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

TEL +1 512.322.2500
FAX +1 512.322.2501
www.bakerbotts.com

ABU DHABI
AUSTIN
BEIJING
DALLAS
DUBAI
HONG KONG
HOUSTON
LONDON
MOSCOW
NEW YORK
PALO ALTO
RIYADH
WASHINGTON

BAKER BOTTS

November 25, 2009

BY HAND DELIVERY

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

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

Re: TCEQ Docket No. 2007-1820-AIR and 2008-1210-AIR; Consolidated SOAH Docket No. 582-08-0861; *Application of NRG Texas Power LLC for State Air Quality Permit 79188 and Prevention of Significant Deterioration Permit PSD-TX-1072 and Hazardous Air Pollutant Major Source [FCAA § 112(g)] Permit HAP-14*

Dear Ms. Castañuela:

I have enclosed an original and seven copies of a revised Proposed Order in the above-referenced and numbered proceeding for the Commission's consideration. This revised Proposed Order reflects those revisions to the Administrative Law Judges' ("ALJs'") form of the Proposed Order that the Commission directed the Applicant to make at its November 18, 2009 Agenda. For the convenience of the Commission, I have also enclosed a track-changes version that clearly identifies the revisions and an electronic version of the revised Proposed Order in Microsoft Word format.

At this time Applicant must reiterate its prior exception to Ordering Provision 1.b. of the Proposed Order and proposed Special Condition No. 43 of Draft Permit Nos. 79188 and PSD-TX-1072. *See* Applicant's Exceptions to the Proposal for Decision and Order of the State Office of Administrative Hearings at p. 17 (July 13, 2009). The special condition proposed by the ALJs does not accurately reflect the terms of Applicant's settlement with the Texas Clean Air Cities Coalition, which is the premise on which this special condition is based.

The special condition proposed by the ALJs may impose an unforeseen hardship on the Applicant if it is later read to require the Applicant to include periods when Limestone Unit Nos. 1 or 2 were not in operation in determining the future 30-day average emission rate. Such a reading would not be in accordance with the Applicant's settlement or the method the Commission uses to determine baseline emissions, and we respectfully request that this language be clarified out of an abundance of caution.

In their letter dated September 9, 2009, the ALJs found the alternate language in the Applicant's exception to Special Condition No. 43 to be "acceptable," and the Executive Director, in his exceptions dated July 13, 2009, requested the Special Condition to be deleted,

"since the origins for including this requirement are unclear." *See* Executive Director's Exceptions to the ALJs' PFD and Order at p. 13 (July 13, 2009).

The Applicant urges the Commission to grant its exception and make this change as an additional technical correction to the Proposed Order at its December 9, 2009 Agenda, to reflect accurately the Applicant's commitment and the record in this proceeding. *See* Applicant's Exhibit No. 2 at 21: 11-19 (Prefiled Testimony of Ben Carmine, P.E.). Additionally, the 30-day rolling average NO_x emission rate data from the time periods identified in Special Condition No. 43 are now available. The baseline average 30-day NO_x emission rate for Limestone Unit Nos. 1 and 2 during the June - September 2006 and 2007 time periods is 3,056 lbs/hr. Applicant supports finalizing Special Condition No. 43 with this data (replacing the second sentence with "The combined 30-day rolling average NO_x emissions from the LMS Unit 1, LMS Unit 2 and LMS Unit 3 shall not exceed a total of 3,056 lbs/hr on a 30-day rolling average.") prior to issuance of Permit Nos. 79188 and PSD-TX-1072.

By my signature below, I certify that a copy of this filing has been served on the ALJs and the parties to this matter as indicated below. If you have any questions concerning this filing, please do not hesitate to contact me at the number above.

Sincerely,

Derek R. McDonald

Enclosures

cc: Judge Craig R. Bennett (via Hand Delivery and Electronic Mail)
Judge Tommy L. Broyles (via Hand Delivery and Electronic Mail)
Garrett Arthur (via Hand Delivery and Electronic Mail)
James Blackburn, Jr. and Charles Irvine (via U.S. Mail and Electronic Mail)
Wendi Hammond (via U.S. Mail and Electronic Mail)
Booker Harrison and Christine Angeletti (via Hand Delivery and Electronic Mail)
Ilan M. Levin and Layla Mansuri (via U.S. Mail and Electronic Mail)
Charles E. Morgan (via U.S. Mail and Electronic Mail)
John M. Quinlan (via U.S. Mail and Electronic Mail)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

ORDER
REGARDING THE APPLICATION BY NRG TEXAS POWER LLC FOR STATE AIR QUALITY PERMIT 79188, PREVENTION OF SIGNIFICANT DETERIORATION AIR QUALITY PERMIT PSD-TX-1072, AND HAZARDOUS AIR POLLUTANT MAJOR SOURCE PERMIT NO. HAP-14
TCEQ DOCKET NOS. 2007-1820-AIR and 2008-1210-AIR
SOAH DOCKET NOS. 582-08-0861 and 582-08-4013

On _____ , the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of NRG Texas Power L.L.C. for State Air Quality and federal Prevention of Significant Deterioration permits to construct a new 800 megawatt (MW) coal-fired electric generating unit and associated facilities at its existing Limestone Electric Generating Station located in Limestone County, Texas. A Proposal for Decision was presented by Administrative Law Judges (ALJs) Tommy L. Broyles and Craig R. Bennett of the State Office of Administrative Hearings (SOAH), who conducted a hearing in this matter on February 23-27, 2009, in Austin, Texas. The record closed on April 24, 2009.

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

FINDINGS OF FACT

Introduction and Procedural History

1. NRG has requested a permit to construct a new solid fuel-fired utility boiler with a heat input of 8,000 MMBtu/hour (Limestone Unit 3) and ancillary equipment (collectively, the "Limestone Unit 3 project").

2. The Limestone Unit 3 project will be located at the existing Limestone Electric Generating Station (Limestone Station) in Limestone County, Texas, approximately nine miles north of Jewett, Texas on FM 39.

3. The Limestone Unit 3 project will consist of a supercritical pulverized coal-fired electric generating unit and related facilities, and it will be the third coal-fired steam electric unit at NRG's Limestone Station.

4. Limestone Unit 3 will use sub-bituminous coal as the primary fuel source, with secondary fuels—which could be used in a blend with sub-bituminous coal—including Eastern bituminous coal or petroleum coke.

5. Pursuant to Section 116.111(a)(1) of the Commission's rules, NRG filed a PI-1 General Application with supporting information for state air quality and prevention of significant deterioration (PSD) review (the "State Air Quality/PSD Application"). The State Air Quality/PSD Application was filed with the Executive Director (ED) of the TCEQ on June 12, 2006.

6. The State Air Quality/PSD Application was declared administratively complete on June 14, 2006, and technically complete on October 8, 2007.

7. NRG published "Notice of Receipt of Application and Intent to Obtain Air Permit" in the *Groesbeck Journal* on June 22, 2006.

8. NRG published "Notice of Application and Preliminary Decision for an Air Quality Permit" in the *Jewett Messenger* on November 7, 2007, and in the *Groesbeck Journal* and the *Teague Chronicle* on November 8, 2007.

9. The State Air Quality/PSD Application was made available for public inspection at the Limestone County Courthouse in Groesbeck, Limestone County, Texas, during the entire public notice period.

10. Notification of the State Air Quality/PSD Application was made to all agencies, regulatory bodies, and other entities to which notification is required.

11. After publication of public notice, a preliminary hearing was held before SOAH on January 24, 2008, and a procedural schedule was established.

12. In March 2008, the United States Circuit Court of Appeals for the District of Columbia vacated the Clean Air Mercury Rule (CAMR) of the United States Environmental Protection Agency (EPA), along with the EPA's rule delisting coal-fired electric generating units from regulation under Section 112 of the federal Clean Air Act (FCAA), effectively requiring a case-by-case Maximum Achievable Control Technology (MACT) determination by the TCEQ prior to the start of construction on Limestone Unit 3, in addition to the already-existing requirement that NRG satisfy state air quality and PSD standards.

13. In Order No. 9, SOAH abated this proceeding to allow time for NRG to file a new application concerning case-by-case MACT requirements, in light of the D.C. Circuit Court's decision.

14. NRG submitted an application on May 12, 2008, for a case-by-case MACT determination for Limestone Unit 3 and the Limestone Unit 3 project auxiliary boiler (the "Case-by-Case MACT Application").

15. The Case-by-Case MACT Application was determined to be administratively and technically complete on July 18, 2008.

16. NRG published "Notice of Application and Preliminary Decision for an Air Quality Permit" in the *Jewett Messenger* on July 23, 2008, and in the *Groesbek Journal* and the *Teague Chronicle* on July 24, 2008.

17. The Case-by-Case MACT Application was made available for public inspection at the Limestone County Courthouse in Groesbeck, Limestone County, Texas, during the entire public notice period.

18. Notification of the Case-by-Case MACT Application was made to all agencies, regulatory bodies, and other entities to which notification is required.

19. After publication of public notice, a preliminary hearing regarding the Case-by-Case MACT Application was held before SOAH on September 15, 2008, and a procedural schedule was established.

20. On October 14, 2008, the presiding ALJs consolidated SOAH Docket Nos. 582-08-4013 and 582-08-0861 and established Docket No. 582-08-0861 as the lead docket.

