

Preservice examination data has been organized by zones under individual zone tabs.

Within each zone, the surface examination data is first, organized by date of examination. Volumetric examination data is last, organized by date of examination.

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PDR ADDOCK 05000382
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The
Virginia Corp.
of Richmond

TITLE

Preservice Examination Data



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne* **AMTE** *3/1/82*

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone Iso/Drawing No. 1 9 ZONE 9 R-2, F.C.3
Procedure ISI. 23 R.O	Exam Surface C.D.	Examiner/Level <i>Nay Hongencke II</i>	VCR Supervisor <i>Daniel Dena</i>
Component/Piping System COLD LEG S.G. #1 TO R.C.P. 1B		Pipe Size 36"	Weld Type BUTT
		Cal. Block # UT-6	Couplant: SONOTRACE Type 40 Batch No. 8117
Date 3-8-82			

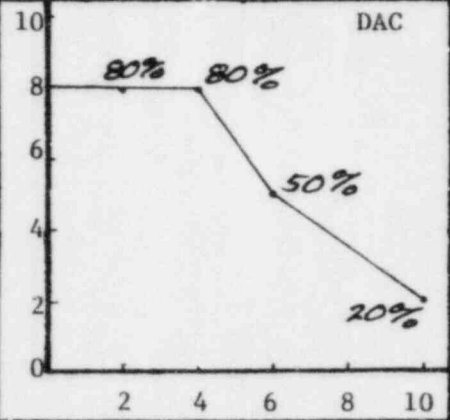
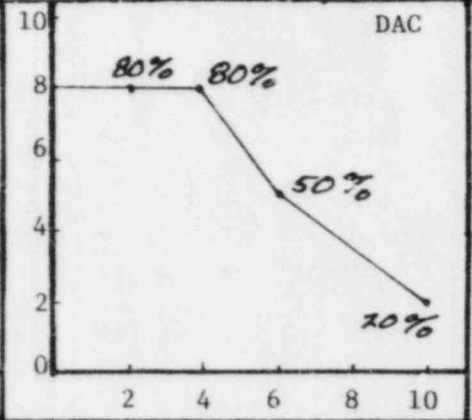
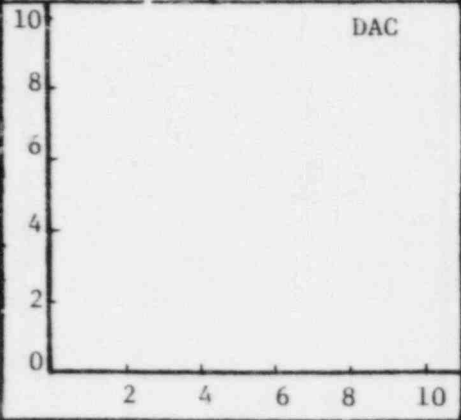
Continuation Sheet Attached
 Yes No

Transducer	0°	45°	60°
S/N	NA	NA	L19801
Size			1" DIA
Frequency			2.25 MHZ.
Beam Angle			62°

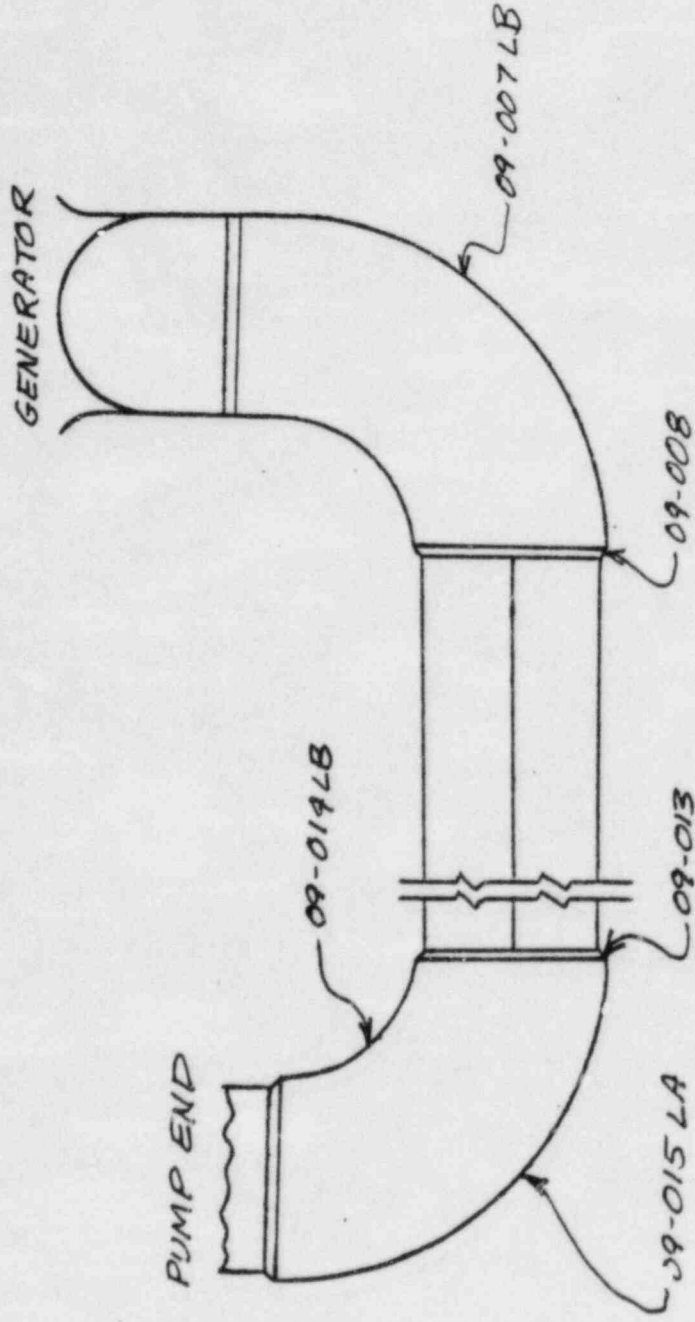
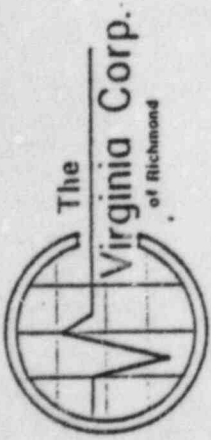
Instrument			
Mf. T.	SONIC	Model	MARK I
S/N	*07304E	RepRate	1K
Reject	OFF	Filter	ALL OFF
Damp	MIN.	Coax	12'
Freq.	2. MHZ.	Video	NORM

Field Changes:
Yes No
If Yes, Number

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1 5/8"	1 3/8" 1 1/2"	80%	2.0	1 5/8"	1 3/8" 1 1/2"	NA	NA	NA	NA	1:30	VER. 4:20
1/2 T			80%	4.0	2 5/8"	2 3/8" 3 1/8"	80%	4.0	3 5/8"	2 3/8" 3 1/8"						
3/4 T			50%	6.0	4 3/8"	4 1/8" 5 1/2"	50%	6.0	4 3/8"	4 1/8" 5 1/2"						
5/4 T			20%	10.0	NA	NA NA	20%	10.0	NA	NA NA						
			64 db													



Additional Comments/Sketch
* 03704E





The
Virginia Corp.
 of Richmond

Date 3-8-82

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To: _____

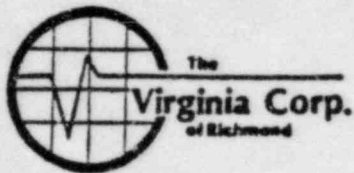
Subject INSPECTION LIMITATIONS
ISO 9 R-2 F.C. 3

WELD NO. 09-008 HAD INTERMITENT LOSS OF CONTACT WITH
THE SURFACE AS A RESULT OF WELD
GEOMETRY SHOWN ON PAGE 3 OF THIS REPORT.
SCAN 2 LOSS OF APPROX. 60%
SCAN 5 LOSS OF APPROX. 10%
SCANS 7 & 8 LOSS OF APPROX. 10%.

WELD NO. 09-013 HAD INTERMITENT LOSS OF CONTACT WITH
THE SURFACE AS A RESULT OF WELD
GEOMETRY SHOWN ON PAGE 3 OF THIS REPORT.
SCAN 2 LOSS OF APPROX. 10%
SCAN 5 LOSS OF APPROX. 60%
SCANS 7 & 8 LOSS OF APPROX. 10%.

WELD NO. 09-014 & B HAD INTERMITENT LOSS OF CONTACT WITH
THE SURFACE AS A RESULT OF ELBOW
INTRADOSE
SCANS 7 & 8 LOSS OF APPROX. 15%.

Signed Gary Longenecker



Don Payne ANIZ 3/11/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/9
Component/Piping System Cold leg - St. Gen. #1 to pump 1B	Examiner/Level David J. Finken/II	Date 3-6-82	
Procedure ISI-2.5 Rev. 0	Iso/Drawing No. Zone 9 Rev. 2 EC. 2	VCR Supervisor Daniel Jensen	Continuation Sheet Attached [] Yes [X] No

Equipment

Instrument	Transducer		Calibration
Mfgr. Sonic	Mfgr. KB-Aerotech	Size .5"	Cal. Block 44-6
Model Mark			Cal. Block —
S/N 01610E	Freq. 2.25 MHz		Range Cal. 5"
Reject OFF			Calibration Checks
Damp. Min	Serial No. J02172		
Freq. 2.0 MHz	Coax. Cable 12' PVC to PVC		Init. 10:45
Rep. Rate 1K			Final 11:40
Filter OFF	Gain 25 dB		
Video NORM			
Couplant Sonotrace 40 R. # 8117			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan
09-008	12	3.29"	2.87"	3.5"	09-007LR	7'	3.43"	3.43"	3.43"
09-008	2	3.15"	2.87"	3.5"	09-007LR	8'	3.5"	3.5"	3.5"
09-008	4	3.22"	2.87"	3.5"					
09-008	6	3.22"	2.8"	3.43"					
09-008	8	3.29"	2.87"	3.5"					
09-008	10	2.94"	2.87"	3.5"					
09-007LR	1'	3.5"	2.43"	3.36"					
09-007LR	2'	3.5"	3.43"	3.26"					
09-007LR	3'	3.5"	3.43"	3.36"					
09-007LR	4'	3.43"	3.43"	3.43"					
09-007LR	5'	3.5"	3.43"	3.43"					
09-007LR	6'	3.43"	3.43"	3.43"					

Sketch/Identification * Note: Measurements on Long. Seams taken beginning at Centerline mark.
 Field Change 3 Zone 9 Rev. 2 has been incorporated.



Don Payne LANI 3/11/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/9
Component/Piping System Steam Generator #1 to B.C. Pump 1B		Examiner/Level David L. Tolson III	Date March 9, 1982
Procedure ISI 2.5 Rev. 0	Iso/Drawing No. Zone 9 Rev. 2 FC. 3	VCR Supervisor Don Payne	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. Sonic	Mfgr. KB-Aerotech	Size 50"	Cal. Block UT-6	
Model Mark I			Cal. Block N/A	
S/N 01610E	Freq. 2.25 MHz	Range Cal. 5"		
Reject OFF	Serial No. J02172		Calibration Checks	
Damp. Min.	Coax. Cable 12' BNC-BNC		In 7:35	
Freq. 2.0	Gain 35dB		Out 9:03	
Rep. Rate 1K				
Filter OFF				
Video Norm.				
Couplant Sonotrace 40 #8117				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
09-013	12	3.40"	3.40"	2.88"	09-014LB	42"	3.40"	3.40"	3.40"
09-013	2	3.40"	3.46"	2.82"	09-015LA	1"	3.52"	3.40"	3.40"
09-013	4	3.40"	3.52"	2.88"	09-015LA	2"	3.46"	3.46"	3.34"
09-013	6	3.16"	3.58"	2.88"	09-015LA	3"	3.58"	3.40"	3.40"
09-013	8	3.40"	3.58"	2.88"	09-015LA	4"	3.46"	3.40"	3.40"
09-013	10	3.34"	3.46"	2.82"	09-015LA	5"	3.46"	3.40"	3.46"
09-014LB	6"	3.40"	3.46"	3.46"	09-015LA	6"	3.52"	3.40"	3.40"
09-014LB	12"	3.34"	3.46"	3.40"	09-015LA	7"	3.46"	3.40"	3.40"
09-014LB	18"	3.40"	3.16"	3.40"	09-015LA	8"	3.52"	3.46"	3.46"
09-014LB	24"	3.40"	3.46"	3.40"					
09-014LB	30"	3.40"	3.46"	3.40"					
09-014LB	36"	3.34"	3.46"	3.46"					

Sketch/Identification Note: Measurements on welds 09-014LB + 09-015LA taken beginning at weld centerline.



Ultrasonic Examination Report *Don Payne ANII 3/11/82*

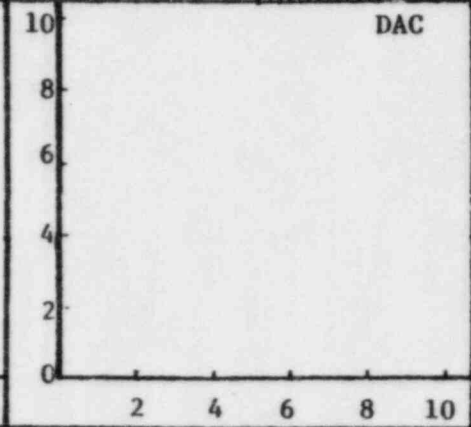
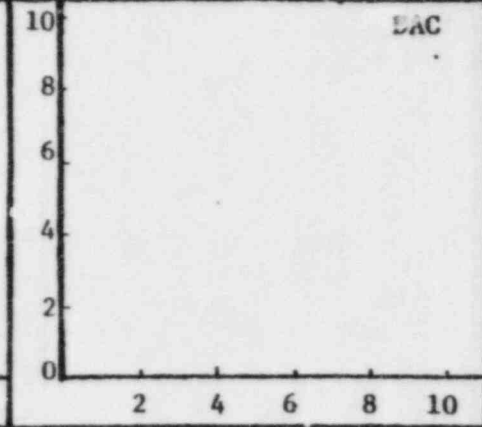
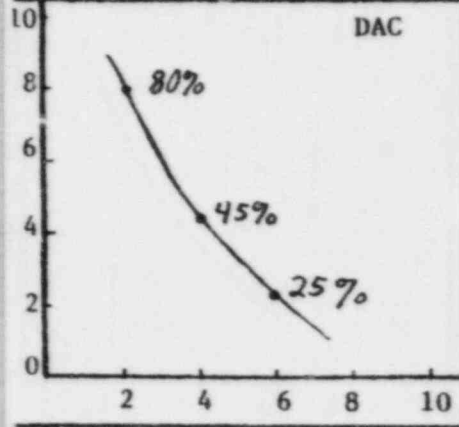
Customer <i>LP#1</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/9</i>	Iso/Drawing No. <i>Zone 9 Rev. 2 FC 3 dff</i>
Procedure <i>ISI - 2.3 Rev. 0</i>	Exam Surface <i>OD</i>	Examiner/Level <i>Stanislav Zelenka</i>		VCR Supervisor <i>Don Payne</i>
Component/Piping System <i>St. Generator to R.C. Pump B</i>		Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Date <i>3-10-82</i>
Cal. Block <i>UT-6</i>			Couplant: Type <i>Sonotrace</i> Batch No. <i>8117</i>	

Continuation Sheet Attached
 Yes No

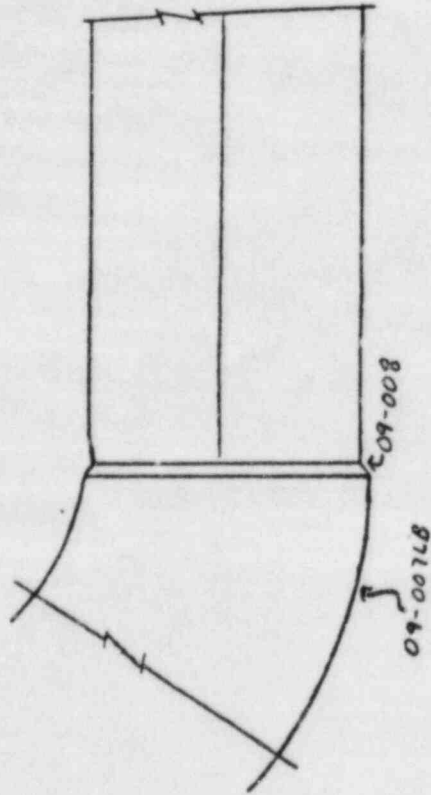
Field Changes:
 Yes No
 If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	<i>Joal72</i>	<i>N/A</i>	<i>N/A</i>	Mfr. <i>Sonic</i>	Model <i>05304E</i>	RepRate <i>115</i>	Mark I <i>off</i>
	<i>5"</i>	<i>?</i>	<i>?</i>	S/N <i>off</i>	Filter <i>off</i>	12' Bus to Rec	
	<i>2.25MHz</i>	<i>?</i>	<i>?</i>	Damp <i>Min.</i>	Coax <i>2.0MHz</i>	Video <i>Norm</i>	
	<i>0°</i>			Freq.			

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4T</i>	<i>80%</i>	<i>2.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>1:10</i>	<i>4:08</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>1/2T</i>	<i>45%</i>	<i>4.0</i>															
<i>3/4T</i>	<i>25%</i>	<i>6.0</i>															
<i>1T</i>	<i>N/A</i>	<i>8.3</i>															
Ref. dB	<i>31DR</i>																



Additional Comments/Sketch
Field Change 3 Zone 9 Rev. 2 has been incorporated.



Unable to maintain back reflection due to unparallel surfaces on weld #09-008.



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *Don Payne ANII 3/1/82*

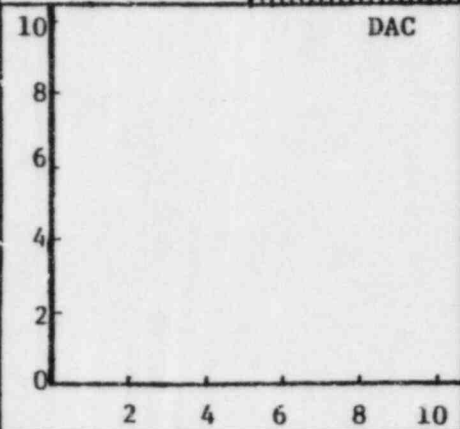
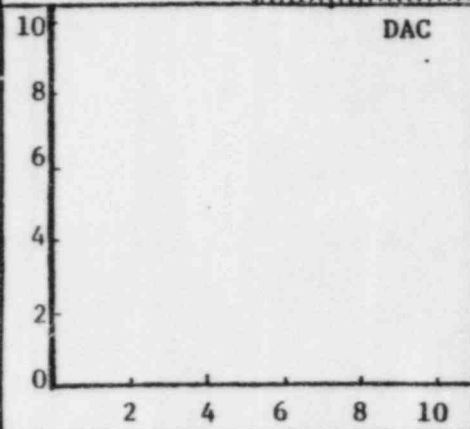
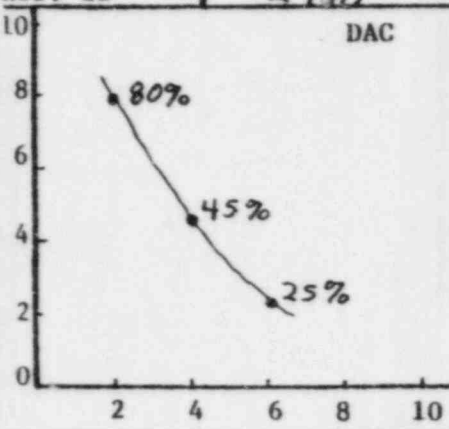
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/9	Iso/Drawing No. Zone 9 Rev. 2 FC 2 dy 3
Procedure ISI-2.7 Rev. 0	Exam Surface OD.	Examiner/Level Dwight Johnson II	VCR Supervisor Don Payne	Date 3-8-82
Component/Piping System Colleg-Steam Generator #1 to pump/R.	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Type Sonotrace 40 Batch No. 8117

Continuation Sheet Attached
 Yes No

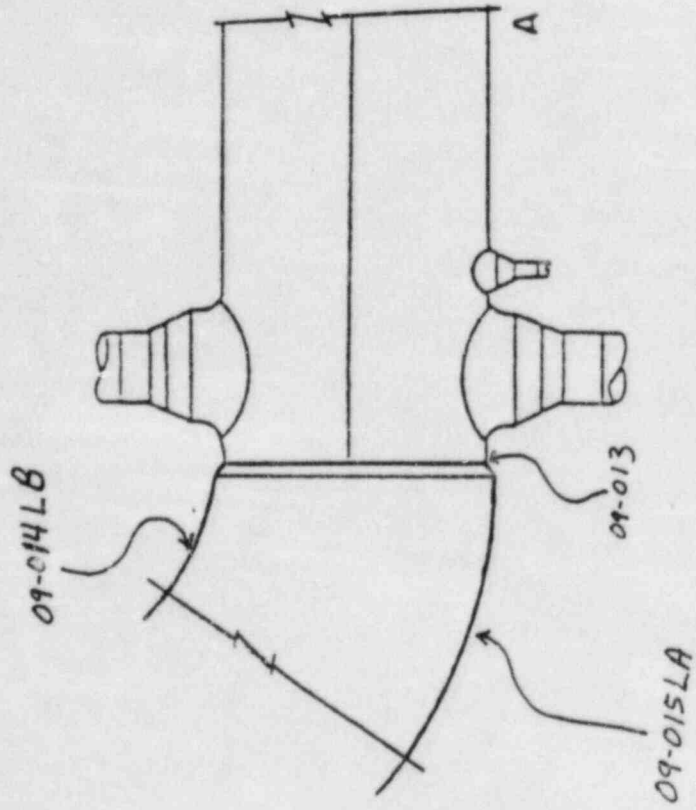
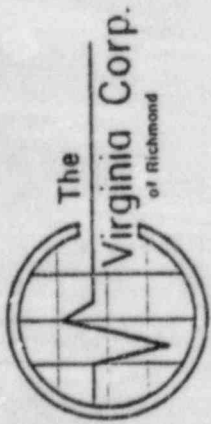
Field Changes:
Yes No
If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	J02172	N/A	N/A	Mfr.	Sonic	Model	Mark I
	50"			S/N	01610E	RepRate	1K
	2.25MHz			Reject	off	Filter	off
0°			Damp	Min	Coax	6' RNC to RNC	
			Freq.	2.0MHz	Video	Norm	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
Y4T	80%	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1:20	3:05	N/A	N/A	N/A	N/A
Y2T	45%	4.0														
Y4T	25%	6.0														
LT	N/A	8.3														
Ref. dB	29dB															



Additional Comments/Sketch
Field Change 3 Zone to 39 Rev. 2 has been incorp.



Unable to maintain back reflection due to unparallel surfaces on 09-013.

Ultrasonic Examination Report



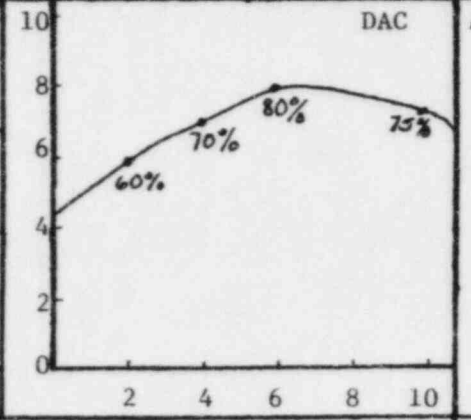
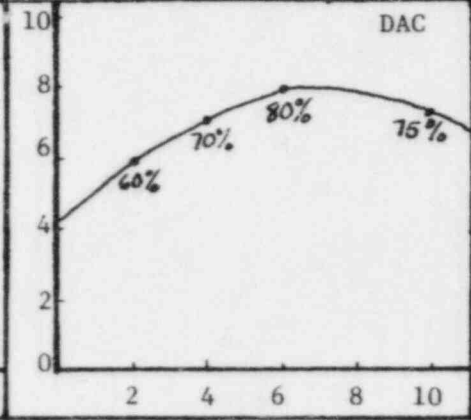
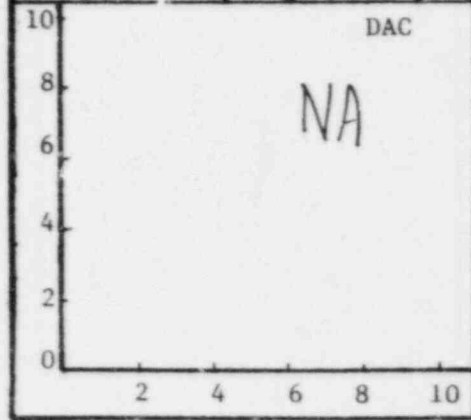
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 18 9	Iso/Drawing No. Zone 9 Rev. 2 F.C.3
Procedure 151-2.3 Rev. 0	Exam Surface O.D.	Examiner Level BURUNGAME/II	VCR Supervisor Kevin White	Date 3-9-82
Component/Piping System Reactor Coolant		Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6
		Couplant: Sonotrace		Batch No. 8117

Continuation Sheet Attached
 Yes No

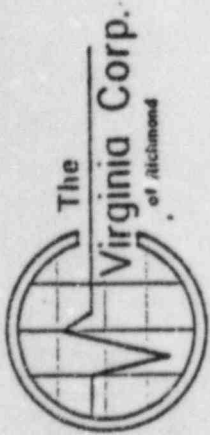
Field Changes:
 Yes No
 If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	L19134	NA	Mfr.	Sonic	Model	FTS MARK I
		1.0"		S/N	780836	RepRate	1000
		2.25 MHz		Reject	off	Filter	off
	↓	15°	↓	Damp	min	Coax	12'

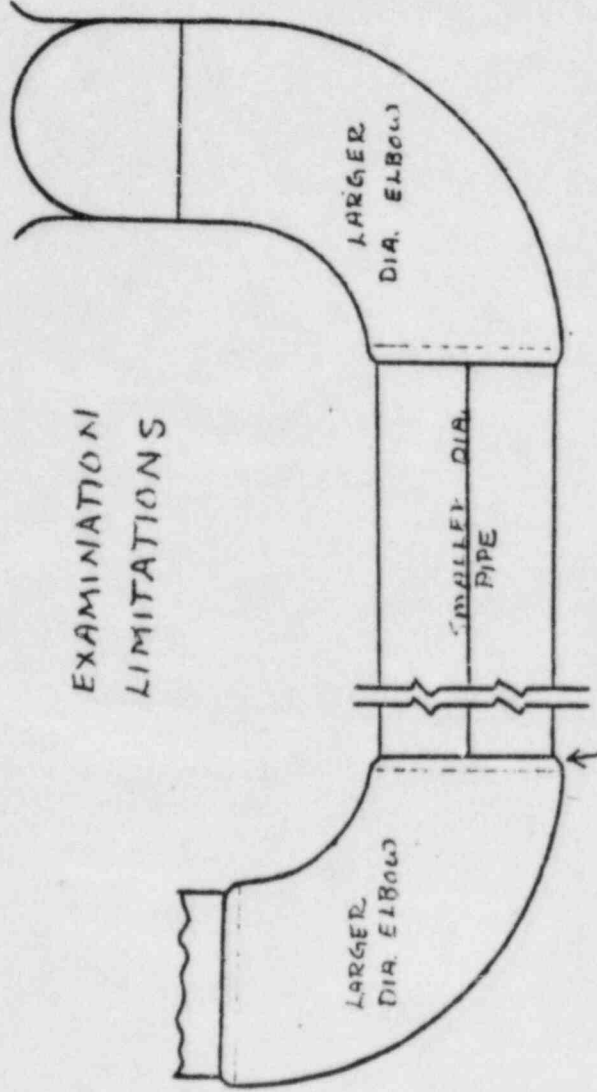
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	60%	2	2 1/32	3 1/8 1 3/16	60%	2	2 1/32	3 1/8 1 3/16	NA	NA	12:45	16:30	NA	NA
1/2 T			70%	4	1 9/16	1 3/8 2.0	70%	4	1 9/16	1 3/8 2.0						
3/4 T			80%	6	2 5/8	2 3/16 2 1/2	80%	6	2 5/8	2 3/16 2 1/2						
5/4 T			75%	10			75%	10								
Ref. dB	↓	↓	56 db				56 db				↓	↓	↓	↓	↓	↓



Additional Comments/Sketch

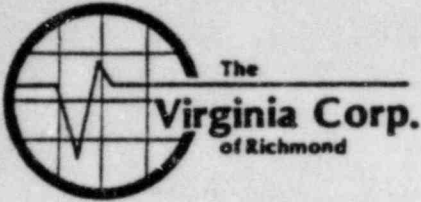


EXAMINATION
LIMITATIONS



WELD-07-013
~ 21° TAPER
~ 2" LONG
360° CIRCUM.

WELD-09-008
~ 16° TAPER
~ 3 1/4" LONG
360° CIRCUM.



Date 3-9-82

Page 4 of 7

To: _____

Subject SCAN LIMITATIONS

150 9 - REV. 2 FC 1

WELD NO. 09-008; SCANS 2 5 7 3/8 WERE RESTRICTED
BY A TAPER ON THE WELD BETWEEN
THE PIPE AND ELBOW. THE LENGTH
OF TAPER WAS ABOUT 3/4" WITH
APPROX. A 16° SLOPE. THE NON-
CONTACT AREA WAS ABOUT 2 1/8"
LONG.

SEE SKETCH ON PAGE 5

WELD NO. 09-013 SCANS 2 5 7 3/8 WERE RESTRICTED
BY A TAPER ON THE WELD BETWEEN
THE PIPE AND ELBOW. THE LENGTH
OF TAPER WAS ABOUT 2" WITH
APPROX. A 21° SLOPE. THE NON-CONTACT
AREA WAS ABOUT 2 1/8" LONG

SEE SKETCHS ON PAGES 6 3/7

WELD METAL COVERAGE

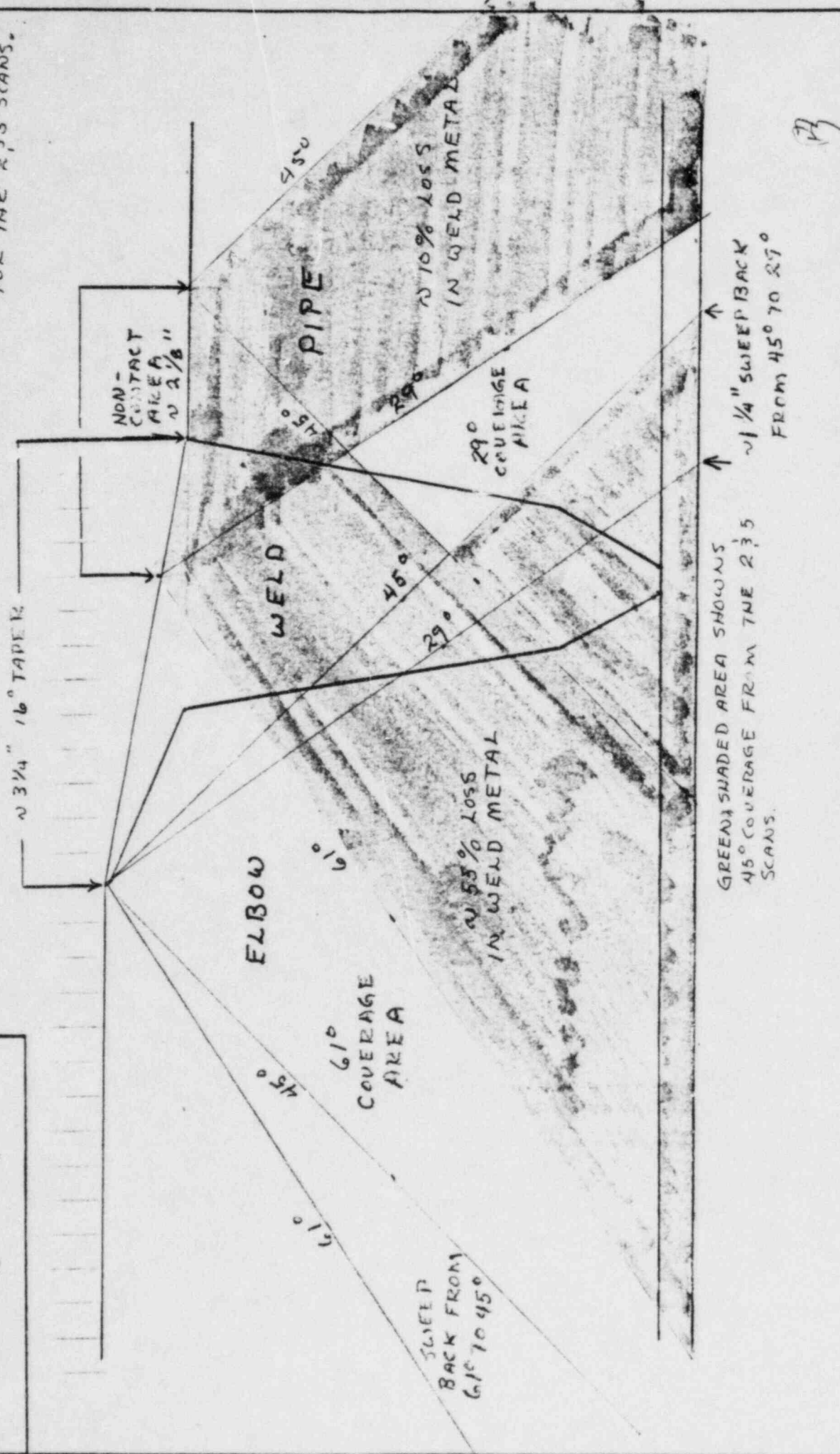
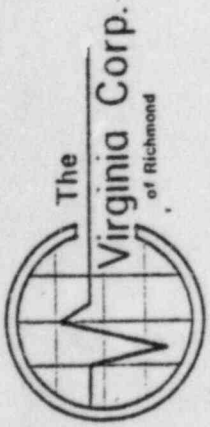
WELD NO. 09-008 APPROX. LOSS = 10% OF SCANS 5, 7 3/8
APPROX. LOSS = 55% OF SCAN 2

WELD NO. 09-013 APPROX. LOSS 10% OF SCAN 2
APPROX. LOSS 20% OF SCANS 7 3/8
APPROX. LOSS 60% OF SCAN 5

Signed _____

WELD NO. 09-008

RED SHADED AREAS INDICATE AREAS NOT COVERED BY THE EXAMINATION, FOR THE 2 3/5 SCANS.



