P.O. Box 968 • Richland, WA • 99352-0968



10 CFR 50.55a

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555-0001

Subject: COLUMBIA GENERATING STATION, DOCKET NO. 50-397 SECOND TEN-YEAR INTERVAL ISI REQUEST 2ISI-32

Dear Sir or Madam:

In accordance with 10 CFR 50.55a(g)(5)(iii) and 10 CFR 50.55a(g)(5)(iv), Energy Northwest hereby submits the attached request for approval related to the Columbia Generating Station second ten-year interval inservice inspection program. This request pertains to the 1989 Edition, with no Addenda, of Section XI of the ASME Boiler and Pressure Vessel Code, for examinations which resulted in less than 100% ASME code required coverage. Energy Northwest has determined that conformance with the code requirements described herein is impractical for Columbia Generating Station.

There are no commitments being made to the NRC by this letter. If you have any questions or require additional information regarding this matter, please contact GV Cullen, Licensing Supervisor, at (509) 377-6105.

Respectfully,

WS Oxenford

Vice President, Technical Services Mail Drop PE04

Attachment: Request 2ISI-32 Tables and Sections including Attachments A through G

cc: BS Mallett – NRC RIV (w/o) RF Kuntz – NRC NRR (w/o) NRC Senior Resident Inspector/988C (w/o) RN Sherman – BPA/1399 (w/o) WA Horin – Winston & Strawn (w/o)

10 CFR 50.55a Request Number 2ISI-32

Proposed Alternative In Accordance with 10 CFR 50.55a(g)(5)(iii) --Inservice Inspection Impracticality—

Summary

This request identifies components whose inspection coverage during the second Inservice Inspection Interval was less than essentially 100% due to impracticality. Essentially 100% examination coverage is defined in Code Case N-460 (listed in Regulatory Guide 1.147 Revision 14 as acceptable without conditions) as examining greater than 90% of the applicable volume or area.

Tables 1 through 4 list the individual components.

Sections 1 through 7 provide the details of the limitations, alternate examination proposed, and duration of the request.

Attachments A through G provide additional information supporting the request including examination data sheets, coverage plots, and drawings.

<u>Abbreviations</u>

RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
MS	Main Steam
RRC	Reactor Recirculation
HPCS	High Pressure Core Spray
SWL	Sweep-O-Let
RWCU	Reactor Water Cleanup
RPV	Reactor Pressure Vessel
IGSCC	Intergranular Stress Corrosion Cracking
TT	Thermal Transient
TASCS	Thermal Stratification Cycling and Striping
SCC	Stress Corrosion Cracking

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	TABLE 1 Code Category B-D Item Number B3.90											
REQUEST NUMBER	1. ASME CODE COMPONENT (AREA OR WELD TO BE EXAMINED)	2. COMPONENT ID NO. Material (Associated damage mechanism)	3. APPLICABLE CODE REQUIREMENT (% COVERAGE OBTAINED)	4. IMPRACTICALITY OF COMPLIANCE	5. BURDEN CAUSED BY COMPLIANCE	6. PROPOSED ALTERNATIVE AND BASIS FOR USE	7. DURATION OF PROPOSED ALTERNATIVE	8. RECORDABLE INDICATIONS FOUND DURING EXAMINATION?				
2ISI-32-1	RPV Top Head Spare Nozzle to RPV Weld	N7 SA 508 CL2 (None)	Relief Request 2ISI- 24 Figure 2ISI-24-1 (88% volumetric coverage)	See Paragraph 4.A	See Paragraph 5.A	See Paragraph 6.A	See Paragraph 7	None				
2ISI-32-2	RPV Top Head Spare Nozzle to RPV Weld	N18 SA 508 CL2 (None)	Relief Request 2ISI- 24 Figure 2ISI-24-1 (85% volumetric coverage)	See Paragraph 4.A	See Paragraph 5.A	See Paragraph 6.A	See Paragraph 7	None				

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TABLE 2 Code Category B-F Item Number B5.130 1. 2. 3. 4. 5. 6. 7. 8. IMPRACTICALITY ASME CODE COMPONENT ID APPLICABLE CODE BURDEN PROPOSED DURATION OF RECORDABLE COMPONENT NO. REQUIREMENT OF COMPLIANCE CAUSED BY ALTERNATIVE PROPOSED INDICATIONS (AREA OR COMPLIANCE AND BASIS FOR FOUND DURING ALTERNATIVE REQUEST WELD TO BE Material (% COVERAGE USE **EXAMINATION?** NUMBER EXAMINED) OBTAINED) (Associated damage mechanism) HPCS 10HPCS(1)-3 Fig. IWB-2500-8 Discharge to RPV SA 508 CL1 / SB See Paragraph See Paragraph 2ISI-32-3 (85% volumetric See Paragraph 4.B See Paragraph 7 None Safe end 166 5.A 6.B coverage) extension to safe end (SCC) 12RHR(1)A-14 RHR Fig. IWB-2500-8 Shutdown SA-350 GR LF2 / See Paragraph See Paragraph None Cooling Return 2ISI-32-4 (26% volumetric See Paragraph 4.B See Paragraph 7 SA-182 TP 304 5.A 6.B Valve to Safe coverage) end (IGSCC) 12RHR(1)B-10 RHR Fig. IWB-2500-8 Shutdown SA-350 GR LF2 / See Paragraph See Paragraph 2ISI-32-5 **Cooling Return** (29% volumetric See Paragraph 4.B See Paragraph 7 None SA-182 TP 304 5.A 6.B Valve to Safe coverage) end (IGSCC)

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REQUEST NUMBER	1. ASME CODE COMPONENT (AREA OR WELD TO BE EXAMINED)	2. COMPONENT ID NO. Material (Associated damage mechanism)	3. APPLICABLE CODE REQUIREMENT (% COVERAGE OBTAINED)	4. IMPRACTICALITY OF COMPLIANCE	5. BURDEN CAUSED BY COMPLIANCE	6. PROPOSED ALTERNATIVE AND BASIS FOR USE	7. DURATION OF PROPOSED ALTERNATIVE	8. RECORDABLE INDICATIONS FOUND DURING EXAMINATION?
2ISI-32-6	RCIC Head Spray Pipe to Valve	6RCIC(1)-40 SA 106 GR B (TT,TASCS)	Fig. IWB-2500-8 (86% volumetric coverage)	See Paragraph 4.C	See Paragraph 5.A	See Paragraph 6.C	See Paragraph 7	None
2ISI-32-7	RRC Discharge Pipe to Valve	24RRC(1)A-14 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None
2ISI-32-8	RRC Discharge Valve to Pipe	24RRC(1)A-15 SA 358 GR 304 CL (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None
2151-32-9	RRC Discharge Pipe to Valve	24RRC(1)A-18 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None
2ISI-32-10	RRC Discharge Valve to Elbow	24RRC(1)A-19 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None

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	TABLE 3 Code Category B-J Item Number B9.11											
REQUEST NUMBER	1. ASME CODE COMPONENT (AREA OR WELD TO BE EXAMINED)	2. COMPONENT ID NO. Material (Associated damage mechanism)	3. APPLICABLE CODE REQUIREMENT (% COVERAGE OBTAINED)	4. IMPRACTICALITY OF COMPLIANCE	5. BURDEN CAUSED BY COMPLIANCE	6. PROPOSED ALTERNATIVE AND BASIS FOR USE	7. DURATION OF PROPOSED ALTERNATIVE	8. RECORDABLE INDICATIONS FOUND DURING EXAMINATION?				
2ISI-32-11	RRC Discharge Pipe to Valve	24RRC(1)B-12 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None				
2ISI-32-12	RRC Discharge Pipe to Valve	24RRC(1)B-16 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None				
2ISI-32-13	RRC Discharge Valve to Elbow	24RRC(1)B-17 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None				
2ISI-32-14	RRC Suction Valve to Pipe	24RRC(2)A-10 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None				
2ISI-32-15	RRC Suction Valve to Pipe	24RRC(2)B-8 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.D	See Paragraph 5.A	See Paragraph 6.D	See Paragraph 7	None				

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	TABLE 3 Code Category B-J Item Number B9.11											
REQUEST NUMBER	1. ASME CODE COMPONENT (AREA OR WELD TO BE EXAMINED)	2. COMPONENT ID NO. Material (Associated damage mechanism)	3. APPLICABLE CODE REQUIREMENT (% COVERAGE OBTAINED)	4. IMPRACTICALITY OF COMPLIANCE	5. BURDEN CAUSED BY COMPLIANCE	6. PROPOSED ALTERNATIVE AND BASIS FOR USE	7. DURATION OF PROPOSED ALTERNATIVE	8. RECORDABLE INDICATIONS FOUND DURING EXAMINATION?				
2ISI-32-16	RRC Suction Elbow to Pump	24RRC(2)B-10 SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.E	See Paragraph 5.A	See Paragraph 6.E	See Paragraph 7	None				
2ISI-32-17	RRC Discharge Cap to Sweep- O-Let	24RRC(2)B- 11/8CAP-1 SA 403 GR WP 304 with Corrosion resistant clad – CRC (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.F	See Paragraph 5.A	See Paragraph 6.F	See Paragraph 7	None				
2ISI-32-18	RRC Discharge Pipe to Sweep- O-Let	(16666) 24RRC(2)B- 11/4RRC(4)-4S SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.F	See Paragraph 5.A	See Paragraph 6.F	See Paragraph 7	None				
2ISI-32-19	RRC Suction Pipe to Sweep- O-Let	24RRC(2)B- 8/4RRC(8)-4S SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.F	See Paragraph 5.A	See Paragraph 6.F	See Paragraph 7	None				

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				TABLE 3 Code Category B-J Item Number B9.11				
REQUEST NUMBER	1. ASME CODE COMPONENT (AREA OR WELD TO BE EXAMINED)	2. COMPONENT ID NO. Material (Associated damage mechanism)	3. APPLICABLE CODE REQUIREMENT (% COVERAGE OBTAINED)	4. IMPRACTICALITY OF COMPLIANCE	5. BURDEN CAUSED BY COMPLIANCE	6. PROPOSED ALTERNATIVE AND BASIS FOR USE	7. DURATION OF PROPOSED ALTERNATIVE	8. RECORDABLE INDICATIONS FOUND DURING EXAMINATION?
2ISI-32-20	RRC Suction Pipe to Sweep- O-Let	24RRC(2)B- 8/4RRC(4)-4S SA 358 GR 304 CL 1 (IGSCC)	Fig. IWB-2500-8 (50% volumetric coverage)	See Paragraph 4.F	See Paragraph 5.A	See Paragraph 6.F	See Paragraph 7	None

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	TABLE 4 Code Category C-F-2 Item Number C5.51												
REQUEST NUMBER	1. ASME CODE COMPONENT (AREA OR WELD TO BE EXAMINED)	2. COMPONENT ID NO. Material (Associated damage mechanism)	3. APPLICABLE CODE REQUIREMENT (% COVERAGE OBTAINED)	4. IMPRACTICALITY OF COMPLIANCE	5. BURDEN CAUSED BY COMPLIANCE	6. PROPOSED ALTERNATIVE AND BASIS FOR USE	7. DURATION OF PROPOSED ALTERNATIVE	8. RECORDABLE INDICATIONS FOUND DURING EXAMINATION?					
2ISI-32-21	MS line Cap to Pipe	6MS(1)B-2 SA 106 GR B (None)	Fig. IWC-2500-7 (81% volumetric coverage 85% surface coverage)	See Paragraph 4.G	See Paragraph 5.A	See Paragraph 6.G	See Paragraph 7	None					

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1. <u>ASME_Code Components Affected</u>

Refer to Tables 1 through 4, Columns 1 and 2

2. Applicable Code Edition and Addenda

ASME Section XI - 1989 Edition no Addenda ASME Section XI – 1995 Edition, 1996 Addenda for Appendix VIII

3. Applicable Code Requirement

Refer to Tables 1 through 4, Column 3

All welds receiving a volumetric examination after the implementation dates in 10 CFR 50.55a for ASME Section XI, Appendix VIII were performed in accordance with Appendix VIII as modified by 10 CFR 50.55a.

4. Impracticality of Compliance

- A. <u>Table 1 Code Category B-D weld identification N18</u>. See additional information in attachment A. Examination requirement is per 10 CFR 50.55a request 2ISI-24, figure 2ISI-24-1. This request was authorized by letter, Nuclear Regulatory Commission to Mr. J. V. Parrish, "Columbia Generating Station - Relief Requests 2ISI-21, 2ISI-22, 2ISI-23, 2ISI-24 and Commitment Change (TAC No. MB0686)," dated April 25, 2001 (reference 1). When applying this requirement, Energy Northwest was only able to obtain 85% examination coverage of the weld due to the configuration of the nozzle. Full code examination volume was obtained in both axial directions and one circumferential direction. The other circumferential direction scan was limited by the nozzle radius configuration.
- B. <u>Table 2 Code Category B-F Weld identification 10HPCS(1)-3, 12RHR(1)A-14, and 12RHR(1)B-10</u>. See additional information in attachment B. The reason the examination was limited for 10HPCS(1)-3 was the configuration of the safe end which does not allow full code coverage from the safe end side. The reason the examination was limited for welds 12RHR(1)A-14 and 12RHR(1)B-10 is the configuration of the safe end and valve body did not allow full coverage scanning from both the safe end side and the valve side.
- C. <u>Table 3 Code Category B-J support attachment weld configuration Weld</u> <u>identification 6RCIC(1)-40.</u> See additional information in attachment C. The reason the examination was limited for the weld listed above is the support attachment welded to the pipe did not allow full coverage scanning from the attachment side.

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- D. <u>Table 3 Code Category B-J Valve configuration Weld identification 24RRC(1)A-14, 24RRC(1)A-15, 24RRC(1)A-18, 24RRC(1)B-12, 24RRC(1)B-16, 24RRC(2)A-10, 24RRC(2)B-8, 24RRC(1)B-17, 24RRC(1)A-19. See additional information in attachment D. The reason the examination was limited for the welds listed above is the configuration of the valve body did not allow full coverage scanning from the valve side.</u>
- E. <u>Table 3 Code Category B-J pump configuration Weld identification 24RRC(2)B-10.</u> See additional information in attachment E. The reason the examination was limited for above weld is the configuration of the pump body did not allow full coverage scanning from the pump side.
- F. <u>Table 3 Code Category B-J sweep-o-let configuration Weld identification</u> <u>24RRC(2)B-8/4RRC(8)-4S, 24RRC(2)B-8/4RRC(4)-4S 24RRC(2)B-11/8CAP-1</u> <u>24RRC(2)B-11/4RRC(4)-4S</u>. See additional information in attachment F. The reason the examination was limited for the above welds is the configuration of the sweep-o-let did not allow full coverage scanning from the sweep-o-let side.
- G. <u>Table 4 Code Category C-F-2 Weld identification 6MS(1)B-2</u>. See additional information in attachment G. The reason for the limited coverage for this weld is a pipe support attachment welded to the pipe. Transducers were not able to scan from the three areas where the support is welded to the pipe. The surface examination could not examine the pipe that was under the welded attachments. This resulted in the limitation for this weld.

5. Burden Caused by Compliance

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A. To achieve the code required examination volume or area the part would need to be redesigned. This is not a practical action.

6. Proposed Alternative and Basis for Use

A. <u>Table 1 Code Category B-D weld identification N18</u>. The proposed alternative is to examine the weld to achieve at least 85% examination coverage. A significant volume of the weld and base material was examined to provide a reasonable assurance that any service induced flaws would be detected. The weld volume was interrogated using 0, 45, 60, and 70RL transducers. The ultrasonic technique was performed in accordance with ASME Section XI, Appendix VIII as modified by 10 CFR 50.55a and 10CFR50.55a request 2ISI-24. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical within the limitations of design, geometry and materials of construction of the component. No indications were detected in the base material nor weld.

REQUEST 2ISI-32 TABLES AND SECTIONS Attachment Page 11 of 12

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- B. <u>Table 2 Code Category B-F Weld identification 10HPCS(1)-3, 12RHR(1)A-14, and 12RHR(1)B-10</u>. The proposed alternative is to examine the welds to achieve at least the examination coverage identified in Table 2, column 3 for each weld. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical within the limitations of design, geometry and materials of construction of the component. The entire weld population Code Category B-F was examined. Of the forty three (43) Code Category B-F welds the three welds listed in Table 2 were the only ones where essentially 100% code coverage was not obtained. This represents a significant total volume of welds examined in this category. No indications were detected in the base material nor welds for all the volume examined in this category.
- C. <u>Table 3 Code Category B-J support attachment weld configuration Weld</u> <u>identification 6RCIC(1)-40.</u> The proposed alternative is to examine the weld to achieve at least 86% examination coverage. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical within the limitations of design, geometry and materials of construction of the component. No indications were detected in the base material nor weld.
- D. <u>Table 3 Code Category B-J Valve configuration Weld identification 24RRC(1)A-14, 24RRC(1)A-15, 24RRC(1)A-18, 24RRC(1)B-12, 24RRC(1)B-16, 24RRC(2)A-10, 24RRC(2)B-8, 24RRC(1)B-17, 24RRC(1)A-19. The proposed alternative is to examine the weld to achieve at least the examination coverage identified in Table 3, column 3 for each weld. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical within the limitations of design, geometry and materials of construction of the component. No indications were detected in the base material nor welds.</u>
- E. <u>Table 3 Code Category B-J pump configuration Weld identification 24RRC(2)B-10.</u> The proposed alternative is to examine the weld to achieve at least 50% examination coverage. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical within the limitations of design, geometry and materials of construction of the component. No indications were detected in the base material nor weld.
- F. <u>Table 3 Code Category B-J sweep-o-let configuration Weld identification</u> <u>24RRC(2)B-8/4RRC(8)-4S, 24RRC(2)B-8/4RRC(4)-4S 24RRC(2)B-11/8CAP-1</u> <u>24RRC(2)B-11/4RRC(4)-4S</u>. The proposed alternative is to examine the weld to achieve at least the examination coverage identified in Table 3, column 3 for each weld. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical

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within the limitations of design, geometry and materials of construction of the component. No indications were detected in the base material nor welds.

G. <u>Table 4 Code Category C-F-2 Weld identification 6MS(1)B-2</u> The proposed alternative is to examine the weld to achieve at least the examination coverage identified in Table 5, Column 3. The examinations performed applied all the current knowledge and techniques to obtain the maximum amount of coverage to the extent practical within the limitations of design, geometry and materials of construction of the component. No indications were found with either the surface or volumetric examinations.

7. Duration of Proposed Alternative

The request is for the duration of the second inspection interval which began February 10, 1995 and concluded December 12, 2005.

References

1. Nuclear Regulatory Commission to Mr. J. V. Parrish, "Columbia Generating Station - Relief Requests 2ISI-21, 2ISI-22, 2ISI-23, 2ISI-24 and Commitment Change (TAC No. MB0686)," dated 4/25/2001, ML011150323

REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

Attachment A

2ISI-32-1

Weld Identification N7

ISI Diagram RPV-111 Figure 2ISI-24-1 NDE Data Report R-R13-G17 pages 1, 8, and 9 through 15

2ISI-32-2

Weld Identification N18

NDE Data Report R15-109 pages 1, 6, and 7 NDE Data Report R15-109 enlarged page 6 of 7 two pages



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NOTES:

Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
Examination volumes may be determined either by direct measurements on the component or by

measurements based on design drawings.

Figure 2ISI-24-1

From ASME Code Case N-613, approval date July 30, 1998

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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

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2ISI-32-1

GE Nuclear Energy	EXAMINATION SUMMARY SHEET	REPORT NO.:
PROJECT: WNP2 R13	PROCEDURE:UT-WNP2-300V3 REV:N/A_FRI	R:
SYSTEM: REACTOR PRESSURE VESSEL WELD NO.: N7 CONFIGURATION: NOZZLE TOP HEAD SPRAY	<u></u>	R:N/A N/A R:N/A N/A
EXAMINER: J. SIMPSON LEVEL: II		
		NZ-VSL HEAD
DATA SHEET NO.(S): DGR13-07, DGR13-13	CAL SHEET NO.(S): CGR-13-09, 10, 11, 16	
Manual scans were unrestricted. Due to the nozzle to vessel weld design it is not feasible to effective Section XI.	ely ultrasonically examine 100% of the ASME Code examination vo	lume as defined in
· · ·	·	
EXAM COMPLETE	DMMENTS) EXAM COMPLETE IN COMBINATION WITH DATA SHEETS BELOW	
ADDITIONAL DATA SHEETS: N/A COMPARED TO: PSI ISI REPORT NO.(S): 1RPU-009	NO. OF RECORDABLE INDICATIONS:	OBTAINED:
EXAMINATION RESULTS : ACCEPTABLE	VACCEPTABLE NO. OF REPORTABLE INDICATIONS: 0	87.94 %
SUMMARY BY LEVEL DATE	UTILITY REVIEW DATE R-RIS	2 8-617
GEREVIEWED BY LEVEL DATE	ANII REVIEW PAGE: _/	OF: /5

FORM LIT-09 REV 9



WNP2

N7 Nozzle

	UNRESTRICTED							•	
		CROSS	SECTIONAL AREA (per slice)			TOTAL CODE COVERAG	E	
	code cross sectional area	area scanned automated	area scanned manually	% of code area scanned automated	% of code area scanned manually	degrees scanned automated	degrees scanned manually	percent scanned automated	percent scanned manually
0 wm	18.87	0	15.05	0.00	79.76	0.00	360.00	0.00	79.76
45 T-scan	18.87	0	17.42	0.00	92.32	0.00	360.00	0.00	92.32
60 T-scan	18.87	0	17.51	0.00	92.79	0.00	360.00	0.00	92.79
45 P-scan CW	18.87	0	16.32	0.00	86.49	0.00	360.00	0.00	86.49
60 P-scan CW	18.87	0	16.32	0.00	86.49	0.00	360.00	0.00	86.49
45 P-scan CCW	18.87	0	16.32	0.00	86.49	0.00	360.00	0.00	86.49
60 P-scan CCW	18.87	0	16.32	0.00	86.49	0.00	360.00	0.00	86.49
70 T-scan	4.74	0	4.61	0.00	97.26	0.00	360.00	0.00	97.26
70 P-scan CW	4.74	0	4.06	0.00	85.65	0.00	360.00	0.00	85.65
70 P-scan CCW	4.74	0	4.06	0.00	85.65	0.00	360.00	0.00	85.65
							Coverages	0.0	87.94

87.94 Total coverage

[CROSS	SECTIONAL AREA (p	ner slice)			E		
	code cross sectional area	area scanned automated	area scanned manually	% of code area scanned automated	% of code area scanned manually	degrees scanned automated	degrees scanned manually	percent scanned automated	percent scanned manually
0 wm	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45 T-scan	18.87	0.00	0.00	0.00	0.00	0,00	0.00	0.00	0.00
60 T-scan	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45 P-scan CW	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60 P-scan CW	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45 P-scan CCW	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60 P-scan CCW	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70 T-scan	4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70 P-scan CW	4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70 P-scan CCW	4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
•							Coverages	0.0	0.0

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0.0 87.94 Total coverage Total Composite Coverage =

WNP-2 R-213-6-17 PAGE ______OF ___ 5



WNP-2 R-R13-6-17 PAGE _____OF ___

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WNP - 2 R - R13- 6-17 PAGE 14 9



REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

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2ISI-32-2

EXAMINATION SUMMARY SHEET

G	E NUCLEAR I	ENERGY					
Site and Unit.	Columbia	Generatir	ng Station Co	omponent ID:	<u>N18</u>		
Outage:	RFO-1	<u>5</u>		SPARE N	OZZLE TO TOP HEA	AD WELL	<u>)</u>
System	RPV ASME	Cat.: <u>B-</u> [2 ASME Item	<u>B3.90</u>	Aug Requirements:	<u>N/A</u>	
Exams Performe	d Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
70° RL	RPV-R15-C097	N/A	GE-UT-300 Ver. 3	UT-115	KENT MONTGOMERY	11	5/30/01
0° Long	RPV-R15-C084	N/A	GE-UT-300 Rev. 3	UT-115	KEVIN LOCKLER		5/30/01
45° Shear	RPV-R15-C086	N/A	GE-UT-300 Rev. 3	UT-115	KEVIN LOCKLER		5/30/01
60° Shear	RPV-R15-C088	N/A	GE-UT-300 Rev. 3	UT-115	KEVIN LOCKLER	11	5/30/01
Examination Re	SUITS:		·				45% 60%
and 70° RL sea	nual ultrasonic ex arch units.	camination o	of the above reference	d weld, no indicat	ions were recorded utili	zing the O	, 45°, 60°
This examinati Guide 1.150, F	on is acceptable Rev.1.	per the requ	irements of ASME Se	ection XI, 1989 Edi	tion, No Addenda and L	ISNRC Reg	gulatory
This examinati	on was limited di	ue to the wel	ld Top Head to Nozzi	e configuration. 8	5.6% Code coverage wa	s obtained	
Previous data	was reviewed pric	or to this sun	nmary.				
1							
Examinatio	n results were con	npared to data	a report 1RPU-04	8 from R-4	outage with	No Chang	1e
These exa	minations were per	formed unde	r Work Order: 010	010463		Change	
This Summar	y and the following	data sheets	have been reviewed a	nd accepted by the	following personnel:	RWP:	N/A
Mize	haly :	II a	12/01 / Den	llel Nu	1= 643/01	Dose:	N/A mr.
Prepared By:		evel: D	ate: Utility Review	red By: T	itle: Date:		
CF Paris	<u> </u>	<u>.</u> .	elo, M.M. Z.	A Pui	-II 6/4/01	Page 1	of 7
GE REVIEWED	uy. L			iu by: I			













Columbia Generating Station N18 - Top Head Spare Nozzle Spring 2001

		CODE CROSS-SECTIONAL AREA					TOTAL CODE COVERAGE			
	Area	Area Inch ²	Area Scanned		% of Area Scanned		Degrees Scanned		% Scanned	
			Auto	Manual	Auto	Manual	Auto	Manual	Auto	Manual
0° WELD METAL	1	14.1	0.0	5.0	0.0	35.5	0.0	180.0	0.0	17.7
0° WELD METAL	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
45° T-SCAN	1	14.1	0.0	10.5	0.0	74.5	0.0	180.0	0.0	37.2
45° T-SCAN	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
45° T-SCAN	1	14.1		j	0.0	0.0			0.0	0.0
60° T-SCAN	1	14.1	0.0	11.8	0.0	83.7	0.0	180.0	0.0	41.8
60° T-SCAN	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
60° T-SCAN	1	14.1			0.0	0.0			0.0	0.0
45° P-SCAN CW	1	14.1	0.0	9.9	0.0	70.2	0.0	180.0	0.0	35.1
45° P-SCAN CW	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
60° P-SCAN CW	1	14.1	0.0	11.6	0.0	82.3	0.0	180.0	0.0	41.1
60° P-SCAN CW	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
5° P-SCAN CCW	1	14.1	0.0	9.9	0.0	70.2	0.0	180.0	0.0	35.1
5° P-SCAN CCW	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
0° P-SCAN CCW	1	14.1	0.0	11.6	0.0	82.3	0.0	180.0	0.0	41.1
0° P-SCAN CCW	2	13.9	0.0	13.9	0.0	100.0	0.0	180.0	0.0	50.0
								Coverages	0.0	85.6
								_		
								Total Composite Coverage =		85.6
							•			
		COMMENTS:								

Manual UT scans were not restricted

Credit for the initial 1/4" of material in Code coverage not obtained with the 45° and 60° near field effects is taken with the 70° RL. Area 1 is the exam volume calculated at Top Dead Center. Area 2 is the exam volume calculated at 180°.

CovCalc.xls 02/29/01

REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

Attachment B

2ISI-32-3

Weld Identification 10HPCS(1)-3

ISI Diagram HPCS-101-2 ISI Diagram RPV-109

NDE Data Report APR-001 pages 1 through 4

2ISI-32-4

Weld Identification 12RHR(1)A-14

ISI Diagram RHR-105

NDE Data Report R17-010 pages 1 through 4

2ISI-32-5

Weld Identification 12RHR(1)B-10

ISI Diagram RHR-106

NDE Data Report R17-012 pages 1 through 3

REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-3




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E.	GE NUCLEAR	ENERGY	EXAMIN	ATION SUMM	IARY SHEE	T	APR-001
Site:	 Columbia	Generating	Station Con	nponent ID:	10HP	CS(1)-3	
Outane		,			SE EXT TO SE		
Outage.				≥ A ACME Hom			
System	HIGH PRES COP	<u>RESPRAT</u>	ASME Cal.: <u>B-F</u>	A ASME NOM	<u>85.130</u> Aug	J neq	
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
45°/RL	N/A	APC-001	GE-UT-209	UT-106	Kevin Fish	11	5/16/2005
45°/S	N/A	APC-002	GE-UT-209	UT-106	Kevin Fish		5/16/2005
45°/S	N/A	APC-005	GE-UT-209	UT-106	Kevin Fish	H	5/16/2005
60°/RL	N/A	APC-006	GE-UT-209	CAL-DPTH-068	Kevin Fish	II	5/16/2005
60°/RL	N/A	APC-003	GE-UT-209	CAL-DPTH-068	Kevin Fish	H	5/16/2005
45°/RL	N/A	APC-004	GE-UT-209	UT-106	Kevin Fish	ll	5/16/2005
N/A	APD-008	N/A	GE-UT-209	N/A	Kevin Fish	ll ll	5/16/2005
non-relevan Previous da Pictures, thi No countert Examination 85% code c 81% procee This examin Edition, with	It indications, acousti ata was reviewed prio ickness and contours pore was detected. In coverage achieved overage achieved. dural coverage achie hation meets the requ to the 2000 Addenda.	c interface, inside r to this examina s were taken in ad utilizing a compo ved. ved.	e surface geometry, and r ttion. ccordance with BWRVIP 2 osite of the 45° shear, 45° IE Section XI, 1989 Edition	n, no Addenda, and A	ch units. Appendix VIII, up to	o, and includi	ng 1998
Examin These e	ation results were co xaminations were pe	mpared to data r rformed under W	eport R-R10-016 /ork Order: 1085348	from 1995 o 0 01	utage with	No Chang Change	1e
This Sum	mary and the followir	ng data sheets ha	ave been reviewed and ac	cepted by the followin	ng personnel:	RWP: 3	0001291
Prepared By	y:	TE <u>5//</u> _evel: Date	e: Utility Review:	lat.	Date:	Dose:	<i>181</i> mr.

