TXU Energy
Comanche Peak Steam
Electric Station
P.O. Box 1002 (E01)
Glen Rose, TX 76043
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C. Lance Terry
Senior Vice President &
Principal Nuclear Officer

Ref: 10 CFR 50.55(a)(g)

CPSES-200300632
Log # TXX-03065
File # 10010

April 9, 2003

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-446; RELIEF REQUESTS B-7 Rev. 1, B-8 Rev. 1, B-9 Rev. 1 and C-6 Rev. 1 TO THE UNIT 2 INSERVICE INSPECTION (ISI) FROM 1986 EDITION OF ASME CODE, SECTION XI, NO ADDENDA (INTERVAL START DATE: AUGUST 3, 1993, FIRST INTERVAL)

REFERENCE: TXU Energy Letter logged TXX –02122 dated July 11, 2002 from C. Lance Terry to the NRC

Dear Sir or Madam:

Based on the telephone conversation with your staff, TXU Generation Company LP (hereafter TXU Energy) is revising its relief requests submitted via the above referenced letter.

TXU Energy requests approval of the proposed Relief Request by June 29, 2003. The approval date was administratively selected to allow for NRC review but the plant does not require this relief to allow continued safe full power operations.

This communication contains no new licensing basis commitments regarding Comanche Peak Steam Electric Station (CPSES) Unit 2.

A047

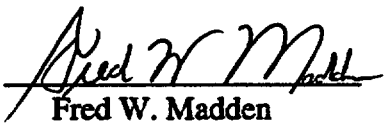
If you have any questions or need additional information regarding this matter, please feel free to contact Douglas W. Snow at (254) 897-8448.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

C. L. Terry
Senior Vice President and Principal Nuclear Officer

By: 
Fred W. Madden
Nuclear Licensing Manager

OAB/dws

Attachments

c - E. W. Merschoff, Region IV
W. D. Johnson, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES
Terry Parks, Chief Inspector, TDLR
J.C. Hair ANII, CPSES

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-

I. System/Component for Which Relief is Requested:

ASME Class I Reactor Pressure Vessel (RPV) closure head to flange weld (Weld No. TCX-1-1300-1) and RPV closure head to disc weld (Weld No. TCX-1-1300-2)

II. Code Requirement from Which Relief is Requested:

Comanche Peak Unit 2 is currently required to perform inservice examinations of selected welds in accordance with the requirements of 10 CFR 50.55a, and the 1986 Edition with no Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components. The Code invokes the examination volume requirements of Figures IWB-2500-3 and IWB-2500-5.

Weld No. TCX-1-1300-1:

> Table IWB-2500-1. Examination Category B-A, Code Item B1.40, Figure IWB-2500-5. The subject weld is a full penetration weld, and requires 100% volumetric and surface examination of the RPV head to flange welds as defined by Figure IWB-2500-5.

Weld No. TCX-1-1300-2:

> Table IWB-2500-1. Examination Category B-A, Code Item B1.21, Figure IWB-2500-3. The subject weld is a full penetration weld, and requires 100% volumetric examination of the accessible portion of all circumferential welds, as defined by Figure IWB-2500-3.

III. Impracticality of Compliance:

The examination coverage is limited by physical interferences from the reactor head flange, shroud, and lifting lugs (refer to the attached sketches on pages 9, 10 and 11). Therefore, pursuant to the requirements of 10 CFR 50.55(g)(5)(iii) relief is requested from performing 100% volumetric examination requirements, Figures IWB-2500-3 and IWB-2500-5.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

IV. Burden Caused by Compliance:

The examination coverage is limited by physical interferences from the reactor head flange, shroud, and lifting lugs as indicated via the attached sketches. These conditions make 100% examination impractical for these welds. To gain access for examination, the RPV head would require design modification. Imposition of this requirement would be a significant burden on TXU Energy.

V. Proposed Alternative and Basis for Use:

There are no proposed alternatives. TXU ENERGY has examined a significant portion of these welds, obtaining approximately 84% of weld TCX-1-1300-2, and 85% of weld TCX-1-1300-1 of the required volumetric examination coverage. Additionally, 100% of the required surface examination of weld TCX-1-1300-1 was performed. There were no recordable indications identified by the volumetric examinations or surface examination.

The subject welds were examined to the maximum extent possible (approximately 84% and 85% of examination completed in all cases) and yielded no indications. Based on the high percentage of the examination volume completed, and the lack of any reportable indications, there is a high level of confidence in the continued structural integrity of the welds. There is no anticipated impact upon the overall plant quality and safety, and the granting of relief should not jeopardize the health and safety of the public.

The CPSES ISI plan requires ⅓ of each weld be examined each inspection period. The limitations of the first two inspection periods have been previously reviewed and approved under relief request identified in precedents No. 2 and No. 4.

VI. Duration of Proposed Alternative:

This relief is requested for the Comanche Peak Steam Electric Station Unit 2, third period of the first 10-year interval vessel examination.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

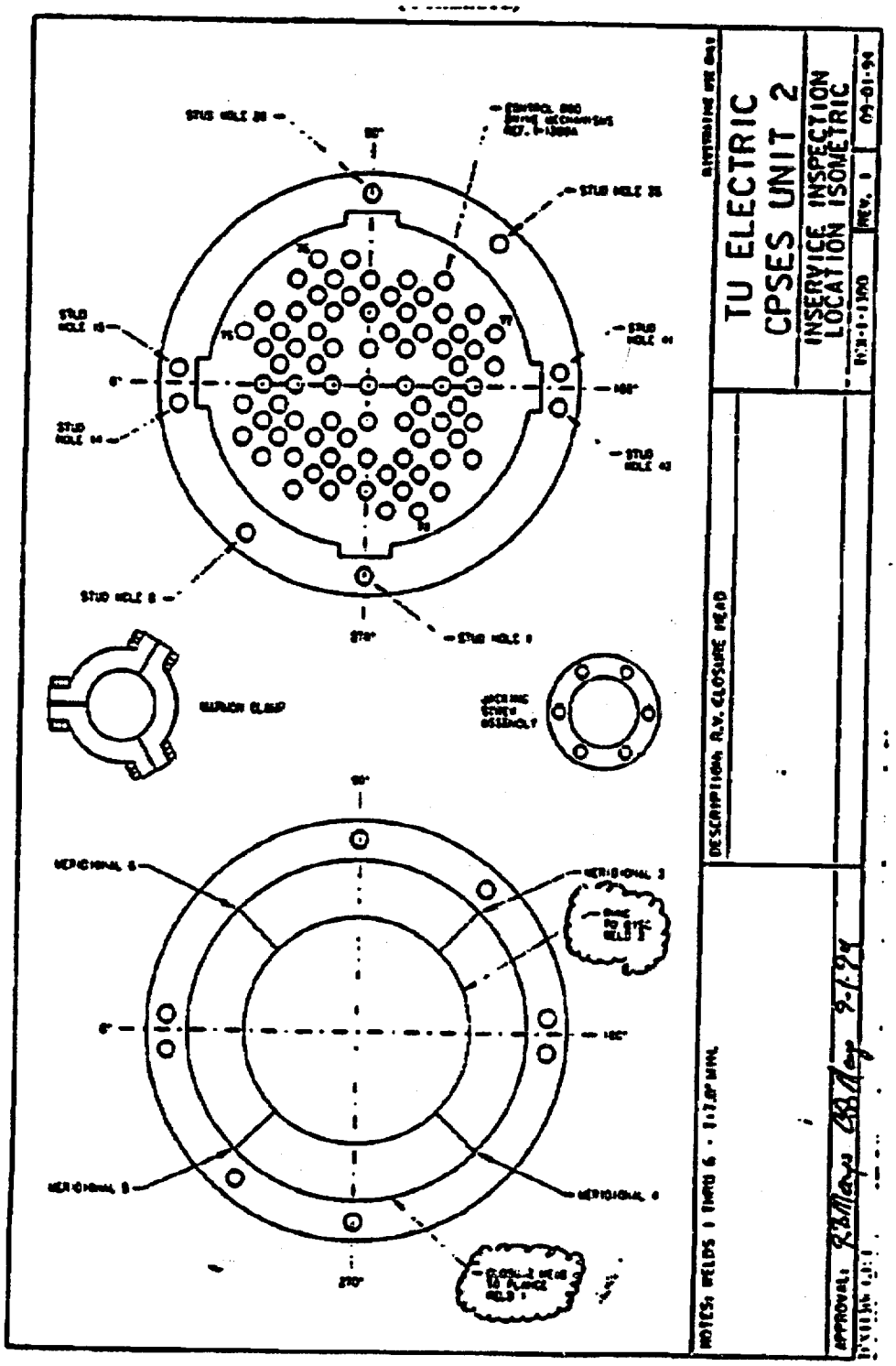
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

