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CP-201001545
Log # TXX-10157

Ref. # 10 CFR 50.55a(g)(5)(iii)

December 15, 2010

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

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT
DOCKET NO. 50-445
RELIEF REQUEST NO. B-10 FOR THE UNIT 1 SECOND 10 YEAR ISI INTERVAL FROM 10 CFR 50.55a INSPECTION REQUIREMENTS DUE TO PHYSICAL INTERFERENCES
(SECOND INTERVAL START DATE: AUGUST 13, 2000)

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 attachment) for Comanche Peak Unit 1 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 1. 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, Oversight & Regulatory Affairs

A047
NRR

Attachments - 1. Relief Request B-10 for Risk-Informed Inservice Inspection (R-I ISI) piping welds
2. Drawing and Inspection Sheets for RI-ISI piping welds

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

10CFR 50.55a Request Number B-10
Relief Requested
In Accordance with 10CFR50.55a(g)(5)(iii)
- Inservice Inspection Impracticality -

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	TBX-1-4201-9
R-A / R1.16	10" elbow to pipe weld	TBX-1-4201-10

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 10027) dated September 28, 2001, 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, which ever is greater.

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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 1." 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 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 82% for TBX-1-4201-9 and 79% for TBX-1-4201-10. (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 2, TBX-1-4201-9 and TBX-1-4201-10, would provide the most coverage.

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 replacements of components designed to allow for complete coverage would be needed to meet the Code requirements. This would cause considerable burden to CPNPP.

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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.

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 1 began on August 13, 2000 and ends on August 12, 2010.

8. Precedents:

None

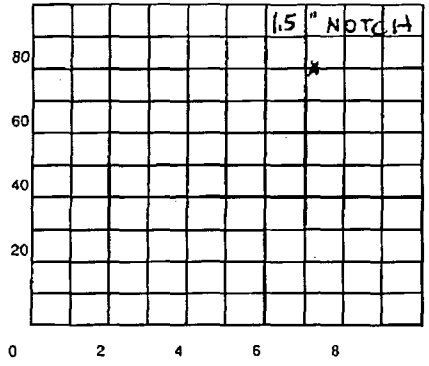
PDI — Calibration Data Sheet

Plant / Unit	COMANCHE PEAK UNIT 1
Company	WESDYNE
Comp / System	ACCUM. DISCHARGE
Procedure No.	TX-ISI-302
Rev / Chng. No.	3 / N/A
Cal. Block No.	PDI-03
Cal. Block Temp	70° Comp. Temp 87°
Therm S/N:	TU-2282
Size	10" Sch. 140 / 1.0 "T"

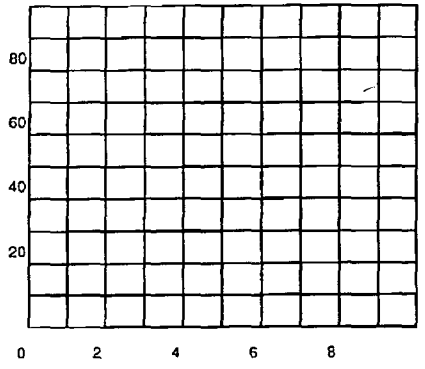
☐ Ferritic ☒ Austenitic

Data Sheet # 13 UT-33
Page 1 of 5

Cal. Checks	Time
Initial Calib.	0911
Initial Calib. Date	10/8/08
Intermediate	N/A
Intermediate	N/A
Final Calib.	1221
Final Calib. Date	10/8/08



10 CRT Div. = 3.00"



10 CRT Div. = _____

Cal. Direction: X Axial Circ. Both

Couplant

Scan Area: ⊥ to Weld / ∥ to Weld

Type: ULTRA GEL II
Batch: 06225

Examination Area / Weld		Access	Recordable Indications Yes	No	Geom	Exam Sens.
TBX-1-4201	9			X		36.0 dB
TBX-1-4201	10			X		36.0 dB

Remarks / Reason for Incomplete Scan(s)

EXAMINATION PERFORMED IN ACCORDANCE WITH RISK BASED VOLUME CRITERIA

SEE ATTACHED LIMITATION SHEETS FOR ACHIEVED COVERAGE.

Search Unit #1

Manufacturer: KBA
Serial No.: 011560 Freq.: 2.25 MHz
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 105203
Dis.Delay: 0.000 µs Range: 3.00"
Prb.Delay: 5.660 µs Pwidth: 220
M'tl Cal/Vel: 0.124 µs Pulser: SQUARE
Damping: 500 Ω Reject: 0%
Rep. Rate: AUTOHIGH Freq.: 2.25 MHz
Filter: FIXED Mode: SINGLE
Voltage: 450 Rectify: FULLWAVE

Reference Sensitivity (Sens.)

