



Luminant

Rafael Flores
Senior Vice President &
Chief Nuclear Officer
rafael.flores@luminant.com

Luminant Power
P O Box 1002
6322 North FM 56
Glen Rose, TX 76043

T 254.897.5590
F 254.897.6652
C 817.559.0403

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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555
ATTN: David B. Matthews, Director
Division of New Reactor Licensing

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 3 AND 4
DOCKET NUMBERS 52-034 AND 52-035
FIRST PARTIAL RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING THE ENVIRONMENTAL REVIEW OF THE COMBINED LICENSE
APPLICATION OF COMANCHE PEAK UNITS 3 AND 4

REFERENCE: Letter, M. Willingham to D. Woodlan, "Request for Additional Information Regarding the Environmental Review of the Combined License Application for Comanche Peak Nuclear Power Plant, Units 3 and 4," dated June 26, 2009 (ML091460707)

Dear Sir:

Luminant Generation Company LLC (Luminant) hereby submits the first of several letters responding to specific questions posed in the referenced letter for the Combined License Application for Comanche Peak Nuclear Power Plant Units 3 and 4. The specific responses in this letter are:

ACC-02	HYD-04	HYD-22	MET-07	TE-04	TRN-03
ACC-03	HYD-05	LU-02	MET-08	TE-05	TRN-04
ALT-02	HYD-06	MET-02	MET-09	TE-12	TRN-05
HR-02	HYD-10	MET-03	MET-10	TE-13	TRN-06
HR-03	HYD-14	MET-04	MET-12	TE-16	TRN-07
HYD-02	HYD-16	MET-05	TE-01	TRN-01	
HYD-03	HYD-21	MET-06	TE-02	TRN-02	

When support documents such as calculations are provided, only the revision used to support the application is submitted. Any subsequent revisions to those documents will be retained and will be available for review or audit on site.

The computer input/output files submitted as part of the responses are in their native format as required for use by the NRC. These files do not meet the requirements for electronic submission stated in NRC guidance document, "Guidance for Electronic Submissions to the NRC, Rev. 4."

DO910
NRO

- c- Stephen Monarque, w/ attachments (CDs)
Michael Willingham, w/attachments (CDs)

Email Distribution w/o attachments (CDs)

mike.blevins@luminant.com
Brett.Wiggs@luminant.com
Rafael.Flores@luminant.com
mlucas3@luminant.com
jeff.simmons@energyfutureholdings.com
Bill.Moore@luminant.com
Brock.Degeyter@energyfutureholdings.com
rbird1@luminant.com
Matthew.Weeks@luminant.com
Allan.Koenig@luminant.com
Timothy.Clouser@luminant.com
Ronald.Carver@luminant.com
David.Volkening@luminant.com
Bruce.Turner@luminant.com
Eric.Evans@luminant.com
Robert.Reible@luminant.com
donald.woodlan@luminant.com
John.Only@luminant.com
JCaldwell@luminant.com
David.Beshear@txu.com
Ashley.Monts@luminant.com
Fred.Madden@luminant.com
Dennis.Buschbaum@luminant.com
Carolyn.Cosentino@luminant.com

masahiko_kaneda@mnes-us.com
nan_sirirat@mnes-us.com
masanori_onozuka@mnes-us.com
ck_paulson@mnes-us.com
joseph_tapia@mnes-us.com
russell_bywater@mnes-us.com
diane_yeager@mnes-us.com
kazuya_hayashi@mnes-us.com
mutsumi_ishida@mnes-us.com
rjb@nei.org
kak@nei.org
cp34update@certrec.com
michael.takacs@nrc.gov
michael.johnson@nrc.gov
David.Matthews@nrc.gov
Balwant.Singal@nrc.gov
paul.kallan@nrc.gov
Stephen.Monarque@nrc.gov
jeff.ciocco@nrc.gov
michael.willingham@nrc.gov
john.kramer@nrc.gov
Brian.Tindell@nrc.gov
Elmo.Collins@nrc.gov
Loren.Plisco@nrc.gov
Laura.Goldin@nrc.gov
James.Biggin@nrc.gov
sfrantz@morganlewis.com
tmatthews@morganlewis.com

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Comanche Peak, Units 3 and 4

Luminant Generation Company LLC

Docket Nos. 52-034 and 52-035

RAI REGARDING THE ENVIRONMENTAL REVIEW

DATE OF RAI ISSUE: 6/26/2009

QUESTION NO.: ACC-02 (7.2.2-2)

Provide the bases for assuming 100 percent of the population is evacuated. Demonstrate that assuming 99.5 percent of the population is evacuated would not substantially change the results. Provide the input and output MACCS files used in this sensitivity evaluation.