VII. Precedents:

1) TXU Energy letter logged TXX-98170 dated July 22, 1998, NRC response dated July 8, 1999, reference TAC NO. MA3632.
2) TXU Energy letter logged TXX-95042 dated March 6, 1995. NRC response dated December 28, 1995, reference TAC NO. M93333 and M93334.
3) NRC SER dated November 29, 1994, reference TAC NO. M83125.
4) TXU Energy letter logged TXX-01110 dated June 22, 2001. NRC response dated October 11, 2001, reference TAC NO. MB1190.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

WESTINGHOUSE NUCLEAR SERVICES DIVISION

REPORT NO. UT-22
PAGE 3 OF 5

LIMITATION TO EXAMINATION

TXU

PLANT COMANCHE PEAK UNIT 2 SKETCH TCX-1-1300

SYST / COMP R.V. CLOSURE HEAD PROCEDURE TX-ISI-210 REV. 4

EXAMINER N. Bollingmo LEVEL III DATE 4-06-02

EXAMINER S. Erickson Scott R. Erickson LEVEL II DATE 4-06-02

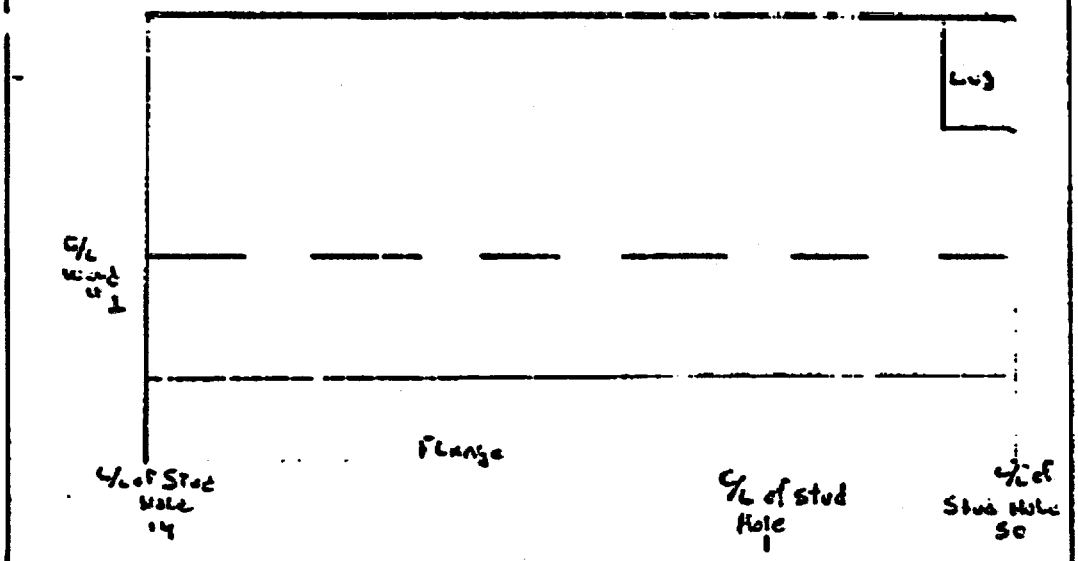
COMPONENT ID TCX-1-1300-1

RELATED TO ☐ MT ☐ PT ☒ UT ☐ VT

PROVICE SUFFICIENT INFORMATION TO DESCRIBE SIZE, LOCATION AND TYPE OF LIMITATION.

COMMENTS / SKETCH / DETAILS

15% of required volume not examined.
99% examined with 45° and 60° in at least one direction.
6% of required volume not examined with 45°, and 15% of required volume not examined with 60°.



see attached coverage plots

4/16/02

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

TXU

SURFACE EXAMINATION DATA

PAGE 1 OF 1

PLANT: COMANCHE PEAK | UNIT: 2 | SKETCH: TCX-1-1300

SYST/COMP: Reactor Vessel Closure Head | PROCEDURE: TX ISI-70 Rev. 6

EXAMINER: H Ackerman | LEVEL: II | DATE: 4 06 02

EXAMINER: C Kiehl | LEVEL: II | DATE: 4-06-02

PT | BATCH NUMBERS

CLEANER: N/A

PENETRANT: N/A

DEVELOPER: N/A

REMOVER: N/A

SURFACE THERMOMETER: N/A

MT

YOKE: TU-7b12 Magnaflux Y-6 | COIL: N/A

EXAM MEDIUM: Red Ardrox Magne-Tech

BLACK-LIGHT: N/A

CHECK TIME: N/A

SURFACE THERMOMETER: TU-2242

COMPONENT ID	RESULTS	REMARKS	LIMITATON	TEMP °F
Weld 1	NI	Examined weld from center of stud hole 50 thru 1 to center line of stud hole 14	NONE	78°F

TU ELECTRIC REVIEW / DATE: Paul M Ramlow 4/9/02

TU ELECTRIC LEVEL III REVIEW / DATE: J Ragan 4/14/02

ANI REVIEW / DATE: ANII witnessed Exam Jeff C. Hair 4/17/02

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

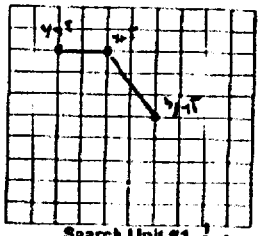
PDI **Calibration Data Sheet**

Plant/Unit: Comanche Peak /2
Company: WesDyne
Comp/System: RV Closure Head
Procedure No: TX-ISI-210
Rev/Chng No: Rev 4
Cal Block No: TRX-RV-29
Cal Block Temp: 78° Comp Temp: 82°
Therm S/N: TU-2261
Size: N/A Sch: 8.7" ~~~
[X] Ferritic [ ] Austenitic
Each Maj or CRT Div. = 1.06"/1.56"
Cal Direction: Axial Circ Both X
Scan Area: I to Weld X, II to Weld X

Date Sheet # UT-22
Page 1 of 6

Cal Checks	Time
Initial Calib.	1418
Initial Calib. Date	4-06-02
Intermediate	N/A
Intermediate	N/A
Final Calib	1554
Final Calib. Date	4-06-02

Couplant: Type: ULTRAGEL II, Batch: 01225

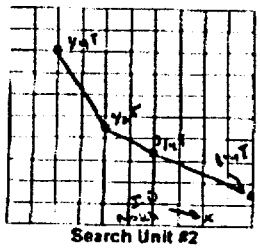


Search Unit #1

Manufacture: KBA
Serial No: 009/57/2 25 MHz
Size: 1.0" Shape: ROUND
Exam Angle: 0° Model: HP
Measured Angle: 0°
Wedge Style: N/A

Search Unit Cable
Type: RG 174 Length: 20'
Intermediate Connectors: 0

Instrument Settings
Make/Model: KBA/USN 52R
Serial No: SAP 102352
Delay: -1.813" Range: 10.64"
M'll Cal/Vel: 2330"/µs Pulser: SINGLE
Damping: 1000 Ω Reject: OFF
Rep Rate: HIGH Freq: 2-8 Mhz
Filter: N/A Mode: FULLWAVE
Reference Sensitivity (Sens.)
Axial: N/A Circ: N/A
SHD Sensitivity: 12.5 dB
Further Evaluation Required? Yes (No)



Search Unit #2

Manufacture: KBA
Serial No: 30B954/2 25 MHz
Size: 0.5" x 1.0" Shape: RECT
Exam Angle: -5° Model: GAMMA
Measured Angle: 45°
Wedge Style: NON-INTEGRAL

Search Unit Cable
Type: RG 174 Length: 20'
Intermediate Connectors: 0

Instrument Settings
Make/Model: KBA/USN 52R
Serial No: SAP 102352
Delay: 5.438" Range: 15.64"
M'll Cal/Vel: 1320"/µs Pulser: SINGLE
Damping: 1000 Ω Reject: OFF
Rep Rate: HIGH Freq: 2-8 Mhz
Filter: N/A Mode: FULLWAVE
Reference Sensitivity (Sens.)
Axial: 41.6 dB Circ: 41.6 dB
SHD Sensitivity: N/A

