



**Luminant**

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CP-201500779  
TXX-15119

Ref. # 10CFR50.55a(g)(5)(iii)

August 3, 2015

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

**SUBJECT:** COMANCHE PEAK NUCLEAR POWER PLANT  
DOCKET NO. 50-446  
RELIEF REQUEST B-15 FOR UNIT 2 SECOND TEN YEAR INSERVICE INSPECTION  
INTERVAL FROM 10CFR50.55a INSPECTION REQUIREMENTS DUE TO PHYSICAL  
INTERFERENCES  
(1998 EDITION OF ASME CODE, SECTION XI, 2000 ADDENDA SECOND INTERVAL  
START DATE: AUGUST 3, 2004 SECOND INTERVAL END DATE: AUGUST 2, 2014)

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a(g)(5)(iii), Luminant Generation Company, LLC (Luminant Power) is submitting Relief Request B-15 (see attachments) for Comanche Peak Unit 2 for the second ten year inservice inspection interval. Luminant Power has determined that certain inspection requirements of ASME Section XI are impractical due to physical interferences.

The geometry of the reactor vessel closure head ring to disc weld makes the Code required examination coverage requirements impractical. No undue risk to the public health and safety is presented by this request.

This communication contains no new licensing basis commitments regarding Comanche Peak Unit 2.

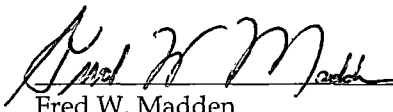
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Should you have any questions, please contact Mr. Jack Hicks at (254) 897-6725.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By:   
Fred W. Madden  
Director, External Affairs

Attachment 1– Relief Request B-15 for Unit 2 Second Ten Year ISI Interval from 10CFR50.55a Inspection Requirements due to Physical Interferences

Attachment 2 – Examination Data Sheets and Sketches

c - Marc L. Dapas, Region IV  
Balwant K. Singal, NRR  
Resident Inspectors, Comanche Peak  
Rob D. Troutt, TDLR  
Jack Ballard, ANII, Comanche Peak

**COMANCHE PEAK NUCLEAR POWER PLANT UNIT 2**  
**Relief Request Number B-15 for Unit 2 Second 10 Year ISI Interval**  
**From 10CFR50.55a Inspection Requirements due to Physical Interferences**  
**(Second 10-Year ISI Interval Start Date: August 3, 2004; End Date: August 2, 2014)**

1. **ASME Code Component Affected:**

ASME Code Class:	Code Class 1
References:	ASME Section XI, Table IWB-2500-1 and IWB-3510
Examination Category:	B-A
Item Number:	B1.21
Description:	Code required examination coverage for the weld volume is impractical
Component:	Reactor Vessel Head to Disc Weld
Component Number:	TCX-1-1300-2

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

The applicable ASME Boiler and Pressure Vessel Code (hereafter referred to as the "Code") is the 1998 Edition through 2000 Addenda of the ASME Section XI Boiler and Pressure Vessel Code.

3. **Applicable Code Requirement:**

The 1998 Edition through 2000 Addenda of the ASME Section XI Boiler and Pressure Vessel Code, Table IWB-2500-1 and IWB-3510 requires volumetric examination of reactor vessel head to disc weld (TCX-1-1300-2).

The Comanche Peak Nuclear Power Plant (CPNPP) second ten-year interval Inspection Program Plan also implements Code Case N-4.60, which is endorsed by the NRC in revision 17 of Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI, Division 1." Code Case N-4.60 states, in part, when the entire examination volume or area cannot be examined due to interference by another component or part geometry, a reduction in examination coverage on any Class 1 or Class 2 weld may be accepted, provided the reduction coverage for that weld is less than 10 percent.

NRC Information Notice (IN) 98-42, "Implementation of 10 CFR 50.55a(g) Inservice Inspection Requirements," termed a reduction in coverage of less than 10 percent to be "essentially 100 percent." IN 98-42 states, in part, "The NRC has adopted and further refined the definition of "essentially 100 percent" to mean "greater than 90 percent"... has been applied to all examinations of welds or other areas required by ASME Section XI."

4. **Impracticality of Compliance:**

The examination of the subject component weld is limited by the presence of an insulation support shroud assembly (See attached sketch). The examinations were conducted in accordance with procedure TX-ISI-306, "Manual Ultrasonic Examination of Reactor Pressure Vessel Welds". 60° scans were used to achieve the weld volume obtained. As shown on the attached examination data sheets, only 68% of the required examination volume was achieved (see attachment 2).