ANSWER:

A sensitivity study was performed using evacuation parameters for 99.5% and 90% population evacuation. The sensitivity study showed that the severe accident results did not substantially change as a result. This sensitivity study was provided via Luminant letter TXNB-09013 dated April 28, 2009 (ML091190793). The MACCS input and output files are attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: ACC-03 (7.2.2-3)

Are the meteorological data used in the MACCS2 analysis consistent with the meteorological data used to calculate X/Q values for routine releases and release for DBA? If not, why not? If different, justify using different meteorological data sets for different purposes.

ANSWER:

The meteorological data used for the MACCS2 is consistent with what is used for the X/Q values. The meteorological data used in both the X/Q and MACCS2 analyses were further clarified in response to FSAR RAI No. 3 submitted via Luminant letter TXNB-09017 (ML091330346) dated May 8, 2009. The MACCS2 input and output files were submitted via Luminant letter TXNB-09006 (ML091120279) dated April 15, 2009.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: ALT-02 (9.2.3.3.4-1)

Provide a corrected version of ER Section 9.2.3.3.4. Please correct the economic comparison references and/or cost values.

ANSWER:

Environmental Report Subsections 9.2.2.9 and 9.2.2.10 were revised in ER Update Tracking Report UTR Revision 3, submitted via Luminant letter TXNB-9011 dated May 14, 2009 (ML091460334), to reflect the economic comparison of NETL 2007 and revised capital cost for coal and natural gas.

Impact on R-COLA

Subsections 9.2.2.9 and 9.2.2.10 were revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HR-02 (2.5.3.1-1)

Provide a copy of the document titled: Archaeological Survey Report on the Luminant Waterline Extension Project, Comanche Peak Nuclear Power Plant, Hood And Somervell Counties, TX. Enercon 2008, referenced in Chapter 2.5.3.1 of the ER.

ANSWER:

The report entitled "Archaeological Survey Report on the Luminant Proposed New Water Exchange Project, Comanche Peak Nuclear Power Plant, Hood and Somervell Counties, Texas," dated April 30, 2009, and the Texas Historical Commission approval letter, are attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HR-03 (2.5.3.3-1)

Provide a copy of the stamped Texas Historical Commission Concurrence letter dated February 12, 2007, referenced in Chapter 2.5.3.3 of the ER.

ANSWER:

The letter dated January 24, 2007, that contains the Texas Historical Commission's concurrence dated February 21, 2007, is attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-02 (2.3.1-2)

Provide a summary table of all site-specific hydraulic conductivity values for slug tests, packer tests, pumping tests, and any other relevant hydraulic testing conducted and justification for not using the higher hydraulic conductivity value determined from the 72-hour pumping test.

ANSWER:

A summary of the hydraulic conductivities was provided as HYD-02, submitted via Luminant letter TXNB-09008 dated April 27, 2009. Please note that this item was discussed in the Hydrology Site Visit as Item HYDSV-18. Additional information will be provided in response to Site Visit Item HYDSV-18 to address how the hydraulic conductivities chosen were conservative in selecting the travel times for the tank failure analysis in FSAR Subsection 2.4.13.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-03 (2.3.1-3)

Provide post-construction grading plans, the planned removal of regolith/undifferentiated fill, planned placement of engineered fill and the impact this will have on infiltration and surface runoff characteristics, gradients and flow paths.

ANSWER:

The response to FSAR RAI No.0, Question 2.4.13-4 was submitted via Luminant letter TXNB-08031 dated December 18, 2008 (ML083590297), and addressed the removal of regolith/undifferentiated fill. This issue was also addressed as HYD-03, submitted via Luminant letter TXNB-09008 dated April 27, 2009. Please note that this item was discussed in Hydrology Site Visit as Item HYDSV-19. The impact of hydrologic processes such as infiltration, surface runoff, groundwater levels, hydraulic gradients and flow paths will be addressed in response to the HYDSV-19 site visit item.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-04 (2.3.1-4)

Provide a map showing the start and stop location for each of the four groundwater flow path and travel time scenarios.