Examination Area/Weld	Access	Recordable Indications: Yes	Nc	Geom	Exam Sens.
TCX-1-1300-1	2 SIDED		X	NONE	30.5/59.6

Remarks/Reasons for incomplete Scan(s): See attached Limitation To Examination sheet. Examined from C/L of stud hole 14 thru stud hole 1 to C/L of stud hole 50

Examiners N. Bollingmo Level III Date 4-06-02

Reviewer: S. Erickson Level II Date 4-06-02
Date 4/8/02

II Electric Review / Date: Paul N Bunby 4/16/02

III Electric Level III Review / Date: J. Ragan 4/18/02

ANII Review / Date: Joe C. Hair 4/18/02

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

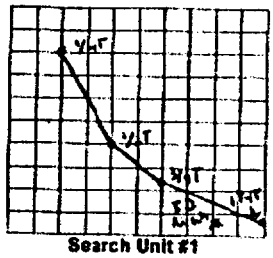
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

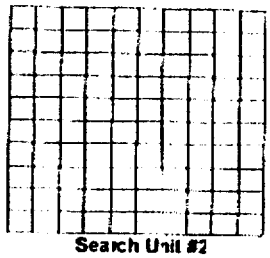
PDI **Calibration Data Sheet**

Plant/Unit: Comanche Peak / 2
Company: WesDyne
Comp/System: RV Closure Head
Procedure No: TX-ISI-210
Rev/Chng No: Rev. 4
Cal Block No: TBX-RV-29
Cal Block Temp: 78° Comp Temp 82°
Therm S/N: TU-2261
Size: N/A Sch: 8.7" "T"
[X] Ferritic [ ] Austenitic
Each Maj or CRT Div = 2.39"
Cal Direction: Axial Circ Both X
Scan Area: I to Weld X
II to Weld X

Date Sheet # UT-22A
Page 2 of 5

Cal Checks	Time
Initial Calib	1422
Initial Calib Date	4-05-02
Intermediate	N/A
Intermediate	N/A
Final Calib	1550
Final Calib Date	4-06-02





Couplant
Type: ULTRAGEL II
Batch: 01225

Examination Area/Weld	Access	Recordable Indications Yes	No	Geom	Exam Sens
TCK-1-1300-1	2 SIDED		X	NONE	65 B

Remarks/Reasons for incomplete Scan(s) See attached Limitation To Examination sheet Examined from C/L of stud hole 14 thru stud hole 1 to C/L of stud hole 50

Examiners: S. Erickson Level II Date 4-06-02
Reviewer: N. Bollingmo Level III Date 4-06-02
Date 4.8.02

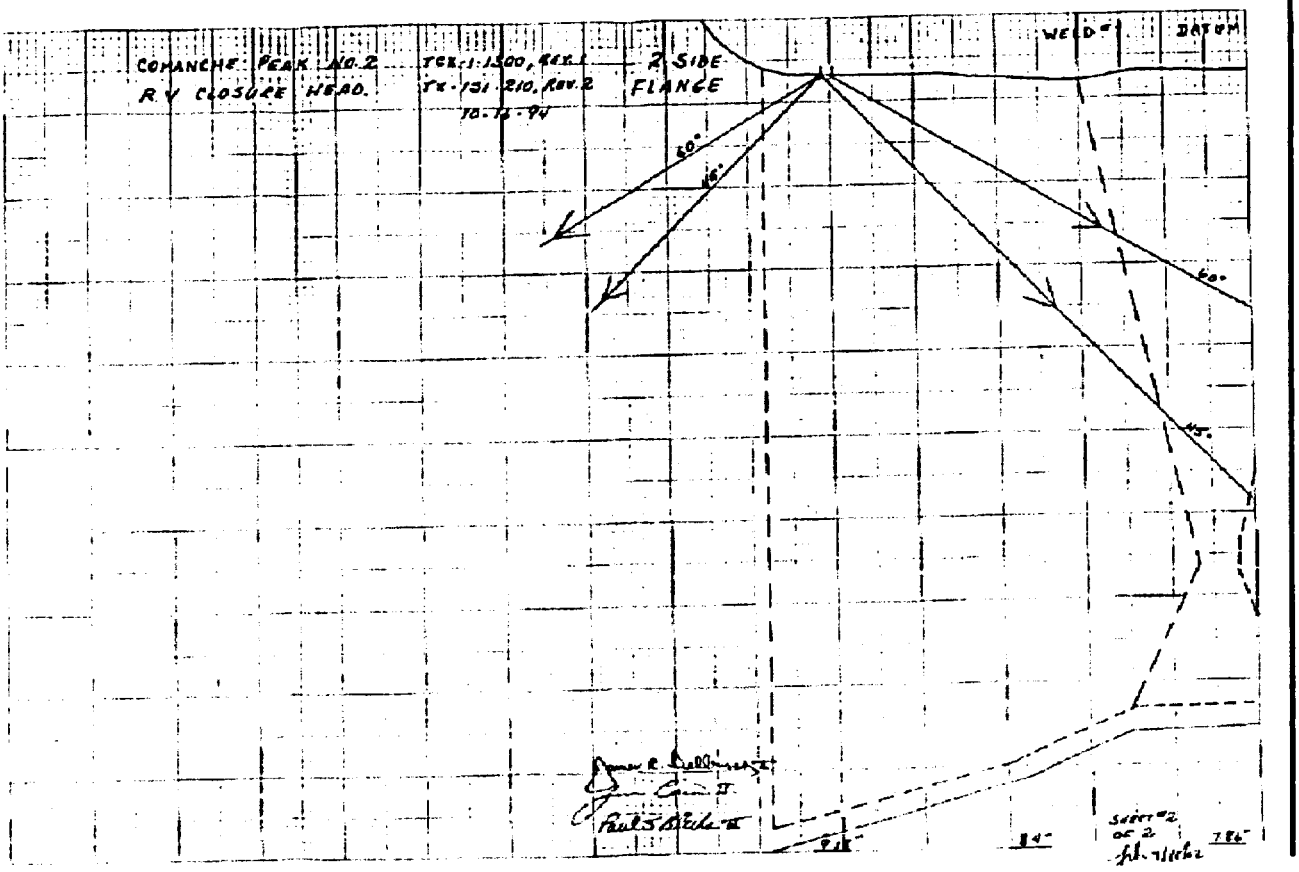
Search Unit #1
Manufacture: KBA
Serial No.: 009XBL/2.25 MHz
Size: .5" x 1.0" Shape: RECT
Exam Angle: 60° Model: GAMMA
Measured Angle: 60°
Wedge Style: NON-INTEGRAL
Search Unit Cable
Type: RG-174 Length: 20'
Intermediate Connectors: 0
Instrument Settings
Make/Model: KBA/USN 52R
Serial No.: SAP 1C2352
Delay: 6.625" Range: 23.91"
M'tl Cal/Vel: 1320'/µs Pulser: SINGLE
Damping: 1000 Ω Reject: OFF
Rep Rate: HIGH Freq: 2-8 Mhz
Filter: N/A Mode: FULLWAVE
Reference Sensitivity (Sens.)
Axial: 47.6 dB Circ: 47.6 dB
SHD Sensitivity: N/A
Further Evaluation Required? Yes (NO)

Search Unit #2
Manufacture: N/A
Serial No.: N/A
Size: N/A Shape: N/A
Exam Angle: N/A Model: N/A
Measured Angle: N/A
Wedge Stye: N/A
Search Unit Cable
Type: N/A Length: N/A
Intermediate Connectors: N/A
Instrument Settings
Make/Model: N/A
Serial No: N/A
Delay: N/A Range: N/A
M'tl Cal/Vel: N/A Pulser: N/A
Damping: N/A Reject: N/A
Rep Rate: N/A Freq: N/A
Filter: N/A Mode: N/A
Reference Sensitivity (Sens.)
Axial: N/A Circ: N/A
SDH Sensitivity: N/A

PDI Electric Review / Date: Paul N Bollingmo 4/18/02
PDI Electric Level III Review / Date: J. Raggon 4/18/02
ANII Review / Date: 4/18/02