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38	GE N	UCLEA	R ENEF	RGY	Wall 1 Prof	Thickness ile Sheet	Site: <u>Columbia Generating Station</u> Unit: Project: <u>16423</u>	2 Report No.: <u>APR-001</u>
System:	HIG	H PRES C	ORE SPI	RAY			1.5"	1.5"
Position	0°	90°	180°	270°	Component ID Number:	<u>10HPCS(1)-3</u>		
1	.80	N/A	N/A	N/A	Crown Height:	FLUSH		
2	.80	N/A	N/A	N/A	Crown Width:	<u>0.87</u>		
3	.82	N/A	N/A	N/A	Nominal Diamotor:	10.0"	SAFE END EXT. UPST Component:	DNST Component:
4	.80	N/A	N/A	N/A	Nominal Diameter.	<u>10.0</u>		
5	N/A	N/A	N/A	N/A	Weld Length:	<u>36.5"</u>	FLOV	√►
					1/5 WELD 10 LPCS(1)-2		U/S TOE	
hitials:	- <i>Justin I</i> Drav	L <u>ehmann</u> wn by:	<u>II</u> Level:	<u>5/15/2005</u> Date:	GE Reviewed By:	<u> </u>		Page 2 of 15
	(i. i)			1			

	()		<u></u>
GE NUCLEAR ENERGY	Indication / Coverage Plot Sheet	Site: <u>Columbia Generating S</u> Project: <u>16423</u>	S <u>tation</u> Unit: <u>2</u>	Report Number.: <u>APR-001</u>
System: <u>HIGH PRES CORE SPRAY</u>	Component ID Number: <u>10HPCS(1)-3</u>	Configuration:	<u>SAFE END EXT.</u>	<u>SAFE END</u>
	10 HPCS(1)	-3		
	45° & 60° RL	45°5, RL		
	Code Required Ins Procedural Regula	pection Volume - 85% ed Inspection Volume	- 817	
	Circ Scan		01/.	
HA <u>Justin Lehmann</u> <u>II 5/15/200</u> Initials: Drawn by: Level: Date:	GE Reviewed By: Level: Date:	.		Page <u>3</u> of <u>15</u>

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E		GE N	uclear En	ergy				Ultra (A	isonic utoma	Data / Scar ted with Mi	n Para cro T	imetei omoS	r Sheet can)		
Site: Unit: Project N	<u>Columbia Ge</u> No.: <u>1</u>	nerating S <u>2</u> 6423	Station	Procedure: Version / Rev DRR:	<u>GE-I</u> rision:	<u>UT-209</u> <u>17</u> <u>N/A</u>	Syst Weld Con	em: d No.: figuration:	<u>HIGH P</u> 1 <u>S</u>	RES CORE SPR 0HPCS(1)-3 E EXT TO SE	AY	Repor Data S Calibi	t No.: Sheet No.: ration Sheet No.	<u>APR</u> <u>APD</u> <u>APC-00</u>	<u>2-001</u> 2-008 11 to 006
						<u>Scan</u>	ner Info	ormation							
Weld Re Examina	ference, (GE-A ition Surface:	.DM-1005) <u>O</u>	: Lo: <u>Top</u> D E	Dead Center Exam Surface To	Wo: <u>J</u> emperature:	<u>Weld Center</u> 90	<u>iline</u> M °F ר	lotor Steps: Thermometer	Cir: S/N:	<u>96.125</u> <u>241942</u>	Tra: Exa Exa	m Start : m End :	<u>98.3</u> <u>5/16/200</u> <u>5/16/200</u>	5 <u>2:30:00</u> 15 8:51:00	<u>AM</u> PM
Nomina Scanne Resolut Scanne	Il Pipe Size: r: <u>NOV</u> tion: ≤ <u>.036"</u> er Zero Position:	<u>10 in.</u> / <u>A</u> s: CIR:	Norr Track Diam Index Ax / Cir	ninal Thickness: eter: c: ≤ <u>.18″</u> T <u>OP DEAD CEN</u>	<u>.8 ir.</u> <u>16 in.</u> <u>.047"</u> <u>ITER</u>	<u>P.</u> Arm Le X Positive Sc Axia	Wi ength: can Directior I Scan Spee IRA:	eld Width: <u>12 in.</u> n: <u>DOWN</u> nd: ≤ <u>2.0</u> <u>WEL</u>	<u>.875 il</u> ISTREAM) in./Sec. D CENTEF	2. W Track Location: Y Positive S Circ Scan S BLINE	Veld Leng Scan Dire Speed: ROT	gth: <u>34</u> ection: ≤ . Zero:	<u>6 in.</u> JPSTREAM 12" <u>CW</u> 1.0 in./Sec. LOOKING DO	OWNSTRE	<u>EAM</u>
					S	can Par	ameters	and Re	<u>sults</u>						
Sc Z Z Z Z	can: Sk 31 (1 41 11 (10 (1 (11 (1 20 11	xew: 2 8 <u>80</u> 2 2 80	File ID: <u>N16_3Z31</u> <u>N16_3Z41</u> <u>N16_3Z10</u> <u>N16_3Z11</u> <u>N16_3Z20</u>	Disk: <u>01</u> <u>01</u> <u>01</u> <u>01</u> <u>01</u>	X-Start: <u>8.0mm</u> <u>7.0mm</u> <u>-53.0mm</u> <u>-53.0mm</u> <u>-48.2mm</u>	X-Stop: <u>-49.0mm</u> <u>-49.0mm</u> <u>14.6mm</u> <u>14.6mm</u> <u>17.1mm</u>	Y-Start: <u>0.0mm</u> <u>0.0mm</u> <u>0.0mm</u> <u>0.0mm</u>	Y-Stop: <u>950.0mm</u> <u>950.0mm</u> <u>950.0mm</u> <u>950.0mm</u>	Gain: Log Log Log Log	Results: <u>C.D</u> <u>C.D</u> <u>C.D.E.F.I</u> <u>C.D.E.F.I</u> <u>C.D.E.F.I</u>	4 4 4		Commen _*	ts:	
						EXAMIN	ATION RESU	JLTS LEGEND	<u>. </u>						
1. B 1	A - 1 E - 1 I - C	NO RECOR NSIDE SUF OUNTERBO	DABLE INDICAT IFACE DRE	IONS B - NO F - OL J - SH	DN-GEOMETRIC JTSIDE SURFA EAR COMPON	C INDICATION CE ENT	NS C-N G-V K-E	ION-RELEVAN VELD DISCON BEAM RE-DIRE	TINDICATI TINUITY ECT	DNS D - ACO H - ROC	USTIC IN	TERFACE			
Commen Exam lim Exam lim * Configu	its: ited to 17 mm (ited to 53 mm (iration was not)	downstrear upstream c as designe	n due to safe e lue to location d. Load modif	nd taper. of weld 10HPCS ied DXF.	6(1)-2.										
	<i>Kevin Fish</i> Examiner:	<u>//</u> Lev	5/16/2005 rel: Date:	GE F	aly Review.	Level:	<u>5-18-05</u> Date:							Page <u>4</u>	of <u>15</u>



6	GE NUCLEAR	ENERGY	EXAMIN	ATION SUMI	MARY SHEET	-	Report No.: R17-010
Site:	Columbia	 Generating	Station Cor	nponent ID:	12RHF	(1)A-14	
Outage:	 D17				VALVE TO SE		
System	SHUTDN COOL	RET LP-A	ASME Cat.: <u>B-F</u>	A ASME Item	B5.130 Aug	Req	
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
45 RL	UT-033	N/A	PDI-UT-10	8746	George DuBose, III		5/11/2005
45° RL	UT-034	N/A	PDI-UT-10	8746	George DuBose, III	111	5/11/2005
60 RL	UT-035	N/A	PDI-UT-10	8746	George DuBose, III	HI	5/11/2005
45° Shear	UT-036	N/A	PDI-UT-10	8746	George DuBose, III	111	5/11/2005
The 45° She No upstream 31% Proced 26% Code c This examin by the Perfor	ar did record root an examination was pr ural coverage achiev overage achieved ation meets the requ mance Demonstrati	d counterbore ge erformed due to v red irements of ASM on Initiative (PDI	eometry. valve configuration. IE Section XI , 1989 Editio) program description.	on, no Addenda and	1995 Edition, 1996	Addenda, as	modified
Examina These ex	tion results were col aminations were pel	npared to data re formed under W	eport R-R8-136 ork Order: 0108254	from 1993 3 01	outage with	No Chang Change	θ
Examina These ex This Summ	tion results were con aminations were per mary and the followin	npared to data re formed under W g data sheets ha	eport R-R8-136 ork Order: 0108254 ve been reviewed and ac	from 1993 3 01 cepted by the follow	outage with	No Chang Change RWP:	e IlA
Examina These ex This Summ Prepared By:	tion results were contraminations were performinations were performinations were performed and the following the f	The set of	eport R-R8-136 ork Order: 0108254 ve been reviewed and ac 3-5 e: Utility Review:	from 1993 3 01 cepted by the follow Will	outage with ipg personnel: 5/15/05	No Chang Change RWP: A Dose: n	e I/A I/A mr.

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					Si	te: <u>Co</u>	lumbia G	ien <u>erati</u>	ing Stat	tion	Proced	lure: <u>F</u>	PDI-UT-10	0 / A / N/A		Cal/Data Sheet Number	<u>01-036</u>
Weld	ID: <u>12</u>	<u>RHR(1)</u> A	<u>1-14</u>			Drawing	g: <u>RHR-</u> ;	105 Rev	<u>r. 8</u>		Size:	<u>12"</u>	Thickne	ess: <u>1.22"</u>		Exam Start:	<u>0240</u>
Lo Lo	ocation:	<u>TDC</u>				Wo Loc	ation: <u>We</u>	eld Cente	erline		Weld \	Nidth:	<u>1.65"</u>	Weld Height	: <u>0.15"</u>	Exam End:	<u>0410</u>
Ind	Angle	% of	Indi	cation Len	gth	V M/1	V Distance	1 10/ 2	MD 1	Metal Path	MD 0	Ax / Circ	Upst/	~		Comments:	
1	45°	112	N/A	5.0	N/A	N/A	1.2	N/A	N/A	1.9	N/A	Ax	Dnst I	Root geometry observed	360°.	ooninenta.	
2	45°	141	N/A	31.0	N/A	N/A	1.9	N/A	N/A	1.75	N/A	Ax	Dnst (Counterbore geometry of	oserved 36	0°.	
			_					1		GL		1		2			

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96 <u>G</u>	E NUCL	EAR ENER	<u>GY</u>	Ultr	rasonic Ma	Calibration a nual Piping	and Examina and Compon	tion Record ents
Site/Unit: (Outage:	Columbi R17	a Generatiı	ng Stat	ion / 2			Report Number: Data Sheet Nun Linearity Sheet:	<u>R17-010</u> nber: <u>UT-033</u> <u>L-006</u>
Calibration	n Data fo	r Block: <u>874</u>	6			Procedure:	<u>PDI-UT-10</u>	
		$(A \rightarrow E0^{\prime\prime} to 2)$	Calibr	ation Col	Time	Ver / Rev: A	DRR:	<u>N/A</u>
Materia	al Siz	ze Thick					Search Unit	Data
<u>Ultragel</u>	<u>UI</u>	00325	Cal C	back: N/A	<u> </u>			
Couplan	nt: Co	uplant batch	Cal C			<u>RTD</u> Mapufacturer:	<u>04-301</u> Serial Number	2(10x18) mm/Rect. Sizo/Shape:
<u>24178</u>	3	<u>72° F</u>	Cal C			Manufacturer.	Senai Number	Size/Shape.
Thermomete	er S/N	Cal Temp.	Final	Cal: <u>0450</u>	2	<u>0.55 in.</u>	<u>45</u>	<u>45°</u>
	D	AC Constru	iction			Incident Point:	Nominal Ang	ie: Measured Angle:
Coop Directio		N// A				<u>2.0 MHz</u>	45°TRL 2-Aust	<u>RL</u> <u>2</u> Mode: Elements:
Scan Directio		<u>IVA</u> 5 Notoh				Frequency.		Mode. Elements.
	<u>1.</u>						Search Unit C	Jable
Signal Amplit	lude	<u>80%</u>				<u>2(RG</u>	<u>-174) 6'</u>	<u>0</u>
Signal Sweet	J. <u>s</u>	<u></u>				Cable	Type: Length:	Connectors:
Signal dB:	<u>5</u>	<u>9.0 aB</u>					lu at a set O at	At
Sweep 0-10 =	= <u>4.0 in</u>	<u>. Metal</u>	Path	i		4	instrument Sei	ungs_
Fiel	<u>Ca</u>	libration Ve	rificati	on M/A		<u>Stav</u> Ma	reley / Sonic 136P aufacturer/Model:	<u>136P1106C031373</u> Serial Number:
Fiei		BIOCK S/IN:				1.0 in	0 227 in /usec	2 4 KHz
	Reflecto	r <u>N/A</u>		<u>N/A</u>		Delay:	Velocity:	Filter: Rep Rate:
-				<u>N/A</u>		4.0 in	250	500 Ohma
	Sween (S			<u>N/A</u>		Range:	Pulser:	Damping:
						Off	2.25 MHz	Dual
Ac	ceptable Li	nearity perform	ed: <u>4/</u>	20/2005		Reject:	Frequency:	Mode:
Exam Data	a for Wel	d: <u>12RHR(</u>	<u>1)A-14</u>					
		VALVE TO	<u>SE</u>			Exan	n Comments / L	imitations:
		Configuratio	n:			Exams performed	to maintain 5% to 2	0% ID roll.
<u>Ol</u> Exam Si	D urface:	<u>84° F</u> Exam Ten	ıp. E	<u>241783</u> xam Thermo	ometer	No upstream exar	n performed due to v	valve configuration.
Axial		UPST	Scan dB	Recordable	Exam	-		
	· · · ·	DING	65.0	nucations NRI	45°	-		
	• 	21121						
						Exam Start:	<u>0240</u> Exan	n End: <u>0410</u>
Initials: E	<u>George</u> Examiner: Examiner 2:	e DuBose, III	Le [,] Le [,]	<u>ш</u> vel: vel:	GE Review	Site Ned By: Luhl BW: Sew:	II Level: D 5/15/05 Date: 5/15/05	<u>5/15/05</u> ate:
Initial Cal/Ex	am Date:	<u>5/11/2005</u>	2		ANII Revie	W: 0	Date:	Page <u>4</u> of <u>7</u>

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2ISI-32-5



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<i>3</i> 6)	GE NUCLEAF	R ENERGY	E	XAMINA	TION SUMI	MARY SHEET	r	Report No R17-012
Site:	Columbia	Generatin	g Station	Com	ponent ID:	12RHR	R(1)B-10	
Outage:		,			VAI	VE TO SAFE E	ND	
System	SHUTDN COOL	- <u>RET LP-B</u>	ASME Cat.:	B-F	A ASME Item	B5.130 Aug	Req	
Exams Performed	Data Sheet	Cal Sheet	Proce	edure	Calibration Block	Examination Personnel	Cert Level	Date
45° Shear	UT-091	N/A	PDI-L	JT-10	8746	George DuBose, III	111	5/21/200
45° Long.	UT-092	N/A	PDI-L	IT-10	8746	George DuBose, III		5/21/200
60° Long.	UT-093	N/A	PDI-L	IT-10	8746	George DuBose, III	111	5/21/200
45° Long.	UT-094	N/A	PDI-U	IT-10	8746	George DuBose, III		5/21/200
		erbore geometi	ry.					
The 45° RL No upstream 16% Procedi 29% Code co	did record counterbo n examination was p ural coverage achie overage achieved	erbore geometri ore geometry. verformed due ved	ry. to valve configura	ation.				
The 45° RL No upstream 16% Procedi 29% Code co This examina by the Perfor	did record counterbo examination was p ural coverage achie overage achieved ation meets the requ rmance Demonstrat	erbore geometry. Performed due ved uirements of A ion Initiative (P	ry. to valve configura SME Section XI , 'DI) program des	ation. 1989 Editior cription.	n, no Addenda and	1995 Edition, 1996	Addenda, as	modified
The 45° RL No upstream 16% Proced 29% Code c This examina by the Perfor No previous	did record counterbo examination was p ural coverage achie overage achieved ation meets the requ rmance Demonstrat data was available	erbore geometry. performed due ved uirements of A ion Initiative (P prior to this exa	ry. to valve configura SME Section XI , 'DI) program des amination.	ation. 1989 Editior cription.	n, no Addenda and	1995 Edition, 1996	Addenda, as	modified
The 45° RL No upstream 16% Proced 29% Code c This examina by the Perfor No previous	did record counterbo n examination was p ural coverage achie overage achieved ation meets the requ rmance Demonstrat data was available	erbore geometry. performed due ved uirements of At ion Initiative (P prior to this exa	ry. to valve configura SME Section XI , PDI) program des amination.	ation. 1989 Editior cription.	n, no Addenda and	1995 Edition, 1996	Addenda, as	modified
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E	GE N	UCLEA	R ENER	IGY	Wall T Profi	hickness le Sheet	Site:Columbia Generating StationUnit:2Report No.:Project:16423R17-012
System:	SHL	ITDN CO	OL RET L	<u>P-B</u>	Component ID Number:	12BHB(1)B-10	1.5"
Position	0°	90°	180°	270°			
1	N/A	N/A	N/A	N/A	Crown Height:	Flush	
2	N/A	N/A	N/A	N/A	Crown Width:	<u>1.7</u>	
3	1.34	N/A	N/A	N/A	Nominal Diameter:	12.0"	Valve Safe End UPST Component: DNST Component:
4	1.30	N/A	N/A	N/A		<u></u>	
5	1.36	N/A	N/A	N/A	weid Length:	<u>42.0"</u>	FLOW
			· · · · · · · · · · · · · · · · · · ·			E A A A A	
Initials:	<u>George I</u> Drav	DuBose, I wn by:	Level:	<u>5/21/2005</u> Date:	GE Reviewed By:	<u>Д</u> 5-23-оч Level: Date:	Page <u>2</u> of <u>7</u>

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eje.					Ultras	sonic E	xamina	tion Indi	cation F	Report			Data Report	Number:	<u>R17-012</u>	
	GE NUCLI	EAR ENERGY	Site:	<u>Columbia</u>	Generatii	ng Statio	<u>n</u>	Procedure:	PDI-UT-10	<u>)/A</u>			Cal/Data She	eet Number	<u>UT-091 and 092</u>	2
Idi ID: <u>1</u> 2	2RHR(1)B-10	1	Dra	awing: <u>RHR</u>	<u>-106</u>			Size: <u>N/A</u>	Thicknes	ss: <u>0.50" t</u>	<u>o 2.0"</u>		Ex	am Start:	<u>1450</u>	
Location:	<u>Top Dead C</u>	Center	Wo	Location: <u>W</u>	eid Cente	erline		Weld Width:	<u>1.70 in</u>	Wel	d Height:	<u>Flush</u>	E>	kam End:	<u>1555</u>	
	e % of	Indication Length	2 1	W Distance	e / W/2	MP 1 L	etal Path	Ax /	Upst/ Dnst	<u>, </u>			Comments:			Τ
. 0000 45°	200	- 28.5	-	- 1.9	-	-	1.8	AX	DNST 4	45 Shear - Cour	nterbore Ge	ometry ol	oserved 360			
45°	159 -	- 29.0	-	- 1.9	-	-	1.8	- AX	DNST 4	45 RL - Counter	bore Geom	etry obse	rved 360			
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Geore		1 <u>II</u> <u>5/21/</u> 2	2005	Augu GE Reviewed	By:	THE Level	<u>5-23</u> Date:	Of Utility Re	1 J J Zulli aview:	ul	SZ3 Date			- A. Çî	<u>ht</u> 5 <u>12305</u> Date:	

Attachment C

2ISI-32-6

Weld Identification 6RCIC(1)-40

ISI Diagram RCIC-102-3

Construction Drawing RCIC-129 (CVI 02-215-008, 203) sheets 2, 4, and 5

NDE Data Report R15-086 pages 1, 4, and 5







			1	1	
TEM QUA	SIZE- DESCRIPTION		ASTM	WT	
10 0					
10 2	12 O WASHER R FIG. 160		H 36		
11 2	518" Q WASHER R FIG. 160		A.36	12 1	
12 1	M4×13×6-058		A-36	79	
13 1	M4 X 13 X (1- 7 1/RV)		A-34	21	
14 4	STIEF # 318" 3 3/3/11 " x 0'-7/1	11/_*	A-36	10	
15 1	D'B'D'' I CHE KI I I I I		1 20	1/2	
19 1	R 518 × 612 × 0-612"		4.06	4	~
19 4	STIFF R 3/8"x 2"x 0"-3 1/2" (CUT	TTO SUIT SEE SECT. E.	E) A-36		$ \ge $
21 2	1/2" Ø WELDED BEAM ATTACHMEN	T FIG. 14DA			
22 2	1/2" Ox1-7" IG HANGER BOD	FIG 165		2	
24 2	CONSTANT SUPPORT #VA-905-3009	TOTAL LOAD - 554# CALC		94	
27 6	WH3TANT SOFTONT - VA 303-5003	TOTAL LOAD = JOH CALO	·	+ - +	
	TRAVEL=25/8" UP TOTAL TRAVEL=3	<u>//2" UP</u>		┟──┥	
25 2	1/2" Ø TURNBUCKLE, 3" OPENIN	NG FIG. 164			
26 1	R 3/8 × 5" × 0'- 6" (BEND TO RAD	DIUS G" Ø PIPE)		4	Γ
	DELETED TEACH IT IS	20 1 23 TOT	AL WIT	302	/
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3 REV NO BWN N SL/LDE	DELETED DETAIL DELETED DETAIL BIR TO INCORP. ED-H-G250 REVISION REVISION DATE OF APVO APV	VASHINGTON PUBLIC POWE HANFORD NO. RK NO. RCIC-12	R SUPPLY 2 9	SYST	EM
3 P REV NO SL/LDE	DELETED DETAIL DELETED DETAIL BIR TO INCORR BO-H-G250 REVISION REVISION DATE 2-13-82 HOF DATE 2-13-82 ENGINEERING REVIEW	VASHINGTON PUBLIC POWE HANFORD NO. RK NO. RCIC-12 BUD NS AND B	R SUPPLY 2 9	SYST	EM
3 B REV NO SL/LDE MECH	DELETED DETAIL DELETED DETAIL EV DE REDRAMINY II- BER TO INCORP. B2 FB ED-H-G250 REVISION DATE 2000 APVD APVD CHKD FBOHAJIKEK SCALE NTS HDF DATE 2-13-82 ENGINEERING REVIEW CIVIL MMM 1210 9.3	VASHINGTON PUBLIC POWE HANFORD NO. RK NO. RC/C-/2 BURNS AND F	R SUPPLY 2 O E, IN	SYST C.	EM
3 B REV NO DWN N SL/LDE MECH ELEC	DELETED DETAIL DELETED DETAIL EV D E REDRAMINY II- BER TO INCORP. ED-H-G250 REVISION DATE 3-13-82 ENGINEERING REVIEW CIVIL MUY 1210 52 NE NE	VASHINGTON PUBLIC POWE HANFORD NO. RK NO. RC/C-/2 BURNS AND F Engineers and Co sw Jersey • New York • Con	R SUPPLY 2 9 10 E, IN nstructor necticut	SYST C. Solito	EM
3 REV NO DWN IV SL/LDE MECH ELEC REVD	DELETED DETAIL DELETED DETAIL EV D E REDRAWINY 11- BER TO INCORP. ED-H-G250 REVISION DATE 30- MDF DATE 3-13-82 ENGINEERING REVIEW CIVIL MUM 1210 52 Ne 3/13/81. APV0 0 0 00TE	VASHINGTON PUBLIC POWE HANFORD NO. RK NO. RC/C-/2 BURNS AND R Engineers and Co sw Jersey • New York • Con	R SUPPLY 2 9 10 E, IN nstructor necticut	SYST C. Scottito	EM
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686 G	E NUC	LEAR I	ENERGY	EXAN	NINATION SUM	MMARY SHEET		Report No.: R15-086
Site and Unit:	Co	olumbia	Generatin	g Station C	omponent ID:	6RCIC(1)-40	4
Outage:		RFO-1	5			PIPE TO VALVE		
System: 1	RCIC	ASME (Cat.: <u>B-J</u>	ASME Item	B9.11 A	ug Requirements:	N/A	
xams Performe	d Dat	a Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Shear	UT-	R15-067	N/A	PDI-UT-1	UT-28	DREW PETERSON	11	5/28/01
45° Shear	UT-	R15-068	N/A	PDI-UT-1	UT-28	DREW PETERSON		5/28/01
During the mai A5° and 60° se This examinati 1996 Addenda The examinatio Previous data v	nual ultr parch un on is ac with m on was 1 was revi	rasonic ex its. Root ceptable odificatio imited fro ewed prio	camination o geometry was per the requins as stated om 8" to 14" o or to this sum	f the above reference as recorded by the e irements of ASME S in 10CFR50.55. due to a support. 8 mmary. Addle wells	ed weld, no reportat 50° search unit. Section XI, 1989 Edit 16% Code coverage v lad to pro	e indications were re ion, no Addenda and t vas obtained.	the 1995 E	lizing the idition,
Examinatio	on results	s were cor	npared to dat	a report RIU-08	0 from 1980) outage with 📝	No Chai	nge
11030 678						L.]	Change	
This Summar	yand the	e following	data sheets	have been reviewed	and accepted by the f	ollowing personnel:	RWP:	N/A
Prepared By:	·		evel: D	Bo -61 ate: Utility Revie	wed By: T	<u>ELEAS 5/31/01</u> itle: Date:	Dose:	N/A mr.
	BV:	2 =		131 /01 2002	Forthe for	<u>47</u> 5131/01	Page	1 of N 1 1

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	GE NU	CLEA	R ENER	GY	Site: C	Columbia	Ultra	sonic	Exami	nation	dure:	catior	n Repo 1/B/S	ort Site Spec	ific Rev.	. 0	Data Repo Cal / Data S	rt Number: Sheet Numbe	<u>R15-086</u> er <u>UT-R15-06</u>
1 ID: <u>6F</u> ocation:	RCIC(1)-4 TOP DE	IO AD CE	<u>NTER</u>	l.	Draw Wo Lo	ing: <u>RCI</u> ocation: <u>V</u>	C-102-3 /ELD CEI		E	Size: Weld	<u>6</u> Width:	Thick <u>1.0"</u>	ness:	<u>0.432</u> Weld H	leight: <u>F</u>	<u>LUSH</u>	EE	Exam Start: Exam End:	<u>2105</u> 2155
Angle Used 60*	e % of DAC 80	Ind L1 N/A	ication Le L Max 7" CCW	ngth L 2 N/A	W1 N/A	W Distanc W Ma .8"	e W 2 N/A	MP 1 N/A	Metal Patt MP Max .87"	MP 2 N/A	Ax / Circ Ax	Upst/ Dnst Upst	Root ge	ometry see	n 360° inte	ermitten	Comments:		
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$\overline{\langle}$)					WH	/h	Ē	5/3/	101	In		hel		<i>131/01</i>	1	WATO		5/3/
DREWI	PETERS	ON	II · 5	/28/01	GEI	Reviewed E	v	Leve	l: Date	Uti	lity Rev	iewed By	€10 !:		Date:	ANII	Reviewed B	By:	Date:

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æ	GE N	UCLEA	R ENEI	RGY	Wall Tr Profil	nickness e Sheet	Site: <u>Columbia G</u> Project: <u>RFC</u>	<u>enerating Statio</u>)-15	n <u></u> Unit: <u>N/A</u>	Report No.: <u>R15-086</u>
System:		<u>R(</u>			Component ID Number:	6RCIC(1)-40	-	1.5"		1.5"
Position	0°	90°	180°	270°				ر <u>د</u> ا ا	<u>ا</u> م ا	
1	.40	N/A	N/A	N/A	Crown Height:	FLUSH		<u> </u>	<u> </u>	<u> </u>
2	.48	N/A	N/A	N/A						
	.51	N/A	N/A	N/A	Crown Width:	<u>1.0"</u>	PIPE	```````````````````````````````````````		VALVE
3	50	NIA	AVA	- N/A	Nominal Diameter.	6.0"	UPST Compor	nent:	$\sum \left \right $	DNST Component:
4	.56	NVA		N/A					<u> </u>	<u>\</u>
5	N/A	N/A	N/A	N/A	Weld Length:	<u>21.5</u> *			FLOW	
	P/	PE								
tials: Ex	DREW PE kaminer:	TERSON	<u>[]</u> Level:	<u>5/28/01</u> Date:	GE Reviewed By:	표 <u>5/30/01</u> Level: Date: (Utility Reviewed By:		ANII Reviewed By:	- 55 Date: Page 5 of 5

Attachment D

2ISI-32-7

Weld Identification 24RRC(1)A-14

ISI Diagram RRC-101-2

NDE Data Report R15-053

2ISI-32-8

Weld Identification 24RRC(1)A-15

ISI Diagram RRC-101-2

NDE Data Report R15-054

2ISI-32-9

Weld Identification 24RRC(1)A-18

ISI Diagram RRC-101-2

NDE Data Report R15-057

2ISI-32-10

Weld Identification 24RRC(1)A-19

ISI Diagram RRC-101-2

NDE Data Report R15-058

2ISI-32-11

Weld Identification 24RRC(1)B-12

ISI Diagram RRC-102-2

NDE Data Report R16-060

2ISI-32-12

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Weld Identification 24RRC(1)B-16

ISI Diagram RRC-102-2

NDE Data Report R16-062

2ISI-32-13

Weld Identification 24RRC(1)B-17

ISI Diagram RRC-102-2

NDE Data Report R16-063

2ISI-32-14

Weld Identification 24RRC(2)A-10

ISI Diagram RRC-101-2

NDE Data Report R15-049 pages 1 and 6

2ISI-32-15

Weld Identification 24RRC(2)B-8

ISI Diagram RRC-102-2

NDE Data Report R16-066

2ISI-32-7



	GE GE	NUCLEAR	ENERGY	EXAN	INATION SUM	MARY SHEET		Report No.: R15-053
	Site and Unit:	Columbia	Generatin	ng Station Co	omponent ID:	24RRC(1) <u>A-14</u>	
	Outage:	RFO-1	<u>5</u>			PIPE TO VALVE		
	System: R	RC ASME	Cat.: <u>B-J</u>	ASME Item	<u>B9.11</u> A	ug Requirements:	<u>N/A</u>	
	Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
	60° RL	UT-R15-046		PDI-UT-2	UT-7	JACK REISEWITZ	11	5/24/01
	45° SHEAR	UT-R15-045	<u> </u>	PDI-UT-2	UT-7	JACK REISEWITZ		5/24/01
	Examination Resul During the manu 45° and 60° sear This examinatior 1996 Addenda w Examined from p Previous data wa	its: rch units. n is acceptable vith modificatio pipe side only o as reviewed pri	xamination o per the requ ons as stated due to valve c or to this sun	f the above reference irements of ASME S in 10CFR50.55. configuration. 50% o nmary.	ed weld, no reportab ection XI, 1989 Editi code coverage obtair	le indications were rea on, no Addenda and t red.	corded uti	lizing the
)		₩₩ ₩ ₩ \$* ₩ \$* ₩ ₩					magnine (1912) - Naga Garage	
· .	y	ana ng ga ng tao k			an a su an		navita trade a set	
ノ	Examination. These exami	results were co inations were pe	mpared to data	e report RRU-24 r Work Order: 01	0 <i>from</i> 1979 011024	outage with	No Chai Change	лgө
ノ	Examination These exami This Summary of Prepared By:	results were co inations were per and the followin	mpared to data enformed under g data sheets <u>21 </u>	a report RRU-24 r Work Order: 01 have been reviewed 24-01 wate: Utility Review	0 from 1979 011024 and accepted by the for Wed By: Th	outage with Dillowing personnel: ELEAL SZ8/01 Date:	No Char Change RWP: Dose:	nge N/A N/A mr.