Axial: 16.0 dB Circ: N/A
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: N/A
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: _____

Examiner: Paul S Blecha PAUL BLECHA Level II Date 10/8/08

Examiner: N/A Level N/A Date N/A

Reviewer / Date: 10/9/08

Reviewer / Date: 10/13/08 ASME AIII

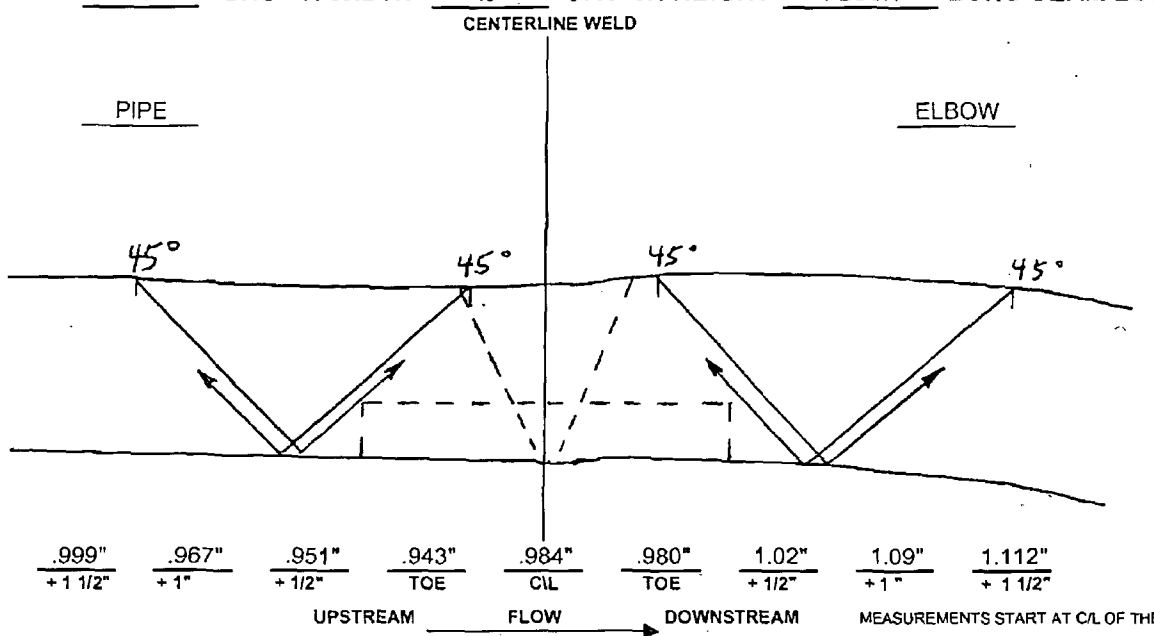
PROFILE OF THE EXAMINATION

EPORT NO. 13UT-33 STATION COMANCHE PEAK UNIT 1 PAGE 2 OF 5

YSTEM ACCUM. DISCHARGE COMPONENT PIPE TO ELBOW DRAWING NO. TBX-1-4201 IDENT NO. 9

PROFILE SECTION

IAMETER 10" WELD LENGTH 34" CROWN WIDTH .9" CROWN HEIGHT FLUSH 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 45°

COVERAGE ACHIEVED

SECTION XI X RISK INFORMED X AUGMENTED ____ PREVIOUS DATA REVIEWED NO TYPE N/A

EXAMINER PAUL BLECHA Paul S Blecha DATE 10/08/08 EXAMINER N/A DATE N/A

