



Fax Cover

TXU Electric
Technical Support
FAX # 254-897-0530

Date: 3/14/03

To: DAVE JAFFE

Company: NRC Fax:

From: BRAD BHATTY Phone: ~~88~~ 254-897-5839

Dept: Fax:

Re: RR.

- Urgent
- For Review
- Please Reply
- Please Reply When Received

DRAFT

If any pages are not received, please call: 254-897-6093

Number of pages (include cover page): _____

Ref: 10 CFR 50.55a(g) |

CPSES-XXXXXXXX
Log # TXX-XXXXXXXX
File # 10010

February XX, 2003

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-446; REQUEST FOR ADDITIONAL
INFORANTION REGARDING RELIEF REQUESTS B-7, B-8, B-9
AND C-6 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 Energy is revising its relief requests submitted via the above referenced letter.

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

TXU-XXXX

Page 2 of 2

If you have any questions or need additional information regarding this matter, please feel free to contact Obaid Bhatta at (254) 897-5839 or 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: _____
Roger D. Walker
Regulatory Affairs Manager

OAB/ob

Attachments

c - E. W. Merschoff, Region IV
W. D. Johnson, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES
Chief Inspector, TDLR

Attachment 1 to TXX-0XXXX

Page 1 of 11

**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 percent 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 3 through 9). 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.

Attachment 1 to TXX-0XXXX

Page 2 of 4

**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 percent 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 has examined a significant portion of these welds, obtaining approximately 84 percent of weld TCX-1-1300-2, and 85 percent of weld TCX-1-1300-1 of the required volumetric examination coverage. Additionally, 100 percent 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 87 % 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 health and safety of the public should not be jeopardized by the granting of relief.

The CPSES ISI plan requires 1/3 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.

Attachment 1 to TXX-0XXXXX

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**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-**

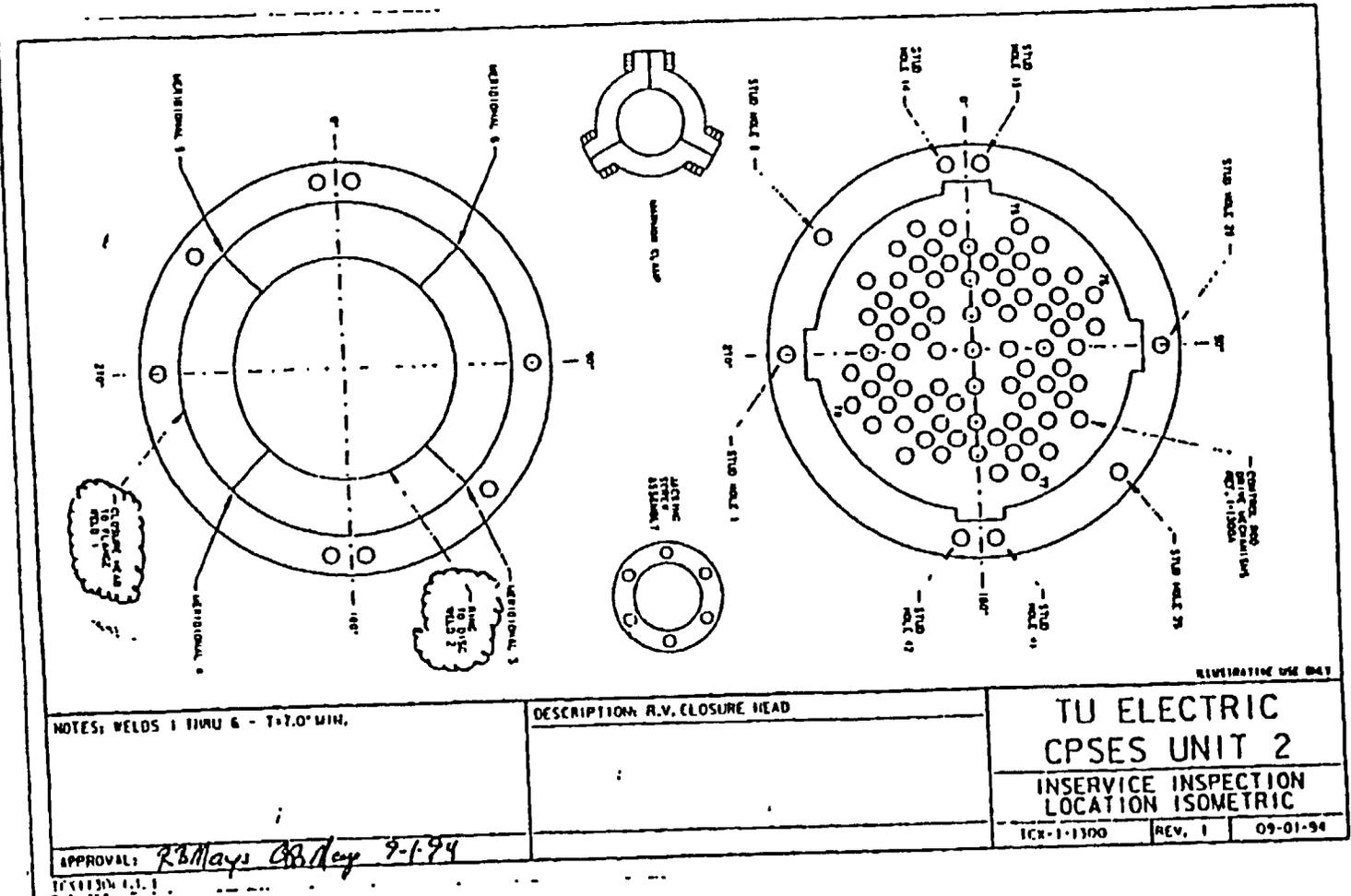
VII. Precedents:

- 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.