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GE NUCLEAR ENERGY	Ultrasonic Ma	Calibration annual Piping a	nd Examination nd Component	Record s	
Site/Unit: <u>Columbia Generating Stati</u> Outage: <u>RFO-15</u>	on / N/A		Data Report Number: Data Sheet Number: Linearity Sheet:	<u>R15-053</u> <u>UT-R15-045</u> <u>L-004</u>	
Calibration Data for Block: UT-7		Procedure: I	PDI-UT-2		
SS 24 1.14 Calibr	ation Cal Time	Rev B	DRR: Site Specific F	<u>lev. 0</u>	
Material Size Thick Initial	Cal: 2030	······································	Search Unit Dat	a	
ULTRAGEL 97425 Cal C	heck: <u>N/A</u>	KRA	003R18	0.50"/Round	
213183 70° F	neck: <u>N/A</u>	Manufacturer:	Serial Number	Size/Shape:	
Thermometer S/N Cal Temp. Final	Cal: <u>2354</u>	0.55	<u>in. 45°</u>	<u>45°</u>	
DAC Construction		Incident	Point: Nominal Angle:	Measured Angle:	
Scan Direction Ax Circ		<u>1.5 M</u> Freque	Hz <u>Comp-G</u>	<u>SHEAR</u> Mode	
Cal Reflector <u>ID Notch</u> <u>ID Notch</u>	!		Search Unit Cahl	e	
Signal Amplitude 80% 80%			74 E'		
Signal Sweep: <u>5.2 Div</u> <u>5.3 Div</u>		Cable T	ype: Length:	Connectors:	
Signal dB: <u>37.2 dB</u> <u>42.0 dB</u>		-			
Sweep 0-10 = <u>4.0 in.</u> <u>Metal Path</u>			Instrument Setting	15	
Calibration Verificat	on N/A	<u>Stave</u> Mau	<i>ley / Sonic 136P</i> facturer/Model:	<u>136991A091220</u> Serial Number:	
Reflector N/A	N/A	<u>0.48 in.</u>	0.122in./µsec.	2 <u>4 KHz</u>	
Amplitude <u>N/A</u>	<u>N/A</u>	Delay:	Velocity: Filt	er: Rep Rate:	
Gain (dB) <u>N/A</u>	<u>N/A</u>	<u>4.0 in.</u>	<u>334 ns</u>	500 Ohms	
Sweep (SD) <u>N/A</u>	<u>N/A</u>	Range:	Pulser:	Damping:	
Acceptable Linearity performed :	5/16/01	_ Reject:	Frequency:	Mode:	
Exam Data for Weld: 24RRC(1)A-14			_		
PIPE TO VALVE	ار دیکر میشوند. اندونی از میرونی ایران میراند. میرونی ایران ای میرونی ایران ای	Exam	Comments / Limi	tations:	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
Configuration: <u>OD</u> <u>92° F</u> Exam Surface: Exam Temp. E	<u>213183</u> xam Thermometer	No axial exams per Counterbore observ	formed on downstream /ed below recordable le	valve surface. vel.	
Drawing: <u>RRC-101-2</u>			•.		
Axial UPST Scan dB Circ DNST	Recordable Exam		na ja na sa	a a secondaria de la composición de la Composición de la composición de la comp	
Axial Opst 51.2	<u>NKI 45</u> N/A	_			
<u>Circ</u> <u>Upst</u> 56.0	<u>NRI</u> 45°				
<u>Circ</u> <u>Dnst</u> <u>N/A</u>	NRI	Exam Start:	2100 Exam Er	nd: <u>2215</u>	
JAR JACK REISEWITZ	<u>II</u>	Hall	II 5/27,	101	
Initials: Examiner: Le	vel: GE Revie	awed By:	Level: Date:		
<u>N/A</u>	NA AD	h Ulleth	5/28/01		
Initials: Examiner 2:	vel:	viewed By:	Date:	Form:Pipe Weld	
Cal/Exam Date: 5/24/01	2/11	Reall	- 5728/01	Dage 2 of A	
	ANII Revi	ewed By:	Date:		

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B <u>G</u>	E NUCL	EAR ENER	<u>GY</u>	Uitra	asonic Mai	Calibration a nual Piping a	nd Exami nd Comp	nation F onents	Record	
Site/Unit: <u>(</u> Outage: <u>F</u>	Columbi RFO-15	la Generatir	ng Statio	on / N/A			Data Repor Data Sheet Linearity Sh	t Number: <u>F</u> Number: <u>L</u> leet: <u>L</u>	<u>215-053</u> JT-R15-046 -004	
Calibration	Data fo	r Block: UT	<u>-7</u>	· · · · · ·		Procedure:	PDI-UT-2	· · · · ·		
<u>SS</u>		<u>24 1.14</u>	Calibra	tion Cal T	ïme	Rev <u>₿</u>	DRR: <u>Site s</u>	Specific Rev	<u>. 0</u>	
Materia	l S	ize Thick	Initial C	Cal: <u>2045</u>			Search L	<u> Jnit Data</u>		
<u>ULTRAG</u> Couplan	EL It: Ci	97425 ounlant batch	Cal Ch	eck: <u>N/A</u>		RTD	92-894	2	(10x18) mm/Rect.	
213183	<u>3</u>	<u>70° F</u>	Cal Ch	eck: <u>N/A</u>		Manufacturer:	Serial Nun	nber	Size/Shape:	
Thermomete	er S/N	Cal Temp.	Final C	al: <u>2357</u>		0.5	in.	<u>60°</u>	<u>60°</u>	
		AC Constr	uction			Incident	Point: Nomin	al Angle: Me	easured Angle:	
Scan Directio		Ax				<u>2.0 M</u> Freque	<u>IHz Ti</u> ancy: S	<u>RLA</u> tvle:	<u>RL</u> Mode:	
al Reflector		D Notch					Search U	nit Cable		- '
Signal Ampli	tude	<u>80%</u>						£'	0	
Signal Swee	p;	<u>5.9 Div</u>			•	Cable 1	174 Type: Le	o ngth: C	v Connectors:	
Signal dB:		76.0 dB								-
Sweep 0-10	= <u>5.0 in</u>	. <u>Metal P</u>	ath]	Instrument	Settings		
	<u>C</u> (alibration V	erificatio	<u>on</u>		Stave	eley / Sonic 13	16P	136991A091220	
Field	d Simulat	or Block S/N:		<u>N/A</u>				···	Serial Number:	
	Reflect	or <u>N/A</u>		<u>N/A</u>		<u>0.85 in.</u> Delav:	<u>0.23in./µse</u> Velocity:	<u>c. 2</u> Filter:	<u>4 KHz</u> Rep Rate:	
	Amplitu Gain (d	ide <u>N/A</u> (B) N/A		<u>N/A</u>		5.0 in.	250	ns	500 Ohms	
	Sweep (SD) <u>N/A</u>		N/A		Range:	Puis	er:	Damping:	
Ac	ceptable L	inearity perform	med : <u>5</u>	/16/01		<u>Off</u> Bojacti	2.25	MHz	<u>Dual</u> Madai	
Exam Data	a for We	ld: 24RRC	(1)A-14				-requ			
		PIPE TO VA	LVE			Exam	n Comment	<u>s / Limitat</u>	tions:	
		Configurati	on:			No scans possible	from downstre	am valve su	face.	
<u>o</u>	D	<u>92° F</u>	· ·	213183						
Exam S	Surface:	Exam Te	mp. Ex	kam Thermo	meter					
Drawing:		RRC-101-2			·····			~		
Axia Circ	1	UPST	Scan dB	Recordable	e Exam		ana este este este a		- 	· ·
Axia	1	<u>Upst</u>	<u>76.0</u>	NRI	<u>60°</u>	an an start an an start an st		· •		
<u>Axia</u>	<u>1</u>	<u>Dnst</u>	<u>N/A</u>	<u>N/A</u>						
Circ	2	<u>Upst</u>	<u>N/A</u>	<u>N/A</u>		Exam Start:	2100	Exam End:	2215	
Circ	2	<u>Dnst</u>	<u>N/A</u>	<u>N/A</u>						
JAR	JACI	K REISEWITZ		<u>II</u>	_Mu	Hally	IU	5/20/0	/	
initials:	Examiner	:	Le	vel:	GE Revie	wed By:	Level	Date:		
		N/A	,	VA X	for	Ulph	5/28	01		
Initials:	Examiner	2:	Le	vel:	Suility Rev	lewed By:	Date:	,	Form:Pipe Weld	
	·/····································				1.11	TENO	5/25	to/	Record # 62	
Cal	vexam Da	te: <u>5/24/0</u>	1		ANII Revie	ewed By:	Date:		Page <u>3</u> of <u>4</u>	

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	GE N	UCLEA	R ENER	<i>IGY</i>	Wall T Profi	hickness le Sheet		Site: <u>Col</u> Project:	umbia Gene <u>RFO-15</u>	rating Statio	<u>n</u> Unit: <u>N/A</u>	Report N <u>R15-053</u>	lo.:
System		RF	25		Company to Number				1.	5"	Ê	1.5"	
Position	0°	90°	180°	270°	Component ID Number:	<u>24RRC(1)A-14</u>					3		_
1	N/A	N/A	1.03	N/A	Crown Height:	FLUSH			1	2	4	5	
2	N/A	N/A	1.10	N/A	Consum 186 dikk			:					
з	N/A	N/A	1.21	N/A	Crown Width:	<u>1.1"</u>		LIDET	<u>PIPE</u>		$\langle \rangle$	VALI	<u>/E</u>
4	N/A	N/A	1.32	N/A	Nominal Diameter:	<u>24.0"</u>			Component				
5	N/A	N/A	N/A	N/A	Weld Length:	<u>75.0"</u>		:			FLOW		
			Piéc 1				<u>2</u> a				MCANP	E	
PRC DF Initials: E	BRET F ixaminer:	TAKE Lesner	<u>n Ai</u> <u>11</u> Leve!:	5/24/01 Date:	GE Reviewed By:	<i>III 5/27/6</i> Level: Date:	UIU	Brand Harris	AT I	DSITION STEDI STEDI Date:	S MEAUNI S ME 7 MI Reviewed B	y: Page	5752847 Date:

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6	SE NUCLEA	R ENERGY	EXA	MINATION S	SUMMARY SHEET	-	Report N R15-05-			
Site and Unit	Columb	ola Generati	ng Station	Component ID:	24RRC(1	24RRC(1)A-15				
Outage:	REO	.15								
System	RRC ASM	E Cat.: B-	J ASME Item	B9.11	Aua Requirements:	N/A				
Exams Perform	ed Data Shee	t Cal Sheet	Procedure	Calibration Blo	ock Examination	Cert	Date			
					Personnel	Level				
45° Shear	UT-R15-04	7 N/A	PDI-UT-2	UT-7			5/24/01			
xamination Re During the ma	sults: inual ultrasonic earch units	examination	of the above refere	nced weld, no repo	ortable indications were re	corded uti	lizing the			
This examinat 1996 Addenda	ion is acceptat a with modifica	ble per the req tions as stated	uirements of ASME d in 10CFR50.55.	Section XI, 1989	Edition, no Addenda and f	the 1995 E	dition,			
Examined fror	n the pipe side	only due to va	alve configuaration.	. 50% code covera	ge was obtained.					
Previous data	was reviewed r	prior to this su	immary.							
				· "	ر بې د دې ورو ورو ورو ورو ورو ورو ورو ورو ورو ور					
				. ".	a meneti nderi bid a taun yan a k					
				- ".	- 					
			11,119 - 111 - 11 - 11 - 11 - 11 - 11 -			M., 14				
					an a	M				
				an a	n - ee oo gaagaa gaar gaga gaar oo oo oo oo oo oo oo oo oo	м. т				
	e		1		na ana ang ang ang ang ang ang ang ang a	90, 19 - 1				
					na – en en el substanti parte en arte de la servici de Registrativa parte de la servici de la se	2 0, 10 - 1				
		••••• ••• ••• •••		n	an a	w				
					n	w				
Examinati	on results were	compared to da	tter report RRU-	.174 from	1979 outage with	No Char	nge			
Examinati These exe	on results were o	compared to de	ita report RRU-	174 from 01011024	1979 outage with	No Char	nge			
Examinati These exa	on results were aminations were	compared to de performed und	ita report RRU- ler Work Order:	174 <i>from</i> 01011024	1979 <i>outage with</i>	No Char Change	nge			
Examinati These exe This Summa	on results were aminations were ry and the follow	compared to de performed und ving data sheet.	ata report RRU- ler Work Order: s have been revigwe	174 from 01011024	1979 outage with	No Char Change	nge			
Examination These exa This Summa	on results were aminations were ry and the follow	compared to de performed und ving data sheet.	tter report RRU- ler Work Order: s have been reviewe	174 from 01011024	1979 outage with	No Char Change RWP:	nge N/A			
Examination These exe This Summa Qack Acc	on results were aminations were ry and the follow	compared to de performed und ving data sheet	ata report RRU- ler Work Order: s have been reviewe	174 from 01011024 Totand accepted by a	1979 outage with the following personnel: USE (LAL SIZE/01	No Char Change RWP: Dose:	nge N/A N/A m			
Examinati These exe This Summa Qack Ques Prepared By:	on results were aminations were ry and the follow	compared to de performed und ving data sheet 	tta report RRU- ler Work Order: s have been reviawe -24-01 Date:	174 from 01011024 Totand accepted by the William Strength of the second	1979 outage with	No Char Change RWP: Dose:	nge N/A N/A m			
Examination These exa This Summa Qack Que Prepared By: Min2	on results were on minations were ry and the follow	compared to de performed und ving data sheet Level:	ta report RRU- ler Work Order: s have been reviewe -24-01 Date:	174 from 01011024 Thand accepted by the UUUUUL riewed By:	1979 outage with the following personnel: USE (LAA SZE) [0] Title: Date: Title: Date:	No Char Change RWP: Dose:	nge N/A N/A m			
Examination These exe This Summa Qack Que Prepared By: Misson	on results were a minations were ry and the follow	compared to de performed und ving data sheet 	ter report RRU- ler Work Order: s have been reviewe - 24 - 01 Date:	174 from 01011024 Thand accepted by the Welling viewed By:	1979 outage with the following personnel: USE (LAA STEE/OI Title: Date: Title: Date: Title: Date:	No Char Change RWP: Dose:	nge N/A N/A m			

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GE NUCL	EAR ENER	<u>97</u>	Ultra	sonic (Mar	Calibration a uual Piping	and Exam and Com	ination ponents	Record
Site/Unit: <u>Columb</u> Outage: <u>RFO-15</u>	ia Generatin	g Statio	<u>n / N/A</u>			Data Repo Data Shee Linearity S	ort Number: et Number: Sheet:	<u>R15-054</u> UT-R15-047 L-004
Calibration Data for	or Block: UT-	7			Procedure:	PDI-UT-2		
SS	24 1.14	Calibrat	ion Cal Tir	ne	Rev B	DRR: <u>Site</u>	Specific Re	<u>ev. 0</u>
Material S	Size Thick	Initial C	al: 2030			Search	Unit Data	<u>l</u>
ULTRAGEL	<u>97425</u>	Cal Ch	eck: N/A		KDA	0020	10	0 50"/Dound
Couplant: C	Couplant batch	Cal Che	eck: N/A		Manufacturer:	Serial Nu	<u>ro</u> Imber	Size/Shape:
213183 Thermometer S/N	<u>70° F</u>	Final C	al 2354				450	489
Thermometer SAN	Carremp.]	<u>0.5</u> Incide	i <u>5 In.</u> nt Point: Nom	45° inal Angle: 1	45* Measured Angle:
<u>1</u>	DAC Constru	<u>iction</u>						Of any
Scan Direction	Ax	Circ			<u>7.5</u> Frea	MHZ C uencv:	omp-G Style:	<u>Snear</u> Mode:
Cal Reflector	ID Notch	ID Notch				Search I	Init Cable	·····
Signal Amplitude	80%	80%				<u>vearon (</u>	Sint Gable	<u> </u>
Signal Sweep:	5.2 Div	5.3 Div			<u>RG</u>	-174	<u>6'</u>	<u>0</u> Connoctore:
Signal dB	37.2 dB	42.0 dB				rype: L	.engun: 	Connectors:
Sween $0.10 = 404$	n Motol De	oth				Instrumer	nt Setting	8
Gweep 0-10 - 4.01						<u>III an ainei</u>	is obtaining	<u>-</u>
	alibration Ve	Princatio	<u>>n</u>		<u>Sta</u> M	veley / Sonic aufacturer/Mod	<u>136P</u> iel:	<u>136991A091220</u> Serial Number:
Field Simula	tor Block S/N:				0.48 in.	0.122in./u	sec. 2	4 KHz
Reflec	tor <u>N/A</u>		<u>N/A</u>		Delay:	Velocity	/: Filte	r: Rep Rate:
Amplit	ude <u>N/A</u>		<u>N/A</u>				4	500 Ohma
		rayor (he ber al. <u>Ber ar ar ear a</u>	N/A	چوي، الأيَّحي من مايَّعا ، في السلاكاتية المحرد في اللي ال	Range	ະ ອີງອີງອີງອີງອີງອີງອີງອີງອີງອີງອີງອີງອີງອ	<u>4 //S</u> Iser:	Damping:
Sweep	(SD) <u>N/A</u>	<u>_</u>	<u>N/A</u>				5 MH2	D/F
Acceptable	Linearity perform	ned : <u>5/</u>	<u>16/01</u>		Reject	: Freq	uency:	Mode:
Exam Data for We	eld: <u>24RRC(</u>	<u>(1)A-15</u>			·			
•	VALVE TO P	PIPE	والمراجع والمراجع والمراجع		<u>Exa</u>	<u>m Commer</u>	nts / Limit	ations:
	Configuratio	on:			No Axial exams µ	performed on u	pstream val	ve surface.
OD	92° F		213183		Counterbore obs	erved below re	cordable levi	əl.
Exam Surface:	Exam Ter	np. 🗠 Ex	am Thermor	neter				
Drawing:	<u>RRC-101-2</u>							
Axial	UPST	Scan dB	Recordable	Exam				
Circ	DNST	AI/A	Indications	Angle	AL.		· · ·	
Axiai		<u>N/A</u>		480				
Axiai	Unst	<u>57.2</u>		<u>45°</u>				
		<u>N/A</u>	NRI	450	Exam Start:	2220	Exam End	d: <u>2335</u>
Circ	<u>Dnst</u>	<u>36.0</u>	<u>NRI</u>	<u>45°</u>				-
TAP JAC	<u>CK REISEWITZ</u>	:	<u>n</u>	Mu.	Has/1	11	5/27,	101
Initials: Examine	r:	Lev	/el:	GE Review	Ned By:	Levei	: Date:	_
				In	! Illelel	SIZE	101	
		<u>^</u>		Uthity Revi	ewed By:	Date	*	Form Pine Mald
Initiais: Examine	Initials: Examiner 2:					57 7	dal	Record # 63
Cal/Exam Da	Cal/Exam Date: 5/24/01							Page <u>2</u> of 4
					wea By:	Date		

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GE NUCLEAR ENERGY	Ultrasonic Ma	Calibration and Examination Record anual Piping and Components
Site/Unit: <u>Columbia Generating St</u> Outage: <u>RFO-15</u>	ation / N/A	Data Report Number: <u>R15-054</u> Data Sheet Number: <u>UT-R15-048</u> Linearity Sheet: <u>L-004</u>
Calibration Data for Block: UT-7		Procedure: <u>PDI-UT-2</u>
<u>SS 24 1.14</u> Cal	ibration Cal Time	Rev B DRR: <u>Site Specific Rev. 0</u>
Material Size Thick Init	ial Cal: <u>2045</u>	Search Unit Data
Couplant: Couplant batch	Check: <u>N/A</u>	RTD 92-894 2(10x18) mm/Rec
<u>213183</u> <u>70° F</u> Ca	Check: <u>N/A</u>	Manufacturer: Serial Number Size/Shape:
Thermometer S/N Cal Temp.	al Cal: 2357	0.5 in. 60° 60° Incident Point: Nominal Angle: Measured Angle:
DAC Constructio	<u>n</u>	2.0 MHz TRLA RL
Scan Direction Ax		Frequency: Style: Mode:
Cal Reflector ID Notch		Search Unit Cable
Signal Amplitude <u>80%</u> Signal Sweep: 5.9 Div		<u>RG-174 6' 0</u>
Signal dB: 76.0 dB		Cable Type. Length. Connectors.
Sweep 0-10 = <u>5.0 in.</u> Metal Path		Instrument Settings
Calibration Verific	ation	<u>Staveley / Sonic 136P</u> <u>136991A091220</u> Maufacturer/Model: Serial Number:
Field Simulator Block S/N:	<u>N/A</u>	0.85 in. 0.23in./usec. 2 4 KHz
Amplitude N/A	N/A	Delay: Velocity: Filter: Rep Rate:
Gain (dB) <u>N/A</u>	<u></u>	<u>5.0 in.</u> 250 ns 500 Ohms
Sweep (SD) <u>N/A</u>	<u>N/A</u>	Range: Pulser: Damping:
Acceptable Linearity performed :	5/16/01	<u>Dff 2.25 MHz Dual</u> Reject: Frequency: Mode:
Exam Data for Weld: 24RRC(1)A-	<u>15</u>	
VALVE TO PIPE	a a a guna a a a a a a a a a a a a a a a a a a	Exam Comments / Limitations:
Configuration:		No exams performed on upstream valve surface.
<u>OD</u> <u>92°F</u> Exam Surface: Exam Temp.	<u>213183</u> Exam Thermometer	
Drawing: <u>RRC-101-2</u>		
Axial UPST Scan	dB Recordable Exam	
Axial Upst N//	<u>N/A</u>	5
Axiai Dnst 76.	<u>0 NRI 60°</u>	-
<u>Circ</u> <u>Upst</u> <u>N/</u>	<u>N/A</u>	Exam Start: 2220 Exam End: 2335
<u>Circ</u> <u>Dnst</u> <u>N//</u>	<u>N/A</u>	
JAR JACK REISEWITZ	<u>u</u> //	Willing III 5/20/01
Initials: Examiner:	Level: GE Rev	viewed By: Level: Date:
N/A	N/A	Liller 5/28/01
Initials: Examiner 2:	Level:	eviewed By: Date: Form:Pipe Weld
Gal/Exam Date: 5/24/01	2/ 11	Eest STISTON BORG 2 of A
	ANII Re	viewed By: Date: Page 3 01 4

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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-9



G G	E NUCLEAR	ENERGY	EXAN	INATION SUN	IMARY SHEE1	Г	R15-05
Site and Unit: Outage:	Columbia RFO-1	<u>Generating</u>	g Station C	omponent ID:	<u>24RRC(1</u> PIPE TO VALVE	<u>1)A-18</u>	<u> </u>
System:	d Data Sheet	Cal Sheet	Procedure	Calibration Block	g Requirements:	Cert	Date
			110000010	Galistation Blook	Personnel	Level	Date
45° Shear	UT-R15-051	N/A	PDI-UT-2	UT-7	CHAD OLSON	11	5/25/01
		<u> </u>				<u>`</u>	
Examination Res During the mar utilizing the 45 This examinati	ults: nual ultrasonic e ° search unit. Ro on is acceptable	xamination of bot geometry v	the above reference was recorded by th rements of ASME S	ed weld, no indication e 60° RL: section XI, 1989 Editio	ns associated with IC on, по Addenda and	GSCC were the 1995	recorded Edition,
1996 Addenda	with modificatio	ons as stated i	n 10CFR50.55.				Lanton,
The examintion	was performed	from the pipe	side only due to v	alve configuration, 50	% Code coverage wa	as obtained	d.
					~		
				·			
Examinatio These exam	n results were co ninations were pe	mpared to data enformed under	report RRU-15 Work Order: 01	57 from 1979 1011024	outage with	No Cha Change	nge
Examinatio These examinatio This Summar CLL OL Prepared By:	n results were co ninations were per y and the followin	mpared to data enformed under g data sheets t <u>TI5/</u> Level: Da	report RRU-15 Work Order: 01 have been reviewed 25/01 tte: Utility Revie	57 from 1979 1011024 and accepted by the fo Wed By: Tit	outage with Ilowing personnel: Lett 126/01 e: Date:	No Cha Change RWP: Dose:	nge N/A N/A r