NON-CONTACT AREA ~ 2 1/8"

ELBOW

WELD

PIPE

61° COVERAGE AREA

29° COVERAGE AREA

~ 53% LOSS IN WELD METAL

SWEEP BACK FROM 61° TO 45°

~ 10% LOSS IN WELD METAL

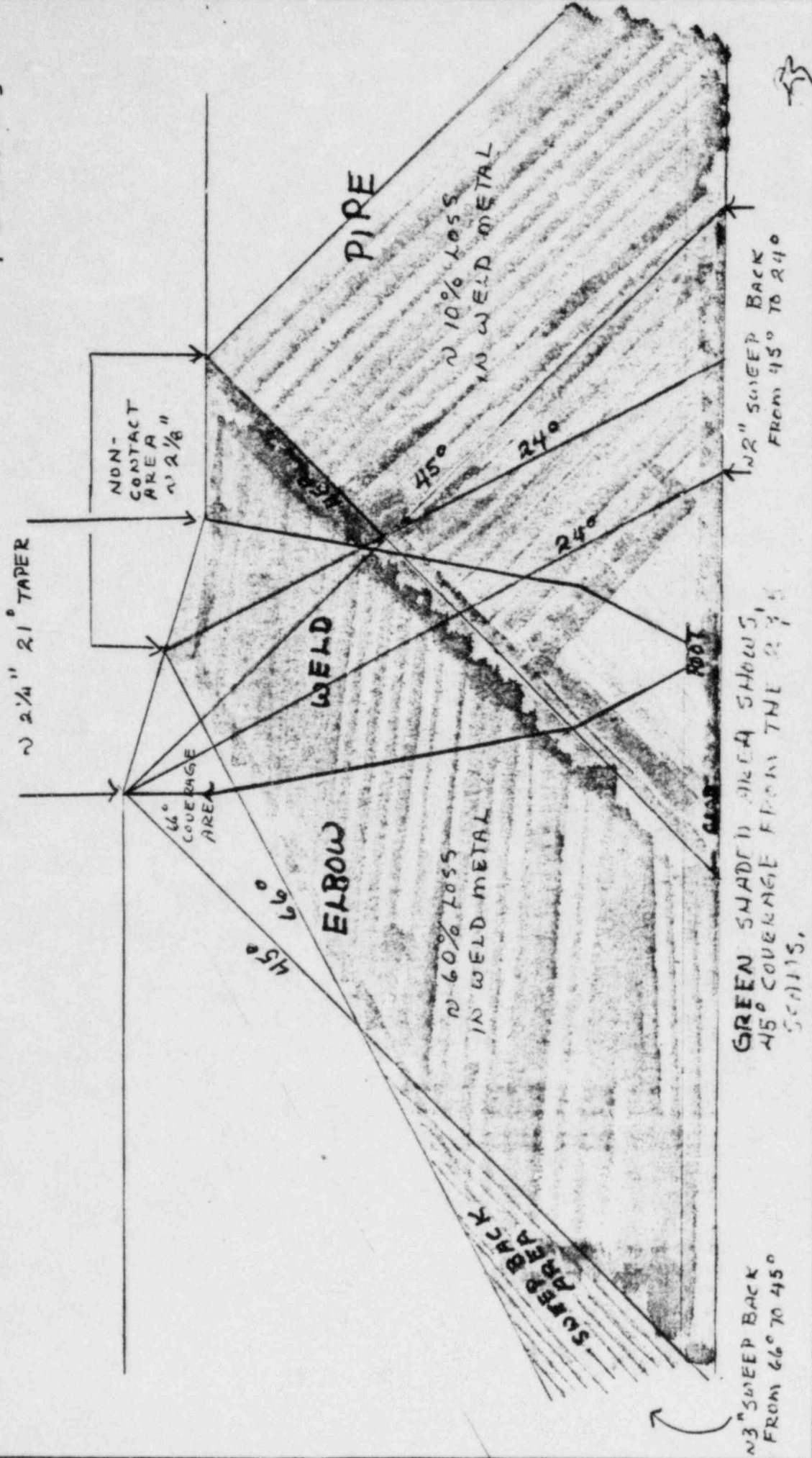
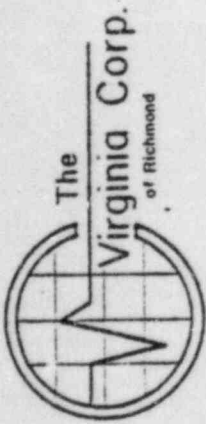
GREEN SHADED AREA SHOWS 45° COVERAGE FROM THE 2 3/5 SCANS.

~ 1/4" SWEEPBACK FROM 45° TO 29°

13

WELD NO. 09-013

RED SHADED AREAS INDICATE AREAS NOT COVERED BY THE EXAMINATION, FOR 2 & 5 SCANS



~ 2 1/4" 21° TAPER

NON-CONTACT AREA ~ 2 1/8"

~ 10% LOSS IN WELD METAL

~ 60% LOSS IN WELD METAL

~ 2" SWEEP BACK FROM 45° TO 24°

~ 3" SWEEP BACK FROM 66° TO 45°

GREEN SHADED AREA SHOWS 45° COVERAGE FROM THE 2 & 5 SCANS.

5

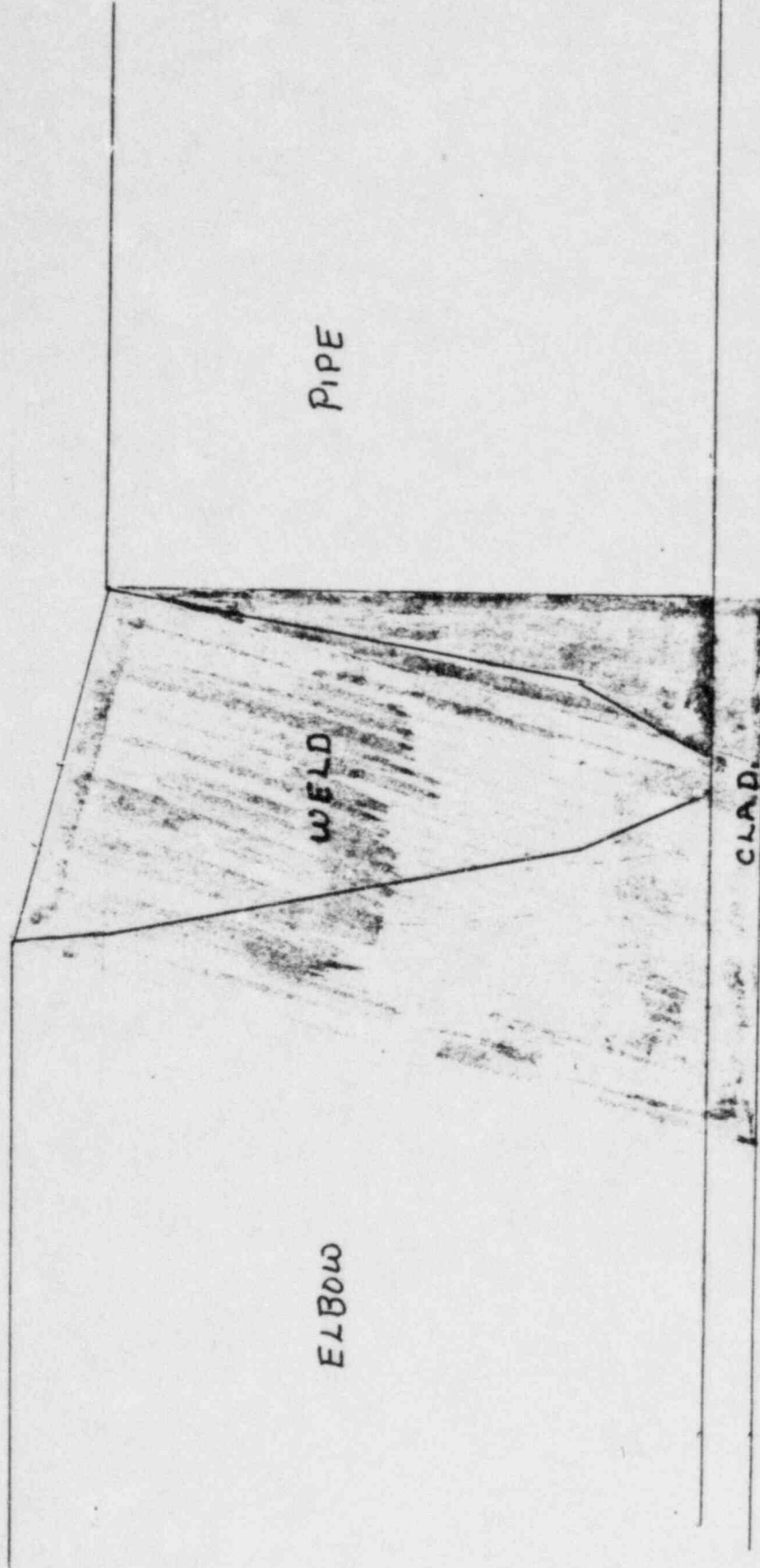
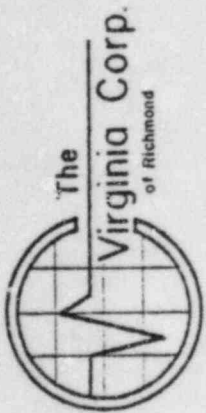
ULTRASONIC SUPPLEMENTAL DATA SHEET

PAGE 7 OF 7

WELD NO 09-013

THE GREEN AREA INDICATES THE APPROX. WELD AREA COVERAGE FROM THE 7 & 8 SCANS.

THE RED AREA INDICATES THE APPROX. WELD AREA NOT COVERED WITH SCANS 7 & 8.



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The
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Ultrasonic Examination Report *Don Payne ANII 3/11/82*

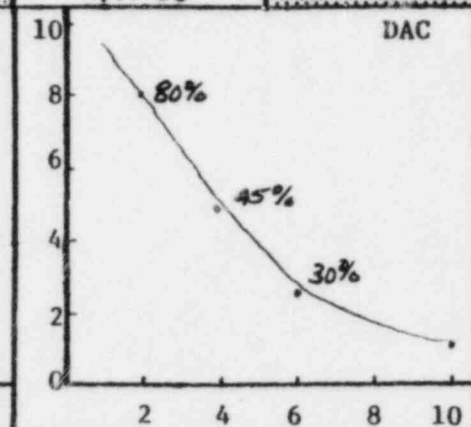
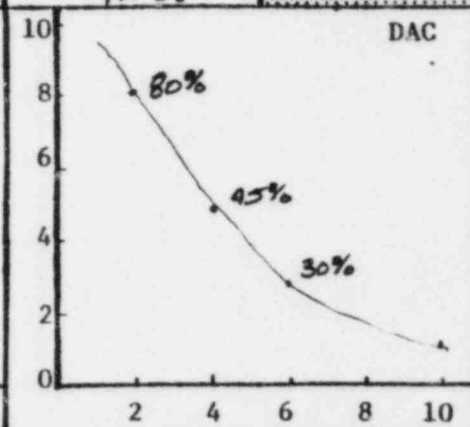
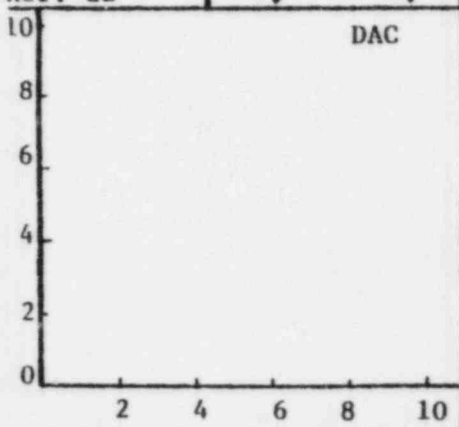
Customer <i>LP & L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>	Loop/Zone <i>9</i>	Iso/Drawing No. <i>150 9 REV. 2 FC-3</i>	
Procedure <i>ISI-2.3 R.O</i>		Exam Surface <i>OD</i>	Examiner/Level <i>BURLINGAME II</i>		VCR Supervisor <i>Don Payne</i>		Date <i>3-11-82</i>
Component/Piping System <i>REACTOR COOLANT</i>			Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-6 3 1/2"</i>	Couplant: <i>SONOTRACE Type 40</i> Batch No <i>8119</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number

	Transducer			Instrument			
	S/N	<i>0°</i>	<i>45°</i>	<i>60°</i>	Mfr.	<i>SONIC</i>	Model <i>MK-1</i>
	Size		<i>1/2"</i>		S/N	<i>780836</i>	RepRate <i>1000</i>
	Frequency		<i>2.25 m</i>		Reject	<i>OFF</i>	Filter <i>OFF</i>
	Beam Angle	<i>↓</i>	<i>45°</i>	<i>↓</i>	Damp	<i>MIN</i>	Coax <i>6'</i>
				Freq.	<i>2.25 MHz</i>	Video	<i>NORM</i>

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
<i>1/4T</i>			<i>80%</i>	<i>2</i>	<i>2 5/32</i>	<i>2 1/2</i>	<i>1.0</i>	<i>80%</i>	<i>2</i>	<i>2 5/32</i>	<i>2 1/2</i>	<i>1.0</i>								
<i>1/2T</i>			<i>45%</i>	<i>4</i>	<i>1 23/32</i>	<i>1 1/2</i>	<i>2 1/6</i>	<i>45%</i>	<i>4</i>	<i>1 23/32</i>	<i>1 1/2</i>	<i>2 1/6</i>			<i>14.5</i>	<i>16.10</i>				
<i>3/4T</i>			<i>30%</i>	<i>6</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>3 1/8</i>	<i>30%</i>	<i>6</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>3 1/8</i>								
<i>5/4T</i>			<i>15%</i>	<i>10</i>				<i>15%</i>	<i>10</i>											
Ref. dB	<i>↓</i>	<i>↓</i>	<i>42 db</i>					<i>42 db</i>					<i>↓</i>	<i>↓</i>			<i>↓</i>	<i>↓</i>		



Additional Comments/Sketch

A AVERAGE 20% CLAD ROLL REQUIRED + 20db.

A LARGE AMOUNT OF GRIN WAS LOST IN CONCAVE AREAS ALONG THE WELD LENGTH, BUT CONTACT WAS MAINTAINED.

M.R. Martin, ANII 12-3-82



Ultrasonic Examination Report

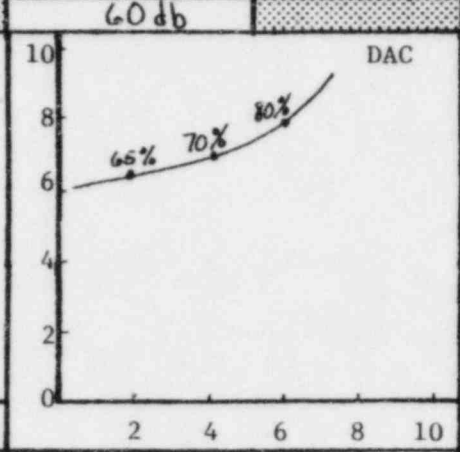
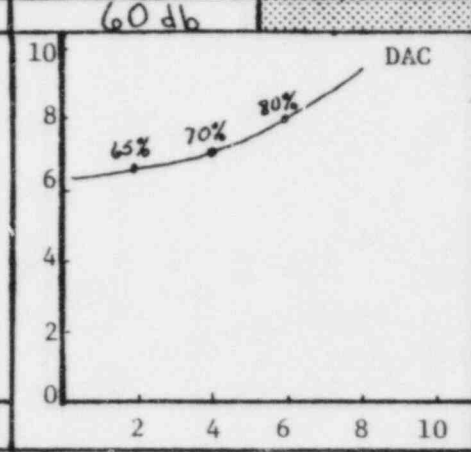
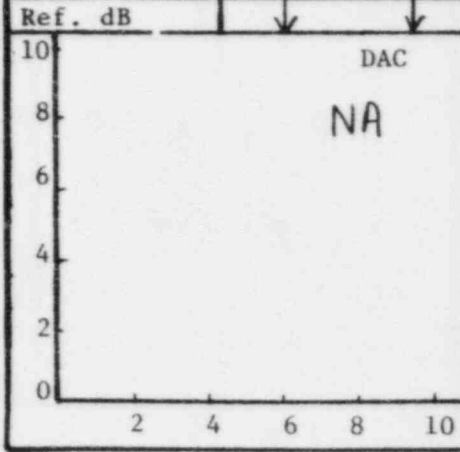
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1B-9	Iso/Drawing No. Zone 9 Rev. 2 F.C. 3
Procedure ISI-2.3 Rev. 0	Exam Surface O.D.	Examiner Level BURLINGAME II	VCR Supervisor <i>Kevin White</i>	Date 3-24-82
Component/Piping System Reactor Coolant		Pipe Size 36"	Weld Type Butt	Cal. Block UT-6
		Couplant: Sonotrace Type 40		Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
	S/N NA	L19134	NA	Mfr. Sonic	Model	FTS MARK I	
	Size	1.0"		S/N 780836	RepRate	1K	
	Frequency	2.25 MHz		Reject	off	Filter	off
Beam Angle	45°			Damp	min	Coax	12'
				Freq.	12. MHz	Video	Norm.

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	65%	2	1/16	7/16 1 3/16	65%	2	1/16	7/16 1 3/16	NA	NA	13:30	16:30	NA	NA
1/2 T			70%	4	1 1/16	1 7/16 1 7/8	70%	4	1 1/16	1 7/16 1 7/8						
3/4 T			80%	6	2 5/8	2 7/8 2 3/4	80%	6	2 5/8	2 7/8 2 3/4						
5/4 T			70%	10			70%	10								



Additional Comments/Sketch



To: _____


Subject Inspection
limitations

09-001 Scans 2+5 were limited by O.D. surface geometry. See pages 4+7. The root area of this weld was not examined. Special transducers and calibration procedures would be required to test this weld.

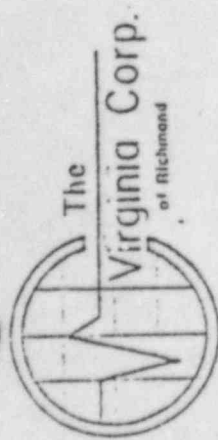
09-007 All scans were limited by O.D. geometry. See pages 4, 5 + 6. The root area was missed completely with Scan 2 using the 1" diameter transducer and wedge. A root area scan was obtained by using a minimum 1/2" transducer and wedge. See pages 8, 9 + 10.

09-018 All scans were limited by O.D. geometry. See pages 4, 5 + 6. The root area was missed completely with Scan 5 using the 1" diameter transducer and wedge. A root area scan was obtained by using a minimum 1/2" transducer and wedge. See pages 8, 9 + 10.

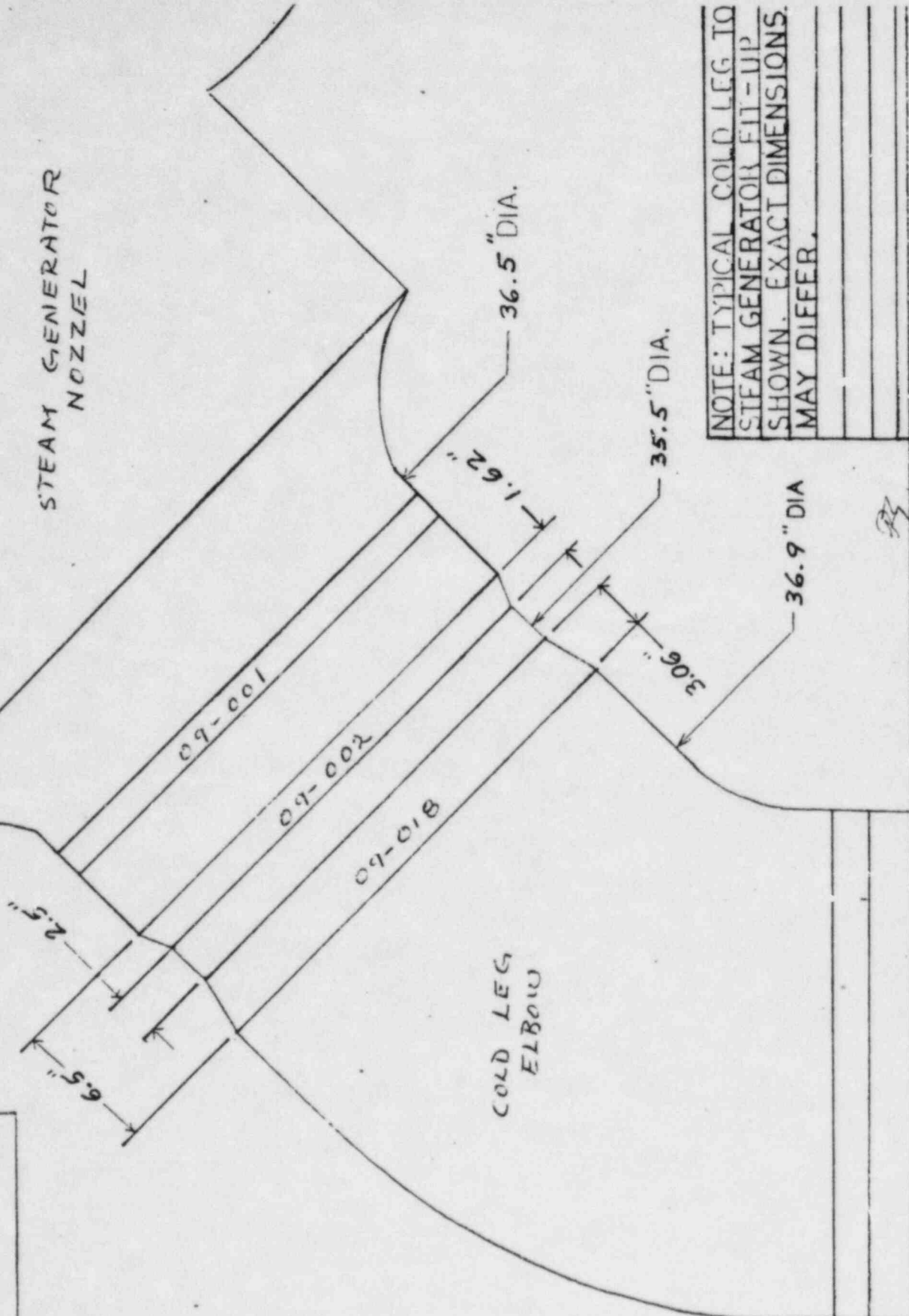
09-019 LB + 09-020 LA are short seams between weld Nos 09-002 and 09-018. Scans 7+8 could not be performed because of the O.D. surface geometry. A partial 2+5 scan was obtained. A partial 7+8 scan was obtained using a minimum 1/2" transducer and wedge. It is felt that 90% of the root area of the two welds was covered by examination.

Signed _____ 

ZONE 09

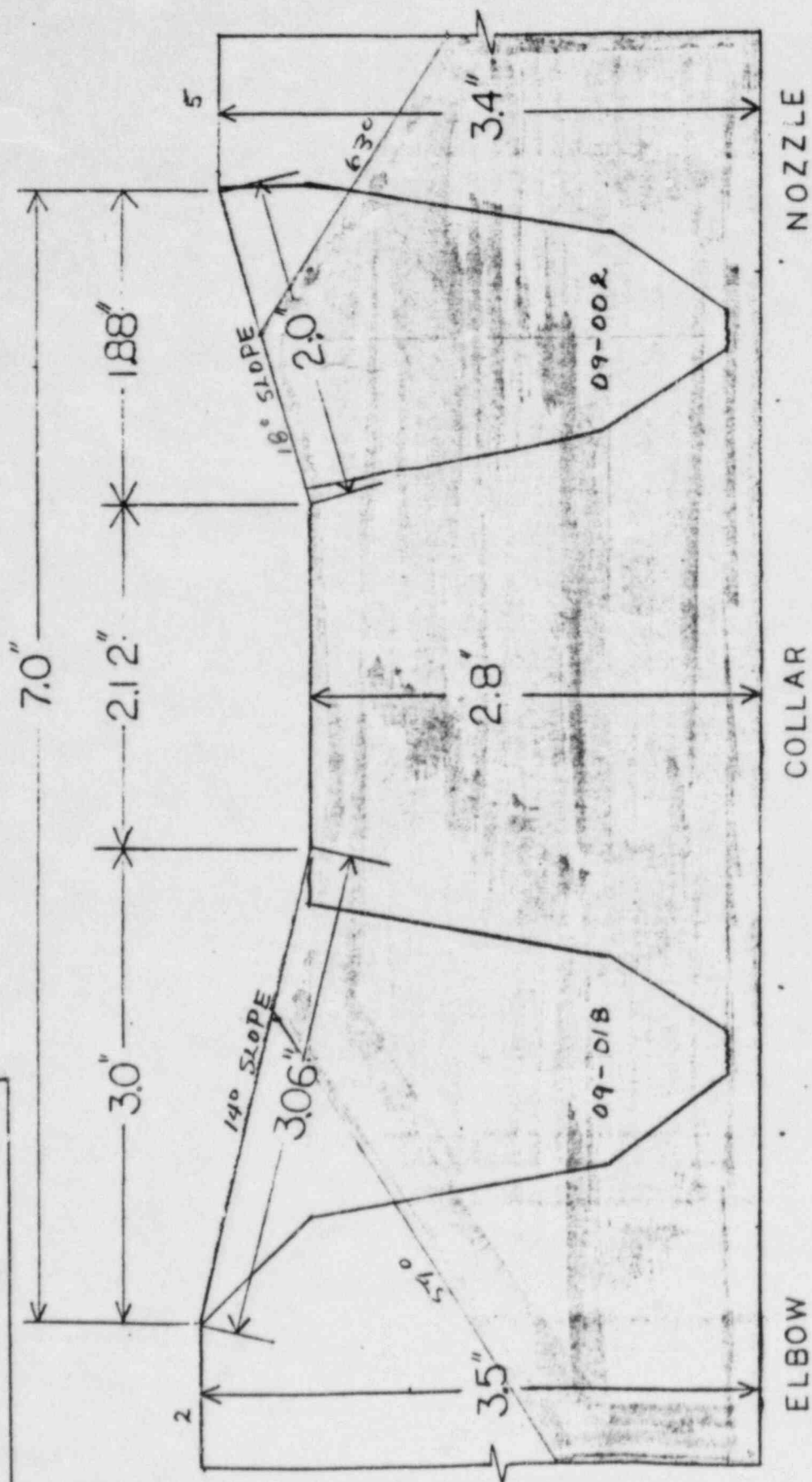


STEAM GENERATOR
NOZZEL



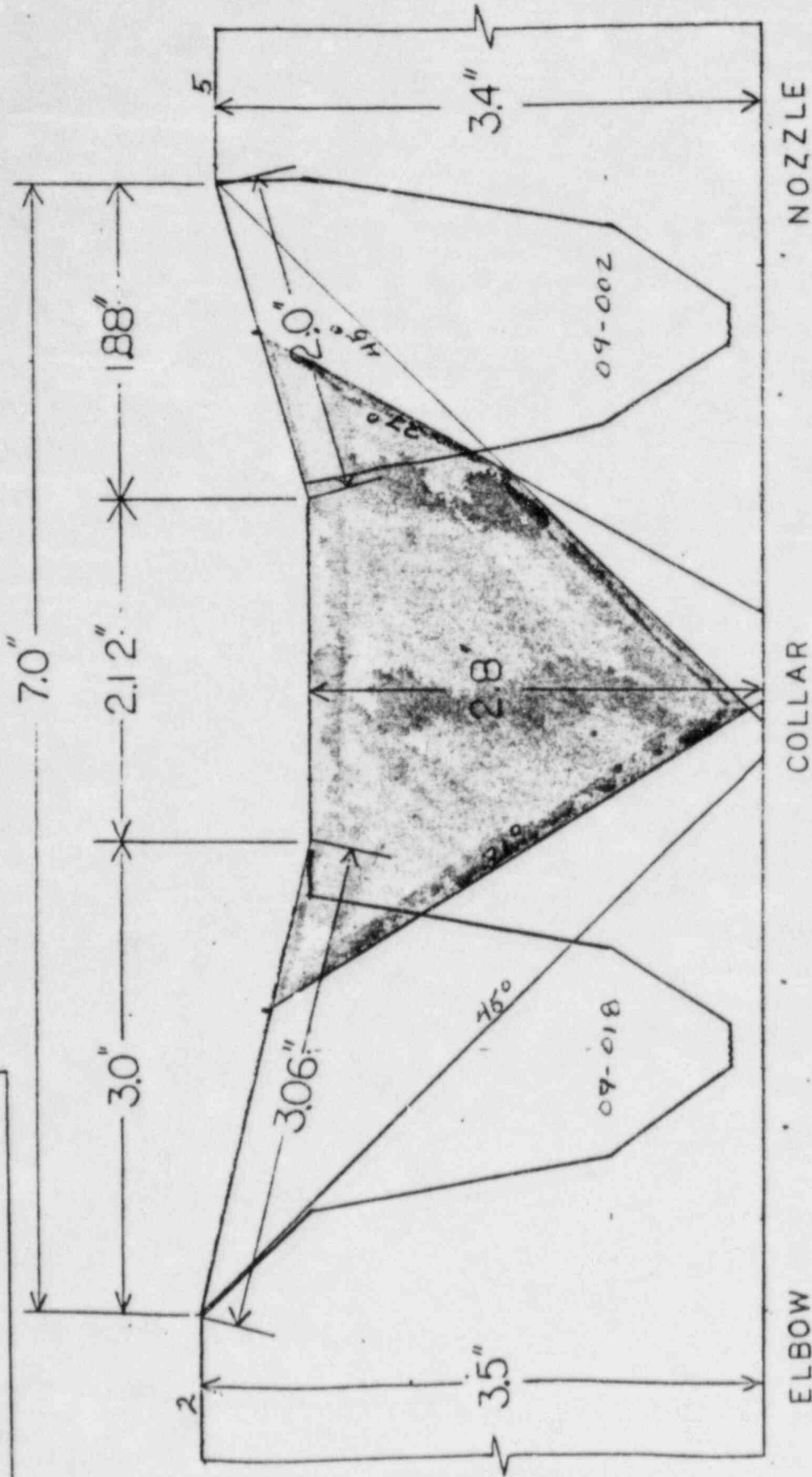
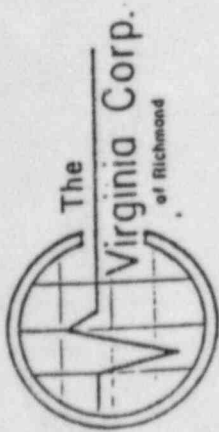
NOTE: TYPICAL COLD LEG TO
STEAM GENERATOR FIT-UP
SHOWN. EXACT DIMENSIONS
MAY DIFFER.

BZ



RED SHADED AREA SHOWS AREA NOT COVERED WITH THE 5 SCAN ON WELD 09-018 AND SCAN 2 ON WELD 09-002, USING A 1" DIA TRANSDUCER. (45°) *BJ*

NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.

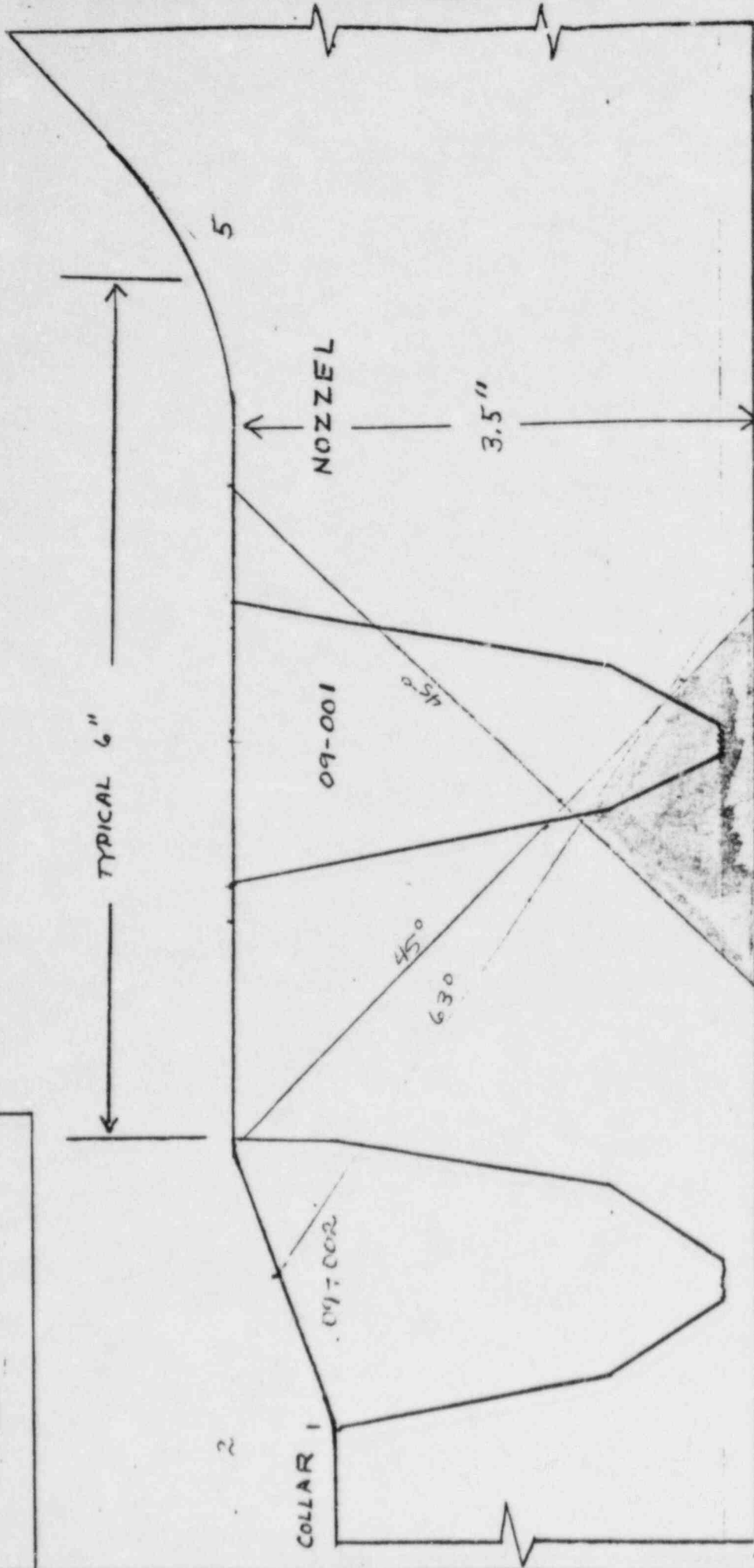
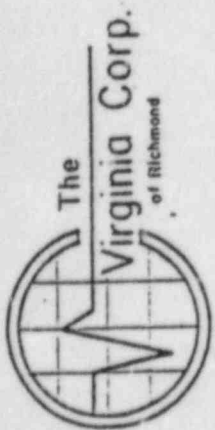


RED SHADED AREA SHOWS AREA NOT COVERED WITH THE 2 SCAN ON WELD 09-018 AND THE 5 SCAN ON WELD 09-002, USING A 1" TRANSDUCER. (45°)

NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.

