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CP-201500777
TXX-15117

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-10 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-10 (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 Safety Injection piping makes the Code required examination coverage requirements impractical. Ultrasonic Testing (UT) of the subject welds was performed during the second interval to the maximum extent practical based on design configuration restrictions. Pressure test VT-2 visual examinations were also performed with no evidence of leakage identified for the subject component. 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.

A047
NRR

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-10 for Unit 2 Second Ten Year ISI Interval from 10CFR50.55a Inspection Requirements due to Physical Interferences

Attachment 2- Examination Data Sheets and Sketch

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-10 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:**

Class 1 Risk-Informed Inservice Inspection (RI-ISI) piping welds as shown:

RI-ISI Piping Welds (formerly Code Category B-J)

Code Cat/Item No.	Description	Weld No.
R-A/R1.16	10" elbow to pipe weld	TCX-1-4301-10

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

The applicable ASME Boiler and Pressure Vessel Code (hereafter referred to as the "Code") edition and addenda is ASME Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 1998 Edition through 2000 Addenda. In addition, as required by 10 CFR 50.55(a), ASME Section XI, 1995 Edition, 1996 Addenda is used for Appendix VIII, Performance Demonstration for Ultrasonic Examination System.

3. **Applicable Code Requirement:**

ASME Section XI, Figure IWC-2500-8(c) 1998 Edition through 2000 Addenda, requires a volumetric examination of a minimum weld volume of the inner 1/3t (one third of the thickness) extending into the piping base metal for a distance of 1/4" past the edge of the weld crown for NPS 4" and larger. The subject pipe size is 10" and Table IWB-2500-1 calls for a surface examination of the weld.

In a letter (NRR 10580) dated October 5, 2006, from the NRC to Comanche Peak Steam Electric Station, Unit No. 1, the NRC approved in a relief request alternative Risk Informed (RI) - ISI examinations for selected ASME Code Class 1 and 2 piping welds for the second interval. The methodology in EPRI TR-112657 Revision B-A is used as the examination method as well as for the selection of welds to be examined.

The RI-ISI program requires volumetric examination of the subject weld and extends the Code required volume of the inner 1/3t to 1/2" past the edge of the weld crown if no counterbore is present or a distance of 1/4" on either side of the weld counterbore, whichever is greater.

The Comanche Peak Nuclear Power Plant (CPNPP) second ten-year interval Inspection Program Plan also implements Code Case N-460, which is endorsed by the NRC in revision 15 of Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI, Division L" Code Case N-460 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

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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 examinations of the subject piping welds were limited by the closeness of the piping welds to safety injection piping structural restraints, attached to the steam generator lower beam. This configuration limited portions of the weld volume from being examined.

Volumetric examinations were performed with shear search units having a nominal angle of 45° in the two axial and circumferential directions. Minimum coverage obtained was 76.5 % for TCX-1-4301-10 (Refer to Attachment 2). The examinations were conducted in accordance with procedure TX-ISI-302, "Ultrasonic Examination of Austenitic Piping Welds."

Consideration was given to selecting other welds that possibly could have provided full coverage, but it was not feasible. There are only twelve welds in four SI segments, classified as risk category 5a, with a medium consequence and a degradation mechanism of IGSCC. The SI piping, subject piping welds, and support configurations are identical in each of the Loop Rooms. Four of the welds, one per Loop, are at valves, with the examination single sided. The other eight welds, two per Loop, are identical to the ones selected, with structural steel supports limiting the examinations. After looking at all of the associated piping in the four Loop Rooms, it was determined that the welds in Loop 3, TCX-1-4301-9 and TCX-1-4301-10, would provide the most coverage. A 100 % coverage was feasible at weld TCX-1-4301-9; however, 76.5% coverage was obtained for TCX-1-4301-10 (see Attachment 2).

5. Burden caused by Compliance:

The design configuration restrictions of the subject components make the Code required examination coverage requirements for the weld volume impractical. Plant modifications or replacement 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.

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.

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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:**

Relief Request B-10 was submitted in letter TXX-10157 from CPNPP to USNRC in December 15, 2010 for the second ten-year interval for Unit 1.

