



**Luminant**

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CP-200900009  
Log # TXX-09004

Ref. # 10 CFR 50.55a(a)(3)(i)

March 4, 2009

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

**SUBJECT:** COMANCHE PEAK STEAM ELECTRIC STATION  
DOCKET NOS. 50-445 AND 50-446  
REQUEST FOR RELIEF TO EXTEND THE UNIT 1 AND 2 INSERVICE INSPECTION  
INTERVAL FOR THE REACTOR VESSEL WELD EXAMINATION AND LICENSE  
AMENDMENT REQUEST 09-004 TO ADD LICENSE CONDITION FOR SUBMITTAL  
OF ISI INFORMATION AND ANALYSES

**REFERENCE:** HO K. NIEH, NRC, NRR LETTER TO GORDON BISCHOFF, WOG REGARDING  
FINAL SAFETY EVALUATION FOR PWROG TOPICAL REPORT WCAP-16168-NP,  
REVISION 2, (TAC NO. MC9768), DATED MAY 8, 2008

Dear Sir or Madam:

Luminant Generation Company, LLC (Luminant Power) is submitting Relief Request B-9 (Attachment 1) for Comanche Peak Unit 1 and Relief Request No. B-8 (Attachment 2) for Comanche Peak Unit 2. These relief requests are for the Second 10-year Inservice Inspection (ISI) Interval and will also apply to the third and fourth 10-year ISI Interval for the Reactor Vessel (RV) Weld examinations.

The NRC approved WCAP-16168-NP-A, Revision 2, "Risk-Informed Extension of The Reactor Vessel Inservice Inspection Interval," in the above referenced letter. This WCAP provides for extension of the inservice inspection interval for certain pressure retaining welds in the reactor vessel from 10 to 20 years. Luminant Power proposes to implement this extended inservice inspection interval for Comanche Peak Units 1 and 2. The plant specific information identified by the above letter as needed to support this request is provided in Attachments 1 and 2. Luminant Power concluded that the proposed alternative provides an acceptable level of quality and safety. The relief is requested under the provisions of 10 CFR 50.55a(a)(3)(i).

Luminant Power is submitting License Amendment Request 09-004 to add a license condition for submittal of ISI information and analyses to the Comanche Peak Unit 1 and Unit 2 Operating Licenses. As required by the referenced letter, Luminant Power is requesting an amendment to the Comanche Peak Unit 1 and Unit 2 Operating Licenses that will require that the information and analyses requested in the final rule for 10 CFR 50.61a, Section (e) or, prior to issuance, the proposed rule (72 FR 56275) for 10 CFR 50.61a, Section (e) be submitted within one year of completing each of the ASME Code, Section XI, Category B-A and B-D RV weld inspections. Luminant Power has evaluated the proposed change in accordance with 10 CFR 50.91(a)(1) using the criteria of 10 CFR 50.92(c) and determined that this proposed change involves no significant hazards considerations. The proposed change and evaluation

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are contained in Attachment 3. Attachment 4 provides the affected Unit 1 and Unit 2 Operating License pages marked-up to reflect the proposed changes. Attachment 5 provides retyped Unit 1 Operating License changes which incorporate the requested change. Attachment 6 provides retyped Unit 2 Operating License changes which incorporate the requested change.

Luminant Power requests approval of the relief requests and license amendment by December 31, 2009, to support the Comanche Peak Unit 1 Spring 2010 Refueling Outage, and to be implemented within 120 days of the issuance of the license amendment.

In accordance with 10 CFR 50.91(b), Luminant Power is providing the State of Texas with a copy of the proposed license amendment.

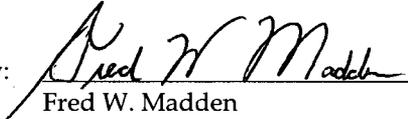
This communication contains no new licensing basis commitments regarding Comanche Peak Units 1 and 2. Should you have any questions, please contact Mr. Jack Hicks at (254)897-6725.

I state under penalty of perjury that the foregoing is true and correct. Executed on the 4<sup>th</sup> of March, 2009.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By:   
Fred W. Madden  
Director, Oversight & Regulatory Affairs

- Attachments -
1. Relief Request B-9 for Unit 1 Request For Relief to Extend the 10-year Reactor Vessel Inservice Inspection Interval
  2. Relief Request B-8 for Unit 2 Request For Relief to Extend the 10-year Reactor Vessel Inservice Inspection Interval
  3. License Amendment Request 09-004 Regarding ASME Relief Request Information and Analyses per 10 CFR 50.91 and 10 CFR 50.92
  4. Proposed Unit 1 and Unit 2 Operating License Changes
  5. Retyped Unit 1 Operating License Pages
  6. Retyped Unit 2 Operating License Pages

c - E. E. Collins, Region IV  
B. K. Singal, NRR  
Resident Inspectors, Comanche Peak  
Brian Welch, ANII, Comanche Peak  
Anthony Jones, TDLR

Alice Rogers  
Environmental & Consumer Safety Section  
Texas Department of State Health Services  
1100 West 49<sup>th</sup> Street  
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**ATTACHMENT 1 TO TXX-09004**

**LUMINANT POWER  
COMANCHE PEAK NUCLEAR POWER PLANT**

**RELIEF REQUEST B-9 FOR UNIT 1  
REQUEST FOR RELIEF TO EXTEND THE 10-YEAR  
REACTOR VESSEL INSERVICE INSPECTION INTERVAL**

**PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(a)(3)(i)  
ALTERNATIVE PROVIDES ACCEPTABLE LEVEL OF QUALITY AND SAFETY**

**1. ASME Code Component(s) Affected**

The affected component is the Comanche Peak Unit 1 reactor vessel, specifically the following American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code Section XI (Reference 1) examination categories and item numbers covering examinations of the reactor vessel (RV). These examination categories and item numbers are from IWB-2500 and Table IWB-2500-1 of the ASME BPV, Code Section XI.