REVIEWER [signature] DATE 10/9/08 REVIEWER Paul M Pardinger DATE 10/13/08

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LIMITATION TO EXAMINATION

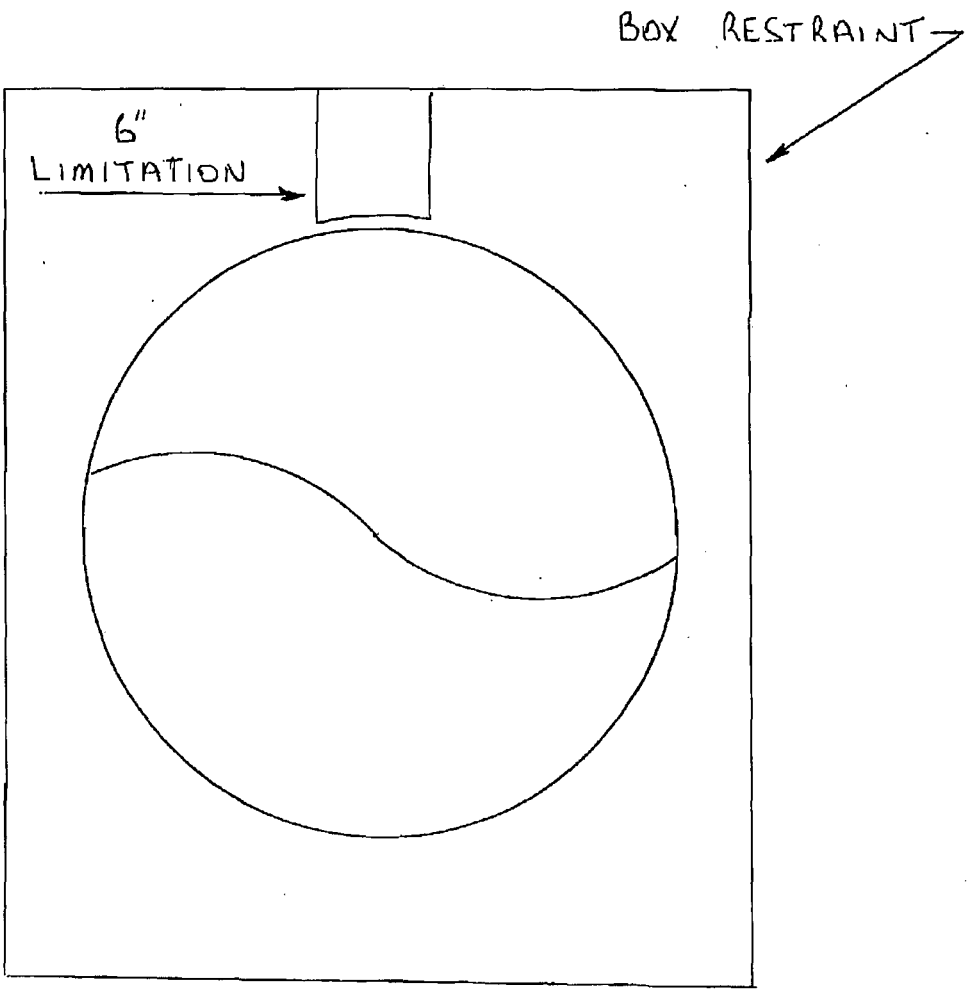
PLANT COMANCHE PEAK UNIT 1 SKETCH TBX-1-4201

SYST./COMP. ACCUMULATOR DISCHARGE PROCEDURE TX-ISI-302, REV. 3

EXAMINER PAUL BLECHA Paul S Blecha DATE 10/08/08

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 9

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



WELD LENGTH: 34"
LIMITATION: 6"

TOTAL COVERAGE: 82%

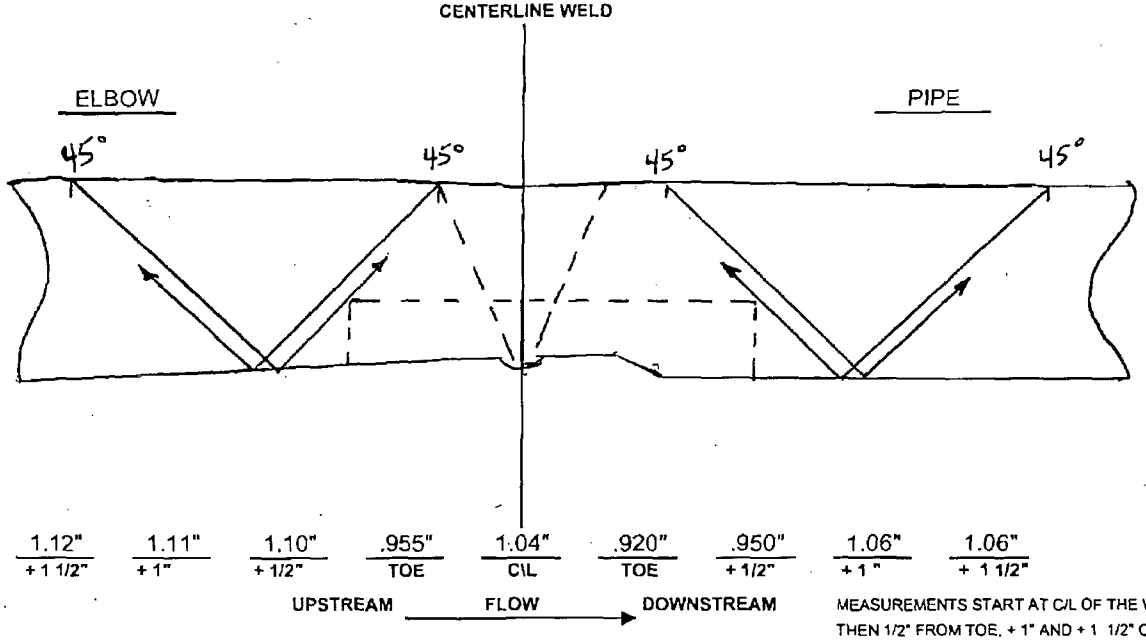
PROFILE OF THE EXAMINATION

EPORT NO. 13UT-33 STATION COMANCHE PEAK UNIT 1 PAGE 4 OF 5

YSTEM ACCUM. DISCHARGE COMPONENT ELBOW TO PIPE DRAWING NO. TBX-1-4201 IDENT NO. 10

PROFILE SECTION

IAMETER 10" WELD LENGTH 34" CROWN WIDTH .9" CROWN HEIGHT FLUSH 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 ON ELBOW EXTRADES