NOZZEL CROSS SECTION

ZONE 09



RED SHADED AREA SHOWS AREA NOT COVERED BY 45° ANGLE BEAM SCANS, (SCANS 2.35), WELD NO. 09-001

NOTE: TYPICAL NOZZEL TO ELBOW FIT-UP ON STEAM GENERATORS SHOWN. EXACT DIMENSIONS MAY DIFFER.

RB

W.R. Martin, AN II 12-3-82

Ultrasonic Examination Report



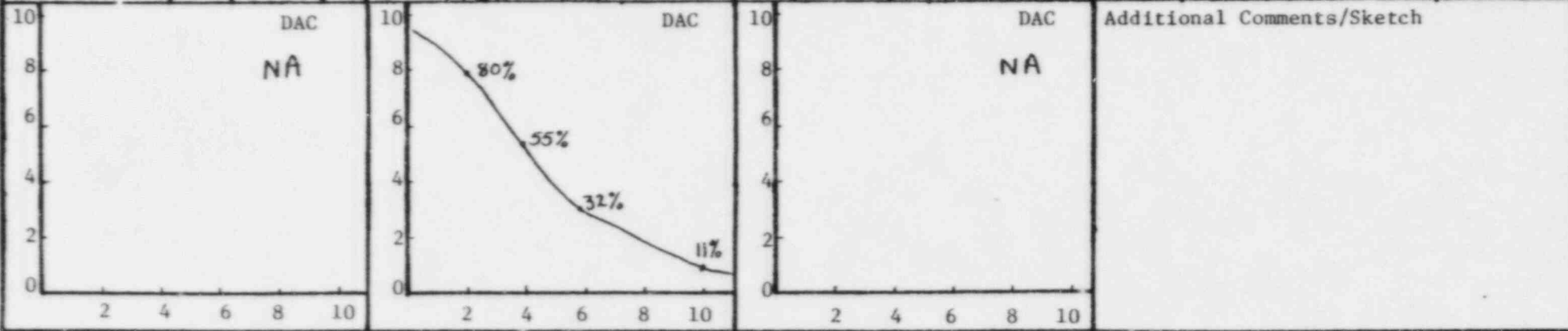
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1B-9	Iso/Drawing No. Zone 9 Rev-2 F.C.-3
Procedure ISI-2.3 Rev 0	Exam Surface O.D.	Examiner/Level BURUNGOME/II	VCR Supervisor Kevin White	Date 3-26-82
Component/Piping System Reactor Coolant		Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6
				Couplant: Sonotrace Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

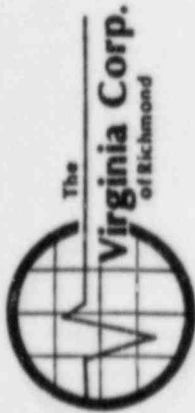
Transducer	0°	45°	60°	Instrument			
	S/N NA	G0715Z	NA	Mfr. Sonic	Model 780836	RepRate 1K	FTS MARK I off
Size		.50"		S/N 780836	Filter off	Coax 12'	
Frequency		2.25 MHz		Reject off	Damp min.	Video Norm.	
Beam Angle		45°		Freq. 2. MHz			

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2	29/32	3/4	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/2 T			55%	4	1 13/16	1 5/8	2 1/32											
3/4 T			32%	5.95	2 5/8	2 7/8	2 15/16											
5/4 T			11%	10														
Ref. dB			44 db															



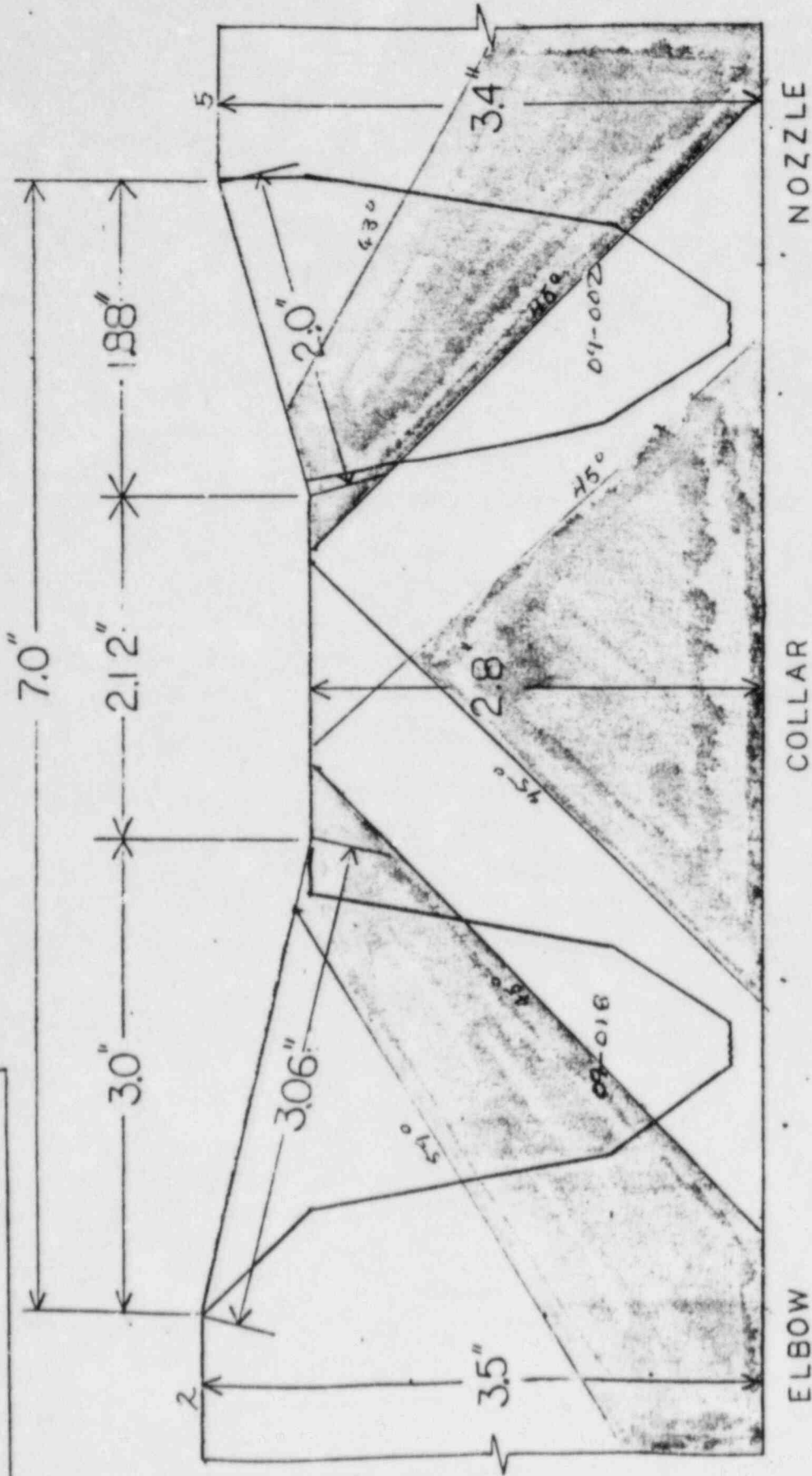
W.R. Martin, ANSI 12-3-82

Ultrasonic Examination Report - Continuation Sheet: Page 9 of 10



Customer LP & L	Plant Waterford	Unit 3	Loop/Zone 1B 9	Iso/Drawing No. Zone 9 Rev-2 F.C.-3
Procedure ISI-2.3 Rev. 0	Exam Surface O.D.	Examiner <u>[Signature]</u>	VCR Supervisor <u>Kevin White</u>	Date 3-26-82
Component/Piping System Reactor Coolant	Pipe Size 36"	Weld Type Butt	Cal. Block Couplant: Sonotrace 40 #8119	

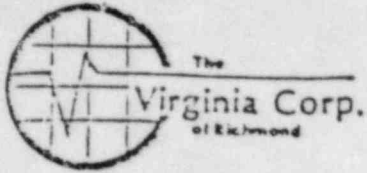
Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
09-002	NA	Par	NA	NA		Clean	Ground	NI	Sat	
09-018	↓	NA	Par	NA		Clean	Ground	NI	Sat	
09-019	↓	NA	NA	Par		Clean	Ground	NI	Sat	
09-020	↓	NA	NA	Par		Clean	Ground	NI	Sat	
					Supplemental Exam, Results of Coverage on Page 10.					



RED SHADED AREA SHOWS AREAS NOT COVERED WITH THE 5 SCAN CAN WELD 09-018 AND SCAN 2 CAN WELD 09-002 USING A 1/2" DIA MINI TRANSPOCER. (45°)

NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.

82



W.R. Martin, ANFF 4-5-82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer L P & L	Plant WATERFORD	Unit 3	Loop/Zone 1B/19
Component/Piping System Cold LEG 46#1 TO RCP 13		Examiner/Level Michael W. Blaw II	Date 3-24-82
Procedure 151-2.5 REV 0	Iso/Drawing No. ZONE 9 REV 2 FC-3	VCR Supervisor Manuel Gomez	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

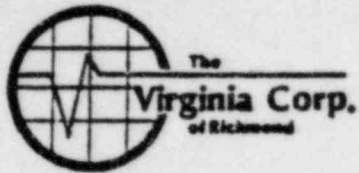
Equipment

Instrument		Transducer		Calibration	
Mfgr. SONIC	Mfgr. AEROTECH	Size .50"	Cal. Block UT-4		
Model MARK I			Cal. Block UT-6		
S/N 05303E	Freq. 1 MHZ	Range Cal. 5"			
Reject OFF			Calibration Checks		
Damp. 6	Serial No. M15B38	10:00 IN			
Freq. 1			11:40 OUT		
Rep. Rate 3K	Coax. Cable 12' BNC TO BNC	1:00 IN			
Filter H1			4:30 OUT		
Video NORM	Gain 43 db				
Couplant Sonotrace 40 5/4 8119					

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
09-001	12	3.35"	3.35"	3.30"	09-003LB	6"	3.55"	3.50"	3.55"
09-002	2	3.35"	3.35"	3.40"	09-003LB	12"	3.55"	3.45"	3.60"
09-001	4	3.30"	3.35"	3.40"	09-003LB	18"	3.50"	3.45"	3.50"
09-001	6	3.35"	3.40"	3.30"	09-003LB	24"	3.45"	3.40"	3.50"
09-001	8	3.35"	3.35"	3.40"	09-003LB	30"	3.50"	3.45"	3.45"
09-001	10	3.30"	3.35"	3.35"	09-003LB	36"	3.50"	3.45"	3.45"
09-002	12	3.10"	3.30"	2.80"	09-003LB	42"	3.50"	3.50"	3.55"
09-002	2	3.10"	3.40"	2.90"	09-003LB	48"	3.50"	3.55"	3.55"
09-002	4	3.30"	3.40"	2.80"	09-004LA	3"	3.55"	3.60"	3.40"
09-002	6	3.30"	3.30"	2.85"	09-004LA	6"	3.50"	3.60"	3.45"
09-002	8	3.30"	3.40"	2.85"	09-004LA	9"	3.60"	3.60"	3.50"
09-002	10	3.15"	3.35"	2.80"	09-004LA	12"	3.55"	3.60"	3.50"

Sketch/Identification



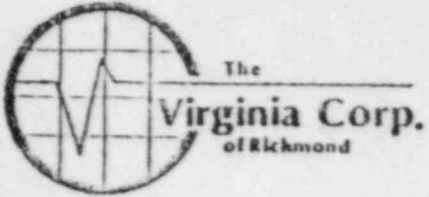
Ultrasonic Data Sheet
M.R. Martin, for
 ANSF 4-5-82
 Thickness Measurement
 Continuation Page 2 of 2

Customer <i>L P & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1B/9</i>
Component/Piping System <i>Cold Leg #1 TO RCP 10</i>	Examiner/Level <i>Michael V Blaw II</i>	Date <i>3-24-82</i>	
Procedure <i>151-2.5 REV 0</i>	Iso/Drawing No. <i>ZONE 9 REV 2 FC 3</i>	VCR Supervisor <i>Daniel J. Jones</i>	

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
09-004LA	15"	3.50"	3.60"	3.50"	09-009LA	5'	2.90"	2.85"	2.85"
09-004LA	18"	3.45"	3.50"	3.50"	09-009LA	6'	2.80"	2.80"	2.85"
09-004LA	21"	3.45"	3.50"	3.50"	09-009LA	7'	2.85"	2.80"	2.80"
09-005	12	3.70"	3.60"	3.55"	09-009LA	8'	2.80"	2.85"	2.85"
09-005	2	3.60"	3.60"	3.55"	09-010LB	1'	2.90"	2.85"	2.90"
09-005	4	3.55"	3.60"	3.60"	09-010LB	2'	2.85"	2.80"	2.85"
09-005	6	3.60"	3.60"	3.45"	09-010LB	3'	2.90"	2.80"	2.85"
09-005	8	3.60"	3.60"	3.55"	09-010LB	4'	2.90"	2.80"	2.80"
09-005	10	3.60"	3.65"	3.60"	09-010LB	5'	2.95"	2.90"	2.85"
09-006LA	6"	3.45"	3.45"	3.50"	09-010LB	6'	2.90"	2.90"	2.80"
09-006LA	12"	3.45"	3.45"	3.55"	09-010LB	7'	2.90"	2.85"	2.80"
09-006LA	18"	3.45"	3.40"	3.55"	09-010LB	8'	2.85"	2.85"	2.85"
09-006LA	24"	3.45"	3.60"	3.50"	09-018	12	3.20"	2.85"	3.50"
09-006LA	30"	3.55"	3.45"	3.55"	09-018	2	3.40"	2.85"	3.60"
09-006LA	36"	3.60"	3.45"	3.50"	09-018	4	3.50"	2.85"	3.60"
09-006LA	42"	3.25"	3.30"	3.30"	09-018	6	3.30"	2.95"	3.55"
09-009LA	1'	2.80"	2.85"	2.90"	09-018	8	3.50"	2.85"	3.55"
09-009LA	2'	2.80"	2.85"	2.80"	09-018	10	3.40"	2.80"	3.60"
09-109LA	3'	2.85"	2.80"	2.85"	09-019LB		2.80"	2.90"	2.85"
09-009LA	4'	2.80"	2.85"	2.90"	09-020LA		2.85"	2.85"	2.80"

Sketch/Identification



Ultrasonic Examination Report

Customer LP AND L	Plant WATERFORD	Unit 3	Loop/Zone 1B/9	Ins/Drawing No. ZONE 9, REV 2, F.C. 3
Procedure ISI 2.3 REV 0	Exam Surface O.D.	Examiner/Level CR Stank II	VAR Supervisor Daniel Jensen	Date 3-25-82
Component/Piping System COND LCR-RCP 1B TO STEAM GEN	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRALE Type 40 Batch No. 8117

Continuation Sheet Attached
 Yes No

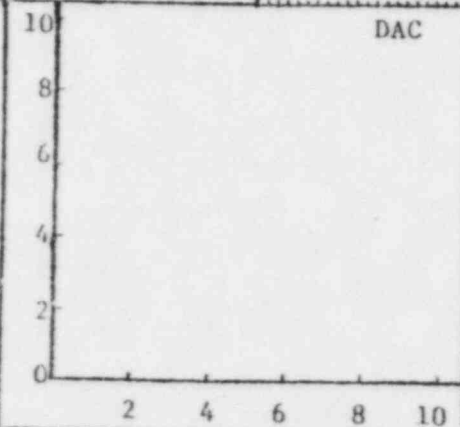
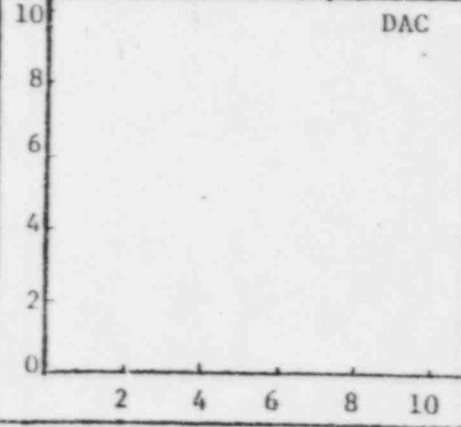
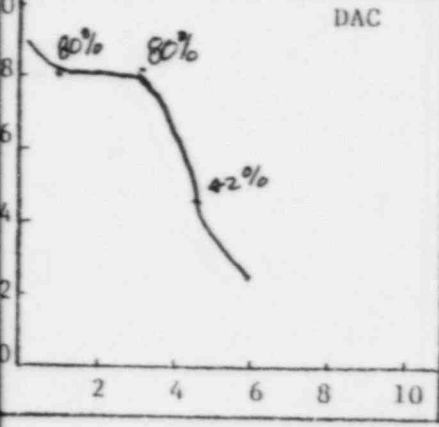
Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°
S/N	48808	NA	NA
Size	1"		
Frequency	2.25 MHz		
Beam Angle	0°		

Instrument			
Mfr.	SONIC	Model	FTSMARK I
S/N	01610E	RepRate	1K
Reject	OFF	Filter	H.
Damp	MIN	Coax	12' BNC
Freq.	2	Video	NORM

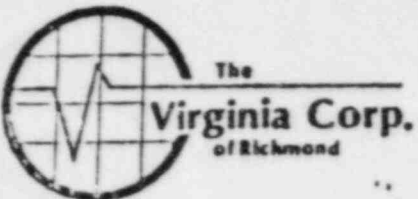
Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:	
					Scribe Line	50% DAC			Scribe Line	50% DAC
174 T	80%	1.5	NA	NA			NA	NA		
112 T	80%	3.0								
314 T	42%	4.5								
1 T	SAT	6.0								

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
945	1144	NA	NA	NA	NA



Additional Comments/Sketch

M.R. Martin AWEF 4-2



Ultrasonic Examination Report

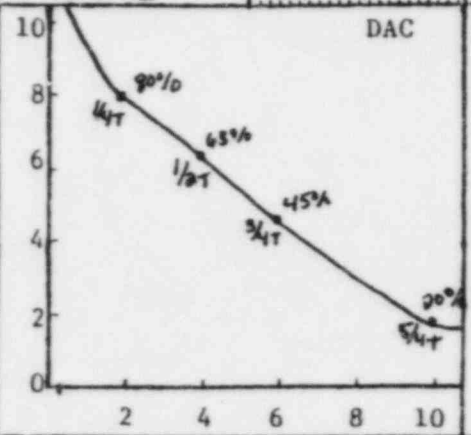
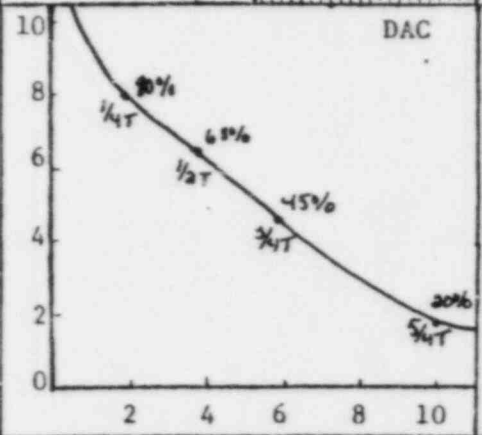
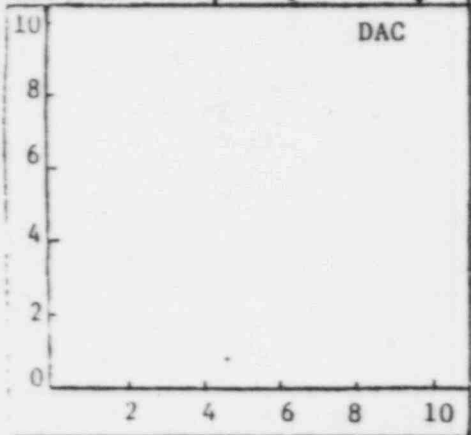
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1/9	Iso/Drawing No. Zone 9 R 2 F.C. 3
Procedure 151 2.3 R.6	Exam Surface C.D.	Examiner/Level Mary Longenecker II	VCR Supervisor Daniel Jensen	Date 3-25-82
Component/Piping System Cold leg-S.G. #1 to pump 1B	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Type 40 ^{Sonotrace} Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
S/N	N/A	N/A	L19801	Mfr.	Sonic	Model	Mark I
Size			1"	S/N	03704E	RepRate	1K
Frequency			2.25 MHz	Reject	OFF	Filter	OFF
Beam Angle			62°	Damp	MINIMUM	Coax	12'
				Freq.	2	Video	Normal

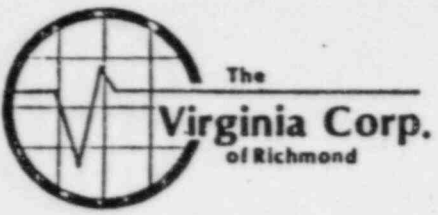
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	N/A	N/A	80%	2	1 5/8	1 1/4 2"	80%	2	1 5/8	1 1/4 2"	N/A	N/A	N/A			1:20	VER. 3:00
1/2 T			63%	4	3 1/2	3" 3 5/8	63%	4	3 1/2	3" 3 5/8							
3/4 T			45%	6	5"	4 1/2 5 3/4	45%	6	5"	4 1/2 5 3/4							
5/4 T			20%	10	N/A	N/A N/A	20%	10	N/A	N/A N/A							
Ref. dB			62 db				62 db										



Additional Comments/Sketch

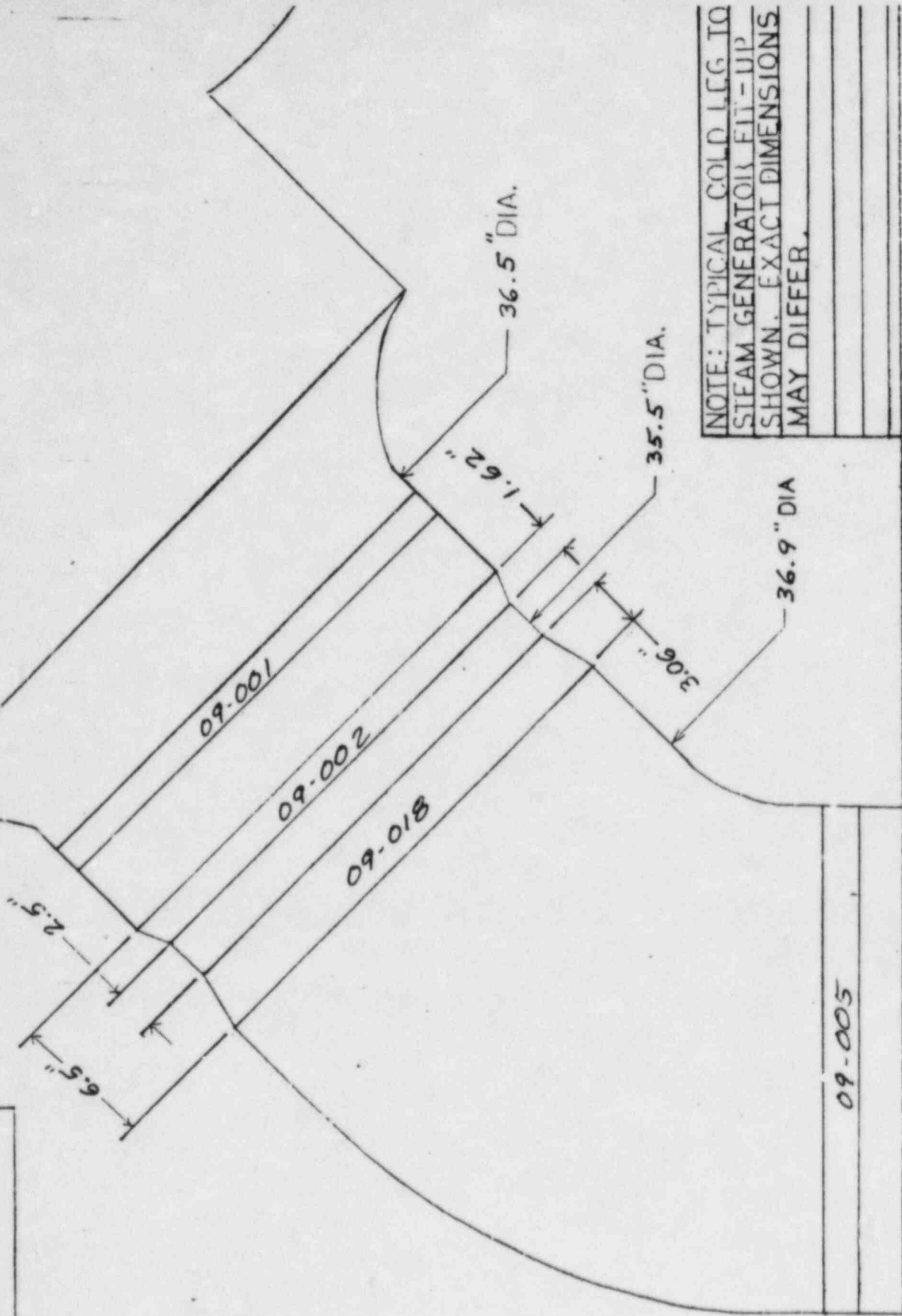
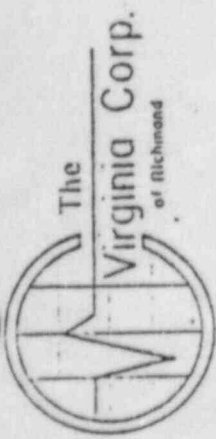
W.R. Martin, ANEF 4-5-82

Ultrasonic Examination Report - Continuation Sheet



Customer LP+L	Plant Waterford	Unit 3	Loop 1	Iso/drawing No. Zone 9 R. 2 F.C.3
Procedure 1512.3 R.O	Exam Surface O.D.	Examiner/Level Gary Longenecker II	VCR Supervisor Daniel Jones	Date 3-25-82
Component/Piping System Cold leg - S.G. # 1 topump 1B	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Type & Batch # Sonotrace 40 #8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
09-001	N/A	Part.	Part.	Part.	N/A	See attached sheet	Clean	Ground	NI	Sat.	N/A
09-002		Part.*	Part.	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-003LB		Part.	Part.	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-004LA		Yes	Yes	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-005		Part.	Part.	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-006LA		Yes	Yes	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-007LA		Yes	Yes	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-008LB		Yes	Yes	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-018		Part.	Part.*	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-019LB		Part.	Part.	Part.*		see attached sheet	Clean	Ground	NI	Sat.	
09-020LA		Part.	Part.	Part.*		See attached sheet	Clean	Ground	NI	Sat.	
						*Supplemental Exam to be performed using .5" diameter transducer.					



NOTE: TYPICAL COLD LEG TO
STEAM GENERATOR FILLET-UP
SHOWN. EXACT DIMENSIONS
MAY DIFFER.



The
Virginia Corp.
of Richmond

Date 3-25-82

Page 4 of 6

To: _____

Subject INSPECTION LIMITATIONS
ZONE 9 R.2 F.C. 3

WELD NO. 09-001 HAD INTERMITTENT LOSS OF COVERAGE DUE
TO O.D. GEOMETRY OF WELD NO. 09-002
AND NOZZLE RADIUS.

SCAN 2 FOR A LOSS OF APPROX. 50%

SCAN 5 FOR A LOSS OF APPROX. 70%

SCANS 7 & 8 FOR A LOSS OF APPROX. 10%

WELD NO. 09-002 HAD INTERMITTENT LOSS OF COVERAGE DUE
TO O.D. GEOMETRY OF WELDS 09-002
AND 09-018

SCAN 2 FOR A LOSS OF APPROX. 90%

SCAN 5 FOR A LOSS OF APPROX. 30%

SCANS 7 & 8 FOR A LOSS OF APPROX. 15%

WELD NO. 09-003LB HAD PARTIAL LOSS OF COVERAGE AT THE
ENDS OF THE LONG SEAM WELD DUE TO
O.D. WELD GEOMETRY OF WELDS 09-005
AND 09-018.

WELD NO. 09-004LA HAD PARTIAL LOSS OF COVERAGE AT THE
ENDS OF THE LONG SEAM WELD DUE TO
O.D. WELD GEOMETRY OF WELDS 09-005
AND 09-018.

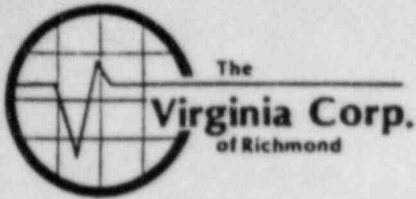
WELD NO. 09-005 HAD INTERMITTENT LOSS OF COVERAGE DUE
TO O.D. WELD GEOMETRY.

SCAN 2 FOR A LOSS OF APPROX. 15%

SCAN 5 FOR A LOSS OF APPROX. 15%

SCANS 7 & 8 FOR A LOSS OF APPROX. 15%

Signed Nery Longenecker



Date 3-25-82

Page 5 of 6

To: _____

Subject INSPECTION LIMITATIONS
ZONE 9 R-2 F.C. 3

WELD NO. 09-006LA HAD PARTIAL LOSS OF COVERAGE AT THE ENDS OF THE LONG SEAM WELD DUE TO O.D. WELD GEOMETRY OF WELDS 09-005 AND 09-008.

WELD NO. 09-009LA HAD PARTIAL LOSS OF COVERAGE AT THE ENDS OF THE LONG SEAM WELD DUE TO O.D. WELD GEOMETRY OF WELDS 09-008 AND 09-013.

WELD NO. 09-010LB HAD PARTIAL LOSS OF COVERAGE AT THE ENDS OF THE LONG SEAM WELD DUE TO O.D. WELD GEOMETRY OF WELDS 09-008 AND 09-013.