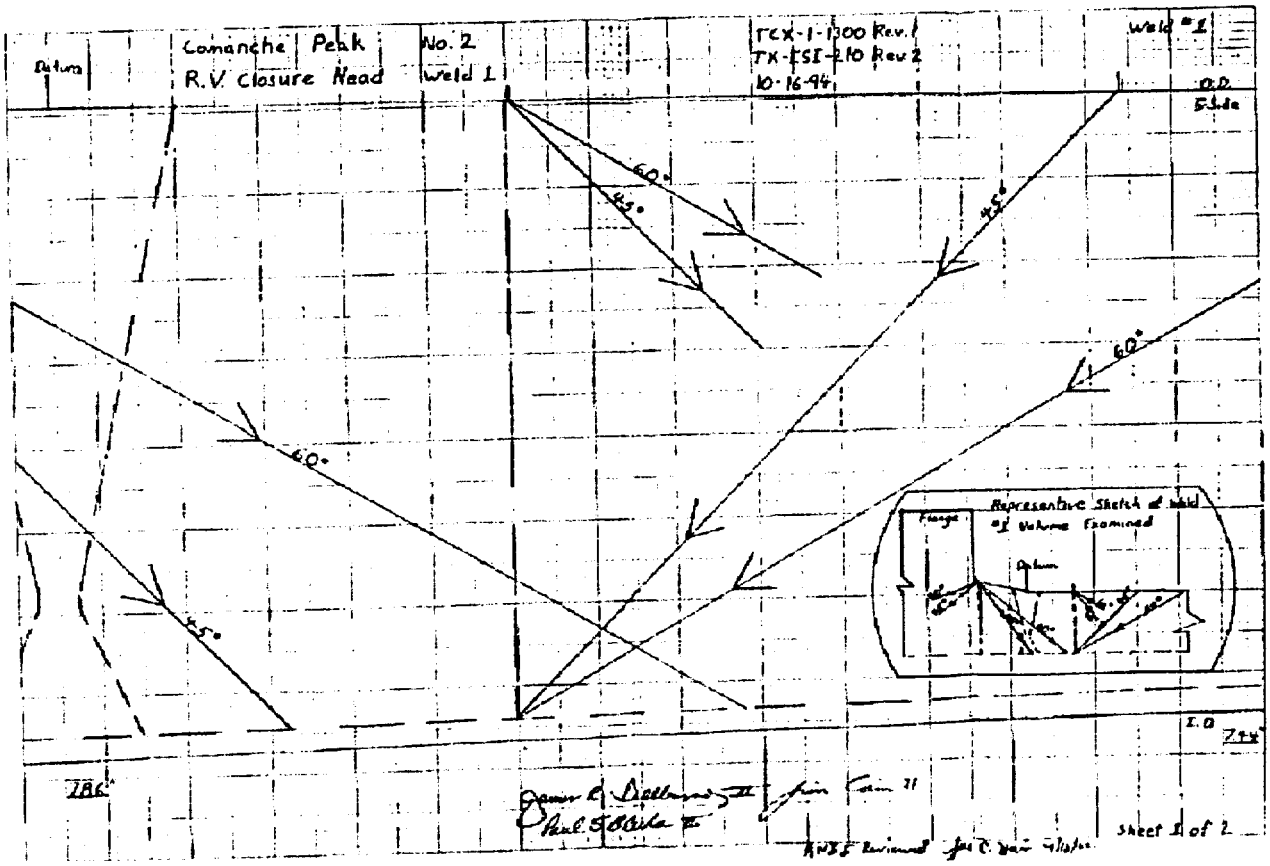
TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



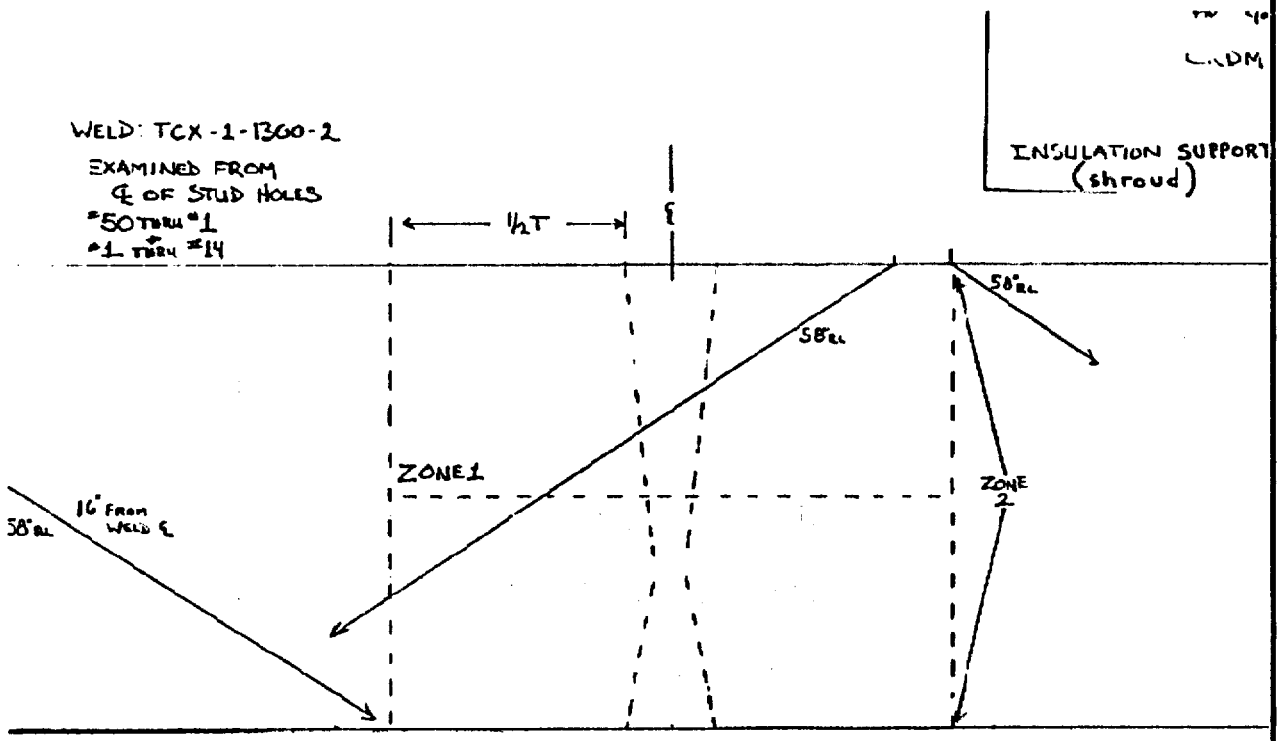
TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-7 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



COVERAGE:	ZONE 2	ZONE 1
PARALLEL SCANS	85%	85%
	85%	85%
TRANSVERSE SCANS	69%	69%
	100%	100%
TOTAL:	84%	85%

SCALE: 2:1 T= 7.3"

Douglas Gronewold LV II
4-6-02

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-

I. System/Component for Which Relief is Requested:

ASME Class I Reactor Pressure Vessel (RPV) Lower Vessel Head Circumferential Weld (Weld No. TCX-1-1100-5).

II. Code Requirement from Which Relief is Requested:

Comanche Peak Unit 2 is currently required to perform inservice examinations of selected welds in accordance with the requirements of 10 CFR 50.55a, and the 1986 Edition with no Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components.

Weld No. TCX-1-1100-5:

> Table IWB-2500-1. Examination Category B-A, Code Item B1.21, Figure IWB-2500-3. The subject weld is a full penetration weld, and requires 100% volumetric examination of the accessible portion of all circumferential welds, as defined by Figure IWB-2500-3.

III. Impracticality of Compliance:

The examination coverage is limited by physical interferences from the reactor vessel bottom mounted instrument tubes (refer to the attached sketches on pages 3 thru 6). Specifically, refer to page 4 of this attachment (lower left hand corner of the sketch), which depicts the periphery penetration. These areas behind the penetrations were not accessible to the ultrasonic scanning sled. However, cameras on the examination tools were used to visually access the areas that were not accessible to the ultrasonic transducer scanning sled. Additionally, Page 6 of this attachment depicts best effort examination coverage results for each examination angle and scan direction.

Therefore, pursuant to the requirements of 10 CFR 50 .55(g)(5)(iii) relief is requested from performing 100% volumetric examination requirements Figures IWB-2500-3.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

IV. Burden Caused by Compliance:

The examination coverage is limited by physical interferences from the reactor bottom mounted instrument tubes as indicated via the attached sketches. These conditions make 100% examination impractical for these welds. To gain access for examination, the RPV head would require design modification. Imposition of this requirement would be a significant burden on TXU Energy.