<b>Weld Number</b>	<b>Examination Category</b>	<b>Item No.</b>	<b>Description</b>
TBX-1-1100-1	B-A	B1.30	Flange to Shell Circumferential Weld
TBX-1-1100-2	B-A	B1.11	Upper/Intermediate Circumferential Weld
TBX-1-1100-3	B-A	B1.11	Intermediate/Lower Circumferential Weld
TBX-1-1100-4	B-A	B1.11	Lower Shell to Lower Head Circumferential Weld
TBX-1-1100-5	B-A	B1.21	Lower Head Circumferential Weld
TBX-1-1100-6	B-A	B1.12	Upper Shell Longitudinal Weld (42°)
TBX-1-1100-7	B-A	B1.12	Upper Shell Longitudinal Weld (162°)
TBX-1-1100-8	B-A	B1.12	Upper Shell Longitudinal Weld (282°)
TBX-1-1100-9	B-A	B1.12	Intermediate Shell Longitudinal Weld (0°)
TBX-1-1100-10	B-A	B1.12	Intermediate Shell Longitudinal Weld (120°)
TBX-1-1100-11	B-A	B1.12	Intermediate Shell Longitudinal Weld (240°)
TBX-1-1100-12	B-A	B1.12	Lower Shell Longitudinal Weld (90°)
TBX-1-1100-13	B-A	B1.12	Lower Shell Longitudinal Weld (210°)
TBX-1-1100-14	B-A	B1.12	Lower Shell Longitudinal Weld (330°)
TBX-1-1100-15	B-A	B1.22	Lower Head Meridional Weld (0°)
TBX-1-1100-16	B-A	B1.22	Lower Head Meridional Weld (90°)
TBX-1-1100-17	B-A	B1.22	Lower Head Meridional Weld (180°)
TBX-1-1100-18	B-A	B1.22	Lower Head Meridional Weld (270°)
TBX-1-1100-19	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 4) (22°)
TBX-1-1100-19IR	B-D	B3.100	Outlet Nozzle to Shell Weld IR (Loop 4) (22°)
TBX-1-1100-20	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 4) (67°)
TBX-1-1100-20R	B-D	B3.100	Inlet Nozzle to Shell Weld (Loop 4) (67°)
TBX-1-1100-21	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 3) (113°)
TBX-1-1100-21IR	B-D	B3.100	Inlet nozzle to Shell Weld (Loop 3) (113°)
TBX-1-1100-22	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 3) (158°)
TBX-1-1100-22IR	B-D	B3.100	Outlet Nozzle to Shell Weld IR (Loop 3) (158°)
TBX-1-1100-23	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 2) (202°)
TBX-1-1100-23IR	B-D	B3.100	Outlet Nozzle to Shell Weld (Loop 2) (202°)
TBX-1-1100-24	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 2) (247°)
TBX-1-1100-24IR	B-D	B3.100	Inlet Nozzle to Shell Weld IR (Loop 2) (247°)
TBX-1-1100-25	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 1) (293°)
TBX-1-1100-25IR	B-D	B3.100	Inlet Nozzle to Shell Weld IR (Loop 1) (293°)
TBX-1-1100-26	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 1) (338°)
TBX-1-1100-26IR	B-D	B3.100	Outlet Nozzle to Shell Weld IR (Loop 1) (338°)

(Throughout this request the above examination categories are referred to as "the subject examinations" and the ASME BPV Code, Section XI, is referred to as "the Code.")

## **2. Applicable Code Edition and Addenda**

ASME Code Section XI, "Rules and Inservice Inspection of Nuclear Power Plant Components," Code 1998 Edition with the 2000 Addenda.

## **3. Applicable Code Requirement**

IWB-2412, Inspection Program B, requires volumetric examination of essentially 100% of reactor vessel pressure retaining welds identified in Table IWB-2500-1 once each ten year interval. The Comanche Peak Unit 1 second 10-year inservice inspection interval is scheduled to end in August 2010.

## **4. Reason for Request**

An alternative is requested from the requirement of IWA-2412, Inspection Program B, that volumetric examination of essentially 100% of reactor pressure vessel pressure retaining welds, Examination Categories B-A and B-D welds, be performed once each ten-year interval. Extension of the inspection interval for Examination Category B-A and B-D welds from 10 years to up to 20 years will result in a reduction in man-rem exposure and examination costs.

## **5. Proposed Alternative and Basis for Use**

Luminant Power proposes to defer the ASME Code required volumetric examination of the Comanche Peak Unit 1 reactor vessel full penetration pressure retaining Category B-A and B-D welds for the second inservice inspection from refueling outage 1RF14 in 2010 until refueling outage 1RF20 in 2019 and to perform the third inservice inspection on a twenty-year inspection interval, instead of the currently required ten-year inspection interval. Therefore, the third inservice inspection is proposed to be performed in 2039 pending an extension of the Unit 1 Operating License. These dates are within one refueling cycle relative to the information provided to the Staff in PWR Owners Group letter OG-06-356 (Reference 2).

In accordance with 10 CFR 50.55a(a)(3)(i), an alternate inspection interval is requested on the basis that the current inspection interval can be extended based on a negligible change in risk by satisfying the risk criteria specified in Regulatory Guide 1.174 (Reference 3).

The methodology used to demonstrate the acceptability of extending the second and third inspection intervals for Category B-A and B-D welds based on a negligible change in risk is contained in WCAP-16168-NP-A, Revision 2 (Reference 4). This methodology was used to develop a pilot plant analysis for Westinghouse, Combustion Engineering, and Babcock and Wilcox reactor vessel designs and is an extension of the work that was performed as part of the NRC PTS Risk Re-Evaluation (Reference 5). The critical parameters for demonstrating that this pilot plant analysis is applicable on a plant specific basis, as identified in WCAP-16168-NP-A, Revision 2, are identified in Table 1. By demonstrating that each plant specific parameter is bounded by the corresponding pilot plant parameter, the application of the methodology to the Comanche Peak Unit 1 reactor vessel is acceptable as shown in Table 1 below.

<b>Table 1 Critical Parameters for Application of Bounding Analysis</b>			
<b>Parameter</b>	<b>Pilot Plant Basis</b>	<b>Plant Specific Basis</b>	<b>Additional Evaluation Required?</b>
Dominant Pressurized Thermal Shock (PTS) Transients in the NRC PTS Risk Study are applicable	NRC PTS Risk Study (Reference 5)	PTS Generalization Study (Reference 6)	No
Through Wall Cracking Frequency	1.76E-08 Events per year (Reference 4)	7.51E-15 Events per year	No
Frequency and Severity of Design Basis Transients	7 heatup/cooldowns per year (Reference 4)	Bounded by 7 heatup/cooldowns per year	No
Cladding Layers (Single/Multiple)	Single Layer (Reference 4)	Single Layer	No

Additional information relative to the Comanche Peak Units 1 reactor vessel inspection is provided in Table 2. This information confirms that satisfactory examinations have been performed on the Comanche Peak Unit 1 reactor vessel.

<b>Table 2 Additional Information Pertaining to Reactor Vessel Inspection</b>	
Inspection methodology:	ASME Section XI and Regulatory Guide 1.150 (Reference 7).
Number of past inspections:	1 inspection has been performed to date on each Category B-A and B-D weld.
Number of indications found:	All 3 potential beltline indications in the reactor vessel are acceptable per Section XI IWB-3500. Based on the weld length and volume of plate inspected in the beltline region for Comanche Peak Unit 1, only 2 flaws are in the required ISI volume and they are both acceptable per the proposed PTS Rule in Reference 8.
Proposed inspection schedule for balance of plant life:	The second inservice inspection is currently scheduled for 2010 (1RF14). The second inservice inspection is proposed to be performed in 2019 (1RF20). The third inservice inspection is proposed to be performed in 2039 <sup>1</sup> . (These dates are within one refueling outage of the dates in PWROG Letter OG-06-356, as discussed in Section 5).

Note 1: Pending an extension to the Unit 1 Operating License.

Table 3 provides additional information relative to the calculation of the Through Wall Cracking Frequency (TWCF) for Comanche Peak Unit 1. As noted in this table, the calculation of  $\Delta T_{30}$  is based upon the embrittlement trend curve equations from Revision 2 of Regulatory Guide 1.99 (Reference 9). The values of chemistry factor (CF) and equations for fluence function (FF) were taken directly from WCAP-16346-NP (Reference 10), which was previously provided to NRC for the Unit 1 heat-up and cool-down limit curves in Reference 11.

