission reductions are insufficient, Oak Grove will be required to replace or otherwise restore the effectiveness of the catalyst. To the extent that there is any issue or question regarding the use SCR at the proposed facility, it is a question of cost. To that point, Oak Grove has accepted the NO_x emission limit established by the TCEQ staff in the draft permit as economically reasonable and, consequently, has accepted the expected cost of operating at or below the permit limit. Furthermore, Oak Grove has accepted that the permit requires further study of NO_x reduction and may require further reduction of the NO_x limit.

In considering the mercury emissions, the PFD, in addition to ignoring the weight of the evidence as to the effectiveness of ACI, suggests that there is not sufficient evidence of the co-benefit of other controls (SCR, wet scrubber, and fabric filter baghouse). Such a finding would completely disregard the findings of EPA in adopting Phase I of the Clean Air Mercury Rule (***"CAMR"***), which is completely based on the expectation of these co-benefits and only considers ACI as necessary to achieve the Phase II reductions.[9]

Generally, the PFD fails to make the distinction between "technical practicability" and "economic reasonableness" with respect to the emission controls proposed by Oak Grove. The technical practicability of the proposed controls is not an issue at all and

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[9] *See generally* 70 FED. REG. 28,606 (May 18, 2005).

each has been recently confirmed by the TCEQ in at least two permit actions.[10] The technical aspects of the controls, that is, the physical existence of the devices and the chemistry of the reactions, are proven, although the cost of the controls may be increased by more frequent catalyst change-outs or use of sorbent injection.

II. ARGUMENT

A. OAK GROVE PROVED BY A PREPONDERANCE OF THE EVIDENCE THAT ITS BACT PROPOSAL FOR CONTROLLING NO_X EMISSIONS FROM THE OGSES UNITS IS TECHNICALLY PRACTICABLE AND WILL ACHIEVE THE PERFORMANCE STANDARDS CONTAINED IN THE APPLICATION AND THE DRAFT PERMIT

Oak Grove takes exception to the ALJs' recommendation that it failed to prove by a preponderance of evidence that the proposal to use SCR technology on the lignite-fired OGSES boilers is technically practicable and will achieve the emission limits contained in the application and draft permit. First, there is simply no question that the use of SCR technology on lignite-fired boilers is technically practicable. While the Commission need look no further than the recent statements of EPA addressing this issue directly, the evidentiary record in this matter also contains uncontroverted evidence of SCR vendor guarantees, pilot testing, and the testimony of a nationally-renowned expert on SCR control technology to support the technical practicability of SCR on lignite-fired boilers.[11] Second, while questions do exist concerning the NO_x emission levels that can be achieved using SCR, these questions relate to whether levels *lower than* the 0.08 lb/MMBtu limit contained in the draft permit can be achieved in an economically reasonable manner, not whether the proposed limit is achievable. As set forth more fully below, Oak Grove unquestionably proved by a preponderance of evidence that the

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[10] *See Order Granting the Application of Sandy Creek Energy Associates, L.P. for Air Quality Flexible Permit No. 70861/PSD Permit No. PSD-TX-1039* (May 26, 2006); *Order Granting the Application of City Public Service for Air Quality Permit No. 70492/PSD Permit No. PSD-TX-1037* (Dec. 28, 2005).

[11] Protestant Ex. P-41; Protestant Ex. P-42, pp. 1-2; Oak Grove Ex. 35 (Cichanowicz).

OGSES units will be capable of meeting the NO_x emission limit contained in the draft permit.

1. Oak Grove Proved by a Preponderance of the Evidence that the Use of SCR to Control NO_x Emissions from the OGSES Units is Technically Practicable

While the proposed OGSES would be the first application of SCR on Texas lignite,[12] this proceeding does not represent the first time a regulatory agency has considered the technical practicability of SCR on lignite-fired boilers. Specifically, earlier this year EPA adopted revised New Source Performance Standards ("***NSPS***") for electric utility steam generating units that are codified at 40 C.F.R. Part 60, Subpart Da.[13] As part of this rule development, EPA evaluated the technical feasibility of SCR on lignite-fired boilers and stated:

> EPA disagrees that lignite-fired steam-generating units would not be able to achieve the amended NSPS. While there are no existing lignite-fired electric utility steam generating units with SCR in the United States, there is considerable experience in the industry to show that *use of SCR on lignite is technically feasible*. EPA has concluded that the primary reason that no pulverized lignite-fired units are equipped with SCR is because no new pulverized lignite unit has been built in the United States since 1986. The Electric Power Research Institute testing of SCR catalyst in a slipstream at the Martin Lake Power plant showed acceptable results from Gulf Coast lignite. In addition, two recent applications for pulverized lignite-fired utility units in Texas (Twin Oaks 3 and Oak Grove facilities) propose to use SCR to control NO_x emissions to 0.07 and 0.10 lb/MMbtu, respectively. Finally, technology suppliers report that SCR has been successfully used on lignite and brown coal in Europe. *EPA has concluded that SCR can be used on lignite boilers in the United States* and catalyst suppliers have indicated that they will offer performance guarantees on these applications. Pore plugging and binding of catalyst is a common problem experienced by pilot test facilities. In full scale installations, this concern is addressed during the SCR design stage. The methods used to avoid the problem include duct design to promote flyash

12 Oak Grove Ex. 1, p. 73, lines 4-5 (Moon).

13 Oak Grove Ex. 1, p. 63, line 20, p. 81, lines 22-23 (Moon).

> fallout prior to the SCR, catalyst reactor design to avoid ash buildup, and on-line cleaning methods (soot blowers and sonic horns).[14]

Admittedly, EPA's conclusion that the "use of SCR on Texas lignite is technically feasible" referenced the fact that Oak Grove has proposed to use SCR on lignite-fired boilers.[15] However, it is clear from EPA's statements that it considered several other more significant factors in reaching its conclusion – the testing of SCR catalyst in a slipstream at the TXU Energy Martin Lake Power plant, the fact that SCR has been successfully used on lignite and brown coal in Europe, the fact that catalyst suppliers have indicated that they will offer performance guarantees for SCR applications on lignite-fired boilers, and the fact that the challenges posed by lignite can be addressed through the design of the SCR.[16] Each of these factors was placed in evidence during the hearing on Oak Grove's application.[17] Additionally, it is significant that EPA cited an application other than Oak Grove's wherein the applicant has proposed the use of SCR on lignite-fired boilers. Another company's independent conclusion that the use of SCR on Texas lignite is technically acceptable is additional evidence of the technical practicability of SCR.[18]

EPA's conclusion that the "use of SCR on Texas lignite is technically feasible" as part of the NSPS rulemaking process is sufficient on its own.[19] Nonetheless, Oak Grove

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14 71 FED. REG. 9,870 (Feb. 27, 2006) (emphasis added).

15 *Id.*

16 *Id.*

17 Oak Grove Ex. 35, p. 14, line 20 to p. 15, line 1 (Cichanowicz); Oak Grove Ex. 3A, pp. 98-157; Protestant Ex. P-42, pp. 1-2; Tr. p. 543, line 18 to p. 544, line 15, p. 553, line 20 to p. 555, line 29, p. 545, lines 14-21, p. 546, line 12 to p. 547, line 4 (Hamilton).

18 *See* Protestant Ex. P-42, p. 2 ("The other application involving Texas lignite, Sempra, has agreed to 0.07 lb NO_x/MMBtu, 30-day rolling average, while firing 100% Texas lignite. The owner's engineer has received assurance from the potential equipment vendors that this limit is guaranteeable.").

19 71 FED. REG. 9,870 (Feb. 27, 2006).

did not rely on EPA's conclusion to meet its evidentiary burden in this matter. Instead, Oak Grove presented evidence from a nationally-renowned expert on the use of SCR technology on coal-fired boilers, Edward Cichanowicz, to evaluate the suite of NO_x emissions control technologies proposed for the OGSES.[20] After performing his evaluation, Mr. Cichanowicz concluded, without qualification, that SCR is technically practicable for units firing Texas lignite.[21] Specifically, Mr. Cichanowicz concluded that "the use of combustion controls and SCR for OGSES represents the highest level of control technically practicable for Texas Wilcox lignite."[22]

Even if it were not supported by other clear evidence, there is no reasonable basis for rejecting Mr. Cichanowicz's expert opinion that SCR is a technically practicable form of NO_x control for the lignite-fired OGSES units. In addition to coinciding with the findings of EPA, Mr. Cichanowicz's conclusion regarding the technical practicability of SCR is fully supported by Randy Hamilton, the TCEQ Permit Engineer who gave sworn deposition testimony to that effect and testified at the hearing on behalf of the Executive Director.[23] In fact, as set forth more fully below, Mr. Hamilton's opinion was that the OGSES units may be able to achieve a *lower* NO_x emission limit than proposed in the draft permit.[24]

Mr. Cichanowicz's experience with SCR and coal-fired boilers is considerable. He is the lead author of an Electric Power Research Institute document that provides

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20 Oak Grove Ex. 35, p. 4, lines 14-17, p. 9, lines 9-11 (Cichanowicz).

21 Ex. 35, p. 23, line 18-19, p. 24, lines 2-5 (Cichanowicz).

22 Ex. 35, p. 23, lines 18-19 (Cichanowicz).

23 Oak Grove Ex. 40, pp. 21-22 (Hamilton); Tr. p. 540, lines 12-19 (Hamilton).

24 Tr. p. 529, line 6 to p. 530, line 2, p. 568, line 25 to p. 569, line 15 (Hamilton).

operating and maintenance guidelines for coal-fired SCR process equipment.[25] Additionally, he has supervised the design and testing of five SCR pilot plants to study the feasibility of using SCR on coal-fired plants in the United States.[26] As part of his work, Mr. Cichanowicz typically inspects three to six SCR-equipped coal-fired power plants each year in the United States, and he has inspected roughly fifty SCR-equipped coal-fired units in Europe over the last fifteen years.[27] Mr. Cichanowicz has actually crawled inside approximately thirty SCR reactors during plant outages to decipher causes of SCR performance issues.[28] Mr. Cichanowicz also has direct experience related to the use of SCR on lignite-fired boilers, having worked on two projects aimed at evaluating the influence of Texas Wilcox lignite on SCR catalyst deactivation.[29] He also is currently working on the design of an SCR pilot plant to be installed at TXU Energy's lignite-fired Sandow Unit 4.[30]

Therefore, considering the entirety of the evidentiary record, which is fully consistent with the conclusion reached independently by EPA, there is simply no basis upon which to conclude that Oak Grove failed to prove, by a preponderance of evidence, that the use of SCR technology on the lignite-fired OGSES boilers is technically practicable.

2. Oak Grove Proved by a Preponderance of the Evidence that the OGSES Units Will Comply With the 0.08 lb/MMBtu NO_x Limit Contained in the Draft Permit

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25 Oak Grove Ex. 35, p. 6, lines 3-4 (Cichanowicz).

26 Oak Grove Ex. 35, p. 5, lines 12-13 (Cichanowicz).

27 Oak Grove Ex. 35, p. 6, lines 7-9 (Cichanowicz).

28 Tr. p. 330, lines 12-17, p. 486, lines 11-12 (Cichanowicz).

29 Oak Grove Ex. 35, p. 14, lines 20-23 (Cichanowicz).

30 Oak Grove Ex. 35, p. 15, lines 1-2 (Cichanowicz).

As Oak Grove's witnesses explained, because the OGSES units will be the first lignite-fired boilers to be equipped with SCR, there is some uncertainty regarding what constitutes an appropriate NO_x emission limit for these units.[31] In fact, Mr. Cichanowicz dedicated a large portion of his direct and cross-examination testimony to explaining the challenges Oak Grove may face as part of this first-of-its-kind application.[32] However, in no instance did Mr. Cichanowicz indicate that these challenges would prevent the OGSES units from achieving the proposed NO_x limit. In fact, based on his vast experience and technical analysis, he unequivocally concluded that the 0.08 lb/MMBtu limit contained in the draft permit was achievable.[33] Other, but slightly contradictory, evidence presented was that a *lower* (0.05 to 0.07 lb/MMBtu) limit may actually be BACT.[34] This is an issue that is addressed directly by Special Condition 50 of the draft permit.[35]

As Mr. Cichanowicz testified, SCR has been deployed on over 100 gigawatts of coal-fired capacity in the United States.[36] In fact, within the last nine months TCEQ has issued two permits requiring the use of SCR on PRB coal-fired units.[37] These permits

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31 Oak Grove Ex. 1, p. 73, line 22 to p. 74, line 1 (Moon).