**COMANCHE PEAK NUCLEAR POWER PLANT UNIT 2**  
**Relief Request Number B-15 for Unit 2 Second 10 Year ISI Interval**  
**From 10CFR50.551 Inspection Requirements due to Physical Interferences**  
**(Second 10-Year ISI Interval Start Date: August 3, 2004; End Date: August 2, 2014)**

**5. Burden caused by Compliance:**

The design configuration restrictions of the subject component makes the Code required examination coverage requirements for the weld volume impractical. Plant modifications or replacements of components designed to allow for complete coverage would be needed to meet the Code requirements. This would cause considerable burden to CPNPP.

**6. Proposed Alternative and Basis for Use:**

Proposed Alternative:

The following alternatives are proposed in lieu of the required examination coverage of essentially 100 percent:

1. Ultrasonic testing (UT) of the subject component weld was performed to the maximum extent practical during the second ten-year interval. No recordable indications were noted, in the areas examined.
2. Pressure test VT-2 visual examinations were performed, as required by Code Category B-P, during the second ten-year interval. No evidence of leakage was identified for this component.

Basis for use:

The basis for use of this alternative is that it provides the best examination coverage practical within the limitations of the current configuration. Based on the percentage of the examination volume completed and the lack of any indications identified, there is a high level of confidence in the continued structural integrity of the weld. CPNPP believes that there is no undue risk to the public health and safety presented by this request.

**7. Duration of Proposed Alternative:**

The second ten-year ISI interval for Unit 2 began on August 3, 2004 and ended on August 2, 2014.

**8. Precedents:**

None



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# UT Calibration Examination

Site/Unit: CPNPP / 2  
 Summary No.: 003200  
 Workscope: ISI

Procedure: TX-ISI-306  
 Procedure Rev.: 3  
 Work Order No.: 4517083

Outage No.: 2RF14  
 Report No.: UT-2014-102  
 Page: 1 of 4

Code: ASME Sec. XI 1998 Ed./2000 Add. Cat./Item: B-A/B1.21 Location: 2-161A, RB, 872

Drawing No.: TCX-1-1300 Description: RV CLOSURE HEAD RING TO DISC WELD

System ID: RC

Component ID: TCX-1-1300-2 Size/Length: 1.5" / 422.95" Thickness/Diameter: 7.3" / 134.63"

Limitations: SINGLE-SIDED EXAMINATION Start Time: 1005 Finish Time: 1220

**Instrument Settings**  
 Serial No.: 105204 Manufacturer: GEIT Model: USN 60SW Linearity: L-2014-006 Delay: 14.6784 Range: 10.00"  
 M/I Cal/Vel: 0.2320 Pulser Type: Square Damping: 500 Ohms Reject: 0% PRF: Auto High SU Freq.: 2.0 MHz Frequency: 2.0 MHz Rectify: Fullwave Voltage: 450 Pulse Width: 250  
 Ax. Gain (dB): 46.4 Circ. Gain (dB): N/A  
10 Screen Div. = 10 in. of Sound Path

**Search Unit**  
 Serial No.: 06 177 Manufacturer: RTD Size: 2(24 X 42)mm Model: TRLA Freq.: 2.0 MHz Center Freq.: 1.82 MHz Exam Angle: 60 Squint Angle: 5 Measured Angle: 59 Mode: Longitudinal Exit Point: 1.1" # of Elements: 2 Config.: Side by Side Focus: 125 mm Shape: Rectangular Contour: N/A Wedge Style: Integral

Cal. Checks	Time	Date
Initial Cal.	0830	4/7/2014
Inter. Cal.		
Inter. Cal.	1045	4/7/2014
Inter. Cal.		
Final Cal.	1240	4/7/2014

**Couplant**  
 Cal. Batch: 11425 Type: Ultrigel II Mfg.: Sonotrace  
 Exam Batch: 11425 Type: Ultrigel II Mfg.: Sonotrace

Axial Orientated Search Unit			
Calibration Reflector	Signal Amplitude %	Sweep Division	Sound Path
1/4T SDH	80	4.1	4.051
N/A			
N/A			
N/A			