Table 3 Details of TWCF Calculation at 60 EFPY								
Inputs								
Reactor Coolant System Temperature, $T_{RCS}$ [°F]:				N/A		T <sub>wall</sub> [inches]:		8.63
#	Region/Component Description	Material	Cu [wt%]	Ni [wt%]	R.G. 1.99 Pos.	CF [°F]	Un-Irradiated $RT_{NDT(u)}$ [°F]	Fluence [ $10^{19}$ Neutron/cm <sup>2</sup> , E>1 MeV]
1	Inter. Shell Plate	A 533B	0.060	0.650	1.1	37.0	10	3.70
2	Inter. Shell Plate	A 533B	0.070	0.670	1.1	44.0	-10	3.70
3	Inter. Shell Plate	A 533B	0.070	0.620	1.1	44.0	10	3.70
4	Lower Shell Plate	A 533B	0.080	0.650	1.1	51.0	0	3.70
5	Lower Shell Plate	A 533B	0.080	0.650	1.1	51.0	0	3.70
6	Lower Shell Plate	A 533B	0.060	0.600	2.1	16.1	20	3.70
7	Int. Shell Axial Weld	Linde 0091	0.045	0.200	2.1	11.5	-70	3.17
8	Int. Shell Axial Weld	Linde 0091	0.045	0.200	2.1	11.5	-70	2.51
9	Int. Shell Axial Weld	Linde 0091	0.045	0.200	2.1	11.5	-70	3.17
10	Low. Shell Axial Weld	Linde 0091	0.045	0.200	2.1	11.5	-70	2.51
11	Low. Shell Axial Weld	Linde 0091	0.045	0.200	2.1	11.5	-70	3.17
12	Low. Shell Axial Weld	Linde 0091	0.045	0.200	2.1	11.5	-70	3.17
13	Int./Low. Circ Weld	Linde 124	0.045	0.200	2.1	11.5	-70	3.70
Outputs								
Methodology Used to Calculate $\Delta T_{30}$ :				Regulatory Guide 1.99 Rev. 2				
	Controlling Material Region # (From Above)	$RT_{MAX-XX}$ [R]	Fluence [ $10^{19}$ Neutron/cm <sup>2</sup> , E>1 MeV]	FF (fluence factor)	$\Delta T_{30}$ [°F]	TWCF <sub>95-XX</sub>		
Axial Weld - AW		3	527.04	3.17	1.30	57.35	2.47E-18	
Circumferential Weld - CW		3	528.61	3.70	1.34	58.92	5.52E-29	
Plate - PL		3	528.61	3.70	1.34	58.92	3.00E-15	
TWCF <sub>95-TOTAL</sub> ( $\alpha_{AW}TWCF_{95-AW} + \alpha_{PL}TWCF_{95-PL} + \alpha_{CW}TWCF_{95-CW} + \alpha_{FO}TWCF_{95-FO}$ ):								7.51E-15

## **6. Duration of Proposed Alternative**

This request is applicable to the Comanche Peak Unit 1 inservice inspection program for the current Unit 1 Operating License.

## **7. References**

1. ASME *Boiler and Pressure Vessel Code*, Section XI, 1989 Edition with the 1989 Addenda up to and including the 2004 Edition with the 2005 Addenda, American Society of Mechanical Engineers, New York.
2. OG-06-356, "Plan for Plant Specific Implementation of Extended Inservice Inspection Interval per WCAP-16168-NP, Revision 1, "Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval." MUHP 5097-99, Task 2059," October 31, 2006.
3. NRC Regulatory Guide 1.174, Revision 1, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," November 2002.
4. WCAP-16168-NP-A, Revision 2, "Risk-Informed Extension of Reactor Vessel In-Service Inspection Interval," June 2008.
5. NUREG-1874, "Recommended Screening Limits for Pressurized Thermal Shock," March, 2007.
6. NRC Letter Report, "Generalization of Plant-Specific Pressurized Thermal Shock (PTS) Risk Results to Additional Plants," December 14, 2004.
7. NRC Regulatory Guide 1.150, Revision 1, "Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations," February 1983.
8. SECY-07-0104, "Proposed Rulemaking - Alternate Fracture Toughness Requirements for Protection against Pressurized Thermal Shock," June 25, 2007 (ADAMS Accession Number ML070570141).
9. NRC Regulatory Guide 1.99, Revision 2, "Radiation Embrittlement of Reactor Vessel Materials," May 1988.
10. WCAP-16346-NP, Rev. 0, "Comanche Peak Units 1 and 2 Heatup and Cooldown Limit Curves for Normal Operation," November 2004.
11. TXU Power letter TXX-06146 from Mike Blevins to the U. S. Nuclear Regulatory Commission, dated August 31, 2006 (ADAMS Accession No. ML062490287).

**ATTACHMENT 2 TO TXX-09004**

**LUMINANT POWER  
COMANCHE PEAK NUCLEAR POWER PLANT**

**RELIEF REQUEST B-8 FOR UNIT 2  
REQUEST FOR RELIEF TO EXTEND THE 10-YEAR  
REACTOR VESSEL INSERVICE INSPECTION INTERVAL**

**PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(a)(3)(i)  
ALTERNATIVE PROVIDES ACCEPTABLE LEVEL OF QUALITY AND SAFETY**

**1. ASME Code Component(s) Affected**

The affected component is the Comanche Peak Unit 2 reactor vessel, specifically the following American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code Section XI (Reference 1) examination categories and item numbers covering examinations of the reactor vessel (RV). These examination categories and item numbers are from IWB-2500 and Table IWB-2500-1 of the ASME BPV, Code Section XI.