Attachment 1 to TXX-0XXXXX
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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)



Attachment 1 to TXX-0XXXXX
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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. <u>UT-22</u>
	LIMITATION TO EXAMINATION			PAGE <u>3</u> OF <u>5</u>
TXU	COMANCHE PEAK		UNIT <u>2</u>	SKETCH <u>TCX-1-1300</u>
PLANT	COMANCHE PEAK		UNIT <u>2</u>	SKETCH <u>TCX-1-1300</u>
SYST/COMP	R.V. CLOSURE HEAD		PROCEDURE <u>TX-ISI-210 REV. 4</u>	
EXAMINER	<u>N. Bollinger</u>	<u>W.D. H.</u>	LEVEL <u>III</u>	DATE <u>4-06-02</u>
EXAMINER	<u>S. Erickson</u>	<u>Scott R. Erickson</u>	LEVEL <u>II</u>	DATE <u>4-06-02</u>

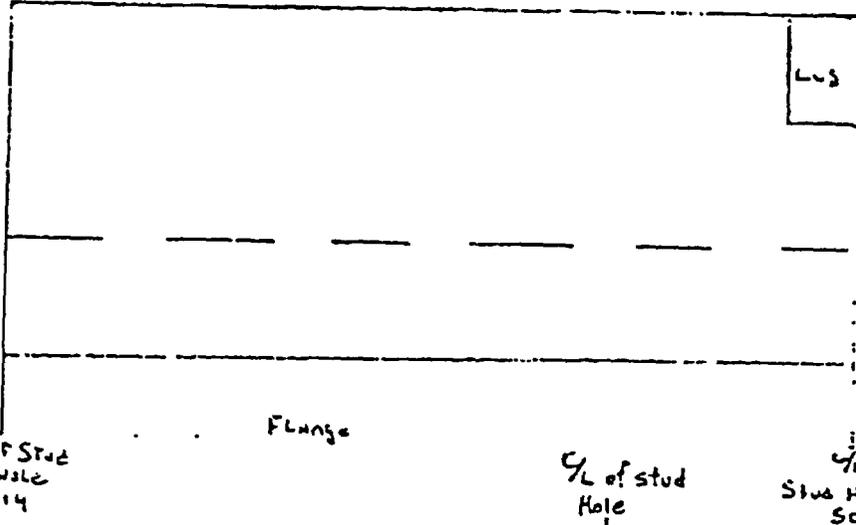
COMPONENT ID TCX-1-1300-1

RELATED TO MT PT UT VT

PROVIDE SUFFICIENT INFORMATION TO DESCRIBE SIZE LOCATION AND TYPE OF LIMITATION

COMMENTS / SKETCH / DETAILS

15% of required volume not examined.
95% examined with 45° and 60° in at least one direction.
8% of required volume not examined with 45°, and 15% of required volume not examined with 60°.



Flange

C/L of Stud Hole 14

C/L of Stud Hole 1

C/L of Stud Hole 50

see attached coverage plots

John H. H. H.

Attachment 1 to TXX-0XXXX

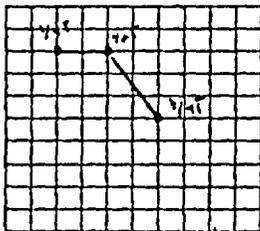
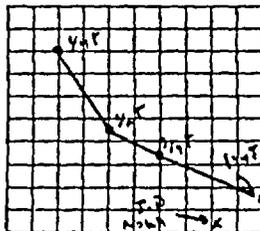
Page 7 of 4

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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-

PDI Calibration Data Sheet

Plan/Unit Company Comp/System Procedure No Rev/Chng No Cal Block No Cal Block Temp Therm S/N Size <input checked="" type="checkbox"/> Ferritic <input type="checkbox"/> Austenitic Each Maj or CRT Div = 106°/156° Cal Direction Scan Area	Comanche Peak / 2 WesDyne RV Closure Head TX-ISI-210 Rev 4 TBX-RV-29 78° Comp Temp 82° TU-2261 Sch 8 7" *T* <input type="checkbox"/> Axial <input type="checkbox"/> Circ <input checked="" type="checkbox"/> Both X 1 to Weld X 11 to Weld X	Date Sheet # Page Cal Checks Initial Calib Initial Calib Date Intermediate Intermediate Final Calib Final Calib Date	UT-22 1 of 5 Time 1418 4-06-02 N/A N/A 1554 4-06-02	 <p>Search Unit #1</p>	 <p>Search Unit #2</p>
Examination Area/Weld	Access	Recordable Indications		Exam Sens	
		Yes	No	Geom	
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 <i>N.A. B.</i> Level III Date 4-06-02		Couplant Type Batch		Manufacture Serial No Size Exam Angle Measured Angle Wedge Style	
Reviewer <i>S. Erickson</i> <i>S.P. Erickson</i> Level II Date 4-06-02		ULTRAGEL II 01225		KBA 009Y57/2 25 MHz 10" Shape ROUND 0° Model HP 0° N/A	
Date 4/8/02		Further Evaluation Required? Yes (No)		KBA 00B954/2 25 MHz 0.5" x 1.0" Shape RECT 45° Model GAMMA 45° NON-INTEGRAL	
Date 4/8/02		SHDSensitivity 12.5 dB		KBA/JUSN 52R SAP 102352 -1.813" Range 10 64" 2330 μ s Pulser SINGLE 1000 Ω Reject OFF HIGH Freq 2-8 Mhz N/A Mode FULLWAVE	
Date 4/8/02		SHDSensitivity N/A		KBA/JUSN 52R SAP 102352 5.438" Range 15 64" 1320 μ s Pulser SINGLE 1000 Ω Reject OFF HIGH Freq 2-8 Mhz N/A Mode FULLWAVE	