32 Oak Grove Ex. 35, p. 21, line 18 to p. 24, line 5 (Cichanowicz); Tr. p. 330, line 12 to p. 336, line 18 (Cichanowicz).

33 Oak Grove Ex. 35, p. 21, line 18 to p. 23, line 4, p. 23, lines 18-19, p. 24, lines 2-5 (Cichanowicz).

34 Tr. p. 529, line 6 to p. 530, line 2, p. 568, line 25 to p. 569, line 15 (Hamilton); Protestant Ex. P-42, pp. 1-2; Oak Grove Ex. 35, p. 21, lines 11-14 (Cichanowicz).

35 *See* Oak Grove Ex. 14, p. 36. For the first two years of operation, the units have a NO_x emission limit of 0.08 lbs/MMBtu while Oak Grove and the selected SCR vendor optimize this first-of-its-kind SCR application. Pursuant to the draft permit, after the two year initial operating period, Oak Grove will request to lower this limit if a lower rate is justified based on the performance of the SCR.

36 Oak Grove Ex. 35, p. 20, lines 11-13 (Cichanowicz).

37 *See Order Granting the Application of Sandy Creek Energy Associates, L.P. for Air Quality Flexible Permit No. 70861/PSD Permit No. PSD-TX-1039* (May 26, 2006); *Order Granting the Application of City Public Service for Air Quality Permit No. 70492/PSD Permit No. PSD-TX-1037* (Dec. 28, 2005).

contain NO_x emission limits of 0.05 lb/MMBtu.[38] Additionally, the evidentiary record reflects that the SCR-equipped PRB coal-fired units at the W.A. Parish site located south of Houston are actually achieving even lower NO_x emissions levels of 0.03 to 0.04 lb/MMBtu.[39] While these units fire, or will fire, PRB coal rather than lignite, the evidentiary record, particularly evidence adduced by Protestant, emphasized that SCR catalyst vendors are willing to provide similar NO_x guarantees of 0.05 lb/MMbtu for lignite-fired units.[40] Therefore, there is evidence to support the conclusion that the NO_x emission limit for the lignite-fired OGSES units may eventually be lower than the 0.08 lb/MMBtu limit as contemplated by Special Condition 50 of the draft permit; but there is no credible evidence anywhere in the record that the NO_x emissions will be higher.

Recognizing the differences between PRB coal and lignite, TCEQ Permit Engineer Randy Hamilton originally recommended that the OGSES draft permit contain a NO_x emission limit of 0.07 lb/MMBtu rather than the 0.05 lb/MMBtu limit applied to the recently permitted PRB units.[41] According to Mr. Hamilton, "[t]he 0.07 lb NO_x/MMBtu limit gives the applicant plenty of headroom to overcome any operational difficulties which may arise over the life of the boiler."[42] To support his recommendation, Mr. Hamilton prepared a document entitled "Technical Feasibility of Achieving 0.07 lb NO_x/MMBtu on Texas Lignite-Fired Utility Boilers."[43] This document references the following in support of a 0.07 lb/MMBtu NO_x limit: emissions

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38 Oak Grove Ex. 1, p. 73, lines 11-14 (Moon).

39 Tr. p. 544, lines 16-19 (Hamilton); Protestant Ex. P-42, p. 1; Oak Grove Ex. 35, p. 21, lines 11-14 (Cichanowicz).

40 Protestant Ex. P-41.

41 Oak Grove Ex. 40, p. 20 (Hamilton).

42 Protestant Ex. P-42, p. 2.

43 Protestant Ex. P-42.

data from existing Texas lignite-fired boilers showing that their average NO_x emissions rate is 0.20 lb/MMBtu (versus the 0.22 lb/MMBtu used by Mr. Cichanowicz in his analysis), information regarding a utility boiler firing a high-ash German lignite coal and equipped with SCR that achieved NO_x reductions of approximately 66% for about 10 years, results of field studies of catalyst degradation which show SCR catalyst performance on Texas lignite to be similar to PRB coal, and the existence of another permit application for a lignite-fired boiler where the applicant agreed to a 0.07 lb/MMBtu emissions limit.[44]

The remaining evidence regarding the appropriate NO_x emission limit for the OGSES units was presented by Mr. Cichanowicz based on his technical analysis. To determine the technically practicable NO_x emission limit for the OGSES units, Mr. Cichanowicz first looked at the expected NO_x emission rate for the lignite-fired boilers at the inlet to the SCR (0.22 lb/MMBtu), applied the SCR NO_x removal efficiency that has been achieved by the W.A. Parish coal-fired units (65%), and then calculated the permit limit of 0.08 lb/MMBtu (0.22 lb/MMBtu with 65% removal equates to 0.077 lb/MMBtu).[45] As Mr. Cichanowicz testified, this level of NO_x removal is consistent with an SCR reactor and catalyst inventory designed for 80% to 85% NO_x removal, that incurs a level of catalyst blockage that he has personally witnessed on PRB coal-fired units and that, based on pilot plant testing, should be expected for units firing lignite.[46] Mr. Cichanowicz further testified that he also verified the appropriateness of the 0.08

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44 *Id.*

45 Oak Grove Ex. 35, p. 22 , lines 3-6 (Cichanowicz).

46 Oak Grove Ex. 35, p. 22, lines 9-22, p. 23, lines 1-4 (Cichanowicz).

lb/MMBtu NO_x emission limit using a process model.[47] For model inputs, he used the same NO_x emission rate for the lignite-fired boilers (0.22 lb/MMBtu), a generous quantity and multiple layers of catalyst, and assumed, based on his personal experience inspecting SCRs, that 20% of the catalyst would be blocked by ash.[48] The model result was a NO_x emission rate of 0.08 lb/MMBtu.[49]

In the discussions leading to the draft permit, both the Executive Director and Oak Grove agreed upon the proposed NO_x limit of 0.08 lb/MMBtu as BACT.[50] However, recognizing that a *lower* emissions limit might be appropriate after the units are built and operating, Oak Grove agreed to accept the NO_x optimization requirement contained in Special Condition 50 of the draft permit.[51]

Essentially, all of the evidence cited by the ALJs as having "revealed serious problems with controlling NO_x emissions from lignite"[52] was presented by Oak Grove's own expert witness, Mr. Cichanowicz. Contrary to the ALJs' portrayal of his testimony, Mr. Cichanowicz never testified that these "problems" could jeopardize the ability of the OGSES units to achieve the 0.08 lb/MMBtu NO_x limit. Instead, Mr. Cichanowicz described the potential challenges of using SCR on lignite-fired units in order to explain why a NO_x emission limit of 0.05 to 0.07 lb/MMBtu *may* not be appropriate as BACT.[53] Mr. Cichanowicz's testimony did not call into question the technical feasibility of these lower limits, but rather explained why achieving such limits would necessarily implicate

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47 Tr. p. 462, line 13 to p. 463, line 16; p. 486, lines 7-21 (Cichanowicz).

48 Tr. p. 462, line 13 to p. 463, line 16; p. 486, lines 7-21 (Cichanowicz).

49 Tr. p. 486, lines 20-21 (Cichanowicz).

50 Oak Grove Ex. 40, p. 20 (Hamilton).

51 Oak Grove Ex. 1, p. 74, lines 9-11 (Moon).

52 PFD at 15.

53 *See* Oak Grove Ex. 35, p. 23, line 16 to p. 24, line 5 (Cichanowicz).

the economic reasonableness component of the BACT analysis. In short, a NO_x emission limit of 0.05 to 0.1 lb/MMBtu is technically practicable, but a limit below 0.08 lb/MMBtu has not, to date, been demonstrated to be economically reasonable.

Accordingly, neither Mr. Cichanowicz's nor Mr. Hamilton's testimony regarding the challenges of SCR support the ALJs' proposition that the use of SCR on a lignite-fired boiler is not technically practicable. Oak Grove met its evidentiary burden with respect to the BACT analysis.

3. The NO_x Controls Proposed by Oak Grove are Technically Practicable Because the Resolution of any Technical Difficulties Associated with the Use of SCR on the Lignite-Fired OGSES Units is Purely a Matter of Cost

According to EPA's PSD BACT guidance, "where the resolution of technical difficulties is a matter of cost, *the applicant should consider the technology as technically feasible*. The economic feasibility of a control alternative is reviewed in the economic impacts portion of the BACT selection process."[54] To the extent that there is any issue or question regarding SCR performance on the OGSES units, it is an economic one and the final analysis of the economics will be evaluated under Special Condition 50 of the draft permit. Oak Grove's carefully considered acceptance of the potential costs of building and maintaining an SCR such that NO_x emissions will be below 0.08 lb/MMBtu render economic reasonableness and, in turn, technical practicability, non-issues in this matter. Unfortunately, the PFD fails to recognize the distinction between "technical practicability" and "economic reasonableness."

SCR systems convert NO_x into inert nitrogen and water by passing the boiler exhaust gas stream through holes in a catalyst material in the presence of ammonia.[55] The chemical reaction by which NO_x is converted to nitrogen and water by operation of the SCR occurs regardless of the type of fuel fired in the boiler being controlled.

The key to making SCR work to its maximum potential is to maintain the surface of the catalyst free and clean of deposits that, if allowed to accumulate, interfere with the chemical reactions that control NO_x.[56] If the catalyst's active sites are blocked or

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54 *See EPA's New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting* at B.19 (Oct. 1990 Draft).

55 Oak Grove Ex. 35, p. 12, lines 1-2 (Cichanowicz).

56 Oak Grove Ex. 35, p. 12, lines 2-5 (Cichanowicz).

deactivated, the rate of reaction may decrease, thus increasing NO_x emissions.[57] However, if the rate of reaction is reduced to unacceptable performance levels, the fouled catalyst can be replaced with new catalyst that is clean and free of deposits, thereby restoring the SCR's ability to control NO_x emissions. In other words, maintaining the NO_x removal efficiency of the SCR is a matter of the costs associated with maintenance and replacement of the SCR catalyst (these costs include the cost of new catalyst material and the cost of bringing the unit down to replace the catalyst). The costs will be borne by Oak Grove and it is not a matter of technical practicability.

B. OAK GROVE PROVED BY A PREPONDERANCE OF THE EVIDENCE THAT ITS BACT PROPOSAL FOR CONTROLLING MERCURY EMISSIONS FROM THE OGSES UNITS IS TECHNICALLY PRACTICABLE AND WILL ACHIEVE THE PERFORMANCE STANDARDS CONTAINED IN THE APPLICATION AND THE DRAFT PERMIT

As Mr. Cichanowicz testified, a portion of the mercury emitted from the OGSES units will be removed by the flue gas desulfurization system ("***FGD***"), SCR, and baghouses installed primarily to control emissions of other air contaminants.[58] Oak Grove also plans to inject treated activated carbon into the exhaust gas ductwork to achieve additional mercury control.[59] The powdered activated carbon treated with halogen or other additives is specially processed so that each particle has an extremely high surface area.[60] Mercury emitted from the OGSES boilers will bind with the carbon thus allowing it to be removed in the baghouses along with other particulate matter.[61]

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57 *See* Oak Grove Ex. 35, p. 12, lines 2-5 (Cichanowicz).

58 Oak Grove Ex. 35, p. 11, lines 10-12 (Cichanowicz). These co-benefits are recognized by EPA and relied upon in the adoption of the CAMR rule and are the exclusive basis for the justification of a mercury emissions cap under Phase I of the CAMR. *See generally* 70 FED. REG. 28,606 (May 18, 2005).