<b>Weld Number</b>	<b>Examination Category</b>	<b>Item No.</b>	<b>Description</b>
TCX-1-1100-1	B-A	B1.30	Flange to Shell Circumferential Weld
TCX-1-1100-2	B-A	B1.11	Upper/Intermediate Circumferential Weld
TCX-1-1100-3	B-A	B1.11	Intermediate/Lower Circumferential Weld
TCX-1-1100-4	B-A	B1.11	Lower Shell to Lower Head Circumferential Weld
TCX-1-1100-5	B-A	B1.21	Lower Head Circumferential Weld
TCX-1-1100-6	B-A	B1.12	Upper Shell Longitudinal Weld (56o)
TCX-1-1100-7	B-A	B1.12	Upper Shell Longitudinal Weld (176o)
TCX-1-1100-8	B-A	B1.12	Upper Shell Longitudinal Weld (296o)
TCX-1-1100-9	B-A	B1.12	Intermediate Shell Longitudinal Weld (0o)
TCX-1-1100-10	B-A	B1.12	Intermediate Shell Longitudinal Weld (120o)
TCX-1-1100-11	B-A	B1.12	Intermediate Shell Longitudinal Weld (240o)
TCX-1-1100-12	B-A	B1.12	Lower Shell Longitudinal Weld (90o)
TCX-1-1100-13	B-A	B1.12	Lower Shell Longitudinal Weld (210o)
TCX-1-1100-14	B-A	B1.12	Lower Shell Longitudinal Weld (330o)
TCX-1-1100-15	B-A	B1.22	Lower Head Meridional Weld (0o)
TCX-1-1100-16	B-A	B1.22	Lower Head Meridional Weld (90o)
TCX-1-1100-17	B-A	B1.22	Lower Head Meridional Weld (180o)
TCX-1-1100-18	B-A	B1.22	Lower Head Meridional Weld (270o)
TCX-1-1100-19	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 3) (22o)
TCX-1-1100-19IR	B-D	B3.100	Outlet Nozzle to Shell Weld IR (Loop 3) (22o)
TCX-1-1100-20	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 3) (67o)
TCX-1-1100-20R	B-D	B3.100	Inlet Nozzle to Shell Weld (Loop 3) (67o)
TCX-1-1100-21	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 4) (113o)
TCX-1-1100-21IR	B-D	B3.100	Inlet nozzle to Shell Weld (Loop 4) (113o)
TCX-1-1100-22	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 4) (158o)
TCX-1-1100-22IR	B-D	B3.100	Outlet Nozzle to Shell Weld IR (Loop 4) (158o)
TCX-1-1100-23	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 1) (202o)
TCX-1-1100-23IR	B-D	B3.100	Outlet Nozzle to Shell Weld (Loop 1) (202o)
TCX-1-1100-24	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 1) (247o)
TCX-1-1100-24IR	B-D	B3.100	Inlet Nozzle to Shell Weld IR (Loop 1) (247o)
TCX-1-1100-25	B-D	B3.90	Inlet Nozzle to Shell Weld (Loop 2) (293o)
TCX-1-1100-25IR	B-D	B3.100	Inlet Nozzle to Shell Weld IR (Loop 2) (293o)
TCX-1-1100-26	B-D	B3.90	Outlet Nozzle to Shell Weld (Loop 2) (338o)
TCX-1-1100-26IR	B-D	B3.100	Outlet Nozzle to Shell Weld IR (Loop 2) (338o)

(Throughout this request the above examination categories are referred to as "the subject examinations" and the ASME BPV Code, Section XI, is referred to as "the Code.")

## **2. Applicable Code Edition and Addenda**

ASME Code Section XI, "Rules and Inservice Inspection of Nuclear Power Plant Components," Code 1998 Edition to the 2000 Addenda.

## **3. Applicable Code Requirement**

IWB-2412, Inspection Program B, requires volumetric examination of essentially 100% of reactor vessel pressure retaining welds identified in Table IWB-2500-1 once each ten year interval. The Comanche Peak Unit 2 second 10-year inservice inspection interval is scheduled to end in August 2014.

## **4. Reason for Request**

An alternative is requested from the requirement of IWA-2412, Inspection Program B, that volumetric examination of essentially 100% of reactor pressure vessel pressure retaining welds, Examination Categories B-A and B-D welds, be performed once each ten-year interval. Extension of the inspection interval for Examination Category B-A and B-D welds from 10 years to up to 20 years will result in a reduction in man-rem exposure and examination costs.

## **5. Proposed Alternative and Basis for Use**

Luminant Power proposes to defer the ASME Code required volumetric examination of the Comanche Peak Unit 2 reactor vessel full penetration pressure retaining Category B-A and B-D welds for the second inservice inspection from refueling outage 2RF13 in 2012 until refueling outage 2RF20 in 2023 and to perform the third inservice inspection on a twenty-year inspection interval, instead of the currently required ten-year inspection interval. Therefore, the third inservice inspection is proposed to be performed in 2043 pending an extension of the Unit 2 Operating License. These dates are different than those provided to the Staff in PWR Owners Group letter OG-06-356 (Reference 2). These changes are required because the initial dates used in the PWROG Schedule are not consistent with the Comanche Peak long range outage plan. These changes would still satisfy the NRC request to have at least 2 to 4 vessel inspections per year with the implementation of the 20 year inspection interval and would still meet the intent of the PWROG vessel inspection schedule in OG-06-356.

In accordance with 10 CFR 50.55a(a)(3)(i), an alternate inspection interval is requested on the basis that the current inspection interval can be extended based on a negligible change in risk by satisfying the risk criteria specified in Regulatory Guide 1.174 (Reference 3).

The methodology used to demonstrate the acceptability of extending the second and third inspection intervals for Category B-A and B-D welds based on a negligible change in risk is contained in WCAP-16168-NP-A, Revision 2 (Reference 4). This methodology was used to develop a pilot plant analysis for Westinghouse, Combustion Engineering, and Babcock and Wilcox reactor vessel designs and is an extension of the work that was performed as part of the NRC PTS Risk Re-Evaluation (Reference 5). The critical parameters for demonstrating that this pilot plant analysis is applicable on a plant specific basis, as identified in WCAP-16168-NP-A, Revision 2, are identified in Table 1. By demonstrating that each plant specific parameter is bounded by the corresponding pilot plant parameter, the application of the methodology to the Comanche Peak Unit 2 reactor vessel is acceptable as shown in Table 1 below.

<b>Table 1 Critical Parameters for Application of Bounding Analysis</b>			
<b>Parameter</b>	<b>Pilot Plant Basis</b>	<b>Plant Specific Basis</b>	<b>Additional Evaluation Required?</b>
Dominant Pressurized Thermal Shock (PTS) Transients in the NRC PTS Risk Study are applicable	NRC PTS Risk Study (Reference 5)	PTS Generalization Study (Reference 6)	No
Through Wall Cracking Frequency	1.76E-08 Events per year (Reference 4)	2.73E-16 Events per year	No
Frequency and Severity of Design Basis Transients	7 heatup/cool downs per year (Reference 4)	Bounded by 7 heatup/cool downs per year	No
Cladding Layers (Single/Multiple)	Single Layer (Reference 4)	Single Layer	No

Additional information relative to the Comanche Peak Unit 2 reactor vessel inspection is provided in Table 2. This information confirms that satisfactory examinations have been performed on the Comanche Peak Unit 2 reactor vessel.

<b>Table 2 Additional Information Pertaining to Reactor Vessel Inspection</b>	
Inspection methodology:	ASME Section XI and Regulatory Guide 1.150 (Ref. 7).
Number of past inspections:	1 inspection has been performed to date on each Category B-A and B-D weld.
Number of indications found:	No recordable indications were found in the latest reactor vessel inspection. Therefore, the results are acceptable per the proposed PTS Rule (Reference 8).
Proposed inspection schedule for balance of plant life:	The second inservice inspection is currently scheduled for 2012 (2RF13) and will be moved to 2023 (2RF20). The third inservice inspection is proposed to be performed in 2043 <sup>1</sup> .

Note 1: Pending an extension to the Unit 2 Operating License.

Table 3 provides additional information relative to the calculation of the Through Wall Cracking Frequency (TWCF) for Comanche Peak Unit 2. As noted in this table, the calculation of  $\Delta T_{30}$  is based upon the embrittlement trend curve equations from Revision 2 of Regulatory Guide 1.99 (Reference 9). The values of chemistry factor (CF) and equations for fluence function (FF) were taken directly from WCAP-16346-NP (Reference 10), which was previously provided to NRC for the Unit 2 heat-up and cool-down limit curves in Reference 11.