11 Electric Review / Date
Paul M. Brundage 4/10/02

11 Electric Level III Review / Date
J. Ragan 4/12/02

ANII Review / Date
J.C. Hair 4/12/02

Attachment 1 to TXX-0XXXX
Page 8 of 4

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-

Calibration Data Sheet

PDI

Plant/Unit <u>Comanche Peak / 2</u>	Date Sheet # <u>UT-22A</u>	
Company <u>WesDyne</u>	Page <u>2</u> of <u>5</u>	
Comp/System <u>RV Closure Head</u>	Cal Checks	Time
Procedure No <u>TX-ISI-210</u>	Initial Calib	<u>1422</u>
Rev/Chng No <u>Rev 4</u>	Initial Calib Date	<u>4-06-02</u>
Cal Block No <u>TBX RV-29</u>	Intermediate	<u>N/A</u>
Cal Block Temp <u>78° Comp Temp 82°</u>	Intermediate	<u>N/A</u>
Therm S/N <u>TU-2261</u>	Final Calib	<u>1550</u>
Size <u>N/A</u>	Final Calib Date	<u>4-06-02</u>
Sch. <u>B 7° "T"</u>		
<input checked="" type="checkbox"/> Ferritic <input type="checkbox"/> Austenitic		
Each Maj or CRT Div = <u>2.39°</u>	Couplant	Manufacture
Cal Direction Axial <input type="checkbox"/> Circ <input type="checkbox"/> Both <input checked="" type="checkbox"/>	Type <u>ULTRAGEL II</u>	<u>KBA</u>
Scan Area <u>I to Weld X</u> <u>II to Weld X</u>	Batch <u>01225</u>	Serial No: <u>009XBL/2 25 Mhz</u>
		Size <u>5" x 1 0" Shape RECT.</u>
		Exam Angle <u>60° Model GAMMA</u>
		Measured Angle <u>60°</u>
		Wedge Style <u>NON-INTEGRAL</u>
		Wedge Style <u>Search Unit Cable</u>
		Type <u>N/A</u> Length <u>N/A</u>
		Intermediate Connectors <u>0</u>
		Instrument Settings
		Make/Model <u>KBA/USN 52R</u>
		Serial No <u>SAP 102352</u>
		Delay <u>6.625° Range 23.91°</u>
		M'tl Cal/Vel <u>.1320"/µs Pulser SINGLE</u>
		Damping <u>1000 Ω Reject OFF</u>
		Rep Rate <u>HIGH Freq 2-8 Mhz</u>
		Filter <u>N/A Mode FULLWAVE</u>
		Reference Sensitivity (Sens)
		Axial <u>47.6 dB</u> Circ <u>47.6 dB</u>
		SHDSensitivity <u>N/A</u>
		Further Evaluation Required? Yes <u>(No)</u>

Examination Area/Weld	Access	Recordable Indications			Exam Sens
		Yes	No	Geom	
<u>TCX-1-1300-1</u>	<u>2 SIDED</u>		<u>X</u>	<u>NONE</u>	<u>65.6</u>

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 <u>S. Erickson</u> <u>S. R. ...</u> Level <u>II</u> Date <u>4-06-02</u>	Reference Sensitivity (Sens)
Reviewer <u>N. Bollingma</u> <u>N/A</u> Level <u>III</u> Date <u>4-06-02</u>	Axial <u>47.6 dB</u> Circ <u>47.6 dB</u>
	SHDSensitivity <u>N/A</u>
	Further Evaluation Required? Yes <u>(No)</u>

Level II Electric Review / Date

N. Bollingma 4/11/02

Level III Electric Review / Date

J. R. ... 4/18/02

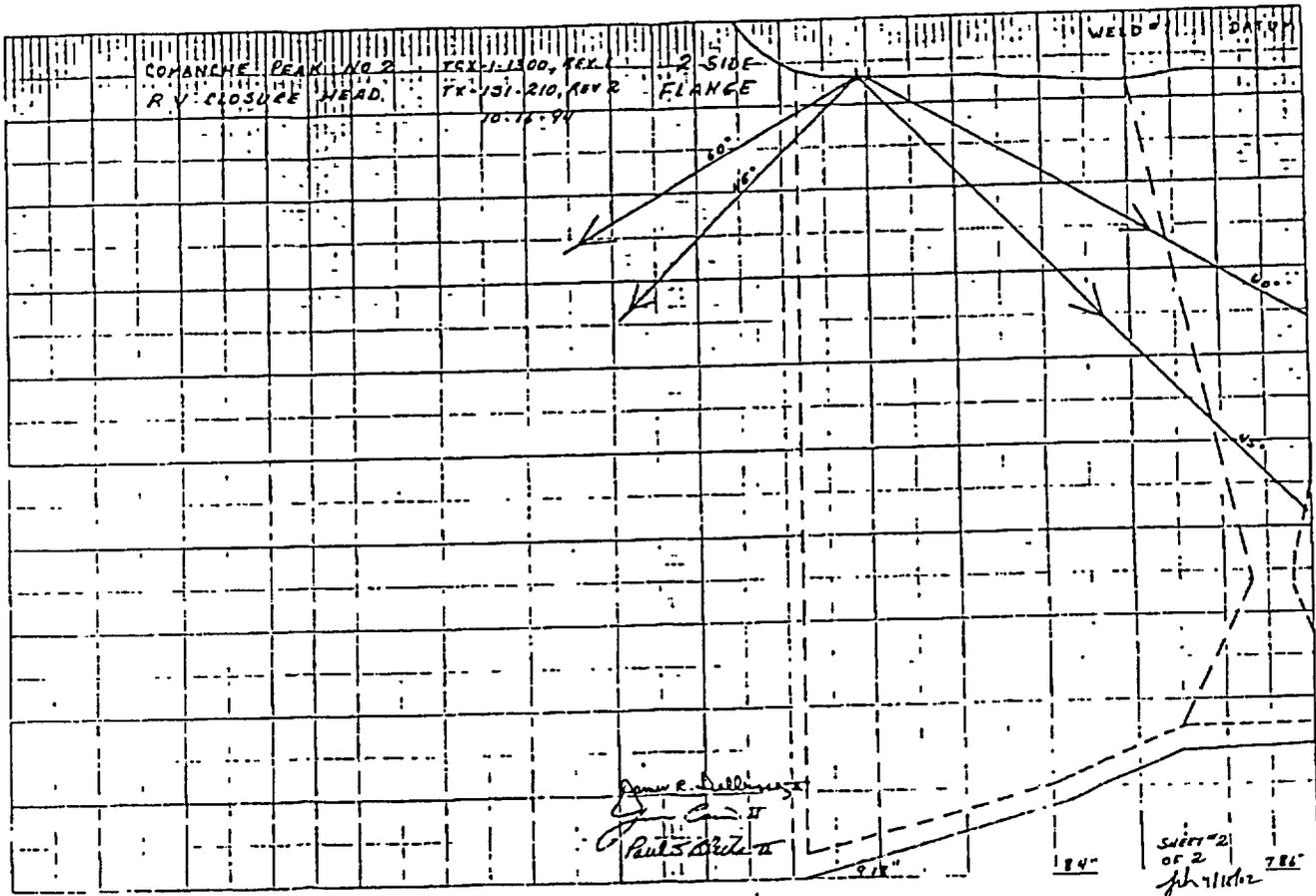
Level III Review / Date

J. R. ... 4/11/02

Attachment 1 to TXX-0XXXX
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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-