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SiterUnit: Columbia Generating Station / N/A Data Report Number: 215:027 Outage: RF0-15 Data Sheet Number: 215:027 Calibration Data for Block: UTZ Procedure: 201:172 Size 24 1.14 Calibration Calibration Couplant: Couplant batch Calibration Calibration Calibration Couplant: Couplant batch Cal Check: MA Couplant: Couplant batch Cal Check: MA Calibration Cal Check: MA Manufacture: Search Unit Data 10000000 Accompation batch 1135 Manufacture: Search Unit Cabio Signal Amplitude 8025 Signal Amplitude 8025 Search Unit Cabio Signal Amplitude 8025 Signal Amplitude 8025 Search Unit Cabio Signal Amplitude 8025 Signal Amplitude 8025 Calibration Verification Field Simulator Block SiN: MA MA Search Unit Cabio Searach Unit Cabio Signal Amplitude 8025 Signal Amplitude 802 Amplitude Serial Number: Serial Number: Accorptable Linearity performed: 51601 MA MA Serial Number: Serial Number:	GE NUCLEAR	ENERGY	Ultra	sonic (Mar	Calibration ar nual Piping ar	nd Examination nd Component	n Record ts
Calibration Data for Block: ULTZ SS 24 1.14 Material Size Trick ULTRAGEL 94125 Couplant Couplant Couplant Couplant 21067 71*E Thermometer Sin Calibration Scan Direction Ax CaliBration Verification 1135 Signal Amplitude 8023 Signal Amplitude 8024 Signal Amplitude 8024 Calibration Verification NA Field Simulator Block SiN: NA Calibration Verification Stavely Verification Field Simulator Block SiN: NA Mandacturer/Model: 24 Miz Sweep 0:0 = 4.01m. Mail Acceptable Linearity performed: 51601 Acceptable Linearity performed: 51601 Axiai UPST Circl DNST Circl Size Signal Mize Prequency: Mail Mail UPST Sol Amile Sear Shore Configuration: OD 24 Miz	Site/Unit: <u>Columbia Ger</u> Outage: <u>RFO-15</u>	nerating Stati	on / N/A			Data Report Number Data Sheet Number Linearity Sheet:	r. <u>R15-057</u> <u>UT-R15-051</u> <u>L-004</u>
SS 24 1.14 Calibration Calibration Calibration Calibration Calibration Calibration Calibration Spearch Unit Date 1 1 Calibration Calibratio	Calibration Data for Bloc	k: <u>UT-7</u>			Procedure: <u>F</u>	DI-UT-2	
Material Size Thek Initial Cat 0232 Material Size The Material Cal Check N/A 213057 71'F Cal Check N/A Thermometer SIN Cal Temp. Final Cat: 1133 DAC Construction Scan Direction Africe Africe Scan Direction Arrentitude BX Signal Amplitude Signal Amplitude Signal Amplitude BX Signal Amplitude Signal Amplitude Signal Amplitude Signal Amplitude BX Signal Amplitude Signal Amplitude Signal Amplitude Field Simulator Block S/N: N/A Acceptable Linearity performed: Signof Acceptable Linearity performed: Signof OD 85'F 213067 Complexition: Signof Acceptable Linearity performed: Signof OD 85'F 213067 Complexition: Signof PiPE TO VALVE Signal Ample Configuration: Signof OD 85'F State Signof PiPE TO VALVE Signal Miner Configuration: Signof OD 85'F Out Sif Sond B	SS 24	1.14 Calibra	ation Cal Tir	me	Rev <u>B</u>	DRR: <u>Site Specific</u>	<u>Rev. 0</u>
UTRAGEL 94125 Couplant Couplant Couplant Couplant Couplant Couplant Couplant Serial Number Size/Shape: 213067 211°.F Final Call 1135 Manufacturer: Serial Number Size/Shape: DAC Construction Size/Shape: 0.41n. 45°. 45°. 45°. Scan Direction Az 135 Marufacturer: Serial Number Size/Shape: Signal Amplitude 80% Signal Amplitude 80% Search Unit Cable Search Unit Cable Signal Amplitude 80% Signal Amplitude 80% Search Unit Cable Search Unit Cable Signal Amplitude MA MA Search Unit Cable Search Unit Cable Search Unit Cable Signal Amplitude MA MA MA Search Unit Cable Search Unit Cable Search Unit Cable Signal Amplitude MA MA MA Search Unit Cable Search Unit Cable Search Unit Cable Signal Amplitude MA MA MA MA Search Unit Cable Search Unit Cable Search Unit Cable Search Unit C	Material Size	Thick Initial	Cal: <u>0938</u>			Search Unit Da	ta
Couplement Call Check: MA 13327 11° E Final Call 1133 Thermometer SIN Call Temp. Final Call 1133 DAC Construction Scan Direction Ax As 45° 45° Scan Direction Ax Call Reflector ID Note: Nominal Angel: Measured Angel: Signal Amplitude 80% Signal Steep: 5.0 Div Signal Steep: Signal Steep: Signal Steep: 9 Signal Steep: 5.0 Div Signal Steep: Signal Steep: Stearthurst Kontectors: Stearthurst Kontectors: Signal Steep: 5.0 Div Signal Steep: Stearthurst Kontectors: Stearthurst Kontectors: Signal Steep: 5.0 Div Signal Steep: Stearthurst Kontectors: Stearthurst Kontectors: Signal Steep: 5.0 Div Stearthurst Kontectors: Stearthurst Kontectors: Stearthurst Kontectors: Signal Steep: Stearthurst Kontectors: Main Call Temp. Stearthurst Kontectors: Stearthurst Kontectors: Stearthurst Kontectors: Signal Steep: Stearthurst Kontectors: Stearthurst Kontectors: Stearthurst Kontectors: Stearthurst Kont	ULTRAGEL 941	25 Cal Cl	neck: <u>N/A</u>		KBA	00L18D	0.375"/Round
Thermometer SIN Call Temp. Final Cat 1133 DAC Construction Stan Direction Ast Incident Point: Nominal Angle: Measured Angle: Scan Direction Ast Stan Amplitude Start Start Mode: Signal Amplitude S023 Signal Amplitude Start Callbration Verification Starter Point: Nominal Angle: Measured Angle: Signal Amplitude S024 Starter Point: Starter Point: Nominal Angle: Measured Angle: Starter Point: Nominal Angle: Measured Angle: Signal Amplitude Starter Point: Point: Starter Point: Point: Point: Starter Point: Point	213067 71°	F Cal Ct	neck: <u>N/A</u>		Manufacturer:	Serial Number	Size/Shape:
DAC Construction Incldent Fourt Kommal Angle: Measured Angle: Scan Direction Action Ax Calibration Verification Signal Amplitude B22 dB Sweep 0-10 = 4.0 in. Metal Path Calibration Verification Field Simulator Block SN: M/A Calibration Verification Field Simulator Block SN: M/A Calibration Verification Sweep 0-10 = 4.0 in. Maid acturer/Model: Structure/Model: Field Simulator Block SN: M/A MAGE Same Connectors: Sweep 0-10 = 4.0 in. Sweep 0.10 = 0.10 = 0.0 M/A M/A Acceptable Linearity performed: SYLet O Sweep 0.10 = 10 m/A M/A Asia for Weid: 24RRC(1)A-18 Pulser: Darbib Linearity performed: Daving: BRC-101-2 Axial UPST Scan dB Recordable Exam CO	Thermometer S/N Cal Te	mp. Final (Cal: <u>1135</u>		<u>0.4 //</u>	<u>n. 45°</u>	<u>45°</u>
Scan Direction Ax Cal Reflector ID Noteh Signal Amplitude 80% Signal Sweep: 5.0 Dly Signal B: 38.2 dB Sweep 0:10 = 4.0 in. Mail Caliner Model: Serial Number: Calibration Verification Mail Field Simulator Block S/N: MA Reflector MA Amplitude MA Sweep 0:10 = 4.0 in. Sweep 0:50 MA Acceptable Linearity performed: 5/16/01 Exam Data for Weid: 2476/01 Data 95'F 213067 Exam State: Exam Temp. Configuration: 00 02 85'F 213067 Exam Surface: Exam Temp. Drawing: RC-101-2 Axial UPST Solar Mail Axial UPST Solar Mail Initials: Examiner: Level: Califoration: Coliforation: Coliforation: Axial UPST Solar Mail Cific Data Solar Mail UPST Cific Data Solar	DACC	onstruction			Incident	Point: Nominal Angle: Hz Comp-G	Measured Angle:
Cal Reflector ID Notch Signal Amplitude 80% Signal Amplitude 80% Signal Sweep: 50.01x Signal B: 39.2 d9 Sweep 0-10 = 4.0 In. Metal Path Instrument Settings. Calibration Verification Field Simulator Block S/N: N/A Amplitude N/A Amplitude N/A Sweep 0-10 = 4.0 In. Main Color Staveley / Sonic 136P Amplitude N/A Amplitude N/A Amplitude N/A Sweep 0-10 = M/A Amplitude N/A Amplitude N/A Amplitude N/A Sweep (SD) N/A Acceptable Linearity performed : 5/15/01 Exam Data for Weld: 24RC(1)A-18 PIEF TO VALVE Configuration: Configuration: Configuration: Circ DNST Scan dB AXIAL UPST So.2 NRI 45° Cintic CIRC UPST <td>Scan Direction <u>Ax</u></td> <td></td> <td></td> <td></td> <td>Freque</td> <td>ncy: Style:</td> <td>Mode:</td>	Scan Direction <u>Ax</u>				Freque	ncy: Style:	Mode:
Signal Amplitude 92% Signal Sweep: 50.01/2 Signal Weep: 50.01/2 Sweep 0-10 = 4.0 In. Mata Data for Weld: 232.2 dB Acceptable Linearity performed: 5/15/01 Acceptable Linearity performed: 5/15/01 Exam Data for Weld: 241067 OD 85°.F 213067 Exam Data for Weld: 241067 Configuration: 01 OD 85°.F Callor Distriction: 01 OD 85°.F Configuration: 02.2 NRI Circ DNST Solo 2 NRI Circ DNST Solo 2 NRI Circ UPST Solo 2 NRI Circ UPST Solo 2 NRI Circ UST Circ UST Circ DNST Circ UST Circ UST C	Cal Reflector ID Note	<u>h</u>				Search Unit Cab	le
Signal Sweep: SUDIV Cable Type: Length: Connectors: Signal dB: Signal dB: Signal dB: Signal dB: Signal dB: Signal dB: Cable Type: Length: Connectors: Cable Type: Length: Connectors: Cable Type: Length: Connectors: Signal dB: Signal dB: Signal dB: Signal dB: Signal dB: Connectors: Cable Type: Length: Connectors: Cable Type: Length: Connectors: Cable Type: Length: Connectors: Size of Colspan="2">Size of Colspan="2">Size of Colspan="2">Size of Colspan="2">Configuration: Configuration: Configuration: Configuration: Configuration: Configuration: Configuration: Configuration: <td>Signal Amplitude 80%</td> <td></td> <td></td> <td></td> <td>RG-1</td> <td>74 6'</td> <td>0</td>	Signal Amplitude 80%				RG-1	74 6'	0
Signal dB: 38.2 dB Sweep 0-10 = 4.0 In. Metal Path Calibration Verification NA Field Simulator Block S/N: NA Reflector NA NA Gain (dB) NA NA Sweep (SD) NA NA Acceptable Linearity performed: S/16/01 Exam Data for Weld: 248RC(1)A-18 PIPE TO VALVE Configuration: Configuration: OD OD 85° F 213067 Exam Data for Weld: 2418RC(1)A-18 PIPE TO VALVE Configuration: Configuration: CONFIGURATION. ACHIEVED 50% CODE COVERAGE. Drawing: RRC-101-2 Axiai UPST ONST Sol2 Milit <dd>45° CIRC UPST OD Sol2 Maxiai UPST ONST Sol2 Militats: Examiner: Level: Circ Old Militats: Examiner 2: Level: Circ Old Minitats: S/26/01</dd>	Signal Sweep: <u>5.0 Div</u>	<u> </u>			Cable T	ype: Length:	Connectors:
Instrument Settings Instrument Settings Calibration Verification Field Simulator Block S/N: M/A M/A Reflector N/A N/A N/A Amplitude N/A N/A N/A Output Output <t< td=""><td>Signal dB: <u>38.2 dl</u></td><td>3</td><td></td><td></td><td></td><td></td><td></td></t<>	Signal dB: <u>38.2 dl</u>	3					
Calibration Verification Stavely / Sonic 138P Maufacturer/Model: Serial Number: Field Simulator Block S/N: M/A Reflector N/A N/A N/A Amplitude N/A N/A N/A Serial Number: Se	Sweep 0-10 = <u>4.0 In.</u>	<u>Metal Path</u>			<u> </u>	nstrument Settin	<u>gs</u>
Field Simulator Block S/N: <u>M/A</u> Reflector <u>M/A</u> <u>M/A</u> Amplitude <u>M/A</u> <u>M/A</u> Gain (dB) <u>M/A</u> <u>M/A</u> Gain (dB) <u>M/A</u> <u>M/A</u> Acceptable Linearity performed : <u>5/16/01</u> Belay: Velocity: Filter: Rep Rate: Acceptable Linearity performed : <u>5/16/01</u> Rainec: <u>900 filler:</u> <u>2.25 MHz</u> <u>PE</u> Exam Data for Weld: <u>24RRC(1)A-18</u> <u>PIPE TO VALVE</u> Configuration: <u>0ff</u> <u>2.25 MHz</u> <u>PE</u> Configuration: Configuration: <u>001</u> <u>85° F</u> <u>213067</u> Exam Comments / Limitations: Exam Surface: Exam Temp. Exam Thermometer Drawing: <u>RRC-101-2</u> <u>Axial</u> <u>UPST</u> So.2 <u>NRI</u> <u>45°</u> CIRC <u>UPST</u> <u>50.2</u> <u>NRI</u> <u>45°</u> <u>5/25/or</u> Level: <u>CIRC CHAD DLSON</u> <u>II</u> <u>MULacture</u> <u>S/25/or</u> Level: <u>5/25/or</u> Level: Date: <u>S/25/or</u> Initials: Examiner 2: Level: Level: Date: <u>S/25/or</u> Record 560<	<u>Calibra</u>	tion Verificati	on		Stave	ey / Sonic 136P	<u>136991A091220</u>
Reflector N/A N/A Amplitude N/A N/A Gain (dB) N/A N/A Gain (dB) N/A N/A Sweep (SD) N/A N/A Acceptable Linearity performed : \$16/01 Acceptable Linearity performed : \$16/01 Exam Data for Weld: 24RRC(1)A-18 PIFE TO VALVE Configuration: 0ff QD 85° F 213067 Exam Surface: Exam Surface: Exam Temp. Exam Surface: Exam Temp. Circ DNST Circ DNST Sol.2 NRI Axial UPST Circ UPST Sol.2 NRI Initials: Examiner: Level: GE Reviewed By: GE Reviewed By: Date: Gene Size/01	Field Simulator Bloc	k S/N:	<u>N/A</u>		Mau	acturer/Model:	Serial Number:
Amplitude MA MA Gain (dB) MA MA Gain (dB) MA MA Sweep (SD) MA MA Acceptable Linearity performed : 5/16/01 Acceptable Linearity performed : 5/16/01 Exam Data for Weld: 24RRC(1)A-18 PIPE TO VALVE Configuration: Configuration: Configuration: OD 85° F 213067 Exam Surface: Exam Surface: Exam Temp. Exam Surface: Exam Temp. Circ DNST Indications Angle Axial UPST Circ UPST Solo.2 NRI 45° Circ UPST 50.2 Initials: Examiner: Level: Initials: Examiner: Level: GE Reviewed By: Date: Unitials: S/26/01 Initials: Kall Mathematical State State S/26/01	Reflector	<u>N/A</u>	<u>N/A</u>		<u>0.426 in.</u>	<u>0.123in./µsec.</u>	<u>2</u> <u>4 KHz</u>
Gain (dB) NA NA Sweep (SD) N/A N/A Acceptable Linearity performed : 5/16/01 Acceptable Linearity performed : 5/16/01 Exam Data for Weld: 24RRC(1)A-18 PIPE TO VALVE Configuration: 0ff QD 85° F Configuration: 213067 Exam Surface: Exam Temp. Exam Surface: Exam Temp. Exam Surface: Exam Temp. Circ DNST Indications Angle Axial UPST Solo DUSON II Initials: Examiner: Level: Initials: Examiner 2: Level: Califexam Date 5/26/01 Mittadd 5/26/01 Mittadd 5/26/01	Amplitude	<u>N/A</u>	<u>N/A</u>		Delay.		
Acceptable Linearity performed : 5/16/01 Acceptable Linearity performed : 5/16/01 Exam Data for Weld: 24RRC(1)A-18 PIPE TO VALVE Configuration: Exam Comments / Limitations: DD 85° F 213067 Exam Surface: Exam Surface: Exam Temp. Drawing: RC-101-2 Axial UPST Scinc DNST Scinc UPST Scinc UPST Scinc NRI 45° Circ UPST Scinc NRI Mattals: Examiner: Level: Exam Start: 1040 Exam End: 1125 CO CHAD OLSON Initials: Examiner: Level: GE Reviewed By: Level: Date: Cal/Exam Date: 5/25/01	Gain (dB)	<u>N/A</u>	<u>N/A</u>		<u>4.0 m.</u> Range:	<u>334 ns</u> Pulser:	<u>500 Onms</u> Damping:
Acceptable Linearity performed: STRV1 Exam Data for Weld: 24RRC(1)A-18 PIPE TO VALVE Configuration: Exam Comments / Limitations: OD 85° F 213067 Exam Surface: Exam Temp. Exam Thermometer Drawing: RRC-101-2 Exam Temp. Axial UPST Solar Axial UPST 50.2 Axial UPST 50.2 Axial UPST 50.2 Axial UPST 50.2 CiRC UPST 50.2 Initials: Examiner: Level: Initials: Examiner: Level: Initials: Examiner 2: Level: Cal/Exam Date: 5/25/01 Cal/Exam Date: 5/25/01					Off	2.25 MHz	<u>PE</u>
24RRC(1)A-18 Exam Data for weld: PIPE TO VALVE Configuration: Configuration: OD 85° F 213067 Exam Surface: Exam Temp. Exam Thermometer Drawing: RRC-101-2 Exam Thermometer Axial UPST So.2 NRI 45° Circ UPST 50.2 NRI 45° Contract UPST 50.2 NRI 45° Contract UPST 50.2 NRI 45° Contract UPST So.2 NRI 45° 1125 I			<u>16/01</u>		Reject:	Frequency:	Mode:
DIFE TO VALVE Configuration: Exam Configuration: OD 85° F 213067 Exam Surface: Exam Temp. Exam Thermometer Drawing: RRC-101-2 Axial UPST Scan dB Circ DNST Scan dB Axial UPST 50.2 Axial UPST 50.2 Circ UPST 50.2 Circ UPST 50.2 NRI 45° Circ UPST Sol.2 NRI Exam Start: 1040 Exam End: 1125 CO CHAD OLSON Initials: Examiner: Level: GE Reviewed By: Utility Reviewed By: State: Participe Wx State: Record # 66	Exam Data for Weld: 2	4RRC(1)A-18			Fyam	Comments / Lim	itations:
OD 85° F 213067 Exam Surface: Exam Temp. Exam Thermometer Drawing: RRC-101-2 Axial UPST Scan dB Recordable Circ DNST Indications Angle Axial UPST 50.2 NRI 45° Circ UPST 50.2 NRI 45° Co CHAD OLSON II Exam Start: 1040 Exam End: 1125 Initials: Examiner: Level: GE Reviewed By: Level: Date: Date: Initials: Examiner 2: Level: UHHty Reviewed By: Date: Form:Pipe We Cal/Evam Date: 5/25/01 MULtantto	Co	TO VALVE					AI VE
Exam Surface: Exam Temp. Exam Thermometer Drawing: RRC-101-2 Axial UPST Scan dB Recordable Exam Circ DNST Indications Angle Axial UPST 50.2 NRI 45° Circ UPST So.2 NRI 45° Circ UPST GE Reviewed By: Level: Date: Initials: Examiner 2: Level: UHHY Reviewed By: Date: Form:Pipe Wx Record # 66 <	00	85° F	213067		CONFIGURATION.	ACHIEVED 50% CO	DE COVERAGE.
Drawing: RRC-101-2 Axial UPST Scan dB Recordable Exam Circ DNST Indications Angle AXIAL UPST 50.2 NRI 45° CIRC UPST 50.2 NRI 45° CIRC UPST 50.2 NRI 45° CIRC UPST 50.2 NRI 45° CO CHAD OLSON II Exam Start: 1040 Exam End: 1125 Initials: Examiner: Level: GE Reviewed By: Level: Date: Initials: Examiner 2: Level: Utility Reviewed By: Date: Form:Pipe We Record # 66 Cal/Exam Date: 5/25/01 MAttant SMMIN SMMIN	Exam Surface: E	xam Temp. E	xam Thermor	meter			
Axial Circ UPST DNST Scan dB Indications Recordable Angle Exam Angle AXIAL UPST 50.2 NRI 45° CIRC UPST 50.2 NRI 45° CO CHAD OLSON II Exam Start: 1040 Exam End: 1125 CO CHAD OLSON II Multanty III S/25/oi Initials: Examiner: Level: GE Reviewed By: Level: Date: Initials: Examiner 2: Level: Utility Reviewed By: Date: Form:Pipe We Record # 66 Cal/Exam Date: 5/25/01 Multanty S/Multi Record # 66	Drawing: <u>RRC-10</u>	<u>01-2</u>					
AXIAL UPST 50.2 NRI 45° CIRC UPST 50.2 NRI 45° Columnation II Exam Start: 1040 Exam End: 1125 CO CHAD OLSON II Multiant III III Initials: Examiner: Level: GE Reviewed By: III Initials: Examiner 2: Level: Georetication State Cal/Exam Date: 5/25/01 Multiant State State	Axial UF	ST Scan dB	Recordable	Exam			
CIRC UPST 50.2 NRI 45° Exam Start: 1040 Exam End: 1125 CO CHAD OLSON II Multically III 5/25/01 Initials: Examiner: Level: GE Reviewed By: Level: Date: Initials: Examiner 2: Level: Generation 5/26/01 Cal/Exam Date: 5/25/01 Multically 5/11/01 Record # 66	<u>AXIAL</u>	<u>PST 50.2</u>	<u>NRI</u>	45°			
CO CHAD OLSON II Multiality III S/25/01 Initials: Examiner: Level: GE Reviewed By: Level: Date: Initials: Examiner 2: Level: Utility Reviewed By: Date: Form:Pipe We Record # 66 Cal/Exam Date: 5/25/01 Multiality S/11/11 Record # 66		<u>2ST 50.2</u>	<u>NRI</u>	<u>45°</u>			
CO CHAD OLSON II Multally III 5/25/01 Initials: Examiner: Level: GE Reviewed By: Level: Date: Initials: Examiner 2: Level: Utility Reviewed By: Date: Form:Pipe We Record # 66 Cal/Exam Date: 5/25/01 Multally III Form:Pipe We Record # 66				-	Exam Start:	<u>1040</u> Exam E	ind: <u>1125</u>
Initials: Examiner 2: Level: Cal/Exam Date: 5/25/01	CHAD OL	.son	<u> </u>	- All	Plales.	III s/z	5/01
Initials: Examiner 2: Level:	Initials: Examiner:	Le	vel:	GE Review	wed By:	Level: Date););
Cal/Exam Date: 5/25/01	Initials: Examiner 2:	Le	evel:		ewed By:		Form:Pipe Wel
Pade 2 of	Cal/Exam Date:	5/25/01	-		tarp	5724/11	Record # 66 Page 2 of 5

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 <u>GE NUCLEAR ENERGY</u>	Ultrasonic (Mar	Callbration and Examination and Examination and Component Piping and Pipi	ation Record nents
Site/Unit: <u>Columbia Generating Stati</u> Outage: <u>RFO-15</u>	on / N/A	Data Report N Data Sheet Nu Linearity Shee	umber: <u>R15-057</u> Imber: <u>UT-R15-052</u> t: <u>L-004</u>
Calibration Data for Block: UT-7		Procedure: PDI-UT-2	· · · · · · · · · · · · · · · · · · ·
	ation Cal Time	Rev B DRR: Site Spe	ecífic Rev. 0
Material Size Thick Initial		Search Un	it Data
ULTRAGEL 94125 Cal C	heck: N/A		
Couplant: Couplant batch	heck: N/A	<u>RTD</u> <u>92-893</u> Manufacturer: Serial Numbe	er Size/Shape:
213067 71° F Thermometer S/N Cal Temp. Final	Cal: <u>1138</u>	0.5 in 60°	60°
DAC Construction		Incident Point: Nominal	Angle: Measured Angle:
Scan Direction Ax		<u>2.0 MHz</u> <u>TRL</u> Frequency: Style	<u>A RL</u> b: Mode:
Cal Reflector ID Notch		Search Unit	Cable
Signal Amplitude 80%			
Signal Sweep: <u>5.6 Div</u>		<u>RG-174</u> 6 Cable Type: Lengt	h: Connectors:
Signal dB: <u>76.2 dB</u>			
Sweep 0-10 = <u>5.0 in. Metal Path</u>		Instrument S	ettings
Calibration Verificat	ion	Staveley / Sonic 136F	<u>136991A091220</u>
Field Simulator Block S/N:	<u>N/A</u>	Maufacturer/Model:	Serial Number:
Reflector <u>N/A</u>	N/A	<u>1.08 in.</u> 0.237in./µsec.	<u>2</u> <u>4 KHz</u>
Amplitude <u>N/A</u>	<u>N/A</u>	Delay: Velocity:	Filter: Rep Rate:
Gain (dB) <u>N/A</u>	<u>N/A</u>	<u>5.0 in.</u> <u>250 ns</u>	500 Ohms
Sweep (SD) <u>N/A</u>	<u>N/A</u>	Range: Pulser:	Damping:
Acceptable Linearity performed :	5/16/01	Reject: Frequence	z <u>DUAL</u> cy: ` Mode:
Exam Data for Weld: 24RRC(1)A-18			-
PIPE TO VALVE		Exam Comments	Limitations:
Configuration:		EXAMINED FROM PIPE SIDE DUE	TO VALVE
<u>OD</u> <u>85° F</u>	<u>213067</u>	MAINTAINED 5% TO 20% NOISE L	EVEL AT REFERENCE dB.
Exam Surface: Exam Temp. E	Exam Thermometer		
Drawing: <u>RRC-101-2</u>			
Axial UPST Scan dE Circ DNST	Recordable Exam		•
AXIAL UPST 76.2	YES 60°		
	+		
		Exam Start: <u>1040</u> E	xam End: <u>1125</u>
AD CHAD OLSON	" Alu	laller -	rhela
Initials: Examiner:	evel: GE Revie	wed By: Level:	Date:
) 111.0,1 A. 1	
/!	- Or	inwed By:	1
Initials: Examiner 2: L	evel:	Date:	Form:Pipe Weld Record # 67
Cal/Exam Date: <u>5/25/01</u>	7.11	<u>11</u> 3 <u>141</u> 0	Page 3 of 5
	ANII Revie	Bwea By: Date:	

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	Ultrasonic Examin	ation Indication Report	Data Report Number: <u>R15-057</u>
GE NUCLEAR ENERGY	Site: Columbia Generating Station	Procedure: PDI-UT-2 / B / Site Specific Rev. 0	Cal / Data Sheet Number <u>UT-R15-052</u>
Neld ID: <u>24RRC(1)A-18</u>	Drawing: <u>RRC-101-2</u>	Size: <u>24</u> Thickness: <u>1.14</u>	Exam Start: <u>1040</u>
o Location: TDC	Wo Location: WELD CL	Weld Width: <u>1.5</u> Weld Height: <u>FLUSH</u>	Exam End: <u>1125</u>
Ind Angle % of Indication Length	W Distance Metal Path	Ax / Upst/ MP 2 Circ Dnst	Comments:
1 60° 100 • 69.0 •	N/A 2.25 N/A N/A 2.70	N/A AX UPST *CAN BE SEEN INTERMITTENTLY 30	50° ROOT GEOMETRY
ketch		·····	
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		¥	
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	Mulles	1 (Allelid Archi A	1117 5126/01
CO CHAD OLSON II 5/25/01	GE Reviewed By: Level: Date	Utility Reviewed By: Date: ANI	Reviewed By: Date:
Examiner Level: Date:		T	Page <u>4</u> of <u>5</u>

GE)			R FNFR	GY	Wall	Thickness	C	Site: <u>Colur</u>	nbia Gener	rating Statio	<u>ı</u> Unit: <u>N/A</u>	Report No.:	
9		UULLA			Prof	ile Sheet		Project:	<u>RFO-15</u>			<u>R15-057</u>	
System:	:	<u>RF</u>	<u>2C</u>		Component ID Number	24RRC(1)A-18		······································	1.	5"	Ê •	1.5"	1
Position	0°	90°	180°	270°						ר בי	3	 [5]	
1	N/A	N/A	1.200	N/A	Crown Height:	<u>FLUSH</u>	P					<u>ı</u>	
2	N/A	N/A	1.200	N/A	Crown Width:	<u>1.5"</u>							
3	N/A	N/A	1.380	N/A	Nominal Diameter	24.0"		UPST (PIPE Component:		\sum	VALVE DNST Compone	nt:
4	N/A	N/A	1.400	N/A	Normal Diameter.	24.0				/	<u> </u>	\	
5	N/A	N/A	N/A	. N/A	Weld Length:	<u>75.0°</u>					FLOW	201 80 and 12 50 (10 and 10	-
			1 () 14 ()	ren an Periode	i trtrt v t de Fritter t	n n n n n n N î n n n n		1997 - 1997 -					
				i, 4 i Pai, k	t in a a fill The net	FLOV	/						
	<u>.</u>		ar e Pizer	l I - L Ezi				ru er y			والمعطية المستبليت	VALVE	2
	Pipe		<u>e 1</u>	fistert i⊋de≂is	i i <u>pri pri .</u>		<u> </u>	<u> </u>	b	Toe			
					li gali di Tang	!.5[‡] ⊤ 1, sr⊰i	Ţò	ė į	h i				
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			ta) ISP		इत्तां की पत पत की . दूसी के से निर्माल	1. 12. (., (., 1., ()				••••••••••••••••••••••••••••••••••••••			
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∣.¦B	SDC			in prìr Provin			E	$\overline{\gamma}$					
AR	JACK RE	SEWITZ	<u> </u>	<u>5-24-01</u>	Mistaly	III stask		Alle	hel	5/26/01	ATTO)	514
ials: E	xaminer:		Level:	Date:	GE Reviewed By:	Level: Date:	Utility Re	viewed By:		Date:	ANII Reviewed By:		Date:

2ISI-32-10



GE I	NUCLEAR E	ENERGY	EXA	MINATION SUM	MARY SHEET	Γ	Report No.: R15-058
Site and Unit:	Columbia	Generatin	g Station	Component ID:	24RRC(1	I)A-19	4
Outage:	<u>RFO-15</u>	5		<u>V/</u>	ALVE TO ELBOW	<u>/</u>	
ystem <u>RRC</u>	ASME Cat.:	<u>B-J</u>	ASME Item	11 JUNA B9.24 5/26 Ju, Aug R	equirements:	<u>N/A</u>	
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
45° Shear	UT-R15-036	N/A	PDI-UT-2	UT-7	CHAD OLSON		5/24/01
60° RL	UT-R15-037	N/A	PDI-UT-2	UT-7	CHAD OLSON		5/24/01
Examination Result During the manua 45° search unit, r This examination 1996 Addenda wi Exam performed t Previous data was	s: al ultrasonic ex oot geometry v is acceptable i th modification from the elbow s reviewed prio	amination o vas seen by per the requ ns as stated r side only d or to this sum	f the above referen the 60° search uni irements of ASME in 10CFR50.55. ue to valve configu nmary.	nced weld, no reportabl t. Section XI, 1989 Edition ration, 50% Code cove	e indications were re	ecorded uti	lizing the Edition,
Examination r These examin	esuits were con nations were per	npared to dat formed unde	a report RRU-: r Work Order: (524 from 1982 01011024	outage with	No Cha Change	nge
This Summary a	nd the following	i data sheets		d and accepted by the fo	llowing personnel:	RWP: Dose:	N/A N/A mr.
Prepared By:	100	evel: D	vate: Utility Revi	iewed By: Tit	le: Date:		
GE Reviewed By	L L	evel: D	Date: ANII Revie	awed By: Tit	le: Date:	Page	1_ of _5

GE NUCLEAR ENERGY	Ultras	sonic (Mar	Calibration a nual Piping a	nd Examination nd Componen	on Record nts
Site/Unit: <u>Columbia Generating Statio</u> Outage: <u>RFO-15</u>	<u>on / N/A</u>			Data Report Numbo Data Sheet Numbe Linearity Sheet:	er: <u>R15-058</u> er: <u>UT-R15-036</u> <u>L-002</u>
Calibration Data for Block: UT-7			Procedure:	PDI-UT-2	
SS 24 1.14 Calibrat	tion Cal Tim	ne	Rev ₿	DRR: Site Specific	: Rev. 0
Material Size Thick Initial C	al: 0946			Search Unit D	ata
ULTRAGEL 94125 Cal Che	eck: <u>N/A</u>		KBA	00/ 490	0.2755/00.000
Couplant: Couplant batch	eck: <u>N/A</u>		Manufacturer:	Serial Number	Size/Shape:
Thermometer S/N Cal Temp. Final Ca	al: <u>1610</u>		<u>0.4</u>	in. 45° Deinty Nominal Apple	<u>45°</u>
DAC Construction			modent	Point. Norninal Angle	e, measured Angle:
Cal Reflector: <u>ID Notch</u>			<u>1.5 N</u> Freque	I <u>Hz Comp-G</u> ency: Style:	<u>Shear</u> Mode:
Signal Amplitude 80%				Search Unit Ca	ble
Signal Sweep: <u>5.0 Div</u>			<u>RG-1</u> Cable 1	1 <u>74 6'</u> Гуре: Length:	<u>0</u> Connectors:
Signal dB: <u>44.2 dB</u> Sweep 0-10 = <u>4.0 in.</u>				Instrument Settin	ngs
Calibration Verificatio	<u>>n</u>		<u>STAVE</u> Mai	ELEY / Sonic 136P	<u>770 /</u> Serial Number:
Field Simulator Block S/N:			0.426 in	0 123in /usec	2 4 KH7
Reflector <u>N/A</u>	<u>N/A</u>		Delay:	Velocity: F	Filter: Rep Rate:
Gain (dB) N/A	N/A		4.0 in.	334 ns	500 Ohms
Sweep (SD) <u>N/A</u>	N/A		Range:	Pulser:	Damping:
Acceptable Linearity performed : 4/	12/01		<u>Off</u> Reject:	<u>2.25 MHz</u> Frequency:	<u>P/E</u> Mode:
Exam Data for Weld: 24RRC(1)A-19					
VALVE TO ELBOW			Exan	<u>n Comments / Lin</u>	<u>nitations:</u>
Configuration: <u>OD 93° F</u>	<u>213067</u>		Maintained 5% to 2 Examined from do Achieved 50% cod	20% ID roll. wnstream side due to v e coverage.	valve configuration.
Exam Surface: Exam Temp. Ex	am Thermom	neter			
Drawing: <u>RRC-101-2</u>					
Axial UPST Scan dB Circ DNST	Recordable Indications	Exam Angle			
<u>AX</u> <u>DNST</u> <u>56.2</u>	NRI	<u>45°</u>	ļ	-	
<u>CIRC</u> <u>UNST</u> <u>56.2</u>	<u>NKI</u>	<u>45°</u>	Exam Start	1500 Evam	End: 1545
CO <u>CHAD OLSON</u>	<u>//</u>	Mu GE Review	Haly_	5/z	<u>24/01</u>
) , / / / /		12.
N/A N Initials: Examiner 2: Lev	VA vel:		iewed By:		Form:Pipe Wel
Cal/Exam Date: <u>5/24/01</u>	A	<u>/////</u> ANII Revie	ewed By:	 Date:	Record # 49

B <u>G</u>	NUCLEA	R ENERO	<u>ay</u>	Ultras	sonic (Mar	Calibration a nual Piping a	nd Examination ind Compone	on Record nts			
Site/Unit: <u>C</u> Outage: <u>R</u>	olumbia G FO-15	eneratin	g Static	on / N/A			Data Report Numb Data Sheet Numb Linearity Sheet:	per: <u>R15-058</u> er: <u>UT-R15-037</u> <u>L-002</u>			
Calibration	Data for Bl	ock: <u>UT-</u>	<u>Z</u> .	······································		Procedure:	PDI-UT-2				
						Rev B	DRR: Site Specifi	c Rev. 0			
<u>SS</u> Material	<u>24</u> Size	<u>1.14</u> Thick	Calibra	tion Cal Tin	ne 		Search Unit F)ata			
ULTRAGI	L 9	4125	Initial C	Jal: <u>1023</u>		Startin Dill Dala					
Couplant	: Coupla	ant batch	CarCh	IECK: <u>N/A</u>		<u>RTD</u> Manufacturor	<u>92-893</u>	2(10x18) mm/Red			
213067	7	<u>'3° F</u>	Cal Ch	еск: <u>N/A</u>			Size/Shape:				
Thermomete	S/N Cal	Temp.	Final C	:al: <u>1616</u>]	0.5 Incident	<u>in.</u> <u>60°</u> : Point: Nominal Ang	<u>60°</u> le: Measured Angle:			
Cal Reflector	DAC A7	Constru	iction /•,			<u>2.0 M</u> Freque	<u>1Hz</u> <u>TRLA</u> ency: Style:	<u>RL</u> Mode:			
	udo 80	•⁄					Search Unit Ca	able			
		<u></u>				80	174 61				
Signal Sweep	: <u>5.6</u>	<u> UIV</u>				Cable	Type: Length:	Connectors:			
Signal dB:	<u>81.2</u>	dB									
Sweep 0-10 =	<u>5.0 in.</u>						Instrument Setti	ings			
	Calib	ration Ve	rificati	<u>on</u>		STAV	ELEY / Sonic 136P	770			
Field	Simulator B	lock S/N:		N/A		Ma	ufacturer/Model:	Serial Number:			
]	Reflector	N/A		N/A		<u>1.08 In.</u>	0.237in./µsec.	<u>2 <u>4 KHz</u></u>			
	Amplitude	N/A		N/A		Delay:	Velocity:	Filter: Rep Rate:			
	Gain (dB)	N/A	N/A			<u>5.0 in.</u>	<u>250 ns</u>	<u>500 Ohms</u>			
	Sweep (SD)	<u>N/A</u>		N/A		Range:	Pulser:	Damping:			
Acc	eptable Linea	arity perform	ned : <u>4</u>	/12/01		<u>Off</u> Reject	<u>2.25 MHz</u> Frequency	<u>Dual</u> Mode:			
Exam Data	for Weld:	24RRC(1)A-19								
	VAL		BOW			Exan	n Comments / LÌ	mitations:			
	(Configuratio	on;			Maintained 5% to :	20% ID roll.				
01)	93° F		213067		Examined from do	wnstream side due to le coverege	valve configuration.			
Exam Si	- urface:	Exam Ten	np. E	xam Thermon	neter	Acineved 30% Col	10 COVB1890.				
Drawing:	RRC	-101-2									
Axial		UPST	Scan dB	Recordable	Exam						
Circ		DNST	04 0	Indications	Angle	1	~				
AX			01.2	153	00.						
						Exam Start:	1500 Exam	End: 1545			
				l							
Co_	CHAD	OLSON		<u> </u>	//	Nally	<u> </u>	125/01			
Initials:	Examiner:		Le	vel:	GE Revie	wed By:	Levei: Da	ate:			
f }	A	/A		N/A	AN	11/11ll	5/26/01				
Initiale	- <u>1</u> 	<u>1</u>	<u>؛</u> ما		Stillty Rev	iewed By:	Date:	Form:Pipe Wel			
; aniais.			10	7	11/1	The second se	512/1/	Record # 50			
Cal	Evam Date	5/24/01	,	-	CP 44	¥	_ 1/ 0/ 0/				

C

			С
	Ultrasonic Examination	n Indication Report	Data Report Number: <u>R15-058</u>
GE NUCLEAR ENERGY	Site: Columbia Generating Station Proce	edure: <u>PDI-UT-2 / B / Site Specific Rev. 0</u>	Cal / Data Sheet Number <u>UT-R15-037</u>
leid ID: <u>24RRC(1)A-19</u> D Location: <u>TDC</u>	Drawing: <u>RRC-101-2</u> Size Wo Location: <u>Weld Centerline</u> Weld	: <u>24"</u> Thickness: <u>1.14"</u> Width: <u>1.50"</u> Weld Height: <u>Flush</u>	Exam Start: <u>1500</u> Exam End: <u>1545</u>
dAngle% ofIndication Lengtho.UsedDACL1L MaxL 2160°100*10.5*	W Distance Metal Path W1 W Max W 2 MP 1 MP Max MP 2 N/A 2.35 N/A N/A 2.7 N/A	Ax / Upst/ Circ Dnst Ax Dnst *Can be seen intermittently 360*.	Comments: Root geometry.
etch			
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	, , , ,		· ,
CHAD OLSON II 5/24/01	GE Reviewed By: Level: Date:	Brillich S/2401 Hry Reviewed By: Date: Al	MI Reviewed By: Date: Page 4 of 5