Table 3 Details of TWCF Calculation at 60 EFPY								
Inputs								
Reactor Coolant System Temperature, $T_{RCS}$ [°F]:				N/A		T <sub>wall</sub> [inches]:		8.63
#	Region/Component Description	Material	Cu [wt%]	Ni [wt%]	R.G. 1.99 Pos.	CF [°F]	Un-Irradiated $RT_{NDT(u)}$ [°F]	Fluence [ $10^{19}$ Neutron/cm <sup>2</sup> , E>1 MeV]
1	Inter. Shell Plate	A 533B	0.060	0.640	1.1	37.0	-20	3.72
2	Inter. Shell Plate	A 533B	0.060	0.640	2.1	21.6	10	3.72
3	Inter. Shell Plate	A 533B	0.050	0.660	1.1	31.0	-20	3.72
4	Lower Shell Plate	A 533B	0.040	0.630	1.1	26.0	-40	3.72
5	Lower Shell Plate	A 533B	0.050	0.590	1.1	31.0	-30	3.72
6	Lower Shell Plate	A 533B	0.030	0.650	1.1	20.0	0	3.72
7	Int. Shell Axial Weld	Linde 0091	0.046	0.059	2.1	32.8	-50	3.16
8	Int. Shell Axial Weld	Linde 0091	0.046	0.059	2.1	32.8	-50	2.57
9	Int. Shell Axial Weld	Linde 0091	0.046	0.059	2.1	32.8	-50	3.16
10	Low. Shell Axial Weld	Linde 0091	0.046	0.059	2.1	32.8	-50	2.57
11	Low. Shell Axial Weld	Linde 0091	0.046	0.059	2.1	32.8	-50	3.16
12	Low. Shell Axial Weld	Linde 0091	0.046	0.059	2.1	32.8	-50	3.16
13	Int./Low. Circ Weld	Linde 124	0.046	0.059	2.1	32.8	-60	3.72
Outputs								
Methodology Used to Calculate $\Delta T_{30}$ :				Regulatory Guide 1.99 Rev. 2				
	Controlling Material Region # (From Above)	$RT_{MAX-XX}$ [R]	Fluence [ $10^{19}$ Neutron/cm <sup>2</sup> , E>1 MeV]	FF (fluence factor)	$\Delta T_{30}$ [°F]	$TWCF_{95-XX}$		
Axial Weld - AW		2	497.83	3.16	1.30	28.14	2.47E-18	
Circumferential Weld - CW		2	498.64	3.72	1.34	28.95	5.52E-29	
Plate - PL		2	498.64	3.72	1.34	28.95	1.07E-16	
$TWCF_{95-TOTAL} (\alpha_{AW}TWCF_{95-AW} + \alpha_{PL}TWCF_{95-PL} + \alpha_{CW}TWCF_{95-CW} + \alpha_{FO}TWCF_{95-FO})$ :								2.73E-16

## **6. Duration of Proposed Alternative**

This request is applicable to the Comanche Peak Unit 2 inservice inspection program for the current Unit 2 Operating License.

## **7. References**

1. *ASME Boiler and Pressure Vessel Code*, Section XI, 1989 Edition with the 1989 Addenda up to and including the 2004 Edition with the 2005 Addenda, American Society of Mechanical Engineers, New York.
2. OG-06-356, "Plan for Plant Specific Implementation of Extended Inservice Inspection Interval per WCAP-16168-NP, Revision 1, "Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval." MUHP 5097-99, Task 2059," October 31, 2006.
3. NRC Regulatory Guide 1.174, Revision 1, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," November 2002.
4. WCAP-16168-NP-A, Revision 2, "Risk-Informed Extension of Reactor Vessel In-Service Inspection Interval," June 2008.
5. NUREG-1874, "Recommended Screening Limits for Pressurized Thermal Shock," March, 2007.
6. NRC Letter Report, "Generalization of Plant-Specific Pressurized Thermal Shock (PTS) Risk Results to Additional Plants," December 14, 2004.
7. NRC Regulatory Guide 1.150, Revision 1, "Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations," February 1983.
8. SECY-07-0104, "Proposed Rulemaking - Alternate Fracture Toughness Requirements for Protection against Pressurized Thermal Shock," June 25, 2007 (ADAMS Accession Number ML070570141).
9. NRC Regulatory Guide 1.99, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," November 2002.
10. WCAP-16346-NP, Rev. 0, "Comanche Peak Units 1 and 2 Heatup and Cooldown Limit Curves for Normal Operation," November 2004.
11. TXU Power letter TXX-06146 from Mike Blevins to the U. S. Nuclear Regulatory Commission, dated August 31, 2006 (ADAMS Accession No. ML062490287).

**ATTACHMENT 3 TO TXX-09004**

**LICENSE AMENDMENT REQUEST 09-004  
REGARDING ASME RELIEF REQUEST  
INFORMATION AND ANALYSIS PER 10 CFR 50.91 AND 10 CFR 50.92**

## 1.0 DESCRIPTION

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(5), Luminant Generation Company, LLC (Luminant Power) hereby requests an amendment to the Comanche Peak Unit 1 and Comanche Peak Unit 2 Licenses. Luminant Power has requested a Reactor Vessel Inservice Inspection Relief Request for each unit based on the NRC approved Topical Report WCAP-1 6168-NP-A, Revision 2, "Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval" and Calculation CN-PCAM-08-17, Revision 1, "Implementation of WCAP-16168-NP-A, Revision 2 for Comanche Peak Units 1 and 2." The NRC safety evaluation report approving the WCAP required licensees requesting the relief to submit a request to amend the license. The purpose of this request is to comply with that requirement.

## 2.0 PROPOSED CHANGE

The proposed change to the Comanche Peak Unit 1 Operating License will add item (10) to Section 2.C that will read as follows:

- "(10) The following condition relates to the Relief Request to extend the Reactor Vessel inservice inspection interval: Provide the NRC with the information and analysis requested in Section (e) of the final 10 CFR 50.61 a (or the proposed 10 CFR 50.61 a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61 a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The information must be submitted within one year of the inspection."

"The proposed change to the Comanche Peak Unit 2 Operating License will add item (10) to Section 2.C that will read as follows:

- "(10) The following condition relates to the Relief Request to extend the Reactor Vessel inservice inspection interval: Provide the NRC with the information and analysis requested in Section (e) of the final 10 CFR 50.61 a (or the proposed 10 CFR 50.61 a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61 a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The information must be submitted within one year of the inspection."