ANSWER:

A figure showing the relative start and stop location for each of the four groundwater flow paths was provided as HYD-04, submitted via Luminant letter TXNB-09008 dated April 27, 2009. Please note that flow paths and travel time scenarios were further discussed during the Hydrology Site Visit as Item HYDSV-23. Additional discussion regarding the conceptual site model flow paths and travel times will be further discussed in response to the HYDSV-23 site visit item.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-05 (2.3.1-5)

Provide a discussion and justification of the porosity, effective porosity, secondary porosity, and preferred pathways considered in the groundwater travel time calculations, and range of effective porosities and preferred pathways (e.g., secondary porosity) measured or estimated in the regolith/undifferentiated fill and underlying bedrock.

ANSWER:

Porosity discussion was provided as HYD-05, submitted via Luminant letter TXNB-09008 dated April 27, 2009. Please note that porosity and transport rate through the conceptual site model flow paths was discussed further during the Hydrology Site Visit as Item HYDSV-24. Additional information relative to the selection of porosity and transport rates will be further discussed in response to the HYDSV-24 site visit item.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-06 (2.3.1-6)

Provide hydrographs showing groundwater levels in wells installed at the site.

ANSWER:

Hydrographs and groundwater levels from November 2006 to May 2008 were provided in response to Information Need HYD-12, submitted via Luminant letter TXNB-09008 dated April 27, 2009. Please note that this issue was further discussed during the Hydrology Site Visit as Item HYDSV-20. Hydrographs will be revised with a different scale and will depict the top and bottom of the well screen elevations in response to the HYDSV-20 site visit item.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-10 (2.3.3-1)

Provide data on all pollutant point discharges to Lake Granbury and to the Brazos River between DeCordova Bend Dam and the Glen Rose stream gage (USGS 08091000), including the location, effluent flow rate, and allowable and average contaminant concentrations and temperature in each discharge. Include a description of information gathering efforts and sources.

ANSWER:

This information is provided in the attached white paper entitled "Impacts of Comanche Peak Nuclear Power Plant Units 3 and 4 Operations on Downstream Water Quality."

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-14 (3.9.3-1)

Provide information on groundwater dewatering that will be conducted during construction activities.

ANSWER:

No dewatering activities will be necessary during construction activities. This information is discussed in FSAR Subsection 2.4.12, provided in FSAR Update Tracking Report, Revision 0 (Technical), submitted via Luminant letter TXNB-09005 dated April 2, 2009 (ML091120280).

Impact on R-COLA

Subsection 2.4.12 was revised in the Final Safety Analysis Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-16 (5.2-2)

Provide a description of baseline water quality conditions for the Brazos River downstream of Lake Granbury and the impact that Unit 3 and 4 thermal and chemical discharges to Lake Granbury and Squaw Creek Reservoir would have on water quality downstream of Lake Granbury. This description should include a summary of the information gathering efforts for quantitative data on chemical concentrations and temperature.

ANSWER:

This information is provided in the attached white paper entitled "Impacts of Comanche Peak Nuclear Power Plant Units 3 and 4 Operations on Downstream Water Quality."

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-21 (6.4-1)

Provide justification and rationale for the construction, preoperational, and operational hydrological monitoring proposed for groundwater.

ANSWER:

Current practice for CPNPP Units 1 and 2 groundwater monitoring and the basis for a future monitoring plan was provided as a part of Information Need HYD-11, submitted via Luminant letter TXNB-09008 dated April 27, 2009. Please note that this issue was further discussed during the Hydrology Site Visit as Item HYDSV-26. During the course of the audit, Luminant agreed to update FSAR Subsection 2.4.12.4 to reflect that a groundwater monitoring plan would be developed prior to fuel load, consistent with what has been used with other COL applications. This update will be provided in response to Information Need HYDSV-26.

Impact on R-COLA

FSAR Subsection 2.4.12.4 will be revised.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: HYD-22 (7.2-1)

Provide a better description of the source term used to assess accidental releases to surface water and groundwater and the transport pathways that are likely to occur after the site has been altered during construction activities.