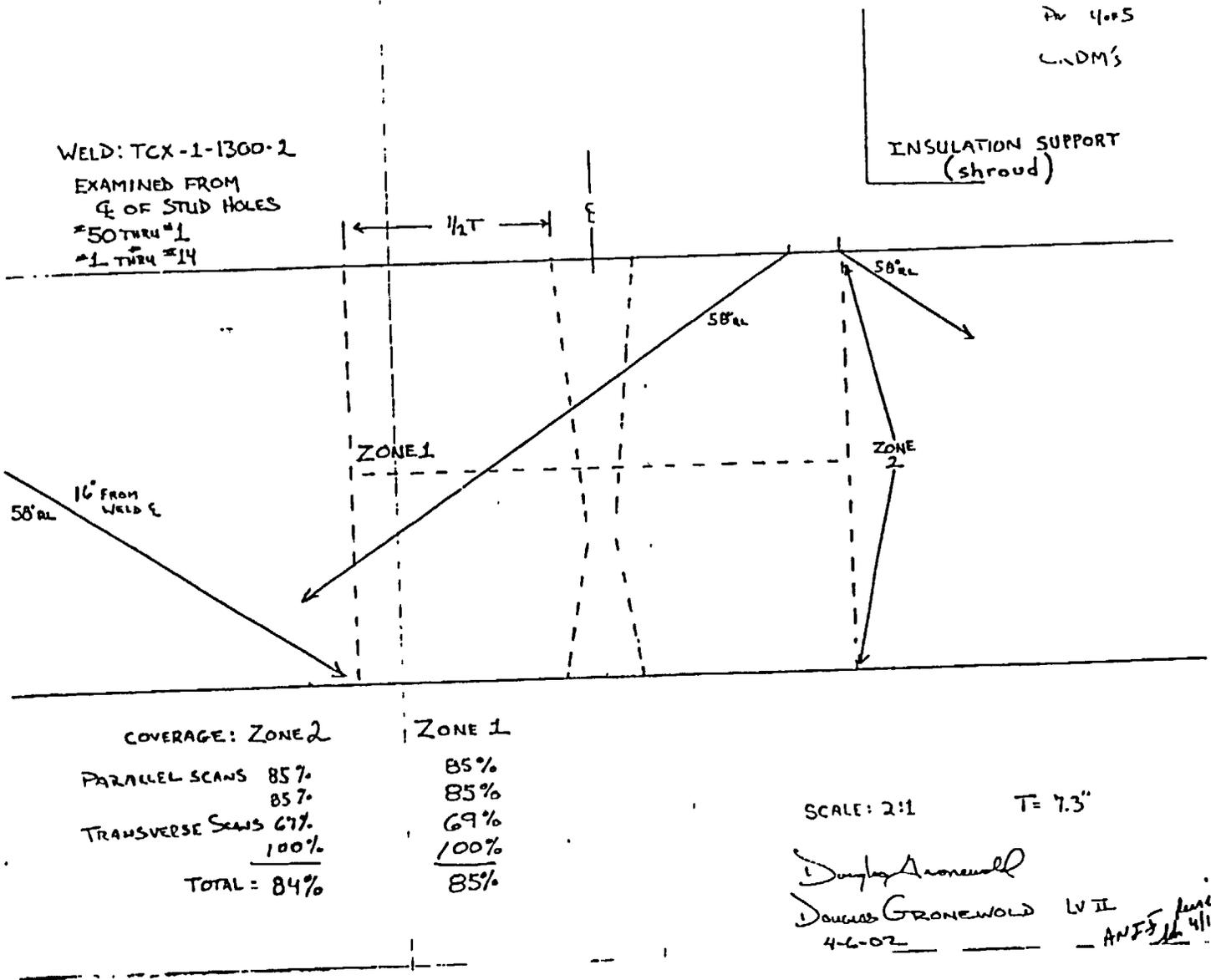


Attachment 1 to TXX-0XXXX

Page 11 of 8

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-



COVERAGE: ZONE 2		ZONE 1	
PARALLEL SCANS	85%	85%	
	85%	85%	
TRANSVERSE SCANS	67%	69%	
	100%	100%	
TOTAL =	84%	85%	

SCALE: 2:1 T = 7.3"

Douglas Gronewold
 DOUGLAS GRONEWOLD W II
 4-6-02 ANFS June 4/10

Attachment 2 to TXX-0XXXXXX

Page 1 of 8

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**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 percent 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.

Attachment 2 to TXX-0XXXXXX

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**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 percent 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 health and safety of the public should not be jeopardized by the granting of relief.

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:

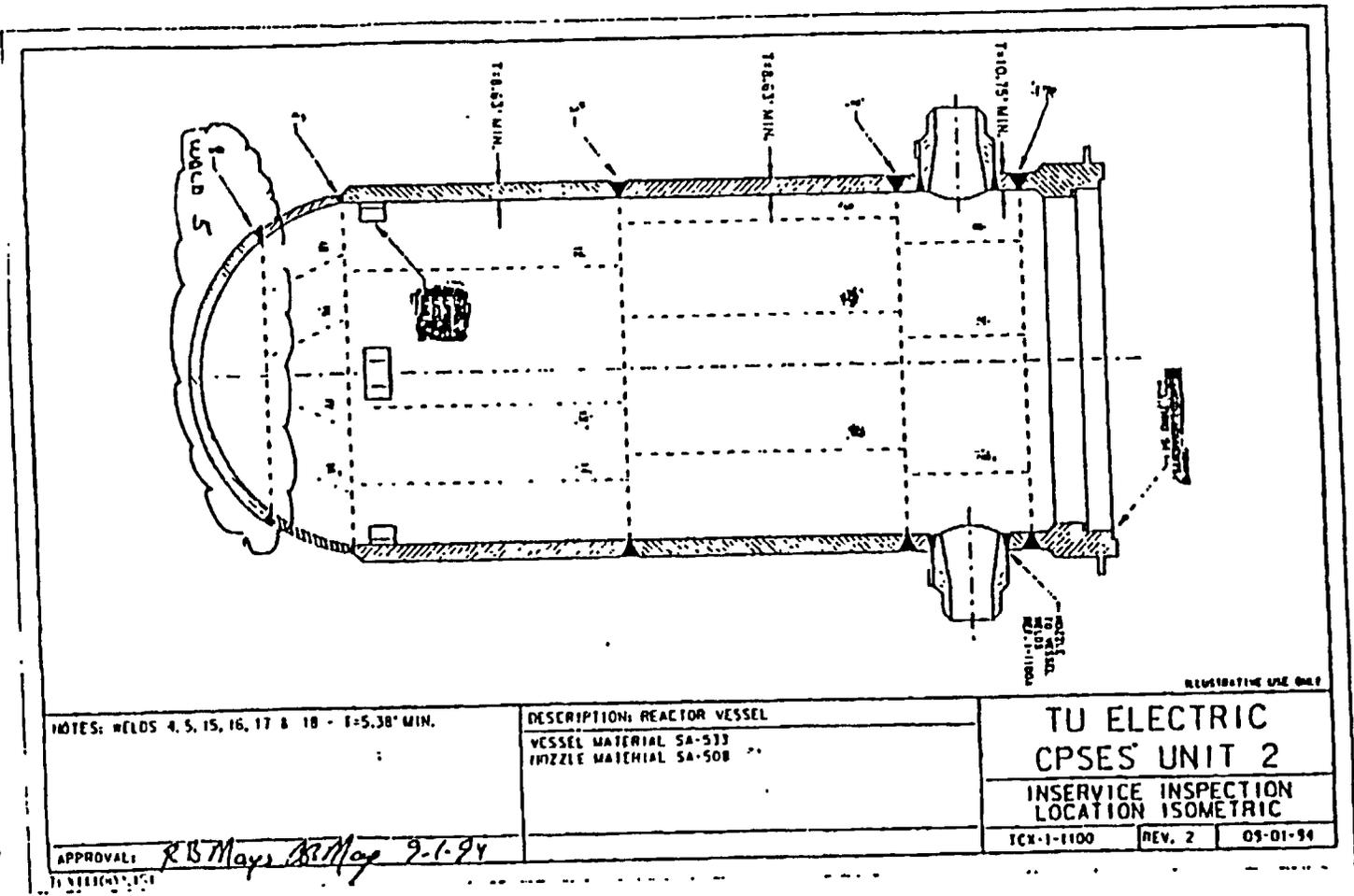
1. TXU Energy letter logged TXX-99030 dated February 17, 1999. NRC response dated September 24, 1999, reference TAC NO. MA4845 and MA6322.