## 3.0 BACKGROUND

The Pressurized Water Reactor Owners Group (PWROG) submitted Topical Report (TR) WCAP-16168-NP, Revision 1, "RISK- INFORMED EXTENSION OF THE REACTOR VESSEL IN-SERVICE INSPECTION INTERVAL," to the U.S. Nuclear Regulatory Commission (NRC) staff by letter dated January 26, 2006 and supplemented by letter dated June 8, 2006. PWROG letter dated October 16, 2007 submitted TR WCAP-16168-NP, Revision 2, and responses to the NRC staff's request for additional information (RAI). An NRC draft safety evaluation (SE) regarding approval of TR WCAP-16168-NP, Revision 2, was provided to the PWROG for review and comment by letter dated March 6, 2008. Comments were provided by the PWROG by letter dated March 31, 2008. The NRC issued a final safety evaluation (SE) and approval of TR WCAP-16168-NP, Revision 2 by letter dated May 8, 2008. The NRC staff's disposition of PWROG comments on the draft SE are discussed in an attachment to the May 8, 2008 letter. The SE attached to the May 8, 2008 letter identifies the information requirements to be included in the relief request and requires that licensees submit the information and analyses requested in Section (e) of the final 10 CFR 50.61a (or the proposed 10 CFR 50.61a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61a) within one year of completing each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. To administratively control the submission of this information the SE also requires that "Licensees that do not implement 10 CFR 50.61a must amend

their licenses to require that the information and analyses requested in Section (e) of the final 10 CFR 50.61 a (or the proposed 10 CFR 50.61 a, given in 72 FR56275, prior to issuance of the final 10 CFR 50.61 a) will be submitted for NRC staff review and approval. The amendment to the license shall be submitted at the same time as the request for alternative." Luminant Power is not implementing 10 CFR 50.61a since the rule is not final. This amendment request satisfies the requirement to submit a license amendment request at the time of submitting a request for the alternative.

#### 4.0 TECHNICAL ANALYSIS

The addition of a License condition to require the submission of the information and analysis requested in Section (e) of the final 10 CFR 50.61 a (or the proposed 10 CFR 50.61 a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61 a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection according to the criteria of 10 CFR 50.92, is an administrative change with no effect on the public safety. The change provides the NRC assurance that Luminant Power will submit defined information and analyses to the NRC every time that a specific inservice inspection is done. Submission of the information and analyses can have no effect on the consequences of an accident or the probability of an accident. The submission has no effect on the manner in which the plant or its equipment is operated, no effect on the programs and processes for training personnel or for personnel to operate equipment, and no effect on the manner in which accident analyses are performed. The submission of information cannot create the possibility of a new or different kind of accident from any accident previously evaluated for the same reasons. The proposed change cannot have a significant effect on the margin of safety because it is not related to any margin of safety. The relief requests to extend the inservice inspection interval for the reactor vessel weld examination from 10 to 20 years are separate from this license amendment request and may be approved independently.

#### 5.0 REGULATORY ANALYSIS

##### 5.1 No Significant Hazards Consideration

Luminant Power has evaluated the safety significance of the proposed change regarding the addition of a License condition to submit the information and analysis requested in Section (e) of the final 10 CFR 50.61 a (or the proposed 10 CFR 50.61 a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61 a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection according to the criteria of 10 CFR 50.92, "Issuance of Amendment". Luminant Power has determined that the proposed change does not involve a Significant Hazards Consideration as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change will revise the license to require the submission of information and analyses to the NRC following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The extension of the ISI from 10 to 20 years is being evaluated as part of the relief request independent from the proposed operating license change. Submission of the information and analyses can have no effect on the consequences of an accident or the probability of an accident because the submission of information is not related to the operation of the plant or any equipment, the programs and procedures used to operate the plant, or the evaluation of accidents. The submittal of information and analyses provides the opportunity for the NRC to independently assess the information and analyses.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change will only affect the requirement to submit information and analyses when specified inspections are performed. There are no changes to plant equipment, operating characteristics or conditions, programs and procedures or training. Therefore, there are no potential new system interactions or failures that could create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change will revise the license to require the submission of information and analyses to the NRC following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The requirement to submit information and analyses is an administrative tool to assure the NRC has the ability to independently review information developed by the Licensee. The proposed change does not involve a significant reduction in the margin of safety.

Based on the above evaluations, Luminant Power concludes that the proposed amendment presents no significant hazards under the standards set forth in 10 CFR 50.92 (c), and, accordingly, a finding of "no significant hazards consideration" is justified.

## 5.2 Applicable Regulatory Requirements / Criteria

The proposed change has been reviewed to evaluate the potential effect on regulatory requirements and criteria. There are no rules and regulations requiring the submittal of information and analyses to NRC regarding NRC ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The information and analyses of Section (e) of the proposed 10 CFR 50.61a defines the requirements for verifying that the pressurized thermal shock screening criteria of the proposed rule are applicable to the reactor vessel. The final rule will be the same or modified as a result of comments. The amendment is the administrative means chosen by the NRC staff to obtain this information.

## 6.0 ENVIRONMENTAL CONSIDERATIONS

The proposed amendment is confined to (i) changes to surety, insurance, and/or indemnity requirements, or (ii) changes to recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(10). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 7.0 PRECEDENTS

- 7.1 Indian Point Unit 2 and 3, Request for Relief to Extend the Unit 2 and 3 Inservice Inspection Interval for the Reactor Vessel Weld Examination and Request for License Amendment for Submittal of ISI Information and Analyses, dated July 8, 2008.
- 7.2 Donald C. Cook Nuclear Plant Unit 2, Request for Relief to Extend the Unit 2 Inservice Inspection Interval for the Reactor Vessel Weld Examination and Request for License Amendment for Submittal of ISI Information and Analyses, dated October 9, 2008.

## 8.0 REFERENCES

- 8.1 Ho K. Nieh, NRC, NRR Letter to Gordon Bischoff, WOG regarding Final Safety Evaluation For PWROG Topical Report WCAP-16168-NP, Revision 2, (TAC NO. MC9768), dated May 8, 2008.

**ATTACHMENT 4 TO TXX-09004**

**PROPOSED UNIT 1 AND 2 OPERATING LICENSE CHANGES (MARK-UP)**

**Unit 1 Page 6**

**Unit 2 Page 6**

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(9) License Transfer

Luminant Generation Company LLC shall enter into the \$250 million support agreement with Luminant Investment Company LLC, as described in the July 20, 2007 supplement to the April 18, 2007 indirect license transfer application, no later than the time the proposed transactions and indirect license transfers occur. Luminant Generation Company LCC shall take no action to cause Luminant Investment Company LLC, or its successors and assigns, to void, cancel, or modify the support agreement or cause it to fail to perform, or impair its performance under the support agreement, without the prior written consent of the NRC. The support agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or his designee. An executed copy of the support agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transactions and the indirect license transfers. Luminant Generation Company LLC shall inform the NRC in writing anytime it draws upon the support agreement.

Following the subject indirect transfer of control of the licenses, all of the officers of the general partner or controlling member of the licensee of CPSES shall be U.S. citizens. This condition may be amended upon application by the licensee and approval by the Director of the Office of Nuclear Reactor Regulation.

Insert A →

D. The following exemptions are authorized by law and will not endanger life or property or the common defense and security. Certain special circumstances are present and these exemptions are otherwise in the public interest. Therefore, these exemptions are hereby granted pursuant to 10 CFR 50.12.