21. On February 23-27, 2009, the hearing on the merits in the consolidated dockets convened before ALJs Tommy L. Broyles and Craig R. Bennett. The following parties appeared and participated in the hearing: (1) NRG; (2) the Sierra Club; (3) Robertson County Our Land Our Lives (RCOLOL); (4) Valence Operating Company (Valence); (5) Douglas Ray; (6) Citizens for Environmental Clean-Up (CEC); (7) the ED; and (8) the Office of Public Interest Counsel (OPIC).

22. The hearing record closed on April 24, 2009, after written closing arguments were filed.

Completeness of the State Air Quality/PSD Application

23. All appropriate forms were submitted in the State Air Quality/PSD Application.

24. The process descriptions included in the State Air Quality/PSD Application are accurate.

25. The State Air Quality/PSD Application addressed all sources of air emissions associated with the Limestone Unit 3 Project that are subject to permitting under TCEQ rules.

26. The State Air Quality/PSD Application addressed applicable TCEQ Disaster Review requirements triggered by the Limestone Unit 3 Project.

27. NRG has committed to prepare a risk management plan before bringing ammonia on-site for storage.

28. The appropriate permit fee of $75,000 was submitted with the State Air Quality/PSD Application.

29. The State Air Quality/PSD Application was submitted under the seal of Brian Gunzelman, a Texas registered professional engineer.

30. TCEQ staff reviewed NRG's application to determine whether it complied with all applicable rules and policies and documented the conclusions of that review in the Construction Permit Review Analysis and Technical Review for Permit No. 79188/PSD-TX-1072.

Completeness of the Case-by-Case MACT Application

31. The appropriate permit fee of $900 was submitted with the Case-by-Case MACT Application.

32. The Case-by-Case MACT Application contains all of the required elements of an FCAA section 112(g) preconstruction permit application filed under Chapter 116 of TCEQ's rules.

33. TCEQ staff reviewed the Case-by-Case MACT Application and documented the conclusions of that review in the Construction Permit Review Analysis and Technical Review for Permit No. HAP-14.

No Net Increase Commitment

34. On November 29, 2007, NRG submitted a letter to the TCEQ in which NRG committed to no net increase in annual emissions of NOx, SO_2, and mercury from the Limestone Station following operation of Limestone Unit 3.

35. The ED, in the Response to Comments dated February 19, 2008, proposed an additional permit term (Special Condition No. 42) for draft permit No. 79188 and PSD-TX-1072 that makes the no net increase commitment an enforceable permit condition.

36. On May 12, 2008, NRG submitted to TCEQ a proposed "netting" demonstration for criteria pollutants NO_x and SO_2.

37. NRG has not proposed the precise method of achieving the netting and does not propose to implement an actual and measurable decrease in emissions from Limestone Units 1 or 2 (or other existing facilities causing emissions at the site) before Limestone Unit 3 begins operating.

38. The May 2008 netting demonstration does not show that the emissions reductions will be "creditable" (*i.e.*, achieved before emissions increases occur from new units).

39. TCEQ staff did not conduct a substantive review of NRG's proposed netting demonstration. Rather, because the netting demonstration was submitted after TCEQ staff had completed its BACT review for the state air quality/PSD permit, such staff simply reviewed the written documentation and filed it away without conducting any substantive review or analysis of it—treating it simply as a commitment (as opposed to an actual demonstration).

40. NRG's proposed netting demonstration is inadequate and does not eliminate the need for PSD review for criteria pollutants NOx and SO_2 in the State Air Quality/PSD Application.

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

The "General Public" and "Ambient Air"

41. An applicant demonstrates that emissions from a proposed facility will be protective of the public health and physical property by evaluating predicted concentrations of air pollutants in the ambient air with air dispersion modeling.

42. TCEQ air permitting guidance specifies that ambient air "starts at the property line."

43. Protestant Valence leases (although the oil and gas lease is a determinable fee and is a sale of interest in land) the mineral rights under parts of the Limestone Station. As a result of that mineral interest, Valence employees and contractors have a right of access

to the Limestone Station property (solely for purposes of oil and gas development) that is not shared with members of the general public.

44. Valence employees or contractors present on the Limestone Station property are not the general public for purposes of the air dispersion modeling demonstrations required for the Limestone Unit 3 project.

45. Before Limestone Unit 3 is constructed, NRG will control access to the Limestone Station property, and it will prevent the general public from entering the Limestone Station property with a fence line.

46. The areas in which Valence employees or contractors work on the Limestone Station property are not considered "ambient air" for purposes of the air dispersion modeling demonstrations required for the Limestone Unit 3 project, provided that NRG will control access to the Limestone Station property and prevent the general public from entering the Limestone Station property with a fence line

47. The air dispersion modeling demonstration performed by NRG, which evaluates predicted air quality impacts at and beyond the Limestone Station property line, is proper.

NRG's Air Dispersion Modeling

48. NRG performed air dispersion modeling, which was summarized in its November 2006 Air Quality Analysis Report, and in follow-up submittals dated March 12, 2007; August 8, 2007; September 21, 2007; and December 21, 2007.

49. NRG performed the modeling using EPA models Industrial Source Complex Short-Term Model, Version 3 (ISCST3) and ISCST3 Prime. These models were recommended by both the TCEQ and the EPA for modeling complex industrial sources like the Limestone Station.

50. The modeling that was included in the State Air Quality/PSD Application was performed in accordance with applicable air quality rules and guidance, and in accord with the

modeling protocol cooperatively developed for this project by NRG and TCEQ's air dispersion modeling team.

51. There are no schools located within 3,000 feet of the facilities to be authorized under the State Air Quality/PSD Application.

52. In performing the air dispersion modeling, NRG modeled emissions from all of its authorized facilities at the site, including the proposed Limestone Unit 3 facilities.

53. NRG included road emissions from on-site haul roads for modeling runs to demonstrate compliance with the annual National Ambient Air Quality Standard (NAAQS) for particulate matter consisting of particles with diameters less than or equal to 10 microns (PM_{10}) and the annual PSD Increment for PM_{10}.

54. NRG excluded road emissions for other modeling purposes, in accordance with TCEQ guidance.

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

56. Under TCEQ's modeling guidance, modeling of plant road dust emissions is excluded for long-term averaging periods if the emissions will not be generated in association with transport, storage, or transfer of road-base aggregate materials and if best management practices are used to control dust emissions.

57. NRG will be transporting no road-base aggregate materials at the Limestone Station and will employ best management practices for minimizing dust, such as watering plant roads as needed to control fugitive dust emissions.

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

    a. NRG used worst-case emission rates for Limestone Unit 3 project facilities, including start-up emission rates that, in reality, will occur infrequently.

b. Modeled emissions do not factor in the effects of NRG's commitment for no net increase in emissions of NO_x, SO_2, or mercury, nor does the air dispersion modeling take into account reductions required by the draft Case-by-Case MACT permit.

c. NRG assumed that all sources at the Limestone Station would be operating simultaneously and emitting their maximum rates at the same time, which will not occur in practice.

d. NRG coupled worst-case meteorological dispersion conditions with the worst-case emissions scenario to calculate maximum off-property impacts.

e. NRG used conservative background concentrations in the modeling analyses.

f. NRG did not consider deposition as part of the regulatory default options in the ISCST3 model setup.

59. NRG properly relied on the pre-processed National Weather Service meteorological data supplied by the TCEQ in conducting its modeling.

60. Monitored background concentrations of PM and SO_2 for Travis County are appropriate for modeling a source in Limestone County because the Travis County data provides a conservative estimate of the ambient contributions of PM and SO_2 from non-point sources in Limestone County.

61. TCEQ's modeling staff performed an audit of NRG's modeling and found it acceptable.

62. The standards and guidelines applicable to this permit application's maximum modeled pollutant concentrations are: NAAQS, PSD increments, Net Ground Level Concentration (NGLC) or "state property-line" standards, and Effects Screening Levels (ESLs).

NAAQS Analysis

63. NRG directly modeled its emissions of SO_2, NO_x, CO, PM_{10}, and lead for the purpose of demonstrating compliance with the NAAQS.

64. Under the TCEQ's *Air Quality Modeling Guidelines*, a PSD NAAQS demonstration is required for emissions of criteria pollutants for which the project emissions increase exceeds the PSD significant threshold. A state NAAQS demonstration is required for

emissions of criteria pollutants for which the project emissions increase falls below the PSD significant threshold.

65. The State Air Quality/PSD Application included an acceptable PSD NAAQS demonstration for SO_2 and NO_2.

66. NRG conducted modeling to make a state NAAQS demonstration for lead.

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

68. The ambient background concentrations used by NRG for the area of the Limestone Station are conservative and in accordance with TCEQ guidance.

SO_2

69. SO_2 NAAQS exist for three averaging periods: three-hour (1300 $\mu g/m^3$), 24-hour (365 $\mu g/m^3$), and annual (80 $\mu g/m^3$).

70. Background concentrations for SO_2 were obtained by reviewing concentrations measured in Travis County and by comparing SO_2 emissions in Limestone and Travis County. Emissions from non-point sources are much higher in Travis County than in Limestone County, while emissions from point sources are higher in Limestone County. Since emissions from point sources are included in the modeling retrieval, using Travis County background concentrations is conservative.

71. The maximum modeled 3-hour SO_2 concentration resulting from the Limestone Station's emissions, including the Limestone Unit 3 project, at any off-site location is 427.67 $\mu g/m^3$; and the ambient background concentration for Travis County is 17.89 $\mu g/m^3$.