Attachment 2 to TXX-0XXXXX

Page 3 of 6

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

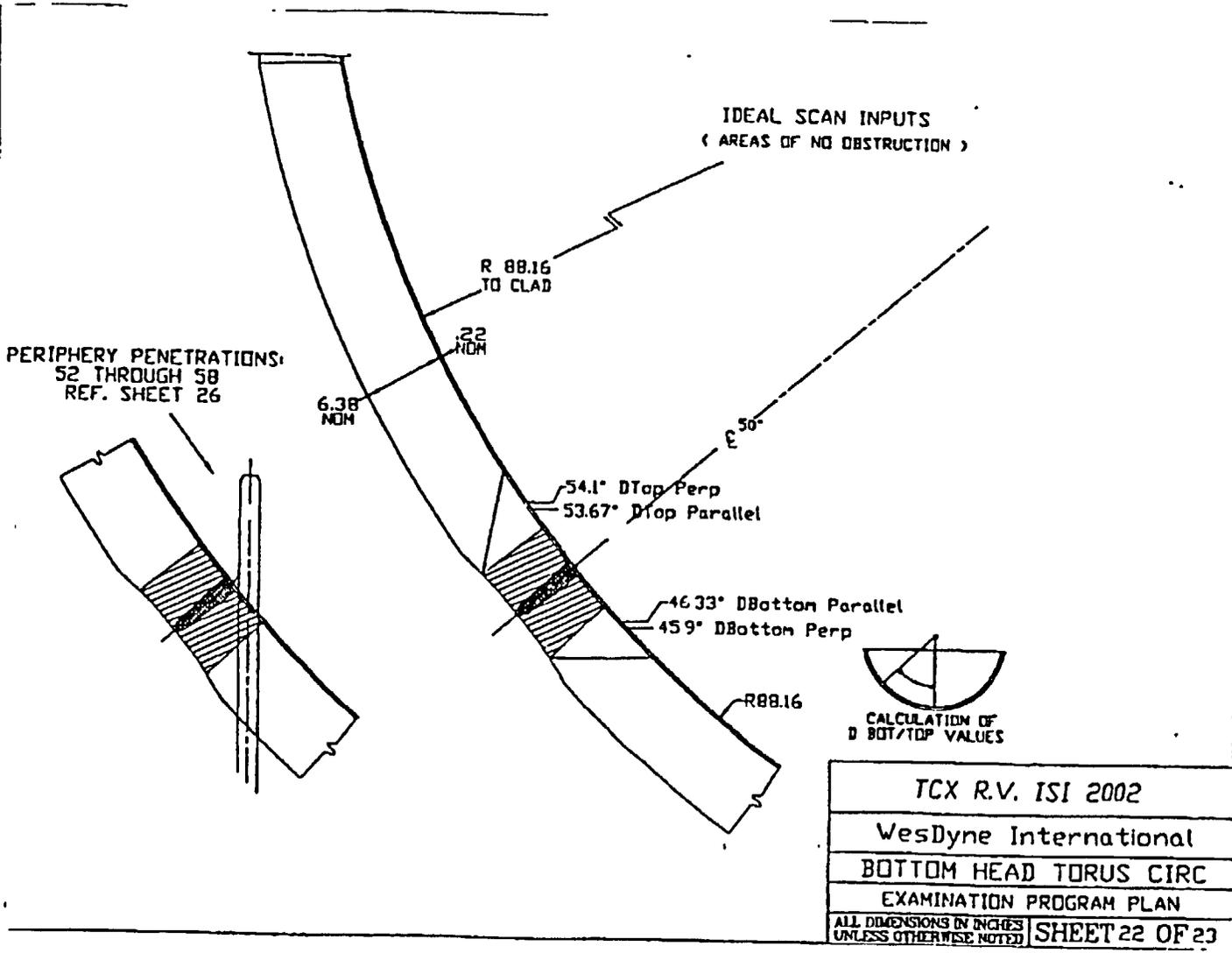


Attachment 2 to TXX-0XXXXX

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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



Attachment 2 to TXX-0XXXXXX

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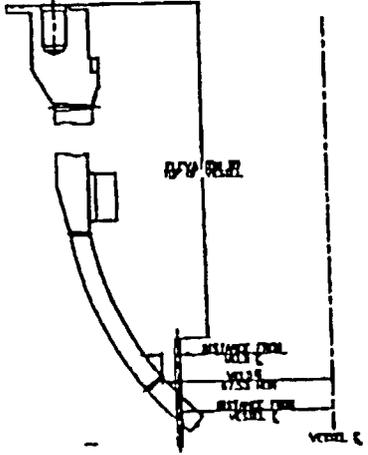
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TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
FIRST TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. B-8 REV 1

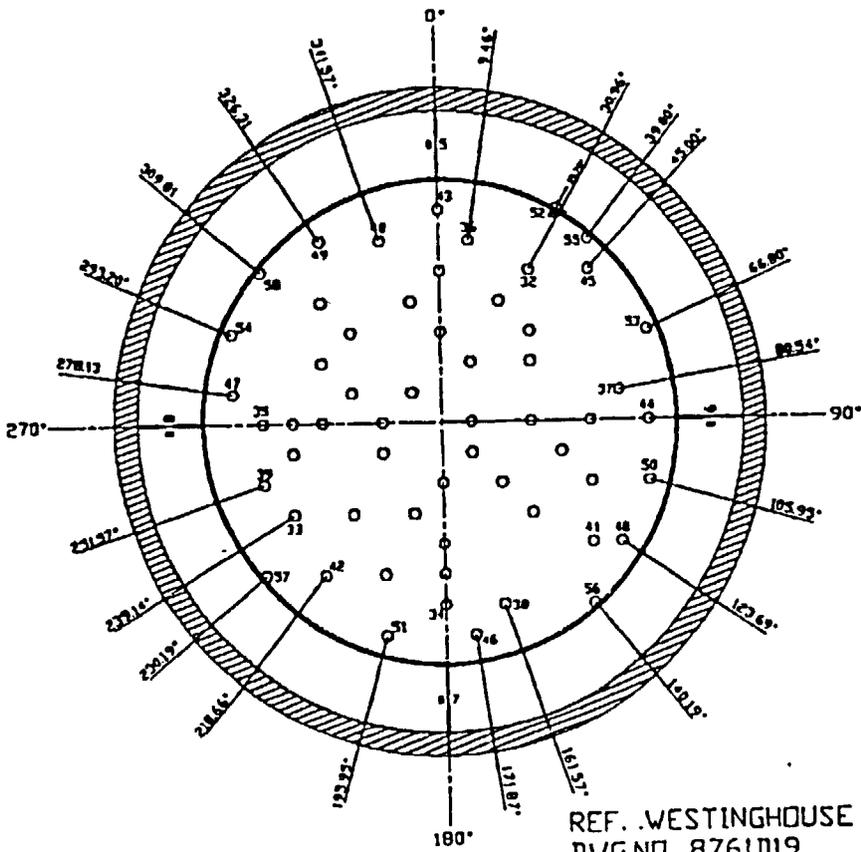
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(g)(5)(iii)
-INSERVICE INSPECTION IMPRACTICALITY-
Continued

PENETRATION	DISTANCE FROM VESSEL C	DISTANCE FROM WELD C	ELEVATION
32.33	49.36	18.17	386.3 AVG
34.73	56.8	16.73	383.5 AVG
36.37	51.5	16.63	385
38.29,48	33.54	13.99	383.3 AVG
41.42	54.21	13.32	381.82
43.44	57.26	8.27	378.68
45.46,47	51.84	7.67	378.2 AVG
48.49	61.63	6.48	377.86 AVG
50.51	61.63	3.9	374.53 AVG
53.54	64.48	3.05	373.6 AVG
55.56,57,58	66.12	3.8	373.57
52	68.83	-6.3	373.57

AVERAGED VALUES WITHIN 82°



TCX R.V. ISI 2002
WesDyne International
BOTTOM HEAD DOLLAR/PENETRATIONS
EXAMINATION PROGRAM PLAN
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED
SHEET 23 OF 23;



PERIPHERAL/OBSTRUCTIVE PENETRATIONS DEPICTED

REF. WESTINGHOUSE DWG.NO. 8761D19 SHEET 2 OF 9 'TCX AS BUILTS'.

Attachment 2 to TXX-0XXXXX
 Page 6 of 6

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) DIRECTION / ORIENTATION

RPV COVERAGE ESTIMATE BREAKDOWNS 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	78.8	78.8	78.8	78.8	78.8	78.8				
CW	78.8	78.8	78.8	78.8	78.8	78.8				
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 exams

ANALYST CSK

Combined Coverage = 75.5%

Attachment 3 to TXX-0XXXXXX

Page 1 of 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 percent due to weld and vessel shell configuration. It is impractical to obtain a volumetric coverage of 100 percent 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 3. These conditions make 100 percent examination impractical for these welds. 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. To gain access for examination would require

Attachment 3 to TXX-0XXXXXX

Page 2 of 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-
Continued**

design modification. Imposition of this requirement would be a significant burden on TXU Energy.