ANSWER:

The FSAR Update Tracking Report, Revision 0 (Technical), Subsections 2.4.12 and 2.4.13 submitted via Luminant letter TXNB-09005 dated April 2, 2008 (ML091120280), and Luminant response to RAI No. 0 dated December 18, 2008, provide the description of the source term and include a discussion of

construction activities that could affect transport pathways. Also, the responses to Information Needs HYD-03, HYD-04, HYD-05, and HYD-06 submitted via Luminant letter TXNB-09008 dated April 27, 2009 further supplement and describe the potential pathways for source term transport. Please note that during the course of discussion regarding Hydrology Site Visit as Item HYDSV-30, the Staff requested that post-construction effects to release pathways considered for the tank failure analysis scenario be further discussed. This information will be provided in response to the HYDSV-30 site visit item.

Impact on R-COLA

Subsections 2.4.12 and 2.4.13 were revised in the Final Safety Analysis Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: LU-02 (4.1.1.2-1)

Provide resolution of the apparent inconsistency between the statement that "no additional land is expected to be required for the CPNPP site," and Figure 3.1-2, which indicates that the proposed concrete batch plant would be constructed largely outside the site boundary.

ANSWER:

Environmental Report Figures 3.1-2 and 4.1-1 showing the batch plant inside the site boundary have been provided in ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334).

Impact on R-COLA

Figures 3.1-2 and 4.1-1 were revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-02 (2.7.1.1-2)

Provide the 2005 meteorological data in Reg. Guide 1.23 format.

ANSWER:

The 2005 meteorological data was provided in RG 1.23 format as Information Need MET-23 submitted via Luminant letter TXNB-09006 dated April 15, 2009 (ML091120279).

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-03 (2.7.2.1.4-1)

Provide moisture data collected onsite during 2008, and the corresponding data from the Mineral Wells and Dallas-Fort Worth (DFW) airport sources.

ANSWER:

The attached report entitled "CPNPP Humidity Comparison with Dallas Fort Worth and Mineral Wells Airport Data", TXUT-001-PR-016, Revision 1, discusses the applicability of moisture data collected during 2008 to the data from Mineral Wells and DFW. This data can be found in Attachment 3 of the attached calculation entitled "TXUT-001-FSAR-2.3-CALC-022, Revision 0, CPNPP Short-Term Atmospheric Dispersion Calculation." Moisture data collected during 2008, and the corresponding data from Mineral Wells and Dallas-Forth Worth (DFW) airport sources is attached as an Excel spreadsheet.

Impact on R-COLA

ER Subsections 2.7.2.1.7, and Sections 6.4 and 6.7 were revised by Luminant letters dated April 16, 2009 and May 14, 2009 (ML091130575 and ML091460334), respectively.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-04 (2.7.2.1.7-1)

Provide a corrected version of ER Section 2.7.2.1.7, to correct an incorrect reference to Table 2.7-34 of the Unit 1 and 2 FSAR. The correct reference is to Table 2.3-34.

ANSWER:

Environmental Report Subsection 2.7.2.1.7 was corrected to refer to Table 2.3-34 in ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334).

Impact on R-COLA

Subsection 2.7.2.1.7 was revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-05 (2.7.3-1)

Provide in electronic format the input and output files for the PAVAN code used to calculate the X/Q values for the evaluation of design basis accidents (DBA) in the Environmental Report. Include all files required to run the code, including the formatted meteorological data file.

ANSWER:

The PAVAN input and output files were provided via Luminant letter TXNB-09004 dated March 31, 2009 (ML091120524), in response to Information Need MET-10. The formatted meteorological data files for years 2001-2004 and 2006 were submitted via Luminant letter TXNB-09017 dated May 8, 2009 (ML091330346), in response to FSAR RAI No. 3, Question 02.03.03.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-06 (2.7.4-1)

Provide in electronic format the XOQDOQ input and output files, including the associated formatted meteorological data file

ANSWER:

The XOQDOQ input and output files were provided via Luminant letter TXNB-09004 dated March 31, 2009 (ML091120524), in response to Information Need MET-10. The formatted meteorological data files for years 2001-2004 and 2006 were submitted via Luminant letter TXNB-09017 dated May 8, 2009 (ML091330346), in response to FSAR RAI No. 3, Question 02.03.03.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-07 (2.7.4-2)

Provide for evaluation and reference the long-term atmospheric dispersion and deposition estimates for the evaporation pond.