72. The Limestone 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 $\mu g/m^3$.

73. The maximum modeled 24-hour SO_2 concentration resulting from the Limestone Station's emissions, including the Limestone Unit 3 project, at any off-site location is 74.64 $\mu g/m^3$; and the ambient background concentration for Travis County is 8.95 $\mu g/m^3$.

74. The Limestone 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 $\mu g/m^3$.

75. The maximum modeled annual average SO_2 concentration resulting from the Limestone Unit 3 project's emissions at any off-site location is 0.4 $\mu g/m^3$, which is below the *de minimis* level for annual average SO_2 of 1.0 $\mu g/m^3$.

76. The impact of the Limestone Unit 3 project's SO_2 emissions on annual-average concentrations is insignificant and will not cause or contribute to an exceedance of annual-average SO_2 NAAQS of 80 $\mu g/m^3$.

NO_2

77. NO_2 NAAQS exist for one averaging period: annual (100 $\mu g/m^3$).

78. Travis County background concentrations provide a conservative estimate of ambient background concentrations of NO_2 at the Limestone Station.

79. The maximum modeled annual average NO_2 concentration resulting from the Limestone Station's emissions, including the Limestone Unit 3 project, at any off-site location is 2.02 $\mu g/m^3$; and the ambient background concentration for Travis County is 9.03 $\mu g/m^3$.

80. The Limestone Station's NO_2 emissions, when added to the background level of ambient NO_2, will not cause or contribute to an exceedance of the annual-average NO_2 NAAQS of 100 $\mu g/m^3$.

CO

81. CO NAAQS exist for two averaging periods: 1-hour (40,000 $\mu g/m^3$) and 8-hour (10,000 $\mu g/m^3$).

82. The maximum modeled 1-hour average CO concentration resulting from the Limestone Unit 3 project's emissions at any off-site location is 584.6 $\mu g/m^3$, which is below the *de minimis* level for 1-hour average CO of 2,000 $\mu g/m^3$.

83. The impact of the Limestone Unit 3 project's CO emissions on 1-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 1-hour average CO NAAQS of 40,000 $\mu g/m^3$.

84. The maximum modeled 8-hour average CO concentration resulting from the Limestone Unit 3 project's emissions at any off-site location is 274.41 $\mu g/m^3$, which is below the *de minimis* level for 8-hour average CO of 500 $\mu g/m^3$.

85. The impact of the Limestone Unit 3 project's CO emissions on 8-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 8-hour average CO NAAQS of 10,000 $\mu g/m^3$.

Lead

86. NRG performed an acceptable state NAAQS demonstration for lead.

87. TCEQ guidance establishes a quarterly "screening threshold" of 0.01 $\mu g/m^3$ for state NAAQS compliance demonstrations for lead.

88. If the maximum predicted off-property concentration of lead from a project falls below the screening threshold, the state NAAQS demonstration for lead is complete and the project is deemed not to cause or contribute to a violation of the lead NAAQS.

89. NRG's modeling established that the maximum predicted off-property concentration of lead from the Limestone Unit 3 project over a calendar quarter is 0.0003$\mu g/m^3$.

Accordingly, the impact of the Limestone Unit 3 project's lead emissions is insignificant and will not cause or contribute to an exceedance of the lead NAAQS.

PM_{10}

90. PM_{10} NAAQS exist for two averaging periods: 24-hour (150 $\mu g/m^3$) and annual (50 $\mu g/m^3$).

91. Background concentrations for PM_{10} were obtained by reviewing concentrations measured in Travis County and by comparing PM_{10} emissions in Limestone and Travis County. Travis County background concentrations provide a conservative estimate of ambient background concentrations of PM_{10} at the Limestone Station.

92. The maximum NRG modeled 24-hour average PM_{10} concentration resulting from the Limestone Station's emissions, including the Limestone Unit 3 project, at any off-site location is 26.06 $\mu g/m^3$; and the maximum ambient background concentration is 53.0 $\mu g/m^3$.

93. The Limestone 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 $\mu g/m^3$.

94. The maximum modeled annual average PM_{10} concentration resulting from the Limestone Station's emissions, including the Limestone Unit 3 project, at any off-site location is 6.62 $\mu g/m^3$; and the maximum ambient background concentration is 22.5 $\mu g/m^3$.

95. The Limestone 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 annual PM_{10} NAAQS of 50 $\mu g/m^3$.

$PM_{2.5}$

96. 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.

97. The Limestone Station's emissions, including the Limestone Unit 3 project, of PM_{10} will not cause or contribute to an exceedance of the PM_{10} NAAQS.

98. The Limestone Station's emissions, including the Limestone Unit 3 project, of $PM_{2.5}$ will not cause or contribute to an exceedance of the $PM_{2.5}$ NAAQS.

Ozone

99. The Limestone Unit 3 project will emit NO_x and volatile organic compounds (VOCs), which, in the presence of sunlight, can form ozone in the atmosphere.

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

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

102. NRG properly applied the screening technique to determine that the Limestone Unit 3 project is NO_x-dominated.

103. NRG demonstrated that there would not be a significant change to the current ozone levels in the local attainment area due to the Limestone Unit 3 project.

104. The Limestone Unit 3 project will not cause any ozone NAAQS exceedances in the local attainment area.

105. NRG also conducted photochemical modeling to evaluate the maximum potential impact of the Limestone Unit 3 project on ozone concentration in other areas.

106. TCEQ does not require that an applicant conduct photochemical modeling to evaluate potential ozone impacts for PSD permitting.

107. The project's maximum incremental contribution to any regulatory monitor, based on photochemical modeling, is 0.07 ppb. This value is significantly below: (a) the level judged significant by EPA for use in regulatory impact modeling, (b) the actual

application of EPA's Attainment Test, and (c) the lower threshold detection limit of 3-5 ppb of regulatory monitors.

108. NRG's photochemical modeling represents a conservative prediction of ozone impacts from the Limestone Unit 3 project because it does not account for NRG's commitment to no site-wide net increase of annual emissions of NO_x from the Limestone Station. Considering this commitment, the Limestone Unit 3 project will not measurably influence ambient ozone concentrations at any monitored or unmonitored location in Texas.

NAAQS Summary

109. Emissions from the Limestone Unit 3 project will not cause or measurably contribute to an exceedance of any NAAQS.

PSD Increment Analysis

110. 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.

111. NRG performed a PSD increment demonstration for emissions of SO_2, NO_2, and PM_{10} from the Limestone Station and the Limestone Unit 3 project.

112. Maximum modeled concentrations resulting from emissions from the Limestone Unit 3 project were below *de minimis* levels for SO_2 (annual averaging period) and CO (1-hour and 8-hour averaging periods).

113. The impacts of the Limestone Unit 3 project's emissions of SO_2 are insignificant and will not cause or contribute to an annual NAAQS or PSD increment violation, and the expected emissions of CO from the Limestone Unit 3 project are insignificant and will not cause or contribute to a violation of the NAAQS.

114. Maximum modeled concentrations resulting from emissions from the Limestone Unit 3 project were above *de minimis* levels for SO_2 (3-hour and 24-hour averaging periods),

NO_2 for the annual averaging period, and PM_{10} for the 24-hour and annual averaging periods.

115. For the above pollutants and averaging times, NRG incorporated emissions data for other PSD increment-consuming sources from TCEQ's Point Source Database into the model.

116. In addition to the Point Source Database data, NRG incorporated emissions data from a number of pending PSD applications not included in the Point Source Database for proposed solid fuel-fired electric generating units that NRG identified as potentially having a significant impact on the area of significant impact for the Limestone Unit 3 project.

117. For each of the above pollutants and averaging periods, the combined impacts from the Limestone Station and Limestone Unit 3 project's maximum modeled concentrations and the PSD increment-consuming sources are less than the applicable PSD increment.

PSD Increment Analysis: SO_2

118. The maximum modeled 3-hour average SO_2 concentration resulting from the combined effect of the emissions from the Limestone Station, Limestone Unit 3 project, and other PSD increment-consuming sources in the area is 427.66 $\mu g/m^3$.

119. The Limestone Unit 3 project's SO_2 emissions will not cause or contribute to an exceedance of the 3-hour average SO_2 PSD increment of 512 $\mu g/m^3$.

120. The maximum modeled 24-hour average SO_2 concentration resulting from the combined effect of the emissions from the Limestone Station, Limestone Unit 3 project, and other PSD increment-consuming sources in the area is 74.15 $\mu g/m^3$.

121. The Limestone Unit 3 project's SO_2 emissions will not cause or contribute to an exceedance of the 24-hour average SO_2 PSD increment of 91 $\mu g/m^3$.

PSD Increment Analysis: NO_2

122. The maximum modeled annual average NO_2 concentration resulting from the combined effect of the emissions from the Limestone Station, Limestone Unit 3 project, and other PSD increment-consuming sources in the area is 2.01 $\mu g/m^3$.

123. The Limestone Unit 3 project's NO_2 emissions will not cause or contribute to an exceedance of the annual average NO_2 PSD increment of 25 $\mu g/m^3$.

PSD Increment Analysis PM_{10}

124. NRG's maximum modeled 24-hour average PM_{10} concentration resulting from the combined effect of the emissions from the Limestone Station, Limestone Unit 3 project, and other PSD increment-consuming sources in the area is 26.06 $\mu g/m^3$.