Circumferential Orientated Search Unit			
Calibration Reflector	Signal Amplitude %	Sweep Division	Sound Path
N/A			
N/A			
N/A			
N/A			

**Search Unit Cable**  
 Type: RG-174 Length: 25' No. Conn.: 1

**Scan Coverage**  
 Upstream  Downstream  Scan dB: 60.4  
 CW  CCW  Scan dB: 60.4  
 Exam Surface: OD Surface Condition: Ground

**Calibration Block**  
 Cal. Block No.: TBX-29 Thickness: 8.60 Dia.: 0 Cal. Blk. Temp.: 71 Temp. Tool: 106855 Comp. Temp.: 73 Temp. Tool: 106855

Recordable Indication(s): Yes  No  (If Yes, Ref. Attached Ultrasonic Indication Report.)  
 Results: Accept  Reject  Info   
 Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: Yes

**Reference Block**  
 Serial No.: 104876 Type: Rompas Block C/S

Reference/Simulator Block				
Gain dB	Reflector	Signal Amplitude %	Sweep Division	Sound Path
46.4	2" BW	90	3.9	3.866
N/A				
N/A				

Comments: **ZONE 1 CALIBRATION.**  
**68% CODE COVERAGE ACHIEVED.**

Examiner	Level	Signature	Date	Reviewer	Signature	Date
Jennings, Jason	II-PDI		4/7/2014	Sabo, Steve		4/14/14
N/A	N/A			ISI Engineer		4/15/14
N/A	N/A			ANII Review		4/16/2014

Attachment 2 to TX-15119



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# UT Calibration Examination

Site/Unit: CPNPP / 2  
 Summary No.: 003200  
 Workscope: ISI

Procedure: TX-ISI-306  
 Procedure Rev.: 3  
 Work Order No.: 4517083

Outage No.: 2RF14  
 Report No.: UT-2014-102  
 Page: 2 of 4

Code: ASME Sec. XI 1998 Ed./2000 Add. Cat./Item: B-A/B1.21 Location: 2-161A, RB, 872

Drawing No.: TCX-1-1300 Description: RV CLOSURE HEAD RING TO DISC WELD

System ID: RC

Component ID: TCX-1-1300-2 Size/Length: 1.5" / 422.95" Thickness/Diameter: 7.3" / 134.63"

Limitations: SINGLE-SIDED EXAMINATION Start Time: 1005 Finish Time: 1220

**Instrument Settings**  
 Serial No.: 105204 Manufacturer: GEIT Model: USN 60SW Linearity: L-2014-006 Delay: 14.6784 Range: 20.00"  
 M'tl Cal/Vel: 0.2320 Pulsar Type: Square Damping: 500 Ohms Reject: 0% PRF: Auto High SU Freq.: 2.0 MHz Frequency: 2.0 MHz Rectify: Fullwave Voltage: 450 Pulse Width: 250

**Search Unit**  
 Serial No.: 06177 Manufacturer: RTD Size: 2(24 X 42)mm Model: TRLA Freq.: 2.0 MHz Center Freq.: 1.82 MHz Exam Angle: 60 Squint Angle: 5 Measured Angle: 59 Mode: Longitudinal Exit Point 1.1" # of Elements: 2 Config.: Side by Side Focus: 125 mm Shape: Rectangular Contour: N/A Wedge Style: Integral

Cal. Checks	Time	Date
Initial Cal.	0820	4/7/2014
Inter. Cal.		
Inter. Cal.	1000	4/7/2014
Inter. Cal.		
Final Cal.	1245	4/7/2014

Axial Orientated Search Unit			
Calibration Reflector	Signal Amplitude %	Sweep Division	Sound Path
ID NOTCH	80	8.7	17.27
N/A			
N/A			
N/A			
N/A			

Ax. Gain (dB): 74.9 Circ. Gain (dB): N/A  
 10 Screen Div. = 20 in. of Sound Path

**Search Unit Cable**  
 Type: RG-174 Length: 25' No. Conn.: 1

**Couplant**  
 Cal. Batch: 11425 Type: Ultragel II Mfg.: Sonotrace  
 Exam Batch: 11425 Type: Ultragel II Mfg.: Sonotrace

Circumferential Orientated Search Unit			
Calibration Reflector	Signal Amplitude %	Sweep Division	Sound Path
N/A			
N/A			
N/A			
N/A			