WELD NO. 09-018 HAD INTERMITTENT LOSS OF COVERAGE DUE TO O.D. WELD GEOMETRY OF WELDS 09-002 AND 09-018

SCAN 2 FOR A LOSS OF APPROX. 10%

SCAN 5 FOR A LOSS OF APPROX. 85%

SCANS 7&8 FOR A LOSS OF APPROX. 10%

WELD NO. 09-019LB HAD INTERMITTENT LOSS OF COVERAGE DUE TO O.D. WELD GEOMETRY OF WELDS 09-002 AND 09-018

SCAN 2 FOR A LOSS OF APPROX. 22%

SCAN 5 FOR A LOSS OF APPROX. 22%

SCAN 7 FOR A LOSS OF APPROX. 45%

SCAN 8 FOR A LOSS OF APPROX. 60%

Signed Larry Longenecker



The
Virginia Corp.
of Richmond

Date 3-25-82

Page 6 of 6

To: _____

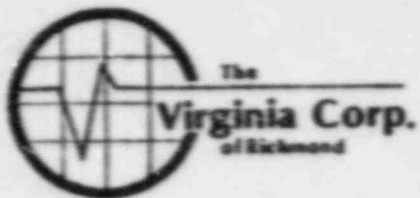
Subject INSPECTION LIMITATIONS
ZONE 9 R-2 FC 3

WELD NO 09-0206A HAD INTERMITTENT LOSS OF COVERAGE
DUE TO O.D. WELD GEOMETRY OF
WELDS 09-002 AND 09-018.
SCAN 2 FOR A LOSS OF APPROX. 22%
SCAN 5 FOR A LOSS OF APPROX. 22%
SCAN 7 FOR A LOSS OF APPROX. 45%
SCAN 8 FOR A LOSS OF APPROX. 60%

Signed Gary Longenecker

M.R. Martin, ANII 12-3-82

Ultrasonic Examination Report



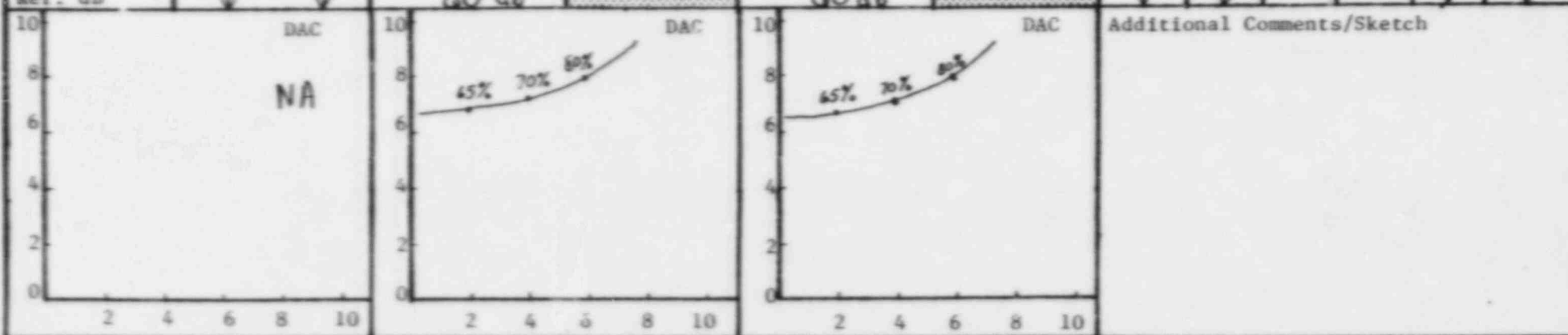
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1B-9	Iso/Drawing No. Zone 9 Rev-2 F.C.-3
Procedure 151-23 Rev 0	Exam Surface O.D.	Examiner/Level BURHAGANE/II	VCR Supervisor Kevin White	Date 3-25-82
Component/Piping System Reactor Coolant		Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6
		Couplant: Sonotrace		Batch No. 8119

Continuation Sheet Attached
 Yes No

Transducer	0°	45°	60°	Instrument			
S/N	NA	L19134	NA	Mfr.	Sonic	Model	ETS MARK I
Size		1.0"		S/N	780836	RepRate	1K
Frequency		2.25 MHz		Reject	off	Filter	off
Beam Angle	✓	45°	✓	Damp	min.	Coax	12"

Field Changes:
 Yes No
 If Yes, Number

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4 T	NA	NA	65%	2	1/16	1/16	1/8	65%	2	1/16	1/16	1/8	NA	NA	12:30	15:10	NA	NA		
1/2 T			70%	4	1/16	1/16	1/8	70%	4	1/16	1/16	1/8								
3/4 T			80%	6	2/16	2/16	2/8	80%	6	2/16	2/16	2/8								
5/4 T			70%	10				70%	10											





The
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W.R. Martin AND 4-5-82

Ultrasonic Examination Report

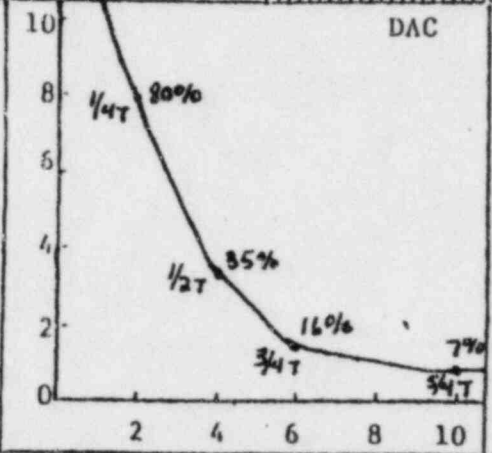
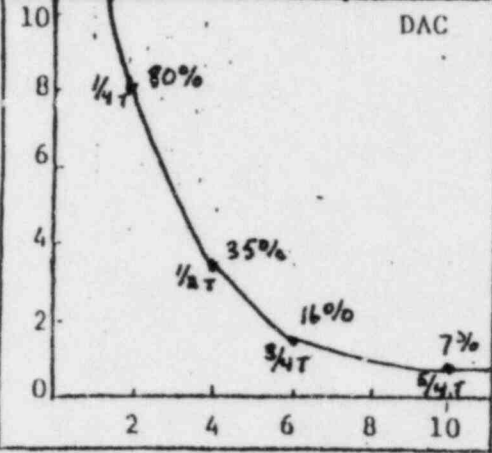
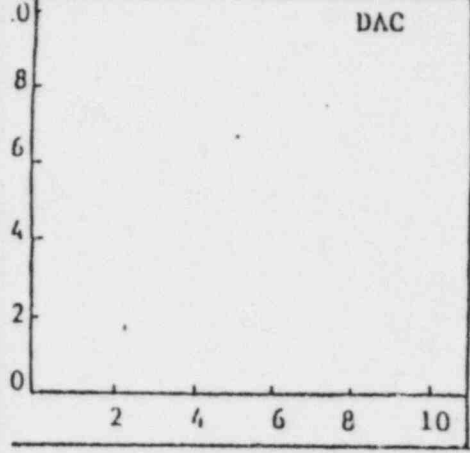
Customer LP+L		Plant Waterford	Unit 3	Loop/Zone 1/9	Isa/Drawing No. ZONE 9 R.2 F.C.3
Procedure ISI 2.3 R.0	Exam Surface O.D.	Examiner/Level Nary Longenecker II		VCR Supervisor Daniel Jones	Date 3-30-82
Component/Piping System Cold leg-S.G.#1 to pump 1B		Pipe Size 36"	Weld Type BUTT	Cal: Block UT-6	Couplant: Type 40 Batch No. 81E

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	N/A	N/A	FIB14	Mfer.	SONIC	Model	Mark I
			.5"	S/N	03704E	RepRate	1K
			2.25 MHz	Reject	OFF	Filter	OFF
		60°	Damp	MINIMUM	Conx	6'	
			Freq.	2	Video	Normal	

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out			
1/4 T	N/A	N/A	80%	2	1 1/2	1 1/2	1 3/32	80%	2	1 1/2	1 1/2	1 3/32	N/A	N/A	N/A	N/A	9:00	11:10		
1/2 T			35%	4	3 1/16	2 1/32	3 9/16	35%	4	3 1/16	2 1/32	3 9/16								
3/4 T			16%	6	4 5/8	3 3/32	5 3/32	16%	6	4 5/8	3 3/32	5 3/32								
5/4 T			7%	10	N/A	N/A	N/A	7%	10	N/A	N/A	N/A								



Additional Comments/Sketch

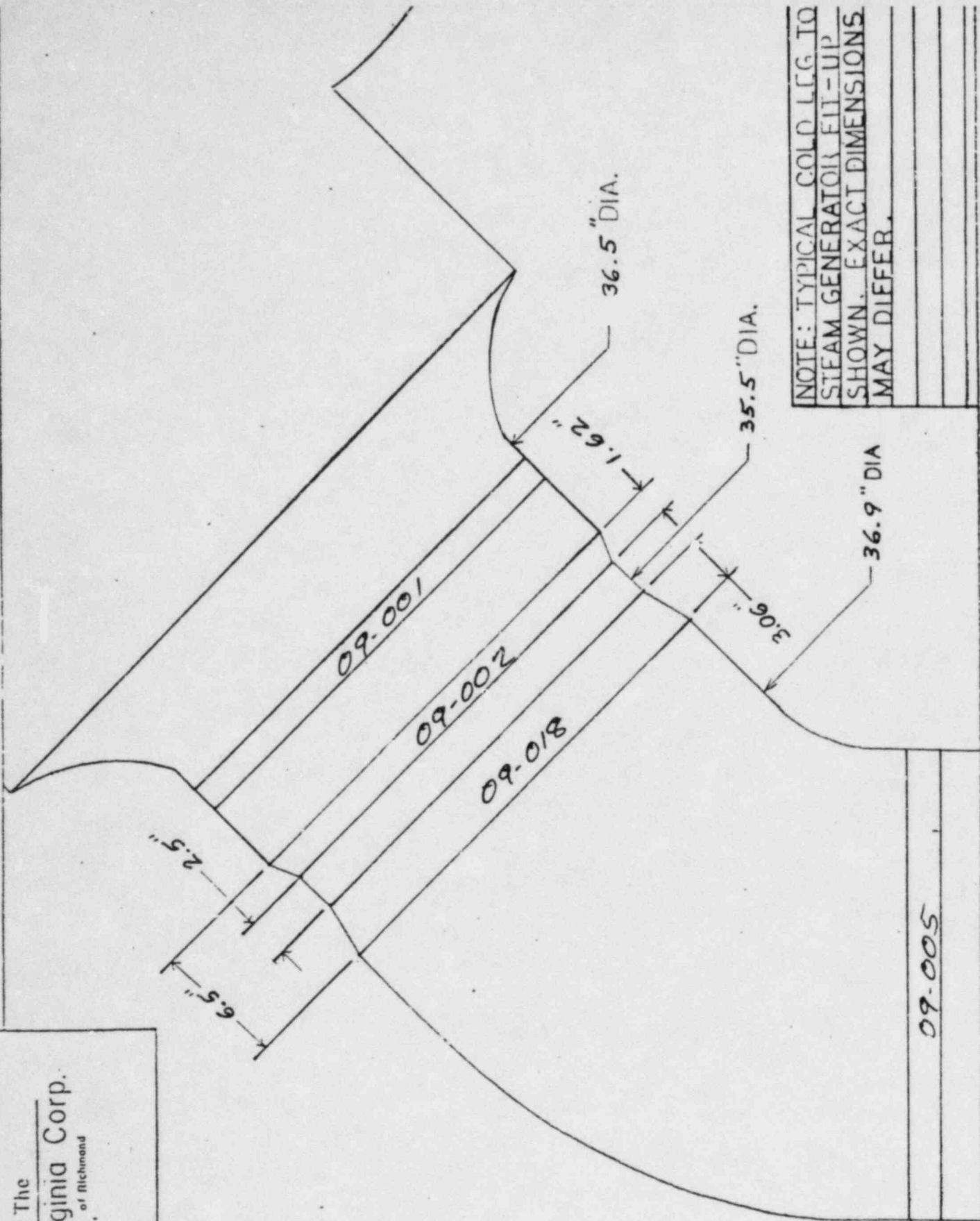
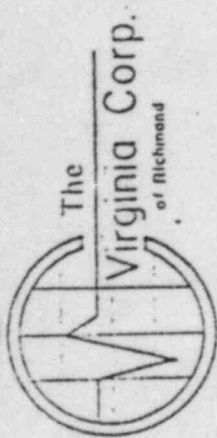
Ultrasonic Examination Report - Continuation Sheet Page **82** of **92**



The Virginia Corp.
of Richmond

Customer LP+L	Plant Waterford	Unit 3	Loop 1	Iso/drawing No. Zone 9 R.2 F.C. 3
Procedure ISI 2.3 R.0	Exam Surface O.D.	Examiner/Level Nary Longenecker II	VCR Supervisor Daniel Jensen	Date 3-30-92
Component/Piping System Cold leg - S.G. #1 to Pump 1B	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Type & Batch # Sonotrac 40 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
09-002	N/A	N/A	Part.	NO	NO	N/A	See attached sheet	Clean	Ground	NI	Sat.	N/A
09-018			NO	Part.	NO		See attached sheet	Clean	Ground	NI	Sat.	
09-096B			NO	NO	Part.		See attached sheet	Clean	Ground	NI	Sat.	
09-0206A	↓	↓	NO	NO	Part.	↓	See attached sheet	Clean	Ground	NI	Sat.	↓



NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.

09-005



To: _____

Subject INSPECTION LIMITATIONS
ZONE 9 R-2 F.C. 3

WELD NO. 09-002 COVERAGE WAS INCREASED BY USING
.5" DIA. TRANSDUCER.

SCAN 2 THE LOSS OF COVERAGE WAS
DECREASED TO APPROX. 75%

WELD NO. 09-018 COVERAGE WAS INCREASED BY USING
.5" DIA. TRANSDUCER.

SCAN 5 THE LOSS OF COVERAGE WAS
DECREASED TO APPROX. 60%

WELD NO. 09-019LB COVERAGE WAS INCREASED BY USING
.5" DIA. TRANSDUCER.

SCAN 7 THE LOSS OF COVERAGE WAS
DECREASED TO APPROX. 30%

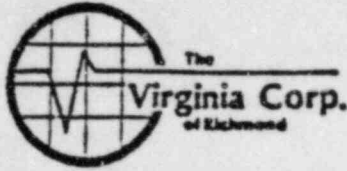
SCAN 8 THE LOSS OF COVERAGE WAS
DECREASED TO APPROX. 45%

WELD NO. 09-020LA COVERAGE WAS INCREASED BY USING
.5" DIA. TRANSDUCER.

SCAN 7 THE LOSS OF COVERAGE WAS
DECREASED TO APPROX. 30%

SCAN 8 THE LOSS OF COVERAGE WAS
DECREASED TO APPROX. 45%

Signed Gary Longenecker



W.R. Martin, ANSF 12-3-82
 Ultrasonic Data Sheet
 for
 Thickness Measurement 1 of 8

Customer LP:1	Plant WATERFORD	Unit 3	Loop/Zone 1B/9
Component/Piping System COLD LEG - RCP 1B TO STEAM GEN.		Examiner/Level BURLINGAME II	Date 5-1-82
Procedure 151-2.5 R.O	Iso/Drawing No. ZONE 9 REV 2 FC-3	VCR Supervisor Tenn White	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfgr. SONIC	Mfgr. KBI	Size 1/2"	Cal. Block UT-6 3.50"
Model FTS MARK I			Cal. Block
S/N 780836	Freq. 2.25 MHz		Range Cal. 3.50" = 8 DIV.
Reject OFF	Serial No. KB 2728		Calibration Checks
Damp. MIN			15:35 IN
Freq. 2.0 MHz	Coax. Cable TWIN 6' COAX		16:55 OUT
Rep. Rate 1000	Gain 71 db		
Filter OFF			
Video NORMAL			
Couplant SONOTRACE 40 #8119			

Examination Results

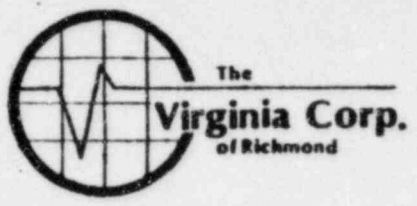
Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
09-011	12	N/A	N/A	2.84"					
	2			2.89"					
	4			2.93"					
	6			2.93"					
	8			2.93"					
	10	↓	↓	2.97"					

Sketch/Identification

W. R. Martin, ANII 12-3-82.

Ultrasonic Examination Report

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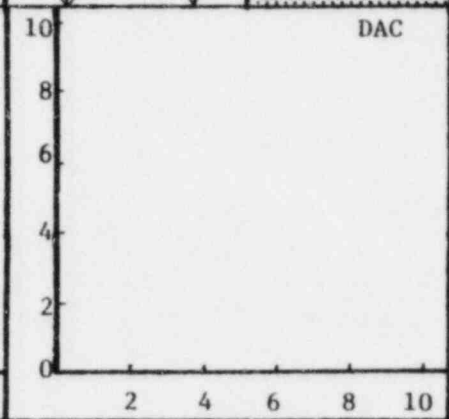
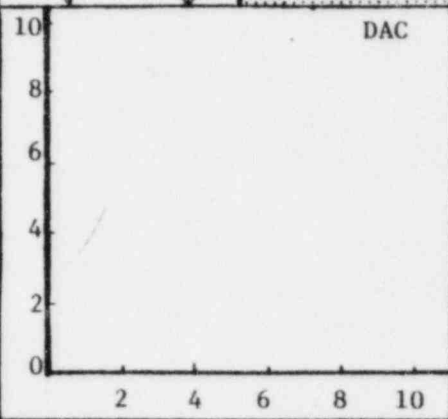
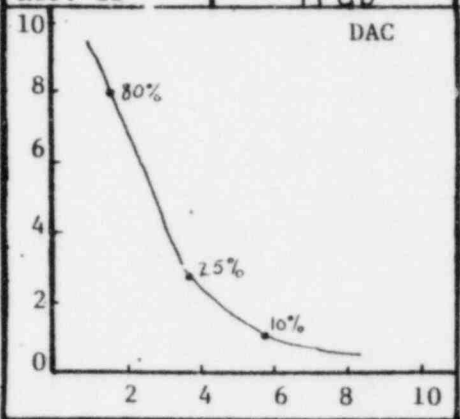
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1B/9	Iso/Drawing No. ZONE 9 REV. 2 F.C.-3
Procedure ISI-2.3 R-0 F.C.-1	Exam Surface O.D.	Examiner/Level BURLINGAME/II	VCR Supervisor Kenneth White	Date 5-1-82
Component/Piping System COLD LEG - RCP 1B TO STEAM GENERATOR		Pipe Size 36" ID	Weld Type BUTT	Cal. Block UT-6, 350"
		Couplant: SONOTRACE		Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **F.C. 1**

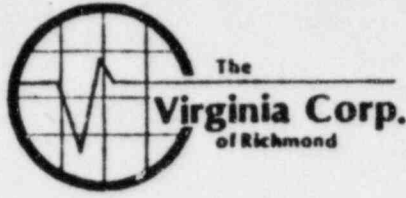
Transducer	0°	45°	60°	Instrument			
S/N	KB2728	N/A	N/A	Mfr.	SONIC	Model	FIS MARK I
Size	1/2"			S/N	780836	RepRate	200
Frequency	2.25 MHz			Reject	OFF	Filter	H _i
Beam Angle	0°			Damp	MIN	Coax	6' TWIN COAX
				Freq.	2 MHz	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	80%	1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15:30	17:00	N/A	N/A	N/A	N/A
1/2 T	25%	3.8																
3/4 T	10%	5.8																
BACK 1 T	8%-4db	8.0																



Additional Comments/Sketch

W.R. Martin, ANSI 12-3-82



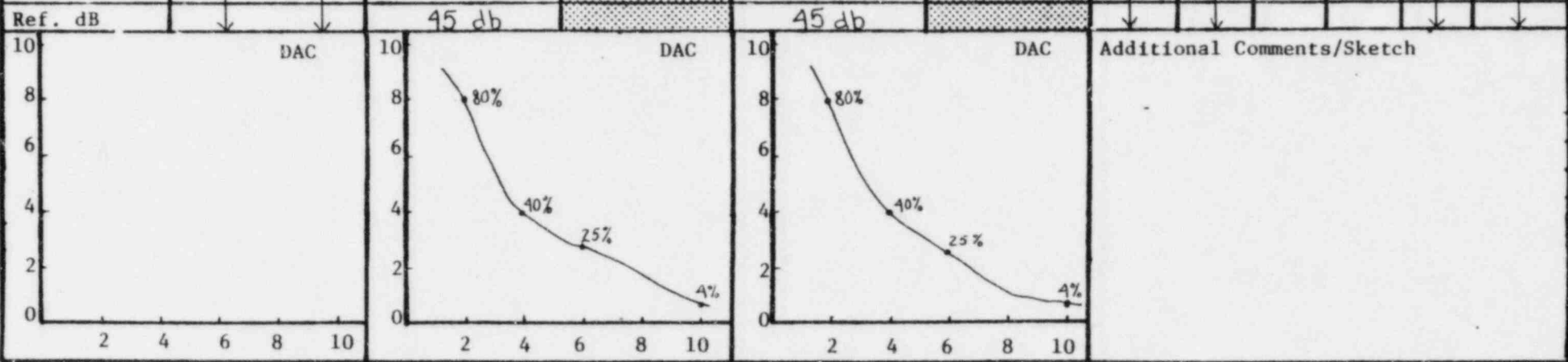
Ultrasonic Examination Report

4 of 8

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1B/9</i>	Iso/Drawing No. <i>ZONE 9 REV: 2 FC. 3</i>
Procedure <i>ISI-2.3 R.O FC-1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>BURLINGAME/II</i>	VCR Supervisor <i>Kevin White</i>	Date <i>5-1-82</i>
Component/Piping System <i>COLD LEG - RCPIA TO STEAM GENERATOR</i>		Pipe Size <i>36" ID</i>	Weld Type <i>BUTT</i>	Cal. Block # <i>UT-6 3.50"</i>
			Couplant: <i>SONOTRACE</i>	Batch No. <i>8119</i>

Continuation Sheet Attached Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Transducer	0°	45°	60°	Instrument				
		S/N <i>N/A</i>	<i>J22935</i>	<i>N/A</i>	Mfr. <i>SONIC</i>	Model <i>01610E</i>	RepRate <i>3000</i>	FTS-MARK I	
Field Changes: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, Number <i>1</i>	Size	Frequency <i>225 MHz</i>			Reject <i>OFF</i>	Filter <i>Hi</i>	Coax <i>6'</i>	Beam Angle	
		Beam Angle <i>45°</i>						Damp <i>MIN</i>	Video <i>NORM</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>2.0</i>	<i>7/8</i>	<i>23/32</i>	<i>31/32</i>	<i>80%</i>	<i>2.0</i>	<i>7/8</i>	<i>23/32</i>	<i>31/32</i>	<i>N/A</i>	<i>N/A</i>	<i>15:30</i>	<i>17:00</i>	<i>N/A</i>	<i>N/A</i>
<i>1/2T</i>			<i>40%</i>	<i>4.0</i>	<i>1 25/32</i>	<i>1 21/32</i>	<i>2</i>	<i>40%</i>	<i>4.0</i>	<i>1 25/32</i>	<i>1 21/32</i>	<i>2</i>						
<i>3/4T</i>			<i>25%</i>	<i>6.0</i>	<i>2 5/8</i>	<i>2 3/8</i>	<i>2 7/8</i>	<i>25%</i>	<i>6.0</i>	<i>2 5/8</i>	<i>2 3/8</i>	<i>2 7/8</i>						
<i>5/4T</i>			<i>4%</i>	<i>10.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>4%</i>	<i>10.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>						





The
Virginia Corp.
of Richmond

Date 5-1-82

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To: _____

Subject Examination
Limitations

09-011 Is a 3" Branch Connection, The Radius Between
The Branch and Reactor Coolant Pipe is Formed
By the Weld Crown. All Scans are Affected
By the Weld Radius. Scan 2 Was Not Performed.
The Ultrasonic Beam is Directed Away From the
Weld Root Area. The 45° Scan 5 Gave Good
Coverage of the weld root area. The 60° Scan 5
Gave Good Coverage of the Root Area When
The Beam Was Directed Axially with Respect
to the Reactor Coolant Pipe. With the Ultrasonic
Beam Directed Circumferentially With Respect to
the Reactor Coolant Pipe. the Beam Does Not
Intersect the I.D. The same Applies to the
7 & 8 Scans. The 7 & 8 Scans Could only
be Performed on the Scan 5 Base Metal
Side of the Weld.

Signed _____

M.R. Martin, ANIS 12-3-82



Ultrasonic Examination Report

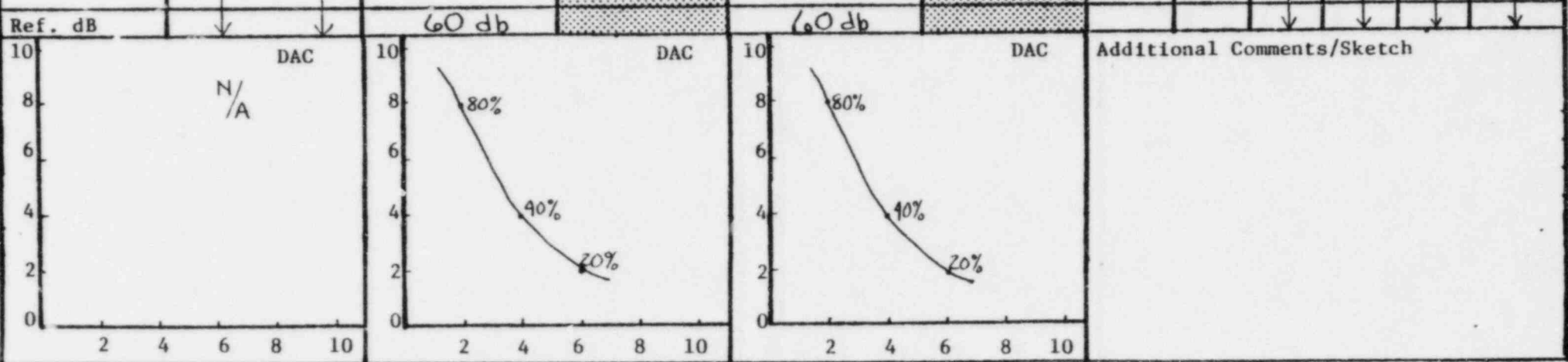
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1B 9	Iso/Drawing No. ZONE 9 REV. 2 F.C.3
Procedure ISI-2.3 REV. 0 F.C.1	Exam Surface O.D.	Examiner/Level BURBANK/II	VCR Supervisor <i>[Signature]</i>	Date 5-9-82
Component/Piping System REACTOR COOLANT		Pipe Size 36" ID	Weld Type BUTT	Cal. Block # UT-6 3.5"
		Couplant: SONOTRACE		Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **F.C.1**

Transducer	30°	45°	60°	Instrument			
	S/N J22935	N/A	N/A	Mfgr. SONIC	Model FTS-MARK I	RepRate 1000	Filter Hi
	Size 1/2"			S/N 01610E	Coax 12'	Video NORM	
	Frequency 2.25MHz			Reject OFF			
	Beam Angle 30°			Damp MIN			

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	N/A	N/A	80%	2.0	17/32	13/32	21/32	80%	2.0	17/32	13/32	21/32	12:45	16:40	N/A	N/A	N/A	N/A
1/2 T			40%	4.0	1 1/16	7/8	1 1/32	40%	4.0	1 1/16	7/8	1 1/32						
3/4 T			20%	6.0	1 7/16	1 5/16	1 23/32	20%	6.0	1 7/16	1 5/16	1 23/32						
1 T			80%	8.6				80%	8.6									
5/4 T			10%	10.0				10%	10.0									



D. Payne ANEE 5/26/82



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of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 3

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1B, 9	Iso/Drawing No. ZONE 9, REP 2, FC-2
Procedure ISE-2.3, REV. FC	Exam Surface O.D.	Examiner/Level BURLINGAME II	VCR Supervisor <i>Daniel J. Jones</i>	Date 5-4-82
Component/Piping System REACTOR COOLANT	Pipe Size 36" I.D.	Weld Type BUTT	Cal. Block UT6, 3.50"	Couplant: Type & Batch # SONOTRACE 40, BATCH 8119

Field No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
09-001	NA	NA	PAR	YES	NA	SCOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
09-002	NA	PAR	NA	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
09-018	NA	AVA	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
09-0194B	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
09-0201A	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	



The
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To: _____

Subject EXAMINATION
LIMITATIONS.
ZONE 9, REV. 2, FC-2

09-001 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 5 WAS RESTRICTED BY THE OD SLOPE OF THE NOZZLE FOR 360°. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED. SCANS 7 1/2 B WERE ALSO RESTRICTED BY THE OD SLOPE OF THE NOZZLE. GOOD ROOT AREA COVERAGE WAS OBTAINED WITH THE 7 1/2 A SCANS.

09-002 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 2, 7 1/2 B WERE RESTRICTED BY GROSS OD MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED WITH THE 30° ANGLE.

09-018 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 5, 7 1/2 B WERE RESTRICTED BY GROSS OD MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED WITH THE 30° ANGLE.

09-019 LB 1/3 09-020 LA. ARE SHORT (APPROX 2") SEAMS. ALL SCANS WERE RESTRICTED BY GROSS OD MISMATCH. THE 30° ANGLE IN CONJUNCTION WITH THE 45° AND 60° ANGLES, DID GIVE ADEQUATE COVERAGE OF THE ROOT AREAS.

Signed _____



The
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of Richmond

Ultrasonic Examination Report

D. Payne ANZI 5/26/82

Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1 9	Iso/Drawing No. ZONE 9 R-2 F.C. 3
Procedure ^{6L.2} I.S.I. 2.3 RO, F.C. +	Exam Surface O.D.	Examiner/Level <i>Navy Longenecker II</i>		VGR Supervisor <i>Donald Dine</i>
Component/Piping System COLD LEG - S.G. #1 TO R.C.P. 1B		Pipe Size 36"	Weld Type BUTT	Date 5-12-82
Cal. Block UT-6		Couplant: SONOTRACE Type 90 Batch No. A119		

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No ^{6L.}
If Yes, Number **F.C. # 2**

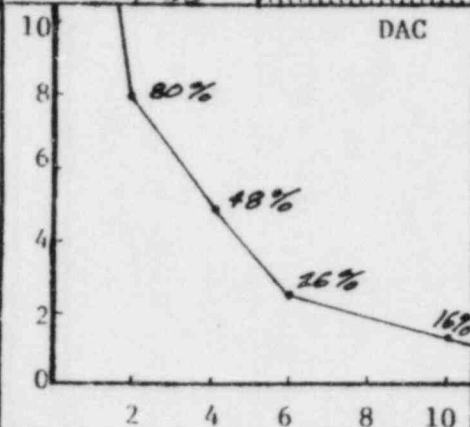
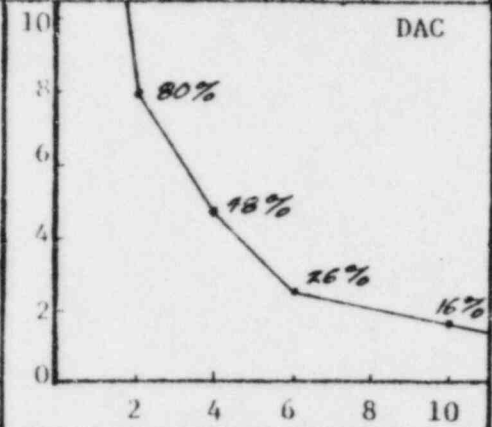
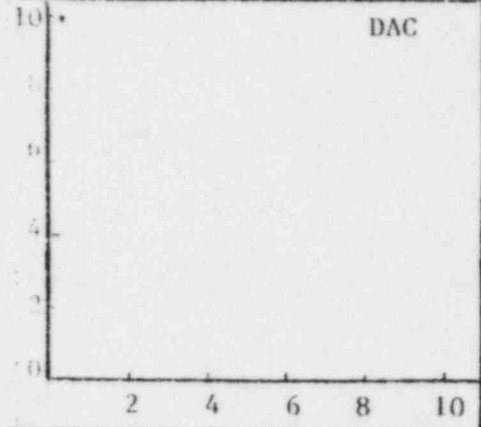
Transducer			Instrument			
30°	45°	60°	Mfr.	SONIC	Model	MARK I
S/N	J22935	NA	S/N	01610E	RepRate	1K
Size	1/2" DIA.		Reject	OFF	Filter	H1
Frequency	2.25 MHz		Damp	MIN.	Coax	12'
Beam Angle	30°		Freq.	2 MHz	Video	NORM

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1/2"	13/32	80%	2.0	1/2"	13/32	2:30	5:00	NA	NA	NA	NA
1/2 T			48%	4.0	1 3/32"	33/32	48%	4.0	1 3/32"	33/32						
3/4 T			26%	6.0	1 9/32"	43/32	26%	6.0	1 9/32"	43/32						
5/4 T			16%	10.0	NA	NA	16%	10.0	NA	NA						
P-T, dB			59 db				59 db									



Additional Comments/Sketch



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Ultrasonic Examination Report - Continuation Sheet

Page 2 of 2

R. Payne ANIZ 5/24/82

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1B/ 9	Iso/Drawing No. ZONE 9, REV. 2, F.C. 42
Procedure 6L.2 ISI 2.3 REV.0, FC+	Exam Surface O.D.	Examiner/Level Ray Longenecker II	VCR Supervisor Daniel Jones	Date 5-12-82
Component/Piping System COLD LEG - S.G. #1 TO PUMP 1B	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6 3.50"	Couplant: Type & Batch # SONOTRACE 40 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
9-003CB	N/A	YES	YES	N/A	N/A		CLEAN	GROUND	NI	SAT	
9-004LA	N/A	YES	YES	N/A	N/A		CLEAN	GROUND	NI	SAT	
9-005	N/A	N/A	N/A	YES	N/A		CLEAN	GROUND	NI	SAT	
9-006LA	N/A	YES	YES	N/A	N/A		CLEAN	GROUND	NI	SAT	
9-007LB	N/A	YES	YES	N/A	N/A		CLEAN	GROUND	NRI	SAT	
9-008	N/A N/A	N/A	N/A	PAR	N/A	*	CLEAN	GROUND	NI	SAT	
						* HAD 10% LOSS OF COVERAGE DUE TO PIPE TO ELBOW O.P. WELD GEOMETRY					



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Ultrasonic Examination Report *D. Payne ANII 5/26/82*

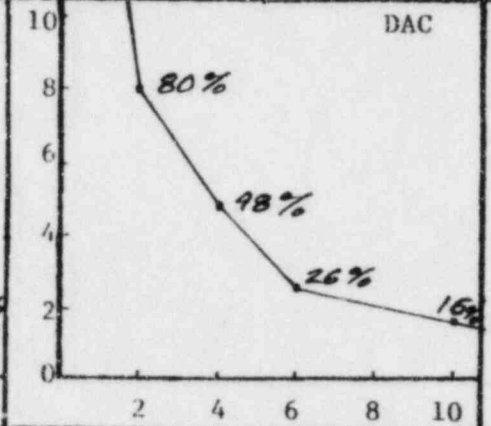
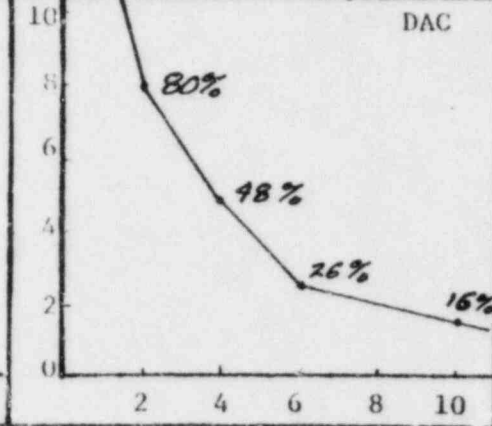
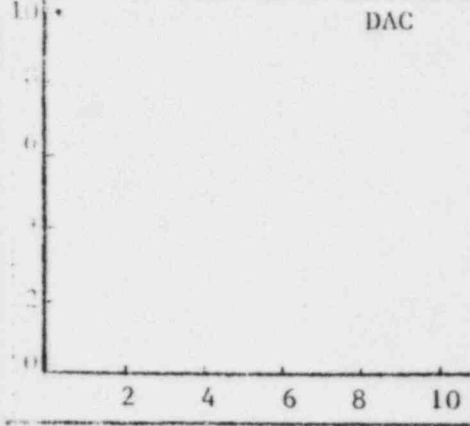
Customer LP & L	Plant WATERFORD	Unit III	Loop/Zone 1 9	Iso/Drawing No. ZONE 9 R-2 F.C. 3
Procedure ^{6L 2} I.S.I. 2.3 R.O. F.C.†	Exam Surface O.D.	Examiner/Level Sary Longenecker II	VCR Supervisor David Dins	Date 5-13-82
Component/Piping System COLD LEG S.G. #1 TO R.C.P. 1B	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type SONOTRAKE Batch No. 0119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number **6L F.C. + 2**

Transducer	30°	45°	60°	Instrument			
S/N	J22935	NA	NA	Mfr.	SONIC	Model	MARK I
Size	1/2" DIA.			S/N	01610E	RepRate	1K
Frequency	2.25 MHR.			Reject	OFF	Filter	H1
Beam Angle	30°			Damp	MIN.	Coax	12'
				Freq.	2 MHR.	Video	NORM.