125. The Limestone Unit 3 project's PM_{10} emissions will not cause or contribute to an exceedance of the 24-hour average PM_{10} PSD increment of 30 $\mu g/m^3$ because at any receptors where the increment is possibly exceeded, the contribution from Limestone Unit 3 is *de minimis*.

126. The maximum modeled annual average PM_{10} concentration resulting from the combined effect of the emissions from the Limestone Station, Limestone Unit 3 project, and other PSD increment-consuming sources in the area is 6.43 $\mu g/m^3$.

127. The Limestone Unit 3 project's PM_{10} emissions will not cause or contribute to an exceedance of the annual average PM_{10} PSD increment of 17 $\mu g/m^3$.

PSD Increment Analysis: Summary

128. Emissions from the Limestone Unit 3 project will not cause or contribute to exceedances of any PSD increments.

129. On behalf of Sierra Club, Camille Marie Sears used the same modeling inputs relied on by NRG and the ED and modeled PM_{10} emissions at receptors around Limestone Station that were not required to be modeled by EPA and TCEQ guidance.

130. Ms. Sears found impacts above the 24-hour average PM_{10} PSD increment of 30 $\mu g/m^3$.

131. At any receptors where the increment is possibly exceeded, the contribution from Limestone Unit 3 is *de minimis*.

PSD Monitoring Analysis

132. Of the criteria pollutants that will be emitted by the Limestone Unit 3 project in PSD-significant amounts, PSD monitoring *de minimis* levels exist for SO_2 (24-hour averaging period); NO_2 (annual averaging period), CO (8-hour averaging period), and PM_{10} (24-hour averaging period).

133. Maximum modeled concentrations resulting from the Limestone Unit 3 project's emissions are below all applicable PSD monitoring *de minimis* levels except for 24-hour SO_2 and 24-hour PM_{10}, for which NRG used existing monitoring data.

State Property Line Analysis

134. State property-line standards are maximum air concentrations that are allowed to result from all sources on a contiguous site.

135. State property-line standards exist for total sulfuric acid (H_2SO_4) for 1-hour and 24-hour averaging periods and for SO_2 for a 30-minute averaging period.

136. NRG modeled site-wide emissions from the Limestone Station, including the Limestone Unit 3 project, for comparison to applicable property-line standards.

137. NRG's maximum off-property modeled concentrations were below the applicable state property line standards.

Property-Line Standard: H_2SO_4

138. The maximum 1-hour average H_2SO_4 concentration resulting from site-wide emissions at any off-property location is 29.54 $\mu g/m^3$.

139. The site-wide H_2SO_4 emissions will not cause an exceedance of the 1-hour H_2SO_4 property line standard of 50 $\mu g/m^3$.

140. The maximum 24-hour average H_2SO_4 concentration resulting from site-wide emissions at any location is 2.26 $\mu g/m^3$.

141. The site-wide H_2SO_4 emissions will not cause an exceedance of the 24-hour H_2SO_4 property line standard of 15 $\mu g/m^3$.

Property-Line Standard: SO_2

142. The maximum 30-minute average SO_2 concentration resulting from site-wide emissions at any off-property location is 954.88 $\mu g/m^3$.

143. The site-wide SO_2 emissions will not cause an exceedance of the 30-minute SO_2 property line standard of 1,021 $\mu g/m^3$.

Property-Line Standard Summary

144. The Limestone Station, including the Limestone Unit 3 project, will not cause an exceedance of any applicable state property-line standard.

ESL Analysis

145. The TCEQ uses effects screening levels (ESL) as part of the state effects review of an air permit application, as conservative guideline levels to evaluate the potential for effects to public health, welfare or property as a result of exposure to air pollutants for which there is no state or federal air quality standard.

146. Health-based ESLs are set by starting with exposure levels that have been shown to cause no adverse health effects or very minor health effects in humans or animals, and then applying generous safety factors to establish levels that will be protective of the most sensitive members of the general public. Health-based ESLs are frequently set at levels that are 100 to 1000 times lower than exposure levels that are designed to be safe for workers exposed to airborne chemicals in occupational settings.

147. ESLs are set very conservatively and are designed to protect even the most sensitive members of the population, including children, the elderly, and people with pre-existing conditions.

148. Maximum modeled air concentrations that do not exceed the ESL will not cause adverse health or welfare effects from the public's exposure to that chemical, and concentrations above the ESLs will not necessarily cause adverse health or welfare effects, but may require further study.

149. It is common for an applicant's maximum modeled concentrations to exceed some ESLs and nevertheless receive authorization from TCEQ, as long as the steps outlined in TCEQ's Effects Evaluation Procedure are followed and the ground level concentrations are deemed acceptable by the TCEQ.

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

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

152. NRG modeled the site-wide emissions of the following non-criteria pollutants: coal dust, limestone dust, gypsum dust, crystalline silica, fused amorphous silica, VOC (as methyl hydrazine), hydrogen chloride (HCl), hydrogen fluoride (HF), ammonia, antimony, arsenic, barium, beryllium, cadmium, chromium, copper, manganese, mercury, nickel, selenium, silver, vanadium pentoxide, and zinc oxide.

153. For gypsum dust, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.597 $\mu g/m^3$, which is below the 1-hour ESL for gypsum dust of 50 $\mu g/m^3$.

154. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of gypsum dust is 0.01 $\mu g/m^3$, which is less than the annual ESL for gypsum dust of 5 $\mu g/m^3$.

155. For crystalline silica, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 1.586 $\mu g/m^3$, which is below the applicable 1-hour ESL for crystalline silica of 10 $\mu g/m^3$.

156. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of crystalline silica is 0.056 $\mu g/m^3$, which is less than the applicable annual ESL for crystalline silica of 1 $\mu g/m^3$.

157. For fused amorphous silica, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 4.8 $\mu g/m^3$, which is below the applicable 1-hour ESL for fused amorphous silica of 10 $\mu g/m^3$.

158. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of fused amorphous silica is 0.162 $\mu g/m^3$, which is less than the applicable annual ESL for fused amorphous silica of 1.0 $\mu g/m^3$.

159. For VOC (as methyl hydrazine), the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.12 $\mu g/m^3$, which is below the 1-hour ESL for VOC (as methyl hydrazine) of 0.2 $\mu g/m^3$.

160. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of VOC (as methyl hydrazine) is 0.001 $\mu g/m^3$, which is less than the annual ESL for VOC (as methyl hydrazine) of 0.02 $\mu g/m^3$.

161. For HCl, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 23.74 $\mu g/m^3$, which is below the 1-hour ESL for HCl of 75 $\mu g/m^3$.

162. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of HCl is 0.059 $\mu g/m^3$, which is less than the annual ESL for HCl of 7.5 $\mu g/m^3$.

163. For HF, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 11.272 $\mu g/m^3$, which is below the 1-hour ESL for HF of 25 $\mu g/m^3$.

164. The maximum modeled 24-hour average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of HF is 0.84 $\mu g/m^3$, which is less than the annual ESL for HF of 3 $\mu g/m^3$.

165. The maximum modeled 30-day average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of HF is 0.254 $\mu g/m^3$, which is less than the annual ESL for HF of 0.5 $\mu g/m^3$.

166. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of HF is 0.018 $\mu g/m^3$, which is less than the annual ESL for HF of 2.5 $\mu g/m^3$.

167. For antimony, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.008 $\mu g/m^3$, which is below the 1-hour ESL for antimony of 5 $\mu g/m^3$.

168. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of antimony is 0.00003 $\mu g/m^3$, which is less than the annual ESL for antimony of 0.5 $\mu g/m^3$.

169. For arsenic, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.03 $\mu g/m^3$, which is below the 1-hour ESL for arsenic of 5 $\mu g/m^3$.

170. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of arsenic is 0.00013 $\mu g/m^3$, which is less than the annual ESL for arsenic of 0.5 $\mu g/m^3$.

171. For barium, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.673 $\mu g/m^3$, which is below the 1-hour ESL for barium of 5 $\mu g/m^3$.

172. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of barium is 0.00308 $\mu g/m^3$, which is less than the annual ESL for barium of 0.5 $\mu g/m^3$.

173. For beryllium, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.01 $\mu g/m^3$, which is below the 1-hour ESL for beryllium of 0.02 $\mu g/m^3$.

174. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of beryllium is 0.00001 $\mu g/m^3$, which is less than the annual ESL for beryllium of 0.002 $\mu g/m^3$.

175. For cadmium, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.009 $\mu g/m^3$, which is below the 1-hour ESL for cadmium of 0.1 $\mu g/m^3$.

176. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of cadmium is 0.00003 $\mu g/m^3$, which is less than the annual ESL for cadmium of 0.01 $\mu g/m^3$.

177. For chromium, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.068 $\mu g/m^3$, which is below the 1-hour ESL for chromium of 1 $\mu g/m^3$.

178. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of chromium is 0.0002 $\mu g/m^3$, which is less than the annual ESL for chromium of 0.1 $\mu g/m^3$.

179. For copper, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.025 $\mu g/m^3$, which is below the 1-hour ESL for copper of 10 $\mu g/m^3$.

180. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of copper is 0.00012 $\mu g/m^3$, which is less than the annual ESL for copper of 1 $\mu g/m^3$.

181. For manganese, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.186 $\mu g/m^3$, which is below the 1-hour ESL for manganese of 2 $\mu g/m^3$.

182. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of manganese is 0.00031 $\mu g/m^3$, which is less than the annual ESL for manganese of 0.2 $\mu g/m^3$.