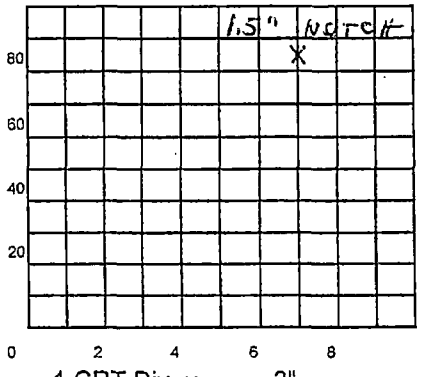
PDI

Calibration Data Sheet

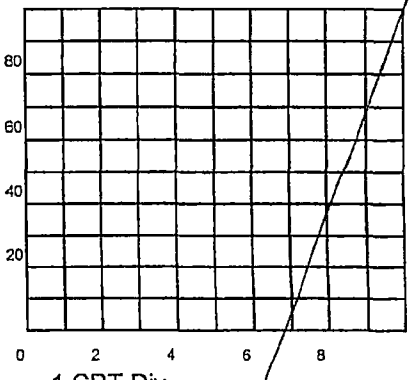
Plant / Unit: COMANCHE PEAK UNIT 2
Company: WESDYNE
Comp / System: SAFETY INJECTION
Procedure No.: TX-ISI-302
Rev / Chng. No.: 3 / N/A
Cal. Block No.: PDI-03
Cal. Block Temp: 78° Comp. Temp: 84°
Therm S/N: RF-2212
Size: 10" Sch.: 140/1.0" "T"
☐ Ferritic ☒ Austenitic

Data Sheet # 11 UT-23
Page 1 of 4

Cal. Checks	Time
Initial Calib.	0800
Initial Calib. Date	10/15/09
Intermediate	N/A
Intermediate	N/A
Final Calib.	1525
Final Calib. Date	10/15/09



1 CRT Div. = .3"



1 CRT Div. =

Cal. Direction: X Axial Circ. Both

Scan Area: ⊥ to Weld ∥ to Weld

Couplant
Type: ULTRA GEL II
Batch: 06225

Examination Area / Weld		Access	Recordable Indications Yes	No	Geom	Exam Sens.
TCX-1-4301	9	2 SIDED		X		36.2 dB
TCX-1-4301	10	2 SIDED		X		36.2 dB

Remarks / Reason for Incomplete Scan(s)
EXAMINATION PERFORMED IN ACCORDANCE WITH RISK BASED VOLUME CRITERIA.

WELD #9: 100% CODE COVERAGE ACHIEVED.

WELD #10: SEE ATTACHED LIMITATION SHEET FOR ACHIEVED COVERAGE.

Examiner: Paul S Blecha PAUL BLECHA Level III Date 10/15/09
Examiner: N/A Level N/A Date N/A

Search Unit #1
Manufacturer: KBA
Serial No.: 00YF95 Freq.: 2.25MHz
Size: .375" Shape: ROUND
Exam Angle: 45° Model: COMP-G
Measured Angle: 45°
Wedge Style: NON-INTEGRAL

Search Unit Cable
Type: RG-174
Length: 6' No. of Connectors: 0

Instrument Settings
Make / Model: KBA / USN 60 SW
Serial No.: SAP / 105211
Dis.Delay: 0.000 µs Range: 3.0"
Prb.Delay: 5.6916 µs Pwidth: 220
M'tl Cal/Vel: 0.1241 µs Pulser: SQUARE
Damping: 500 Ω Reject: 0%
Rep. Rate: AUTOHIGH Freq.: 2.25 MHz
Filter: FIXED Mode: P/E
Voltage: 450 Rectify: FULLWAVE
Reference Sensitivity (Sens.)
Axial: 16.2 dB Circ: 16.2 dB
SDH Sensitivity: n/a
Further Evaluation Required? ☐ Yes ☒ No

Search Unit #2
Manufacturer:
Serial No.: Freq.:
Size: Shape:
Exam Angle: Model:
Measured Angle:
Wedge Style:

Search Unit Cable
Type:
Length: No. of Connectors:

Instrument Settings
Make / Model:
Serial No.: SAP
Dis.Delay: µs Range:
Prb.Delay: µs Pwidth:
M'tl Cal/Vel: µs Pulser:
Damping: Ω Reject:
Rep. Rate: AUTOHIGH Freq.:
Filter: Mode:
Voltage: Rectify: FULLWAVE
Reference Sensitivity (Sens.)
Axial: Circ:
SDH Sensitivity:

Reviewer / Date: 10-16-09
Reviewer / Date: Paul M Pankow 10/21/09 HSB&T Hall 10-24-09