ANSWER:

Environmental Report Subsection 2.7.4.3 was added in the ER Update Tracking Report, Revision 1, submitted via Luminant letter TXNB-09007 dated April 16, 2009 (ML091130575). This new subsection includes new tables and reflects the long-term atmospheric dispersion and deposition estimates for the evaporation pond.

Impact on R-COLA

Subsection 2.7.4.3 and Tables 2.7-129 through 2.7-135 were added to the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-08 (4.4.1.6-1)

Provide for evaluation and reference quantitative estimates of air emissions associated with construction activities. Include number of workers, number of daily worker trips, number of daily deliveries, manner of deliveries (truck, rail, or other), area of site disturbance, volume of excavation, manner of removal/disposal of excavated materials, duration of construction activities, length and type (dirt or asphalt) of access roads, construction vehicle and heavy equipment traffic (exhaust emissions and dust generation), emissions from specialized equipment (cement batch plant), and emissions associated with earthmoving and/or blasting activities.

ANSWER:

Environmental Report Subsection 4.4.1.6 was revised and provided in ER Update Tracking Report, Revision 2, submitted via Luminant letter TXNB-09009 dated April 28, 2009 (ML091260719), in response to Information Need MET-07.

Impact on R-COLA

Subsection 4.4.1.6 was revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-09 (4.4.1.6-2)

Provide for reference a description of the process used to develop and implement air quality monitoring requirements, including means of communicating requirements to workers, during the construction phase.

ANSWER:

Environmental Report Subsection 3.9.1.1 states that construction workers will be provided with environmental awareness training and there will be an associated Environmental Compliance Inspection Program established. Environmental Report Subsection 3.9.2.2 states that air quality environmental procedures will be developed to ensure air quality is maintained in accordance with best management practices. Environmental Report Subsection 4.4.1.6 was revised to reflect a construction air monitoring program in accordance with the applicable permits, including training of construction workers and annual refresher training. This was accomplished in the ER Update Tracking Report, Revision 2, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), in response to MET-09.

Impact on R-COLA

Subsection 4.4.1.6 was revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-10 (5.3.3.1-1)

Provide in electronic format the input and output files for the SACTI code used to calculate the heat dissipation plume characteristics in the ER. Include all files required to run the code, including the formatted meteorological data file.

ANSWER:

The SACTI input and output files were transmitted via Luminant letter TXNB-09004 dated March 31, 2009 (ML091120524), in response to Information Need MET-10.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: MET-12 (5.8.1.6-2)

Provide for evaluation and reference quantitative estimates of air emissions associated with operations of Units 3 and 4. Include worker vehicle traffic (exhaust emissions and dust generation), emissions from specialized equipment (such as boilers and generators), and any other emissions sources that may be regulated under the facility's Clean Air Act permit.

ANSWER:

Environmental Report Subsection 5.8.1 was revised to include a new Subsection 5.8.1.6 entitled "Air Quality" in ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), in response to Information Need MET-08.

Impact on R-COLA

Subsection 5.8.1.6 was added to the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-01 (1.2.2-1)

Provide a copy of the following letter that is referenced in the ER: (FWS 2006) Response letter from the U.S. Department of the Interior Fish and Wildlife Service to ENERCON recommending that potential impact to three species be considered during project planning. December 4, 2006.

ANSWER:

The US Fish and Wildlife Service letter of December 4, 2006, regarding the "Response Impacts to Threatened and Endangered Species" is attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-02 (1.2.2-2)

Provide copy of letter (made available at site visit) from Texas Parks & Wildlife Department to Enercon (W.Wenstrom) dated 8/3/07 concerning rare species.

ANSWER:

The Texas Parks and Wildlife letter dated August 3, 2007, regarding the "Response to Potential Impacts to Rare, Threatened, and Endangered Species" is attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-04 (2.4.1-1)

Provide copy of the following document that is referenced in the ER: (PBS&J 2007) Golden-Cheeked Warbler Bird Survey Report (for) TXU Power, Comanche Peak Power Plant, Somervell County, Texas. Prepared for TXU Power, 1601 Bryan Street, Dallas, Texas 75201 by PBS&J, 18383 Preston Road, Suite 110, Dallas, Texas 75252. May.

ANSWER:

The requested report was submitted via Luminant letter TXNB-09003 dated February 13, 2009 (ML090490382).