183. For mercury, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.112 $\mu g/m^3$, which is below the 1-hour ESL for mercury of 0.25 $\mu g/m^3$.

184. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of mercury is 0.00012 $\mu g/m^3$, which is less than the annual ESL for mercury of 0.025 $\mu g/m^3$.

185. For nickel, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.082 $\mu g/m^3$, which is below the 1-hour ESL for nickel of 0.15 $\mu g/m^3$.

186. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of nickel is 0.0004 $\mu g/m^3$, which is less than the annual ESL for nickel of 0.015 $\mu g/m^3$.

187. For selenium, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 1.572 $\mu g/m^3$, which is below the 1-hour ESL for selenium of 2 $\mu g/m^3$.

188. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of selenium is 0.001 $\mu g/m^3$, which is less than the annual ESL for selenium of 0.2 $\mu g/m^3$.

189. For silver, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.0005 $\mu g/m^3$, which is below the 1-hour ESL for silver of 0.1 $\mu g/m^3$.

190. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of silver is 0.0000 $\mu g/m^3$, which is less than the annual ESL for silver of 0.01 $\mu g/m^3$.

191. For zinc, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.085 $\mu g/m^3$, which is below the 1-hour ESL for zinc of 50 $\mu g/m^3$.

192. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of zinc is 0.00054 $\mu g/m^3$, which is less than the annual ESL for zinc of 5 $\mu g/m^3$.

ESL Analysis: Coal Dust

193. For coal dust, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 14.5$\mu g/m^3$, which is approximately 1.6 times the 1-hour ESL for coal dust of 9 $\mu g/m^3$.

194. The maximum modeled 1-hour average concentration for coal dust is predicted to exceed the 1-hour ESL for only 23 hours per year, at a non-residential location.

195. There were no modeled 1-hour average concentrations for coal dust that exceeded the 1-hour ESL at a non-industrial area.

196. The short-term ESL for coal dust is conservative.

197. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of coal dust is 0.555 $\mu g/m^3$, which is below the annual ESL for coal dust of 0.9 $\mu g/m^3$.

198. No adverse health or welfare effects will result from the public's exposure to emissions of coal dust from the Limestone Station and the Limestone Unit 3 project.

ESL Analysis: Limestone Dust

199. For limestone dust, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 52.73 $\mu g/m^3$, which is approximately 5 percent greater than the 1-hour ESL for limestone dust of 50 $\mu g/m^3$.

200. The maximum modeled 1-hour average concentration for limestone dust is predicted to exceed the 1-hour ESL for only 1 hour per year, at a non-residential location.

201. There were no modeled 1-hour average concentrations for limestone dust that exceeded the 1-hour ESL at a non-industrial area.

202. The short-term ESL for limestone dust is conservative.

203. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of limestone dust is 0.687 $\mu g/m^3$, which is below the annual ESL for limestone dust of 5 $\mu g/m^3$.

204. No adverse health or welfare effects will result from the public's exposure to emissions of limestone dust from the Limestone Station and the Limestone Unit 3 project.

ESL Analysis: Ammonia

205. For ammonia, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 398 $\mu g/m^3$, which is approximately 2.3 times the 1-hour ESL for ammonia of 170 $\mu g/m^3$.

206. The maximum modeled 1-hour average concentration for ammonia is predicted to exceed the 1-hour ESL for 22 hours per year, at a non-residential location.

207. There were no modeled 1-hour average concentrations for ammonia that exceeded the 1-hour ESL at a non-industrial area.

208. The short-term ESL for ammonia is conservative.

209. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of ammonia is 7.44 $\mu g/m^3$, which is below the annual ESL for ammonia of 17 $\mu g/m^3$.

210. No adverse health or welfare effects will result from the public's exposure to emissions of ammonia from the Limestone Station and the Limestone Unit 3 project.

ESL Analysis: Vanadium

211. For vanadium, the maximum modeled 1-hour average concentration from the Limestone Station and Limestone Unit 3 project's emissions is 0.877 $\mu g/m^3$, which is approximately 1.8 times the 1-hour ESL for vanadium of 0.5 $\mu g/m^3$.

212. The maximum modeled 1-hour average concentration for vanadium is predicted to exceed the 1-hour ESL for 5 hours per year, at any point off property.

213. The maximum modeled 1-hour average concentration for vanadium at any non-industrial receptor is predicted to exceed the 1-hour ESL by 1.5 times and only for 4 hours per year.

214. The short-term ESL for vanadium is conservative.

215. The maximum modeled annual average concentration resulting from the Limestone Station and Limestone Unit 3 project's emissions of vanadium is 0.005 $\mu g/m^3$, which is below the annual ESL for vanadium of 0.05 $\mu g/m^3$.

216. No adverse health or welfare effects will result from the public's exposure to emissions of vanadium from the Limestone Station and the Limestone Unit 3 project.

ESL Summary

217. No adverse public health or welfare effects will result from the Limestone Station and Limestone Unit 3 project's emission of air contaminants for which no air quality standard exists.

Additional Findings Concerning Air Emissions: Chapter 111 Standards

218. Limestone Unit 3 project stationary vents will not exceed the opacity limit of 20 percent over a six-minute period established in 30 TEX. ADMIN. CODE § 111.111(a)(1)(B).

219. Limestone Unit 3 project fugitive emission sources will not exceed the opacity limit of 30 percent over a six-minute period established in 30 TEX. ADMIN. CODE § 111.111(a)(7) and (8).

220. Limestone Unit 3 project will comply with limits on the emission rate of particulate matter from the auxiliary boiler, engine, and material handling stacks, established under 30 TEX. ADMIN. CODE § 111.151.

221. Emissions of particulate matter from the Limestone Unit 3 project main boiler will not be greater than 0.3 pound total suspended particulates per MMBtu heat input over a two-hour period during solid fuel firing.

222. Emissions of particulate matter from the Limestone Unit 3 project main boiler will not be greater than 0.1 pound total suspended particulates per MMBtu heat input over a two-hour period during natural gas firing.

Summary of Protection of Public Health and Welfare

223. The proposed emissions from the Limestone Unit 3 project will comply with all ambient air contaminant standards and guidelines at off-property locations.

Unregulated Substances

224. Carbon dioxide is not currently subject to regulation under the Federal Clean Air Act and has not previously been subject to regulation.

225. Carbon dioxide is not currently subject to regulation under the Texas Clean Air Act and has not previously been subject to regulation.

226. [Intentionally Omitted]

227. NRG's Limestone Unit 3 project will emit some substances that are not presently regulated under the FCAA or the Texas Clean Air Act (TCAA), such as water vapor, nitrogen, methane, ethane, and carbon dioxide.

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

228. NRG will install, operate, and maintain continuous emissions monitoring systems (CEMS) to provide a continuous demonstration of compliance with limits of NO_x, CO, SO_2, mercury, and NH_3 from the Limestone Unit 3 project boiler stack.

229. NRG will install, operate, and maintain a continuous opacity monitoring system (COMS) to provide a continuous demonstration of compliance with the limitation on opacity from the Limestone Unit 3 project boiler stack.

230. NRG will perform initial emission testing; quarterly sample solid fuel heat content and trace metal concentrations; annual stack testing on the boiler for any pollutant not monitored with a CEMS; and undertake other actions at various emission points throughout the Limestone Unit 3 project site to ensure that emissions are within permit limits and comply with the terms of Draft Permit No. 79188 and PSD-TX-1072.

231. NRG's proposed methods for measuring emissions from the Limestone Unit 3 project facilities are adequate to assure compliance with the permit conditions and emissions limitations of Draft Permit No. 79188 and PSD-TX-1072.

232. NRG'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 (NSPS).

233. NRG's proposed methods for measuring emissions from the Limestone Unit 3 project facilities are adequate to assure compliance with the permit conditions and emissions limitations of Draft Permit No. HAP-14.

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

234. The TCEQ has provided a draft guidance document entitled "Evaluating Best Available Control Technology (BACT) in Air Permit Applications," setting forth guidance for evaluation of BACT proposals submitted in a New Source Review air permit application.

235. Under the draft guidance document relied on by the ED in evaluating BACT, the BACT evaluation is conducted using a tiered analysis approach, involving three different tiers. A Tier I evaluation involves a comparison of the applicant's BACT proposal to emission reduction performance levels accepted as BACT in recent permit reviews involving the same process or industry, with an evaluation of new technical developments necessary in some cases. A Tier II evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry. A Tier III evaluation is a detailed technical and quantitative economic analysis of all emission reduction options available for the process under review. The guidance document also notes that the Tier III evaluation is rarely necessary because technical practicability and economic reasonableness have usually been firmly established by industry practice as identified in the first two tiers.

236. NRG's BACT analysis included a review of over 40 pulverized coal-fired power plants, of which 10 were located in Texas. Of the total considered, approximately half had draft or final permits dated in 2006 or 2007.

237. In addition to looking at the permits for these other facilities, NRG considered information from vendors and engineering experts on the most realistic emissions limits available with BACT.

238. NRG's BACT analysis in this case was conducted under Tier I only.

239. NRG's BACT analysis was performed in accordance with TCEQ guidance.

240. For the main boiler, NRG will use low-NO_x burners, overfire air and selective catalytic reduction (SCR) to minimize NO_x emissions; a fabric filter baghouse to control emissions of PM and trace metals; a wet limestone flue gas desulfurization (FGD) system to control emissions of SO_2, HCl, HF, and H_2SO_4; the FGD system to control emissions of H_2SO_4; an alkali injection system to control emissions of H_2SO_4 when burning bituminous coal or petroleum coke; good combustion practices to control emissions of CO and VOCs; and NRG will use a combination of the fabric filter baghouse, wet FGD, and SCR, and proposes to install mercury-specific control technology, such as halogen or sorbent addition, to control mercury emissions.