V. Proposed Alternative and Basis for Use:

There are no proposed alternatives. The subject welds were examined to the maximum extent possible (approximately 75%) and yielded no indications. Based on the high percentage of the examination volume completed, and the lack of any reportable indications, there is a high level of confidence in the continued structural integrity of the welds. There is no anticipated impact upon the overall plant quality and safety, and the granting of relief should not jeopardize the health and safety of the public.

VI. Duration of Proposed Alternative:

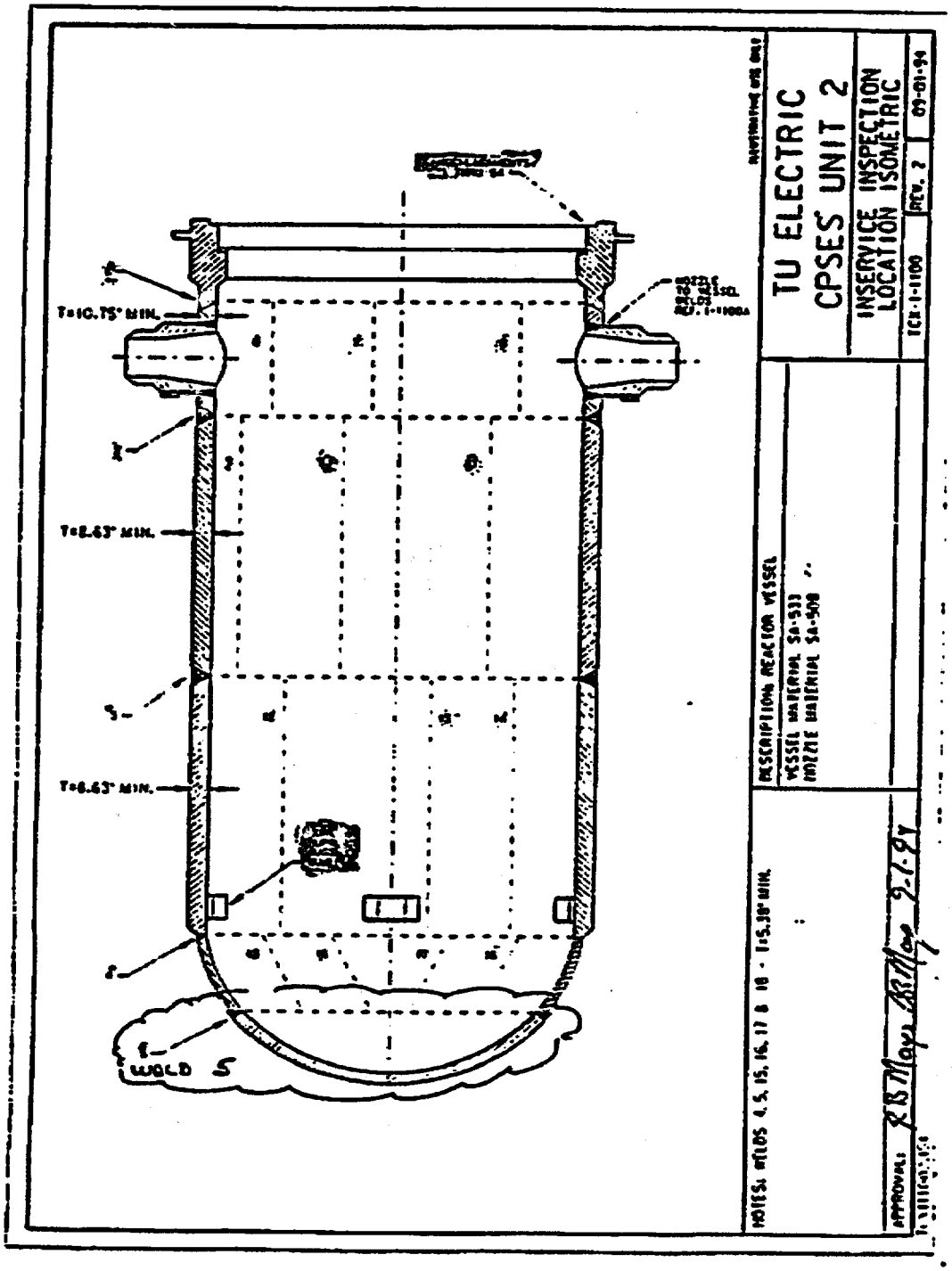
This relief is requested for the Comanche Peak Steam Electric Station Unit 2, third period of the first 10-year interval vessel examination.

VII. Precedents:

1. TXU Energy letter logged TXX-99030 dated February 17, 1999. NRC response dated September 24, 1999, reference TAC NO. MA4845 and MA6322.

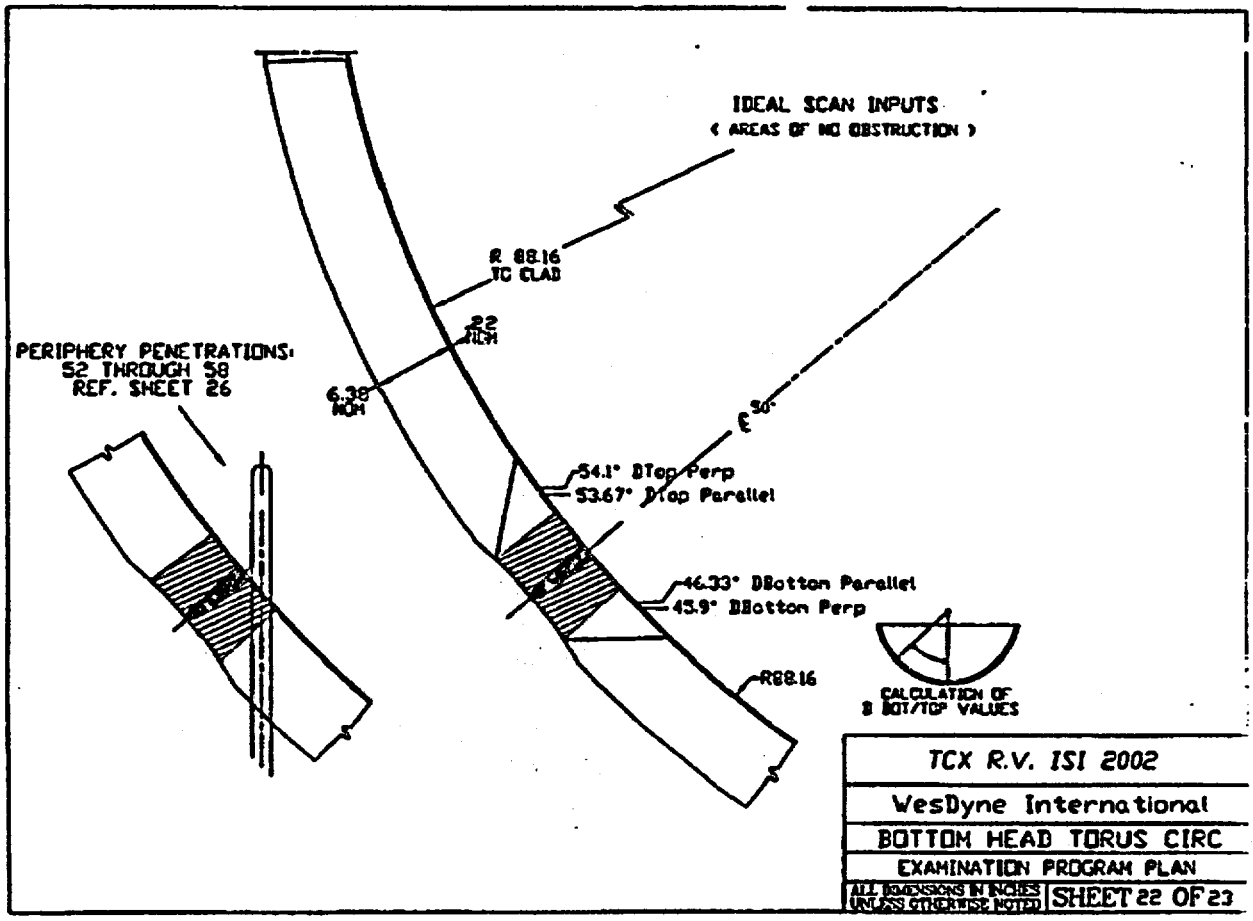
TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued