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(gg)				PCV	Wall ⁻	Fhickr	ness (Site: <u>Colum</u>	bia Generating Stati	i <u>on</u> Unit: <u>N/A</u>	Report No.:
	GEN				Prof	ile Sh	eet		Project:	<u>RFO-15</u>		<u>R15-058</u>
System		<u>R</u> [<u>25</u>		Component ID Number	24RRC	(1)A-19			1.5"	Ē 🖣	1.5"
Position	0°	90°	180°	270°					Г	1 1	3	
1	N/A	N/A	N/A	N/A	Crown Height:	<u>I</u>	-LUSH		L			<u>ା</u>
2	N/A	N/A	1.40	N/A			4.6%					
3	N/A	N/A	1.320	N/A			1.5		VAL		$\backslash / $	ELBOW
4	N/A	N/A	1.28	N/A	Nominal Diameter:		<u>24.0"</u>		0-31 00		<u>i/</u>	DNST Component.
5	N/A	N/A	1.360	. N/A	Weld Length:		<u>75.0"</u>			······································		
4.C.4				 				CLAI	<u>,</u>		FLOYY	
1. 72. 1				$\left[\begin{array}{c} 1 & 1 \\ 1 & 7 \end{array} \right]$				<u>r l u v</u>	v 			
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			th side		Toe -	£	Toe		. 1.5	С.В.		
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				1,1,2								
B	6 C				n lent to to to							
					<u>推翻器除出。除</u> 除				7			
ĀR	JACK RE	ISEWITZ	<u>//</u>	<u>5-24-01</u>	Willing	<u></u>	5/25/01	10	Lillach	5/26/01	1112	5 5/74/0
tials: E	xaminer:		Levei:	Date:	GE Reviewed By: "	Level:	Date:	Utility Re	viewed By:	Date:	ANII Reviewed By:	Date: Page ్⊰ of <u>∡</u> 5
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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-11

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GE GE	NUCLEAR	ENERGY	EXAMINA	F	Report No.: R16-060		
Site and Unit:	Columbia	Generating	Station Compo	onent ID:	24RRC(1)B-12	
Outage:	<u>R16</u>			<u>Pl</u>	PE TO VALVE		
System	RRC	ASM	NE Cat.: <u>B-J</u> ASN	IE Item <u>B9.11</u>	Aug Requireme	nts:	N/A
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
45° Shear	UT-071	N/A	PDI-UT-2/Site Specific	UT-7	Dickey Michael	11	5/19/2003
60° Long	UT-072	N/A	PDI-UT-2/Site Specific	UT-7	Dickey Michael	11	5/19/2003
Examination Result During the manua search units. This examination Addenda with mo 50% Code covera	ts: Il ultrasonic exa is acceptable p difications as sl age was obtaine	Imination of the the requirem tated in 10CFR: ad.	above referenced weld, n tents of ASME Section XI, 50.55.	o reportable indicati 1989 Edition, no Ac	ions were recorded	utilizing the	45° and 60
Previous data was	3 reviewed prior	r to this summa	r y .				
·							
·							
Examination n	sults were con	npared to data	report RRU-106	from PSI (1979) o	outage with	No Chang	e
Examination n These examin	esults were con ations were per	npared to data rformed under t	report RRU-106 Work Order: 0104492	from PSI (1979) o 5-01	outage with □ ☑	No Chang Change	e
Examination n These examin This Summary ai	esults were con ations were per nd the following	npared to data rformed under t data sheets ha	report RRU-106 Work Order: 0104492 ave been reviewed and ac	from PSI (1979) o 5-01 cepted by the follow	outage with	No Chang Change	6
Examination n These examin This Summary an Duckey Much	esults were con ations were per nd the following	npared to data rformed under V I data sheets ha	report RRU-106 Work Order: 0104492 ave been reviewed and ac 9-03	from PSI (1979) of 5-01 cepted by the follow	outage with □ ving personnel: 5/23/03	No Chang Change	e
Examination n These examin This Summary au Dickey Mich Prepared By:	esults were con ations were per nd the following	npared to data rformed under to data sheets ha data sheets ha	report RRU-106 Work Order: 0104492 ave been reviewed and ac 9-03 e: Utility Reviewed By 20/03 M. MITT	from PSI (1979) o 5-01 cepted by the follow	outage with ↓ ving personnel: 5/23/03 Date: 5/24/b32	No Chang Change	e

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S.	6	SE NUC	LEAP		GY		(Jitras	onic	Examir	ation	Indi	cation	Report		Data Report Number: Cal / Data Sheet Number	<u>R16-060</u> <u>UT-072</u>
	10: 24	BBC/418	. 17		S	Drawin	olumbia G	enerati oz z	ng Sta	<u>tion</u>	Proce	dure: <u>F</u>	PDI-UT-2	2/Site Specific / C/1		Evom Start:	
	no. <u>ze</u>	Too Dea	<u>riz</u> d Cent	er		Wo Loc	ation: Wei	<u>vz-z</u> d Cente	rline		Weld	Width:	1.80"	Weld Height:	Flush	Exam End: 2	<u>.343</u> 2351
Ind	Angle	% of	Ind	ication Le	nath	1	W Distance		T	Metal Path		Ax/	Upst/	_			
Ńo.	Used	DAC	L1	L Max	L2	<u>W1</u>	W Max	W 2	MP 1	MP Max	MP 2	Circ	Dnst	D	-	Comments:	
_1	60°	250	N/A	8	N/A	N/A	2.1"	N/A	N/A	2.4"	<u>N/A</u>	AX	Upst	Root geometry seen 360"	at varying	ampiruoes.	
sketc	n																
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86)	GE N	UCLEAI	R ENER	GY	Wall Thickness Profile Sheet	Site: Columbia Generating Station Unit: N/A Re Project: 16423 R1	port No.:
System:		RR		1	Component ID Number: <u>24RRC(1)B-12</u>	1.5" ^C 1.5"	
Position	0°	90°	180°	270°			 [5]
1	N/A	1.4"	N/A	N/A	Crown Height: <u>FLUSH</u>		
2	N/A	1.2"	N/A	N/A	Crown Width: <u>1.8"</u>	PIPE	
3	N/A	1.35"	N/A	N/A	Nominal Diameter: <u>24.0″</u>	UPST Component:	Component:
4	N/A	N/A	N/A	N/A	Weld Length: <u>75.5"</u>		
					a han han han han han han han han han ha	And summer and summer and succession of the summer succession of the su	
			-	10ger	455	4*S	

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	LEAR ENER	GY	Ultra	sonic Ma	Calibration an nual Piping ar	d Examina Id Compon	tion Record ents
Site/Unit: <u>Colum</u> Outage: <u>R16</u>	bia Generatii	ng Static	<u>on</u>			Data Report Nu Data Sheet Nun Linearity Sheet:	mber: <u>R16-060</u> nber: <u>UT-071</u> <u>L-04</u>
Calibration Data	for Block: UT	-7			Procedure: P	DI-UT-2/Site Sp	pecific
82	24" 1 140"	Calibra	tion Col Ti	me	Ver / Rev: <u>C/1</u>	DRR:	<u>N/A</u>
<u>55</u> Material	<u>SS</u> <u>Z4</u> <u>1.140</u> Material Size Thick Initial (Iltragel II 00325					Search Unit	Data
Ultragel II			Cal: <u>2154</u>				
Couplant:	Couplant batch	Cal Ch	eck: <u>2321</u>		<u>KBA</u>	<u>00H8Y3</u>	0.50*/Round
<u>225291</u>	<u>72° F</u>	Cal Ch	eck: <u>N/A</u>		Manufacturer:	Serial Number	Size/Shape:
Thermometer S/N	Cal Temp.	Final C	al: <u>0028</u>]	<u>0.35 in.</u>	<u>45°</u>	<u>46°</u>
					Incident Point:	Nominal Ang	le: Measured Angle
Scan Direction	Ax	uction			<u>1.5 MHz</u> Frequency:	<u>Comp-G</u> Style:	<u>Shear 1</u> Mode: Elements:
Cal Reflector	ID Notch					Secreb Unit (Sable Sable
	<u>10 110(cm</u>				-	Search Unit C	adie
Signal Sweep:	<u>80%</u> 5.1 Div				<u>RG-17</u> Cable Ty	4 <u>6'</u> pe: Length:	<u>0</u> Connectors:
Signal dB:	<u>32.2 dB</u>						
Sweep 0-10 = <u>4.0</u>	in. Metal P	ath			lr	nstrument Set	tings
2	Calibration V	erificatio	<u>ən</u>		<u>Stavele</u>	ey / Sonic 136P	<u>707H</u>
Field Simul	ator Block S/N:	<u>CAL-F</u>	RHOM-066		iviaura	acture//woder.	Serial Number:
Refle	ctor <u>2" Rad</u>	lius	N/A		<u>0.279 in.</u>	<u>0.126in./µsec.</u>	<u>1 4 KHz</u>
Ampl	itude <u>80%</u>	6	<u>N/A</u>		Delay:	Velocity:	Filter: Rep Rate:
Gain	(dB) <u>20.4</u>	!	<u>N/A</u>		<u>4.0 in.</u>	<u>334 ns</u>	<u>500 Ohms</u>
Sweep	o (SD) <u>5.0</u>		<u>N/A</u>		Range:	Pulser:	Damping:
Acceptable	Linearity perform	ned: <u>4/1</u>	7/2003		<u>Off</u> Reject:	2.25 MHz Frequency:	<u>P/E</u> Mode:
Exam Data for W	/eld: <u>24RRC</u>	(1) <u>B-12</u>					
	PIPE TO VA	LVE			<u>Exam</u>	<u>Comments / L</u>	imitations:
	Configuration	on:			Exams performed to	maintain 5% to a	20% ID roll.
OD	72" F		225291		ID mometry observ	od helow moorda	hla lavals
Exam Surface:	Exam Te	mp. Ex	am Thermon	neter	No exam performed	from downstream	n side due to component
Axial	UPST	Scan dB	Recordable	Exam	Actual Cal Block "T'	' is 1.410."	
Axial	UPST	44.2	NRI	46°			
Circ	UPST	46.2	NRI	46°	-		
					Exam Start:	2322 Exa	m End [.] 2341
				n	A Th		
DEM DI	ickey Michael	!	<u>u</u>	UM	A MAX	II OS	5/20/03
Initials: Examine	er:	Lev	el:	GE Revie	wed By:	Level: [Date:
	N// 4			her	Illulch	5/23/03	
	<u>N/A</u>	<u>N</u>		tuity Revi	ewed By:	Date:	
Initials: Examine	er 2:	Lev	el:	11 ISM	Est	8/hiller	2
Cal/Exam D	ate: 5/19/200	3	1	1.111.5	THE -	3/24/05	Page 2 of 5
		<u></u>	A	ANII Revie	wed By:	Date:	

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		Mai	nual Piping a	nd Componen	its
Site/Unit: <u>Columbia Generating Static</u> Outage: <u>R16</u>	<u>on</u>			Data Report Numbe Data Sheet Numbe Linearity Sheet:	er: <u>R16-060</u> r: <u>UT-072</u> <u>L-04</u>
Calibration Data for Block: <u>UT-7</u>			Procedure:	PDI-UT-2/Site Spec	<u>ífic</u>
SS 24" 1.140" Calibra	tion Cal Tim	ne	Ver / Rev: <u>C/1</u>	DRR: MA	
Material Size Thick Initial C	al: 2136			Search Unit Da	ata
<u>Ultragel II</u> <u>00325</u> Cal Ch	beck: 2242				
Couplant: Couplant batch			<u>RID</u> Manufacturer	<u>00-407</u> Serial Number	2(10x18) mm/Rect. Size/Shape
<u>225291</u> <u>72° F</u> Carcin			manufacturer.		Gitterenape.
Thermometer S/N Cal Temp. Final C	al. <u>0030</u>	}	0.45 in.	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Apole
DAC Construction			<u>2.0 MHz</u>	TRL 2-Aust L	ong 2 odo: Elemente:
Scan Difection <u>Ax</u>			Frequency.		de. Elements.
				Search Unit Cal	DIE
Signal Amplitude <u>80%</u> Signal Sweep: <u>5.2 Div</u>			<u>RG-1</u> Cable T	1 <u>74 6'</u> Type: Length:	<u>0</u> Connectors:
Signal dB: <u>71.0 dB</u> Sweep 0-10 = <u>5.0 in. Metal Path</u>				Instrument Settin	igs_
Calibration Verification	<u>on</u>		<u>Stave</u> Mai	eley / Sonic 136P Ifacturer/Model:	<u>707H</u> Serial Number:
Field Simulator Block S/N: <u>CAL-F</u>	RHOM-066		1.08 in	0.24in /usec	1 4 KHz
Reflector <u>2" Radius</u>	<u>N/A</u>		Delay:	Velocity: F	ilter: Rep Rate:
	<u>N/A</u>		5 0 in	250 ns	500 Ohms
Sween (SD) 40	N/A		Range:	Pulser:	Damping:
Acceptable Linearity performed : 4/	7/2003		<u>Off</u> Reject:	<u>2.25 MHz</u> Frequency:	<u>Dual</u> Mode:
Exam Data for Weld: <u>24RRC(1)B-12</u>					
PIPE TO VALVE			Exam	Comments / Lim	<u>itations:</u>
Configuration:	<u>225291</u>		Exams performed 20% noise level.	at reference sensitivit	y to maintain 5% to
Exam Surface: Exam Temp. Ex	cam Thermom	eter	ID root geometry r Supplemental 60°	ecorded. See attache RL examination due te	d data sheet. o single side access.
Axial UPST Scan dB Circ DNST	Recordable Indications	Exam Angle	No exam performe configuration.	d from downstream si	de due to component
<u>Axial UP\$T 71</u>	Yes	<u>60°</u>	Actual Cal Block "	T" is 1.410."	
			Exam Start:	2343 Exam E	ind: <u>2351</u>
ηεπ <u>Dickey Michael</u>		Um	UMAKA	II Of	20/03
Initials: Examiner: Lev	rel:	SE Review	ved By:	Level: Date	<u>)</u>
N/A N		Tility Revi	ewed By:	5/23/03 Date:	
Cal/Evam Date: 5/10/2002		<u>Y. M</u>	tent	5 5/24/07	Page 3 of 5

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GE GE	NUCLEAR	ENERGY	EXA	T	teport No.: R16-062			
Site and Unit:	Columbia	Generating	Station	Compo	nent ID:	24RRC(1)B-16	
Outage:	R16				PI	PE TO VALVE		
System	RRC	ASN	IE Cat.: <u>B-J</u>	ASM	E Item <u>B9.11</u>	Aug Requireme	nts:	<u>N/A</u>
Exams Performed	Data Sheet	Cal Sheet	Procedur	e	Calibration Block	Examination Personnel	Cert Level	Date
45° Shear	UT-077	N/A	PDI-UT-2/Site S	Specific	UT-7	Charles Barrett	11	5/19/2003
60° Long	UT-078	N/A	PDI-UT-2/Site \$	Specific	UT-7	Charles Barrett		5/19/2003
Examination Result During the manua search units. This examination Addenda with mod 50% Code covera Previous data was	ts: I ultrasonic exai is acceptable pe difications as sta ige was obtained s reviewed prior	mination of the er the requirem ated in 10CFR! d. to this summa	above referenced ents of ASME Se 50.55. ry.	d weld, n	o reportable indicat 1989 Edition, no Ad	ions were recorded	l utilizing the 95 Edition, 19	45° and 60' 996
Examination r	esults were con ations were per	npared to data	repo <u>rt</u> RRU- Work Order:	158 0104492	from PSI (1979) 5-01	outage with	No Chang Change	ye
This Summary a	nd the following	data sheets ha $T = \frac{05/19}{100000000000000000000000000000000000$	ave been reviewe 03 e: Utility Rev 03 1. IIIIe	d and acc Ula iewed By	cepted by the follow	ving personnel: <u> SZS</u> 03 Date: STULL		

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				ويتقان ويتركب والمتحد		Data Rapad Nu	mber D14		
Site/Unit: Columb	ia Generatii	ng Stati	on		Data Report Nu	nber <i>IIT</i> -	<u>077</u>		
Outage: R16					Linesth Sheet Null	10001. 07-	2		
						Linearity Sheet.	10,	<u>2</u>	
Calibration Data f	or Block: UT	-7		<u></u>	Procedure:	PDI-UT-2/Site Sp	pecific	<u> </u>	
<u>SS</u>	<u>24" 1.140"</u>	Calibra	ation Cal	Time	Ver / Rev: <u>C/1</u>	DRR:	<u>N/A</u>		
Material S	Size Thick	Initial (Cal: <u>191</u> .	3		Search Unit	Data		
<u>Ultragel II</u>	<u>00325</u>	Cal Cl	neck: <u>225</u>	0	KBA	00L6YV	(.50"/Round	
Couplant: C	Couplant: Couplant batch				Manufacturer:	Serial Number		Size/Shape:	
Z20080 Thermometer S/N	Cal Temp	Final C	Cal: 013:	2	0.2 in	AE°		45°	
	· ·	- <u> </u>			Incident Point:	Nominal Ang	jle: I	49. Measured Angle	
Ī	DAC Constru	uction			<u>1.5 MHz</u>	<u>Comp-G</u>	Shear	1	
Scan Direction	<u>Ax</u>				Frequency:	Style:	Mode:	Elements:	
Cal Reflector	ID Notch					Search Unit C	Cable		
Signal Amplitude	<u>80%</u>				BG-1	7A &'		0	
Signal Sweep:	<u>5.1 Div</u>				Cable T	ivpe: Length:	: Con	nectors:	
Signal dB:	<u>35.0 dB</u>								
Sweep 0-10 = <u>4.0 ii</u>	n. Metal P	ath			1	Instrument Set	ttings.		
C	alibration V	erificatio	on		Staveley / Sonic 136P 136P1106C031364				
Field Simulat	tor Block S/N:	CAL-I	RHO M- 068		Mau	facturer/Model:	Se	rial Number:	
Reflec	tor 1" Rad	ius 2	" Radius	1	<u>0.265 in.</u>	0.12in./µsec.	1	<u>4KHz</u>	
Amplit	ude 80%		72%		Delay:	Velocity: Filter:		Rep Rate:	
Gain (dB) 25.0		25.0		<u>4.0 in.</u>	<u>334 ns</u>	500	Ohms	
Sweep	(SD) <u>2.5</u>		5.0		Range:	Pulser:	Da	mping:	
Acceptable	Linearity perform	ned: 4/	7/2003	J	Off	2.25 MHz		<u>P/E</u>	
Exam Data for We	ald 24PPC	(1)R-16			Reject:	Frequency	: 1	Mode:	
					Exam	Comments / L	_imitatio	ns:	
	Configuratio	<u></u> on:			Exams performed	to maintain 5% to	20% ID roll	 /_	
OD	75° F		22508	8	ID mot geometry o	hserved below rer	omahia ia	mic	
Exam Surface:	Exam Te	mp. E;	xam Therm	- ometer	No exam performe configuration.	d from downstream	n side due	to component	
Axial	UPST	Scan dB	Recordabl	le Exam	Actual Cal Block "				
Axial	UPST	49 .0	NRI	45°	-				
	UPST	<u>52.0</u>	<u>NRI</u>	<u>45°</u>	-				
· · · · · · · · · · · · · ·					E Stad	10000 5	- - -		
				1	Exam Start.	<u>2230</u> Exa	m End:	<u>2320</u>	
CAO Chi	arles Barrett		11	IMA	II MA KA	TT OF	5/20/03		
Initials: Examiner:		Le	 vei:	GE Revie	wed By:	Level: {	Date:		
					7/110.1	Startan	2		
	<u>N/A</u>	Δ			- MMM_	= <u>= = = = = = = = = = = = = = = = = = </u>	-		
						(1970)			

GE NUCLEAR ENERGY	Ultrasoni N	ic Calibration and Examination Record Manual Piping and Components
Site/Unit: <u>Columbia Generating Stati</u> Outage: <u>R16</u>	<u>on</u>	Data Report Number: <u>R16-062</u> Data Sheet Number: <u>UT-078</u> Linearity Sheet: <u>L-02</u>
Calibration Data for Block: UT-7	<u> </u>	Procedure: PDI-UT-2/Site Specific
SS 24" 1.140" Calibra	tion Cal Time	Ver / Rev: <u>C/1</u> DRR: <u>N/A</u>
Material Size Thick Initial	Cal: 1937	Search Unit Data
Ultragel II 00325 Cal Ct	neck: 2322	PTD 00.360 2/15x25) mm/Pect
Couplant: Couplant batch	ieck: N/A	Manufacturer: Serial Number Size/Shape:
Thermometer S/N Cal Temp. Final C	Cal: 0140	0.6 in 60° 82°
DAC Construction		Incident Point: Nominal Angle: Measured Angle
Scan Direction <u>Ax</u>		2.0 MHzTRL 2-AustLong2Frequency:Style:Mode:Elements:
Cal Reflector <u>ID Notch</u>	,	Search Unit Cable
Signal Amplitude <u>80%</u> Signal Sweep: <u>4.3 Div</u>		RG-1746'0Cable Type:Length:Connectors:
Signal dB: <u>80.8 dB</u> Sweep 0-10 = <u>6.0 in.</u> <u>Metal Path</u>		Instrument Settings
Calibration Verification	on Succession	Staveley / Sonic 136P 136P1106C031364 Maufacturer/Model: Serial Number:
Field Simulator Block S/N: <u>CAL-1</u>	<u>RHOM-068</u>	1.33 in. 0.231in./usec. 2 4KHz
Amplitude 30%	Radius	Delay: Velocity: Filter: Rep Rate:
Gain (dB) 47.4	47.4	<u>6.0 in. 250 ns 500 Ohms</u>
Sweep (SD) <u>1.6</u>	3.3	Range: Pulser: Damping:
Acceptable Linearity performed : 4/	7/2003	<u>Off</u> <u>2.25 MHz</u> <u>Dual</u> Reject: Frequency: Mode:
Exam Data for Weld: 24RRC(1)B-16		
PIPE TO VALVE		Exam Comments / Limitations:
Configuration: <u>OD</u> <u>75° F</u> Exam Surface: Exam Temp. E:	225088 xam Thermometer	Exams performed at below reference sensitivity to maintain 5% to 20% noise level. ID root geometry recorded. See attached data sheet. No exam performed from downstream side due to valve
Axial UPST Scan dB	Recordable Exa	Configuration. m le Actual Cal Block "T" is 1 410"
Axial UPST 74.8	<u>Yes</u> <u>60</u>	
		Exam Start: <u>2322</u> Exam End: <u>2350</u>
Initials: Examiner:	<u>‼</u> /el: GE Re	NUT DE 05/20/03 Newed By: Level: Date:
Initials: Examiner 2: Let Cal/Exam Date: <u>5/19/2003</u>	Vel:	Reviewed By: Date: Date: Date: Page 3 of 5





2ISI-32-13



ge ge	NUCLEAR	ENERGY	E	T	Report No.: R16-063					
Site and Unit:	Columbia	Generating	Station	Compo	onent ID.	v	<u>24RRC(</u> ALVE TO ELL	1)B-17		
Svstem	RRC	ASM	ME Cat.: B⊣	J ASN	IE Item	B9.11	Aug Reguireme	ents:	N/A	
Exams Performed	Data Sheet	Cal Sheet	Proce	dure	Calibrat	ion Block	Examination Personnel	Cert Level	Date	
60° Long	UT-088	N/A	PDI-UT-2/Si	te Specific	U	T-7	Andre' Rachal		5/21/2003	
45° Shear	UT-087	N/A	PDI-UT-2/Si	te Specific	U	T-7	Andre' Rachal	<u> </u>	5/21/2003	
During the manua 60°RL search unit This examination Addenda with mod 50% Code covera	al ultrasonic exa t. is acceptable p difications as s age was obtaine	amination of the per the requirem tated in 10CFR ed.	e above referen nents of ASME 10.55	aced weld, r Section XI	o reporta 1989 Ed	ble indicat ition, no A	tions were recorded ddenda and the 19	d utilizing the 95 Edition, 1	45° and 996	
Previous data was	s reviewed prio	r to this summa	ıry.							
Previous data was	s reviewed prio	r to this summa	r y.							
Previous data was	s reviewed prio	r to this summa	ı ry.	·						
Previous data was Examination r These examin	s reviewed prio esults were con nations were pe	r to this summa mpared to data informed under t	report RF Work Order:	₹U-140 0104492	from F 25	2SI(1979)	outage with	No Change	ge	
Previous data was Examination m These examin This Summary au Mul Land Prepared By:	esults were con nations were pe nd the following	r to this summa mpared to data prormed under to g data sheets ha g data sheets ha	report RF Work Order: ave been revie	RU-140 0104492 wed and ad Reviewed B	from F 25 Cocepted b	PSI(1979) y the follow	outage with	No Change	ge	

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86 <u>G</u>	E NUCL	EAR ENER	<u>gy</u>	Ultra	sonic Ma	Calibration a nual Piping a	nd Examina nd Compon	tion Record ents
Site/Unit: <u>(</u> Outage: <u>F</u>	Columbi R16	ia Generatir	ig Statio	<u>on</u>			Data Report Nu Data Sheet Nur Linearity Sheet:	mber: <u><i>R16-063</i></u> nber: <u>UT-088</u> <u>L-06</u>
Calibration	Data fo	r Block: <u>UT</u>	.7			Procedure:	PDI-UT-2/Site Sj	pecific
		45 4 4 4 0 1			7	Ver / Rev: <u>C/1</u>	DRR:	<u>N/A</u>
<u>SS</u> Materia	<u>2</u> I S	<u>4 1.140</u> ize Thick	Calibrat	tion Cal Ti	me		Search Unit	- Data
Ultragel		00325	Initial C	al: <u>1133</u>			Search Olin	Data
Couplan	# t: Co	ouplant batch	Cal Ch	eck: <u>1332</u>		<u>RTD</u>	<u>98-172</u>	2(10x18) mm/Rect
225316		75° F	Cal Che	eck: <u>N/A</u>		Manufacturer:	Serial Number	Size/Shape:
Thermomete	er S/N	Cal Temp.	Final C	al: <u>1500</u>		0.45 in.	60°	59°
		·				Incident Point:	Nominal And	ale: Measured Angle
	D	AC Constru	<u>iction</u>			2010	TDI 0 4	
Saca Directic	-	A.,	N/A	A//		<u>2.0 MHz</u> Erecuency:	<u>IRL 2-Aust</u>	Long 2 Mode: Elements:
Scan Directic	in .	AX	<u>N/A</u>	<u>N/A</u>	i		Style.	Woue. Elements.
Cal Reflector	<u>1</u>	<u>D Notch</u>	<u>N/A</u>	<u>N/A</u>	L.		Search Unit (Cable
Signal Amplii	ude	<u>80%</u>	<u>%</u>	<u>%</u>		RG-1	74 6'	0
Signal Sweer);	<u>4.7 Div</u>	<u>.0 Div</u>	<u>.0 Di</u>	iy	Cable 1	Type: Length	: Connectors:
Signal dB:	:	<u>69.2 dB</u>	<u>.0 dB</u>	<u>.0 d</u>	B			
Sweep 0-10 =	• <u>6.</u> 0 in	. Metal Pa	ath				Instrument Se	ttings
						1		
		libration Ve	rificatio	n		Stave	ley / Sonic 136P	<u>717H</u>
Fiel	d Simulato	or Block S/N:	CAL-R	HOM-069		Mau	ifacturer/Model:	Serial Number:
ſ	Paflact	or 1" Pad		Dadius		<u>1.2 in.</u>	<u>0.233in./µsec.</u>	<u>2 <u>4KHz</u></u>
	Amplitu		<u>us e</u>	ROW		Delay:	Velocity:	Filter: Rep Rate:
(Coin (d	R) 20.6		20.6		6 O in	250 pc	500 Ohme
	Sam (u	B) <u>39.0</u>		39.0		Range	<u>200 ns</u> Pulser	Damning
l	Sweep (<u>50) <u>1.7</u></u>		3.33		Off	2 25 MU-	Dual
Ac	eptable L	inearity perform	ned : <u>4/7</u>	/2003		Reject:	<u>Z.25 MITZ</u> Frequency	: Mode:
Exam Data	for We	ld 24RRC	1)R-17					
						Exam	Comments / I	imitations:
		Configuration				Example conformed		
		Configuratio	n:			Supplemental 60°	to maintain 5% to RL examination du	20% noise ievei. Ie to single side access.
<u> </u>	2	<u>72° F</u>		<u>225316</u>		No exam performe	d from upst side d	ue to component
Exam S	urface:	Exam Ter	np. Ex	am Thermor	neter	configuration.	oce dB to maintain	5% to 20% noise level
						ID root geometry 3	60° intermittently	above and below recorded
		IIDET	Scan do	Decembra	Even	levels. Actual Cal block T	" ie 1 410"	
Circ		DNST		Indications	Angle		131.710	
Axial		DNST	69.2	Yes	60°	ł		
						Exam Start:	1334 Exa	m End: 1354
]				1			
AMA	And	fre' Rachal	<u>I</u>	<u> </u>	112	200 D	11 3	722/02
Initials: F	xaminer:		Lev	el:	GE Review	ved By:	Level: I	Date:
						100.1.1	11-	
		<u>N/A</u>		X-	10x	un	<u> </u>	
Initials: F	xaminer 2	2.	l ev	ei: 4	Juility Revi	ewed By:	Date:	
111140413			2011					
111101013. E					19 MI	Fats	5142/18	2



86)	GE NUCLEAR ENERGY Profile Sheet				Wall Thickness Profile Sheet	Site:Columbia Generating StationUnit:N/AReport No.:Project:16423R16-063
System	:	RF	<u>10</u>		Compaged ID Number 24090(4)8 47	1.5"
Position	0°	90°	180°	270°		
1	N/A	N/A	N/A	N/A	Crown Height: <u>FLUSH</u>	
2	1.46	N/A	N/A	N/A	Crown Width: <u>1.15"</u>	
3	1.58	N/A	N/A	N/A	Nominal Diameter 24.0"	VALVE ELBOW UPST Component: DNST Component:
4	1.4	N/A	N/A	N/A		i
5	1.52	N/A	N/A	N/A	vveia Lengin: <u>77.5</u>	FLOW
	·					

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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-14