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-05 (2.4.1.1-1)

Provide a quantification of acreages, by habitat type, and terrestrial ecological impacts from construction activities in the Blowdown Treatment Facility area.

ANSWER:

The entire Blowdown Treatment Facility (BDTF) area was conservatively considered to be disturbed during construction for habitat type, and terrestrial ecological impacts from construction activities in the Blowdown Treatment Facility. This discussion was provided in ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), related to Information Needs TE-07 and TE-12. Please note: the Environmental Report was revised to reflect the total acreage of the BDTF as 400 acres opposed to 384 acres.

Impact on R-COLA

Subsections 2.3.1.1.5, 4.1.1.1, 4.1.2, 4.2.1.1.5, and 4.3.1 have been revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-12 (4.3.1-1)

Provide a quantification of acreages, by habitat type, and impacts from preconstruction activities to terrestrial ecological resources at the site.

ANSWER:

The quantification of acreages by habitat type and impacts from preconstruction activities to terrestrial ecological resources was provided in the ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), in response to Information Need TE-07.

Impact on R-COLA

Subsection 4.3.1 was revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-13 (4.3.1.4-1)

State what impacts are expected to the small wetland area just to the southeast of the proposed cooling tower locations and what mitigation measures will be taken.

ANSWER:

The project report, TXUT-001-PR-015, entitled "Wetland & Other Potentially Jurisdictional Waterbody Identification & Delineation Study," by Enercon for Luminant was submitted via Luminant letter TXNB-09004, dated March 31, 2009 (ML091120324), and addresses impacts to the small wetland area near the cooling tower location. The Texas Commission on Environmental Quality and the US Army Corps of

Engineers permit's conditions will be followed during all phases of construction. Best management practices (BMPs) will be used throughout construction and post-construction. Mitigation measures, such as sediment runoff control using hay bails, silk fencing and other applicable BMPs, will be used for compliance with state and federal permits to minimize impacts to the small wetland area noted.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TE-16 (5.3.3.2-1)

Provide copy of the following document that was made available at the site visit: Plume Characteristics of Proposed New Cooling Towers at Comanche Peak, by Enercon for Luminant, TXUT-001-ER-5.3-005.

ANSWER:

Calculation TXUT-001-ER-CALC-5.3-005, Revision 2, entitled "Plume Characteristics of the Proposed New Cooling Towers at Comanche Peak," is attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-01 (3.8-1)

Provide a full and detailed transportation impact analysis (Transportation Analysis Report) including the RADTRAN and TRAGIS input and output files as well as the calculation package that supports the analysis. The calculation package should also provide rationale and reference for multiplier for population growth in future.

ANSWER:

Calculations TXUT-001-ER-3.8-CALC-008, Revision 1, entitled "CPNPP Transportation Analysis" and TXUT-001-ER-3.8-CALC-009, Revision 0, entitled "Transportation Routing," address the transportation impact analysis and are attached. The RADTRAN and TRAGIS input and output files are attached for your information and use. These files are contained in appendices and sections in the attached calculations.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-02 (3.8-2)

Provide revised text in Section 3.8.1.11 and Table 3.8.1 of the ER to accurately represent the number of fuel assemblies per package and number of packages per truck, for fresh fuel shipments.

ANSWER:

Environmental Report Subsection 3.8.1.11 is now entitled "Decay Heat." Environmental Report Subsection 3.8.1.12 entitled "Number of Truck Shipments" and Tables 3.8-5 and 3.8-9 were revised in response to Information Needs TR-02 and TR-06 for the number of packages per truck shipment and the number of truck shipments, and were provided in Updated Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML 091460334).

Impact on R-COLA

Subsection 3.8.1.12, Table 3.8-5, and Table 3.8-9 were revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-03 (3.8-3)

Provide revised description of the total number of shipments assumed in section 3.8.1.11, paragraph 5 in the ER.

ANSWER:

Environmental Report Subsection 3.8.1.11 entitled "Decay Heat" was added. As a result, the referenced subsection in this RAI is now Subsection 3.8.1.12 and the correction was made in this subsection and Tables 3.8-5 and 3.8-9 in Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), in response to Information Needs TR-01 and TR-03.

Impact on R-COLA

Subsection 3.8.1.12 was added, and Tables 3.8-2 and 3.8-3 were revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-04 (3.8-4)

Provide reference source and description of rationale for input data used in RADTRAN code for aerosol, respirable and total release fractions from spent fuel cask during transportation accident.