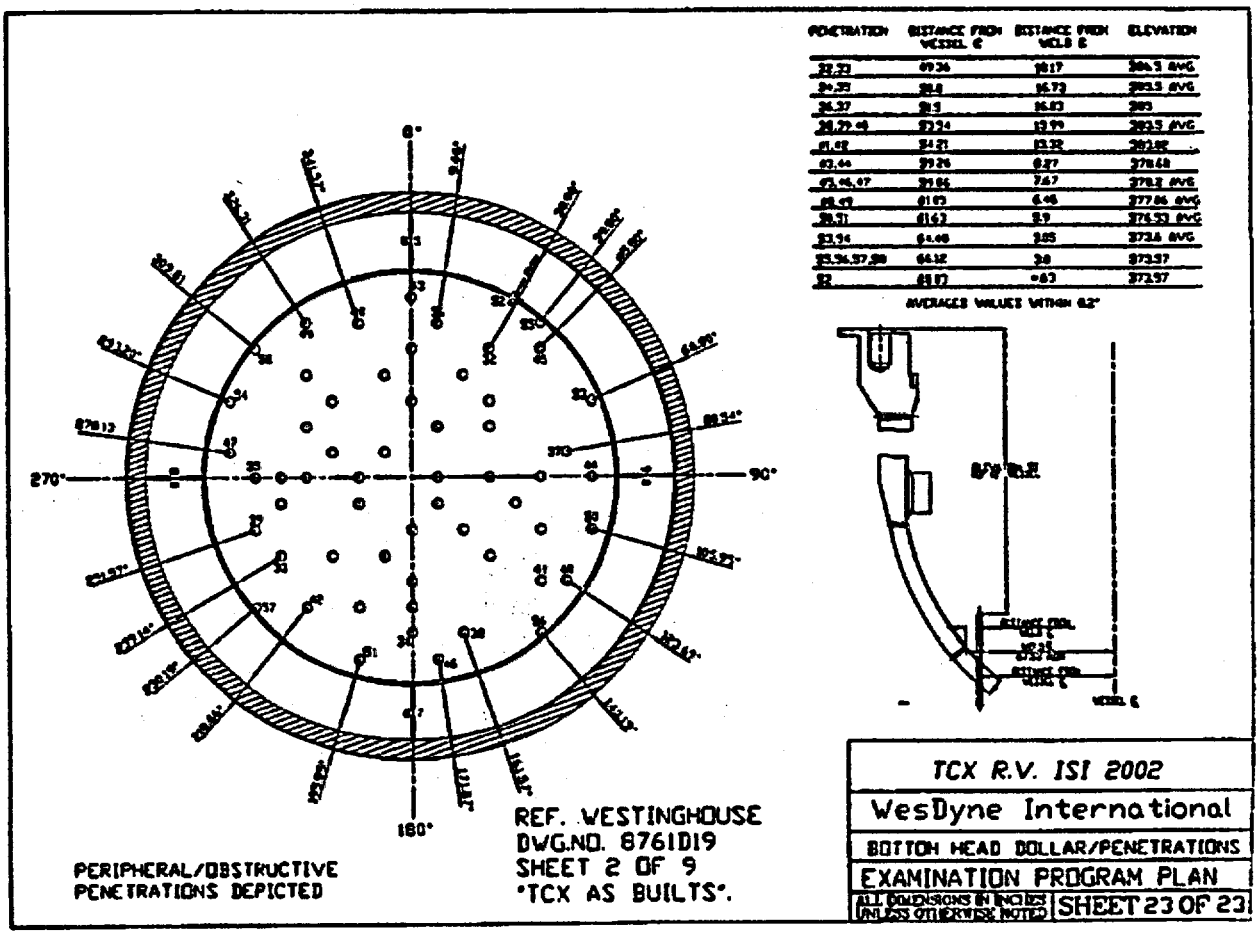
TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

Comanche Peak Unit #2 (TCX)

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS CCW / CW
PERP. SCANS UP / DN

ITEM / AREA Lower Head Circ

WELD NO. TCX-1-1100-5

BEAM ANGLES

BEAM DIRECTION	45° L Dual		45° L Single		45° Shear					
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
CCW	78.6	78.6	78.6	78.6	78.6	78.6				
CW	78.6	78.6	78.6	78.6	78.6	78.6				
UP (IN)	(1) 74	(1) 71	(1) 71	(1) 70	(1) 75	(1) 72				
DOWN (OUT)	(1) 74	(1) 71	(1) 71	(1) 70	(1) 75	(1) 72				
BORE AXIAL										

(1) Combination of dual sided and single sided scans

ANALYST

Combined Coverage = 75.5%

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-9 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-

I. System/Component for Which Relief is Requested:

ASME Class I Reactor Pressure Vessel (RPV) Outlet Nozzle to Shell Welds.

RPV Nozzle-to-Vessel Weld (Weld No. TCX-1-1100A-19)
RPV Nozzle-to-Vessel Weld (Weld No. TCX-1-1100A-22)
RPV Nozzle-to-Vessel Weld (Weld No. TCX-1-1100A-23)
RPV Nozzle-to-Vessel Weld (Weld No. TCX-1-1100A-26)

II. Code Requirement from Which Relief is Requested:

Comanche Peak Unit 2 is currently required to perform inservice examinations of selected welds in accordance with the requirements of 10 CFR 50.55a, and the 1986 Edition with no Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components. The subject welds are described in Table IWB-2500-1, Examination Category B-D, and Full Penetration Welds of Nozzles in Vessels, Code Item B3.90, Figures IWB-2500-7(b), and requires volumetric examination of these welds.

III. Impracticality of Compliance:

The examination coverage is limited by area geometries of the reactor vessel outlet nozzles. Best effort examination resulted in volumetric coverage of approximately 84.4% due to weld and vessel shell configuration. It is impractical to obtain a volumetric coverage of 100% required by the Code for each of the subject welds unless the RPV is redesigned to improve access to the welds.

Therefore, pursuant to the requirements of 10 CFR 50 .55(g)(5)(iii) relief is requested from performing 100% volumetric examination requirements Figures IWB-2500-7(b).

IV. Burden Caused by Compliance:

The examination coverage is limited by area geometries of the reactor vessel outlet nozzles, as indicated via the attached sketch on page 4. The examination tool used for this volumetric exam has been used to examine reactor vessels of similar designs at other plants with similar coverage results. These conditions make 100% examination impractical for these welds. To gain access for examination would require design modification. Imposition of this requirement would be a significant burden on TXU Energy.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-9 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued

V. Proposed Alternative and Basis for Use:

The are no proposed alternatives. TXU Energy has examined a significant portion of the weld, obtaining approximately 84.4% of the required volumetric examination coverage (see typical Table on page 5). Essentially 100% of the examination volume for each weld was examined in the axial scan direction from nozzle inside bore by techniques designed for the detection and sizing of surface and subsurface flaws oriented in a plane normal to the vessel inside surface and parallel to the weld. The examination performed in this manner emphasizes the detection of the types of flaws that can result from welding processes or inservice conditions. There were no recordable indications identified by the volumetric examination.

Additionally, cameras on the examination tool were used to visually access areas that were not accessible to the ultrasonic transducer scanning sled.

The subject welds were examined to the maximum extent possible (approximately 84% and 84.4% of examination completed in all cases) and yielded no indications. Based on the high percentage of the examination volume completed, and the lack of any reportable indications, there is a high level of confidence in the continued structural integrity of the welds. There is no anticipated impact upon the overall plant quality and safety, and the granting of relief should not jeopardize the health and safety of the public.