Site and Unit: <u>Co</u> Outage: System: <u>RRC</u> Exams Performed Data 60° RL UT-F 45° Shear UT-F 60° Shear UT-F 50° Shear UT-F Examination Results: During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	ASME C ASME C a Sheet R15-042 R15-041 R15-044 asonic exunit. Roo ceptable p odification e side onl ewed prio	Generati Sat.: B- Cal Sheet N/A N/A N/A N/A amination t geometry per the req ns as stated ly due to va r to this su	ASME ASME Procedu PDI-UT PDI-UT PDI-UT PDI-UT of the above of was recorded uirements of d in 10CFR50 alve configura	Cc Item ure F-2 F-2 F-2 F-2 reference d with the ASME Se).55. ition. 50	B9.11 Calibration UT-1 UT-1 UT-1 ed weld, no r e 60° RL and ection XI, 19	Aug / Aug / n Block 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	24RI ALVE TO PI Requirements: Examination Personnel BRET FLESN BRET FLESN BRET FLESN ndications we dusing a 60° no Addenda ned.	RC(2)A-10 IPE In Cert IER II IER II IER II IER II ere recorded shear wave and the 199	<u>N/A</u> Date al 5/24/01 5/24/01 5/24/01
Outage: System: RRC Exams Performed Data 60° RL UT-F 45° Shear UT-F 60° Shear UT-F 50° Shear UT-F 50° Shear UT-F 200° Shear UT-F 200° Shear UT-F 201° Shear UT-F	RFO-15 ASME C a Sheet R15-042 R15-041 R15-044 asonic ex- unit. Roo ceptable p odification e side onl ewed prio	Cal Sheet N/A N/A N/A N/A N/A amination t geometry per the req ns as state ly due to va r to this su	ASME Proceed PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT	T-2 T-2 T-2 T-2 T-2 reference d with the ASME Se 0.55. ition. 50	B9.11 Calibration UT- UT- UT- ed weld, no r e 60° RL and ection XI, 19 % code cove	Aug / Aug / n Block	ALVE TO PI Requirements: Examination Personnel BRET FLESN BRET FLESN BRET FLESN Indications we dusing a 60° no Addenda ned.	IPE In Cert Leve IER II IER II IER II IER II ere recordec shear wave and the 199	<u>N/A</u> Date bl 5/24/01 5/24/01 5/24/01 5/24/01
System: RRC Exams Performed Data 60° RL UT-f 45° Shear UT-f 60° Shear UT-f 50° Shear UT-f Examination Results: During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	ASME C ASME C R15-042 R15-041 R15-044 asonic ex- unit. Roor ceptable p odification e side onl ewed prior	Cal Sheet N/A N/A N/A N/A amination t geometry per the req ns as state ly due to va r to this su	J ASME Procedu PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT PDI-UT	T-2 T-2 T-2 T-2 T-2 T-2 T-2 T-2 T-2 T-2	B9.11 Calibration UT-1 UT-1 ed weld, no r e 60° RL and ection XI, 19	Aug I n Block 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Requirements: Examination Personnel BRET FLESN BRET FLESN BRET FLESN ndications we dusing a 60° no Addenda ned.	IER II IER II IER II IER II IER II ere recordec shear wave and the 199	N/A Date 5/24/01 5/24/01 5/24/01
System. KKC Exams Performed Data 60° RL UT-f 45° Shear UT-f 60° Shear UT-f 50° Shear UT-f 50° Shear UT-f 50° Shear UT-f 50° Shear UT-f Examination Results: UT-f During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mode Examined from the pip Previous data was revie	a Sheet R15-042 R15-041 R15-044 asonic ex- unit. Roo ceptable p odification e side onl ewed prio	Cal Sheet N/A N/A N/A N/A amination t geometry per the req ns as state ly due to va r to this su	of the above of was recorded uirements of d in 10CFR50 alve configurations and the above of the	ure T-2 T-2 T-2 reference d with the ASME Se 0.55. Ition. 50	Calibration UT-1 UT-1 UT-1 ed weld, no r e 60° RL and ection XI, 19	Paper able i Paper able i d confirmed 89 Edition,	Examination Personnel BRET FLESN BRET FLESN BRET FLESN ndications we d using a 60° no Addenda ned.	I Cert Leve IER II IER II IER II ere recorded shear wave and the 199	Date Date 5/24/01 5/24/01 5/24/01
60° RL UT-f 45° Shear UT-f 60° Shear UT-f 50° Shear UT-f Uring the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	a sonic ex assonic ex unit. Roor ceptable p odification e side onl ewed prior	N/A N/A N/A N/A N/A amination t geometry per the req ns as state ly due to va r to this su	of the above of was recorded uirements of d in 10CFR50 alve configura	reference d with the ASME Se).55.	ed weld, no r e 60° RL and ection XI, 19	reportable i d confirmed 89 Edition, erage obtai	Personnel BRET FLESN BRET FLESN BRET FLESN ndications we d using a 60° no Addenda ned.	ere recorded shear wave and the 199	d utilizing the 95 Edition,
60° RL UT-f 45° Shear UT-f 60° Shear UT-f xamination Results: During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	R15-042 R15-041 R15-044 asonic ex- unit. Roo ceptable p odification e side onl ewed prio	N/A N/A N/A amination t geometry per the req ns as state ly due to va r to this su	PDI-UT PDI-UT PDI-UT of the above of was recorded uirements of d in 10CFR50 alve configura	reference d with the ASME Se 0.55.	UT- UT- UT- ed weld, no r e 60° RL and ection XI, 19	7 7 7 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 8 9	BRET FLESN BRET FLESN BRET FLESN ndications we d using a 60° no Addenda ned.	IER II IER II IER II ere recordec shear wave and the 199	5/24/01 5/24/01 5/24/01 5/24/01
45° Shear UT-f 60° Shear UT-f Examination Results: During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	asonic ex unit. Roo ceptable p odification e side onl ewed prio	N/A N/A amination t geometry per the req ns as state ly due to va r to this su	PDI-UT PDI-UT of the above if was recorded uirements of d in 10CFR50 alve configura	reference d with th ASME Se).55.	UT-1 UT-2 ed weld, no r e 60° RL and ection XI, 19	7 7 7 89 Edition, erage obtain	BRET FLESN BRET FLESN ndications we d using a 60° no Addenda ned.	ere recorded shear wave and the 199	5/24/01 5/24/01 d utilizing the 95 Edition,
60° Shear UT-F Examination Results: During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	asonic ex unit. Roo ceptable p odification e side onl ewed prio	N/A amination t geometry per the req ns as state ly due to va r to this su	of the above of was recorded was recorded uirements of d in 10CFR50 alve configura	reference d with th ASME Se).55. Ition. 50	ed weld, no r e 60° RL and ection XI, 19	reportable i d confirmed 89 Edition, erage obtai	BRET FLESN ndications we d using a 60° no Addenda ned.	ere recordec shear wave and the 199	5/24/01 d utilizing the 95 Edition,
Examination Results: During the manual ultr 45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	asonic ex unit. Roo ceptable p odification e side onl ewed prio	amination t geometry per the req ns as state ly due to va r to this su	of the above in was recorded uirements of d in 10CFR50 alve configura ummary.	reference d with th ASME Se).55. Ition. 50	ed weld, no r e 60° RL and ection XI, 19 9% code cove	eportable i d confirmed 89 Edition, erage obtai	ndications we d using a 60° no Addenda ned.	ere recorded shear wave and the 199	d utilizing the 95 Edition,
45° shear wave search This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	unit. Roo ceptable p odification e side onl ewed prio	t geometry per the req ns as state ly due to va r to this su	was recorded uirements of d in 10CFR50 alve configura ummary.	d with th ASME Se).55. Ition. 50	e 60° RL and ection XI, 19 1% code cove	d confirmed 89 Edition, erage obtai	no Addenda ned.	and the 199	95 Edition,
This examination is acc 1996 Addenda with mo Examined from the pip Previous data was revie	ceptable p odification e side onl ewed prio	per the req ns as state ly due to va r to this su	uirements of d in 10CFR50 alve configura immary	ASME S€ 0.55. Ition. 50	ection XI, 19 % code cove	89 Edition, erage obtai	no Addenda ned.	and the 199	95 Edition,
Examined from the pip Previous data was revie	e side onl ewed prio	ly due to va r to this su	alve configura ımmary	ition. 50	1% code cové	erage obtai	ned.		
Previous data was revie	ewed prio	r to this su	immary.		70 0000 0000		ind.		
Previous data was revie	ewed prio	r to this su	immary.						
								14 1	
								-,	
		<u></u>							
Examination results	were com	npared to de	ata report	RRU-078	B from	1979	outage with	🛃 No C	Change
These examinations	s were per	formed und	er Work Order	. 010	011024			🔄 Cha	nge
								···	
This Summary and the	following	data sheet:	s have been re	viewed a	nd accepted	by the follow	wing personne	RWP	: N/A
DACT Flesner.	/ 1	T s	-24-01	A	11111/	NKS1	CAL Sha	DI Dose	: N/A m
Prepared By:	Le	evel: I	Date: Utili	Review	/ed Bv:	<u> </u>	Date:	1-1	
Aug in		- T	-hal	1 inn			$\sim 7/3$		
GE Reviewed By:	Le	evel:	Date: ANI	I Reviewe	ed By:	Title:	Date:	Pag	e <u>1</u> of <u>7</u>

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86	GE NUCLEAR ENERGY	Indication / Coverage Plot Sheet	Site: <u>Columbia Generating S</u> Project: <u>RFO-15</u>	<u>Station</u> Unit: <u>N/A</u>	Report No.: <u>R15-049</u>
ystem:	RRC	Component ID Number: <u>24RRC(2)A-10</u>	Configuration:	Valve	Pipe
			1		
	VALVE	FLOW		0. M	
			. •	PIPE	
		4 4	<u>Kaz 60°2 45°5</u>		
) j		
		CONFRACE PLAT			·
	,	LUVERAGE TLUT	, ,	:	
Ċ.		Augelia - chill	aller to	h. I.MT	r 77/x
<u>B</u>	<u>RET FLESNER</u> <u>II</u> <u>5/24/01</u>	GE Paviewed By Loval Data	gu/ullen 5/29		

2ISI-32-15





GE GE	NUCLEAR	ENERGY	EXA	MINATION	I SUMN	IARY SHEE	T	R16-066
Site and Unit:	Columbia	Generating	Station	Component ID);	24RRC	2)B-8	
Outage:	<u>R16</u>				<u>v</u> /	ALVE TO PIPE		
System	RRC	ASM	ИЕ Cat.: <u>В-</u> Ј	ASME Item	<u>89.11</u>	Aug Requirements: <u>N/A</u>		
Exams Performed	Data Sheet	Cal Sheet	Procedure	e Calibra	tion Block	Examination Personnel	Cert Level	Date
45° Shear	UT-119	N/A	PDI-UT-2/Site S	pecific L	JT-7	Charles Barrett	11	5/21/200
60° Long	UT-120	N/A	PDI-UT-2/Site S	pecific l	JT-7	Charles Barrett	H	5/21/2003
Examination Result During the manua search units. This examination i Addenda with mod 50% Code covera	s: I ultrasonic exa is acceptable p lifications as si ge was obtaine	amination of the per the requirem tated in 10CFR ed.	above referenced ents of ASME Sec 50.55.	weld, no report tion XI, 1989 Ed	able indicat	ions were recorded ddenda and the 199	utilizing the	45° and 60 996
This weld was ide	ntified during c	onstruction as E	3C/G 217 Weld B-4	4.				
Examination n	esults were con ations were co	mpared to data	report RRU-0 Work Order: 0	1044925-01	PSI (1979)	outage with	No Chang	je
This Summary an		g data sheets he $\frac{5}{2}$		and accepted	by the follow	ving personnel:		*
Mull M		evel: Dat	e: Utility Revie	ewed By:		Date:		

Site/Unit: (Outage: [Columbia R16	a Generatir	ng Statio	<u>on</u>			Data Report Number: Data Sheet Number: Linearity Sheet:	<u>R16-066</u> <u>UT-119</u> <u>L-02</u>
Calibratior	n Data for	Block: UT	-7			Procedure: <u>P</u>	DI-UT-2/Site Specifi	<u>c</u>
55	24	(" <u>1 140</u> "	Calibra	tion Cal Tin	ne	Ver / Rev: <u>C/1</u>	DRR: MA	
Materia	al Siz	ze Thick					Search Unit Data	3
Ultrage		<u>00325</u>	Cal Ch	neck: 2202				-
Couplar	nt: Co	uplant batch	Cal Ch			<u>KBA</u> Manufacturer:	<u>00L6YV</u> Serial Number	<u>0.50°/Round</u> Size/Shape:
225080	8	<u>78° F</u>	Einal C	Col: 2208				
Inermomete	er S/N	Cal Temp.	Final C	281. <u>2306</u>]	<u>0.35 in.</u> Incident Point	<u>45°</u> Nominal Angle	<u>45°</u> Measured Angli
	D	AC Constru	uction					modourou / mgn
Scan Directiv		Δ				<u>1.5 MHz</u> Frequency:	<u>Comp-G</u> <u>She</u> Style: Mod	e: Elements:
Cal Reflector	, <i>ור</i>	Notch					Soorch Unit Cable	
Signal Amelia	<u>ne</u> tude	R0%					Search Unit Cable	<u>.</u>
Signal Sweet	n. 4	1 Div				<u>RG-11</u>	<u>14 6'</u>	<u>0</u>
Signal dB [.]	y. <u>y</u>	50 dB					ype: Length:	Connectors.
Sween 0-10 :	± = 40in	<u>Notal P</u>	ath			1	nstrument Setting	8
	<u>4.0 m.</u>					-	noti unione octang	-
Fiel	<u>Ca</u> d Simulato	Block S/N		011 RHQ M -068		<u>Stavel</u> Maut	e <u>v / Sonic 136P</u> facturer/Model:	136P1106C031364 Serial Number:
	Reflecto	r 1" Pad	iue 2	" Padius		<u>0.265 in.</u>	<u>0.12in./µsec. 1</u>	<u>4KHz</u>
	Amplitud	le 80%		76%		Delay:	Velocity: Filte	er: Rep Rate:
	Gain (dE	3) 24.0	· · · · · · · · · · · · · · · · · · ·	24.0		<u>4.0 in.</u>	<u>334 ns</u>	<u>500 Ohms</u>
	Sweep (S	D) <u>2.5</u>		5.0		Range:	Pulser:	Damping:
An	centable Li	nearity perform	ned: 4/	7/2003		<u>Off</u>	2.25 MHz	<u>P/E</u>
						Reject:	Frequency:	Mode:
Exam Data	a for Well	d: <u>24RRC(</u>	<u>(2)B-8</u>			Even	Commente / Limit	
		VALVE TO F	PIPE			Exam	Comments / Limit	auons:
		Configuration	on:			Exams periormed t	o maimain 5% to 20% i	
<u>0</u>	D	<u>81° F</u>		<u>225088</u>		No exam performed	l from upstream side du	e to valve
Exam 5	unace.	Examiler	пр. Е	xam inemom	leter			
						Actual Cal Block "I	" is 1.410".	
Axia	I	UPST	Scan dB	Recordable	Exam			
UIC (مار)	, ·····	DNST	49 0	NRI	45°			
Circ		DNST	53.0	NRI	45°			
	· /		<u></u>	<u> </u>	<u>.</u>			
						Exam Start:	2202 Exam End	1: <u>2222</u>
			- <u></u>	I	Am	Id II A OTA		
(C-85	<u>Char</u>	tes Barrett		<u>u</u>	<u> </u>	U WILKA	II 05/22/	03
Initials: I	Examiner:		Le	vel: C	GE Revie	wed By:	Level: Date:	
		AT/ A	-		R	Ulalch	5/25/03	
	.	<u>N/A</u>	1		Itility Revi	ewed By:	Date:	
Louisiolo: 1	Examiner 2		Le	vel:		1	11 . 1 .	
millais.					11 11	2 Lint	0121.112	

			<u>1_</u>				Data Report Number	R16-066
Site/Unit:	Columbia	Generati	ng Static	<u>n</u>			Data Sheet Number:	UT-120
Outage:	R16						Linearity Sheet:	<u>L-02</u>
Calibration	n Data for	Block: <u>U1</u>	-7			Procedure:	PDI-UT-2/Site Specifi	ic
99	24		Orither			Ver / Rev: <u>C/1</u>	DRR: N/A	
<u>35</u> Materia	al Size	e Thick	Calibra				Search Unit Dat	a
Ultrage	Ш	<u>00325</u>		al. <u>1915</u>				. .
Couplar	nt: Cou	plant batch				<u>RTD</u> Manufacturer:	<u>00-369</u> Serial Number	2(15x25) mm/Rec Size/Shaper
<u>22508</u>	<u>8</u> 	<u>78° F</u>	Einal C	al. 2210				01201011000
inermomen		ai remp.		a. <u>2310</u>	I	0.6 in. Incident Point	<u>60°</u> Nominal Anole	60° Measured Ano
	DA	C Constr	uction				TPI 2 Avet	
Scan Directio	n	Ax				Frequency:	Style: Mod	te: Elements
Cal Reflector	r <u>ID</u>	Notch					Search Unit Cable	8
Signal Ampli	tude	80%					74 81	~ ^
Signal Swee	p: <u>4</u>	<u>6 Div</u>				Cable	14 <u>5</u> Type: Length:	<u>u</u> Connectors:
Signal dB:	. 80).4 dB						· · · · · · · · · · · · · · · · · · ·
Sweep 0-10 :	= <u>6.0 in.</u>	Metal P	ath				Instrument Setting	8
	Cali	bration V	erificatio	n		Stave	Nev / Sonic 136P	136011060031364
Fiel	d Simulator	Block S/N	CAL-5			Mau	ifacturer/Model:	Serial Number:
7 10	Deflector	1" Poo		Padius		<u>1.33 in.</u>	<u>0.231in./µsec. 2</u>	<u>4KHz</u>
	Amplitude	<u>1_Rau</u>	<u>ius</u> <u>z</u>	<u>Radius</u> 80%		Delay:	Velocity: Filte	er: Rep Rate:
	Gain (dB)) 46.0	<u> </u>	46.8		<u>6.0 in.</u>	<u>250 ns</u>	<u>500 Ohms</u>
	Sweep (SI	D) <u>1.6</u>		3.3		Range:	Pulser:	Damping:
Ac	ceptable Lin	earity perfor	med: 4/7	/2003		Off	2.25 MHz	Dual
Exam Dat	a for Weld	· JADDC	(2) 8 8	····	<u> </u>	Reject:	Frequency:	Mode:
		24RRC	<u>(2)0-0</u>			Fxam	Comments / Limit	ations:
		Configurati	<u>-1</u> 00:			Exams performed	at reference sensitivity (to maintain 5% to
0	n	81° F		225088	,	20% noise level.	· · · · · · · · · · · · · · · · · · ·	
Exam S	urface:	Exam Te	mp. Ex	am Thermo	meter	No exam performe	d from upstream side di	ue to valve
						configuration.		
Avia		UDOT	Seen dB	Deserveble	- Even	Reference attache	d indication report for ex	xamination results.
Circ	•	DNST	Scan ub	Indications	s Angle	Actual Cal Block "	T" is 1.410".	
<u>Axia</u>	!	DNST	<u>80.4</u>	Yes	<u>60°</u>			
								·
						Exam Start:	2224 Exam En	d: <u>2255</u>
				····	A			
CAR	<u>Charl</u>	es Barrett	ļ	<u>u</u>	UM	UU WAADA	II 05/22	103
Initials:	Examiner:		Lev	el:	GE Revie	Aved By:	Level: Date:	_ _ *
						11101	1.1.2	
		<u>N/A</u>	<u>N</u>	\square	Utility Ravi	ewed By:	 Date:	
Initials:	Examiner 2:		Lev	eł:	11 12	n - T	- M/1/40	
					11. 111	1 Stand N	STHILLS	



3 6)	GE N	UCLEAF	RENER	GY	Wall Th Profil	nickness e Sheet	Sité: <u>Columbia Generatin</u> Project: <u>16423</u>	i <u>g Station</u> Unit: <u>N/</u>	A Report No.: <u>R16-066</u>
ystem:		RR	<u>c</u>		Component ID Number	24PBC(2)P-8	1.5"	L E	1.5"
sition	0°	90°	18Q°	270°	Component 12 Number.	<u>24RRC[2]8-0</u>		3	
1	N/A	N/A	N/A	N/A	Crown Height:	FLUSH			4 5
	N/A	N/A	N/A	N/A	Crown Width:	1.0"			/
	1.20*	N/A	N/A	N/A	Nominal Diameter		<u>VALVE</u> UPST Component:		<u>PIPE</u> DNST Component:
	1.05"	N/A	N/A	N/A		<u>64.U</u>		·i	
	1.03"	N/A	N/A	N/A	Weld Length:	<u>75.5"</u>		FLOW	
						<u>Flo</u>	W N	¥5°	
						Flo	w N	¥5°	

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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

Attachment E

2ISI-32-16

Weld Identification 24RRC(1)B-10

ISI Diagram RRC-101-2

NDE Data Report R16-064



GE GE	NUCLEAR	ENERGY	EXAMINA	EXAMINATION SUMMARY SHEET						
Site and Unit:	Columbia	Generating	g Station Compo	nent ID:	24RRC(2	2)B-10				
Outage:	<u>R16</u>			<u>E</u>	LL TO PUMP					
System.	RRC	ASA	ME Cat.: <u>B-J</u> ASM	E Item <u>B9.11</u>	Aug Requireme	nts:	<u>N/A</u>			
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date			
45° Shear	UT-117	N/A	PDI-UT-2/Site Specific	UT-7	Dickey Michael	11	5/21/2003			
60° Long	UT-118	N/A	PDI-UT-2/Site Specific	UT-7	Dickey Michael		5/21/2003			
Examination Result During the manua search units. This examination Addenda with mod 50% Code covera Previous data was	ts: I ultrasonic exa is acceptable p difications as st ge was obtaine s reviewed prior	amination of the let the requirem lated in 10CFR ed. r to this summa	e above referenced weld, m nents of ASME Section XI, 50.55.	o reportable indicat 1989 Edition, no A	ions were recorded ddenda and the 19	utilizing the	45° and 60° 996			
Examination n These examin	esults were cor ations were pe	mpared to data rformed under	report R-R8-127 Work Order: 0104492	from R-8 5-01	outage with 🔽	No Chan Change	ge			
This Summary an	nd the following	g data sheets h	ave been reviewed and ad	ccepted by the follow	ving personnel: 5/23/03		-			
Prevared By: Reviewed By:		evel: Dat <u> TT (5/2:</u> evel: Dat	te: Dtility Reviewed By 2/03 <u>1.111 (</u>	to	Date: <i>3/12/10-2</i> Date:	Page 1	of			

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B GE	NUCLEA	R ENERO	<u>ay</u>	Ultr	asonic Ma	Calibration a nual Piping a	nd Examina nd Compor	ation Reco nents	rđ
Site/Unit: <u>C</u> Outage: <u>R</u>	olumbia G 16	eneratin	g Static	<u>on</u>			Data Report No Data Sheet Nu Linearity Sheet	umber: <u>R16-064</u> imber: <u>UT-117</u> t: <u>L-04</u>	
Calibration	Data for Bl	ock: <u>UT-</u>	<u>7</u>			Procedure:	PDI-UT-2/Site S	pecific	
<u>SS</u>	<u>24"</u>	1.140"	Calibra	tion Cal	Time	Ver / Rev: <u>C/1</u>	DRR:	<u>N/A</u>	·
Material <u>Ultragel I</u> Couplant: <u>225291</u>	Size <u>I Q</u> Coupla Z	Thick 0 <u>325</u> Int batch <u>2° F</u>	Initial C Cal Ch Cal Ch	Cal: <u>1911</u> leck: <u>220</u> eck: <u>N/A</u>	<u>B</u> <u>4</u>	<u>KBA</u> Manufacturer:	<u>90H8Y3</u> Serial Numbe	<u>t Data</u> <u>0.50*</u> r Size/	/ <u>Round</u> Shape:
Thermometer Scan Direction	S/N Cal DAC	Temp. Constru	Final C	al: <u>235</u>	<u>f</u>	<u>0.35 in.</u> Incident Point: <u>1.5 MHz</u> Frequency:	<u>45°</u> Nominal An <u>Comp-G</u> Style:	gle: Meas <u>Shear</u> Mode:	<u>46°</u> ured Angle: <u>1</u> Elements:
Cal Reflector	<u>ID No</u> de 801	o <u>tch</u> %					Search Unit	Cable	
Signal Sweep: Signal dB:	<u>5.1 l</u> <u>31.0</u>	<u></u> Div dB				<u>RG-1</u> Cable T	1 <u>74 6'</u> Type: Length	<u>0</u> n: Connecto) rs :
Sweep 0-10 =	<u>4.0 in.</u>	Metal Pa	<u>th</u>				instrument Se	ettings	
Field	Calibr	ation Ve	rificatio	<u>on</u> 2HO M -066		<u>Stave</u> Mai	ley / Sonic 136P Ifacturer/Model:	<u>70.</u> Serial N	<u>7H</u> lumber:
F	Reflector	<u>2" Radi</u>	<u>us</u>	<u>N/A</u>		<u>0.221 in.</u> Delay:	<u>0.126in./µsəc.</u> Velocity:	<u>1</u> <u>4K</u> Filter: Rep I	<u>Hz</u> Rate:
	Gain (dB)	<u>19.4</u>		<u>N/A</u>		<u>4.0 in.</u> Range:	<u>334 ns</u> Pulser:	<u>500 Ohr</u> Damoin	<u>ns</u> a:
Acce	entable Linea	rity perform	ed: <u>4/</u>	<u>104</u> 7/2003]	<u>Off</u> Reject:	2.25 MH: Frequence	<u>z <i>P/E</i></u> y: Mode	
Exam Data	for Weld:	24RRC(2) <u>B-10</u>				· · · · ·		
	E	LL TO PU	<u>np</u>			Exam	Comments /	Limitations:	
<u>OD</u> Exam Su	face:	<u>76° F</u> Exam Terr	и. 1р. Ех	<u>22529:</u> am Therma	1 ometer	Previously recorde levels. No exam performe	d geometry obse d from downstrea	rved below recon m side due to co	dable mponent
Axiał Circ		JPST DNST	Scan dB	Recordabl Indication	e Exam is Angle	Actual Cal Block "	T" is 1.410".		
<u>Axial</u> <u>Circ</u>	<u> </u>	JPST JPST	<u>45</u> <u>48</u>	NRI NRI	<u>45°</u> <u>45°</u>	-			
					1	Exam Start:	<u>2205</u> Exa	am End:	1222
DEM Initials: Ex	<u>Dickey M</u> aminer:	<u>lichael</u>	Lev	<u>//</u> rel:	GE Review	Wed By:	Level:	15/22/03 Date:	
N/A N/A Utility Revie					ewed By:	<u>5/23/</u> 07 Date: <u>5/124////</u>	3 7/ ²⁷		
Cal/E	kam Date:	<u>5/21/2003</u>	8		ANII Revie	wed By:	Date:	Page <u>2</u>	of <u>4</u>

GE NUCLEAR EI	IERGY	Ultra	sonic Ma	Calibration a nual Piping a	nd Examina nd Compon	tion Record ents		
Site/Unit: <u>Columbia Gene</u> Outage: <u>R16</u>	rating Station	<u>n</u>			Data Report Nu Data Sheet Nun Linearity Sheet:	mber: <u>R16-064</u> nber: <u>UT-118</u> <u>L-04</u>		
Calibration Data for Block:	<u>UT-7</u>			Procedure:	PDI-UT-2/Site Sp	<u>ecific</u>		
FS 24" 1	(40° Calibrati			Ver / Rev: C/1	DRR:	N/A		
Material Size T	nick Laiting O				Search Unit	Data		
Ultragel II 00325	Initial Ca	11: <u>7924</u>						
Couplant: Couplant ba	itch	ck: <u>2223</u>		RTD	<u>00-407</u>	2(10x18) mm/Rect		
<u>225291 72° F</u>	Cal Cheo	ck: <u>N/A</u>		Manufacturer:	Serial Number	Size/Shape:		
Thermometer S/N Cal Tem	b. Final Ca	l: <u>2355</u>		<u>0.45 in.</u>	<u>60°</u>			
DAC Cor	struction			Incident Point: 2.0 MHz	le: Measured Angle			
Scan Direction <u>Ax</u>				Frequency:	Style:	Mode: Elements:		
Cal Reflector ID Notch					Search Unit C	Cable		
Signal Amplitude 80%								
Signal Sweep: 5.2 Div				RG-1 Cable	74 <u>6'</u> Type: Length:	<u>0</u> Connectors		
Signal dB: 64.0 dB					.,po. cengui.			
Sweep 0-10 = <u>5.0 in.</u> <u>Me</u>	tal Path				Instrument Set	ttings		
Calibratio	n Verification	<u>1</u>		<u>Stave</u> Mat	ley / Sonic 136P Jacturer/Model:	<u>707H</u> Serial Number:		
		10m-000		1.08 in.	0.244in./usec.	1 4KHz		
Reflector <u>2</u>	Reflector <u>2" Radius</u> <u>N/A</u>					Filter: Rep Rate:		
Ampinude Cain (dB)	<u>80%</u>			5.0 in	250 nc	500 Obme		
Sween (SD)	<u>33.4</u>			Range: Pulser: Damping:				
Acceptable Linearity p	erformed : <u>4/7//</u>	2003		<u>Off</u>	<u>2.25 MHz</u>	<u>Dual</u>		
Exam Data for Wold: 24E	PC(2)8-10			. Reject.	Frequency	mode:		
				Fxam	Comments / I	imitations:		
<u>ELL I</u>	uration:			Exams nerformed	at reference sensit	inity to maintain 5% to		
				20% noise level.	ut reference ashan			
<u>QD</u> Exam Surface: Exar	n Temp. Exa	<u>225291</u> m Thermon	neter	Previously records levels.	ed geometry observ	red below recordable		
Axial UPST Circ DNST	Scan dB R	Recordable	Exam	No exam performe component configu	d from downstream aration.	n side due to		
<u>Axial</u> <u>UPS1</u>	<u>64</u>	NRI	<u>60°</u>	Actual Cal Block "	T" is 1.410".			
				Exam Start	2224 Eva	m Fad [.] 2228		
DEm Dickey Micha	<u>el 11</u>		Uma	MANK	TT 05	12103		
Initials: Examiner:	Level		GE Review	wed By:	Level: [Date:		
<u>N/A</u>	<u>N/A</u>	1 (] ,		ullu	- 2/23/03			
Initials: Examiner 2:	Level		Hitty Revi	ewed By:	Date:	りょう		
Cal/Exam Date: 5/2	//2003	A	NII Revie	wed By:	Date:	Page <u>3</u> of <u>4</u>		



REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

Attachment F

2ISI-32-17

Weld Identification 24RRC(2)B-11/8CAP-1

ISI Diagram RRC-101-2

NDE Data Report R17-014

2ISI-32-18

Weld Identification 24RRC(2)B-11/4RRC(4)-4S

ISI Diagram RRC-101-2

NDE Data Report R16-058

2ISI-32-19

Weld Identification 24RRC(2)B-8/4RRC(8)-4S

ISI Diagram RRC-101-1

NDE Data Report R16-068

2ISI-32-20

Weld Identification 24RRC(2)B-8/4RRC(4)-4S

ISI Diagram RRC-101-1

NDE Data Report R16-067

: : : 2ISI-32-17

x



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HE)	GE NUCLEAR	ENERGY	E)	KAMIN	ATION SUMM	ARY SHE	ET	Report No.: R17-014
Site:	<u>Columbia</u>	Generating	Station	Cor	mponent ID:	24RRC	(1)B-11/8CAF	<u>2-1</u>
Outage:	<u>R17</u>	,			<u>.</u>	SWL TO CA	<u>AP</u>	
System	REACTOR RECIR	CLOOP B	ASME Cat.:	<u>B-J</u>	A ASME Item	<u>B9.31</u>	Aug Req	<u>N/A</u>
Exams Performed	Data Sheet	Cal Sheet	Proce	edure	Calibration Block	Examination Personnel	n Cert Level	Date
60° RL	UT-037	N/A	GE-U	T-105	8746	James Bulle	en II	5/12/2005
45° Long.	UT-038	N/A	GE-U	T-105	8746	James Bulle	en II	5/12/2005
During the n refracted lor This examin 50% Code c	nanual ultrasonic exa ngitudinal wave seard nation meets the requ coverage was achiev	amination of the ch units. uirements of ASN ed.	above referenc //E Section XI 1	ed weld, n 989 and 1	o reportable indication 995 Edition with the 1	ns were record 996 Addenda.	led utilizing 45° a	nd 60°
Examin	ation results were co	ompared to data	report	N/A	from N/A c	butage with	No Chan	ge
Examin These e	ation results were co xaminations were pe	ompared to data informed under V	report Vork Order:	N/A 010824	from N/A c 97 01	butage with	□ No Change	ge
Examin These e This Sum Prepared By	nation results were co examinations were per many and the following Subject of the following of the following Subject of the following of the following of the following Subject of the following of t	Intervel: Data	report Vork Order: ave been review bs te:	N/A 010824 wed and a eview:	from N/A of 97 01 Compared by the following with the following of the foll	butage with ing personnel:	No Chan Change RWP: Dose:	<i>ge</i> <i>N/A</i> <i>N/A</i> mi