ANSWER:

Calculations TXUT-001-ER-3.8-CALC-008, Revision 1, entitled "CPNPP Transportation Analysis" and TXUT-001-ER-3.8-CALC-009, Revision 0, entitled "Transportation Routing" are being submitted as part of question TRN-01. These calculations provide the reference source and description of the rationale used for the RADTRAN input data used for the aerosol, respirable and total release fractions from the spent fuel cask during a transportation accident.

Environmental Report Tables 3.8-5 and 3.8-9 were also revised to address changes in truck stop times and shipments per year, as a result of Revision 1 to Calculation TXUT-001-ER-3.8-CALC-008. Subsection 3.8.1.12 and Tables 3.8-5 and 3.8-9 were revised in Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), in response to item TR-02.

Impact on R-COLA

Subsection 3.8.1.12 and Table 3.8-5 and Table 3.8-9 were revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-05 (3.8-5)

Provide references and analysis to demonstrate that NRC has approved higher enrichments and burnup that exceed basis in the S-4 table.

ANSWER:

Environmental Report Subsection 3.8.1.5 was changed in ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334) to reference NUREG-1437, which gives a higher allowed burnup value. Section 3.2 of the Environmental Report lists an average discharged burnup of 46,200 MWd/MTU and the maximum burnup as 54,200 MWd/MTU for a reference equilibrium core. Subsection 3.8.1.5 now references NUREG-1437 (Addendum 1, page 30) as the bounding 62,000 MWd/MTU burnup.

Impact on R-COLA

Subsection 3.8.1.5 was revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-06 (3.8-6)

Provide reference and analysis of decay heat load from spent fuel in comparison to Table S-4.

ANSWER:

New ER Subsection 3.8.1.11 was added in ER Update Tracking Report, Revision 3, submitted via Luminant letter TXNB-09011 dated May 14, 2009 (ML091460334), and addresses the decay heat load from spent fuel.

Impact on R-COLA

Subsection 3.8.1.11 was revised in the Environmental Report.

Impact on S-COLA

None.

Impact on DCD

None.

QUESTION NO.: TRN-07 (7.4-1)

Provide a full and detailed analysis of radioactive inventory of spent fuel, including input and output files from ORIGEN-ARP for results presented in Table 7.4-1.

ANSWER:

A full and detailed analysis of radioactive inventory of spent fuel is provided in Calculation TXUT-001-ER-3.8-CALC-008, Revision 1, entitled "CPNPP Transportation Analysis." The ORIGEN-ARP input and output files are attached.

Impact on R-COLA

None.

Impact on S-COLA

None.

Impact on DCD

None.

LIST OF ATTACHMENTS ON CD

NRC Question No.	Location of Attachment	File Extension Name	Name of Document(s)	Document Date	Type of Document
ACC-02	Disc 1 ACC-02 Folder	CP2001OUTPUT2.out, CP2003OUTPUT2.out, CP2006OUTPUT2.out, CPATMOS.inp, CPCHRONC.inp, CPEARLY2.inp, CPEARLY.inp, CPSIT2056.inp	None - file extension only	None	Input Files and Output Files
HR-02	Disc 2 HR-02 Folder	HR-02-A.pdf	Archeological Survey Report On the Luminant Proposed New Water Exchange Line Project Comanche Peak Nuclear Power Plant Hood and Somervell Counties, Texas	April 30, 2009	Report
	Disc 2 HR-02 Folder	HR-02-B.pdf	Texas Historical Commission	June 10, 2009	Letter
HR-03	Disc 2 HR-03 Folder	HR-03.pdf	Enercon Letter addressed to: State Historic Preservation Officer, Texas Historical Commission, with the Commission's approval stamp	Letter dated: January 24, 2007 Approval Stamp dated February 21, 2007	Letter
HYD-10	Disc 2 HYD-10	HYD-10.pdf	Impacts of Comanche Peak Nuclear Power Plant Units 3 and 4 Operations on Downstream Water Quality	April 30, 2009	Report
HYD-16	Disc 2 HYD-16 Folder	HYD-16.pdf	Impacts of Comanche Peak Nuclear Power Plant Units 3 and 4 Operations on Downstream Water Quality	April 30, 2009	Report
MET-03	Disc 1 MET-03 Folder	MET-03.xls	None - file extension only	None	Data
	Disc 2 MET-03 Folder	MET-03-A.pdf	TXUT-001-FSAR-2.3-CALC-022 Rev. 0 CPNPP Short-Term Atmospheric Dispersion Calculation	December 12, 2007	Calculation
	Disc 2 MET-03 Folder	MET-03-B.pdf	TXUT-001-PR-016, Revision 1 CPNPP Humidity Comparison with Dallas Fort Worth and Mineral Wells Airport Data	May 4, 2009	Project Report
TE-01	Disc 2 TE-01 Folder	TE-01.pdf	United States Department of the Interior Fish and Wildlife Service	December 4, 2006	Letter
TE-02	Disc 2 TE-02 Folder	TE-02.pdf	Texas Parks and Wildlife Service	August 3, 2007	Letter
TE-16	Disc 2 TE-16	TE-16.pdf	TXUT-001-ER-5.3-CALC-005 Rev. 2 Plume Characteristics of Proposed New Cooling Towers at Comanche Peak	March 19, 2009	Calculation