VI. Duration of Proposed Alternative:

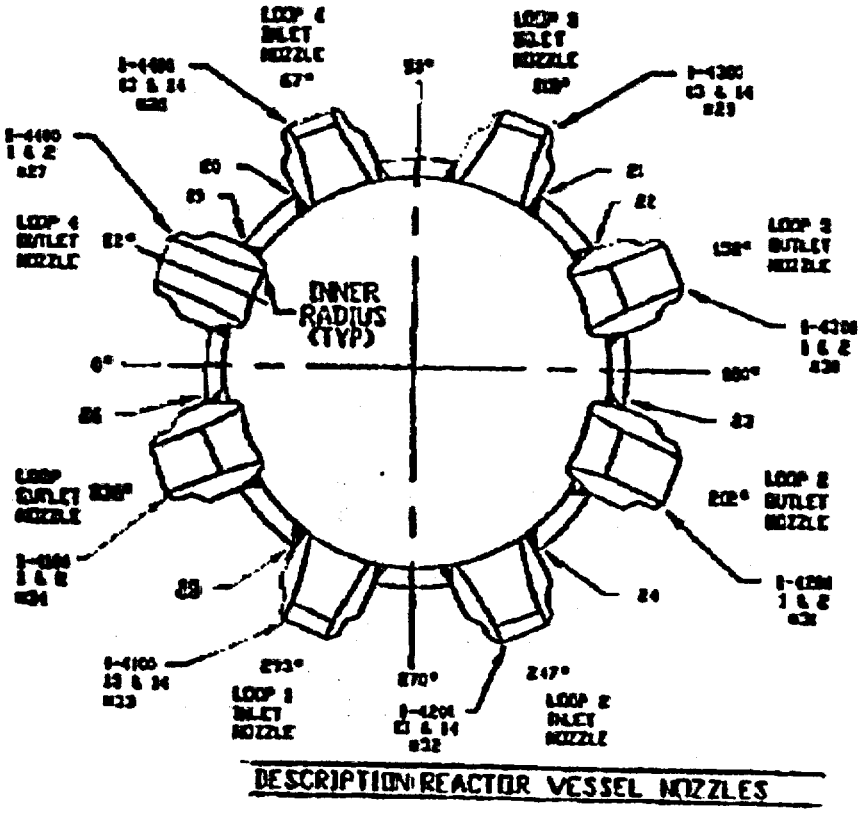
This relief is requested for the Comanche Peak Steam Electric Station Unit 2, third period of the first 10-year interval vessel examination.

VII. Precedents:

1) TXU Energy letter logged TXX-99030 dated February 17, 1999. NRC response dated September 24, 1999, reference TAC NO. MA4845 and MA6322.

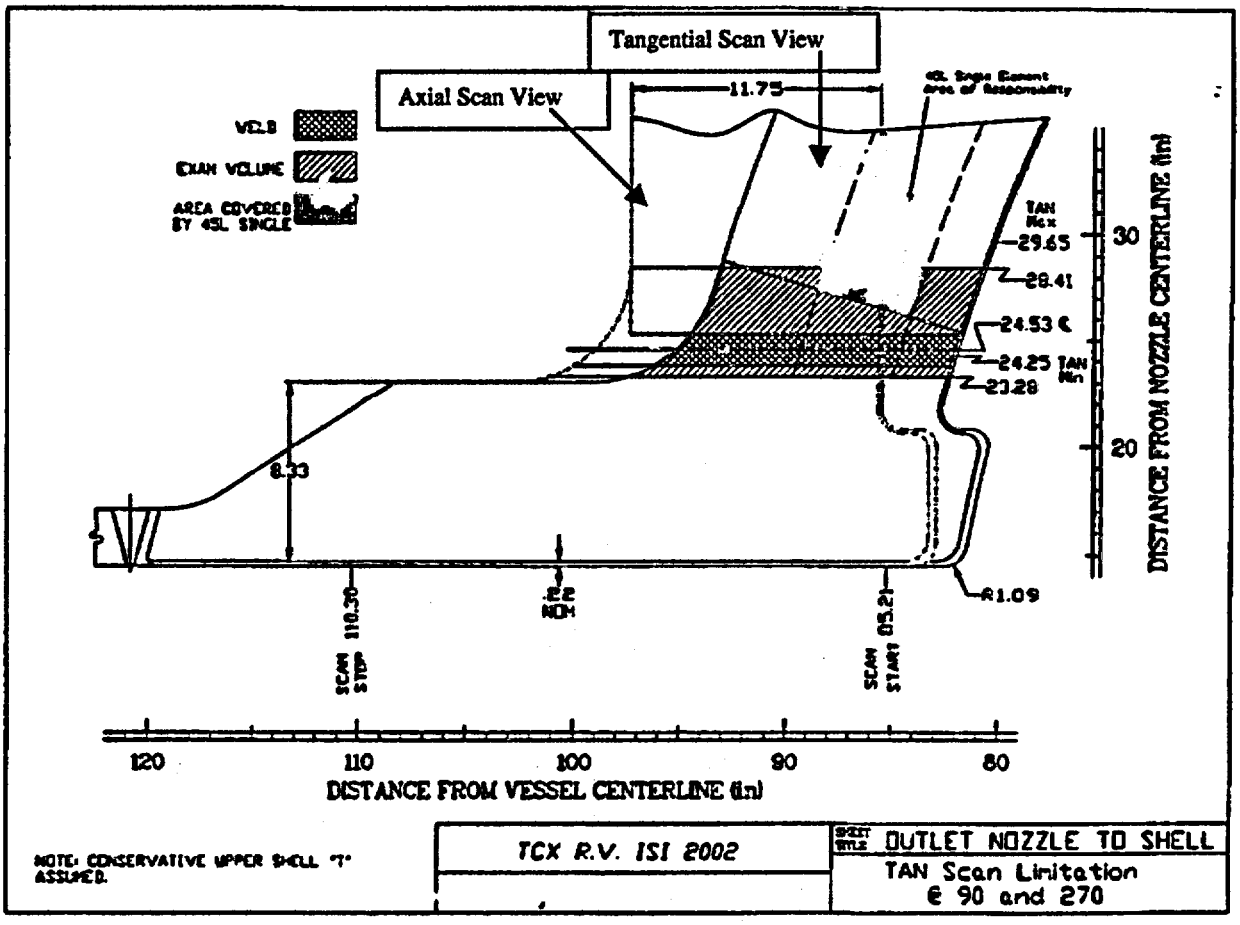
TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-9 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-9 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-9 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued

Comanche Peak Unit #2 (TCX)

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION
PARALLEL SCANS: CCW / CW
PERP. SCANS: Bore Axial

ITEM / AREA: Outlet Nozzle to Shell @ 22°

WELD NO.: TCX-1-1100A-~~18~~ Typical

BEAM ANGLES

BEAM DIRECTION	10° L		60° L		45° L Dual		45° L Single		45° Shear	
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
CCW					100	100	5	62	55	90
CW					100	100	5	62	55	90
UP (IN)										
DOWN (OUT)										
BORE AXIAL	(1) 100	(1) 100	(1) 100	(1) 100						

(1) Combined Coverage Bore Axial = 100%
(2) Tan Scan Coverage = 68.7%

ANALYST: SR Sch

Combined Coverage = 84.4%

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-

I. System/Component for Which Relief is Requested:

Chemical and Volume Control (CVCS) Pump TCX-CSAPCH-01. ASME Class 2 Integrally Welded Pump Attachments.

Weld No. TCX-2-3110-3WS
Weld No. TCX-2-3110-4WS

II. Code Requirement from Which Relief is Requested:

Comanche Peak Unit 2 is currently required to perform inservice examinations of selected welds in accordance with the requirements of 10 CFR 50.55a, and the 1986 Edition with no Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components. The subject welds are described in Table IWC-2500-1, Examination Category C-C, Code Item B3.30, Figures IWC-2500-5, and requires surface examination of these welds.

III. Impracticality of Compliance:

The examination coverage is limited due to interference from the housing seal and pump base plate, refer to the attached pictures of the welded attachment (typical for all 4 attachments). Therefore, the Code required 100% surface examination by liquid penetrant method could not be achieved. Best effort examination resulted in coverage of approximately 77% of the area. As depicted via the pictures, it is impractical to obtain coverage of 100% required by the Code for each of the subject welds unless the CVCS Pump is redesigned or completely removed of the pedestal to improve access to the welds.

Therefore, pursuant to the requirements of 10 CFR 50 .55(g)(5)(iii) relief is requested from performing 100% volumetric examination requirements of Examination Category C-C, Code Item B3.30, Figures IWC-2500-5.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued

IV. Burden Caused by Compliance:

The examination coverage is limited by area geometries of the CVCS pump housing seal and pump base plate, as indicated via the attached sketches on pages 4 thru 7. These conditions make 100% examination impractical for these welds. To gain access for examination would require design modification. Imposition of this requirement would be a significant burden on TXU Energy.

V. Proposed Alternative and Basis for Use:

There are no proposed alternatives. TXU ENERGY has examined a significant portion of these welds, obtaining approximately 77% of the required volumetric examination coverage. There were no recordable indications identified by the liquid penetrant surface examination. An attempt to visually inspect the welds was done, however, physical geometry of the location would not permit the visual examination of the entire weld area, which was obstructed by the base plate. The best effort visual examination did not reveal any matters of concern regarding the structural integrity of the accessible weld.