Beport Number: Bit-2.014 Bite/Unit: Collapation Data for Block: 97.46 Calibration Data for Block: 97.46 Signal Market	36)	<u>GE NUC</u>	LEAR ENER	<u>IGY</u>	Ult	rasonic Ma	Calibration nual Piping	and Exan and Com	ninatior ponent	n Record s	
Calibration Data for Block: <u>8746</u> Procedure: <u>GE-UT-105</u> S3304 <u>M4</u> <u>950' to 2.0''</u> Material Size Thickness Utrace/II <u>00325</u> Calibration MA Calibration	Site/Unit: (Outage: /	Columbia R17	Generating	g Static	on / 2	<u> </u>		Report Nu Data Shee Linearity S	mber: et Number: sheet:	<u>R17-014</u> <u>UT-037</u> <u>L-002</u>	
SS04 MA 0.50° to 2.0° Material Size Thickness Urage/II 00325 Couplant Couplant 20172201 Couplant 20172201 Couplant 20172201 Couplant 20172201 Couplant 20172201 Couplant 2017201 Couplant 20172011 Search Unit Cable 2017201 Search Unit Cable 201812 Search Unit Cable	Calibration	n Data for	Block: <u>8746</u>	2		<u></u>	Procedure:	<u>GE-UT-105</u>			
Jobser Call Date Material Size Thickness Uitzagel II 2022 Couplant: Couplant batch 241380 Z2: F Cal Check: NA Thermometer S/N Cal Temp. Final Cal: 1340 DAC Construction Size/Shape: Serial Number Size/Shape: Cal Pellector 10 Signal Amplitude 80% 80°	5530/	1 N/	A 0.50" to	2.0"	libration	Col Timo	Ver / Rev: 6	D	RR: <u>N/A</u>		
Ultradel II 00325 Cal Check: India Cal. 1022 Cal Check: MA 241980 78° F Cal Temp. Final Cal. 1340 Manufacturer: Serial Number Size/Shape: DAC Construction Scan Direction Ax Ax B02% Signal Amplitude 802% Signal Amplitude 802% Signal Amplitude 802% Signal Sweep: 4.5 In. 60° <td>Materia</td> <td>al Siz</td> <td>e Thickne</td> <td>ss lin</td> <td></td> <td>1022</td> <td></td> <td>Search</td> <td>Unit Dat</td> <td>a</td>	Materia	al Siz	e Thickne	ss lin		1022		Search	Unit Dat	a	
Couplant: Couplant batch Dial Critick Mail 211980 Ze'F Cal Check: Mail Cal Check: Mail Manufacturer: Serial Number Size/Shape: DAC Construction Size/Shape: Scan Direction Az Cal Reflector 12 Signal Amplitude 80% Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal GB: 36.8 dB Sweep 0-10 = 4.0 in Mainutator Block S/N: MA Reflector MA Mainutator Block S/N: MA Reflector MA Mainutator Block S/N: MA Reflector MA Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 241820 Exam Surface: Exam Temp. Exam Surface: Exam Temp. Axial UPST Circ DNST Sond B Recordable Exam Barformed from upstream side due to component Cric DNST Sond B Recordable State Arial UPST Scan dB Recordable <	<u>Ultrage</u>	<u> </u>	<u>00325</u>		al Chock:	<u>1022</u> N/A					
21980 78° F Cal Tench. Mathematical F State State State State Thermometer S/N Cal Temp. Final Cal: 1340 0.5 in. 60° 60° DAC Construction Scan Direction Ax 60° 80° Incident Point: Nominal Angle: Measured Ang Cal Reflector 1.0 Signal Amplitude 80% Signal Amplitude 80% Signal Sweep: 4.5 Div Measured Ang Signal Sweep: 4.5 Div Signal Amplitude 80% Signal Amplitude Signal Amplitude 80% Signal Amplitude 80% Signal Amplitude Signal Amplitude Signal Amplitude <td>Couplar</td> <td>nt: Coi</td> <td>uplant batch</td> <td></td> <td></td> <td></td> <td><u>RTD</u> Mapufacturor:</td> <td><u>04-30</u> Sorial Nu</td> <td><u>94</u> mbor</td> <td>2(10x18) mm/Rect.</td>	Couplar	nt: Coi	uplant batch				<u>RTD</u> Mapufacturor:	<u>04-30</u> Sorial Nu	<u>94</u> mbor	2(10x18) mm/Rect.	
Intermometer S/N Cal Lemp. India Cal: 1342 0.5 in. 60° 60° 60° DAC Construction Scan Direction Az Incident Point: Nominal Angle: Measured Angle Cal Reflector 1.0 Signal Amplitude 80%	<u>24198</u>	<u>0</u>	<u>78° F</u>			<u>IVA</u>	Manufacturer.	Senarina	mbei	Size/Shape.	
DAC Construction Nominal Angle: Measure Angle: Scan Direction Az Cal Reflector 1.0 Signal Amplitude 80% Signal Sweep: 4.5 Div Signal Amplitude 80% Signal Sweep: 4.5 Div Signal Maplitude 80% Signal Sweep: 4.5 Div Signal MB: 36.8 dB Sweep 0:10 = 4.0 in Metal Path Instrument Settings Calibration Verification N/A Field Simulator Block S/N: N/A Maplitude N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 241980 Exam Surface: Exam Temp. Exam Surface: Exam Temp. Exam Surface: Exam Temp. Exam Data Dist Surface: Exam Temp. Exam Data Dist Axial UPST Scan dB Recordable Axial UPST Dist 42.8 NB1 60*	Thermomete	er S/N	Cal Temp.		nal Cal:	<u>1340</u>	<u>0.5 in.</u>	<u> </u>	<u>60°</u>	<u>60°</u>	
Scan Direction Ax Cal Reflector 1.0 Signal Amplitude 80% Signal Amplitude 80% Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Mapiltude 80% Signal Sweep: 4.5 Div Signal Mapiltude 80% Sweep 0-10 = 4.0 in Matter Block S/N: N/A Reflector N/A Amplitude N/A Sweep (SD) N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24RRC(1)B-11/8CAP-1 SWL TO CAP Configuration: QD 82° F 241980 Exam Surface: Exam Temp. Exam Thermometer Avial UPST Scand B Recordable Avial UPST Scand B Recordable Avial Dast 42.8 NHi 60°		<u>D</u> 4	AC Construc	ction			Incident Point:		al Angle:	Measured Angle	
Cal Reflector 1.0 Signal Amplitude 80% Signal Amplitude 80% Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Metal Path Calibration Verification Field Simulator Block S/N: N/A Reflector N/A Sweep (SD) N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 241980 Exam Comments / Limitations: Exam Configuration: OD 82° F Exam Temp. Exam Thermometer Axial UPST Circ DNST Indications Angle Ax	Scan Directio	on	Ax				<u>2.0 MHz</u> Frequency:	50°THL 2-Au Style:	<u>st Hi</u> Moo	Le: Elements:	
Signal Amplitude 80% Signal Amplitude 80% Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal Amplitude 80% Calibration Verification Instrument Settings Calibration Verification Instrument Settings Field Simulator Block S/N: MA Amplitude N/A Gain (dB) N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24RRC(1)B-11/8CAP-1 SwL TO CAP Exam Temp. Configuration: OD OD 82° F 241980 Exam Surface: Exam Temp. Exam Thermometer Axial UPST Scan dB Recordable Axial Dnst 42.8 NRI 60° Axial Dnst 42.8 NRI 60°	Cal Reflector	r	<u> </u>					Search L	Init Cabl	e	
Signal Sweep: 4.5 Div Signal Sweep: 4.5 Div Signal dB: 36.8 dB Sweep 0-10 = 4.0 in Metal Path Instrument Settings Calibration Verification N/A Field Simulator Block S/N: N/A Reflector N/A N/A Gain (dB) N/A N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24FRFC(1)B-11/8CAP-1 SWL TO CAP Configuration: 2419800 Exam Surface: Exam Temp. Exam Thermometer Axial UPST Circ Scan dB Recordable Indications Exam Arige Panse to to component configuration. Axial UPST Linc Scan dB Recordable Recordable Exam Arige NH 60° Axial UPST Scan dB Recordable Recordable Exam Arige Axial UPST Scan dB Recordable Recordable Exam Arige Axial UPST Scan dB Recordable Exam Arige Axial UPST Scan dB Recordable Exam Axial UPST <	Signal Amplii	tude	<u>80%</u>					174	61	<u> </u>	
Signal dB: Signal dB: Signal dB: Signal dB: Sweep 0-10 = <u>4.0 in</u> <u>Metal Path</u> Instrument Settings Calibration Verification Field Simulator Block S/N: <u>M/A</u> Reflector <u>M/A</u> <u>M/A</u> Gain (dB) <u>M/A</u> <u>M/A</u> Acceptable Linearity performed : <u>4/18/2005</u> <u>2419800</u> Exam Data for Weld: <u>2418RC(1)B-11/8CAP-1</u> <u>Swit TO CAP</u> <u>Configuration:</u> OD <u>82° F</u> <u>2419800</u> Exam Thermometer Axial UPST Scan dB Recordable Exam Atial <th cols<="" td=""><td>Signal Sweet</td><td>p: <u>4</u></td><td>.<u>5 Div</u></td><td></td><td></td><td></td><td>Cable</td><td><u>-1/4</u> е Туре: Г</td><td><u>e</u> ength:</td><td><u>u</u> Connectors:</td></th>	<td>Signal Sweet</td> <td>p: <u>4</u></td> <td>.<u>5 Div</u></td> <td></td> <td></td> <td></td> <td>Cable</td> <td><u>-1/4</u> е Туре: Г</td> <td><u>e</u> ength:</td> <td><u>u</u> Connectors:</td>	Signal Sweet	p: <u>4</u>	. <u>5 Div</u>				Cable	<u>-1/4</u> е Туре: Г	<u>e</u> ength:	<u>u</u> Connectors:
Sweep 0-10 = 4.0 in Metal Path Instrument Settings. Calibration Verification Field Simulator Block S/N: N/A Amplitude N/A N/A Amplitude N/A N/A Gain (dB) N/A N/A Sweep (SD) N/A N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24RRC(1)B-11/BCAP-1 SWL TO CAP Configuration: Exam Temp. Exam Surface: Exam Temp. Exam Surface: Exam Temp. Exam Data UPST DNST Scan dB Circ Post Mail UPST Mail Angle Axial UPST DNST Scan dB Recordable Exam Indications Angle Axial UPST DNST Scan dB Recordable Exam Indications Angle Axial UPST DNST Scan dB Recordable Exam Scan Stret S	Signal dB:	<u>3</u>	<u>6.8 dB</u>								
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Matulature Block S/N: Matulature Block S/N: <th colspa<="" td=""><td></td><td>Cal</td><td>ibration Vei</td><td>ificatio</td><td>n</td><td></td><td>Pan M</td><td>ametrics / Epo</td><td><u>ch 4</u></td><td><u>031573011</u></td></th>	<td></td> <td>Cal</td> <td>ibration Vei</td> <td>ificatio</td> <td>n</td> <td></td> <td>Pan M</td> <td>ametrics / Epo</td> <td><u>ch 4</u></td> <td><u>031573011</u></td>		Cal	ibration Vei	ificatio	n		Pan M	ametrics / Epo	<u>ch 4</u>	<u>031573011</u>
Reflector N/A N/A Amplitude N/A N/A Amplitude N/A N/A Gain (dB) N/A N/A Sweep (SD) N/A N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24RRC(1)B-11/8CAP-1 Sweep (SD) Sweep (SD) Velocity: Narrowband Filte QD 82° F 241980 Exam Surface: Exam Temp. Exam Thermometer Axial UPST Scan dB Recordable Circ Dnst 42.8 NRI 60° Axial UPST Scan dB Recordable Exam Indications Angle Angle Angle Angle	Fiel	ld Simulator	Block S/N:	1	<u>v/A</u>			autacturer/woo	el:	Serial Number:	
AmplitudeN/AN/AGain (dB)N/AN/ASweep (SD)N/AN/AAcceptable Linearity performed :4/18/2005Acceptable Linearity performed :4/18/2005Exam Data for Weld:24RRC(1)B-11/8CAP-1SWL TO CAP Configuration:SWL TO CAP Configuration:OD82° F241980Exam Surface:Exam Temp.Exam Surface:Exam Temp.AxialUPST DNSTOnst42.8AxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxDnst42.8NRI 60°AxDnst42.8NRI 60°		Reflector	<u>N/A</u>		<u>N/A</u>		<u>11.88 µs</u>	<u>0.2334 in/</u>	<u>usec</u>	<u>0.8 - 3.0 MHz</u>	
Gain (dB)N/AN/ASweep (SD)N/AN/AAcceptable Linearity performed :4/18/2005Acceptable Linearity performed :4/18/2005Exam Data for Weld:24RRC(1)B-11/8CAP-1SWL TO CAP Configuration:SWL TO CAP Configuration:OD82° F241980Exam Surface:Exam Temp.Exam Surface:Exam Temp.AxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialUPST DNSTAxialDnst42.8NRI 60°AxDnst42.8NRI 60°Exam Stort1210Exam Stort1210Exam Stort1210		Amplitude <u>N/A</u>			<u>N/A</u>		Zero:	Velocity	y:	Narrowband Filter:	
Sweep (SD) N/A N/A Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24RRC(1)B-11/8CAP-1 SWL TO CAP Configuration: Bage: F 241980 Exam Surface: OD 82° F 241980 Exam Temp. Exam Thermometer Axial Circ UPST DNST Scan dB Recordable Indications Exam Angle Axial UPST DNST Scan dB Recordable Indications Exam Angle Ax Dnst 42.8 NRI 60°		Gain (dB) <u>N/A</u>		<u>N/A</u>		Auto	Fullwave	<u>4.0 in</u>	<u>Sq. / Max</u>	
Acceptable Linearity performed : 4/18/2005 Exam Data for Weld: 24RRC(1)B-11/8CAP-1 SWL TO CAP Configuration: Barrier Comments / Limitations: OD 82° F 241980 Exam Surface: Exam Temp. Exam Thermometer Axial Circ UPST DNST Scan dB Recordable Exam Angle Axial UPST Circ Scan dB Recordable Exam Angle Axial UPST DNST Scan dB Recordable Exam Angle Axial UPST DNST Scan dB Recordable Exam Angle Axial UPST DNST Scan dB Recordable Exam Angle Ax Dnst 42.8 NHI 60°		Sweep (S	D) <u>N/A</u>		<u>N/A</u>		Rep Hate: Re	ectification:	Range:	Pulser/Energy:	
Exam Data for Weld: 24RRC(1)B-11/8CAP-1 SWL TO CAP Configuration: OD 82° F 241980 Exam Surface: Exam Temp. Exam Thermometer Axial Circ UPST DNST Scan dB Recordable Indications Exam Angle Axial UPST DNST Scan dB Recordable Indications Exam Angle Ax Dnst 42.8 NRI 60°	Ac	ceptable Lir	nearity performe	ed: <u>4/1</u>	<u>3/2005</u>		ADD	<u>Off</u> Reject:	<u>2.0 MF</u> Frequen	<u>Hz P/E</u> icy: Mode:	
SWL TO CAP Configuration: Exam Comments / Limitations: OD Exam Surface: 82° F Exam Temp. 241980 Exam Temp. Exam performed to maintain 5% to 20% noise level. No exam performed from upstream side due to component Configuration. No exam performed from upstream side due to component Configuration. Axial Circ UPST DNST Scan dB Indications Indications Angle Exam Angle Ax Dnst 42.8 NRI 60° Exam Start 1210 Exam End 1220	Exam Data	a for Weld	d: <u>24RRC(1</u>)B-11/8	CAP-1					· · · · ·	
OD 82° F 241980 Exam Surface: Exam Temp. Exam Thermometer Axial UPST Scan dB Recordable Exam Circ DNST Scan dB Recordable Exam Axial UPST Scan dB Recordable Exam Axial UPST Scan dB Recordable Exam Ax Dnst 42.8 NRI 60°			SWL TO CAL	<u>-</u>			<u>Exa</u>	<u>m Commen</u>	ts / Limit	tations:	
OD Exam Surface:82° F Exam Temp.241980 Exam ThermometerNo exam performed from upstream side due to component configuration.Axial CircUPST DNSTScan dB IndicationsRecordable AngleExam AngleAx ODnst42.8NRI60°CircDnst42.8NRI60°CircDnst42.8NRI60°			Configuration	:			Exams performe	d to maintain 59	% to 20% n	oise level.	
Axial Circ UPST DNST Scan dB Indications Recordable Angle Exam Angle Ax Dnst 42.8 NRI 60°	<u>0</u> Exam S	D Surface:	<u>82° F</u> Exam Tem i	o. Exa	<u>241980</u> am Thermo	2 ometer	No exam perform configuration.	ned from upstre	am side du	e to component	
Axial Circ UPST DNST Scan dB Indications Recordable Angle Ax Dnst 42.8 NRI 60°							Achieved 50% C	ode coverage.			
<u>Ax Dnst 42.8 NRI 60°</u>	Axial Circ	I	UPST S DNST	ican dB	Recordable Indication	e Exam s Angle	-				
Even Starti 1210 Even Endi 1220	<u>Ax</u>		<u>Dnst</u>	<u>42.8</u>	<u>NRI</u>	<u>60°</u>	-				
							Even Start	1010	Even En		
					¢			1210	Exam En	u. <u>1220</u>	
North James Bullen II X12) Site II 5/10/05	ANTE) Jam	es Bullen	<u> </u>		×1,)	Sita -	T	5/10/0	5	
Initials: Examiner: Level: GE Reviewed By: Level: Date:	Initials:	Examiner:		Leve	el:	GE Revie	wed By:	Level:	Date:		
NA NA OL Uhld 5/14/05		-	<u>N/A</u>	N	A	On	- Uhlo	1 5/1	4/05		
Initials: Examiner 2: Level:	Initials:	Examiner 2:		Leve	el:	Utility Revi	ew:	Date:	(or		
Initial Cal/Exam Date: <u>5/12/2005</u> ANII Review: Date: Page <u>2</u> of <u>4</u>	Initial Cal/Ex	itial Cal/Exam Date: <u>5/12/2005</u> ANII Rev						Date:	172) 	Page <u>2</u> of <u>4</u>	

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	GE NUCL	EAR ENI	ERGY	Ult	rasonic Ma	Calibrationual Pipin	on and E ng and C	xamination component	n Record ts
Site/Unit: <u>C</u> Outage: <u>R</u>	olumbia (17	Generati	ng Stat	tion / 2			Repo Data Linea	ort Number: Sheet Number: arity Sheet:	<u>R17-014</u> <u>UT-038</u> <u>L-002</u>
Calibration	Data for E	Block: <u>87</u>	46			Procedur	e: <u>GE-UT</u>	105	
SS304	N/A	0.50" t	o 2.0"	Calibration	Cal Time	Ver / Rev	: 6	DRR: <u>N/A</u>	
Material	Size	Thick	ness	Initial Cal:	1020	 	Sea	rch Unit Dat	a
<u>Ultragel</u>	Щ.	<u>00325</u>		Cal Check	<u>N/A</u>				_
Couplant	: Coup	lant batch		Cal Check:	N/A	<u>RTD</u> Manufacture	er Sori	<u>98-228</u> al Number	<u>2(10x18) mm/Rect</u> Size/Shape:
<u>241980</u>	0/11 0	<u>78° F</u>		Einal Calı	1949	Manufacture	ei. Jeii	arnumber	Size/Shape.
Inermometer	S/N Ca	al temp.][<u>1342</u>	<u>0.5 in.</u>		<u>45°</u>	<u>45°</u>
	DAC	C Constr	uction			Incluent Por	int: N <u>45°TRL</u>	ominai Angle: <u>1-Aust Lor</u>	measured Angle:
Scan Direction	n <u>4</u>	<u>4x</u>				Frequency	y: Styl	e: Moo	de: Elements:
Cal Reflector	1	. <u>0</u>					Sear	ch Unit Cabl	e
Signal Amplitu	ide <u>8</u>	<u>0%</u>					PC-174	£'	
Signal Sweep:	<u>5.0</u>	Div				Ca	able Type:	Lenath:	Connectors:
Signal dB:	<u>38.</u>	<u>1 dB</u>					·····		
Sweep 0-10 =	<u>2.0 in</u>	<u>Metal P</u>	ath				Instru	ment Setting	<u>IS</u>
	Calib	oration V	erificat	ion		Ē	Panametrics Maufacturer	/ Epoch 4 /Model:	<u>031573011</u> Serial Number:
Field	Simulator B	lock S/N:		<u>N/A</u>	1	10.00	0 221	16 in/usoo	08-20MH-
	Reflector	<u>N/A</u>	<u> </u>	<u>N/A</u>		Zero:	<u>0.231</u> Vi	elocity:	Narrowband Filter:
	Amplitude	<u>N/A</u>		<u>N/A</u>					
-	Gain (dB)	<u>N/A</u>		<u>N/A</u>		Auto Rep Rato:	<u>Fullwave</u> Bostification	<u>2.0 in</u> Bangai	<u>Sq. / Max</u> Bulcor/Eporeur
	Sweep (SD)	nitu porfor		<u>N/A</u>		400 Ohms	<u>s Off</u>	. папуе. <u>1.0 М</u>	Hz <u>P/E</u>
Exam Data	for Wold		//////////////////////////////////////	/8CAD_1		Damping:	Rejec	t: Frequer	ncy: Mode:
		<u>241110</u>		<u>/004F-1</u>		E	xam Com	ments / Limi	tations:
		Configurati	<u>AP</u>			Evene perfor	med to maint	nio 5% to 20% r	
<u>OD</u> Exam Su	rface:	<u>82° F</u> Exam Te	mp. E	<u>241980</u> Exam Thermo	2 ometer	No exam perfector		am side due to (component
			,		,	Achieved 50%		ige.	
Axial Circ		UPST DNST	Scan dB	Recordabl	e Exam s Angle				
Circ		Upst	44.1	NRI	45°	-			
<u>Circ</u>		Dnst	<u>44.1</u>	<u></u>	<u>45°</u>	-			
						Exam Start:	<u>1224</u>	Exam En	d: <u>1232</u>
Initials: E	James xaminer: <u>A</u> xaminer 2:	<u>s Bullen</u> I/A	L	<u>II</u> evel: <u>N/A</u> evel:	GE Review	Ned By:	let s	Evel: 5/14 Solution Solution Solution Solution	05
Initial Cal/Exa	ım Date:	<u>5/12/200</u>	<u>05</u>		ANII Revie	w:	<u>×</u>	/16/05 Date:	Page <u>3</u> of <u>4</u>

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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-18



GE GE	NUCLEAR	ENERGY	EXAMINATION SUMMARY SHEET						
Site and Unit:	Columbia	Generating	Station Compo	onent ID:	24RRC(1)B-11	/4RRC(8)-	<u>4S</u>		
Outage:	<u>R16</u>			<u> </u>	PIPE TO SWL				
System.	RRC	ASN	IE Cat.: <u>B-J</u> ASM	IE Item <u>B9.31</u>	Aug Requireme	nts:	<u>N/A</u>		
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date		
45° Shear	UT-069	N/A	PDI-UT-2/Site Specific	UT-7	Dickey Michael	11	5/19/2003		
60° Long	UT-070	N/A	PDI-UT-2/Site Specific	UT-7	Dickey Michael	11	5/19/2003		
50% Code covera Previous data was	ge was obtaine s reviewed prior	ed. r to this summa	ry.						
Examination r	esults were cor	mpared to data	report 1RRU-079	from R-1	outage with	No Chang	ле		
These examin	ations were pe	rformed under i	Work Order: 0104492	25-01		Change			
This Summary a	nd the following	data sheets h	ave been reviewed and ad	ccepted by the follow	wing personnel:				
Prepared By:		evel: Dat	re: Utility Reviewed By	y:	Date:				
AM MULL VVC Reviewed By:	UNK	evel: Dat	e: ANII Reviewed By	The contraction of the contracti	Date:	Page 1	of		

	LEAR ENERG	<u>ay</u>	Ultra	sonic (Mai	Calibration ar nual Piping ar	nd Examina nd Compor	ition R ients	lecord
Site/Unit: <u>Columb</u> Outage: <u>R16</u>	ia Generatin	g Station				Data Report Nu Data Sheet Nu Linearity Sheet	umber: <u>R</u> mber: <u>U</u> : <u>L</u> -	<u>16-058</u> T-069 -04
Calibration Data for	or Block: UT-	7			Procedure: P	DI-UT-2/Site S	pecific	<u> </u>
SS	24" 1.140"	Calibration	Cal Tir	ne	Ver / Rev: <u>C/1</u>	DRR:	<u>N/A</u>	
Material	Size Thick	Initial Cal:	2154			Search Uni	t Data	
<u>Ultragel II</u>	Ultragel II 00325 Cal C							
Couplant: C	plant: Couplant batch		N/A		<u>KBA</u> Manufacturer:	<u>00H8Y3</u> Serial Number		0.50"/Round
<u>225291</u>	<u>72° F</u>			<u> </u>	Manalactarer.			Cize/Citapo.
Thermometer S/N	Cal Temp.	Final Cal:	0028		<u>0.35 in.</u>	<u>45°</u>		<u>46°</u>
. [DAC Constru	<u>ction</u>			<u>1.5 MHz</u>	Nominal An	gie. <u>Shear</u>	Measured Angle
Scan Direction	Ax				Frequency:	Style:	Mode:	Elements:
Cal Reflector	ID Notch					Search Unit	<u>Cable</u>	
Signal Amplitude	<u>80%</u>				RG-17	74 6'		0
Signal Sweep:	<u>5.1 Div</u>				Cable Ty	ype: Length	i: Co	onnectors:
Signal dB:	<u>32.2 dB</u>							<u> </u>
Sweep 0-10 = <u>4.0 ii</u>	n. <u>Metal Pa</u>	<u>th</u>			<u>lı</u>	nstrument Se	ttings	
<u>C</u>	alibration Ve	rification			<u>Stavel</u> Mauf	ey / Sonic 136P acturer/Model:	S	<u>707H</u> Serial Number:
Field Simulat	tor Block S/N:	<u>CAL-RHC</u>	DM-066		0 279 in	A 126in /usec	1	4 KH7
Reflec	tor <u>2" Radi</u>	<u>us N/</u>	<u>'A</u>		Delay:	Velocity:	Filter:	Rep Rate:
Amplit	ude <u>80%</u>	<u></u>	A		;	004		
Gain ((BD) <u>20.4</u>	<u>N/</u>			<u>4.0 m.</u> Range	<u>334 fis</u> Dulser	<u>e</u> 1	Damping:
Sweep	(SD) <u>5.0</u>	<u>N</u>	A		Off	2 25 MU		D/E
Acceptable	Linearity perform	ed : <u>4/7/20</u>	<u>103</u>		Reject:	Frequency	: /:	Mode:
Exam Data for We	eld: <u>24RRC(</u>	1)B-11/4R	RC(8)-4	S				
	PIPE TO SW	<u>/L</u>			Exam	Comments /	<u>Limitati</u>	ons:
	Configuration	n:			Exams performed to	o maintain 5% to	20% ID n	oll.
OD	<u>72° F</u>		<u>225291</u>		ID geometry observ	red below record	able level:	s.
Exam Surface:	Exam Tem	ıp. Exam	Thermon	neter	No exam performed configuration.	l from downstrea	m side du	e to component
Axial Circ	UPST S DNST	Scan dB Re	cordable dications	Exam Angle	Actual Cal Block "T	" is 1.410."		
Axial	<u>UPST</u>	44.2	<u>NRI</u>	<u>46°</u>				
Circ	<u>UPST</u>	<u>46.2</u>	<u>NRI</u>	<u>46°</u>				
				2	Exam Start:	<u>2353</u> Exa	am End:	<u>0004</u>
)EM Dic	kev Michael			Ima	N MAHA	TT D	5/20/02	
Initials: Examiner:		Level:		GE Review	ved By:		Date:	
	<u>N/A</u>	<u>N/A</u>	17	Con .	umon Bu:	- <u> </u>	,	
Initials: Examiner	2:	Level:		LI LA	weu by:	Date:	P	
Cal/Exam Da	te: <u>5/19/2003</u>	!	A	NII Revie	wed By:	 Date:	, F	^D age <u>2</u> of <u>4</u>

<u>6</u>	E NUCLEAF	<u>R ENERGY</u>	Ult	rasonic Ma	Calibration a nual Piping a	nd Examination	n Record ts	
Site/Unit: <u>(</u> Outage: <u>[</u>	Columbia Go R16	enerating S	Station			Data Report Numbe Data Sheet Number Linearity Sheet:	r: <u>R16-058</u> : <u>UT-070</u> <u>L-04</u>	
Calibration	n Data for Blo	ock: <u>UT-7</u>			Procedure:	PDI-UT-2/Site Speci	fic	
<u>SS</u> Materia <u>Ultrage</u>	SS 24" 1.140" Calibi Material Size Thick Initial Ultragel II 00325 Cauplant Calibi		alibration Ca	II Time <u>36</u>	Ver / Rev: 2/1	DRR: <u>N/A</u> Search Unit Da	ta	
Couplar <u>22529</u> Thermomete	nt: Coupla 1 <u>Z</u> er S/N Cal	nt batch 2° F Temp. F	Cal Check: <u>N//</u> Cal Check: <u>N//</u> Cal Cal; <u>00</u>	<u>A</u> <u>30</u>	<u>RTD</u> Manufacturer: <u>0.45 in.</u>	<u>00-407</u> Serial Number <u>60°</u>	<u>2(10x18) mm/Rect</u> Size/Shape: <u>60°</u>	
Scan Directio	DAC on <u>Ax</u> r <u>ID No</u>	Construction tch	<u>on</u>		Incident Point: <u>2.0 MHz</u> Frequency:	Nominal Angle: <u>TRL 2-Aust</u> <u>Lo</u> Style: Mo <u>Search Unit Cab</u>	Measured Angl ong <u>2</u> ode: Elements: Ie	
Signal Ampli Signal Swee Signal dB:	tude <u>80%</u> p: <u>5.2 C</u> <u>71.0 c</u>	<u>6</u> Div dB			<u>RG-1</u> Cable	1 <u>74 6'</u> Type: Length:	<u>0</u> Connectors:	
Sweep 0-10 : Fiel	= <u>5.0 in.</u> <u>Calibr</u> d Simulator Blo	<u>Metal Path</u> ation Verifi ck S/N:	<u>cation</u> CAL-RHOM-06	<u>6</u>	<u>Stave</u> Mat	Instrument Setting aley / Sonic 136P ufacturer/Model:	gs Serial Number:	
	Reflector	<u>2" Radius</u> 80%	<u>N/A</u> N/A	_	<u>1.08 in.</u> Delay:	<u>0.24in./µsec.</u> Velocity: Fil	<u>1 4KHz</u> Iter: Rep Rate:	
	Gain (dB) Sweep (SD)	<u>40.0</u> <u>4.0</u>	<u>N/A</u> <u>N/A</u>		<u>5.0 in.</u> Range:	<u>250 ns</u> Pulser:	<u>500 Ohms</u> Damping:	
Ac Exam Data	ceptable Linear	ity performed : 24RRC(1)B	<u>4/7/2003</u>)- 4 S	<u>Off</u> Reject:	<u>2.25 MHz</u> Frequency:	<u>Dual</u> Mode:	
	<u>Pi</u> C	PE TO SWL onfiguration:		<u></u>	Exam Exams performed	Comments / Lim at reference sensitivity	itations: to maintain 5% to	
<u>Oi</u> Exam S	<u>D</u> urface:	<u>72° F</u> Exam Temp.	<u>2252</u> Exam Therr	<u>91</u> nometer	Supplemental 60°	RL examination due to ed from downstream sid	single side access le due to component	
Axial Circ <u>Axia</u>		IPST Sca INST IPST <u>7</u>	n dB Recorda Indicatio 1 <u>NRI</u>	ble Exam ons Angle <u>60°</u>	Actual Cal Block "	T" is 1.410."		
					Exam Start:	5006 Exam El	nd: <u>0015</u>	
DEM Initials: E	<u>Dickey M</u> Examiner:	lichael	<u>II</u> Level:	GE Revie	WA WAXA	II 05/2 Level: Date	<u>a/03</u>	
Initials: E	<u>N/A</u> Examiner 2:	l	<u>N/A</u> Level:	Utility Revi	Viewed By: Date:			
Cal/	Exam Date:	<u>5/19/2003</u>		ANII Revie	wed By:	Date:	Page <u>3</u> of <u>4</u>	