241. For the auxiliary boiler, operation of which will be limited to an annual capacity factor of 10 percent based on heat input, low-NO_x burners and pipeline quality natural gas will be used to minimize NO_x and SO_2 emissions, respectively.

242. For the material handling sources, a combination of fabric filters, covered conveyors, enclosed buildings, and water sprays for dust suppression will be used to control the emissions of PM and PM_{10}.

243. For the emergency generators, operation of which will be limited to 500 non-emergency hours per year each, the use of low sulfur fuel will be used to minimize SO_2 emissions.

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

245. For the generator cooling tower, PM emissions will be minimized utilizing mist eliminators on the tower and by minimizing total dissolved solids in the cooling water.

246. For the diesel storage tanks, VOC emissions will be minimized by the low vapor pressure of fuel stored in the tanks and by best management practices.

247. For the ammonia handling and storage facilities, ammonia emissions will be minimized by a vapor recovery system, storage in high pressure tanks, daily Audio/Visual/Olfactory inspections to detect leaks, barriers around the storage areas to prevent collisions, and industry-standard leak detection systems.

BACT for Limestone Unit 3

248. Utilization of good combustion practices with an emission rate of 0.12 lb/MMBtu on a 30-day rolling average basis is BACT for CO emissions from Limestone Unit 3.

249. Application of low-NO_x burners, overfire air, and SCR specified to meet NOx emission limits of 0.06 lb/MMBtu over a rolling 30-day average and 0.05 lb/MMBtu over a rolling annual average is BACT for NO_x emissions from the main boiler.

250. Application of a wet FGD system with emission rates of 0.10 lb/MMBtu over a rolling 30-day average and 0.06 lb/MMBtu over a rolling annual average is BACT for SO_2 emissions from the main boiler.

251. Application of fabric filter baghouses with a filterable PM/PM_{10} emission rate of 0.012 lb/MMBtu and a total PM/PM_{10} emission rate of 0.025 lb/MMBtu over a rolling annual average is BACT for PM and PM_{10} emissions from the main boiler.

252. Application of good combustion practices with an emission rate of 0.0036 lb/MMBtu over a rolling annual average is BACT for VOC emissions from the main boiler.

253. Application of a wet FGD system and fabric filter baghouse and an alkali injection system (when burning bituminous coal or petroleum coke) with an emission rate of 0.0075 lb/MMBtu over a rolling annual average is BACT for H_2SO_4 emissions from the main boiler.

254. Application of a wet FGD system and fabric filter baghouse with an emission rate of 0.0005 lb/MMBtu over a rolling annual average is BACT for fluorine emissions (primarily in the form of HF) from the main boiler.

255. Application of a wet FGD system and fabric filter baghouse with an emission rate of 0.0023 lb/MMBtu over a rolling annual average is BACT for HCl emissions from the main boiler.

256. Application of a wet FGD system, SCR, fabric filters, and the use of mercury-specific control technology, such as halogen or sorbent addition, with a sliding scale emissions limit, ranging between 0.012 lb/GWh and 0.015 lb/GWh based upon the fuel burned, is BACT for mercury emissions from the main boiler.

257. Application of a fabric filter baghouse with an emission rate of 0.0000114 lb/MMBtu over a rolling annual average is BACT for lead emissions from the main boiler.

258. Application of best management practices with an emission rate of 10 ppm over a three-hour average is BACT for emissions of ammonia from the main boiler.

Auxiliary Boiler BACT

259. Application of low-NO_x burners to meet 30 parts per million by volume (ppmv) NO_x represents BACT for the auxiliary boiler.

260. Because the boiler is limited by a 10-percent annual capacity limitation, additional controls are not cost effective. Therefore low-NO_x burners and good combustion practices represents BACT for the auxiliary boilers.

Fuel and Material Handling BACT

261. Use of fabric filters, covered conveyors, enclosed buildings and dust suppressant spraying, designed to achieve an emission limit of 0.01 grain PM/dry standard cubic foot, is BACT for emissions of PM/PM_{10} from the fuel and material handling sources.

Emergency Generators BACT

262. Modern diesel engines and limiting non-emergency operations to weekly testing for less than 500 hours per year, along with the use of low sulfur diesel fuel, represents BACT for these diesel engines for emergency generators and fire water pumps.

Cooling Tower BACT

263. 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 cooling tower.

Diesel Storage Tanks BACT

264. Best management practices and the low vapor pressure of fuel stored in the tanks is BACT for emissions of VOCs from diesel storage tanks.

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

BACT Summary

266. Except as otherwise modified by this order, the emission limitations and controls proposed by NRG and established for Limestone Unit 3 Project facilities are BACT.

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

267. NRG's application accurately and completely delineates the requirements of all applicable NSPS as they apply to pulverized coal boilers, the auxiliary boiler, storage and handling systems, and the Limestone Unit 3 project generally.

268. The Limestone Unit 3 Project is expected to meet all of the NSPS to which it will be subject.

269. Compliance with all applicable NSPS requirements is a condition of the Draft Permit.

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

270. There are no national emissions standards for hazardous air pollutants (NESHAPs) applicable to facilities of a type comprising the Limestone Unit 3 project.

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

271. The Limestone Unit 3 Project emergency diesel engines are expected to comply with 40 CFR Part 63, Subpart ZZZZ, the requirements for NESHAPs for source categories, or maximum achievable control technology (MACT) standards, for stationary reciprocating internal combustion engines.

272. MACT Subpart DDDDD for Industrial/Commercial/Institutional Boilers and Process Heaters was vacated during the technical review of the permit application and is no longer applicable. The case-by-case MACT application filed by NRG makes a case-by-case MACT demonstration for the auxiliary boiler.

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

273. Draft Permit No. 79188/PSD-TX-1072 contains provisions for demonstrating achievement of the performance specified in the application, such as conducting performance testing of emissions from the main boiler and auxiliary boiler stacks, once the Limestone Unit 3 Project is constructed and operating.

274. Provisions for demonstrating achievement of the performance specified in the application will adequately demonstrate performance of Limestone Unit 3 Project facilities.

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

275. The Limestone Station is located in Air Quality Control Region 212, which is classified as attainment or not classifiable for all criteria pollutants.

276. Because the Limestone Station is not located in an area that is designated nonattainment for any air contaminant, the Limestone Unit 3 project is not subject to nonattainment review requirements.

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

277. 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.

278. Limestone Station has the potential to emit more than 100 tons of any single regulated air contaminant and The Limestone Unit 3 project has the potential to emit the following pollutants in "significant" quantities as defined in 40 C.F.R. §52.21(b)(23): CO, PM, PM_{10}, VOC, H_2SO_4, and fluorides (as HF).

279. NRG conducted a source impact analysis showing that allowable emissions from the Limestone Unit 3 project will not cause or measurably contribute to air pollution in violation of any NAAQS or PSD increment.

280. NRG conducted an appropriate additional impacts analysis that assessed the potential impairment to visibility, soils, and vegetation as a result of the Limestone Unit 3 project and associated commercial, residential, and industrial growth, and assessed air quality impacts as a result of such growth.

281. The Limestone Unit 3 project will not generate sufficient growth in the area to significantly increase air contaminants from secondary sources.

282. Modeling of the Limestone Unit 3 project's emissions shows concentrations that will be protective of soils and vegetation.

283. The Limestone Unit 3 project will not have adverse impacts on visibility since the nearest Class I area is more than 300 kilometers away and because the project will comply with Chapter 111 limits.

284. Modeling of the Limestone Unit 3 project's impact on visibility in a Class I area is not required because the nearest Class I area is more than 300 km from the site of Limestone Unit 3.

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

285. NRG performed computerized air dispersion modeling in order to demonstrate the air impacts from the Limestone Unit 3 project.

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

286. NRG prepared an FCAA § 112(g) Case-by-Case MACT Application and applied for a HAP Major Source Permit to establish case-by-case MACT requirements for the Limestone Unit 3 Project main boiler.

287. NRG submitted a Case-by-Case MACT Application for both Limestone Unit 3 and the Limestone Unit 3 Project auxiliary boiler.

288. NRG performed the Case-by-Case MACT analyses in two steps. In the first step, NRG established the "MACT floor" or the most stringent limitation achieved in practice by the best controlled similar source. In the second step, NRG performed a "beyond the floor" analysis of the other methods for potentially reducing emissions to a greater degree, considering such factors as the cost of achieving such emissions reductions and any non-air quality health and environmental impacts and energy requirements to establish whether further reductions are achievable.

289. Using conservative estimates for output-based limits mandated by Massachusetts Air Pollution Control Regulations and achieved by three bituminous boilers in practice, NRG determined that a mercury emissions limit of 0.0075 pounds per gigawatts-hour (lb/GWh)

has been demonstrated in practice and would represent the "MACT floor" for boilers burning only bituminous coal.