59 Oak Grove Ex. 35, p. 11, lines 12-13 (Cichanowicz).

60 Oak Grove Ex. 35, p. 12, lines 8-11 (Cichanowicz).

61 Oak Grove Ex. 35, p. 12, lines 10-12 (Cichanowicz).

The draft permit contains an annual mercury limit of 9.2 pounds per trillion Btu ("***lb/TBtu***").[62] As Mr. Cichanowicz testified, to meet this limit Oak Grove will need to achieve an average mercury removal efficiency of 68 to 72%, compared to the approximately 80% removal required by the recently issued permit for the PRB coal-fired Sandy Creek Energy Station, which also will utilize ACI to control mercury emissions.[63] The recently issued City Public Service permit also proposed 80% removal but the facility appears to be relying solely on the co-benefit provided by other pollutant controls because sorbent injection is not proposed in its application or required by its permit.[64]

In order to demonstrate that the proposed level of mercury emissions will not result in adverse health or other effects, Oak Grove conducted computer-based air dispersion modeling to predict the maximum expected off-property concentrations of mercury resulting from operation of the OGSES.[65] Because there is no national ambient air quality standard ("***NAAQS***") for mercury, consistent with TCEQ policy, Oak Grove compared the modeled off-property mercury concentrations to the appropriate TCEQ Effects Screening Levels ("***ESLs***").[66] The results of this comparison indicate that off-property mercury concentrations resulting from operation of the OGSES, assuming the proposed mercury emission rate of 9.2 lb/TBtu, will be *several orders of magnitude below* TCEQ's annual mercury ESL.[67] Specifically, the results show that the off-property

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62 Oak Grove Ex. 14, p. 6; Oak Grove Ex. 35, p. 12, lines 20-22 (Cichanowicz).

63 Oak Grove Ex. 35, p. 35, lines 11-18 (Cichanowicz); Oak Grove Ex. 18.

64 Oak Grove Ex. 18; *see also Order Granting the Application of City Public Service for Air Quality Permit No. 70492/PSD Permit No. PSD-TX-1037* (Dec. 28, 2005).

65 *See generally* Oak Grove Exs. 4, 4A, 4B, 4C, and 19.

66 Oak Grove Ex. 19, p. 17, lines 12-15 (Castro).

67 Oak Grove Ex. 4C, p. 12; Oak Grove Ex. 22, p. 2. Oak Grove also modeled the maximum hourly OGSES mercury emissions and compared the results to TCEQ's short-term or 1-hour mercury ESL. The results of the modeling show that the maximum modeled off-property concentration (0.191 $\mu g/m^3$) is well

mercury concentrations will be 0.00012 $\mu g/m^3$ compared to the ESL of 0.025 $\mu g/m^3$.[68] Stated differently, the modeled off-property concentrations are more than 200 times less than the level deemed acceptable by TCEQ for screening purposes.

As previously discussed, earlier this year EPA adopted revised NSPS for electric utility steam generating units.[69] As part of this rulemaking, EPA adopted a mercury limit of 17.5 lb/TBtu for lignite-fired boilers, a limit that EPA must find under federal law has been adequately demonstrated before it can adopt the NSPS rule and, consequently, is technically feasible.[70] As explained in Section II.C. of these exceptions, a finding that Oak Grove failed to prove by a preponderance of evidence that the currently proposed mercury limit of 9.2 lb/TBtu is technically practicable would not result in the denial of the draft permit. Instead, a finding of technical impracticability, which Oak Grove disputes, would necessarily reset BACT for mercury emissions from the proposed OGSES boilers at an increased level to address this issue. Presumably, the OGSES allowable mercury emission rate could be set at the recently adopted NSPS standard, which again, by definition under federal law, must be technically practicable. As demonstrated by the undisputed results of the air dispersion modeling described above, raising the allowable mercury limit by as much as 200 times would not result in an exceedance of TCEQ's ESL for mercury and, therefore, would not alter Oak Grove's

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below the 1-hour mercury ESL (0.25 $\mu g/m^3$). Note that the maximum hourly mercury emissions were based on an emissions rate that is significantly higher than the 9.2 lb/TBtu emission rate used to calculate maximum annual mercury emissions.

68 Oak Grove Ex. 22, p. 2.

69 Oak Grove Ex. 1, p. 63, line 20, p. 81, lines 22-23 (Moon).

70 Tr. p. 43, line 22 to p. 44, line 1 (Moon). According to the Federal Clean Air Act, NSPS must reflect "the degree of emission limitation achievable through the application of the best system of emission reduction which . . . the Administrator *determines has been adequately demonstrated.*" 42 U.S.C.A. § 7411(a)(1) (emphasis added).

demonstration that operation of the OGSES will not cause or contribute to a condition of air pollution.[71]

Although revising the mercury limit currently proposed for the OGSES upward to reflect the recently adopted NSPS limit is an option created by the proposed findings in the PFD, Oak Grove does not believe that it is an appropriate choice given the abundance of evidence presented at the hearing demonstrating that the proposed mercury control technology is practicable and the proposed emission limit is achievable for the OGSES units. As explained below, the great weight of evidence supports the technical practicability of both the mercury control technology and emission rate upon which the draft permit is based.

There simply is no basis for concluding that ACI is not a technically practicable control technology for the lignite-fired OGSES units. First, the control technology proposed by Oak Grove, ACI, is the exact same technology as recently approved for the PRB coal-fired Sandy Creek Energy Station.[72] Although the OGSES units will fire lignite rather than PRB coal, pilot testing has been conducted to evaluate the performance of ACI on units firing lignite. As Mr. Cichanowicz testified, this pilot testing has demonstrated that "injection of carbon and treated carbon for mercury control on lignite fuels is feasible."[73] Accordingly, following his evaluation of the mercury controls proposed for the OGSES units, Mr. Cichanowicz concluded that "[a] technically practicable mercury emission limit [for the OGSES units] is one that reflects the use of

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71 Adjusting the mercury limit from 9.2 lb/TBtu to 17.5 lb/TBu would increase the off-property mercury concentration from 0.00012 µg/m3 to 0.0002 µg/m3, an amount that is 125 times less than the level deemed acceptable by TCEQ.

72 Oak Grove Ex. 18; *see Order Granting the Application of Sandy Creek Energy Associates, L.P. for Air Quality Flexible Permit No. 70861/PSD Permit No. PSD-TX-1039* (May 26, 2006).

73 Oak Grove Ex. 35, p. 33, lines 13-15 (Cichanowicz).

some type of ACI, either conventional or treated, to augment any inherent mercury removal provided by the environmental controls for NO_x, SO_2, and PM."[74] There simply is no evidence in the record to the contrary.

According to the PFD, "Applicant provided no evidence demonstrating that a 68 to 72% mercury removal efficiency in a commercial facility can be achieved at this time with 100% lignite fuel."[75] As support for this conclusion, the ALJs cite Oak Grove's responses to requests for information from the Executive Director.[76] Significantly, in addition to selectively choosing from the evidence contained in the record, the ALJs fail to point out the context in which these responses were provided. In fact, they were provided in response to the following request from TCEQ Permit Engineer Randy Hamilton:

> Mercury technology. Based on current understanding, we believe that halogenated, powdered activated carbon (PAC) is the most effective demonstrated technology for reduction of mercury emissions from coal-fired electric generating facilities (EGF). The MidAmerican Energy Unit 4 at Council Bluffs, Iowa is an 800 MW EGF under construction, and an order has been placed with a control equipment vendor for the required PAC injection system for control of mercury emissions. The permit emission limits are based on an 83% reduction from the potential mercury emissions which are based on a 0.1 ppmw mean mercury concentration in the Powder River Basin subbituminous coal. The proposed Sandy Creek Energy project in Riesel, Texas proposes to use halogenated PAC to achieve the same level of reduction. Both permits allow optimization studies of the mercury control system.
>
> Please use the mean mercury concentration data from lignite samples representative of your fuel sources to establish the proposed annual mercury emission limit. *Please propose halogenated PAC or other demonstrated control system to achieve at least 83% reduction from the potential average mercury*

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74 Oak Grove Ex. 35, p. 34, lines 3-5 (Cichanowicz).

75 PFD at p. 32.

76 PFD at pp. 32-33.

> *emissions*. The selection of a technology for review today does not preclude later amending the permit if a different control technology becomes more attractive.[77]

As the above request makes clear, the information provided by Oak Grove in its response to Mr. Hamilton was specifically aimed at explaining why a mercury emission rate based on 83% reduction was not appropriate for the lignite-fired OGSES units. This information should not now be used, as the ALJs have, to discredit the testimony of Mr. Cichanowicz, an expert in the area of mercury control technology,[78] that 70% removal is achievable and that "the proposed limit of 9.2 lbs/TBtu is a technically practicable mercury emission limit for the OGSES boilers."[79]

One example of how the ALJs' portrayal of Oak Grove's response is misleading is the reference to Oak Grove's statement that "[d]uring pilot testing, the maximum efficiency using treated activated carbon on a 100% lignite sample was only 55% removal."[80] The ALJs have apparently interpreted this statement to stand for the seemingly straightforward proposition that, because 55% is less than 70%, Oak Grove will not be able to achieve the 70% reduction to which the 9.2 lb/TBtu corresponds. Significantly, however, the ALJs' interpretation fails to consider the fact that the 55% removal does not account for the additional mercury removal that will be achieved by the FGD and SCR, as this pilot testing measured mercury reduction only across the

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77 Oak Grove Ex. 3B, p. 5 (emphasis added). As with the control of NO_x emissions from the OGSES units, there admittedly are questions regarding the level of mercury emissions that can be achieved for the lignite-fired OGSES units. However, as Mr. Hamilton's request makes clear, like NO_x, the issue is whether mercury emission rates *lower* than 9.8 lb/MMBtu can be achieved.

78 Oak Grove Ex. 35, p. 4, lines 14-17, p. 5, lines 19-21, p. 6, lines 4-7 (Cichanowicz).

79 Oak Grove Ex. 35, p. 34, lines 10-12 (Cichanowicz).

80 PFD at pp. 32-33.

particulate matter control device.[81] In fact, Mr. Cichanowicz testified that "the suite of conventional environmental controls proposed for the OGSES could provide up to approximately 25% mercury removal, with higher levels possible depending on the extent of mercury oxidation."[82] Therefore, Mr. Cichanowicz, taking all of the evidence into consideration, concluded that "the proposed limit of 9.2 lbs/TBtu is a technically practicable mercury emission limit for the OGSES boilers."[83]

C. IF OAK GROVE DID NOT PROVE BY A PREPONDERANCE OF THE EVIDENCE THAT IT ESTABLISHED BACT FOR THE CONTROL OF NO_x AND MERCURY EMISSIONS, THE PROPER REMEDY IS NOT DENIAL OF THE APPLICATION

While Oak Grove maintains that the ALJs' recommendation to deny its application is not warranted by the evidence adduced at the hearing, if the Commission were to agree with the ALJs' proposition that Oak Grove failed to prove that the BACT proposal developed by the TCEQ staff and accepted by Oak Grove is technically practicable, the Texas Health & Safety Code specifies that the proper Commission action in such circumstances is not denial of Oak Grove's application, as proposed by the ALJs. Rather, should the Commission decide not to issue a permit to Oak Grove, the required next step is for the Commission to set forth in a report to Oak Grove "its specific objections to the submitted plans of the proposed facility" and provide Oak Grove an opportunity to address those objections.[84] Therefore, rather than denial of the permit, the practical result of the ALJs' proposal may be to require Oak Grove to revise the suite of air emissions controls proposed in its permit application and, potentially, remove SCR

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81 Oak Grove Ex. 3B, p. 84.

82 Oak Grove Ex. 35, p. 34, lines 5-8 (Cichanowicz).

83 Oak Grove Ex. 35, p. 34, lines 10-12 (Cichanowicz).

84 *See* Tex. Health & Safety Code § 382.0518(d), (e).

and ACI. Oak Grove does not believe that any Commission action that raises the NO_x and mercury emissions limits is necessary or appropriate.