COVERAGE ACHIEVED

SECTION XI X RISK INFORMED X AUGMENTED ____ PREVIOUS DATA REVIEWED NO TYPE N/A

EXAMINER PAUL BLECHA Paul S Blecha DATE 10/08/08 EXAMINER N/A DATE N/A

REVIEWER S F Sch DATE 10/9/08 REVIEWER Paul M Ramsey DATE 10/13/08

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LIMITATION TO EXAMINATION

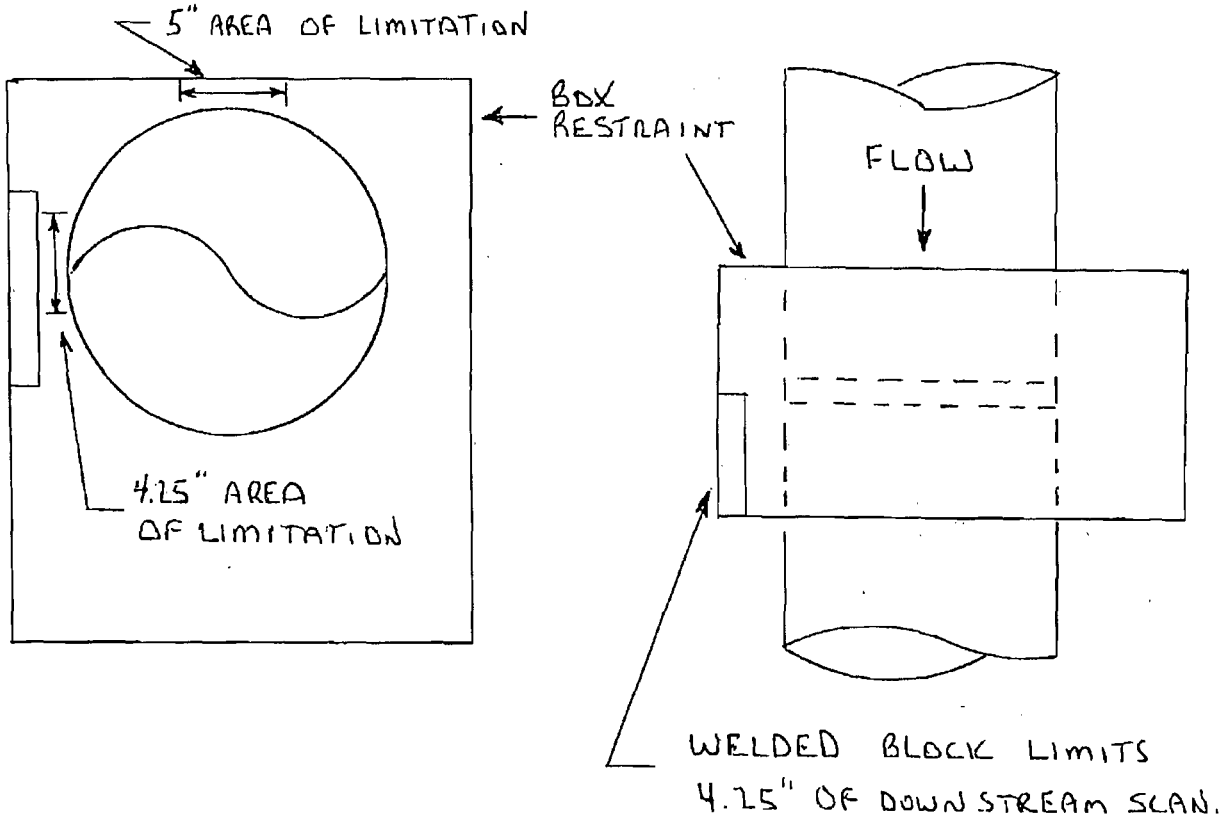
PLANT COMANCHE PEAK UNIT 1 SKETCH TBX-1-4201

SYST./COMP. ACCUMULATOR DISCHARGE PROCEDURE TX-ISI-302, REV. 3

EXAMINER PAUL BLECHA Paul S Blecha DATE 10/08/08

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

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



WELD LENGTH: 34"

UPSTREAM SCAN: 29"

DOWNSTREAM SCAN: 24.75

TOTAL COVERAGE: 79%