290. The applicable Case-by-Case MACT mercury emission limit for Limestone Unit 3 will vary with the amount of bituminous coal burned. NRG submitted a weighted, output-based emissions limit as the appropriate MACT floor based on the actual blend of subbituminous and bituminous coal burned at Limestone Unit 3. The Case-by-Case MACT mercury emission limit for Limestone Unit 3 is reflected in a sliding scale emissions limit, ranging between 0.012 lb/GWh and 0.015 lb/GWh, based upon the fuel burned. This sliding scale limit represents MACT for Limestone Unit 3.

291. [Intentionally Omitted]

292. [Intentionally Omitted]

293. [Intentionally Omitted]

294. [Intentionally Omitted]

295. Filterable PM is an appropriate surrogate pollutant for non-mercury HAP metals because filterable PM and non-mercury HAP metals have common formation mechanisms and control techniques.

296. For non-mercury HAP metals, NRG performed an evaluation of particulate matter emissions controls and recent permit limits and determined that the MACT floor is a filterable particulate matter emission limit of 0.015 lb/MMBtu.

297. NRG performed a "beyond-the-floor" MACT analysis for non-mercury HAP metals and found that advances in fabric filter technology allow for a more-stringent case-by-case MACT emission limit for non-mercury HAP metals of 0.012 lb/MMBtu.

298. For HCl, NRG evaluated recent controls and permit limits and determined that a MACT floor must be established based on a blend by weight of sub-bituminous and bituminous coal. The corresponding worst-case blend containing 60 percent by weight sub-

bituminous coal and 40 percent by weight bituminous coal resulted in the establishment of a MACT floor.

299. For HF, a MACT floor of 0.0005 lb/MMBtu was identified.

300. The applicable Case-by-Case MACT emission limit for HCl is 0.0023 lb/MMBtu.

301. The applicable Case-by-Case MACT emission limit for HF is 0.0005 lb/MMBtu.

302. CO is an appropriate surrogate pollutant for organic HAP emissions because CO and organic HAPs have common formation mechanisms and control technologies.

303. It has been EPA's practice to use CO as a surrogate pollutant for organic HAPs when establishing MACT emission limits for combustion sources.

304. The MACT floor for emissions of organic HAPs corresponds to a CO emission limit of 0.12 lb/MMBTu on a 30-day average.

305. A "beyond-the-floor" MACT analysis did not reveal any MACT emission limit more appropriate and the MACT floor represents the most stringent limit achievable for CO, irrespective of cost.

306. Filterable PM is an appropriate surrogate pollutant for HAP non-mercury metal emissions from the Limestone Unit 3 project auxiliary boiler.

307. CO is an appropriate surrogate pollutant for organic HAP emissions from the Limestone Unit 3 project auxiliary boiler.

308. The Case-by-Case MACT emission limit for HAP non-mercury metal emissions from the Limestone Unit 3 project auxiliary boiler corresponds to a Filterable PM emission limit of 0.0022 lb/MMBtu.

309. The Case-by-Case MACT emission limit for organic HAP emissions from the Limestone Unit 3 project auxiliary boiler corresponds to a CO emission limit of 0.04 lb/MMBtu.

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

310. Limestone Unit 3 will not be located in the Houston/Galveston ozone nonattainment area.

311. No mass cap and trade allowances are applicable to the Limestone Unit 3 project.

Compliance History

312. NRG's compliance history person and site ratings are average.

Permit

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

314. The Limestone Unit 3 project has been planned to comply with the emission limits specified in the permit's MAERT.

315. The Limestone Unit 3 project facilities can be operated to meet the permit requirements.

316. The draft permit prescribes requirements for demonstrating initial and ongoing compliance with all applicable requirements of the permit and the TCAA.

Transcript Costs

317. The non-expedited transcription costs for this case are $6,974.75, which NRG has paid.

318. NRG has the greatest financial ability to pay the transcription costs.

319. NRG presented the greatest amount of witnesses and most evidence of any party during the contested case hearing.

320. Protestants have identified valid deficiencies in NRG's applications.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over NRG's State Air Quality/PSD Application and Case-by-Case MACT Application pursuant to TEX. HEALTH & SAFETY CODE Chapter 382 and TEX. WATER CODE Chapter 5.

2. NRG's State Air Quality/PSD Application and Case-by-Case MACT Application were directly referred to SOAH pursuant to TEX. WATER CODE § 5.557.

3. Pursuant to TEX. GOV'T CODE § 2003.047, SOAH has jurisdiction to conduct a hearing and to prepare a proposal for decision in this matter.

4. Notice of NRG's application was provided pursuant to 30 TEX. ADMIN. CODE § 39.601, *et seq.*, and TEX. GOV'T CODE §§ 2001.051 and 2001.052.

5. NRG submitted its State Air Quality/PSD Application and Case-by-Case MACT Application pursuant to 30 TEX. ADMIN. CODE §§ 116.110(f) and 116.140.

6. Pursuant to 30 TEX. ADMIN. CODE § 80.17(a), in a contested case hearing involving an air quality permit application, the burden of proof is on the applicant to prove by a preponderance of the evidence that it satisfies all statutory and regulatory requirements.

7. Pursuant to 30 TEX. ADMIN. CODE § 116.111, and as modified by and reflected in this order, the emissions from the Limestone Unit 3 project facilities will comply with all Commission rules and regulations and with the intent of the TCAA, 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 from a project is less than a NAAQS *de minimis* level, it is unnecessary to incorporate background levels or emissions from other sources in the area in the analysis of that pollutant because the maximum predicted concentration level is insignificant.

10. Pre-construction monitoring is not required to evaluate the cumulative impact of the Limestone Unit 3 project's emissions of SO_2 and PM_{10} because of the availability of existing conservative monitoring data.

11. No pre-construction monitoring is required for any of the air contaminants for which NRG's maximum modeled concentrations were below PSD monitoring *de minimis* levels.

12. For NO_2 and CO, pre-construction monitoring is not required because the predicted concentrations of these pollutants are less than their respective PSD monitoring significance levels.

13. The proposed emissions from the Limestone Unit 3 project will not cause or contribute to air pollution.

14. The proposed emissions from the Limestone Unit 3 project will not cause adverse public health or welfare effects, including nuisance conditions.

15. Based on the above Findings of Fact, the proposed emissions from the Limestone Unit 3 project will comply with the opacity limits and particulate matter emission rates set forth in 30 TEX. ADMIN. CODE Chapter 111 concerning control of air pollution from visible emissions and particulate matter.

16. Based on the above Findings of Fact, the proposed emissions from the Limestone Unit 3 project 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, NRG will comply with all applicable standards adopted by reference in 30 TEX. ADMIN. CODE Chapter 113.

18. The proposed Limestone Unit 3 project diesel fuel tanks will only store diesel that meets the specifications set forth in 30 TEX. ADMIN. CODE Chapter 114.

19. The Limestone Unit 3 project is not subject to the rules set forth in 30 TEX. ADMIN. CODE Chapter 115 regarding the control of VOCs because it will be located in Limestone County.

20. The Limestone Unit 3 project 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 Limestone Unit 3 project 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 Limestone Unit 3 project 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 Limestone Unit 3 project will comply with all Commission rules and regulations and the intent of the TCAA, including protection of the health and property of the public, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.

24. Carbon dioxide is not currently subject to regulation under the FCAA or TCAA.

25. NRG is not required to evaluate any impacts from the Limestone Unit 3 project's emissions of substances that are not regulated under the FCAA or TCAA, such as water vapor, nitrogen, methane, ethane, and carbon dioxide.

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

26. In accordance with 30 TEX. ADMIN. CODE §116.111(a)(2)(B), the Limestone Unit 3 project will have provisions for measuring the emission of air contaminants as determined by the Commission's Executive Director.

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

27. An applicant that is proposing to construct a pulverized-coal-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.

28. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(C), the Limestone Unit 3 project will utilize BACT, with consideration given to the technical practicability and economic reasonableness of reducing or eliminating emissions from the facilities of which it will be comprised.

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

29. There will be five types of equipment in the Limestone Unit 3 project that will be subject to five different NSPS: the main boiler; the auxiliary boiler; the coal handling system; the limestone handling system; and the diesel fired emergency generators, including the generator used for the fire water pump. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(D), the emissions from the Limestone Unit 3 project will meet the requirements of any applicable NSPS as listed under Title 40 C.F.R. Part 60, promulgated by the EPA under authority granted under Section 111 of the FCAA, as amended.

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

30. No requirement set forth at 30 TEX. ADMIN. CODE § 116.111(a)(2)(E) regarding compliance with NESHAPS is applicable to the Limestone Unit 3 project.

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

31. The Limestone Unit 3 project emergency diesel engines are the only type of equipment in the Limestone Unit 3 project subject to a NESHAPs for source categories. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(F), the emissions from the Limestone Unit 3 project will meet the requirements of any applicable MACT standards as listed under Title 40 C.F.R. Part 63, promulgated by the EPA under authority granted under Section 112 of the FCAA, as amended, or as listed under 30 TEX. ADMIN. CODE Chapter 116.

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

32. In accordance with 30 TEX. ADMIN. CODE § 116.111 (a)(2)(G) the Limestone Unit 3 project facilities will achieve the performance specified in the permit application.

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

33. Nonattainment review requirements are not applicable to the Limestone Unit 3 project.

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

34. The Limestone Station is a major source because it emits more than 100 tpy of any single criteria pollutant.

35. The Limestone Unit 3 project constitutes a major modification because it emits certain criteria pollutants in "significant" quantities; therefore, PSD review is triggered.