As previously discussed, Oak Grove has proposed to utilize SCR to achieve a NO_X emission limit of 0.08 lb/MMBtu[85] and carbon sorbent injection to achieve a mercury emission limit of 9.2 lb/TBtu.[86] Air dispersion modeling performed by Oak Grove and presented as part of its application clearly demonstrates that compliance with NAAQS, PSD increments, and state health effects guidelines can be achieved even if the Oak Grove units were to emit NO_x and mercury at rates much higher than those proposed in the draft permit.[87] Specifically, as previously discussed in Section II.B of these exceptions, the results of Oak Grove's air dispersion modeling indicate that off-property mercury concentrations resulting from operation of the OGSES, assuming the proposed mercury emission rate of 9.2 lbs/TBtu, will be more than 200 times less than TCEQ's annual mercury ESL (*i.e.*, 0.00012 $\mu g/m^3$ compared to the ESL of 0.025 $\mu g/m^3$).[88] Similarly, as illustrated by the table below, the results of the NO_2 NAAQS and PSD Increment modeling based on a NO_X emission limit of 0.08 lb/MMBtu are significantly less than the applicable regulatory standards.[89]

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85 Oak Grove Ex. 1, p. 74, lines 7-9 (Moon); Oak Grove Ex. 35, p. 12, lines 16-20 (Cichanowicz); Oak Grove Ex. 14, pp. 6, 28. For the first two years of operation, the units will be subject to a NO_x limit of 0.08 lbs/MMBtu while Oak Grove and the SCR vendor optimize the SCR. Pursuant to the draft permit, after the two year initial operating period, Oak Grove will request to lower this limit if a lower rate is justified based on the performance of the SCR.

86 Oak Grove Ex. 1, p. 80, lines 13-16 (Moon); Oak Grove Ex. 35, p. 12, lines 20-22 (Cichanowicz); Oak Grove Ex. 14, p. 6.

87 *See generally* Oak Grove Exs. 4, 4A, 4B, 4C, 21, and 22.

88 Oak Grove Ex. 22, p. 2; Oak Grove Ex. 4C, p. 12.

89 Oak Grove 22, p. 3; Oak Grove Ex. 4C, pp. 7-8.

Pollutant	Averaging Period	NAAQS Analysis		PSD Increment Analysis	
		Modeled Concentration (µg/m3)	NAAQS (µg/m3)	Modeled Concentration (µg/m3)	PSD Increment (µg/m3)
NO_2	Annual	23	100	2	25

These modeling results show that, although clearly not the desired outcome, the proposed OGSES units can be permitted at NO_x and mercury emission levels reflective of EPA's NSPS – 0.096 lb/MMBtu NO_X and 17.5 lb/TBtu mercury.[90] The following table demonstrates the increase in emissions that would result from such an outcome:

Pollutant	Proposed Emission Limits (TPY Both Units)	NSPS-Based Emission Limits (TPY Both Units)	Emission Increase (TPY Both Units)
NO_X	6,286	7,544	1,258
Mercury	0.72	1.38	0.66

As shown above, the result of the ALJs' PFD would be to permit the Oak Grove facility with substantially higher NO_x and mercury emission limits than those proposed in the application and that can be met with state-of-the-art control technology. Such a permit would also establish BACT at these levels, resulting in other pending applications for lignite-fired boilers being permitted at these same elevated rates. Therefore, if allowed to stand, the implications of this PFD would be far reaching.

III. TRANSCRIPT COSTS

Oak Grove takes exception to the ALJs' proposal to allocate all reporting and transcription costs to Oak Grove. As set forth more fully in Oak Grove's response brief to Order No. 9, Oak Grove acknowledges that the parties to this proceeding have

[90] Oak Grove Ex. 1, p. 63, line 20, p. 81, lines 21-23 (Moon).

differing financial resources. However, 30 TEX. ADMIN. CODE § 80.23(d) sets forth several considerations that *must* be weighed in assessing reporting and transcription costs and, significantly, the financial ability of a party to pay such costs is but one of these considerations.[91] For example, the Commission must also consider the "extent to which the party participated in the hearing."[92] Despite the clear requirement of 30 TEX. ADMIN. CODE § 80.23(d) to consider factors beyond a party's financial ability to pay costs, the PFD summarily dismisses these other factors and bases the proposed allocation of transcript costs solely on Oak Grove's financial status. Thus, the PFD fails to account for and reflect the significant time taken by Protestant during the hearing – a consideration that is clearly required by 30 TEX. ADMIN. CODE § 80.23(d). Accordingly, Oak Grove respectfully requests that the Commission allocate the transcription costs equally between Oak Grove and Protestant.

IV. CONCLUSION: THE QUESTION OF THE TECHNICAL PRACTICABILITY OF OAK GROVE'S PROPOSED NO_X AND MERCURY CONTROLS SHOULD BE RESOLVED IN OAK GROVE'S FAVOR AND THE PERMIT SHOULD BE ISSUED

As set forth more fully above, Oak Grove proved by more than a preponderance of the evidence that the NO_x and mercury controls proposed in the application are technically practicable and will achieve the emission rates established in the draft permit. Given that the question of the technical practicability of Oak Grove's proposed NO_x and mercury controls serves as the sole basis for the Findings of Fact and Conclusions of Law proposed by the ALJs in their PFD, and that this question should be resolved in Oak Grove's favor, the ALJs' proposed order denying the permit is without support and

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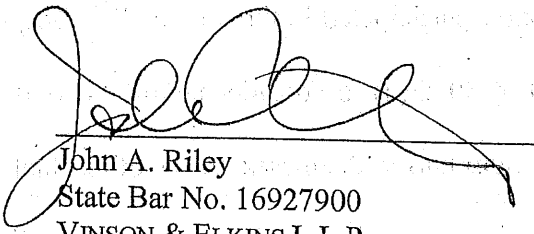
91 30 TEX. ADMIN. CODE § 80.23(d).

92 *Id.* § 80.23(d)(1)(C).

should not be issued. Therefore, Oak Grove respectfully requests that the Commission adopt the proposed order attached to these exceptions granting TCEQ Air Quality Permit Nos. 76474/PSD-TX-1056, as drafted by the Executive Director.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing Applicant Oak Grove Management Company LLC's Exceptions to the Administrative Law Judges' Proposal for Decision has been served on the following via hand delivery, facsimile, electronic mail, first class mail, and/or overnight mail on this the 12th day of September, 2006.

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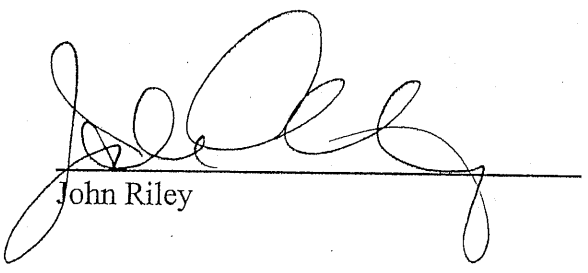

John Riley

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ATTACHMENT A

Proposed Order Granting the Application of Oak Grove Management Company LLC for Air Quality Permit No. 76474; PSD Permit No. PSD-TX-1056; TCEQ Docket No. 2006-0195-AIR; SOAH Docket No. 582-06-1502

On _____, 2006, the Texas Commission on Environmental Quality (Commission or TCEQ) considered the application of Oak Grove Management Company LLC (Applicant or Oak Grove) for Air Permit Nos. 76474 and PSD-TX-1056. The application was presented to the Commission with a proposal for decision by the Honorable Carol Wood and Tom Walston, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH).

After considering the ALJs' proposal for decision and the evidence and arguments presented, the Commission makes the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

General Facts and Procedural History

1. The proposed Oak Grove Steam Electric Station (the Station) will be a new lignite-fired electricity generating station constructed on an site located off of FM 979 in Robertson County, approximately twelve miles east of Bremond and twelve miles north of Franklin, Texas.

2. The Station will consist of two new lignite-fired boilers, Units 1 and 2, and associated support equipment, including: facilities for receipt, handling, preparation, transport, and storage of lignite; facilities for receipt, handling, and storage of limestone; facilities for receipt, handling, and storage of anhydrous ammonia; facilities for process products and waste handling and storage; two 260.5 million British thermal units per hour (MMBtu/hr) oil-fired auxiliary boilers; diesel fuel storage tanks; a 1,444 horsepower (hp) diesel engine emergency generator with a small wet cooling tower; and a 350 hp diesel engine fire pump.

3. Each Unit of the proposed Station will be capable of producing approximately 860 gross megawatts (MW) of electricity, with a maximum heat input of 8,970 MMBtu/hr. The fuel that will be fired in the two proposed boilers will be Texas lignite.

4. Oak Grove Management Company LLC (Oak Grove) is a wholly owned subsidiary of TXU Energy Company, LLC, which itself is a subsidiary of TXU Corp.

5. Oak Grove originally submitted its application for an air quality permit to TCEQ on July 27, 2005. On December 16, 2005 and February 17, 2006, Oak Grove submitted revised pages to the initial application, reflecting changes that had occurred during the technical review phase.

6. Oak Grove posted public notice signs along the perimeter of the proposed site, declaring the filing of its air permit application and stating the manner in which TCEQ could be contacted for further information.

7. Oak Grove published "Notice of Receipt of Application and Intent to Obtain Air Permit" in the *Franklin News Weekly* on August 11, 2005 and *The Bremond Press* on August 12, 2005.

8. Oak Grove published "Notice of Application and Preliminary Decision for Air Quality Permit" in the *Franklin News Weekly* on February 23, 2006 and *The Bremond Press* on February 24, 2006.

9. Oak Grove's application was made available for public inspection during the entire public notice period.

10. Oak Grove provided notification of its application to all agencies, regulatory bodies, and other entities to which notification is required.

11. At the request of Oak Grove, the Commission's Chief Clerk directly referred Oak Grove's application to SOAH for a hearing on whether the application complies with all applicable statutory and regulatory requirements. The referral was subject to the procedural requirements of the Governor's Executive Order No. RP49.

12. Oak Grove published notice of the preliminary hearing at the Pridgeon Community Center in Franklin, Texas, the *Franklin News Weekly* on March 2, 2006 and in *The Bremond Press* on March 3, 2006.

13. At the preliminary hearing conducted on April 3, 2006, in Franklin, Texas, ALJs Thomas Walston and Carol Wood accepted jurisdiction over TCEQ's referral of Oak Grove's application and designated the following as parties: Oak Grove Management Company LLC; the Commission's Public Interest Counsel; the Commission's Executive Director (ED); and Robertson County: Our Land, Our Lives.

14. ALJs Walston and Wood conducted the hearing on the merits at SOAH's offices in Austin, Texas, from June 13 to June 16 and June 19 to June 20, 2006.

Completeness of the Application

15. Oak Grove applied to the Commission for an air quality permit that would also satisfy the federal Prevention of Significant Deterioration (PSD) permitting requirements.

16. Oak Grove submitted a complete Form PI-1 General Application signed by Richard Wistrand, an authorized representative of Oak Grove. Oak Grove's application was also signed and sealed by Larry Moon, a Texas registered professional engineer.

17. Oak Grove remitted a permit fee of $75,000 with its application.

18. Oak Grove provided all supplemental information required by TCEQ's PI-1 Form.

19. Oak Grove's permit application addressed all sources of air emissions from the Station that are subject to permitting under TCEQ rules.

20. The ED's staff reviewed Oak Grove's application to determine whether it complied with all applicable rules and policies and documented the conclusions of that review in an internal report entitled "Construction Permit Review Analysis & Technical Review."

Demonstrations Under 30 Tex. Admin. Code § 116.111: Protection of Public Welfare

Oak Grove's Air Dispersion Modeling

21. Oak Grove performed an atmospheric dispersion modeling study, which was summarized in its December 16, 2005 "Air Quality Impacts Analysis in Support of an Application for a TCEQ Air Permit and a Prevention of Significant Deterioration Permit for the Oak Grove Steam Electric Station," and its December 28, 2005, January 3, 2006, and February 16, 2006 supplements to that report.

22. To perform the modeling, Oak Grove used the latest EPA "Industrial Source Complex Short-Term Model, Version 02035 (ISCT3)," which is the model recommended by both TCEQ and the EPA for modeling complex industrial sources like the Station.