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1/2"	1 1/32" 1 1/32"	80%	2.0	1/2"	1 1/32" 1 1/32"	9:00	11:30	NA	NA	NA	NA
1/2 T			48%	4.0	1 3/32"	2 3/32" 1 1/32"	48%	4.0	1 3/32"	2 3/32" 1 1/32"						
3/4 T			26%	6.0	1 11/32"	1 11/32" 1 1/32"	26%	6.0	1 11/32"	1 11/32" 1 1/32"						
5/4 T			16%	10.0	NA	NA NA	16%	10.0	NA	NA NA						



Additional Comments/Sketch

D. Payal RNEE 5/26/82



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Ultrasonic Examination Report - Continuation Sheet

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1 9	Iso/Drawing No. ZONE 9 R-2 F.C. 3
Procedure ISI 2.3 R-O F.C.2	Exam Surface O.D.	Examiner/Level <i>Ray Longenecker II</i>	VCR Supervisor <i>Donald Sims</i>	Date 5-13-82
Component/Piping System COLD LEG S.G. #1 TO R.C.P. 1B	Pipe/Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch # SONOTRACE 40 # B119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
09-009LA	NA	YES	YES	NA	NA		CLEAN	GROUND	NRI	SAT.	
09-013		NA	NA	PAR		*	CLEAN	GROUND	NI	SAT.	
09-014LB		YES	YES	NA			CLEAN	GROUND	NI	SAT.	
09-015LA		YES	YES	NA			CLEAN	GROUND	RI	SAT.	
* HAD APPROX. 20% LOSS OF COVERAGE DUE TO PIPE TO ELBOW O.D. WELD GEOMETRY.											

D. Payne ANII 5/26/86



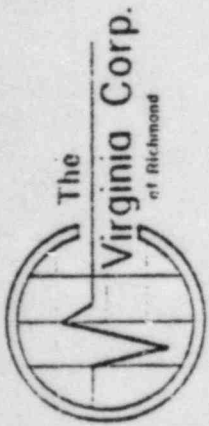
The Virginia Corp.
of Richmond

Ultrasonic Examination Report

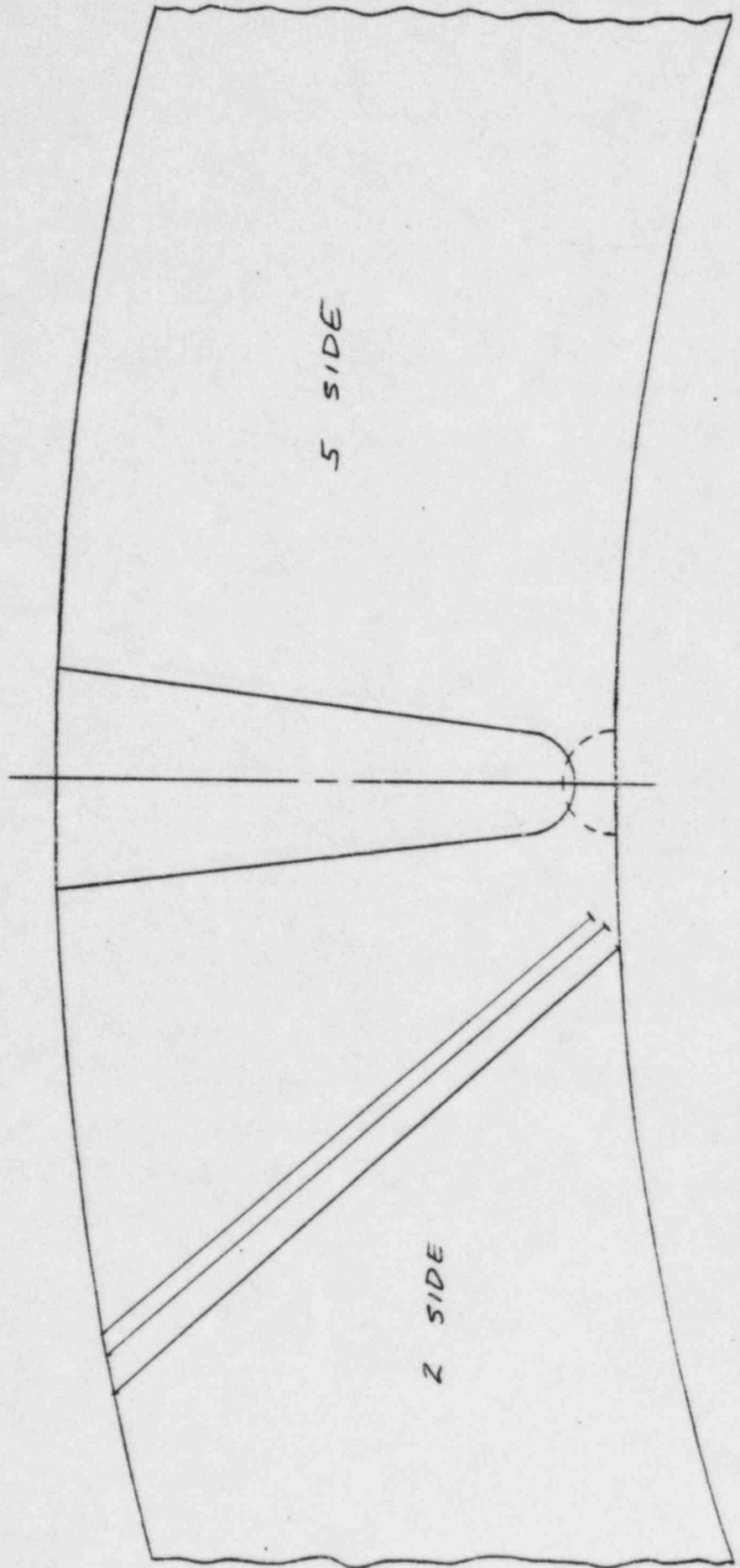
PAGE 3 OF 4 Indication Record

Customer <i>LP & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop <i>1</i>
Procedure <i>I.S.I. 2.3 R-O F.C. +</i>	GL 2 Examiner/Level <i>Nary Longenecker II</i>	VCR Supervisor <i>Daniel Dins</i>	Date <i>5-13-82</i>
Component/Piping System <i>COLD LEG S.G. 1 TO R.C.P. 15</i>	ISO Drawing No. <i>ZONE 9 R-2, F.C.-1</i>	Ca Standard No./Thickness <i>UT-6 3.5"</i>	

Weld No.	Ind No.	Max. % DAC	Indication Length		Minimum Depth		Maximum Depth		Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
			From	To	S.U. Pos.	Sweep Reading	S.U. Pos.	Sweep Reading						
<i>0R-015LA</i>	<i>1</i>	<i>75%</i>	<i>10 5/8"</i>	<i>11 1/4"</i>	<i>3 1/2" (2)</i>	<i>8.4</i>	<i>3 7/8" (2)</i>	<i>8.8</i>	<i>30°</i>	<i>2</i>	<i>3.90</i>	<i>3.52</i>	<i>3.40</i>	<i>PEAK 3 7/8" (2) 0.6</i>



INDICATION NO. 1





The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANII 5/26/82*

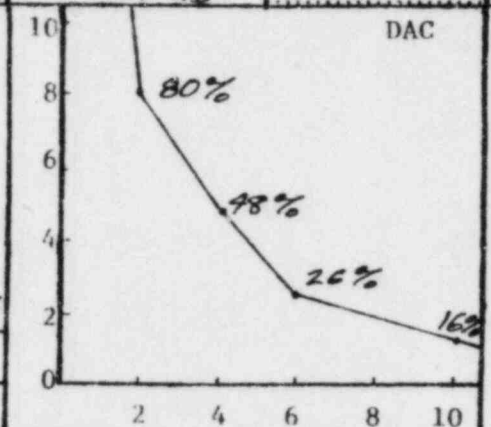
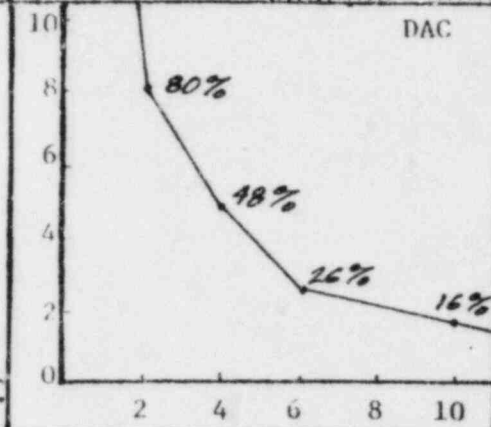
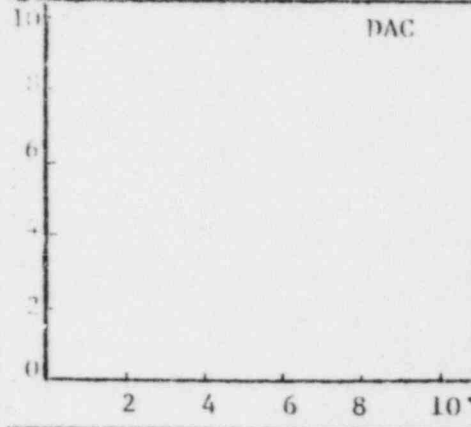
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1 9	Isos/Drawing No. ZONE 9 R-2 F.C. 3
Procedure ^{GL-2} I.S.I. 2.3 RD F.C. +	Exam Surface O.D.	Examiner/Level Nary Longenecker II	VGR Supervisor Daniel Dims	Date 5-19-82
Component/Piping System COLD LEG S.G.# 1 TO R.C.P. 1B	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 90 Batch No. 8119

Continuation Sheet Attached
 Yes No

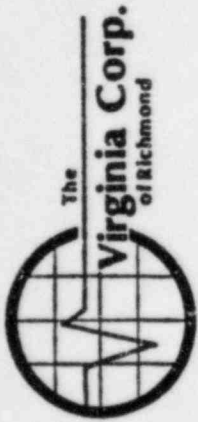
Field Changes:
Yes No ^{GL}
If Yes, Number **F.C. + 2**

Transducer	30°	45°	60°	Instrument			
	S/N	J22935	NA	NA	Mfg.	SONIC	Model
Size	1/2" DIA.			S/N	01610E	RepRate	1K
Frequency	2.25 MHZ			Reject	OFF	Filter	H1
Beam Angle	30°			Damp	MIN.	Coax	12'
				Freq.	2 MHZ.	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1/2"	1 1/32"	1 1/32"	80%	2.0	1/2"	1 1/32"	1 1/32"	9:00	11:30	NA	NA	NA	NA
1/2 T			48%	4.0	1 1/32"	1 1/32"	1 1/32"	48%	4.0	1 1/32"	1 1/32"	1 1/32"						
3/4 T			26%	6.0	1 1/32"	1 1/32"	1 1/32"	26%	6.0	1 1/32"	1 1/32"	1 1/32"						
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA						
Ref. dB			59 db					59 db										



Additional Comments/Sketch



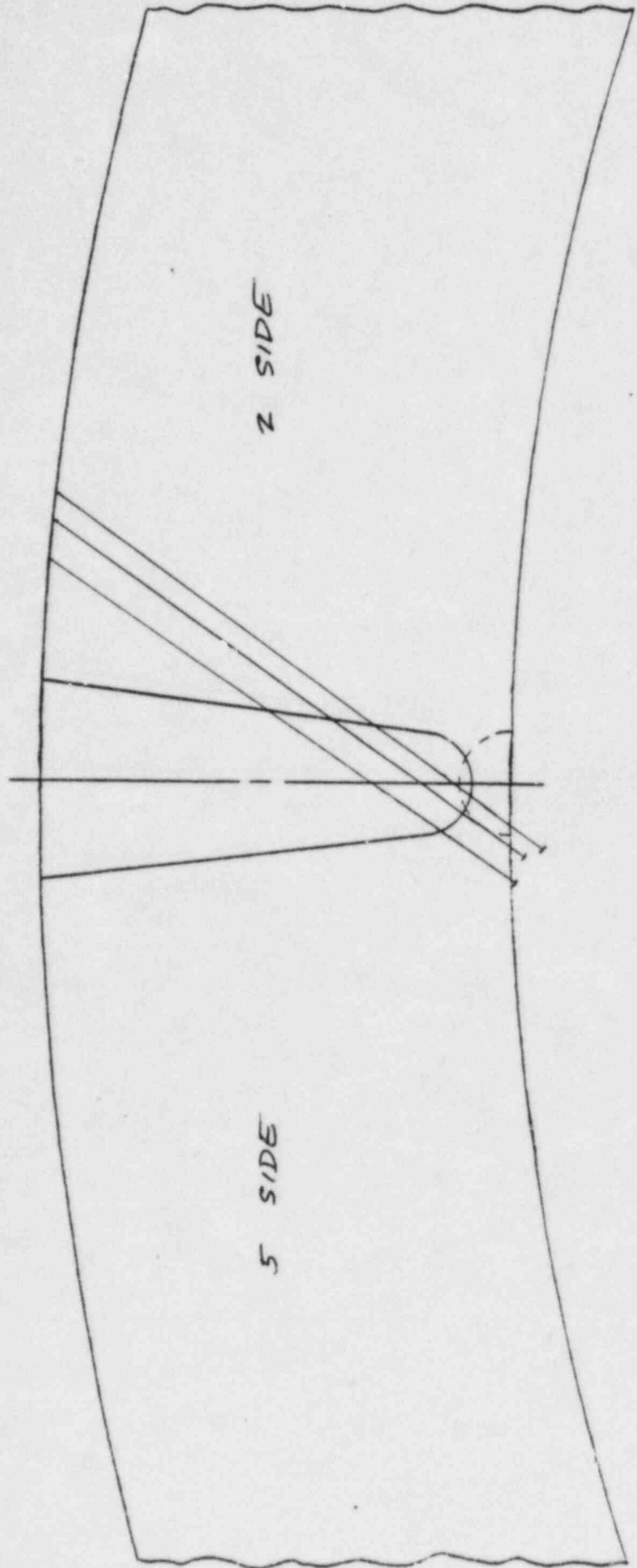
Ultrasonic Examination Report PAGE 3 OF 10 Indication Record

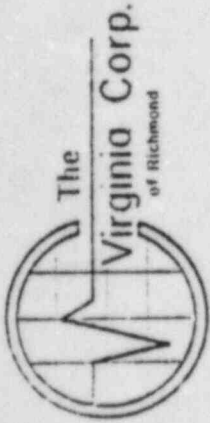
D. Payne ANII 5/20/82

Customer		Plant		Unit		Loop							
L P & L		WATERFORD		3		1							
Procedure		Examiner/Level		VCR Supervisor		Date							
ISI 2.3 REV.0 F.C.42		Harry Longenecker III		David Jones		5-14-82							
Component/Piping System				ISO Drawing No.									
COLD LEG-S.G.#1 TO R.C.P. 1B				ZONE 9, REV.2 F.C.3									
Cal. Standard No./Thickness		Base Metal Thickness 2 Side		Weld Thick.		Base Metal Thickness 5 Side		PEAK Remarks					
UT-6		2.80		2.90		2.85		1 5/8 (2) 7.6					
		2.80		2.90		2.85		3 (2) 7.0					
		2.80		2.90		2.85		1 1/2 (2) 7.5					
		2.95		2.90		2.85		1 1/2 (2) 7.8					
		2.95		2.90		2.85		3 1/8 (2) 7.2					
		2.90		2.90		2.80		2 5/16 (2) 7.5					
		2.90		2.85		2.80		3 1/2 (2) 7.6					
Weld No.	Ind No.	Max. % DAC	Indication Length From To	Minimum Depth S.U. Pos.	Sweep Reading	Maximum Depth S.U. Pos.	Sweep Reading	Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	PEAK Remarks
09-010LB	1	75%	33 7/8 38 1/2	1 3/8 (2)	7.4	1 1/2 (2)	8.0	30°	2	2.80	2.90	2.85	1 5/8 (2) 7.6
09-010LB	2	82%	36 1/4 37 1/4	2 1/4 (2)	7.0	3 1/4 (2)	7.3	30°	2	2.80	2.90	2.85	3 (2) 7.0
09-010LB	3	57%	40 1/2 42 1/2	1 1/4 (2)	7.0	2.4 (2)	8.0	30°	2	2.80	2.90	2.85	1 1/2 (2) 7.5
09-010LB	4	75%	56 3/8 56	1 5/8 (2)	7.6	2.4 (2)	8.0	30°	2	2.95	2.90	2.85	1 1/2 (2) 7.8
09-010LB	5	59%	61 63	2 7/8 (2)	6.8	3 7/8 (2)	7.4	30°	2	2.95	2.90	2.85	3 1/8 (2) 7.2
09-010LB	6	150%	74 3/4 75 1/8	1 1/2 (2)	7.4	2 3/8 (2)	7.9	30°	2	2.90	2.90	2.80	2 5/16 (2) 7.5
09-010LB	7	90%	84 84 3/4	3 1/4 (2)	7.4	3 3/4 (2)	7.8	30°	2	2.90	2.85	2.80	3 1/2 (2) 7.6

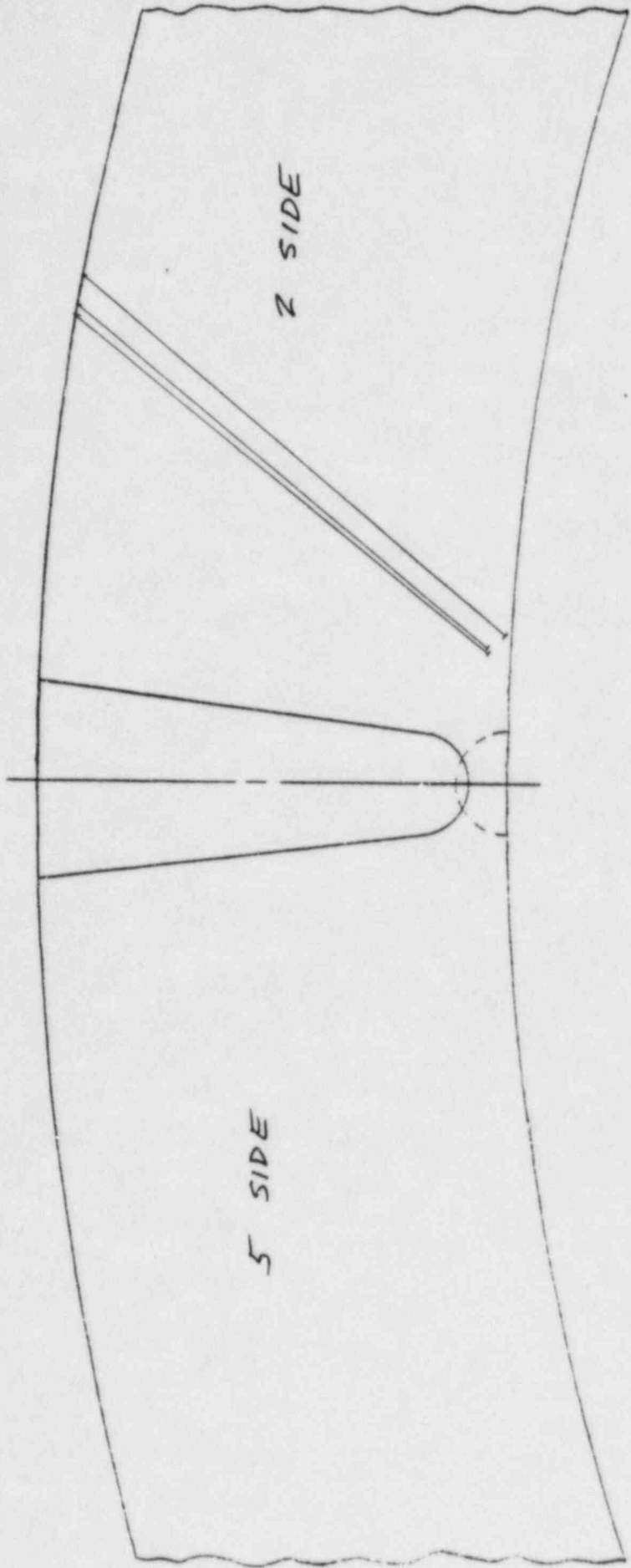


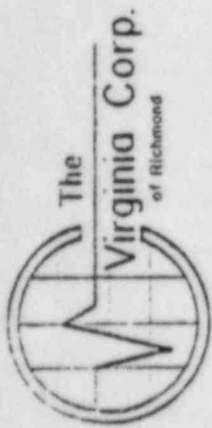
INDICATION NO. 1



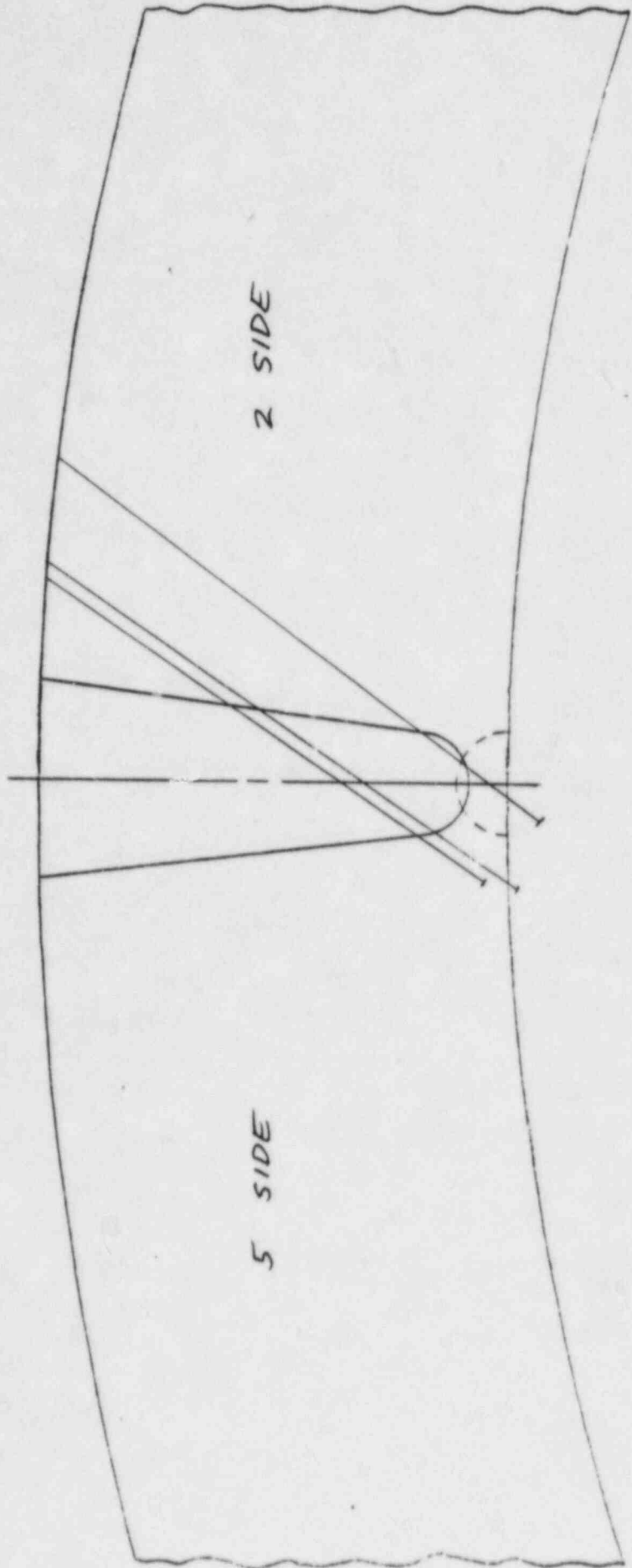


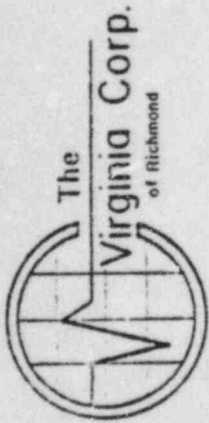
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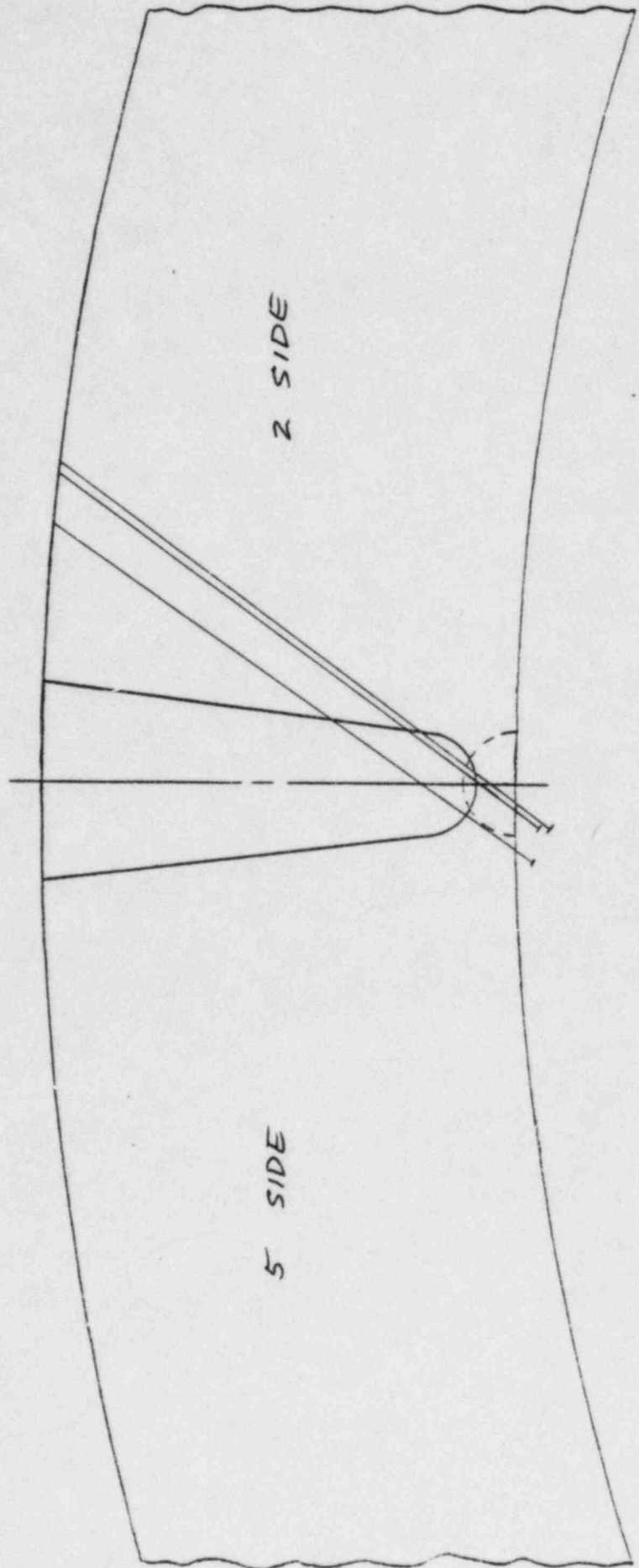


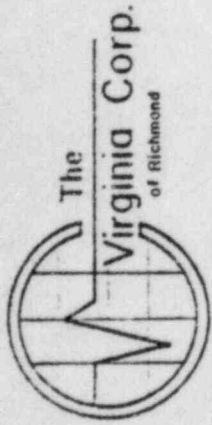
INDICATION NO. 3



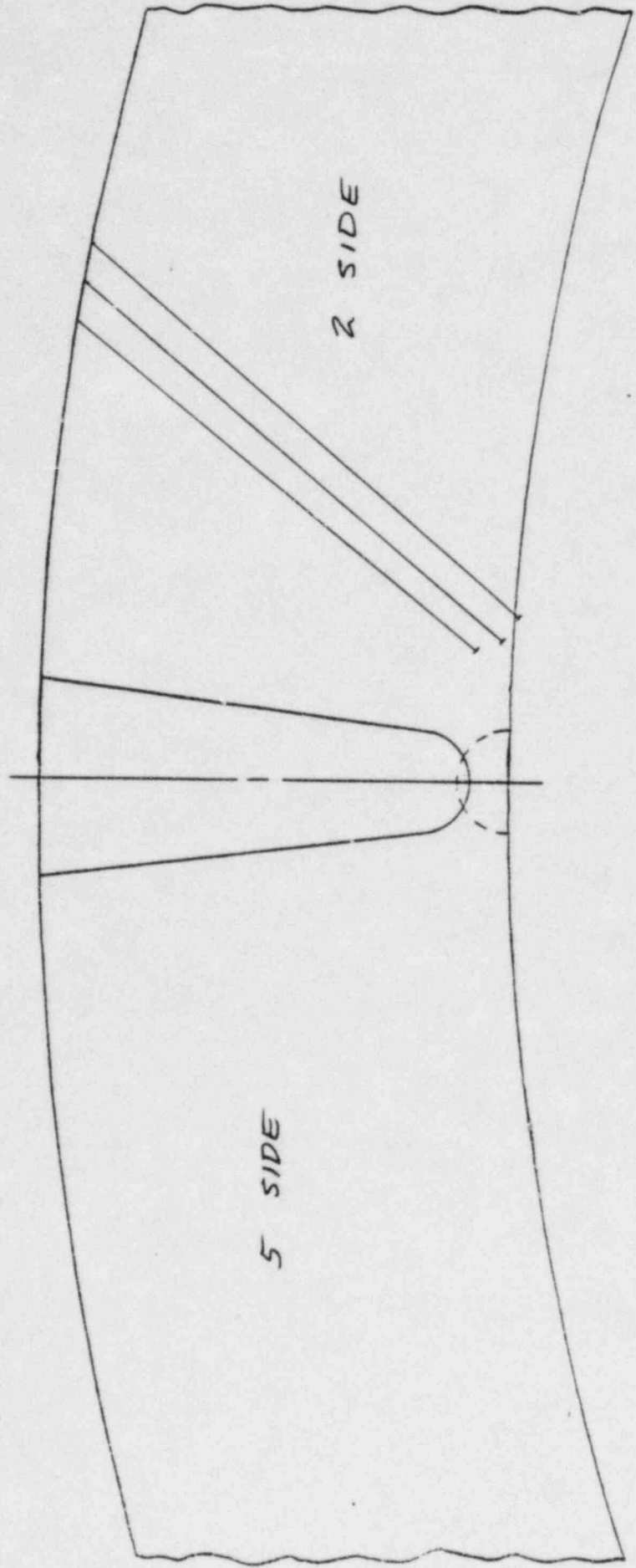


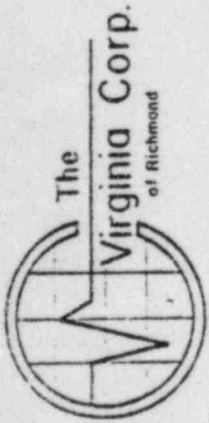
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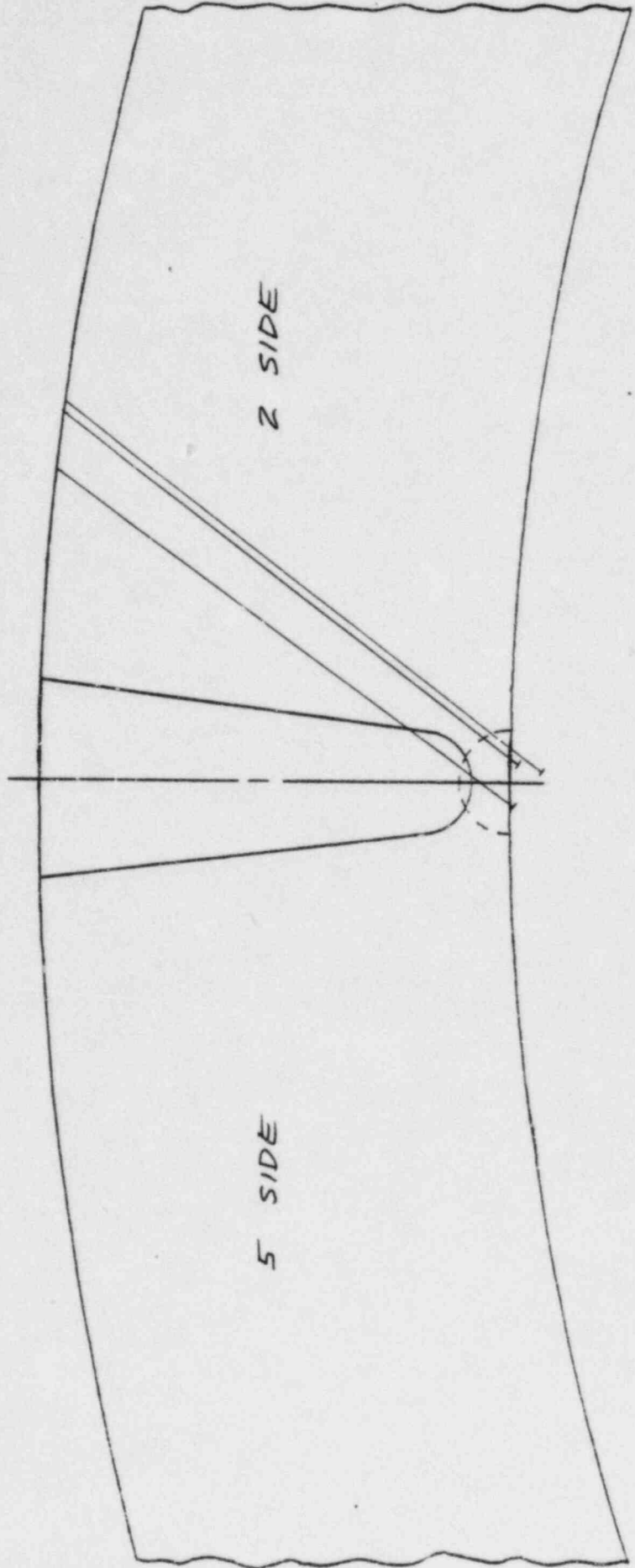