36. In accordance with 30 TEX. ADMIN. CODE §116.111(a)(2)(I), the Limestone Unit 3 project complies with all applicable requirements of Chapter 116 regarding PSD review.

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

37. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(J), computerized air dispersion modeling was performed as required to determine the air impacts from the Limestone Unit 3 project and Limestone Station.

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

38. Limestone Unit 3 will be a major source of HAPs.

39. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(K), a case-by-case MACT analysis was conducted to establish federally enforceable MACT emission limits for Limestone Unit 3.

40. The application requirements for a case-by-case MACT determination are established in 40 C.F.R. § 63.43(e).

41. Under 40 C.F.R. § 63.43(e)(1), an application for a MACT determination must specify a control technology selected by the owner or operator that, if properly operated and maintained, will meet the proposed MACT emission limitation.

42. Under 40 C.F.R. § 63.43(e)(2)(xi)-(xii), an application for a MACT determination must identify the selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, estimated control efficiency of the control technology; and supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology.

43. In accordance with 30 TEX. ADMIN. CODE § 116.111(a)(2)(K), the Limestone Unit 3 project complies with all applicable requirements of Chapter 116 regarding case-by-case MACT review.

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

44. The requirement set forth at 30 TEX. ADMIN. CODE § 116.111(a)(2)(L) is not applicable to the Limestone Unit 3 project.

NRG's Permit

45. The special conditions in the permit are appropriately added under 30 TEX. ADMIN. CODE § 116.115(c)(1) and are consistent with the TCAA.

46. No changes to the permit should be made on the basis of compliance history in accordance with 30 TEX. ADMIN. CODE § 116.110(c), because NRG has an "average" site and person compliance history rating as determined in accordance with 30 TEX. ADMIN. CODE Chapter 60.

47. Based on the above Findings of Fact and Conclusions of Law, NRG 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.

48. In accordance with TEX. HEALTH & SAFETY CODE § 382.0518(b)(1), the Limestone Unit 3 project facilities will use at least BACT, considering the technical practicability and economic reasonableness of reducing or eliminating its emissions.

49. In accordance with 30 TEX. ADMIN. CODE § 116.400, Limestone Unit 3 will employ the maximum achievable control technology (MACT) emissions limitations for a new source.

50. In accordance with TEX. HEALTH & SAFETY CODE § 382.0518(b)(2), emissions from the Limestone Unit 3 project will not contravene the intent of the TCAA and will be protective of the public's health and physical property, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.

51. In accordance with TEX. HEALTH & SAFETY CODE §382.0518(b), the application for Air Quality Permit No. 79188/PSD Permit No. PSD-TX-1072 should be approved and Air Quality Permit No. 79188/PSD Permit No. PSD-TX-1072 should be issued.

Transcription Costs

52. All transcription costs should be assessed to NRG.

EXPLANATION OF CHANGES

During its November 18, 2009, public meeting the Commission determined to grant the exceptions filed by the Applicant and revise or set aside Findings of Fact Nos. 32, 291, 292, 293, and 294, Conclusion of Law No. 43, and Ordering Provision No. 3 in the ALJs' PFD and Proposed Order, as described below in this Explanation of Changes. The Commission also determined to set aside Finding of Fact No. 226 and to revise Findings of Fact Nos. 234 and 235 and Ordering Provision No. 1.a. of the ALJ's PFD and Proposed Order, as recommended by ALJs in their letter dated September 9, 2009, and to add or revise Findings of Fact Nos. 13 and 308, and Ordering Provision Nos. 9 and 10 to make needed typographical or clerical changes or to accurately reflect the record or the terms of its Order.

The Commission granted the Applicant's exceptions listed above for the reasons set forth in the Applicant's exceptions and determined that Government Code Section 2001.058(b) and (e)(1) require the ALJs to apply Commission rules and policy. The Commission also determined that the ALJs incorrectly interpreted the applicable law, rules, and policy in viewing the record in this proceeding as not providing sufficient information to render the case-by-case MACT determination for mercury for the proposed Limestone Unit 3.

During the public meeting, the Commission also stated the following additional explanation of its changes: In its case-by-case MACT application and its representations to the Commission, the Applicant provided information sufficient to satisfy the Commission's interpretation of applicable requirements found in 30 Tex. Admin. Code Sections 116.15 and 116.404 and 40 C.F.R. Sections 63.40 through 63.44 regarding the mercury controls to be used at the proposed Limestone Unit 3. The Applicant has represented that mercury from proposed

Limestone Unit 3 will be controlled through the proposed selective catalytic reduction (SCR) system, the fabric filter baghouse, the wet flue gas desulphurization (FGD) system, and sorbent injection. Based on the Commission's interpretation of applicable control technology requirements and its policy judgments, additional details concerning the proposed mercury controls beyond those provided by the Applicant are not necessary to comply with applicable requirements since (i) such information was not necessary to establish the enforceable MACT emissions limitation for mercury, which is required to be continuously monitored by Permit No. HAP-14, (ii) the Applicant identified proposed mercury controls that are capable of attaining that mercury emissions limitation, (iii) the Commission should not prohibit the Applicant from identifying more-effective mercury controls prior to operation of Limestone Unit 3, (iv) the Applicant would be required to seek authorization from the Commission prior to any change in the proposed mercury controls, (v) Special Condition No. 21 of Permit No. HAP-14 requires the submission of as-built information regarding the proposed mercury controls to the Commission for review prior to operation of Limestone Unit 3, and (vi) there would be no environmental benefit to be gained by any further delay in the permitting process. As reflected in the Executive Director's and the Applicant's Exceptions to the ALJ's PFD and Proposed Order, the Commission finds that the evidentiary record supports that the representations made by the Applicant in this matter comply with the applicable MACT review requirements.

The changes adopted by the Commission to Findings of Fact Nos. 13, 226, 234, 235, and 308 and Ordering Provision Nos. 1.a. and 9 of the ALJ's PFD and Proposed Order have been made to correct typographical errors or to accurately reflect the record or the terms of the Order.

The Commission also determined to overrule all other exceptions filed by the parties, and establish that the attached Permit Nos. 79188, PSD-TX-1072, and HAP-14 shall take effect upon issuance of the Order.

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

1. The application of NRG Texas Power LLC For State Air Quality Permit No. 79188 and Prevention of Significant Deterioration Air Quality Permit PSD-TX-1072 is approved and

the permit attached is approved and issued, with the inclusion of the following special conditions:

a. Special Condition No. 42: The permit holder will have no net increase in annual site-wide emissions of NO_x, SO_2, and Hg from the Limestone Electric Generating Station upon initial start-up of LMS Unit 3. The reduction of emissions relied upon for ensuring no net increase in annual emissions of NO_x, SO_2, and Hg shall occur no later than initial start-up of the unit. Following the initial start-up of LMS Unit 3, the combined annual NO_x emissions from LMS Unit 1, LMS Unit 2, and LMS Unit 3 shall not exceed a total of 12,056.6 tons per year, and the combined annual SO_2 emissions from LMS Unit 1, LMS Unit 2, and LMS Unit 3 shall not exceed a total of 16,844.8 tons per year, and the combined annual Hg emissions from LMS Unit 1, LMS Unit 2, and LMS Unit 3 shall not exceed a total of 1,084.5 pounds per year.

b. Special Condition No. 43: The permit holder will have no increase in 30-day rolling average site-wide emissions of NO_x from the Limestone Electric Generating Station upon initial start-up of LMS Unit 3. To determine the baseline 30-day rolling average of NO_x emissions which NRG Texas may not exceed, NRG Texas shall use the lowest 30-day rolling average from any consecutive 30-day period within the June-September 2006 or June-September 2007 time periods. NRG Texas shall maintain records demonstrating compliance with this special condition.

c. Special Condition No. 44: The permit holder will install and maintain a fence at the Limestone Station property line or boundary used for the air dispersion modeling demonstration of compliance with NAAQS and PSD Increment and for the State Effect Review for issuance of Permit Nos. 79188 and PSD-TX-1072. Permit holder will also maintain control over access to the Limestone Station property enclosed by the fence.

2. Within 90 days from the date this order is final, NRG Texas shall provide the ED with data reflecting the lowest 30-day rolling average of NO_x emissions from the Limestone Electric Generating Station from any consecutive 30-day period within the June-September 2006 or June-September 2007 time periods, so as to allow determination of the baseline 30-day average of NO_x emissions required by Special Condition No. 43.

3. The application of NRG Texas for Hazardous Air Pollutant Major Source [FCAA § 112(g)] Permit No. HAP-14 is approved and the permit attached is approved and issued.

4. NRG shall comply with all Findings of Fact and Conclusions of Law contained herein.

5. NRG shall pay for all transcription and reporting costs associated with this matter.

6. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.

7. The effective date of this Order is the date the Order is final, as provided by 30 TEX. ADMIN. CODE § 80.273 and TEX. GOV'T CODE § 2001.144.

8. 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.

9. The Executive Director's Response to Comment concerning NRG's Hazardous Air Pollutant Major Source Permit No. HAP-14 and its Air Quality Permit No. 79188 and PSD Permit No. PSD-TX-1072 are adopted and approved. If there is any conflict between the Commission's Order and the Executive Director's two Responses to Comment, the Commission's Order prevails.

10. The attached Air Quality Permit No. 79188 and PSD Permit No. PSD-TX-1072 and Hazardous Air Pollutant Major Source Permit No. HAP-14 shall take effect on the date of issuance of this Order.

ISSUED:

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

_____

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