- (1) The facility requires a technical exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.2(b)(ii). The justification for this exemption is contained in Section 6.2.5 of Supplement 22 to the Safety Evaluation Report dated January 1990. The staff's environmental assessment was published on November 14, 1989 (54 FR 47430).

(9) License Transfer

Luminant Generation Company LLC shall enter into the \$250 million support agreement with Luminant Investment Company LLC, as described in the July 20, 2007 supplement to the April 18, 2007 indirect license transfer application, no later than the time the proposed transactions and indirect license transfers occur. Luminant Generation Company LLC shall take no action to cause Luminant Investment Company LLC, or its successors and assigns, to void, cancel, or modify the support agreement or cause it to fail to perform, or impair its performance under the support agreement, without the prior written consent of the NRC. The support agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or his designee. An executed copy of the support agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transactions and the indirect license transfers. Luminant Generation Company LLC shall inform the NRC in writing anytime it draws upon the support agreement.

Following the subject indirect transfer of control of the licenses, all of the officers of the general partner or controlling member of the licensee of CPSES shall be U.S. citizens. This condition may be amended upon application by the licensee and approval by the Director of the Office of Nuclear Reactor Regulation.

Insert A →

D. The following exemptions are authorized by law and will not endanger life or property or the common defense and security. Certain special circumstances are present and these exemptions are otherwise in the public interest. Therefore, these exemptions are hereby granted:

- (1) The facility requires a technical exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.2(b)(ii). The justification for this exemption is contained in Section 6.2.5.1 of Supplement 26 to the Safety Evaluation Report dated February 1993. The staff's environmental assessment was published on January 19, 1993 (58 FR 5036). Therefore, pursuant to 10 CFR 50.12(a)(1), 10 CFR 50.12(a)(2)(ii) and (iii), the Comanche Peak Steam Electric Station, Unit 2 is hereby granted an exemption from the cited requirement and instead, is required to perform the overall air lock leak test at pressure  $P_a$  prior to establishing containment integrity if air lock maintenance has been performed that could affect the air lock sealing capability.

The facility was previously granted exemption from the criticality Monitoring requirements of 10 CFR 70.24 (see Materials License No. SNM-1986 dated April 24, 1989 and Section 9.1.1 of SSER 26 dated February 1993.) The staff's environmental assessment was published on January 19, 1993 (58 FR 5035). The Comanche Peak Steam Electric Station, Unit 2 is hereby exempted from the criticality monitoring provisions of 10 CFR 70.24 as applied to fuel assemblies held under this license.

INSERT A

(10) Submittal of ISI Information and Analyses License Conditions

The following condition relates to the Relief Request to extend the Reactor Vessel inservice interval: Provide the NRC with the information and analysis requested in Section (e) of the final 10 CFR 50.61a (or the proposed 10 CFR 50.61a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The information must be submitted within one year of the inspection.

**ATTACHMENT 5 TO TXX-09004**

**RETYPE UNIT 1 OPERATING LICENSE PAGES**

**Pages 6, 7, 8**

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(9) License Transfer

Luminant Generation Company LLC shall enter into the \$250 million support agreement with Luminant Investment Company LLC, as described in the July 20, 2007 supplement to the April 18, 2007 indirect license transfer application, no later than the time the proposed transactions and indirect license transfers occur. Luminant Generation Company LLC shall take no action to cause Luminant Investment Company LLC, or its successors and assigns, to void, cancel, or modify the support agreement or cause it to fail to perform, or impair its performance under the support agreement, without the prior written consent of the NRC. The support agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or his designee. An executed copy of the support agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transactions and the indirect license transfers. Luminant Generation Company LLC shall inform the NRC in writing anytime it draws upon the support agreement.

Following the subject indirect transfer of control of the licenses, all of the officers of the general partner or controlling member of the licensee of CPSES shall be U.S. citizens. This condition may be amended upon application by the licensee and approval by the Director of the Office of Nuclear Reactor Regulation.

(10) Submittal of ISI Information and Analyses License Conditions

The following condition relates to the Relief Request to extend the Reactor Vessel inservice inspection interval: Provide the NRC with the information and analysis requested in Section (e) of the final 10 CFR 50.61a (or the proposed 10 CFR 50.61a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The information must be submitted within one year of the inspection.

D. The following exemptions are authorized by law and will not endanger life or property or the common defense and security. Certain special circumstances are present and these exemptions are otherwise in the public interest. Therefore, these exemptions are hereby granted pursuant to 10 CFR 50.12.

- (1) The facility requires a technical exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.2(b)(ii). The justification for this exemption is contained in Section 6.2.5 of Supplement 22 to the Safety Evaluation Report dated January 1990. The staff's environmental assessment was published on November 14, 1989 (54 FR 47430).

Therefore, pursuant to 10 CFR 50.12(a)(1), and 10 CFR 50.12(a)(2)(ii) and (iii), the Comanche Peak Steam Electric Station, Unit 1 is hereby granted an exemption from the cited requirement and instead, is required to perform the overall air lock leak test at pressure  $P_a$  prior to establishing containment integrity if air lock maintenance has been performed that could affect the air lock sealing capability.

- (2) The facility was previously granted an exemption from the criticality monitoring requirements of 10 CFR 70.24 (see Materials License No. SNM-1912 dated December 1, 1988 and Section 9.1.1 of Supplement 22 to the Safety Evaluation Report dated January 1990). The staff's environmental assessment was published on November 14, 1989 (54 FR 47432). The Comanche Peak Steam Electric Station, Unit 1 is hereby exempted from the criticality monitoring provisions of 10 CFR 70.24 as applied to fuel assemblies held under this license.

- (3) The facility requires a temporary exemption from the schedular requirements of 10 CFR 50.33(k) and 10 CFR 50.75. The justification for this exemption is contained in Section 20.6 of Supplement 22 to the Safety Evaluation Report dated January 1990. The staff's environmental assessment was published on November 14, 1989 (54 FR 47431). Therefore, pursuant to 10 CFR 50.12(a)(1), 50.12(a)(2)(iii) and 50.12(a)(2)(v), the Comanche Peak Steam Electric Station, Unit 1 is hereby granted a temporary exemption from the schedular requirements of 10 CFR 50.33(k) and 10 CFR 50.75 and is required to submit a decommissioning funding report for Comanche Peak Steam Electric Station, Unit 1 on or before July 26, 1990.

E. DELETED

F. In order to ensure that Luminant Generation Company LLC will exercise the authority as the surface landowner in a timely manner and that the requirements of 10 CFR Part 100.3 (a) are satisfied, this license is subject to the additional conditions specified below: (Section 2.1.1, SER)

- (1) For that portion of the exclusion area which is within 2250 ft of any seismic Category I building or within 2800 ft of either reactor containment building, Luminant Generation Company LLC must prohibit the exploration and/or exercise of subsurface mineral rights, and if the subsurface mineral rights owners attempt to exercise their rights within this area, Luminant Generation Company LLC must immediately institute immediately effective condemnation proceedings to obtain the mineral rights in this area.