**Calibration Block**  
 Cal. Block No. TBX-29 Thickness 8.60 Dia.: 0 Cal. Blk. Temp. 71 Temp. Tool: 106855 Comp. Temp. 73 Temp. Tool: 106855

**Scan Coverage**  
 Upstream  Downstream  Scan dB: 74.9 CW  CCW  Scan dB: 74.9 Exam Surface: OD Surface Condition: Ground

**Reference Block**  
 Serial No.: 104876 Type: Rompas Block C/S

Reference/Simulator Block				
Gain dB	Reflector	Signal Amplitude %	Sweep Division	Sound Path
46.4	2" BW	90	1.9	3.866
N/A				
N/A				

Recordable Indication(s): Yes  No  (If Yes, Ref. Attached Ultrasonic Indication Report.)  
 Results: Accept  Reject  Info

Comments: **ZONE 2 CALIBRATION. 68% CODE COVERAGE ACHIEVED.**

Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: Yes

Examiner	Level	Signature	Date	Reviewer	Signature	Date
Jennings, Jason	II-PDI		4/7/2014			4/14/14
N/A	N/A			Site Review		4/15/14
N/A	N/A			ANII Review		4/16/2014

Attachment 2 to TXX-15119

2014



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# Supplemental Report

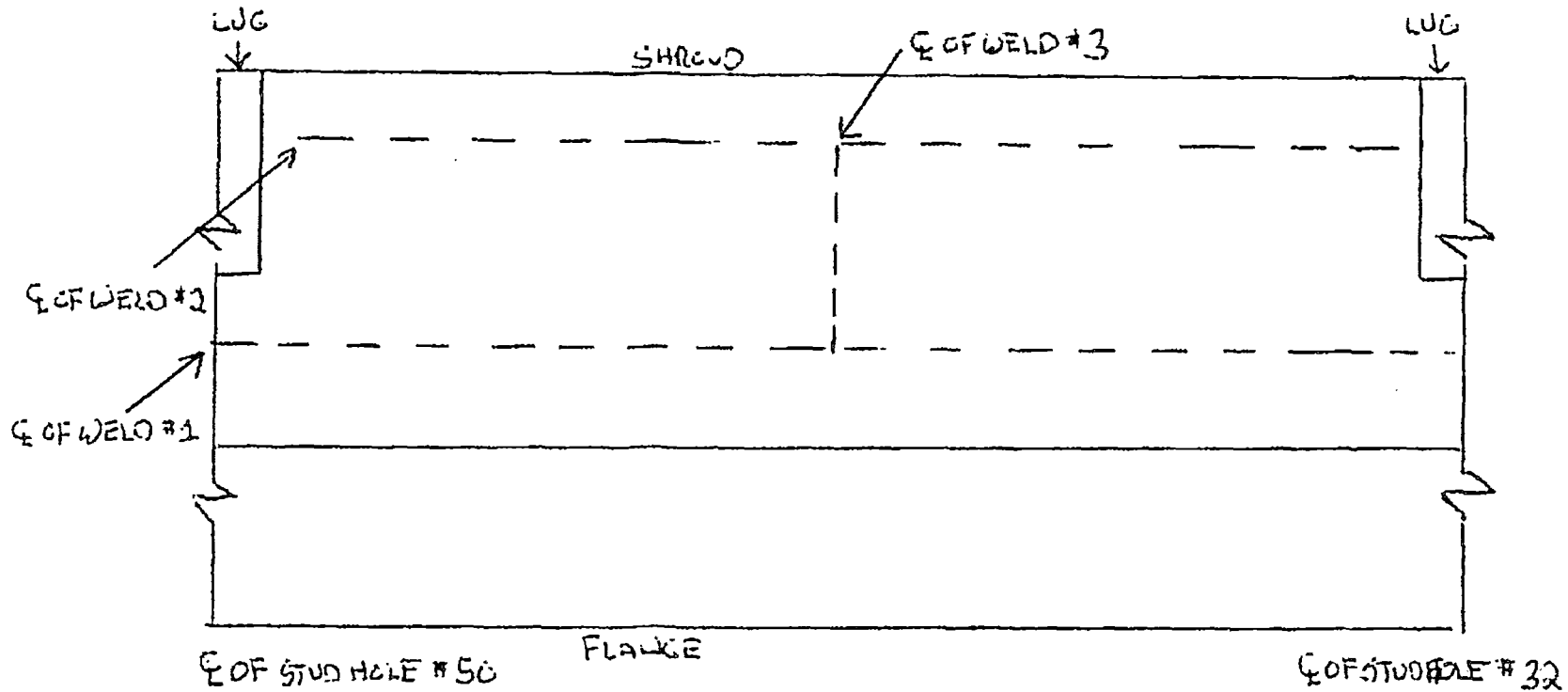
Report No.: UT-2014-102

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Summary No.: 003200

Sketch or Photo: O:\SI\2rRF14\Scans\TCX-1-1300-20001.jpg

## LIMITATION TO EXAMINATION TCX-1-1300-2



Attachment 2 to TXX-15119



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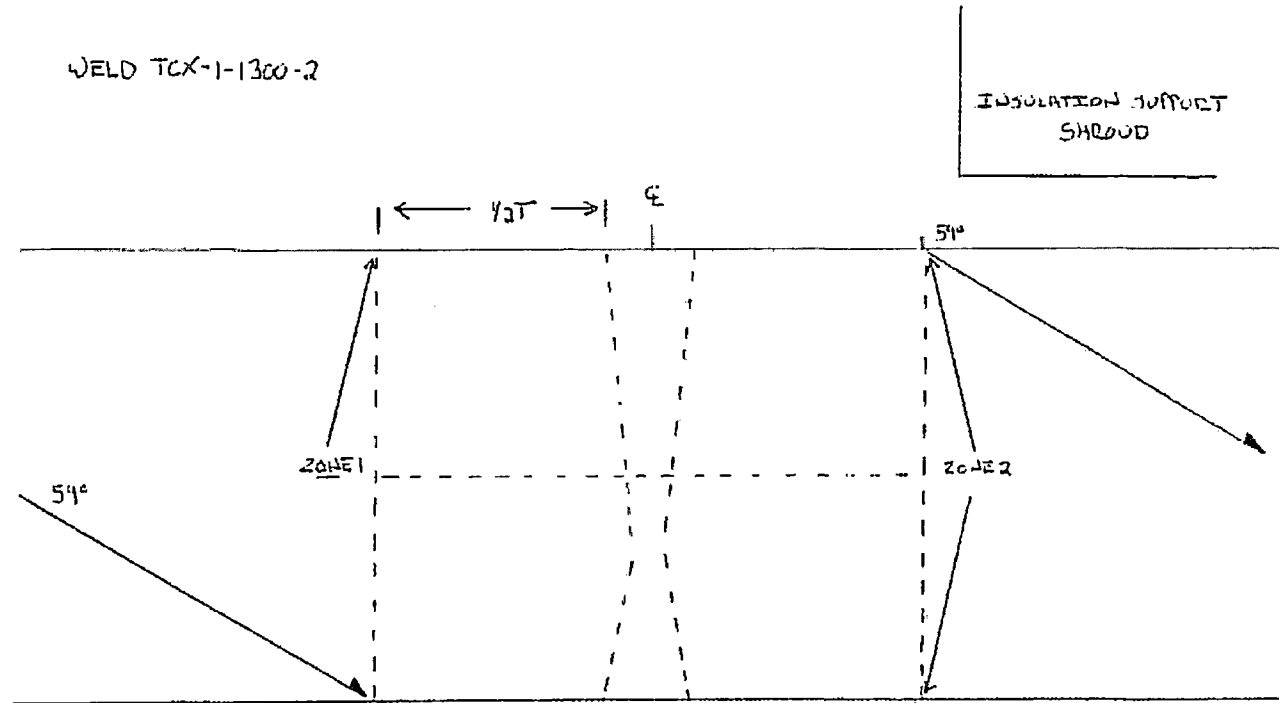
# Supplemental Report

Report No.: UT-2014-102

Page: 4 of 4

Summary No.: 003200

Sketch or Photo: O:\ISI\2rRF14\Scans\TCX-1-1300-20002.jpg



COVERAGE

	<u>ZONE 1</u>	<u>ZONE 2</u>
PARALLEL SCANS	85%	85%
	85%	85%
TRANSVERSE SCANS	100%	100%
	0%	0%
TOTAL	68%	68%

SCALE 2:1  
T: 7.3"

Attachment 2 to TXX-15119

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