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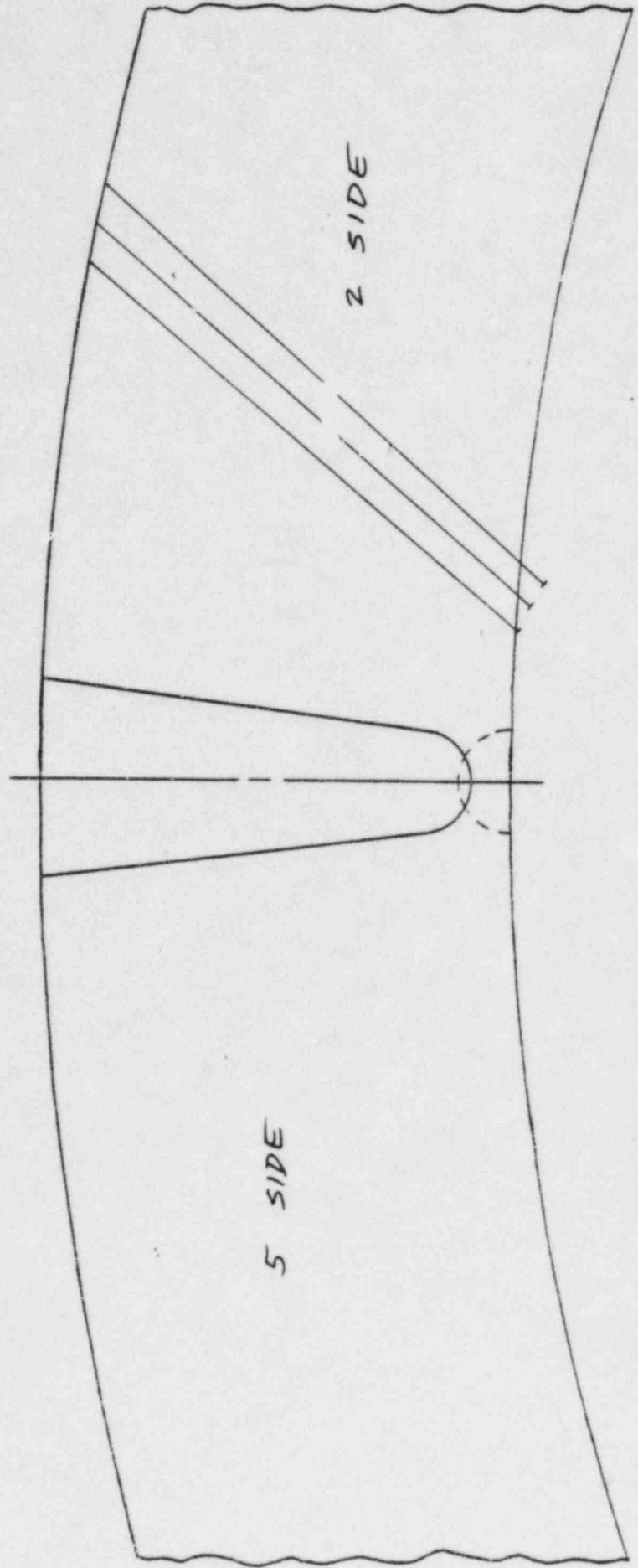


INDICATION NO. 6





INDICATION NO. 7





Ultrasonic Examination Report *D. Payne ANEL 5/26/82*

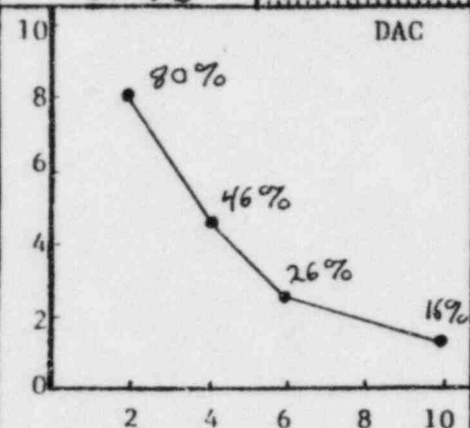
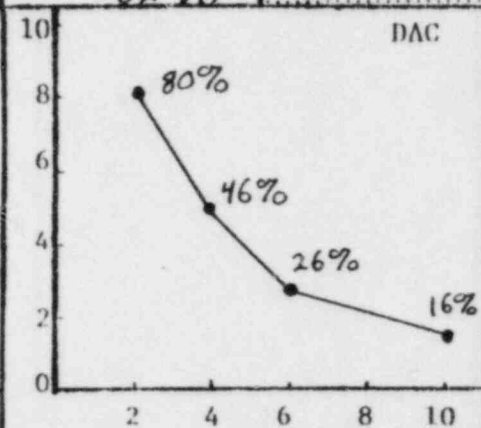
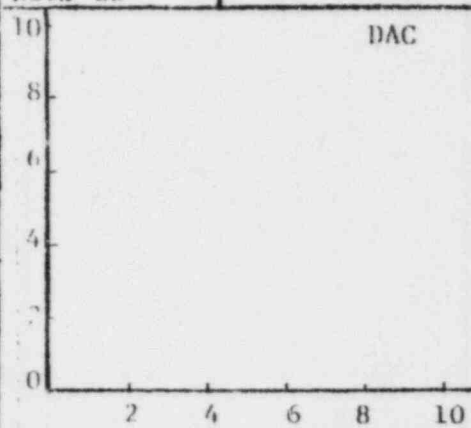
Customer <i>LP+L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>		Loop/Zone <i>1 9</i>		Iso/Drawing No. <i>ZONE 9 REV-2 FC-2 3</i>	
Procedure <i>6L 2</i> <i>ISI 2.3 REV-0 FC-1</i>		Exam Surface <i>OD</i>		Examiner/Level <i>Navy Longenecker II</i>		VGR Supervisor <i>Daniel J. Gens</i>		Date <i>5-18-82</i>	
Component/Piping System <i>COLD LEG - STEAM GEN. 1 TO PUMP 1B</i>				Pipe Size <i>36"</i>		Weld Type <i>BUTT</i>		Cal. Block # <i>UT-6</i>	
						Couplant: <i>SONOTRACE</i>		Type <i>40</i> Batch No. <i>819</i>	

Continuation Sheet Attached
 Yes No

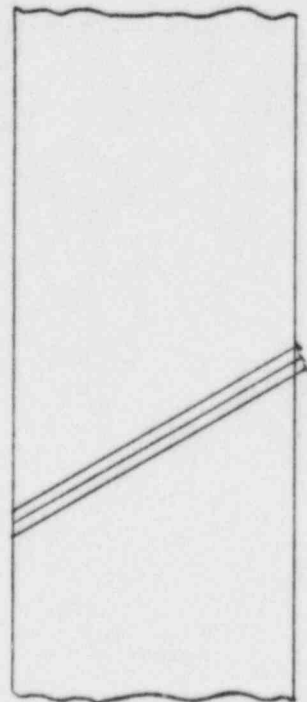
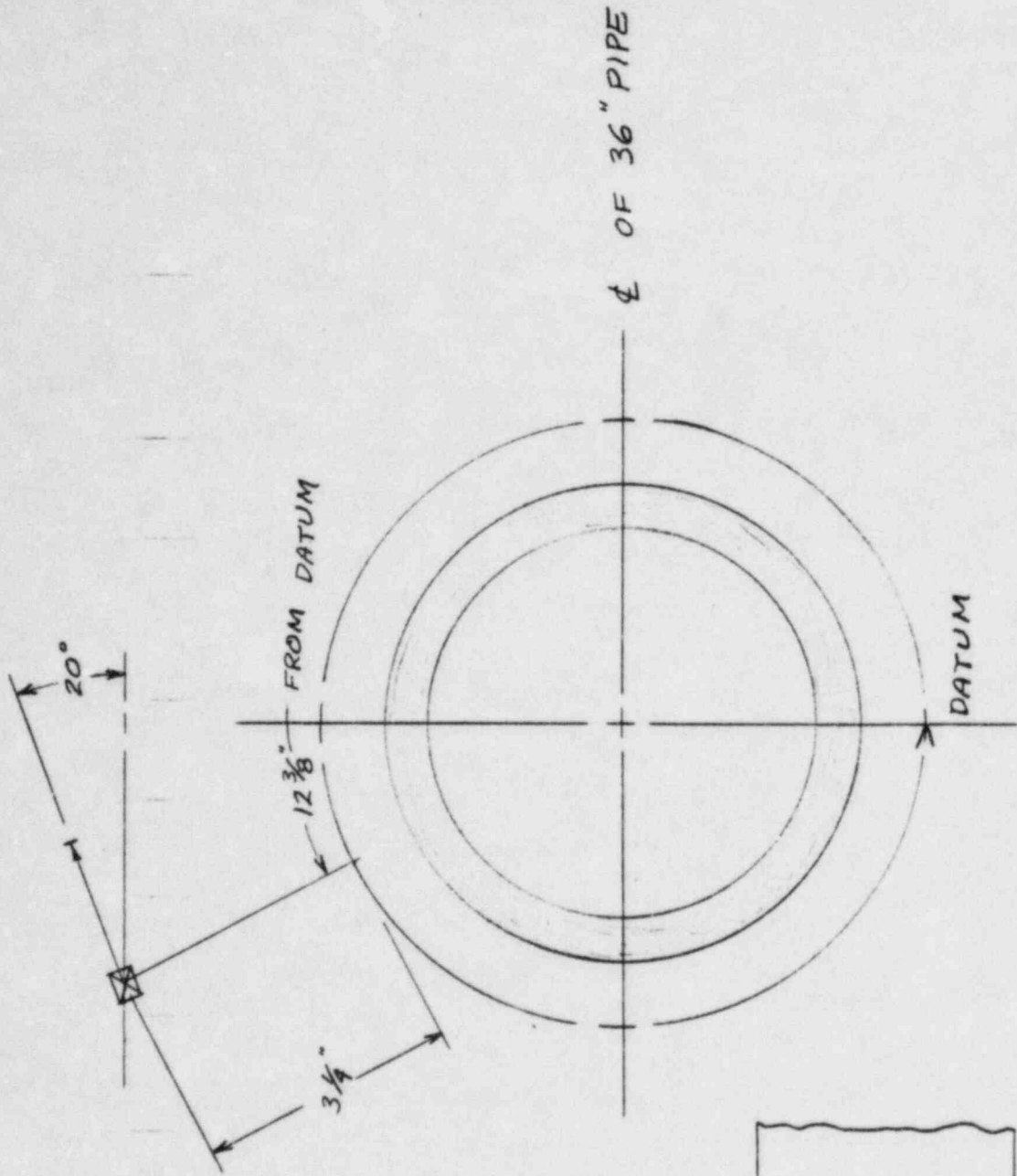
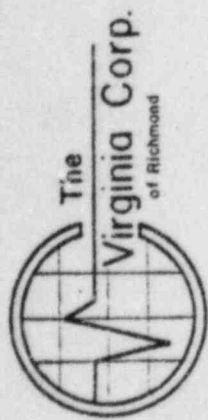
Field Changes:
 Yes No
 Yes, Number *6L FC-1 2*

Transducer			Instrument		
	<i>30°</i>	<i>45°</i>	<i>60°</i>	Mfg.	<i>SONIC</i>
S/N	<i>522935</i>	<i>NA</i>	<i>NA</i>	S/N	<i>01610E</i>
Size	<i>.5"</i>			Model	<i>MARK I</i>
Frequency	<i>2.25MHz</i>			RepRate	<i>1K</i>
Beam Angle	<i>30°</i>			Reject	<i>OFF</i>
				Filter	<i>H1</i>
				Damp	<i>MIN</i>
				Coax	<i>12'</i>
				Freq.	<i>2</i>
				Video	<i>NORM</i>

Calibration 0°			2 & 5 Scan			7 & 8 Scan			Calibration Checks									
Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>	<i>1/2</i>	<i>1 3/32</i>	<i>1 1/32</i>	<i>80%</i>	<i>2.0</i>	<i>1/2</i>	<i>1 3/32</i>	<i>1 1/32</i>	<i>2:40</i>	<i>5:00</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>46%</i>	<i>4.0</i>	<i>1 3/32</i>	<i>2 1/32</i>	<i>1 1/32</i>	<i>46%</i>	<i>4.0</i>	<i>1 3/32</i>	<i>2 1/32</i>	<i>1 1/32</i>						
<i>3/4 T</i>			<i>26%</i>	<i>6.0</i>	<i>1 19/32</i>	<i>1 1/32</i>	<i>1 1/32</i>	<i>26%</i>	<i>6.0</i>	<i>1 19/32</i>	<i>1 1/32</i>	<i>1 1/32</i>						
<i>5/4 T</i>			<i>16%</i>	<i>10.0</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>16%</i>	<i>10.0</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>						
Ref., dB			<i>62 DB</i>					<i>62 DB</i>										



Additional Comments/Sketch





D. Payne ANIZ 6/2/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP31</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1, 9</i>
Component/Piping System <i>REACTOR COOLANT</i>	Examiner/Level <i>BURLINGAME II</i>	Date <i>5-22-82</i>	
Procedure <i>ISI-2.5 REV. 0</i>	Iso/Drawing No. <i>WELM 3 ZONE 9, REV. 3, EC</i>	VCR Supervisor <i>Don Williams</i>	Continuation Sheet Attached [] Yes [X] No

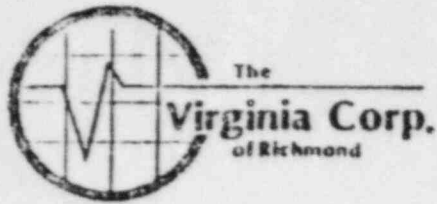
Equipment

Instrument		Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>AEROTECH</i>	Size <i>1.0"</i>	Cal. Block <i>UT-15</i>	Cal. Block
Model <i>ETS-MK1</i>	Freq. <i>1 MHz</i>	Serial No. <i>L19614</i>	Range Cal. <i>3/4" = 6 DIV.</i>	Calibration Checks
S/N <i>780836</i>	Coax. Cable <i>12'</i>	Gain <i>68dB</i>		<i>0800</i>
Reject <i>OFF</i>				<i>1045</i>
Damp. <i>MIN</i>				<i>1245</i>
Freq. <i>1 MHz</i>				<i>1630</i>
Rep. Rate <i>1000</i>				
Filter <i>OFF</i>				
Video <i>NORMAL</i>				
Couplant <i>SONOTRACE 40 #8119</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>09-017</i>	<i>12</i>	<i>3.59</i>	<i>3.28</i>	<i>4.06</i>					
	<i>2</i>	<i>3.75</i>	<i>3.32</i>	<i>4.06</i>					
	<i>4</i>	<i>3.86</i>	<i>3.28</i>	<i>4.06</i>					
	<i>6</i>	<i>3.59</i>	<i>3.28</i>	<i>4.06</i>					
	<i>8</i>	<i>3.57</i>	<i>3.28</i>	<i>4.06</i>					
<i>09-016</i>	<i>10</i>	<i>3.43</i>	<i>3.32</i>	<i>4.06</i>					
	<i>12</i>	<i>3.43</i>	<i>3.75</i>	<i>3.28</i>					
	<i>2</i>	<i>3.57</i>	<i>3.35</i>	<i>3.32</i>					
	<i>4</i>	<i>3.35</i>	<i>3.28</i>	<i>3.28</i>					
	<i>6</i>	<i>3.20</i>	<i>3.28</i>	<i>3.28</i>					
	<i>8</i>	<i>3.28</i>	<i>3.35</i>	<i>3.28</i>					
	<i>10</i>	<i>3.35</i>	<i>3.35</i>	<i>3.32</i>					

Sketch/Identification



D. Payne ANE I 6/17

Ultrasonic Examination Report

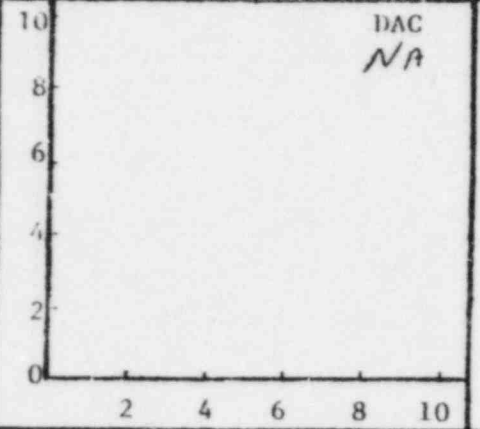
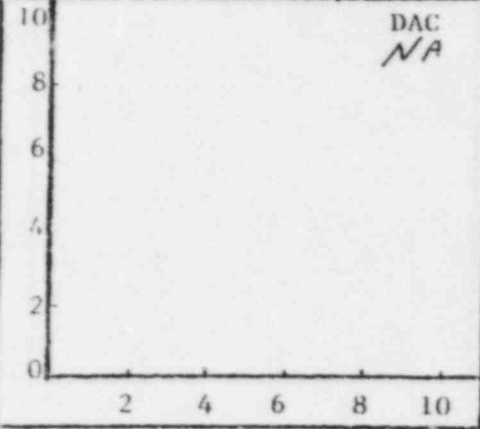
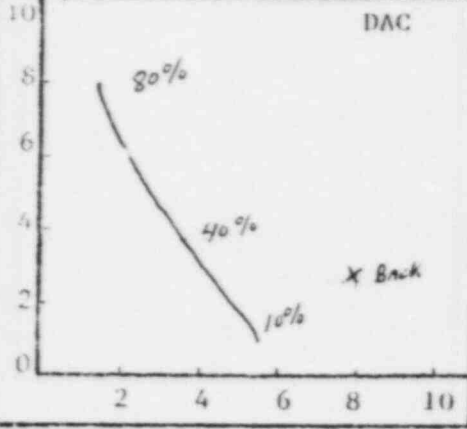
Customer LP+L	Plant Waterford	Unit # 3	Loop/Zone 119	Iso/Drawing No. ZONE 9 Rev. 2 EC3
Procedure IST-2.8 Rev. 0	Exam Surface OD	Examiner/Level RUBINIA GME III	VCR Supervisor Donal Jones	Date 5-22-82
Component/Piping System Reactor Coolant	Pipe Size 30" 3/4	Weld Type BUTT	Cal. Block UT-15	Couplant: Type Sonve 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 IF Yes, Number **FL-10**

Transducer	Instrument		
	0°	45°	60°
S/N	L19814	NA	NA
Size	1"		
Frequency	1 MHz		
Beam Angle	0°		
Mfr.	SONIC	Model	MARK I
S/N	780836	RepRate	14
Reject	off	Filter	off
Damp	MIN.	Coax	6'
Freq.	1 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	80%	1.8	NA	NA	NA		NA	NA	NA		0805	1050	NA	NA	NA	NA
1/2 T	40%	3.8									1250	1630				
3/4 T	10%	5.8														
Back	35%	8.0														
Ref. dB	68 dB		NA				NA									



Additional Comments/Sketch



Ultrasonic Examination Report

4 of 7

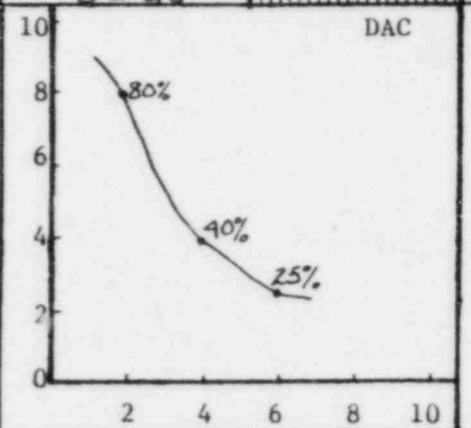
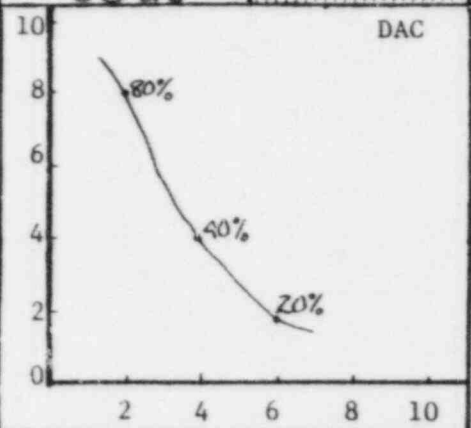
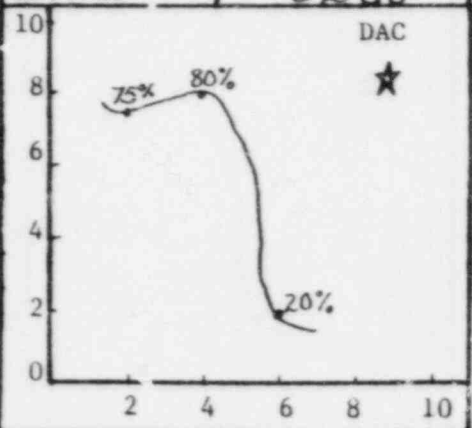
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 119	Iso/Drawing No. ZONE 9 REV. 2 F.C. 3
Procedure F.C. 1	Exam Surface O.D.	Examiner/Level <i>R. Pauling</i>	VCR Supervisor <i>Daniel Jensen</i>	Date 5-22-82
Component/Piping System REACTOR COOLANT	Pipe Size 30" ID	Weld Type BUTT	Cal. Block UT-15	Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No *F.C. 1*
 If Yes, Number

Transducer	2E5 (CS)	2E5 (SS)	7E8	Instrument			
S/N	T8468	T8468	V3035	Mfr.	SONIC	Model	FTSMK1
Size	1.0"	1.0"	1.0"	S/N	01610E	RepRate	1000
Frequency	1MHz	1MHz	1MHz	Reject	3	Filter	OFF
Beam Angle	45°L	45°L	45°L	Damp	4.5	Coax	6'
				Freq.	1MHz	Video	NORM

2 & 5 Scan (CS)			2 & 5 Scan S.S.			7 & 8 Scan			Calibration Checks									
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	75%	2.0	80%	2.0	N/A	N/A	N/A	80%	2.0	N/A	N/A	N/A			12:45	16:30		
1/2T	80%	4.0	40%	4.0				40%	4.0									
3/4T	20%	6.0	20%	6.0				25%	6.0									
Ref. dB	52 db		55 db						56 db									

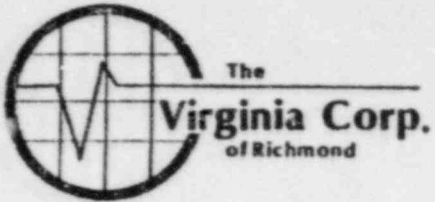


Additional Comments/Sketch

- ★ THE SHAPE OF THE DAC CURVE IS DUE TO THE RATIO OF CARBON STEEL METAL PATH TO THE STAINLESS STEEL METAL PATH (OR INCONEL)
- SCANNING SENSITIVITY WAS 10db ABOVE THE REFERENCE SENSITIVITY.
- SEPERATE TRANSDUCERS WERE USED FOR AXIAL AND CIRC. SCANS

D. Ryme ANE# 6/2/82

Ultrasonic Examination Report - Continuation Sheet



Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1 9	Iso/Drawing No. ZONE 9 RELO 2 FC-9
Procedure ASME FC+G SI-2.8 RELO 9	Exam Surface OD	Examiner/Level BURLINGAME JR	VCR Supervisor Daniel Dena	Date 5/22/82
Component/Piping System 45 REACTOR COOLANT	Pipe Size 30" ID	Weld Type BUTT	Cal. Block UT-15	Couplant: Type & Batch # SCOTTRACK 40 th B119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
09	C17	NA	PAR	PAR	PAR	NA	OD MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETRY
09	C16	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETRY
												SEE ATTACHMENT FIG-1

TYR PUMP TO SAFE END TO PIPE
CONFIGURATION

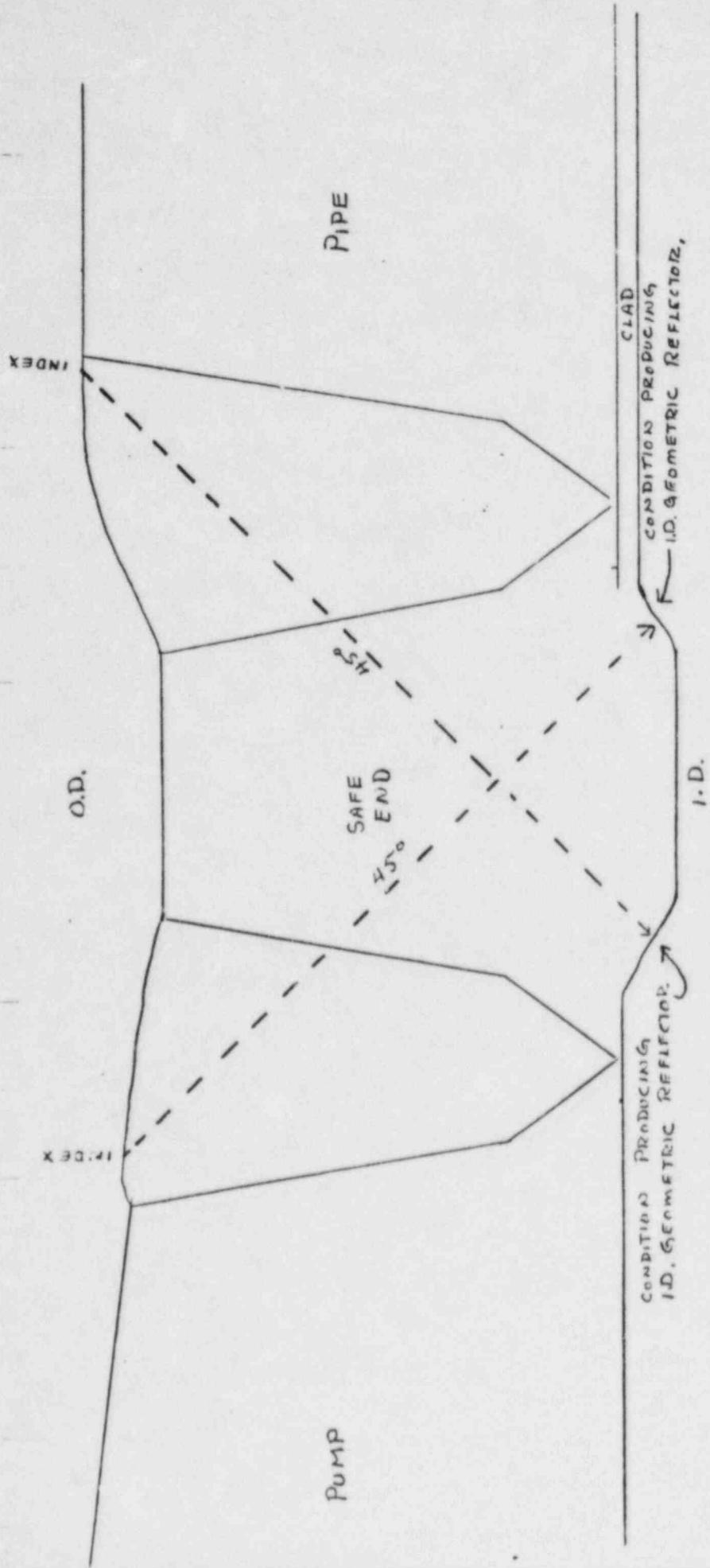


FIG. 1

5-25-82
[Signature]



To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 4, REG. 2, FC-3

09-017 ALL SCANS WERE RESTRICTED BY O.D. MISMATCH BY THE PUMP TO SAFE END WELD AND SAFE END TO PIPE WELD. SCAN 5 WAS ALSO RESTRICTED BY A 1" LINE COMING OFF OF THE PUMP NOZZLE.

GOOD ROOT AREA COVERAGE WAS OBTAINED WITH THE 2 AND 5 DIRECTION SCANS.

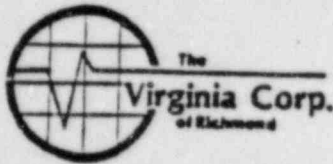
SCANS 7 & 8 WERE LIMITED BY ABOUT 15% FOR THE COVERAGE AREA.

09-016 (DM WELD) ALL SCANS WERE RESTRICTED BY O.D. MISMATCH BY THE PIPE TO SAFE END WELD AND THE SAFE END TO PUMP WELD.

GOOD ROOT AREA COVERAGE WAS OBTAINED WITH THE 2 AND 5 DIRECTION SCANS.

SCANS 7 & 8 WERE LIMITED BY ABOUT 15% FOR THE COVERAGE AREA.

S. J. [Signature]



D. Payne ANZI 7/19/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>L.P. & L.</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1B/09</i>
Component/Piping System <i>Cold Leg - RIA 1B to 5/6 1</i>	Examiner/Level <i>Michael W. Blew II</i>	Date <i>7-10-82</i>	
Procedure <i>ISI-25, Rev. 0, F.C.C.</i>	Iso/Drawing No. <i>Zone 9, Rev. 2, F.C.C.</i>	VCR Supervisor <i>N. J. [Signature]</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Parametrics</i>	Size <i>.5"</i>	Cal. Block <i>UT-18</i>	
Model <i>Mark I</i>			Cal. Block <i>NA</i>	
S/N <i>01058E</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>2.135"</i>	
Reject <i>OFF</i>	Serial No. <i>84651</i>		Calibration Checks	
Damp. <i>Min.</i>			<i>In 1:15</i>	
Freq. <i>2.0 MHz</i>	Coax. Cable <i>6' Dual</i>		<i>Out 4:40</i>	
Rep. Rate <i>LR</i>				
Filter <i>Hi</i>	Gain <i>47 dB</i>			
Video <i>Norm.</i>				
Couplant <i>Sonotrace 80 SN 8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>09-012</i>	<i>12</i>	<i>1.068"</i>	<i>.854"</i>	<i>1.281"</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>09-012</i>	<i>2</i>	<i>1.110"</i>	<i>.875"</i>	<i>1.281"</i>					
<i>09-012</i>	<i>4</i>	<i>1.068"</i>	<i>.854"</i>	<i>1.281"</i>					
<i>09-012</i>	<i>6</i>	<i>1.068"</i>	<i>.847"</i>	<i>1.324"</i>					
<i>09-012</i>	<i>8</i>	<i>1.068"</i>	<i>.854"</i>	<i>1.281"</i>					
<i>09-012</i>	<i>10</i>	<i>1.068"</i>	<i>.854"</i>	<i>1.281"</i>					

Sketch/Identification



Ultrasonic Examination Report *D. Payne ANEE 7/19/82*

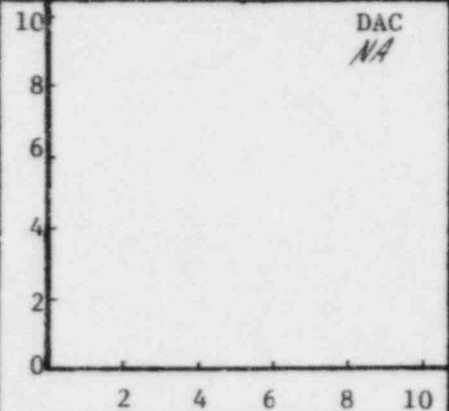
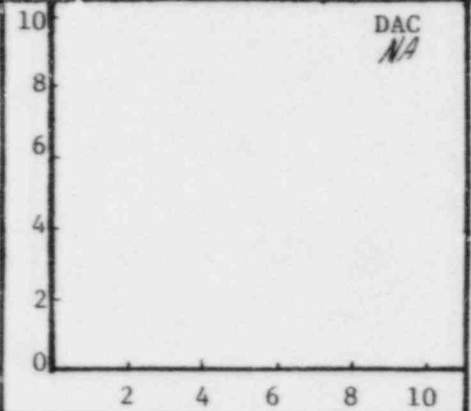
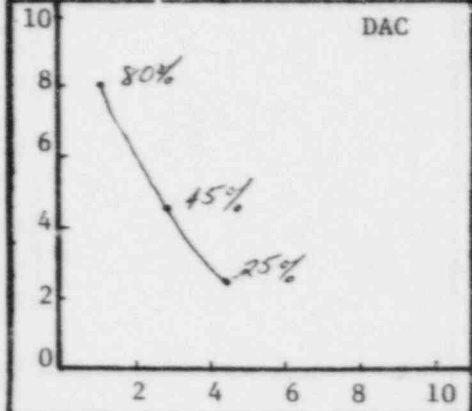
Customer <i>L.P.&L.</i>		Plant <i>Waterford</i>		Unit <i>#3</i>	Loop/Zone <i>1A/09</i>	Iso/Drawing No. <i>Zone 9, Rev. 2, F.C. 34</i>	
Procedure <i>TSI-28 Rev. 1, F.C. 1</i>		Exam Surface <i>O.D.</i>	Examiner/Level <i>Michael W. Blaw II</i>		VGR Supervisor <i>Daniel P. Denson</i>		Date <i>7-10-82</i>
Component/Piping System <i>Cold Leg - RCP 1B to Steam Generator 1</i>			Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: <i>Sonotrace Type 40</i> Batch No. <i>8124</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *F.C. 1*

	Transducer	0°	45°	60°	Instrument			
	S/N	<i>44651</i>	<i>NA</i>	<i>NA</i>	Mfr.	<i>Sonic</i>	Model	<i>Mark I</i>
	Size	<i>.5"</i>			S/N	<i>01058E</i>	RepRate	<i>1K</i>
	Frequency	<i>2.25MHz</i>			Reject	<i>OFF</i>	Filter	<i>Hi</i>
Beam Angle	<i>0°</i>			Damp	<i>Min.</i>	Coax	<i>6' Dual</i>	
				Freq.	<i>2.0MHz</i>	Video	<i>Norm.</i>	

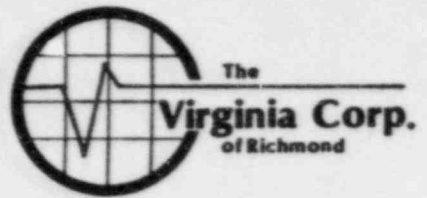
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
			<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1:15</i>	<i>4:40</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/4 T</i>	<i>80%</i>	<i>1.5</i>															
<i>1/2 T</i>	<i>45%</i>	<i>2.8</i>															
<i>3/4 T</i>	<i>25%</i>	<i>4.3</i>															
Ref. dB	<i>47dB</i>																