23. Oak Grove performed its air modeling in accordance with guidance published by both TCEQ and EPA and the modeling protocol cooperatively developed for this project by Oak Grove and TCEQ's air dispersion modeling team.

24. The receptor grids used by Oak Grove in its air dispersion modeling were sufficient to include the entire maximum impact area for all air contaminants as well as areas over which concentrations resulting from the Station's emissions were modeled to exceed *de minimis* levels.

25. There are no schools located within 3,000 feet of the Station site.

26. In performing the air dispersion modeling, Oak Grove modeled every source of emissions at the site except for fuel storage tanks.

27. Modeling of fuel storage tanks was appropriately excluded because their emissions are low and the chemicals emitted are not particularly toxic.

28. Oak Grove did not model road dust emissions, although Oak Grove accounted for dust emissions from vehicles traveling in the ash disposal area.

29. Under TCEQ's modeling guidance, modeling of road dust emissions is explicitly excluded for short-term averaging periods.

30. Under TCEQ's modeling guidance, modeling of road dust emissions is excluded for long-term averaging periods if the following apply: the emissions will not be generated in

association with the transport, storage, or transfer of road-base aggregate materials and the applicant plans to use best management practices to control such emissions.

31. Oak Grove will be transporting no road-base aggregate materials at the Station and will employ best management practices for minimizing dust, such as paving of most roads and watering of unpaved road segments.

32. Oak Grove's air dispersion modeling was conservative, that is, it tended to over-predict off-property ambient concentrations.

    a. Oak Grove used worst-case emission rates which accounted for start-up emission rates that, in reality, would occur infrequently.

    b. Oak Grove assumed that all sources at the Station would be operating simultaneously and emitting at their maximum rates at the same time, which would not always be the case.

    c. Oak Grove coupled worst-case dispersion conditions with the worst-case emissions scenario to calculate maximum off-property impacts.

    d. Oak Grove used conservative background concentrations in the modeling analyses.

33. TCEQ's modeling staff performed an audit of Oak Grove's modeling and found it acceptable.

34. The following standards or guidelines apply to this permit application's maximum modeled pollutant concentrations: National Ambient Air Quality Standards (NAAQS); PSD increments; Net Ground Level Concentration (NGLC) or "state property-line" standards; and Effects Screening Levels (ESLs).

NAAQS Analysis

35. NAAQS are federal standards representing concentrations at which no adverse health or welfare impacts are expected to occur.

36. 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.

37. EPA has established primary and secondary NAAQS for seven air contaminants, referred to as the "criteria" pollutants: sulfur dioxide (SO_2), particulate matter consisting of particles with diameters less than or equal to 10 microns (PM_{10}), particulate matter consisting of particles with diameters less than or equal to 2.5 microns ($PM_{2.5}$), ozone, nitrogen dioxide (NO_2), carbon monoxide (CO) and lead. The NAAQS are expressed as ambient concentrations in units of parts per million (ppm) or micrograms per cubic meter averaged over a specific time period, such as 24 hours or a calendar quarter.

38. Oak Grove directly modeled its emissions of SO_2, NO_2, CO, lead, and PM_{10} for the purpose of demonstrating compliance with the NAAQS.

39. For the pollutants and averaging periods for which maximum modeled concentrations resulting from emissions at the Station were above *de minimis* levels, Oak Grove modeled non-Station emissions and added an ambient background concentration to consider the influence of other sources affecting the Station impact areas.

40. The ambient background concentrations used by Oak Grove are conservative and appropriate for the area of the proposed Station.

SO_2

41. SO_2 NAAQS exist for three averaging periods: three-hour (1300 ug/m_3), 24-hour (365 ug/m_3), and annual (80 ug/m_3).

42. Background concentrations for SO_2 were obtained by reviewing concentrations measured in Travis and Ellis Counties, as these were the two locations nearest the Station site with monitoring data for SO_2. Specifically, background concentrations for SO_2 were obtained from concentrations measured in Ellis County because these concentrations were higher than the concentrations measured in Travis County. These background concentrations are a conservative estimate of background concentrations in Robertson County since reported actual SO_2 emissions from stationary sources are higher in Ellis County than in Robertson County.

43. The maximum modeled 3-hour average SO_2 concentration resulting from the Station's emissions at any off-site location is 313 ug/m^3 and the ambient background concentration for Ellis County is 110 ug/m^3.

44. The proposed Station's SO_2 emissions, when added to the background level of ambient SO_2, will not cause or contribute to an exceedance of the 3-hour SO_2 NAAQS of 1,300 ug/m^3.

45. The maximum modeled 24-hour average SO_2 concentration resulting from the Station's emissions at any off-site location is 74.8 ug/m^3 and the maximum ambient background concentration for Ellis County is 32 ug/m^3.

46. The proposed Station's SO_2 emissions, when added to the background level of ambient SO_2, will not cause or contribute to an exceedance of the 24-hour SO_2 NAAQS of 365 ug/m^3.

47. The maximum modeled annual average SO_2 concentration resulting from the Station's emissions at any off-site location is 5.71 ug/m^3 and the maximum ambient background concentration is 5 ug/m^3.

48. The proposed Station's SO_2 emissions, when added to the background level of ambient SO_2, will not cause or contribute to an exceedance of the annual SO_2 NAAQS of 365 ug/m^3.

NO_2

49. NO_2 NAAQS exist for one averaging period: annual (100 ug/m^3).

50. Background concentrations for NO_2 were obtained by reviewing concentrations measured in Travis and Ellis Counties, as these were the two locations nearest the Station site with monitoring data for NO_2. Specifically, background concentrations for NO_2 were obtained from concentrations measured in Ellis County because these concentrations were higher than the concentrations measured in Travis County. These background concentrations are a conservative estimate of background concentrations in Robertson County since

reported actual NO_2 emissions from stationary sources are higher in Ellis County than in Robertson County.

51. The maximum modeled annual average NO_2 concentration resulting from the Station's emissions at any off-site location is 1.57 ug/m^3; and the maximum ambient background concentration is 21 ug/m^3.

52. The proposed Station's NO_2 emissions, when added to the background level of ambient NO, will not cause or contribute to an exceedance of the annual NO_2 NAAQS of 100 ug/m^3.

CO

53. CO NAAQS exist for two averaging periods: 1-hour (40,000 ug/m_3) and 8-hour (10,000 ug/m^3).

54. Background concentrations for CO were obtained from concentrations measured in Travis County, as this was the location nearest the Station site with monitoring data for CO. These background concentrations are a conservative estimate of background concentrations in Robertson County since reported actual CO emissions from stationary sources are higher in Travis County than in Robertson County.

55. The maximum modeled 1-hour average CO concentration resulting from the Station's emissions at any off-site location is 1,611 ug/m^3, which is below the *de minimis* level for 1-hour average CO concentrations of 2,000 ug/m^3.

56. The impact of the Station's CO emissions on 1-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 1-hour CO NAAQS of 40,000 ug/m^3.

57. The maximum modeled 8-hour average CO concentration resulting from the Station's emissions at any off-site location is 506 ug/m^3; and the maximum ambient background concentration is 699 ug/m^3.

58. The proposed Station's CO emissions, when added to the background level of ambient CO, will not cause or contribute to an exceedance of the 8-hour CO NAAQS of 10,000 ug/m^3.

Lead

59. Lead NAAQS exist for one averaging period: calendar quarter (1.5 ug/m^3).

60. A screening background concentration for lead from Robertson County was used in Oak Grove's modeling demonstration.

61. The maximum modeled calendar quarter average lead concentration resulting from the Station's emissions at any off-site location is 0.131 ug/m^3; and the maximum screening background concentration is 0.4 ug/m^3.

62. The proposed Station's 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 1.5 ug/m^3.

PM_{10}

63. PM_{10} NAAQS exist for two averaging periods: 24-hour (150 ug/m_3) and annual (50 ug/m^3).

64. Background concentrations for PM_{10} were obtained by reviewing concentrations measured in Travis and Ellis Counties, as these were the two locations nearest the Station site with monitoring data for PM_{10}. Specifically, background concentrations for PM_{10} were obtained from concentrations measured in Ellis County because these concentrations were higher than the concentrations measured in Travis County. These background concentrations are a conservative estimate of background concentrations in Robertson County since reported actual PM_{10} emissions from stationary sources are higher in Ellis County than in Robertson County.

65. The maximum modeled 24-hour average PM_{10} concentration resulting from the Station's emissions at any off-site location is 11.8 ug/m^3; and the maximum ambient background concentration is 47 ug/m^3.

66. The proposed Station'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 ug/m^3.

67. The maximum modeled annual average PM_{10} concentration resulting from the Station's emissions at any off-site location is 0.676 ug/m^3, which is below the *de minimis* level for annual average PM_{10} concentrations of 1 ug/m^3.

68. The impact of the Station's PM_{10} emissions on annual average concentrations is insignificant and will not cause or contribute to an exceedance of annual PM_{10} NAAQS of 50 ug/m^3.

$PM_{2.5}$

69. 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.

70. The Station's emissions of PM_{10} would not cause or contribute to an exceedance of the PM_{10} NAAQS.

71. The Station's emissions of $PM_{2.5}$ would not cause or contribute to an exceedance of the $PM_{2.5}$ NAAQS.

Ozone

72. The proposed Station would emit nitrogen oxides (NO_x) and volatile organic compounds (VOCs), which, in the presence of sunlight, can form ozone in the atmosphere.

73. TCEQ requires use of a screening technique to determine whether a proposed source will cause ozone exceedances in the local attainment area.

74. If a source is NO_x-dominated, then local ozone impacts will be insignificant and the analysis is deemed complete.

75. Oak Grove properly applied the screening technique to determine that the Station would be NO_x-dominated.

76. Oak Grove demonstrated there would not be a significant change to the current ozone levels in the local attainment area due to the Station's emissions.

77. The Station will not cause any ozone NAAQS exceedances in the local attainment area.

78. Station's maximum incremental contribution to any monitor, based on photochemical modeling, is 0.07 ppb in the DFW nonattainment area and 0.09 ppb in the Austin EAC area, which are significantly below 5 ppb, the lower required range of detectability of modern ambient ozone monitors.

79. The Station's maximum incremental contribution to any monitor, based on photochemical modeling, is 0.0824 % of the 85 ppb EPA standard that is used to evaluate compliance with the 8-hour ozone NAAQS in the DFW nonattainment area and, although not in nonattainment status, the Station's maximum incremental contribution to any monitor in the Austin EAC area is 0.106% of the 85 ppb EPA standard. These values are at least an order of magnitude below the fraction of the applicable NAAQS that is defined as insignificant for other criteria pollutants.

80. Oak Grove's photochemical modeling demonstrates that, when following EPA procedures for demonstrating compliance with the 8-hour NAAQS for ozone, the emissions from the proposed Oak Grove facility will make no difference in the future Design Values for the DFW nonattainment or Austin EAC areas.

81. The Station will not measurably influence ambient ozone concentrations in the DFW nonattainment or Austin EAC areas.

NAAQS Summary

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

PSD Increment Analysis

83. 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.

84. Oak Grove performed a PSD increment analysis for emissions of SO_2, NO_2, and PM_{10} from the Station.

85. Maximum modeled concentrations resulting from emissions at the Station were below *de minimis* levels for PM_{10} (annual averaging period).

86. The impacts of the Station's PM_{10} emissions on an annual average concentration is insignificant and will not cause or contribute to an exceedance of the annual PM_{10} PSD increment.

87. Maximum modeled concentrations resulting from emissions at the StationN were above *de minimis* levels for SO_2 (3-hour, 24-hour, and annual averaging periods), NO_2 (for the annual averaging period) and PM_{10} (for the 24-hour averaging period).

88. For the above pollutants and averaging times, Oak Grove incorporated data on other PSD increment-consuming sources from TCEQ's Point Source Database into the model.

89. For each of the above pollutants and averaging periods, the combined impacts from the Station's maximum modeled concentrations and the PSD increment-consuming sources are less than their PSD increments.