V. Proposed Alternative and Basis for Use:

The are no proposed alternatives. TXU has examined a significant portion of the weld, obtaining approximately 84.4 percent of the required volumetric examination coverage (see typical Table on page 4). Essentially 100 percent 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 health and safety of the public should not be jeopardized by the granting of relief.

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:

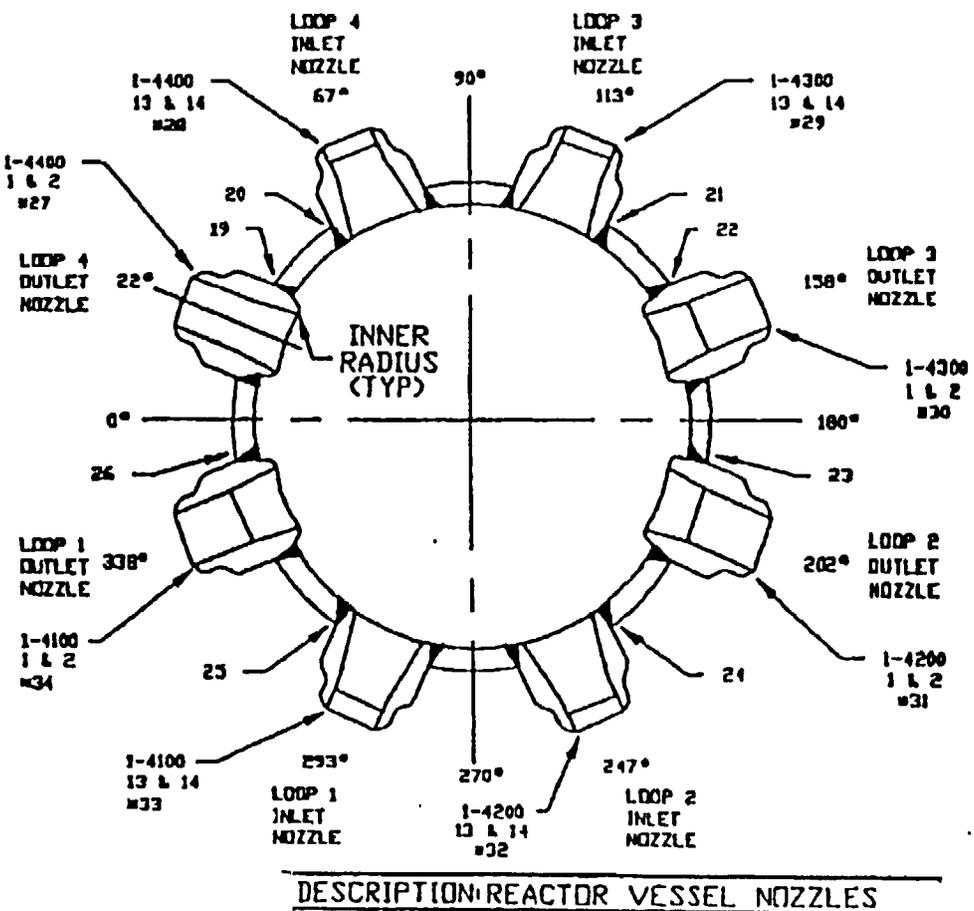
- 1) TXU Energy letter logged TXX-99030 dated February 17, 1999. NRC response dated September 24, 1999, reference TAC NO. MA4845 and MA6322.