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86)	GE NUCLEAR ENERGY			RGY	Wall Thickness Profile Sheet	Site:Columbia Generating StationUnit:N/AReport No.:Project:16423R16-058
System: <u>RRC</u> Position 0° 90° 180° 270°				270°	Component ID Number: <u>24RRC(1)B-11/4RRC(8)-</u>	<u>1.5"</u> <u>1.5"</u> <u>1.5"</u>
1	1.3"	N/A	N/A	N/A	Crown Height: <u>FLUSH</u>	- 1 2 4 5
2	1.3"	N/A	N/A	N/A	Crown Width: <u>1.4"</u>	
3	1.3"	N/A	N/A	N/A	Nominal Diameter: <u>24.0*</u>	UPST Component:
	1.85"	N/A	N/A	N/A	Weld Length: <u>48.0"</u>	

REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-19



GE GE	NUCLEAR	ENERGY	EXAMIN	T	Report No.: R16-068		
Site and Unit:	Columbia	Generating	Station Compo	onent ID:	24RRC(2)B-8/	4RRC(8)-4	1 S
Outage:	<u>R16</u>			P	IPE TO SWL		
System.	RRC	ASM	ME Cat.: <u>B-J</u> ASM	IE Item <u>B9.31</u>	Aug Requireme	nts:	<u>N/A</u>
xams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
45° Shear	UT-113	N/A	PDI-UT-2/Site Specific	UT-7	Michael Kemp	1 11	5/21/200
60° Long	UT-114	N/A	PDI-UT-2/Site Specific	UT-7	Michael Kemp	11	5/21/200
xamination Result During the manua search units. This examination Addenda with mo	its: al ultrasonic exa is acceptable p difications as s	amination of the per the requirem tated in 10CFR	above referenced weld, r nents of ASME Section XI 50.55.	no reportable indicat 1989 Edition, no Ad	ions were recorded ddenda and the 199	d utilizing the 95 Edition, 19	45° and 60 396
50% Code covera	age was obtaine	ed.					
50% Code covera Previous data wa	age was obtaine s reviewed prio	ed. r to this summa	ıry.				
50% Code covera Previous data wa	age was obtaine s reviewed prio	ed. r to this summa	ıry.				
50% Code covera Previous data wa	age was obtaine s reviewed prio	ed. r to this summa	ıry.				
50% Code covera Previous data wa	age was obtaine s reviewed prio	ed. r to this summa	ıry.			·	
50% Code covera Previous data wa	age was obtaine s reviewed prio	ed. r to this summa	Iry .			·	
50% Code covera Previous data was Examination r These examin	age was obtaine s reviewed prio s reviewed prio presults were con nations were pe	ed. r to this summa mpared to data erformed under	iry. report 1RRU-082 Work Order: 0104492	from R-1 25-01	outage with	No Change	ge
50% Code covera Previous data was Examination r These examin This Summary a	age was obtaine s reviewed prio results were con nations were per and the following	ed. r to this summa mpared to data enformed under g data sheets h	report 1RRU-082 Work Order: 0104492 ave been reviewed and av	from R-1 25-01 Scepted by the follow	outage with	No Chang Change	
50% Code covera Previous data was Examination r These examin This Summary a Mult 1/2 Pregrared By:	age was obtaine s reviewed prio results were con nations were per and the following	ed. r to this summa mpared to data erformed under g data sheets h <u>TL</u> svel: Data	report 1RRU-082 Work Order: 0104492 ave been reviewed and ave 2 2/0 3 te: Utility Reviewed B	from R-1 25-01 Completed by the follow	outage with $$ ving personnel: 5/23/03 Date:	No Change	7e
50% Code covera Previous data was Examination r These examin This Summary a Much J (2) Pranared By:	age was obtained s reviewed prio	ed. This summative r to this summative mpared to data enformed under g data sheets h $TL = \frac{3}{2}$ Level: Data TT = 05/22	report 1RRU-082 Work Order: 0104492 ave been reviewed and ave 2 2/0 3 te: Utility Reviewed B	from R-1 25-01 Scepted by the follow	outage with $$ ving personnel: $\boxed{23/03}$ Date: $\boxed{114/07}$	No Chang Change	78

E <u>G</u>	NUCLEA	R ENER	GY	Ultra	sonic Ma	Calibration ar nual Piping ar	nd Examination nd Componen	n Record ts
Site/Unit: <u>C</u> Outage: <u>R</u>	olumbia (16	Generatir	ng Statio	<u>on</u>			Data Report Numbe Data Sheet Numbe Linearity Sheet:	er: <u>R16-068</u> r: <u>UT-113</u> <u>L-12</u>
Calibration	Data for B	lock: <u>UT</u>	-7			Procedure: E	PDI-UT-2/Site Spec	ific
SS	24"	1.140"	Calibra	ition Cal Ti	ime	Ver / Rev: <u>C/1</u>		
Material	Size	Thick	Initial C	Cal: 2047			Search Unit Da	<u>ata</u>
<u>Ultragel</u>		<u>00325</u>	Cal Cr	Check: 0030		KBA	00MPY8	0.50"/Round
Couplant 225046	: Coupi	ant batch	Cal Chec			Manufacturer:	Serial Number	Size/Shape:
Thermometer	S/N Ca	I Temp.	Final C	Cal: <u>0146</u>		<u>0.4 in.</u>	<u>45°</u>	<u>45°</u>
	DAC	Constru	uction			Incident Point: 1.5 MHz	Nominal Angle: <u>Comp</u> -G Si	Measured Angle: hear <u>1</u>
Scan Direction	ר <u>A</u>	<u>x</u>	<u>Ax</u>			Frequency:	Style: M	ode: Elements:
Cal Reflector	<u>ID N</u>	otch	OD Notch	2			Search Unit Cat	<u>ole</u>
Signal Amplitu Signal S wee p	ide <u>80</u> : <u>5.1</u>	<u>)%</u> Div	<u>15%</u> <u>10.0 Div</u>			<u>RG-11</u> Cable T	<u>74 6'</u> ype: Length:	<u>0</u> Connectors:
Signal dB:	<u>29.8</u>	<u>dB</u>	<u>29.8 dB</u>					
Sweep 0-10 =	<u>4.0 in.</u>	<u>Metal Pa</u>	<u>ath</u>			<u> </u>	nstrument Settin	igs
Field	<u>Calib</u>		erificatio	<u>nc</u> Buon ese		<u>Stavel</u> Maut	ey / Sonic 136P facturer/Model:	<u>136-766/</u> Serial Number:
Field	Simulator B	IDCK S/IN.	CAL-I	RHOM-069		<u>0.342 in.</u>	0.12in./µsec.	<u>1 4KHz</u>
-	Amplitude	<u>1 Rao</u> 80%		60%		Delay:	Velocity: F	ilter: Rep Rate:
F	Gain (dB)	22.0		22.0		<u>4.0 in.</u>	<u>334 ns</u>	<u>500 Ohms</u>
	Sweep (SD)	2.5		<u>5.0</u>		Range:	Pulser:	Damping:
Acc	eptable Linea	arity perform	ned : <u>5/</u>	5/2003		<u>Off</u> Reject	2.25 MHz	<u>P/E</u> Mode:
Exam Data	for Weld:	24RRC	(2)B-8/4	RRC(8)-49	 S			
	1	PIPE TO SU	WL.		-	Exam	Comments / Lim	itations:
		Configuratio	on:			Exams performed t	o maintain 5% to 20%	6 ID roll.
<u>OD</u> Exam Su	rface:	<u>78° F</u> Exam Ter	πp. Ε:	<u>225046</u> kam Thermor	meter	ID geometry observ	red below recordable	levels.
						No exam performed configuration.	l from downstream si	de due to component
Axial Circ		UPST DNST	Scan dB	Recordable Indications	Exam Angle	No counterbore det	ected.	
Axial		<u>UPST</u>	<u>43.8</u>	NRI	<u>45°</u>	Actual Cal Block "T	" is 1.410. "	
Circ		UPST	<u>43.8</u>	NRI	<u>45°</u>			
					1	Exam Start:	0031 Exam E	ind: <u>0040</u>
MTK Initials: E	<u>Michae</u> xaminer: <u>N</u>	<u>I Kemp</u> / <u>A</u>	Lev <u>A</u>	<u>II</u> vel: <u>I/A</u>	GE Review	MMMA wed By: //////	$\frac{II}{Level:} \frac{05/22}{Date}$	<u>/03</u> ::
Initials: E	xaminer 2:	(Lev	vel:		ewed By: Mtoth	Date:	
Cal/E	xam Date:	<u>5/21/200</u>	<u>3</u>		ANII Revie	wed By:	Date:	Page <u>2</u> of <u>4</u>

•		LEAR ENER	<u>GY</u>	Ultra	asonic (Mai	Calibration a nual Piping a	nd Examinat Ind Compone	ion Record ents		
4	Sitë/Unit: <u>Columt</u> Outage: <u>R16</u>	oia Generatir	ng Static	<u>>n</u>			Data Report Nun Data Sheet Num Linearity Sheet:	nber: <u>R16-068</u> ber: <u>UT-114</u> <u>L-12</u>		
	Calibration Data	for Block.	-7		· · · · ·	Procedure:	PDI-UT-2/Site Sp	ecific		
}	SS	24" 1.140"	Calibra	tion Cal]	Time	Ver / Rev: <u>C/</u>		<u>V/A</u>		
	Material	Size Thick	Initia	al: <u>2122</u>	2	Search Unit Data				
	Couplant: 225046	Couplant batch	Cal Ch Cal Ch	ièc. <u>0042</u> ieck: <u>hư</u> ạ	<u>}</u>	<u>RTD</u> Manufacturer:	<u>98-172</u> Serial Number	<u>2(10x18) mm/Rect</u> Size/Shape:		
	Thermometer S/N	Cal Temp.	Final C	Cal: <u>014</u>		<u>0.45 in.</u> Incident Point:	<u>60°</u> Nominal Angl	<u>60°</u> le: Measured Angle:		
		DAC Constr	uction			2.0 MHz	TRL 2-Aust	Long 2		
ĺ	Scan Direction	<u>Ax</u>				Frequency:	Style:	Mode: Elements:		
	Cal Reflector	ID Notch					Search Unit C	able		
	Signal Amplitude Signal Sweep:	<u>80%</u> 5.2 Div				Cable	174 <u>6'</u> Dyne: Length:	<u>0</u> Connectors:		
	Signal dB: Sweep 0-10 = <u>5.0 /</u>	<u>71.2 dB</u> in. Metal P	ath				Instrument Set	tings_		
-		alibration V	erificatio			<u>Stav</u> Ma	eley / Sonic 136P ufacturer/Model:	<u>136-766/</u> Serial Number:		
	Reflec	ctor 2" Rad	lius	N/A		<u>1.21 in.</u>	0.239in./µsec.	<u>1 4KHz</u>		
	Ampli	tude <u>80%</u>	6	N/A	•	Delay:	Velocity:	Filter: Rep Rate:		
	Gain	(dB) <u>43.4</u>	<u>t</u>	N/A		<u>5.0 in.</u>	<u>250 п</u> s	500 Ohms		
	Sweep	(SD) <u>4.0</u>		<u>N/A</u>		Range:	Pulser:	Damping:		
	Acceptable	Linearity perfor	ned: <u>5/</u>	5/2003		<u>Off</u> Reject:	<u>2.25 MHz</u> Frequency:	<u>Dual</u> Mode:		
	Exam Data for W	eld: <u>24RRC</u>	(2)B-8/4	<u>RRC(8)-4</u>	IS		·			
		<u>PIPE TO S</u>	<u>WL</u>			Exan	<u>n Comments / L</u>	imitations:		
	<u>OD</u> Exam Surface:	Configurati <u>78° F</u> Exam Te	on: mp. Ex	<u>225040</u> cam Thermo	<u>ŝ</u> ometer	Exams performed 20% noise level. ID geometry obse No exam performe	at reference sensit rved below recorda ed from downstrean	ivity to maintain 5% to ble levels. 1 side due to component		
	Axial Circ	UPST DNST	Scan dB	Recordabl	e Exam s Angle	No counterbore de	etected.			
	<u>Axial</u>	UPST	<u>71.2</u>	<u>NRI</u>	<u>60°</u>	Actual Cal Block '	T" is 1.410."			
					<u>л.</u>	Exam Start:	<u>0042</u> Exar	n End: <u>0051</u>		
	MJK M	ichael Kemp		<u>//</u>	UMA	U MASA	II 0.5	tala		
	Initials: Examiner	r;	Lev	vel:	GE Review	wed By:	Level: D	Date:		
	Initials: Examiner	<u>N/A</u> 2:	. <u>N</u> Lev	VA rel:	Utility Revi	ewed By:	<u>5/Z3/03</u> Date: 5/1/6:	5		
	Cal/Exam Da	ate: <u>5/21/200</u>	13		ANII Revie	wed By:	Date:	Page <u>3</u> of <u>4</u>		

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REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

2ISI-32-20





GE	NUCLEAR	ENERGY	EXAMIN	T	Report No.: R16-067		
Site and Unit:	Columbia	Generating	Station Compo	onent ID:	24RRC(2)B-8/	4RRC(4)-	4 <u>S</u>
Outage:	R16			P	IPE TO SWL		
System	RRC	ASM	1E Cat.: <u>B-J</u> ASM	IE Item <u>B9.31</u>	Aug Requireme	nts:	<u>N/A</u>
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
45° Shear	UT-111	N/A	PDI-UT-2/Site Specific	UT-7	Michael Kemp	1 11	5/21/200
60° Long	UT-112	N/A	PDI-UT-2/Site Specific	UT-7	Michael Kemp	11	5/21/2003
Examination Result During the manua search units. This examination Addenda with more	ls: Il ultrasonic exa is acceptable p difications as s	mination of the the requirem tated in 10CFR	above referenced weld, r ents of ASME Section XI 50.55.	no reportable indicat , 1989 Edition, no Ad	ions were recorded ddenda and the 19	l utilizing the 95 Edition, 1	45° and 60 996
50% Code covera	ge was obtaine	ed.					
50% Code covera Previous data was	ge was obtaine s reviewed prio	ed. r to this summa	Ŋ.				
50% Code covera Previous data was	ge was obtaine s reviewed prio	≿d. r to this summa	Ŋ.				
50% Code covera Previous data was	ge was obtaine s reviewed prio	≿d. r to this summa	Ŋ				
50% Code covera Previous data was Examination m	ge was obtaine s reviewed prio	ed. r to this summa mpared to data	гу. гер <i>ort</i> 1RRU-081	from R-1	outage with	No Chang	ge
50% Code covera Previous data was Examination n These examin	ge was obtaine s reviewed prio s reviewed prio esults were con nations were pe	ed. r to this summa mpared to data rformed und e r t	ΓΥ. report 1RRU-081 Work Order: 010449;	from R-1 4	outage with	No Chang Change	ge
50% Code covera Previous data was Examination n These examin This Summary a	ge was obtaine s reviewed prio esults were con ations were pe	ed. r to this summa mpared to data rformed under to g data sheets he	report 1RRU-081 Nork Order: 0104492 ave been reviewed and av	from R-1 25-01 ccepted by the follow	outage with	No Chang Change	
50% Code covera Previous data was Examination n These examin This Summary an MWM J L	ge was obtaine s reviewed prio esults were con nations were pe	ed. r to this summa mpared to data rformed under to g data sheets ha 11 5/2	ry. report 1RRU-081 Work Order: 010449: ave been reviewed and ad	from R-1 25-01 Cocepted by the follow	outage with $$ ving personnel: $5\sqrt{23/03}$	No Change	ge
50% Code covera Previous data was Examination n These examin This Summary an MMM J L Pregared By	ge was obtaine s reviewed prio esults were con ations were pe and the following	ed. T to this summa r to this summa mpared to data rformed under data sheets ha $\frac{11}{10} \qquad \frac{5}{2}$ evel: Dat $\frac{11}{10} \qquad \frac{5}{2}$	report 1RRU-081 Nork Order: 0104492 ave been reviewed and av 2/4 3 e: Utility Reviewed B	from R-1 25-01 Ccepted by the follow	outage with $$ ving personnel: $5 \boxed{23} \boxed{03}$ Date: (15) 116	No Chang Change	7e

	LEAR ENERG		Ultra	asonic Mai	: Calibration and Examination Record anual Piping and Components						
Site/Unit: <u>Columb</u> Outage: <u>R16</u>	nia Generatin	g Station			<u></u>	Data Report Nu Data Sheet Nur Linearity Sheet:	mber: <u>R16-067</u> nber: <u>UT-111</u> <u>L-12</u>				
Calibration Data for	or Block: <u>UT-</u>	Ζ			Procedure: P	DI-UT-2/Site Sp	pecific				
SS	24" 1.140"	Calibratio	n Call	Time	Ver / Rev: <u>C/1</u>	DRR:	<u>N/A</u>				
Material S	Size Thick	Initial Cal	: 2047	,		Search Unit	t Data				
<u>Ultragel II</u>	00325	Cal Chec	k: 0059		KDA	MARY R	0.50°/Pound				
Couplant: C	Couplant batch	Cal Chec	k: <u>N/A</u>		Manufacturer:	Serial Number	Size/Shape:				
Thermometer S/N	<u>ov r</u> Cal Temp.	Final Cal:	0146		0 4 in	45°	45°				
				·	Incident Point:	Nominal Ang	gle: Measured Angle				
Scan Direction	DAC Constru Ax	<u>ction</u> Ax			<u>1.5 MHz</u> Frequency:	<u>Comp-G</u> Style:	<u>Shear 1</u> Mode: Elements:				
Cal Reflector	ID Notch C	DD Notch				Search Unit (Cable				
Signal Amplitude	<u>80%</u>	<u>15%</u>									
Signal Sweep:	<u>5.1 Div</u>	10.0 Div			Cable T	vpe: Length	: Connectors:				
Signal dB:	29.8 dB	29.8 dB					· · · · · · · · · · · · · · · · · · ·				
Sweep 0-10 = <u>4.0 in</u>	n. <u>Metal Pa</u>	<u>th</u>			<u> 1</u>	nstrument Se	ttings				
<u>C</u>	alibration Ve	rification			<u>Stavel</u> Maut	ley / Sonic 136P facturer/Model:	<u>136-7661</u> Serial Number				
Field Simulat	tor Block S/N:	CAL-RH	<u>OM-069</u>		0.242 i=	0.4255 (40000	4 4KU -				
Reflec	tor <u>1" Radi</u>	<u>us 2" R</u>	adius		<u>0.342 m.</u> Delay:	Velocity:	Filter: Rep Rate:				
Amplit	ude <u>80%</u>	<u>6</u>	0%		4 0 in	234 05	500 Ohms				
Sween	(SD) 2.5		<u>z.u</u> 5.0		Range:	Pulser:	Damping:				
Acceptable	Linearity perform	ed: <u>5/5/2</u>	003		<u>Off</u> Reject:	2.25 MHz Frequency	<u>P/E</u> Mode:				
Exam Data for We	eld: <u>24RRC(</u> 2	2)B-8/4RF	RC(4)-4	S							
	PIPE TO SV	<u>1</u>			Exam	Comments / I	Limitations:				
	Configuration	n:			Exams performed to	o maintain 5% to	20% ID roll.				
<u>OD</u> Exam Surface:	<u>78° F</u> Exam Tem	o. Exan	<u>225046</u> n Thermo	meter	ID geometry observ	ed below records	able levels.				
		,			No exam performed configuration.	l from downstreal	m side due to component				
Axial	UPST S	Scan dB R	ecordable	e Exam	No counterbore det	ected.					
Axial	UNST	43.8	NRI	45°	Actual Cal Block "T	" is 1.410."					
Circ	UPST	43.8	NRI	<u>45°</u>							
					Exam Start:	<u>0059</u> Exa	ım End: <u>0112</u>				
MJE MI	chael Kemp	 		Amil	11 MATA	TT 03	1/22/03				
Initials: Examiner	:	Level:		GE Review	ved By:	Level:	Date:				
			l.	B	111.1.L	Stall	3				
	<u>N/A</u>	<u>N/A</u>	đ	Utilly Revi	ewed By:	Date:					
Initials: Examiner	2:	Level:		1	m F. it.	57/11	102				
Cal/Exam Da	te: <u>5/21/2003</u>	!		ANII Revie	wed By:	Date:	Page <u>2</u> of <u>4</u>				

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GE NUC	LEAR ENER	<u>ər</u>	Ultra	isonic Ma	Calibration a nual Piping a	nd Examina Ind Compor	ation R nents	lecord
Site/Unit: <u>Colum</u> Outage: <u>R16</u>	<u>bia Generatin</u>	g Statio	2			Data Report No Data Sheet Nu Linearity Sheet	umber: <u>R</u> mber: <u>U</u> t: <u>L</u>	<u>16-067</u> T-112 -12
Calibration Data	for Block: UT-	7			Procedure:	PDI-UT-2/Site S	pecific	
SS	24" 1 140"	Calibrati	n Cal Ti	me	Ver / Rev: 🗹	DRR:	<u>N/A</u>	
Material	Size Thick	Calibratin						
<u>Ultragel II</u>	00325		ak 0114					
Couplant:	Couplant batch	Cal Che	CR. 0114		<u>RTD</u>	<u>98-172</u>	2	(10x18) mm/Rect
<u>225046</u>	<u>80° F</u>		CK: <u>N/A</u>		manutacturer.	Senai Numbe	f	Size/Shape.
Thermometer S/N	Cal Temp.	Final Ca	1: <u>0147</u>		<u>0.45 in.</u> Incident Point:	<u>60°</u> Nominal An	ale:	<u>60°</u> Measured Angle
	DAC Constru	ction			<u>2.0 MHz</u>	TRL 2-Aust	<u>Long</u>	<u>2</u>
Scan Direction	<u>Ax</u>				Frequency:	Style:	Mode:	Elements:
Cal Reflector	ID Notch					Search Unit	<u>Cable</u>	
Signal Amplitude	<u>80%</u>				RG-1	174 6'		0
Signal Sweep:	<u>5.2 Div</u>				Cable	Type: Length	n: Co	onnectors:
Signal dB:	<u>71.2 dB</u>							
Sweep 0-10 = <u>5.0</u>	in. <u>Metal Pa</u>	<u>th</u>		<u></u>	-	Instrument Se	ettings	
Eield Simula	Calibration Ve				<u>Stave</u> Mai	eley / Sonic 136P Jacturer/Model:	S	<u>136-766/</u> Serial Number:
Poffee	ator Didok Grin.				1.21 in.	0.239in./usec.	1	4KHz
Amoli			N/A		Delay:	Velocity:	Filter:	Rep Rate:
Gain	(dB) 43.4				5.0 in.	250 ns	5	00 Ohms
Sweep	(SD) 4.0		<u>v/A</u>		Range:	Pulser:	<u>.</u>	Damping:
Acceptable	Linearity perform	ed: <u>5/5/</u> 2	2003		<u>Off</u> Deiesti	<u>2.25 MHz</u>	<u>.</u>	<u>Dual</u>
Exam Data for W	eld: 24RRC ()	2)B-8/4R	RC(4)-45		Rejeci.	Frequency	y.	Mode:
		<u>-1</u> /1	<u></u>	E	Exam	Comments /	Limitati	ons:
	Configuratio	n:			Exams performed	at reference sens	itivity to n	aintain 5% to
OD	78° F		225046		20% noise level.			
Exam Surface:	Exam Terr	p. Exa	m Thermon	neter	ID geometry obser	ved below record	able level	S.
					No exam performe	d from downstrea	m side du	e to component
Axial	UPST	Scan dB R	ecordable	Exam	_ cormguration.			
Circ	DNST	1	ndications	Angle	No counterbore de	tected.		
Axial	UPST	<u>71.2</u>	<u>NRI</u>	<u>60°</u>	Actual Cal Block "	T" is 1.410."		
				.1	Exam Start:	<u>0114</u> Exa	am End:	<u>0125</u>
int: M	ichael Komo			Mil	A MAXA	TT IS	ton lan	
	Surger Light	<u>u</u>		CE Pario	ved Bu:		Data	
minais. Examinei	<u>N/A</u>	Level			Muld	<u>5/23/03</u>	3	
Initials: Examiner	2:	Level	4	tility Revi	ewed By:	Date:		
				1.11	3. Int	5 5124	67	
Cal/Exam Da	ate: <u>5/21/2003</u>		A	NII Revie	wed By:	Date:	F	Page <u>3</u> of <u>4</u>



REQUEST 2ISI-32 ATTACHMENTS A THROUGH G Attachment

Attachment G

2ISI-32-21

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Weld Identification 6MS(1)B-2

ISI Diagram MS-202-4

Construction Drawing MS-529-1.3 (CVI 215-00, 14362) sheet 2

NDE Data Report 2MSU-005 NDE Data Report 2MSM-002





ULTRASON EXAMINATION DATA SHEET



2-msu-005 REPORT NO .:

PROJEC	T: W	NP-2					s	YSTEM	:	М	S			ISI DR	AWING	B NO.:	M	<u>5</u> 2	02-4	·	
WELD/P	PART DESCRIPT	TION:	C	AP	TO	PIF	۶E	CI	RW	EL	S			WELD	PART	NO.:	6 M	su)	B-2		
MATERIAL TYPE: CS CAL STANDARD NO.: UT-28								THICKNESS. 432													
NO. OF SCAN DIRECTIONS: 4 LIMITED EXAM:								ACCE	PTANC	E CRIT	ERIA:	PER	7CI 6	-13 R	EV7						
INSTRU	CTION NO.:) CI	6-	13	et de	u Ş	R	EVISIO	N: 7			ANGLE: 4	S° s	ANGL	E:			ANGL	E:	,	
EXAMIN	IER: DONN		. 4	EBE	RT	Put	L	EVEL:	Π			DATE: 4-2	.5-95	DATE	関連のう			DATE	:	/	/
EXAMIN	IER: JEN	۰ ۵'	NEL	LL	÷.	1.20	- l	EVEL:	П			TIME START:	0947	TIME	START	: N/	A	TIME	START: /	∿∕A	
WE			THIC	KNESS	MEAS		NTS					TIME STOP:	1005	TIME	STOP			TIME	STOP: /	/	
SU	IRFACE ONE							>	SURFA	CE TV	vo	PART TEMP:	77.4 °F	PART	TEMP			F PART	TEMP:		٩°
	BM		TER	HA7	WE	105	HA	Z		R	BM	CAL SHEET NO.	· 2-003	CALS	HEET	10::	के से	CALS	HEET NO	.:	
0°				لم /		Aliston - shi						CHART NO.	NIA	CHAR	T NO.:	ing ing Selection	n than An Anna Anna Anna Anna Anna Anna Anna	CHAR	T NO.:	_	
90°			\rightarrow	, s	98. 14. 8. 4 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Т ^а .	1.005					NOTES: SCAN A	ACROSS WELD AGE (4 DEREC	TO A	SURE) DUE	COU E	RAGE BRAT.	ABLE TON COLL	TO OBTA AR ANDS	IN B	4359 57.
180°					4. g. j.							NO EXAM PE NO EXAM PE	FRFORMED F	rom L	-14.5	8 / 1 to 17	HON MOFD	5" AND PEPESI 7.5201	21"to,S DE OFW	ELD	F51V2
270°						'.						ALL L MEA	SURMENTS .								
NOR		R	щ	_ N		-	Ľ Ľ		100 TO	50 TO	20 TO	SEARCH		ТНА	OUGH	WALL	DATA		B. SC	EV/ UAT	ION
CAT	A - B OR PART NO.	EAM	CAN	EAN	ATH	CLEN	MPAE	N A	100	50	20	MAXIM	UM AMP	MAX	IMUM	MIN	MUM	8	SP CC	EPT	ECT
N N	A – B	8 A	s JS	DIR	. Ж. С	i û	DA	3	L	ENGT	H 3	L.	W	8 P	a D 営	SP	D		$\overline{\Delta}$	A C	RE
NIA	0-360	45	1+2	AB CD			NO	R	ECO	zpA	BLE	INDIC	ATIONS			а С., .				~	
											·	書語語言言語	的關係的認識								
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						· ·		· · ·			1. P. P.			海影漫				- Sector			
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				5	· .			1.1.1			1 - 1 - 1 - 1 1 - 1		200 M House								
REVIEW	VED BY LEVEL	HI:	b	2	110	U.	1	DATE	4-2	18-	95	REVIEWED BY:	Quit	17	Ver	-1	n IT	DAT	E: 4-2	2 8-93	
968-162	93	- C	<u> </u>		<u>parta da</u>				1		•	and the second sec				a gana a sa Ana a sa sa	PA	GE 1 OF	2		

WASHINGTON PUBLI

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MAGNETIC PARTICLE EXAMINATION DATA SHEET

REPORT NO .: 2-MSM-002

PROJECT: WNP .2	SYSTEM: MS	ISI DRAWING NO .: MS - ZOZ-4						
WELD/PART DESCRIPTION: CIIZC WELDS		WELD/PART NO .: SEE Below						
MATERIAL TYPE: CS	THICKNESS: 서(A	DATE: 4/24/95						
EXAMINER: N. LABELLA MB		CTION: QCT4-3 REVISION:						
EXAMINER: (. CARLSON OPC	LEVEL: IT ACCEPT	ANCE CRITERIA: PER Q LE 4-3 REU. 6						
CONTROL TEST METER S/N: N/A	LIGHT METER S/N:	LIFT BLOCK S/N: イモンフノーン/						
EQUIPMENT MANUFACTURER: PARKER RESEARCH MODEL NO .: B-300 SERIAL NO .: 2014								
EXAM MEDIUM: WET DRY CURR	ENT TYPE: AC DC PAF	TICLE TYPE: CHRCLE 43 BATCH NO.: 8017						

MAGNETIZING METHOD

χίγοκε	PRODS	DIRECT CONTACT		NOTES: * NO EXAM AT 0°
POLE SPACING 6" MAX	PROD SPACING		L/D RATION	FOR I", AT 7" FOR I", AND AT 15" FOR I" DUE TO
PERMANENT MAGNET			COIL TURNSA	Support RING.
POLE SPACING			AMPERAGE	85% Coverage

INDICATION NUMBER	PART OR	LOCATION INTERVAL	INDICATION	INDICATION	EXAM	INDICATIO	ON POSITION	EVALUATION		
	WELD NUMBER	AB	SHAPE	SIZE	SURFACE	L	w	ACCEPT	REJECT	
NIA	6MS(1) B-1	6-360	No RECORD	ABLE INDIATI	ons			/		
MA	6MS(1)B-2	0.360 *	No RECORDA.	BLE INDICATIO	ی بر			/		
	·									
	D = 6,	625								
	(= <i>î</i> r	D = 1,842 ×6.6	25= 20.8							
	3″ n	ot examined								
	. Dy	- 20=8 -	3 85%	N						
	o cove	1Age 20.8	- X100	A						
						· · ·				
REVIEWED		2 Illelch	DATE: 4-28-	95 REVIEWED BY:	Con	170	TO BN	TT DATE:	4/28/95	
968-16314			· · · · · · · · · · · · · · · · · · ·				PAGE 1 of	1 .		