Attachment 2 to TXX-15117
1 of 3

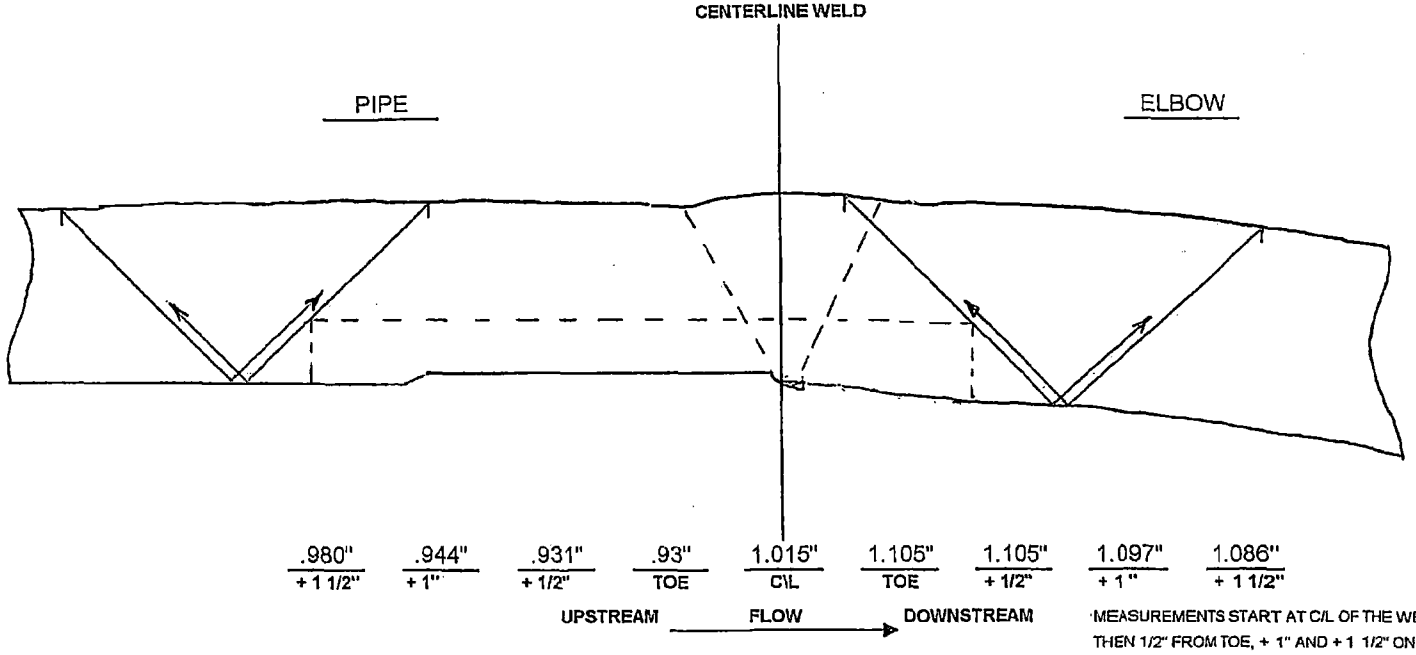
PROFILE OF THE EXAMINATION

REPORT NO. _____ STATION COMANCHE PEAK UNIT 2 PAGE 3 OF 4

SYSTEM SAFETY INJECTION COMPONENT PIPE TO ELBOW DRAWING NO. TCX-1-4301 IDENT NO. 10

PROFILE SECTION

DIAMETER 10" WELD LENGTH 34" CROWN WIDTH 1.1" CROWN HEIGHT .05" LONG SEAM LOCATION(S) N/A



MEASUREMENTS START AT C/L OF THE WELD, THEN TOE OF WELD AND THEN 1/2" FROM TOE, + 1" AND + 1 1/2" ON BOTH SIDE OF WELD AS APPLICABLE

PROFILE EXAM COMMENTS

PROFILE TAKEN AT TDC

COVERAGE ACHIEVED

SECTION XI X RISK INFORMED X AUGMENTED N/A PREVIOUS DATA REVIEWED N/A TYPE N/A

EXAMINER PAUL BLECHA Paul S Blecha DATE 10/15/09 EXAMINER N/A DATE N/A

REVIEW N/A DATE ~~N/A~~ 10-16-09 EVIEWER ~~N/A~~ Paul M Pawlyn DATE 10/21/09

Attachment 2 to TXX-15117

LIMITATION TO EXAMINATION

PLANT COMANCHE PEAK UNIT 2 SKETCH TCX-1-4301

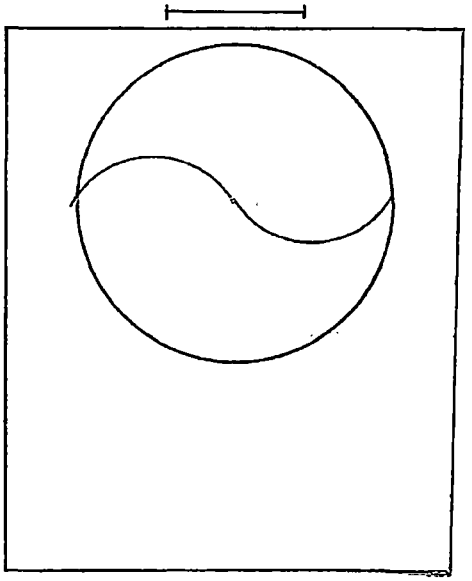
SYST./COMP. SAFETY INJECTION PROCEDURE TX-ISI-302, REV.3

EXAMINER PAUL BLECHA Paul S Blecha DATE 10/15/09

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 10

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.

8" AREA OF LIMITATION



WELD LENGTH: 34"

WELD LENGTH EXAMINED: 26"

TOTAL COVERAGE: 76.5 %