PSD Increment Analysis: SO_2

90. The maximum modeled 3-hour average SO_2 concentration resulting from the combined effect of the Station's emissions and the emissions of other PSD increment-consuming sources in the area is 313 ug/m^3.

91. The proposed Station's SO_2 emissions will not cause or contribute to an exceedance of the 3-hour average SO_2 PSD increment of 512 ug/m^3.

92. The maximum modeled 24-hour average SO_2 concentration resulting from the combined effect of the Station's emissions and the emissions of other PSD increment-consuming sources in the area is 69.6 ug/m^3.

93. The proposed Station's SO_2 emissions will not cause or contribute to an exceedance of the 24-hour average SO_2 PSD increment of 91 ug/m^3.

94. The maximum modeled annual average SO_2 concentration resulting from the combined effect of the Station's emissions and the emissions of other PSD increment-consuming sources in the area is 4.46 ug/m^3.

95. The proposed Station's SO_2 emissions will not cause or contribute to an exceedance of the annual average SO_2 PSD increment of 20 ug/m^3.

PSD Increment Analysis: NO_2

96. The maximum modeled annual average NO_2 concentration resulting from the combined effect of the Station's emissions and the emissions of other PSD increment-consuming sources in the area is 1.57 ug/m^3.

97. The proposed Station's NO_2 emissions will not cause or contribute to an exceedance of the annual average NO_2 PSD increment of 25 ug/m^3.

PSD Increment Analysis: PM_{10}

98. The maximum modeled 24-hour average PM_{10} concentration resulting from the combined effect of the Station's emissions and the emissions of other PSD increment-consuming sources in the area is 11.4 ug/m^3.

99. The proposed Station's PM_{10} emissions will not cause or contribute to an exceedance of the 24-hour average PM_{10} PSD increment of 30 ug/m_3.

PSD Increment Analysis: Summary

100. Emissions from the Station will not cause or contribute to exceedances of any PSD increments.

PSD Monitoring Analysis

101. Of the air contaminants that will be emitted by the Station, PSD monitoring *de minimis* levels exist for SO_2 (24-hour averaging period), NO_2 (annual averaging period), CO (8-hour averaging period), lead (calendar quarter averaging period), PM_{10} (24-hour averaging period).

102. Maximum modeled concentrations resulting from the Station's emissions are below all applicable PSD monitoring *de minimis* levels except for 24-hour SO_2, 8-Hour CO, and 24-hour PM_{10}, for which Oak Grove used existing monitoring data.

NGLC Analysis

103. NGLC standards are maximum air concentrations that are allowed to result from all sources on a contiguous property.

104. NGLC standards exist for total H_2SO_4 (1-hour and 24-hour averaging periods) and SO_2 (30-minute averaging period).

105. Oak Grove modeled emissions of total H_2SO_4 and SO_2 for purposes of comparison to applicable NGLC standards.

106. Oak Grove's maximum modeled concentrations were below the applicable NGLC standards on all property that is not owned by Oak Grove.

NGLC: H_2SO_4

107. The maximum modeled 1-hour average H_2SO_4 concentration resulting from the Station's emissions at any location is 34.1 ug/m^3.

108. The proposed Station's H_2SO_4 emissions will not cause an exceedance of the 1-hour average H_2SO_4 NGLC of 50 ug/m^3.

109. The maximum modeled 24-hour average H_2SO_4 concentration resulting from the Station's emissions at any location is 2.27 ug/m^3.

110. The proposed Station's H_2SO_4 emissions will not cause an exceedance of the 24-hour average H_2SO_4 NGLC of 15 ug/m^3.

NGLC: SO_2

111. The maximum modeled 30-minute average SO_2 concentration resulting from the Station's emissions at any location is 1,111 ug/m^3.

112. The maximum predicted SO_2 concentrations are greater than the SO_2 NGLC of 1,021 ug/m^3 only within a small area on the Oak Grove-owned cooling reservoir for 1-hour per year, which was conservatively modeled as ambient air.

113. Predicted SO_2 concentrations are below the SO_2 NGLC on all property that is not owned by Oak Grove.

114. The model predicted greater than 99.9% compliance with the SO_2 standard. This is equivalent to a demonstration of compliance with the SO_2 standard.

115. The proposed Station's SO_2 emissions will not cause an exceedance of the SO_2 NGLC of 1,021 ug/m^3.

NGLC Summary

116. The proposed Station's air emissions will not cause exceedances of any applicable NGLC standards on any property not owned by Oak Grove.

ESL Analysis

117. TCEQ developed the ESL system to review ground level concentrations of constituents for which there are no established state or federal standards. ESLs serve as conservative guideline comparison concentrations for use in effects evaluations to protect against adverse health effects to both humans and animals, vegetation effects, material damage (e.g., corrosion), and nuisance conditions (e.g., odor).

118. ESLs incorporate very generous margins of safety to take into account even the most sensitive individual, typically using 1/100th of levels of a constituent at which no adverse effects are observed (No Observed Adverse Effect Level or "NOAEL") for short-term ESLs and 1/1000th of the NOAEL for long-term ESLs.

119. Maximum modeled air concentrations resulting from a source's emissions that are below the ESL will not cause adverse health or welfare effects, and concentrations above the ESL will not necessarily cause adverse health or welfare effects, but may require further study if they exceed the ESL to a significant degree in an area populated or frequented by people.

120. 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 to be acceptable.

121. An ESL analysis is conducted only for sources on the applicant's property.

122. 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.

123. TCEQ and its predecessor agencies have been using the ESL system to evaluate the health effects of air contaminants for at least 20 years.

124. The ESL system currently used by TCEQ adequately protects the health and welfare of the public.

125. Oak Grove modeled the Station's emissions of the following non-criteria pollutants: ammonia, hydrogen chloride, hydrogen fluoride, limestone dust, gypsum dust, silica dust and the following trace metallic constituents of the lignite: antimony, arsenic, barium, beryllium, boron, cadmium, chromium, coal dust, copper, manganese, mercury, molybdenum, nickel, selenium, silver, vanadium, and zinc.

126. For ammonia (NH_3), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 11.2 ug/m^3, which is below the 1-hour ESL for ammonia of 170 ug/m^3.

127. The maximum modeled annual average concentration resulting from the Station's emissions of ammonia is 0.0340 ug/m^3, which is below the annual ESL for ammonia of 17 ug/m^3.

128. For hydrogen chloride (HCl), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 22.6 ug/m^3, which is below the 1-hour ESL for hydrochloric acid of 75 ug/m^3.

129. The maximum modeled annual average concentration resulting from the Station's emissions of hydrogen chloride is 0.0831 ug/m^3, which is below the annual ESL for hydrogen chloride of 0.1 ug/m^3.

130. For hydrogen fluoride (HF), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 13.1 ug/m^3, which is below the 1-hour ESL for hydrogen fluoride of 25 ug/m^3.

131. The maximum modeled 24-hour average concentration resulting from the Station's emissions of hydrogen fluoride is 0.850 ug/m^3, which is below the 24-hour ESL for hydrogen fluoride of 3 ug/m^3.

132. The maximum modeled 30-day average concentration resulting from the Station's emissions of hydrogen fluoride is 0.242 ug/m^3, which is below the 30-day ESL for hydrogen fluoride of 0.5 ug/m^3.

133. The maximum modeled annual average concentration resulting from the Station's emissions of hydrogen fluoride is 0.0483 ug/m^3, which is below the annual ESL for hydrogen fluoride of 2.5 ug/m^3.

134. For limestone dust, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.361 ug/m^3, which is below the 1-hour ESL for limestone dust of 50 ug/m^3.

135. The maximum modeled annual average concentration resulting from the Station's emissions of limestone dust is 0.00008 ug/m^3, which is below the annual ESL for limestone dust of 5 ug/m^3.

136. For gypsum dust, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0102 ug/m^3, which is below the 1-hour ESL for gypsum dust of 50 ug/m^3.

137. The maximum modeled annual average concentration resulting from the Station's emissions of gypsum dust is 0.00003 ug/m^3, which is below the annual ESL for gypsum dust of 5 ug/m^3.

138. For crystalline silica dust, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.146 ug/m^3, which is below the 1-hour ESL for crystalline silica dust of 1 ug/m^3.

139. The maximum modeled annual average concentration resulting from the Station's emissions of crystalline silica dust is 0.000710 ug/m^3, which is below the annual ESL for silver of 0.1 ug/m^3.

140. For antimony (Sb), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.00784 ug/m^3, which is below the 1-hour ESL for aluminum of 5 ug/m^3.

141. The maximum modeled annual average concentration resulting from the Station's emissions of antimony is 2.18 x 10^{-05} ug/m^3, which is below the annual ESL for antimony of 0.5 ug/m^3.

142. For arsenic (As), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0496 ug/m^3, which is below the 1-hour ESL for arsenic of 0.1 ug/m^3.

143. The maximum modeled annual average concentration resulting from the Station's emissions of arsenic is 9.59 x 10^{-05} ug/m^3, which is below the annual ESL for arsenic of 0.01 ug/m^3.

144. For barium (Ba), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 1.88 ug/m^3, which is below the 1-hour ESL for barium of 5 ug/m^3.

145. The maximum modeled annual average concentration resulting from the Station's emissions of barium is 0.00431 ug/m^3, which is below the annual ESL for barium of 0.5 ug/m^3.

146. For boron (B), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.999 ug/m^3, which is below the 1-hour ESL for boron of 100 ug/m^3.

147. The maximum modeled annual average concentration resulting from the Station's emissions of boron is 0.00509 ug/m^3, which is below the annual ESL for boron of 10 ug/m^3.

148. For cadmium (Cd), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.00310 ug/m^3, which is below the 1-hour ESL for cadmium of 0.1 ug/m^3.

149. The maximum modeled annual average concentration resulting from the Station's emissions of cadmium is 4.11 x 10^{-06} ug/m^3, which is below the annual ESL for cadmium of 0.01 ug/m^3.

150. For chromium (Cr), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0911 ug/m^3, which is below the 1-hour ESL for chromium of 1 ug/m^3.

151. The maximum modeled annual average concentration resulting from the Station's emissions of chromium is 0.000357 ug/m^3, which is below the annual ESL for chromium of 0.1 ug/m^3.

152. For coal dust, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 3.01 ug/m^3, which is below the 1-hour ESL for coal dust of 9 ug/m^3.

153. The maximum modeled annual average concentration resulting from the Station's emissions of coal dust is 0.0145 ug/m^3, which is below the annual ESL for coal dust of 0.9 ug/m^3.

154. For copper (Cu), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.252 ug/m^3, which is below the 1-hour ESL for copper of 10 ug/m^3.

155. The maximum modeled annual average concentration resulting from the Station's emissions of copper is 0.000647 ug/m^3, which is below the annual ESL for copper of 1 ug/m^3.

156. For mercury (Hg), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.191 ug/m^3, which is below the 1-hour ESL for mercury of 0.25 ug/m^3.

157. The maximum modeled annual average concentration resulting from the Station's emissions of mercury is 0.00012 ug/m^3, which is below the annual ESL for mercury of 0.025 ug/m^3.

158. For molybdenum (Mo), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0364 ug/m^3, which is below the 1-hour ESL for molybdenum of 50 ug/m^3.

159. The maximum modeled annual average concentration resulting from the Station's emissions of molybdenum is 0.000109 ug/m^3, which is below the annual ESL for molybdenum of 5 ug/m^3.

160. For nickel (Ni), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0960 ug/m^3, which is below the 1-hour ESL for nickel of 0.15 ug/m^3.

161. The maximum modeled annual average concentration resulting from the Station's emissions of nickel is 0.000200 ug/m^3, which is below the annual ESL for nickel of 0.015 ug/m^3.

162. For selenium (Se), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0532 ug/m^3, which is below the 1-hour ESL for selenium of 2 ug/m^3.

163. The maximum modeled annual average concentration resulting from the Station's emissions of selenium is 0.000154 ug/m^3, which is below the annual ESL for selenium of 0.2 ug/m^3.