The subject welds were examined to the maximum extent possible (approximately 77% of the weld) and yielded no indications. A review of the previous inspection results did not identify any abnormal results for the subject welds. A visual examination of the welds (using an inspection mirror) did not reveal any reportable indications. A few utilities were polled to determine if any failures had occurred for the same welds. No matters of concern were identified. The stresses on the mounting foot attachments of the pump were reviewed, it was ascertained that the maximum stresses in the components are lower than those allowed and the bearing loads are well within the allowable limits. Therefore, TXU Energy believes the structural integrity and operability of the unit would not be affected by the most severely postulated loading conditions. Based on the high percentage of the examination volume completed, and the lack of any reportable indications, there is a high level of confidence in the continued structural integrity of the welds. There is no anticipated impact upon the overall plant quality and safety, hence, granting of relief should not jeopardize the health and safety of the public.

VI. Duration of Proposed Alternative:

This relief is requested for the Comanche Peak Steam Electric Station Unit 2, third period of the first 10-year interval vessel examination.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

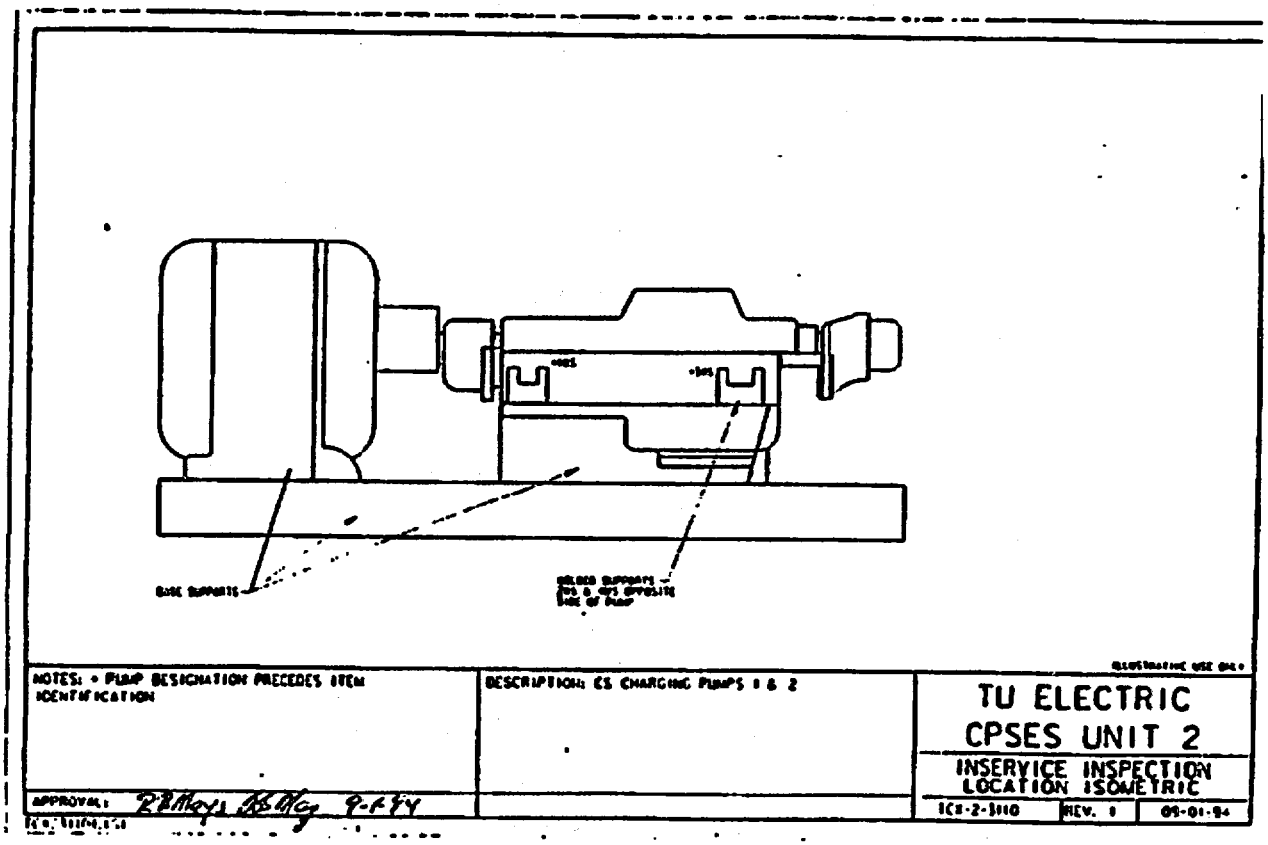
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued

VII. Precedents:

1) TXU Energy letter logged TXX-93107 dated March 15, 1993. NRC response dated November 29, 1994, reference TAC NO. M83125.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued



TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued

TXU

WESTINGHOUSE NUCLEAR SERVICES DIVISION
INSPECTION SERVICES
SURFACE EXAMINATION DATA

REPORT NO. PT-02
PAGE 1 OF 2

PLANT: COMANCHE PEAK — UNIT: 2 — SKETCH: TCX-2-3110
SYS/COMP: Centrifugal Charging Pump 1 — PROCEDURE: TX-ISI-11 Rev. 6
EXAMINER: J. Furyak — LEVEL: II — DATE: 3-20-02
EXAMINER: L. Masterson — LEVEL: II — DATE: 3-20-02

PT	BATCH NUMBERS	MT	
CLEANER: MAGNAFLUX	97E02K	YOKE: N/A	COIL: N/A
PENETRANT: MAGNAFLUX	97K07K	EXAM MEDIUM: N/A	
DEVELOPER: MAGNAFLUX	94J04K	BLACK-LIGHT: N/A	
REMOVER: MAGNAFLUX	97E02K	CHECK TIME: N/A	
SURFACE THERMOMETER: TU-2367		SURFACE THERMOMETER: N/A	

COMPONENT ID	RESULTS	REMARKS	LIMITATION	TEMP °F
1 WS	NI	Flashlight and Mirror	NONE	61°F
2 WS	NI	Flashlight and Mirror	NONE	61°F
3 WS	NI	Flashlight and Mirror	*	61°F
4 WS	NI	Flashlight and Mirror	*	61°F
			*	
		* See attached Limitation to Examination Sheet		

TU ELECTRIC REVIEW / DATE: 4/6/02
TU ELECTRIC LEVEL III REVIEW / DATE: 4/6/02
ANII REVIEW / DATE: ANII Witnessed Exams 4/8/02

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)

WESTINGHOUSE NUCLEAR SERVICES DIVISION

REPORT NO. PT-02
PAGE 2 OF 3

LIMITATION TO EXAMINATION

TXU

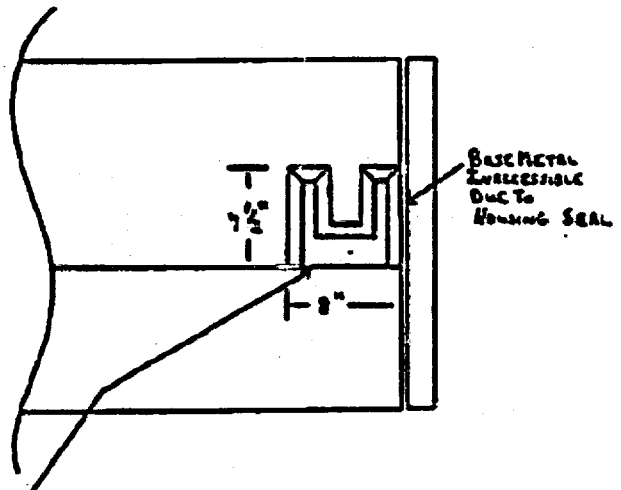
PLANT: COMANCHE PEAK UNIT: 2 SKETCH: TCX-2-3110
SYST / COMP: Centrifugal Charging Pump 1 PROCEDURE: TX-ISI-11 Rev. 6
EXAMINER: J. Ferrak LEVEL: II DATE: 3-20-02
EXAMINER: L. Masterson LEVEL: II DATE: 3-20-02

COMPONENT ID: 3 WS & 4 WS

RELATED TO: ☐ MT ☒ PT ☐ UT ☐ VT

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

COMMENTS / SKETCH / DETAILS



Weld And Base Metal Inaccessible Due To Support Base

Typical 3WS + 4WS

23% Of Required Volume Not Examined Of 3WS + 4WS

TU ELECTRIC REVIEW / DATE	TU ELECTRIC LEVEL III REVIEW / DATE	ANI REVIEW / DATE
Carl D Findley 4/4/02	J. Ragan 4/6/02	Joe C. Hair 4/6/02

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. C-6 REV 1

PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
(Continued)