LIST OF ATTACHMENTS ON CD

NRC Question No.	Location of Attachment	File Extension Name	Name of Document(s)	Document Date	Type of Document
TRN-01	Disc 1 TRN-01 Folder RADTRAN Subfolder	AltAtoYucca.rml, AltAtoYuccaout, AltBtoYucca.rml, AltBtoYuccaout, AltCtoYucca.rml, AltCtoYuccaout, SanDiegoToAltA.rml, SanDiegoToAltAout, SanDiegoToAltB.rml, SanDiegoToAltBout, SanDiegoToAltC.rml, SanDiegoToAltCout, SanDiegoToCPNPP.rml, SanDiegoToCPNPPout	None - file extension only	None	Input files and Output Files
	Disc 1 TRN-01 Folder TRAGIS Subfolder INPUT Subfolder	Input Folder: RADTRAN - Alternate - Site A New Fuel, RADTRAN - Alternate - Site A Spent Fuel, RADTRAN - Alternate - Site B New Fuel, RADTRAN - Alternate - Site B Spent Fuel, RADTRAN - Alternate - Site C New Fuel, RADTRAN - Alternate - Site C Spent Fuel, RADTRAN - CPNPP to Yucca Route F, RADTRAN - San Diego to CPNPP commercial	None - file extension only	None	Input Files
	Disc 1 TRN-01 Folder TRAGIS Subfolder OUTPUT Subfolder	Output Folder: Alternate - Site A New Fuel, Alternate - Site A Spent Fuel, Alternate - Site B New Fuel, Alternate - Site B Spent Fuel, Alternate - Site C Spent Fuel, Alternate - Site C New Fuel, CPNPP to Yucca Route A, CPNPP to Yucca Route B, CPNPP to Yucca Route C, CPNPP to Yucca Route D, CPNPP to Yucca Route E, CPNPP to Yucca Route F, Port Los Angeles to CPNPP commercial, Port San Diego to CPNPP commercial, Port San Francisco to CPNPP commercial, RADTRAN - Alternate - Site A New Fuel, RADTRAN - Alternate - Site A Spent Fuel, RADTRAN - Alternate - Site B New Fuel, RADTRAN - Alternate - Site B Spent Fuel, RADTRAN - Alternate - Site C New Fuel, RADTRAN - Alternate - Site C Spent Fuel, RADTRAN - CPNPP to Yucca Route F, RADTRAN - CPNPP to Yucca Route F.dbf, RADTRAN - CPNPP to Yucca Route F.shp, RADTRAN - CPNPP to Yucca Route F.shx, RADTRAN - San Diego to CPNPP commercial, VV- commercial, VV HRCQ	None - file extension only	None	Output Files
	Disc 2 TRN-01 Folder	TRN-01-A.pdf	TXUT-001-ER-3.8-CALC-009 Rev. 0 Transportation Routing	April 11, 2008	Calculation
	Disc 2 TRN-01 Folder	TRN-01-B.pdf	TXUT-001-ER-3.8-CALC-008 Rev. 1 CPNPP Transportation Analysis	March 20, 2009	Calculation
TRN-07	Disc 1 TRN-07 Folder	origen.inp, origen.out	None - file extension only	None	Input and Output Files