Additional Comments/Sketch

D. Payne ANZI 7/19/82

Ultrasonic Examination Report - Continuation Sheet



Customer <i>L.P. & L.</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/ Zone <i>1B/ 9</i>	Iso/Drawing No. <i>new</i>
Procedure <i>ISE-28 Rev. 1, F.C. 1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Michael W. Bla II</i>	VCR Supervisor <i>Dennis Jensen</i>	Date <i>7-10-82</i>
Component/Piping System <i>Cold Log - RCP 1B to Steam Generator 1</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: Type & Batch # <i>Sonotrace 40, Batch 8124</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>00-012</i>	<i>Yes</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>Yes</i>	<i>NA</i>	<i>Smooth</i>	<i>Ground Smooth</i>	<i>NI</i>	<i>NI</i>	<i>NA</i>



Ultrasonic Examination Report

Customer <i>LP&L</i>		Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>119</i>	Isos/Drawing No. <i>Zone 9 Rev 2 FL 3/4</i>
Procedure <i>LC-2</i> <i>ISI 2.8 Rev 1</i>	Exam Surface <i>OD</i>	Examiner/Level <i>Richard J. Johnson</i>		VCR Supervisor <i>W. G. ...</i>	Date <i>7/15/82</i>
Component/Piping System <i>SAGGON to RLP 1B</i>		Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-18</i>	Couplant: <i>Type 40</i> Batch No. <i>8/24</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *2*

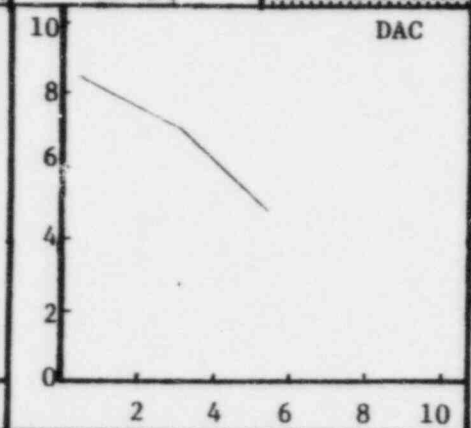
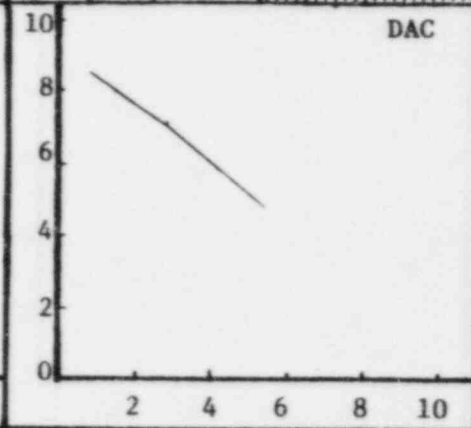
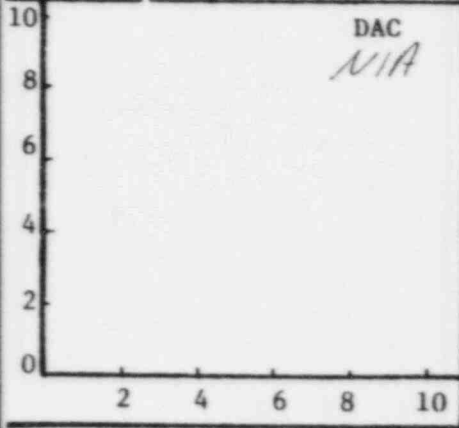
Transducer	30°	45°	60°	Instrument			
	S/N <i>607150</i>	<i>N/A</i>	<i>N/A</i>	Mfrg.	<i>Sonic</i>	Model	<i>MARK I</i>
	Size <i>.50"</i>			S/N	<i>05473E</i>	RepRate	<i>1X</i>
	Frequency <i>2.25 MHz</i>			Reject	<i>3</i>	Filter	<i>H.</i>
Beam Angle	<i>30°</i>			Damp	<i>Min</i>	Coax	<i>6846-MD</i>
				Freq.	<i>2.0 MHz</i>	Video	<i>Norm</i>

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	30°		45°		60°	
											In	Out	In	Out	In	Out
<i>1/4T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>1.5</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>1.5</i>	<i>N/A</i>	<i>N/A</i>	<i>8:00</i>	<i>10:53</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>1/2T</i>			<i>70%</i>	<i>3.0</i>			<i>70%</i>	<i>3.0</i>								
<i>3/4T</i>			<i>55%</i>	<i>4.5</i>			<i>55%</i>	<i>4.5</i>								
Ref. dB	<i>N/A</i>		<i>62</i>				<i>62</i>									



Additional Comments/Sketch
Calibration for carbon steel side



Ultrasonic Examination Report

D. Payne ANZI 7/19/82

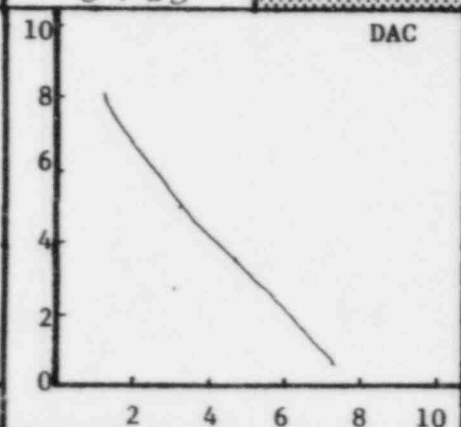
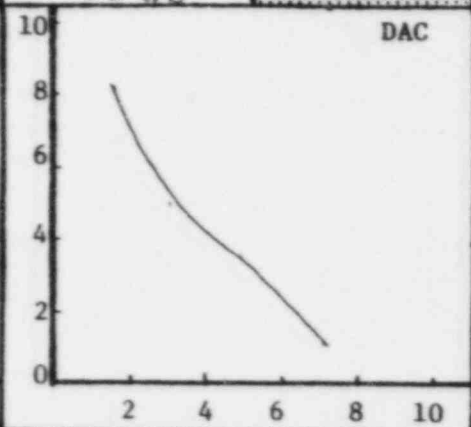
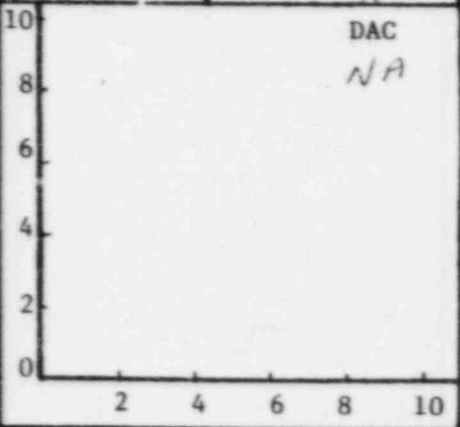
Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>#3</i>	Loop/Zone <i>1/9</i>	Iso/Drawing No. <i>ZONE 9 Rev 2 FC 4</i>
Procedure <i>FC 2 ISI-2.8 Rev 1</i>	Exam Surface <i>00</i>	Examiner/Level <i>Daniel J. Felt</i>	VGR Supervisor <i>Denise Demer</i>	Date <i>7-15-82</i>
Component/Piping System <i>ST. GEN #1 To RCP 1B</i>	Pipe Size <i>3.5"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-18</i>	Couplant: Type <i>Sono 1/4</i> Batch No. <i>8121</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *FC-2*

	Transducer	<i>30°</i>	<i>45°</i>	<i>60°</i>	Instrument			
	S/N	<i>607150</i>	<i>NA</i>	<i>NA</i>	Mfr.	<i>SONIC</i>	Model	<i>MARK I</i>
	Size	<i>.50"</i>			S/N	<i>05473 #</i>	ReRate	<i>1K</i>
	Frequency	<i>2.25 MHz</i>			Reject	<i>3</i>	Filter	<i>Hi</i>
Beam Angle	<i>30°</i>			Damp	<i>MIN</i>	Coax	<i>6'BNL TO MO</i>	
				Freq.	<i>2.0 MHz</i>	Video	<i>NORM</i>	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>7:50</i>	<i>10:53</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>50%</i>	<i>3.0</i>				<i>50%</i>	<i>3.0</i>									
<i>3/4 T</i>			<i>35%</i>	<i>4.5</i>				<i>35%</i>	<i>4.5</i>									
<i>LT</i>			<i>15%</i>	<i>6.5</i>				<i>10%</i>	<i>7.2</i>									
Ref. dB	<i>NA</i>		<i>63 dB</i>					<i>67 dB</i>										

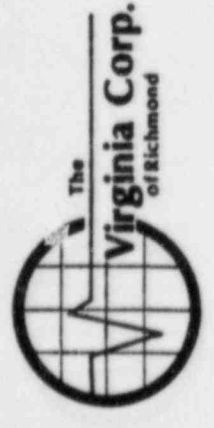


Additional Comments/Sketch
Calibration for austenetic side

7/19/82
D. Payne ANEI

Ultrasonic Examination Report - Continuation Sheet

Customer LP + L		Plant Waterford		Unit # 3		Loop/Zone 1/19		Iso/Drawing No. Zone 9 Rev. 2 E.C. 107		Date 7-15-82	
Procedure ISI-2.8 Rev. 10.1			Exam Surface OP			Examiner/Level D. Payne			VCR Supervisor S. C. ...		
Component/Piping System St. Ven. #1 To RCP 1A		Pipe Size 3.5"		Weld Type BUTT		Cal. Block Couplant: Type & Batch # UT-18 SonoTrace 40 Batch # 8124					



Weld No.	Base Metal Scan			Scan Direction			Inspection Limitations		Surface Condition		Examination Results		Remarks
	NA	PA	PAC	2	5	7 & 8	0	Weld	UT	Visual	UT	Visual	
09-013	NA	PA	PAC	2	5	7 & 8	0	Weld center	Smooth	UT	NI	SAT	N/A



The
Virginia Corp.
of Richmond

Magnetic Particle
Don Payne ANII 2/26/82
Examination Report

Customer <i>LP+L</i>		Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/10</i>
Procedure <i>151-4.3 Rev. 0</i>		Examiner/Level <i>David I. Fokun II</i>	VCR Supervisor <i>Don Payne</i>	Date <i>Feb. 25, 1982</i>
Component/Piping System <i>Reactor Vessel to R.C. Pump 1B</i>		ISO Drawing No. <i>Zone 10, Rev. 2 FC1</i>	Surface Condition <i>Ground</i>	
Type of Particles <u>Wet</u> <input checked="" type="checkbox"/> <u>Dry</u> <input checked="" type="checkbox"/> <u>Visible</u> <input type="checkbox"/> <u>Flourescent</u> <input type="checkbox"/>		Manufacturer <i>Magnaflux</i>	Type <i>8A-Red</i>	Batch Number <i>81M107</i>
Current <input checked="" type="checkbox"/> <u>AC</u> <input type="checkbox"/> <u>DC</u> <input type="checkbox"/> <u>HWDC</u>	Machine Mfr. <i>Parker Research</i>	Type/Model <i>DA-200 contour</i>	Serial No. <i>5801</i>	
Magnetization <input checked="" type="checkbox"/> <u>Continuous</u> <input type="checkbox"/> <u>Residual</u>	Coil <u>NA</u> Amps. <u>NA</u> No. Turns	Prods <u>NA</u> Spacing <u>NA</u> Amps.	Yoke <u>8"</u> Spacing	

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>10-009</i>		<i>✓</i>		<i>✓</i>	
<i>10-010-LA</i>		<i>✓</i>		<i>✓</i>	
<i>10-011-LB</i>	<i>Partial exam. Area not examined is 4.5" (15" (7direction) to 27" (7direction))</i>	<i>✓</i>		<i>✓</i>	
<i>10-012</i>		<i>✓</i>		<i>✓</i>	
<i>10-013</i>	<i>Partial exam. Area not examined is 30" (7direction) to 58" (7direction)</i>	<i>✓</i>		<i>✓</i>	



The
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of Richmond

Liquid Penetrant

D. Payne ANII 4/22/82
Examination Report

Customer <i>LPEL</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>	Loop/Zone <i>1B/10 R.2 FC.1</i>		
Procedure <i>ISI 3.1 R.O FC.2</i>		Examiner/Level <i>Richard N. Lee II Robert J. Overstreet</i>			Date <i>4-15-82</i>		
Component/Piping System <i>Cold Leg RCP to Reactor</i>		ISO Drawing No. <i>10 R.2 FC.1</i>		VCR Supervisor <i>Manuel Jensen</i>			
	Manufacturer	Type	Batch No.				
Penetrant	<i>SHERWIN</i>	<i>DUBL-CHEK</i>	<i>47L015</i>				
Developer	<i>SHERWIN</i>	<i>DUBL-CHEK</i>	<i>129FG</i>				
Remover	<i>SHERWIN</i>	<i>DUBL-CHEK</i>	<i>112C4</i>				
Weld Number	Comments			PT Results		VT Results	
				NRI	RI	SAT.	UNSAT.
<i>10-012B</i>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>10-013</i>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



The
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Liquid Penetrant

D. Payne ANII 4/23/82
Examination Report

Customer LP+L		Plant Waterford		Unit 3	Loop/Zone 1/10	
Procedure ISI 3.1 R.O.F.C. 2		Examiner/Level Richard D. De... I Robert Chesnut I			Date 4-22-82	
Component/Piping System Cdd leg-Reactor vessel to REP 13		ISO Drawing No. Zone 10 R. 2 F.C. 1		VCR Supervisor Daniel Jones		
	Manufacturer	Type	Batch No.			
Penetrant	Sherwin	Dubl-Check	474015			
Developer	Sherwin	Dubl-Check	129F6			
Remover	Sherwin	Dubl-Check	112C4			
Weld Number	Comments	PT Results		VT Results		
		NRI	RI	SAT.	UNSAT.	
10-006		✓		✓		
10-008		✓		✓		



Don Payne ANII 3/4/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>L.P.H.</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/10</i>
Component/Piping System <i>Reactor Vessel + R.G. Pump 1B</i>	Examiner/Level <i>David J. Johnson III</i>	Date <i>Jan 27, 1982</i>	
Procedure <i>1312.5 Rev. 0</i>	Isd/Drawing No. <i>Zone 10 Rev 2</i>	VCR Supervisor <i>David Johnson</i>	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

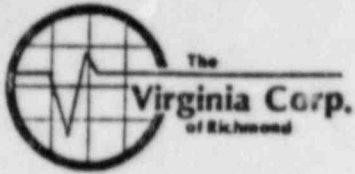
Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>KB-Aero</i>	Size <i>.50"</i>	Cal. Block <i>UT-5</i>	
Model <i>Mark I</i>			Cal. Block <i>NA</i>	
S/N <i>05304E</i>	Freq. <i>2.25 Mhz</i>		Range Cal. <i>5"</i>	
Reject <i>OFF</i>			Calibration Checks	
Damp. <i>Min.</i>	Serial No. <i>F18164</i>		<i>In 1:20</i>	
Freq. <i>2 Mhz</i>	Coax. Cable <i>6' BNC + BNC</i>		<i>Out 4:00</i>	
Rep. Rate <i>1K</i>	Gain <i>61dB</i>			
Filter <i>OFF</i>				
Video <i>Norm</i>				
Couplant <i>Sonotrace 40 # 817</i>				

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
10-013	12	3.27"		10-013	5-12	3.27"	
10-013	2	3.27"		10-013	5-2	3.27"	
10-013	4	3.20"		10-013	5-4	3.20"	
10-013	6	3.13"		10-013	5-6	3.13"	
10-013	8	3.60"		10-013	5-8	3.20"	
10-013	10	3.27"		10-013	5-10	3.20"	
10-013	2-12	3.33"					
10-013	2-2	3.27"					
10-013	2-4	3.20"					
10-013	2-6	3.27"					
10-013	2-8	3.20"					
10-013	2-10	3.20"					

Sketch/Identification



Ultrasonic Data Sheet
 for D. Payne ANII 3/4/82
 Thickness Measurement
 Continuation Page 1 of 4

Customer <i>L.P.+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1110</i>
Component/Piping System <i>Reactor Vessel to R.C. Pump 10</i>	Examiner/Level <i>David L. Johnson III</i>	Date <i>Jan 77 1982 Feb. 27, 1982</i>	
Procedure <i>ISI 2.5 Rev. 0</i>	Iso/Drawing No. <i>Rev 2 Fc. 1</i> <i>200010 Rev. 0</i>	VCR Supervisor <i>Donal Jones</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
10-012	12	3.53"		10-009	12	3.4"	
10-012	2	3.53"		10-009	2	3.47"	
10-012	4	3.40"		10-009	4	3.47"	
10-012	6	3.40"		10-009	6	3.47"	
10-012	8	3.60"		10-009	8	3.67"	
10-012	10	3.53"		10-009	10	3.60"	
10-012	2-12	3.27"		10-009	2-12	3.27"	
10-012	2-2	3.27"		10-009	2-2	3.33"	
10-012	2-4	3.20"		10-009	2-4	3.33"	
10-012	2-6	3.13"		10-009	2-6	3.53"	
10-012	2-8	3.20"		10-009	2-8	3.47"	
10-012	2-10	3.20"		10-009	2-10	3.53"	
10-012	5-12	3.60"		10-009	5-12	3.47"	
10-012	5-2	3.60"		10-009	5-2	3.33"	
10-012	5-4	3.60"		10-009	5-4	3.53"	
10-012	5-6	3.53"		10-009	5-6	3.33"	
10-012	5-8	3.53"		10-009	5-8	3.33"	
10-012	5-10	3.47"		10-009	5-10	3.33"	

Sketch/Identification



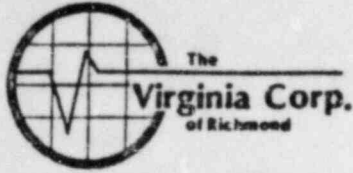
Ultrasonic Data Sheet
 for Don Payne ANII 3/4/82
 Thickness Measurement
 Continuation Page 2 of 4

Customer <i>L, P & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1110</i>
Component/Piping System <i>Reactor Vessel to R.C. Pump 1B</i>	Examiner/Level <i>Daniel T. Fokan III</i>	Date <i>Feb. 27, 1982</i>	
Procedure <i>151 2.5 Rev. 0</i>	Iso/Drawing No. <i>Zone 10 Rev. 2 F.C. 1</i>	VCR Supervisor <i>Daniel Jensen</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
10-011LB	3"W	3.60"	<i>Measurements were taken approx every 3" beginning at weld centerline</i>	10-011LB	63"W	3.53"	
10-011LB	6"W	3.60"		10-011LB	66"W	3.53"	
10-011LB	9"W	3.60"					
10-011LB	12"W	3.60"	<i>(2) MARK, for welds</i>	10-011LB	3" 2	3.53"	
10-011LB	15"W	3.60"		10-011LB	6" 2	3.40"	
10-011LB	18"W	3.60"	<i>10-011LB & 10-011LA</i>	10-011LB	9" 2	3.47"	
10-011LB	21"W	3.60"		10-011LB	12" 2	3.47"	
10-011LB	24"W	3.53"		10-011LB	15" 2	3.47"	
10-011LB	27"W	3.53"		10-011LB	18" 2	3.40"	
10-011LB	30"W	3.53"		10-011LB	21" 2	3.47"	
10-011LB	33"W	3.53"		10-011LB	24" 2	3.40"	
10-011LB	36"W	3.53"		10-011LB	27" 2	3.40"	
10-011LB	39"W	3.53"		10-011LB	30" 2	3.47"	
10-011LB	42"W	3.60"		10-011LB	33" 2	3.53"	
10-011LB	45"W	3.60"		10-011LB	36" 2	3.47"	
10-011LB	48"W	3.60"		10-011LB	39" 2	3.47"	
10-011LB	51"W	3.60"		10-011LB	42" 2	3.47"	
10-011LB	54"W	3.60"		10-011LB	45" 2	3.40"	
10-011LB	57"W	3.60"		10-011LB	48" 2	3.47"	
10-011LB	60"W	3.60"		10-011LB	51" 2	3.47"	

Sketch/Identification



Ultrasonic Data Sheet
 for *Don Payne* ANII 3/4/82
 Thickness Measurement
 Continuation Page 3 of 4

Customer <i>L P & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/10</i>
Component/Piping System <i>Reactor Vessel to R.L. Pump 1B</i>	Examiner/Level <i>David T. Fokan / [Signature]</i>	Date <i>Feb. 27, 1981</i>	
Procedure <i>ISI 2.5 Rev 0</i>	Iso/Drawing No. <i>Zone 10 Rev. 2 F.C. 1</i>	VCR Supervisor <i>[Signature]</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
10-0114B	54" 2	3.47"		10-0114A	45" 5	3.47"	
10-0114B	57" 2	3.47"		10-0114A	48" 5	3.47"	
10-0114B	60" 2	3.53"		10-0114A	51" 5	3.47"	
10-0114B	63" 2	3.47"		10-0114A	54" 5	3.47"	
10-0114B	66" 2	3.60"		10-0114A	57" 5	3.53"	
				10-0114A	60" 5	3.53"	
10-0114B	3" 5	3.53"		10-0114A	63" 5	3.47"	
10-0114B	6" 5	3.53"		10-0114A	66" 5	3.53"	
10-0114B	9" 5	3.47"					
10-0114B	12" 5	3.47"		10-0104A	3" W	3.53"	
10-0114B	15" 5	3.47"		10-0104A	6" W	3.53"	
10-0114B	18" 5	3.47"		10-0104A	9" W	3.47"	
10-0114B	21" 5	3.47"		10-0104A	12" W	3.53"	
10-0114B	24" 5	3.47"		10-0104A	15" W	3.47"	
10-0114B	27" 5	3.47"		10-0104A	18" W	3.53"	
10-0114B	30" 5	3.47"		10-0104A	21" W	3.53"	
10-0114B	33" 5	3.47"		10-0104A	24" W	3.47"	
10-0114B	36" 5	3.47"					
10-0114B	39" 5	3.47"		10-0104A	3" 2	3.60"	
10-0114B	42" 5	3.47"		10-0104A	6" 2	3.53"	

Sketch/Identification



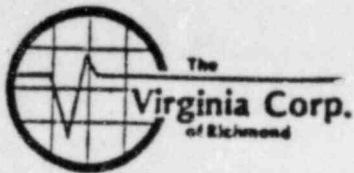
Ultrasonic Data Sheet
 for *Don Payne ANZI*
 Thickness Measurement *3/4/82*
 Continuation Page 4 of 4

Customer <i>LY+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1110</i>
Component/Piping System <i>Reactor Vessel to R.C. Pump 1B</i>	Examiner/Level <i>David T. Folan III</i>	Date <i>Jan 27, 1982</i>	
Procedure <i>ISI 2.5 Rev. 0</i>	Iso/Drawing No. <i>Zone 10 Rev. 2 F.C.1</i>	VCR Supervisor <i>Daniel F. Jones</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
<i>10-010LA</i>	<i>9" 2</i>	<i>3.47"</i>					
<i>10-010LA</i>	<i>12" 2</i>	<i>3.47"</i>					
<i>10-010LA</i>	<i>15" 2</i>	<i>3.47"</i>					
<i>10-010LA</i>	<i>18" 2</i>	<i>3.47"</i>					
<i>10-010LA</i>	<i>21" 2</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>24" 2</i>	<i>3.47"</i>					
<i>10-010LA</i>	<i>3" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>6" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>9" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>12" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>15" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>18" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>21" 5</i>	<i>3.60"</i>					
<i>10-010LA</i>	<i>24" 5</i>	<i>3.53"</i>					

Sketch/Identification



D. Payne ANIZ 4/23/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1 10
Component/Piping System COLD LEG R.V. TO R.C.P. 1B	Examiner/Level New Longenecker II	Date 4-16-82	
Procedure I.S.I. 2.5 R-0	Iso/Drawing No. ZONE 10 R-2 F.C.1	VCR Supervisor Donald Jones	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. SONIC	Mfgr. PANAMETRIC	Size 1. " DIA.	Cal. Block UT-6	
Model MARK 1			Cal. Block	
S/N 03704E	Freq. 2.25 MHZ.	Range Cal. 4.268"		
Reject OFF			Calibration Checks	
Damp. MIN.	Serial No. 48808	3:35 CAL. IN		
Freq. 2 MHZ.	Coax. Cable 12'	4:40 CAL. OUT		
Rep. Rate 1K				
Filter H1	Gain 35 dB			
Video NORM				
Couplant SONOTRACE 40 #8119				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
10-003LA	1'	3.329	3.329	3.329	10-004LB	1'	3.329	3.329	3.329
10-003LA	2'	3.329	3.372	3.329	10-004LB	2'	3.329	3.329	3.329
10-003LA	3'	3.287	3.372	3.372	10-004LB	3'	3.287	3.329	3.372
10-003LA	4'	3.372	3.329	3.329	10-004LB	4'	3.329	3.329	3.372
10-003LA	5'	3.415	3.329	3.329	10-004LB	5'	3.372	3.329	3.329
10-003LA	6'	3.457	3.329	3.287	10-004LB	6'	3.415	3.329	3.329
10-003LA	7'	3.415	3.329	3.287	10-004LB	7'	3.457	3.372	3.329
10-003LA	8'	3.500	3.329	3.329	10-004LB	8'	3.415	3.415	3.329
10-003LA	9'	3.415	3.287	3.329	10-004LB	9'	3.415	3.415	3.329
10-003LA	10'	3.415	3.329	3.372	10-004LB	10'	3.415	3.372	3.372
10-003LA	11'	3.415	3.372	3.329	10-004LB	11'	3.372	3.372	3.329
10-003LA	12'	3.457	3.500	3.500	10-004LB	12'	3.500	3.628	3.500

Sketch/Identification



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne AND 4/23/82*

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1 10	Iso/Drawing No. ZONE 10 REV-2 FC-1
Procedure ISI 2.3 REV-0 FC-1	Exam Surface O.D.	Examiner/Level <i>Nary Lopez</i>	VCR Supervisor <i>Daniel Dena</i>	Date 4-17-82
Component/Piping System COLD LEG R.V. to RCP 1B	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 10 Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number **FC-1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	48808	NA	NA	Mfr.	SONIC	Model	MARK I
	1.0"			S/N	03704E	RepRate	1K
	2.25 MHZ			Reject	OFF	Filter	H1
	0			Damp	MIN	Coax	12'
			Freq.	2	Video	NORM	

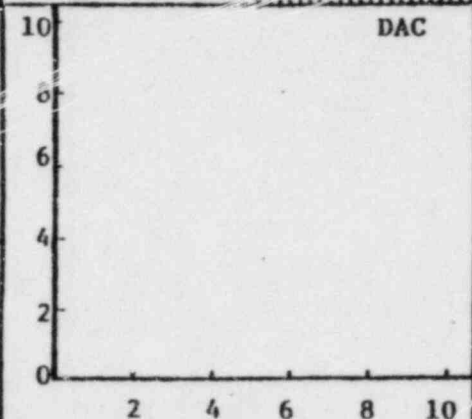
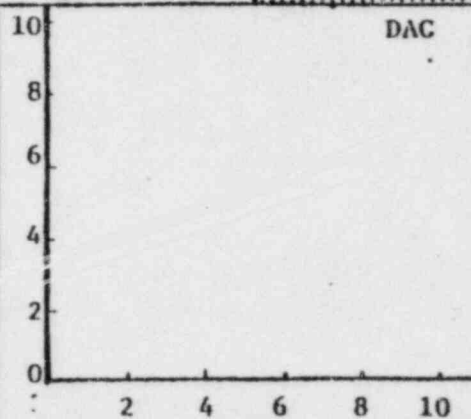
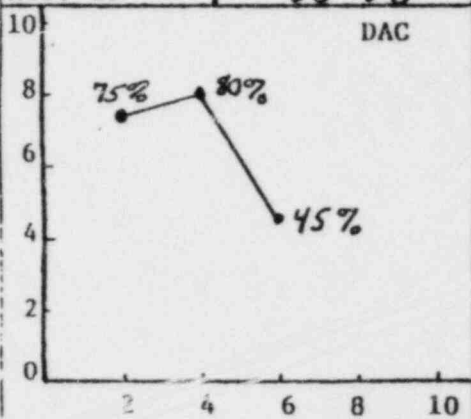
Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Checks

Calibration Reflecto. Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
					Scribe Line	50% DAC				Scribe Line	50% DAC		0°		45°		60°	
						In	Out				In	Out	In	Out				
1/4 T	75%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9:06	11:30	NA	NA	NA	NA
1/2 T	80%	4.0																
3/4 T	45%	6.0																
1 T		8.2																
Ref. dB	35 DB																	



Additional Comments/Sketch



The
Virginia Corp.
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Ultrasonic Examination Report *D. Payne ANII 4/23/82*

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone/ISO/Drawing No. 1B/10 Zone 10 Rev 2 F.C.1
Procedure IST 2.3 F.C.1	Exam Surface OD	Examiner/Level D. Payne	VCR Supervisor Daniel Dene
Component/Piping System Cold leg - R.V. to R.C.P. 1B	Pipe Size 36"	Weid Type Butt	Cal. Block UT-6
		Couplant: Sonatrace	Date 4-17-82
		Type 40	Batch No. 8119

Continuation Sheet Attached
Yes No

Field Changes:
Yes No
If Yes, Number **1**

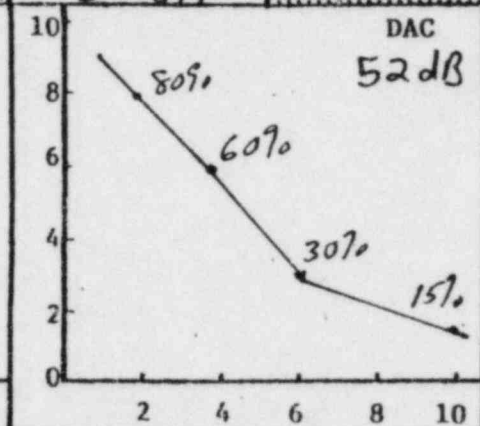
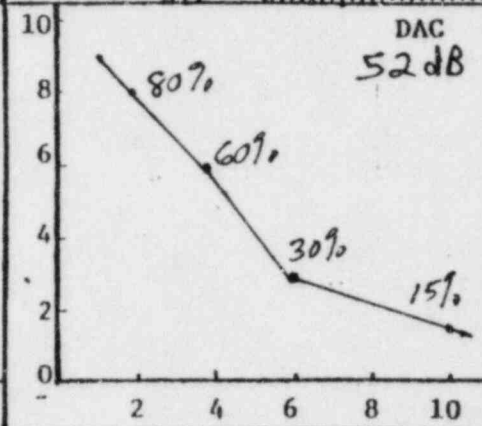
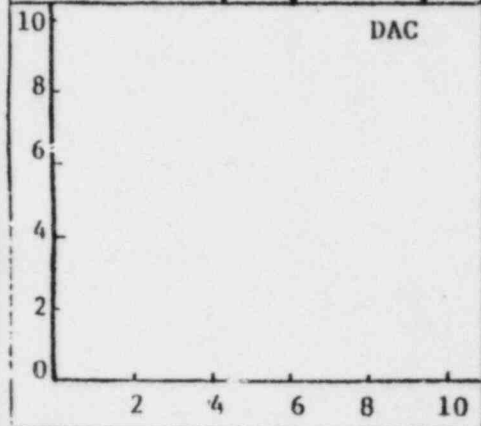
Transducer	0°	45°	60°	Instrument			
	S/N NA	522935	NA	Mfg.	Sonic	Model	FTS Mark I
	Size	.50"		S/N	05304E	RepRate	1K
	Frequency	2.25MHz		Reject	off	Filter	Hi
	Beam Angle	44.5°		Damp	Min	Coax	12'
				Freq.	2 Mhz	Video	Norm

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	3/8	3/4 1/2	80%	2.0	7/8	3/4 1/2	NA	NA	1045	1150	NA	NA
1/2 T			60%	4.0	1 1/4	1 1/2 2	60%	4.0	1 1/4	1 1/2 2						
3/4 T			30%	6.0	2 1/8	2 5/8 3 1/8	30%	6.0	2 1/8	2 5/8 3 1/8						
5/4 T			15%	10.0	4 1/2	4 3/4 5 1/4	15%	10.0	4 1/2	4 3/4 5 1/4						
Ref. dB																



Additional Comments, Sketch



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Ultrasonic Examination Report *D. Payne ANII 4/23/82*

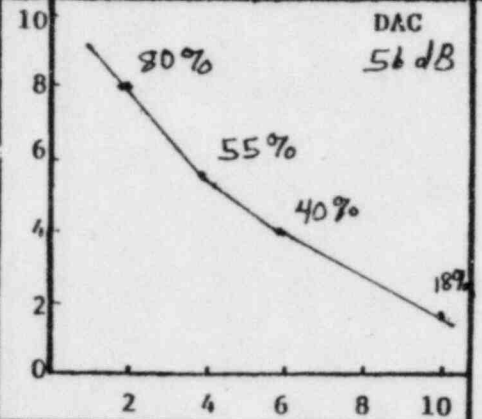
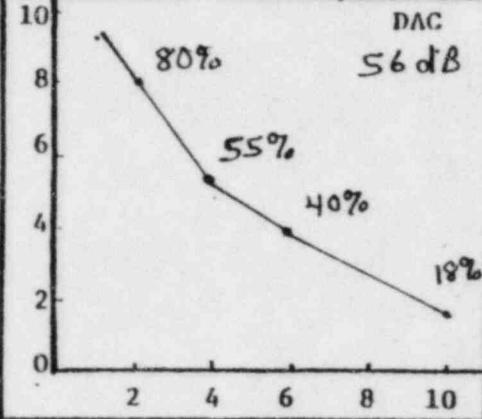
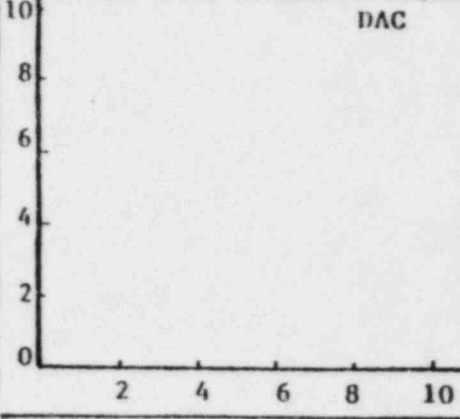
Customer LP + L	Plant Waterford	Unit 3	Loop/Zone 1B/10	Iso/Drawing No. Zone 10, Rev 2, F.C.1
Procedure Rev 0 IST 2.3 F.C.1	Exam Surface O.D.	Examiner/Level CRS/HO/CF/EP	VCR Supervisor Daniel Payne	Date 4-19-82
Component/Piping System Cold leg - R.V. to R.C.P. 1B	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
Yes No