164. For silver (Ag), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.00122 ug/m^3, which is below the 1-hour ESL for silver of 0.1 ug/m^3.

165. The maximum modeled annual average concentration resulting from the Station's emissions of silver is 2.96 x 10^{-06} ug/m^3, which is below the annual ESL for silver of 0.01 ug/m^3.

166. For vanadium (V), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.326 ug/m^3, which is below the 1-hour ESL for vanadium of 0.5 ug/m^3.

167. The maximum modeled annual average concentration resulting from the Station's emissions of vanadium is 0.000740 ug/m^3, which is below the annual ESL for vanadium of 0.05 ug/m^3.

168. For zinc (Zn), the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.297 ug/m^3, which is below the 1-hour ESL for zinc of 50 ug/m^3.

169. The maximum modeled annual average concentration resulting from the Station's emissions of zinc is 0.000362 ug/m^3, which is below the annual ESL for zinc of 0.5 ug/m^3.

ESL Analysis: Beryllium

170. For beryllium, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.0211 ug/m^3, which is slightly higher than the 1-hour ESL for beryllium of 0.02 ug/m^3.

171. The maximum modeled 1-hour average concentration for beryllium is predicted to exceed the 1-hour ESL for only 1 hour in a year, at a non-residential location.

172. The health effect of concern from exposure to beryllium occurs after long-term exposure.

173. The short-term ESL for beryllium is conservative.

174. The maximum modeled annual average concentration resulting from the Station's emissions of beryllium is 0.00015 ug/m^3, which is below the annual ESL for beryllium of 0.002 ug/m^3.

175. No adverse health or welfare effects will result from the public's exposure to the Station's beryllium emissions.

ESL Analysis: Fused Amorphous Silica Dust

176. For fused amorphous silica dust, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 0.973 ug/m^3, which is approximately 1.9 times higher than the 1-hour ESL for fused silica of 0.5 ug/m^3.

177. The maximum modeled 1-hour average concentration for fused amorphous silica dust is predicted to exceed the 1-hour ESL for only 12 hours in a year, at a non-residential location.

178. The health effect of concern from exposure to silica occurs after long-term exposure.

179. The maximum modeled annual average concentration resulting from the Station's emissions of fused amorphous silica is 0.0112 ug/m^3, which is below the annual ESL for silica of 0.05 ug/m^3.

180. No adverse health or welfare effects will result from the public's exposure to the Station's silica emissions.

ESL Analysis: Manganese

181. For manganese, the maximum modeled 1-hour average concentration resulting from the Station's emissions is 2.04 ug/m^3, which is slightly higher than the 1-hour ESL for manganese of 2 ug/m^3.

182. The maximum modeled 1-hour average concentration for manganese is predicted to exceed the 1-hour ESL for only 1 hour in a year, at a non-residential location.

183. The health effect of concern from exposure to manganese occurs after long-term exposure.

184. The maximum modeled annual average concentration resulting from the Station's emissions of manganese is 0.0150 ug/m^3, which is below the annual ESL for manganese of 0.2 ug/m^3.

185. No adverse health or welfare effects will result from the public's exposure to the Station's manganese emissions.

ESL Summary

186. Maximum modeled concentrations resulting from Oak Grove's emissions of non-criteria pollutants are below all applicable one-hour and annual ESLs, except for beryllium, fused amorphous silica dust, and manganese, for which maximum modeled concentrations exceed only the respective one-hour ESLs for a short period of time on non-residential property.

187. No adverse health or welfare effects will result from the Station's emissions of air contaminants for which no air quality standard exists.

Additional Findings Concerning Air Emissions

188. Emissions of particulate matter from the Station lignite-fired boilers will not be greater than 0.3 lb/MMBtu on a two-hour average basis and will not exceed a six-minute average opacity of 20 percent.

189. Combined emissions of particulate matter from the two auxiliary boilers at the Station will not be greater than 195.4 lb/hr and will not exceed a six-minute average opacity of 20 percent.

190. Emissions of particulate matter from the stationary vents at the Station will not exceed a six-minute average opacity of 20 percent.

191. Emissions of particulate matter from all buildings, enclosed facilities, structures, and other sources at the Station will not exceed a six-minute average opacity of 30 percent.

192. Emissions of SO_2 from the Station lignite-fired boilers will not exceed 3.0 lb/MMBtu on a three-hour average basis.

193. When starting up on fuel oil, emissions of SO_2 from the Station boilers will not exceed 440 ppm by volume averaged over a 3-hour period.

194. Emissions of SO_2 from the Station auxiliary boilers will not exceed 440 ppm by volume averaged over a 3-hour period.

195. A disaster review for the proposed Station was triggered by the on-site storage of anhydrous ammonia, which is used as a reagent in the SCR NO_x emission control equipment.

196. A Preliminary Risk Assessment Plan for the Station was submitted to the TCEQ on January 6, 2006.

197. The disaster review performed for the Station demonstrated that the disaster potential associated with the storage of anhydrous ammonia will be minimized and that the public health and welfare will be protected.

Summary of Protection of Public Health and Welfare

198. The Station's proposed emissions will comply with all ambient air contaminant standards and guidelines at all off-property locations.

Measurement of Emissions: 30 Tex. Admin. Code § 116.111(a)(2)(B)

199. Oak Grove will install, operate, and maintain continuous emissions monitoring systems (CEMS) to provide a continuous demonstration of compliance with limits on emissions of SO_2, NO_x, CO, and ammonia from the Station lignite-fired boilers.

200. Oak Grove will install, operate, and maintain a continuous opacity monitoring system (COMS) to provide a continuous demonstration of compliance with the limitation on opacity from each Station lignite-fired boiler.

201. Oak Grove will install, operate, and maintain either a CEMS or a sorbent trap to provide a continuous demonstration of compliance with limits on mercury emissions from the Station lignite-fired boilers.

202. Oak Grove will perform initial emission testing; annually test lignite for concentrations of non-mercury metals, fluorides, and chlorides; keep records of fuel analyses; conduct regular opacity inspections; and undertake other actions at various emission points throughout the Station site to ensure that emissions are within permit limits and comply with the terms of the Draft Permit.

203. Oak Grove's proposed methods for measuring emissions from the Station are adequate.

204. Oak Grove's 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.

Best Available Control Technology: 30 Tex. Admin. Code § 116.111(a)(2)(C)

205. Oak Grove's BACT analysis was performed in accordance with TCEQ guidance.

206. For the lignite-fired boilers, Oak Grove will use wet flue gas desulfurization to control emissions of SO_2, HF, H_2SO_4, HCl, and Hg; low-NO_x burners, over-fired air, and selective catalytic reduction (SCR) to control emissions of NO_x; fabric filter baghouses to control emissions of PM, PM_{10}, HF, H_2SO_4, HCl, Hg, and Pb; good combustion practices to control emissions of CO and volatile organic compounds (VOCs); proper SCR design and operation to control emissions of ammonia; and treated activated carbon injection to control emissions of mercury.

207. For the auxiliary boilers, operation of which will be limited to an annual capacity factor of 10 percent based on heat input, low-NO_x burners and low sulfur No. 2 fuel oil will be used to minimize NO_x and SO_2 emissions, respectively.

208. For the material handling sources, a combination of fabric filters, covered conveyors, enclosed buildings, and dust suppressant spraying will be used to control emissions of PM and PM_{10}.

209. For the emergency engines, operation of which will be limited to 876 hours per year each, the use of low sulfur fuel will be used to minimize SO_2 emissions.

210. The emergency engines will meet applicable NSPS for Stationary Compression Ignition Internal Combustion Engines.

211. For the generator cooling tower, PM emissions will be controlled by maintaining a low level of dissolved solids in the cooling water and utilizing mist eliminators on the tower.

212. For the fuel oil storage tanks, VOC emissions will be controlled through the use of a submerged fill pipe.

213. For the ammonia handling and storage facilities, ammonia emissions will be minimized and/or controlled by: equipping the ammonia unloading facilities with vapor recovery; storing ammonia in high pressure tanks; conducting daily Audio/Visual/Olfactory inspections of the ammonia storage area to detect leaks; and installing barriers around the storage tanks to prevent vehicular collisions.

BACT for the Lignite-fired Boilers

214. Utilization of good combustion practices with an emission rate of 0.34 lb/MMBtu on a 12-month rolling average basis is BACT for CO emissions from the lignite-fired boilers.

215. Pursuant to Special Condition 50 of the Draft Permit, the Station will be subject to a two-phase NO_x emission limit. For the first two years of operation, the Station lignite-fired boilers will be subject to a NO_x limit of 0.08 lbs/MMBtu while Oak Grove optimizes the SCR. After the two year initial operating period, Oak Grove must request to lower this limit if a lower rate is justified based on the performance of the SCR.

216. Application of low-NO_x burners, over-fired air, and selective catalytic reduction (SCR) specified to meet a NO_x emission limit of 0.05 lb/MMBtu along with the two-phase NO_x limit contained in Special Condition 50 of the Draft Permit is BACT for NO_x emissions from the lignite-fired boilers.

217. Application of a wet FGD system with an emission rate of 0.192 lb/MMBtu on a 30-day rolling average basis is BACT for SO_2 emissions from the lignite-fired boilers.

218. Application of fabric filter baghouses with a filterable PM/PM_{10} emission rate of 0.015 lb/MMBtu and a total PM/PM_{10} emission rate of 0.04 lb/MMBtu on an annual average is BACT for PM and PM_{10} emissions from the lignite-fired boilers.

219. Application of good combustion practices with an emission rate of 0.0045 lb/MMBtu on an annual average is BACT for VOC emissions from the lignite-fired boilers.

220. Application of a wet FGD system and fabric filter baghouses with an emission rate of 0.0036 lb/MMBtu on an annual average is BACT for fluorine emissions (primarily in the form of hydrogen fluoride or HF) from the lignite-fired boilers.

221. Application of a wet FGD system and fabric filter baghouses with an emission rate of 0.0122 lb/MMBtu on an annual average is BACT for sulfuric acid (H_2SO_4) emissions from the lignite-fired boilers.

222. Application of a wet FGD system and fabric filter baghouses with an emission rate of 0.0061 lb/MMBtu on an annual average is BACT for emissions of hydrogen chlorine (HCl) from the lignite-fired boilers.

223. Application of a wet FGD system, fabric filter baghouses, SCR, and treated activated carbon injection system with an emission rate of 0.0000092 lb/MMBtu on a 12-month rolling average is BACT for mercury (Hg) emissions from the lignite-fired boilers.

224. Proper SCR unit design and operation with an emission rate of 10 ppm on an hourly average and 4 ppm on 12-month rolling average is BACT for emissions of ammonia from the lignite-fired boilers.

Auxiliary Boiler BACT

225. Application of low-NO_x burners and flue gas recirculation with an emission rate of 0.10 lb/MMBtu, averaged over 3 hours of operation, is BACT for emissions of NO_x from the auxiliary boilers.

226. Because the boilers will use low sulfur No. 2 fuel oil and be limited to a maximum of 10% annual capacity factor, the emissions of other products of combustion (such as, PM,

SO_2, VOCs, and CO) will be minimal. Therefore, the low-NO_x burners are BACT for the auxiliary boilers.

Material Handling BACT

227. Use of fabric filters, covered conveyors, enclosed buildings, and dust suppressant spraying is BACT for emissions of PM and PM_{10} from the material handling sources.

Emergency Engines BACT

228. Compliance with the emission specifications contained in Special Conditions 17 and 18 of the Draft Permit represent BACT for the diesel fuel-fired generator and diesel fuel-fired firewater pump.

Generator Cooling Tower BACT

229. Maintaining a low level of dissolved solids in the cooling water and utilizing mist eliminators on the cooling tower is BACT for emissions of PM from the generator cooling tower.

Fuel Storage Tanks BACT

230. Use of a submerged fill pipes is BACT for emissions of VOCs from the fuel storage tanks.

Ammonia Storage Tanks BACT

231. Use of vapor recovery, high pressure storage tanks, and best management practices is BACT for the ammonia handling and storage facilities.