- (2) For the unowned subsurface mineral rights within the exclusion area not covered in item (1), Luminant Generation Company LLC will prohibit the exploration and/or exercise of mineral rights until and unless the licensee and the owners of the mineral rights enter into an agreement which gives Luminant Generation Company LLC absolute authority to determine all activities -- including times of arrival and locations of personnel and the authority to remove personnel and equipment -- in event of emergency. If the mineral rights owners attempt to exercise their rights within this area without first entering into such an agreement, Luminant Generation Company LLC must institute immediately effective condemnation proceedings to obtain the mineral rights in this area.
  - (3) Luminant Generation Company LLC shall promptly notify the NRC of any attempts by subsurface mineral rights owners to exercise mineral rights, including any legal proceeding initiated by mineral rights owners against Luminant Generation Company LLC.
- G. Luminant Generation Company LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report through Amendment 78 and as approved in the SER (NUREG-0797) and its supplements through SSER 24, subject to the following provision:
- Luminant Generation Company LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- H. Luminant Generation Company LLC shall fully implement and maintain in effect all provisions of the physical security, training and qualification, and safeguards contingency plans, previously approved by the Commission, and all amendments made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled: "Comanche Peak Steam Electric Station Physical Security Plan" with revisions submitted through May 15, 2006, with limited approvals as provided for in the Safety Evaluation by the office of Nuclear Reactor Regulation dated December 5, 2000; "Comanche Peak Steam Electric Station Security Training and Qualification Plan" with revisions submitted through May 15, 2006; and "Comanche Peak Steam Electric Station Safeguards Contingency Plan" with revisions submitted through May 15, 2006.
- I. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- J. NOT USED

**ATTACHMENT 6 TO TXX-09004**

**RETIYPED UNIT 2 OPERATING LICENSE PAGES**

**Pages 6, 7, 8**

(9) License Transfer

Luminant Generation Company LLC shall enter into the \$250 million support agreement with Luminant Investment Company LLC, as described in the July 20, 2007 supplement to the April 18, 2007 indirect license transfer application, no later than the time the proposed transactions and indirect license transfers occur. Luminant Generation Company LCC shall take no action to cause Luminant Investment Company LLC, or its successors and assigns, to void, cancel, or modify the support agreement or cause it to fail to perform, or impair its performance under the support agreement, without the prior written consent of the NRC. The support agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or his designee. An executed copy of the support agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transactions and the indirect license transfers. Luminant Generation Company LLC shall inform the NRC in writing anytime it draws upon the support agreement.

Following the subject indirect transfer of control of the licenses, all of the officers of the general partner or controlling member of the licensee of CPSES shall be U.S. citizens. This condition may be amended upon application by the licensee and approval by the Director of the Office of Nuclear Reactor Regulation.

(10) Submittal of ISI Information and Analyses License Conditions

The following condition relates to the Relief Request to extend the Reactor Vessel inservice inspection interval: Provide the NRC with the information and analysis requested in Section (e) of the final 10 CFR 50.61a (or the proposed 10 CFR 50.61a, given in 72 FR 56275, prior to issuance of the final 10 CFR 50.61a) following completion of each ASME Code, Section XI, Category B-A and B-D Reactor Vessel weld inspection. The information must be submitted within one year of the inspection.

D. The following exemptions are authorized by law and will not endanger life or property or the common defense and security. Certain special circumstances are present and these exemptions are otherwise in the public interest. Therefore, these exemptions are hereby granted:

- (1) The facility requires a technical exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.2(b)(ii). The justification for this exemption is contained in Section 6.2.5.1 of Supplement 26 to the Safety Evaluation Report dated February 1993. The staff's environmental assessment was published on January 19, 1993 (58 FR 5036). Therefore, pursuant to 10 CFR 50.12(a)(1), 10 CFR 50.12(a)(2)(ii) and (iii), the Comanche Peak Steam Electric Station, Unit 2 is hereby granted an exemption from the cited requirement and instead, is required to perform the overall air lock leak test at pressure  $P_a$  prior to

establishing containment integrity if air lock maintenance has been performed that could affect the air lock sealing capability.

The facility was previously granted exemption from the criticality Monitoring requirements of 10 CFR 70.24 (see Materials License No. SNM-1986 dated April 24, 1989 and Section 9.1.1 of SSER 26 dated February 1993.) The staff's environmental assessment was published on January 19, 1993 (58 FR 5035). The Comanche Peak Steam Electric Station, Unit 2 is hereby exempted from the criticality monitoring provisions of 10 CFR 70.24 as applied to fuel assemblies held under this license.

E. DELETED

F. In order to ensure that Luminant Generation Company LLC will exercise the authority as the surface landowner in a timely manner and that the requirements of 10 CFR 100.3 (a) are satisfied, this license is subject to the additional conditions specified below: (Section 2.1, SER)

- (1) For that portion of the exclusion area which is within 2250 ft of any seismic Category I building or within 2800 ft of either reactor containment building, Luminant Generation Company LLC must prohibit the exploration and/or exercise of subsurface mineral rights, and if the subsurface mineral rights owners attempt to exercise their rights within this area, Luminant Generation Company LLC must immediately institute immediately effective condemnation proceedings to obtain the mineral rights in this area.
- (2) For the unowned subsurface mineral rights within the exclusion area not covered in item (1), Luminant Generation Company LLC will prohibit the exploration and/or exercise of mineral rights until and unless the licensee and the owners of the mineral rights enter into an agreement which gives Luminant Generation Company LLC absolute authority to determine all activities - including times of arrival and locations of personnel and the authority to remove personnel and equipment - in event of emergency. If the mineral rights owners attempt to exercise their rights within this area without first entering into such an agreement, Luminant Generation Company LLC must immediately institute immediately effective condemnation proceedings to obtain the mineral rights in this area.
- (3) Luminant Generation Company LLC shall promptly notify the NRC of any attempts by subsurface mineral rights owners to exercise mineral rights, including any legal proceeding initiated by mineral rights owners against Luminant Generation Company LLC.

G. Luminant Generation Company LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report through Amendment 87 and as approved in the SER (NUREG-0797) and its supplements through SSER 27, subject to the following provision:

Luminant Generation Company LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- H. Luminant Generation Company LLC shall fully implement and maintain in effect all provisions of the physical security, guard training and qualification, and safeguards contingency plans, previously approved by the Commission, and all amendments made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled: "Comanche Peak Steam Electric Station Physical Security Plan" with revisions submitted through May 15, 2006, with limited approvals as provided for in the Safety Evaluation by the Office of Nuclear Reactor Regulation dated December 5, 2000; "Comanche Peak Steam Electric Station Security Training and Qualification Plan" with revisions submitted through May 15, 2006; and "Comanche Peak Steam Electric Station Safeguards Contingency Plan" with revisions submitted through May 15, 2006.
- I. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- J. NOT USED
- K. This license is effective as of the date of issuance and shall expire at Midnight on February 2, 2033.

FOR THE NUCLEAR REGULATORY COMMISSION

original signed by:

Thomas E. Murley, Director  
Office of Nuclear Reactor Regulation

Attachments/Appendices:

- 1. Appendix A - Technical Specifications (NUREG-1468)
- 2. Appendix B - Environmental Protection Plan
- 3. Appendix C - Antitrust Conditions

Date of Issuance: April 6, 1993