Attachment 3 to TXX-0XXXXX

Page 3 of 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-
 Continued

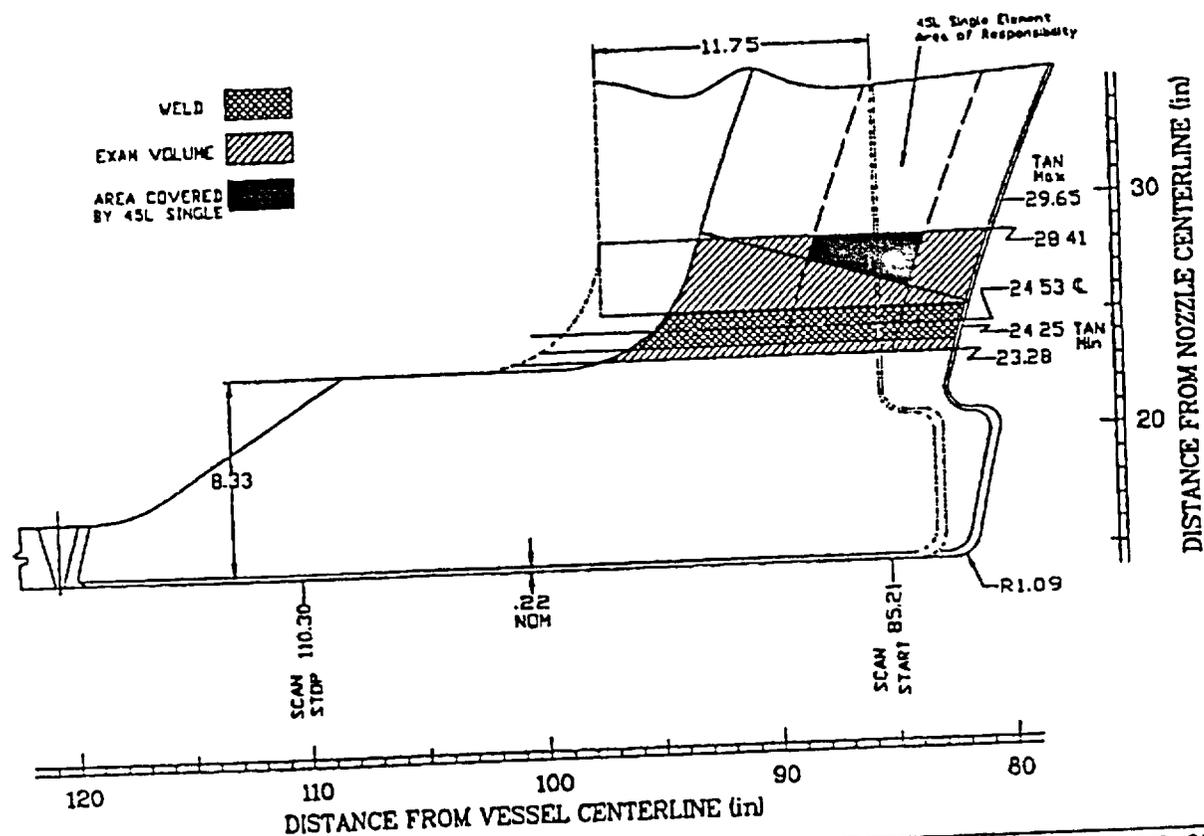


Attachment 3 to TXX-0XXXXXX

Page 4 of 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-
Continued



NOTE: CONSERVATIVE UPPER SHELL "T" ASSUMED

TCX R.V. ISI 2002	SHEET TITLE	OUTLET NOZZLE TO SHELL
	TAN Scan Limitation @ 90 and 270	

Attachment 3 to TXX-0XXXXXX
 Page 5 of 6

**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)	DIRECTION / ORIENTATION
RPV COVERAGE ESTIMATE BREAKDOWNS	PARALLEL SCANS <u>CCW / CW</u> PERP. SCANS <u>Bore Axial</u>
ITEM / AREA <u>Outlet Nozzle to Shell @ 22°</u>	WELD NO. <u>TCX-1-1100A-39</u> <i>TYPICAL</i>

BEAM ANGLES

BEAM DIRECTION	10° L		50° 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%
Combined Coverage = 81.4%

ANALYST SA Seb

Attachment 4 to TXX-0XXXXXX
Page 1 of 6

**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 percent surface examination by liquid penetrant method can not be achieved. Best effort examination resulted in coverage of approximately 77 percent of the area. As depicted via the pictures, it is impractical to obtain coverage of 100 percent 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.

Attachment 4 to TXX-0XXXXXX

Page 2 of 6

**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 3 thru 5. These conditions make 100 percent 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 has examined a significant portion of these welds, obtaining approximately 77 percent 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 percent of the weld) 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 health and safety of the public should not be jeopardized by the granting of relief.

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.

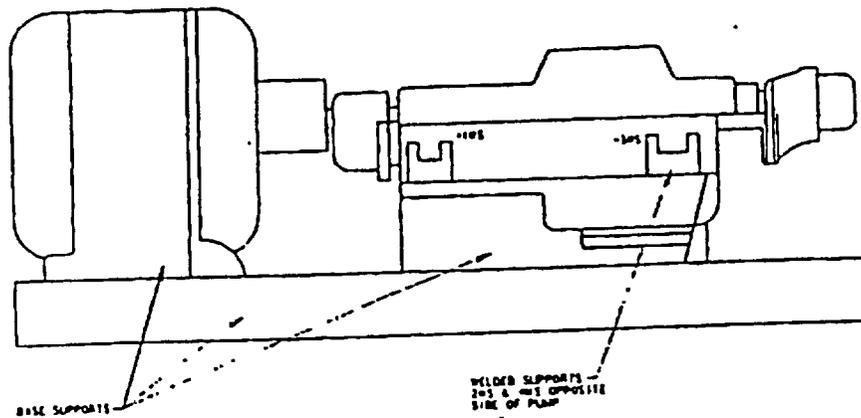
VII. Precedents:

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

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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



ILLUSTRATIVE USE ONLY

NOTES: * PUMP DESIGNATION PRECEDES ITEM IDENTIFICATION

DESCRIPTION: CS CHARGING PUMPS 1 & 2

TU ELECTRIC
CPSES UNIT 2

INSERVICE INSPECTION
LOCATION ISOMETRIC

1CX-2-3110

REV. 1

03-01-94

APPROVAL:

R. May *AS May 9-1-94*

TE 9-11111.1.11

Attachment 4 to TXX-0XXXXX
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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

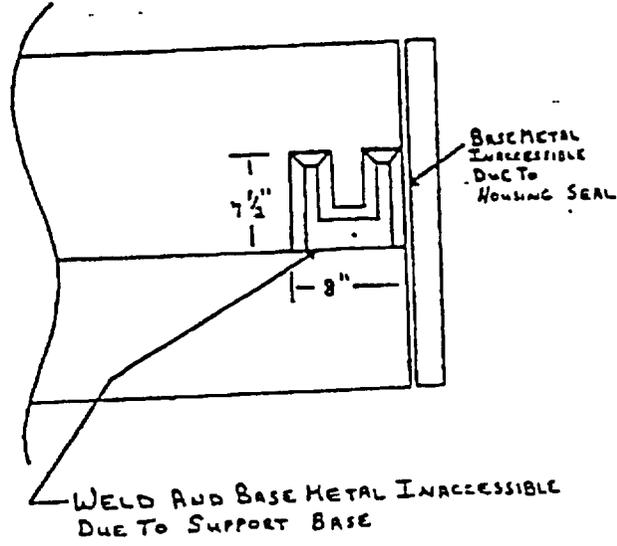
	WESTINGHOUSE NUCLEAR SERVICES DIVISION		REPORT NO PT-02
	LIMITATION TO EXAMINATION		PAGE 2 OF 2
TXU PLANT	COMANCHE PEAK	UNIT 2	SKETCH TCX-2-3110
SYST / COMP	Centrifugal Charging Pump 1		PROCEDURE TX-ISI-11 Rev 6
EXAMINER	J Furrak <i>J Furrak</i>	LEVEL II	DATE 3-20-02
EXAMINER	L. Musgrave <i>L. Musgrave</i>	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



TYPICAL 3 WS + 4 WS

23% OF REQUIRED VOLUME NOT EXAMINED OF 3 WS + 4 WS

TXU ELECTRIC REVIEW DATE <i>Paul M. Furrak 4/10/02</i>	TXU ELECTRIC LEVEL III REVIEW DATE <i>J. Ragon 4/6/02</i>	ANR REVIEW DATE <i>J.P.C. Hair 4/8/02</i>
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Attachment 4 to TXX-0XXXXXX

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6 6

**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

PICTURES VIA E-MAIL