BACT Summary

232. Oak Grove prepared a complete and appropriate BACT analysis that satisfied all requirements for each pollutant emitted from each emission point for which such an analysis was required.

233. The controls and associated emission rates proposed by Oak Grove for the Station represent BACT.

New Source Performance Standards (NSPS): 30 Tex. Admin. Code § 116.111(a)(2)(D)

234. Oak Grove's application accurately and completely delineates the requirements of all applicable NSPS as they apply to the lignite-fired boilers, the auxiliary boilers, the lignite processing, storage, and conveyor equipment, the limestone handling system, and the Station generally.

235. The proposed Station is expected to meet all of the NSPS to which it will be subject. Compliance with all applicable NSPS requirements is a condition of the Draft Permit.

National Emission Standards for Hazardous Air Pollutants (NESHAPS): 30 Tex. Admin. Code § 116.111(a)(2)(E)

236. There are no NESHAPS applicable to facilities of a type that comprise the Station.

NESHAPS for Source Categories: 30 Tex. Admin. Code § 116.111(a)(2)(F)

237. The Station auxiliary boilers and emergency diesel engines are expected to comply with the requirements of the NESHAPS for source categories, or maximum available control technology (MACT) standards, for industrial boilers and process heaters and reciprocating internal combustion engines.

Performance Demonstration: 30 Tex. Admin. Code § 116.111(a)(2)(G)

238. The Draft Permit contains provisions for demonstrating achievement of the performance specified in the application, such as conducting performance testing of emissions from the lignite-fired boiler and auxiliary boiler stacks, once the Station is constructed and operating.

239. The provisions for demonstrating achievement of the performance specified in the application will adequately demonstrate the performance of the Station.

Nonattainment Review: 30 Tex. Admin. Code § 116.111(a)(2)(H)

240. Robertson County is not classified as nonattainment for any criteria pollutant.

Prevention of Significant Deterioration Review: 30 Tex. Admin. Code § 116.111(a)(2)(I)

241. As part of Texas' State Implementation Plan, EPA has approved TCEQ's program for using Chapter 116 NSR permits as the vehicle for undertaking the demonstrations required by the federal PSD program.

242. The Station will 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, SO_2, VOCs, PM, PM_{10}, CO, H_2SO_4, and Pb.

243. Oak Grove conducted a source impact analysis showing that allowable emissions from the Station will not cause or measurably contribute to air pollution in violation of any NAAQS or PSD increment.

244. Oak Grove conducted an appropriate additional impacts analysis that assessed the potential impairment to visibility, soils, and vegetation as a result of the Station and associated commercial, residential, and industrial growth, and assessed air quality impacts as a result of such growth.

245. The proposed Station will not generate sufficient growth in the area to significantly increase air contaminants from secondary sources.

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

247. The proposed Station will not have adverse impacts on visibility since the nearest Class I area is more than 100 kilometers away.

248. Modeling of the Station's impact on visibility in a Class I area is not required because the nearest Class I area is located more than 100 km from the site of the Station.

Air Dispersion Modeling or Ambient Monitoring: 30 Tex. Admin. Code § 116.111(a)(2)(J)

249. Oak Grove performed computerized air dispersion modeling in order to determine the air impacts of the Station.

Federal Standards of Review for Constructed or Reconstructed Major Sources of Hazardous Air Pollutants: 30 TAC § 116.111(a)(2)(K)

250. On May 18, 2005, EPA removed coal and oil-fired electric utility steam generating units from the Federal Clean Air Act Section 112(c) source category list. Therefore, there are no sources at the Station for which a case-by-case MACT determination is required.

Mass Cap and Trade Allocations: 30 Tex. Admin. Code § 116.111(a)(2)(L)

251. The proposed Station will not be located in the Houston/Galveston ozone nonattainment area.

Compliance History

252. Oak Grove's compliance history score is zero because there are no violations for the Station which is not yet built, although there have been investigations recorded.

Permit

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

254. The proposed Station has been planned to comply with the emission limits specified in the permit's MAERT.

255. The proposed Station can be operated to meet the requirements of the permit.

256. Oak Grove's permit prescribes requirements for demonstrating initial and ongoing compliance with all applicable requirements of the permit and the Texas Clean Air Act.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over Oak Grove's application pursuant to Tex. Health & Safety Code (Health & Safety Code) Chapter 382 (West 2005) and Tex. Water Code (Water Code) Chapter 5 (West 2005).

2. Oak Grove's application was directly referred to SOAH pursuant to Water Code § 5.557.

3. Pursuant to Tex. Gov't Code (Gov't Code) § 2003.047 (West 2005), SOAH has jurisdiction to conduct a hearing and to prepare a proposal for decision in this matter.

4. Notice of Oak Grove's application was provided pursuant to 30 Tex. Admin. Code § 39.601, *et seq.*, and Gov't Code §§ 2001.051 and 2001.052.

5. Oak Grove submitted its application in compliance with 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 met all statutory and regulatory requirements.

7. Pursuant to 30 Tex. Admin. Code § 116.111, Oak Grove demonstrated that the emissions from the Station 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 PM_{10} NAAQS suffices to demonstrate compliance with the $PM_{2.5}$ NAAQS.

9. When the maximum modeled concentration of a pollutant 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 Station's emissions of SO_2, PM_{10}, and CO because of the availability of existing conservative monitoring data that are below all NAAQS.

11. No preconstruction monitoring is required for any of the air contaminants for which Oak Grove's maximum modeled concentrations were below PSD monitoring *de minimis* levels.

12. For NO_2 and Pb, preconstruction monitoring is not required because the predicted concentrations of these pollutants were less than their respective PSD monitoring significance levels.

13. Based on the above Findings of Fact and Conclusions of Law, the proposed Station's emissions will not cause or contribute to a condition of air pollution.

14. Based on the above Findings of Fact and Conclusions of Law, the proposed Station's emissions will not cause adverse health or welfare effects, including nuisance conditions.

15. Based on the above Findings of Fact and Conclusions of Law, the proposed Station's emissions 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 and Conclusions of Law, the proposed Station's emissions 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 and Conclusions of Law, Oak Grove will comply with all applicable standards adopted by reference in 30 Tex. Admin. Code Chapter 113.

18. The proposed Station's diesel fuel tanks will only store diesel that meets the specifications set forth in 30 Tex. Admin. Code Chapter 114.

19. The proposed Station is not subject to the rules set forth in 30 Tex. Admin. Code Chapter 115 regarding the control of volatile organic compounds because it will be located in Robertson County.

20. The proposed Station is not subject to the rules set forth in 30 Tex. Admin. Code Chapter 117 regarding the control of NO_x because it will not be located in an ozone nonattainment area and will be placed into service after December 31, 1995.

21. The proposed Station 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 proposed Station 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 Station will comply with all Commission rules and regulations and the intent of the Texas Clean Air Act, including protection of the health and property of the public, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.

Measurement of Emissions: 30 Tex. Admin. Code § 116.111(a)(2)(B)

24. In accordance with 30 Tex. Admin. Code § 116.111(a)(2)(B), the Station will have provisions for measuring the emission of air contaminants as determined by the Commission's Executive Director.

Best Available Control Technology: 30 Tex. Admin. Code § 116.111(a)(2)(C)

25. An applicant that is proposing to construct a lignite-fired boiler power plant is not required to include other electric generation technologies, such as integrated gasification/combined cycle (IGCC) technology, in its BACT analysis.

26. In accordance with 30 Tex. Admin. Code § 116.111(a)(2)(C), the Station 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.

New Source Performance Standards (NSPS): 30 Tex. Admin. Code § 116.111(a)(2)(D)

27. There will be four types of equipment at the Station that will be subject to four different NSPS: the lignite-fired boilers; the auxiliary boilers; the lignite handling system; and the limestone handling system. In accordance with 30 Tex. Admin. Code § 116.111(a)(2)(D), the emissions from the Station 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 Federal Clean Air Act, as amended.

National Emission Standards for Hazardous Air Pollutants (NESHAPS): 30 Tex. Admin. Code § 116.111(a)(2)(E)

28. No requirement set forth at 30 Tex. Admin. Code § 116.111(a)(2)(E) regarding compliance with NESHAPS is applicable to the Station.

NESHAPS for Source Categories: 30 Tex. Admin. Code § 116.111(a)(2)(F)

29. There will be two types of equipment at the Station that will be subject to two different MACT standards: the emergency diesel engines and the auxiliary boilers. In accordance with 30 Tex. Admin. Code § 116.111(a)(2)(F), the emissions from the Station 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 Federal Clean Air Act, as amended, or as listed under Chapter 113, Subchapter C of Tex. Admin. Code Title 30.

Performance Demonstration: 30 Tex. Admin. Code § 116.111(a)(2)(G)

30. In accordance with 30 TAC § 116.111(a)(2)(G), the Station will achieve the performance specified in the permit application.

Nonattainment Review: 30 Tex. Admin. Code § 116.111(a)(2)(H)

31. Nonattainment review requirements are not applicable to the Station.

Prevention of Significant Deterioration Review: 30 Tex. Admin. Code § 116.111(a)(2)(I)

32. The proposed Station constitutes a major new source because it emits more than 100 tpy of any single criteria pollutant; therefore, PSD review is triggered.

33. In accordance with 30 Tex. Admin. Code § 116.111(a)(2)(I), the Station 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)

34. 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 of the Station.

Federal Standards of Review for Constructed or Reconstructed Major Sources of Hazardous Air Pollutants: 30 Tex. Admin. Code § 116.111(a)(2)(K)

35. The proposed Station will be a major source of hazardous air pollutants.

36. No case-by-case MACT determination for the lignite-fired boilers is needed because the type of steam generating unit (lignite-fired boiler) that Oak Grove is proposing is not subject to MACT regulation.

Mass Cap and Trade Allocations: 30 Tex. Admin. Code § 116.111(a)(2)(L)

37. The requirement set forth at 30 Tex. Admin. Code § 116.111(a)(2)(L) is not applicable to the Station.

Oak Grove's Permit

38. The special conditions in the permit are appropriately added under 30 TAC § 116.115(c)(1) and are consistent with the Texas Clean Air Act.

39. No changes to the permit should be made in consideration of compliance history in accordance with 30 Tex. Admin. Code § 116.110(c), because Oak Grove has a compliance history rating of 0.00 as determined in accordance with 30 Tex. Admin. Code Chapter 60.

40. Based on the above Findings of Fact and Conclusions of Law, Oak Grove 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.

41. In accordance with Health & Safety Code § 382.0518(b)(1), the Station will use at least BACT, considering the technical practicability and economic reasonableness of reducing or eliminating its emissions.

42. In accordance with Health & Safety Code § 382.0518(b)(2), emissions from the Station will not contravene the intent of the Texas Clean Air Act 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.

43. In accordance with Health & Safety Code § 382.0518(b), the application for Air Quality Permit No. 76474/PSD Permit No. PSD-TX-1056, should be approved and Air Quality Permit No. 76474/PSD Permit No. PSD-TX-1056, should be issued.

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

1. The application of Oak Grove Management Company LLC, for Air Quality Permit Nos. 76474 and PSD-TX-1056, is approved and the attached draft permit is issued.

2. Oak Grove shall comply with all Findings of Fact and Conclusions of Law contained herein.

3. Oak Grove shall pay transcription and reporting costs in the total amount of $8,696.63. Robertson County: Our Land, Our Lives shall pay transcription and reporting costs in the total amount of $8,696.63.

4. 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.

5. The effective date of this Order is the date the Order is final, as provided by 30 Tex. Admin. Code § 80.273 and Gov't Code § 2001.144.

6. The Commission's Chief Clerk shall forward a copy of this Order to all parties.

7. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.

8. The Executive Director's Response to Public Comment and the Executive Director's Amendments to Response to Public Comment Permit concerning Oak Grove's Air Quality Permit No. 76474 and PSD Permit No. PSD-TX-1056 are adopted and approved. If there is any conflict between the Commission's Order and the Executive Director's Response to Comments, the Commission's Order prevails.

ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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Kathleen Hartnett White, Chairman
For the Commission