Field Changes:
Yes No
If Yes, Number **1**

Transducer	0°	45°	60°	Instrument			
S/N	NA	NA	L19134	Mfr.	Sonic	Model	FTS M.K.I
Size			1.0"	S/N	05304E	RepRate	200
Frequency			2.25 Mhz	Reject	off	Filter	hi
Beam Angle	▼	▼	61°	Damp	Min	Coax	12'
				Freq.	2 Mhz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	N/A	N/A	80%	2.0	1 9/16	1 1/2 1 3/4	80%	2.0	1 9/16	1 1/2 1 3/4	NA	NA	NA	NA	0825	1145
1/2 T			55%	4.0	3 7/16	2 5/8 3 1/8	55%	4.0	3 7/16	2 5/8 3 1/8						
3/4 T			40%	6.0	4 13/16	4 1/2 5 1/4	40%	6.0	4 13/16	4 1/2 5 1/4						
5/4 T			18%	10.0			18%	10.0								
Ref. dB	▼	▼	56 dB				56 dB									



Additional Comments/Sketch



The
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Ultrasonic Examination Report *D. Payne ANII 4/23/82*

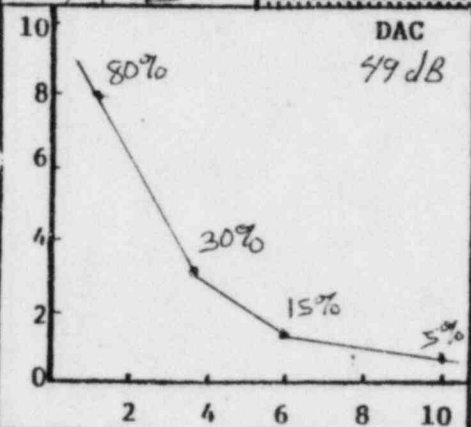
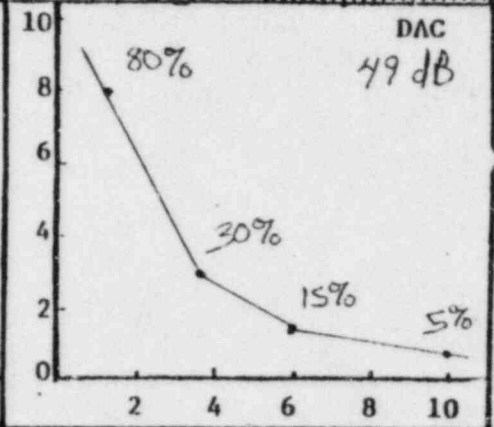
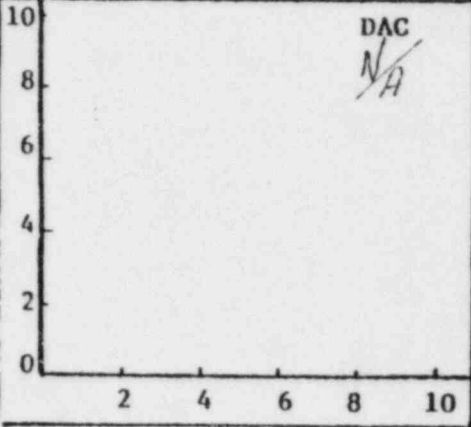
Customer <i>L P AND L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1B/10</i>	Iso/Drawing No. <i>Zone 10, Rev 2, F.C. 1</i>
Procedure <i>Rev 0 ISI 2.3 F.C. 1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>CRS/UT 6A</i>	VGR Supervisor <i>Wenil Jensen</i>	Date <i>4-19-82</i>
Component/Piping System <i>Cold leg - R.V. to R.C.P. 1B</i>	Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-6</i>	Couplant: Sonotrace Type <i>40</i> Batch No. <i>8119</i>

Continuation Sheet Attached
Yes No

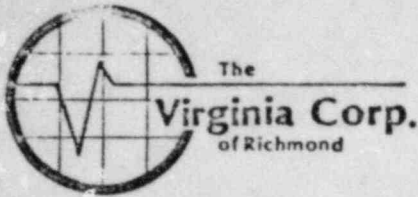
Field Changes:
Yes No
If Yes, Number *1*

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	NA	F18164	Mfer.	<i>Sonic</i>	Model	<i>FTS M&K</i>
			.50"	S/N	<i>05304E</i>	RepRate	<i>200</i>
			2.25MHz	Reject	<i>off</i>	Filter	<i>hi</i>
	Y	Y	60°	Damp	<i>Min</i>	Coax	<i>6'</i>
			Freq.	<i>2 MHz</i>	Video	<i>Norm</i>	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/2 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.6</i>	<i>1 1/2</i>	<i>1 1/2</i>	<i>80%</i>	<i>1.6</i>	<i>1 1/2</i>	<i>1 1/2</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1412</i>	<i>1605</i>
<i>1/2 T</i>			<i>30%</i>	<i>3.9</i>	<i>3 1/2</i>	<i>2 3/4</i>	<i>30%</i>	<i>3.9</i>	<i>3 1/2</i>	<i>2 3/4</i>						
<i>3/4 T</i>			<i>15%</i>	<i>6.0</i>	<i>4 1/2</i>	<i>4 1/2</i>	<i>15%</i>	<i>6.0</i>	<i>4 1/2</i>	<i>4 1/2</i>						
<i>5/8 T</i>			<i>5%</i>	<i>10.0</i>			<i>5%</i>	<i>10.0</i>								
Ref. dB	↓	↓	<i>49 dB</i>				<i>49 dB</i>									



Additional Comments/Sketch



Date 4-19-82

Page 3 of 6

To: _____

Subject ZONE 10, LOOP 1 B,
WELDS 10-005 AND
10-007 ATTACHMENT
SHEET

WELDS 10-005 AND 10-007 ARE NOZZLE BRANCH CONNECTION WELDMENTS WITH A CURVED RADIUS WELD AREA WHICH CAUSES VARYING DEGREES OF LOSS OF SOUND COVERAGE.

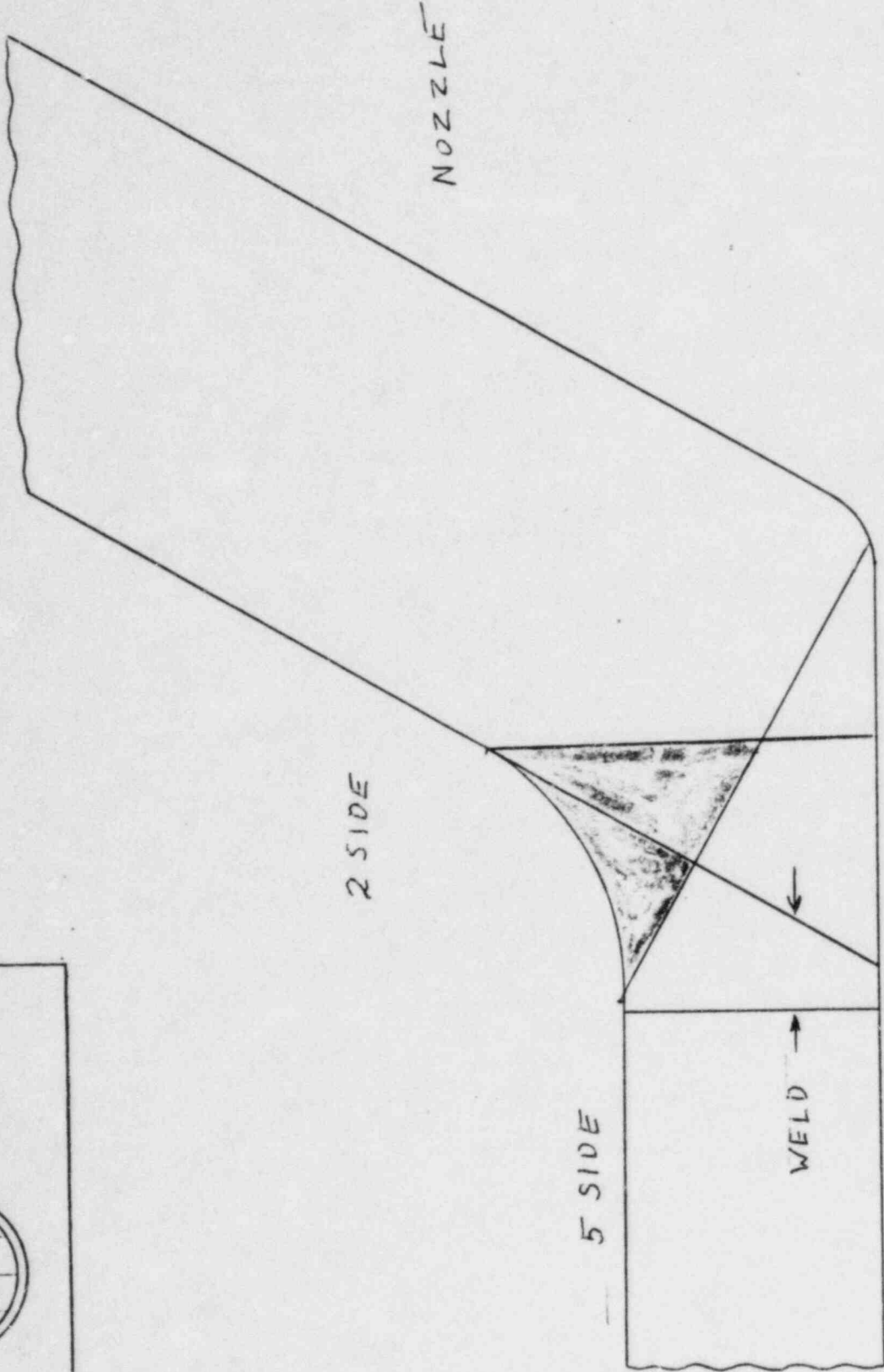
THIS IS GRAPHICALLY DEPICTED ON THE FOLLOWING PAGES WITH THE AREA NOT COVERED HIGHLIGHTED OR SHADED:

PAGE 4 WELD 10-007 GREATER ANGLE

PAGE 5 WELD 10-007 LESSER ANGLE

PAGE 6 WELD 10-005 TYPICAL

Signed CR [Signature]



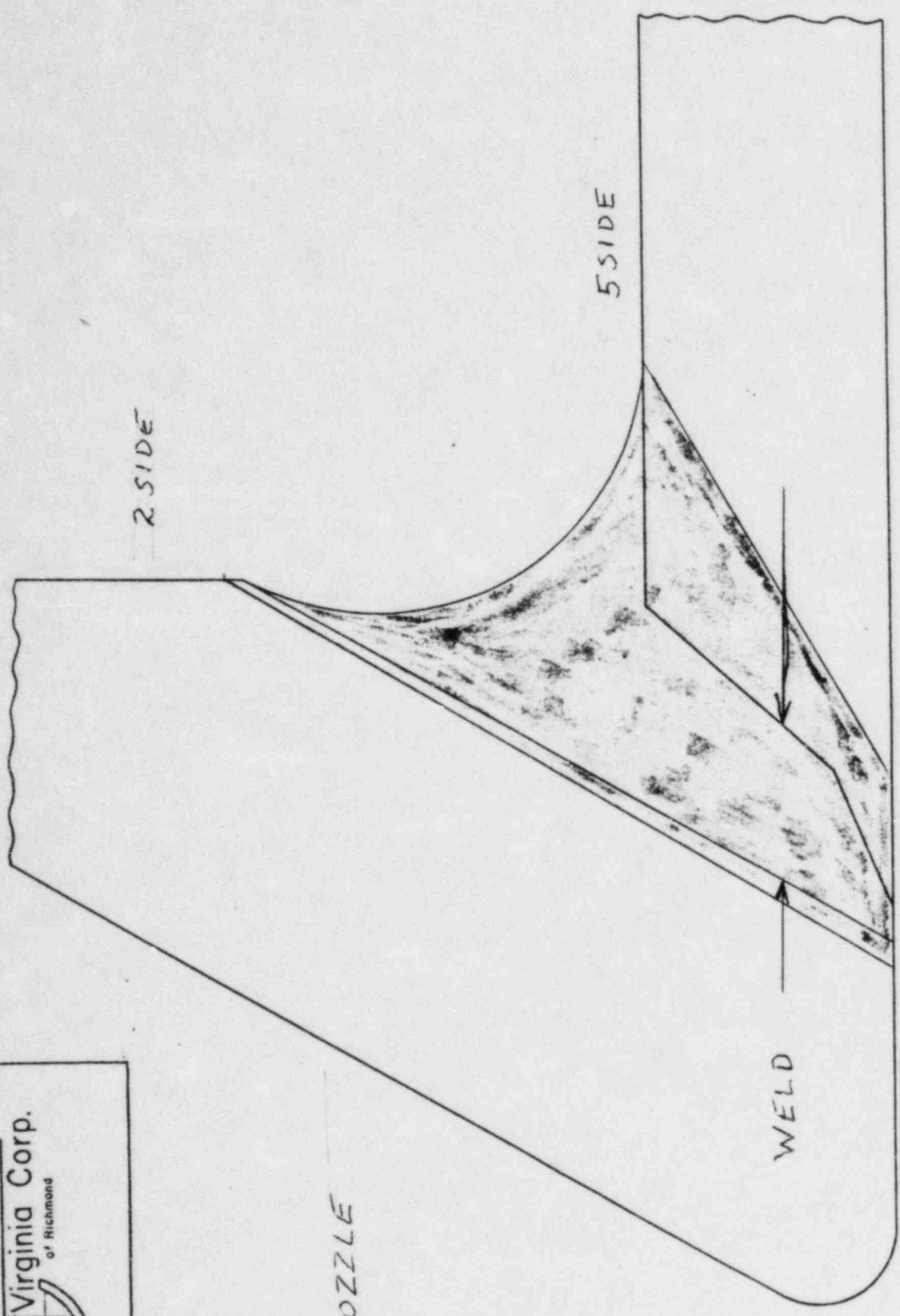
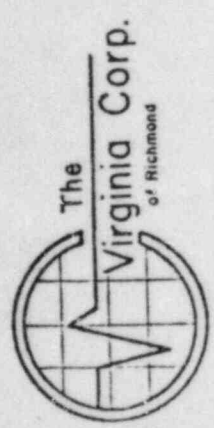
2 SIDE

NOZZLE

5 SIDE

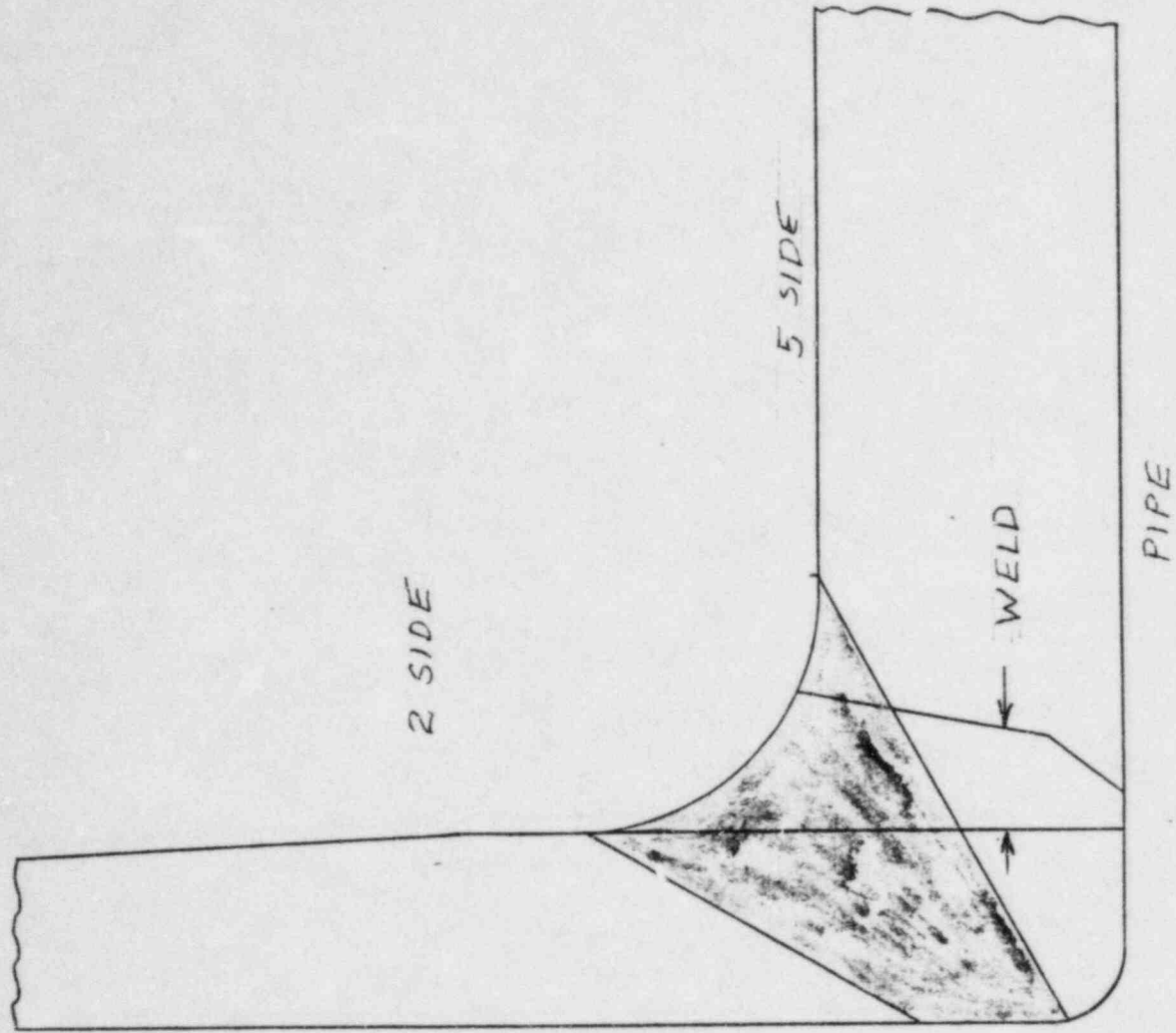
WELD →

PIPE





NOZZLE



R. Payne ANTI 4/19/82



Ultrasonic Examination Report

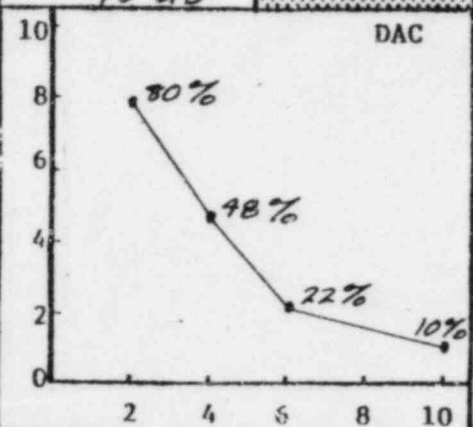
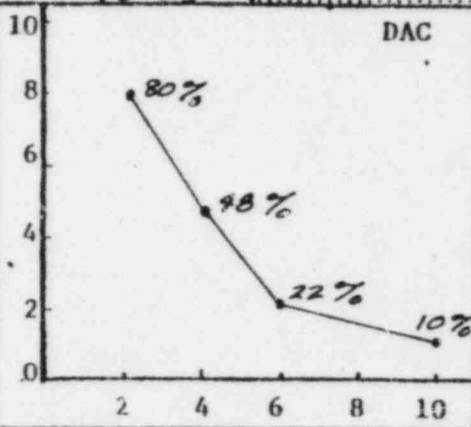
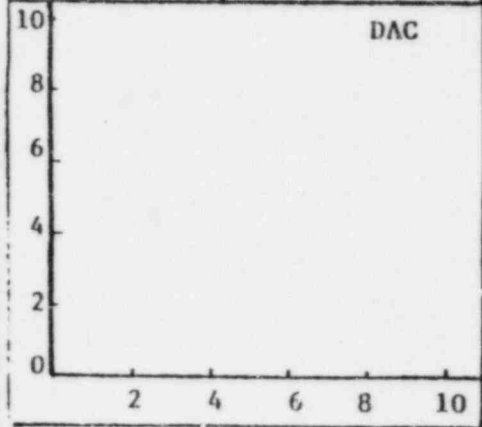
Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1 10	Iso/Drawing No. ZONE 10 R-2 F.C.1
Procedure I.S.I. 23 R.O.F.C.I	Exam Surface O.D	Examiner/Level <i>Rory Longenecker III</i>	VCR Supervisor <i>Daniel Jones</i>	Date 4-19-82
Component/Piping System COLD LEG R.V. TO R.C.P. 1B	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **F.C.1**

Transducer	0°	45°	60°	Instrument			
S/N	NA	D22063	NA	Mfer.	SONIC	Model	MARK 1
Size		.5" dia		S/N	780836	RepRate	1K
Frequency		2.25MHZ		Reject	OFF	Filter	H1
Beam Angle		45°		Damp	MIN.	Coax	6'
				Freq.	2. MHZ.	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	NA	NA	80%	2.0	15/16	2 1/2	80%	2.0	15/16	2 1/2	NA	NA	2:00	4:45	NA	NA	
1/2 T			48%	4.0	1 7/8	1 1/2	48%	4.0	1 7/8	1 1/2							
3/4 T			22%	6.0	2 1/16	2 3/8	22%	6.0	2 1/16	2 3/8							
1 T			NA	8.2			NA	8.2									
5/4 T			10%	10.0			10%	10.0									
Ref. dB			45 db				45 db										



Additional Comments/Sketch:



D. Payne ANII 4/23/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP+L	Plant WATERFORD	Unit 3	Loop/Zone 1B 10
Component/Piping System COLD LEG R.V. TO RCP. 1B	Examiner/Level Larry Longenecker II	Date 4-20-82	
Procedure ISI 2.5 REV-0	Iso/Drawing No. ZONE 10 REV-2 FC-1	VCR/Supervisor Daniel Jones	Continuation Sheet Attached [] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	KB AEROTECH	Cal. Block	UT-6
Model	MARK I	Size	.5"	Cal. Block	NA
S/N	01610E	Freq.	2.25 MHZ	Range Cal.	4.167
Reject	OFF	Serial No.	J02172	Calibration Checks	
Damp.	MIN	Coax. Cable	12"	8:10 IN	
Freq.	2	Gain	25 DB	9:30 OUT	
Rep. Rate	1K				
Filter	H1				
Video	NORM				
Couplant	SONOTRACE 40 3/8 119				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
10-005	12	3.750	NA	3.250	NA	NA	NA	NA	NA
10-005	2	3.833		3.292					
10-005	4	3.833		3.292					
10-005	6	3.917		3.292					
10-005	8	3.875		3.250					
10-005	10	3.792		3.292					
10-007	12	3.958		3.292					
10-007	2	4.000		3.292					
10-007	4	3.958		3.292					
10-007	6	3.833		3.292					
10-007	8	3.958		3.333					
10-007	10	3.958		3.333					

Sketch/Identification

10-005 2 SCAN NA DUE TO NOZZLE CONFIGURATION
 10-007 2SCAN NA DUE TO NOZZLE CONFIGURATION



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANII 4/23/82*

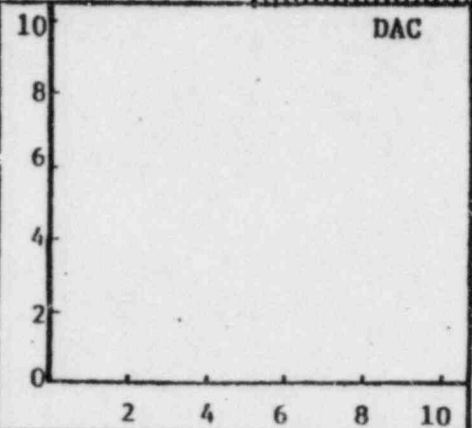
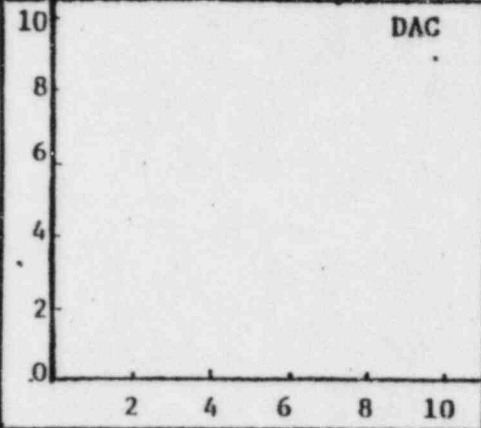
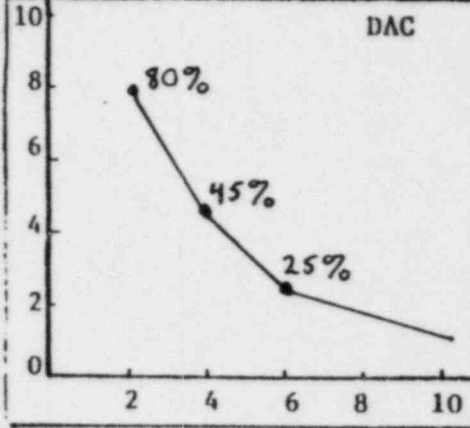
Customer LP&L		Plant WATERFORD		Unit 3	Loop/Zone 1 10	Iso/Drawing No. ZONE 10 REV-2 F.C.-1	
Procedure ISI 2.3 REV-0 FC-1		Exam Surface OD.	Examiner/Level <i>Nay Longenicher II</i>		VCR Supervisor <i>Daniel J. Jones</i>		Date 4-20-82
Component/Piping System COLD LEG-REACTOR VESSEL TO RCP 1B			Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No 8119	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **FC-1**

	Transducer	0°	45°	60°	Instrument			
	S/N	J02172	NA	NA	Mfg.	SONIC	Model	MARK 1
	Size	.5"			S/N	01610E	RepRate	1K
	Frequency	2.25MHZ			Reject	OFF	Filter	H1
Beam Angle	0			Damp	MIN	Coax	12'	
				Freq.	2	Video	NORM	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8:10	9:30	NA	NA	NA	NA
1/2 T	45%	4.0																
3/4 T	25%	6.0																
1 T	NA	8.4																
Ref. dB	25 DB																	



Additional Comments/Sketch



The
Virginia Corp.
of Richmond

Date 4-20-81

Page 3 of 3

To: _____

Subject INSPECTION LIMITATIONS
ZONE 10 WELDS
10-005
10-007

WELD NO. 10-005 0° SCAN HAD A PARTIAL LOSS OF
CONTACT DUE TO NOZZLE RADIUS
BASE METAL SCAN HAD PARTIAL
ON 2 SIDE DUE TO NOZZLE
CONFIGURATION.

WELD NO. 10-007 0° SCAN HAD A PARTIAL DUE TO
NOZZLE RADIUS CAUSING LOSS OF
CONTACT. AND INCREASED METAL
PATH FROM 0° TO 60° AND
300° TO 360°

BASE METAL SCAN HAD PARTIAL
ON 2 SIDE DUE TO NOZZLE
CONFIGURATION

Signed

Gary Longenecker



The Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANII 4/23/82*

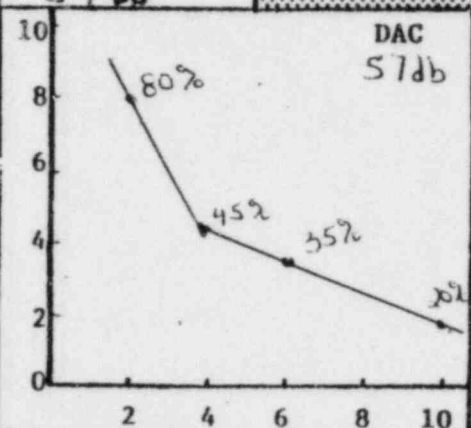
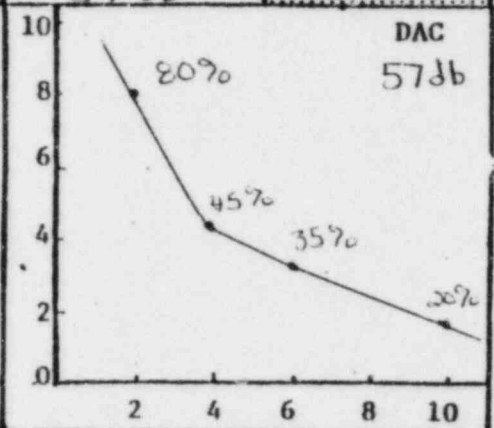
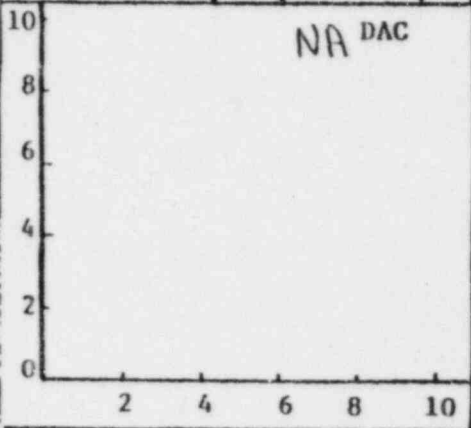
Customer <i>LP&L</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>1B/1D</i>	Iso/Drawing No. <i>Zone 10, Rev 2, F.C. 1</i>	
Procedure <i>ISI-2.3 Rev 0, F.C. 1</i>		Exam Surface <i>O.D</i>	Examiner/Level <i>BURLINGAME 71</i>		VCR Supervisor <i>Daniel Jones</i>		Date <i>4-20-82</i>
Component/Piping System <i>Cold Leg Reactor Vessel to RCP 1B</i>			Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-6</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8119</i>	

Continuation Sheet Attached
 Yes No

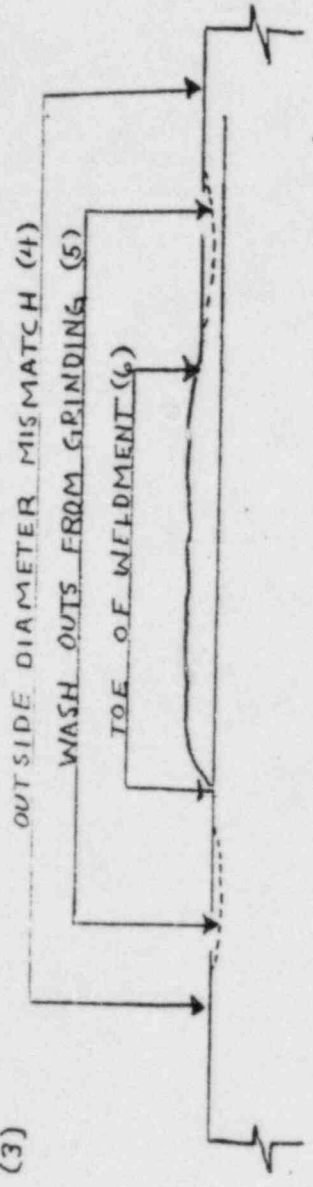
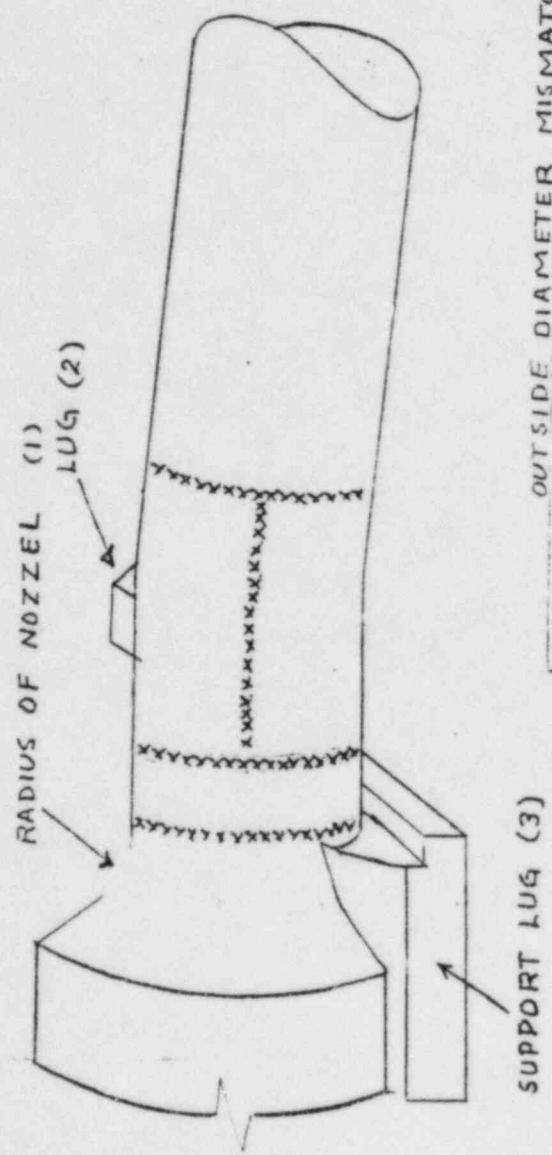
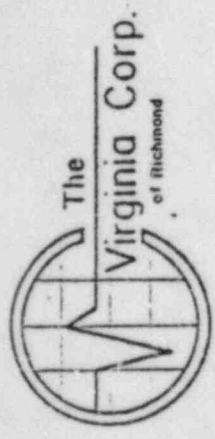
Field Changes:
Yes No
If Yes, Number *F.C. 1*

	Transducer			Instrument			
	S/N			Mfr.	Model	FTS Mark I	
	Size			S/N	RepRate		
	Frequency			Reject	Filter		
	Beam Angle			Damp	Coax		

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>	<i>1 17/32</i>	<i>1 13/32</i>	<i>1 23/32</i>	<i>80%</i>	<i>2.0</i>	<i>1 17/32</i>	<i>1 13/32</i>	<i>1 23/32</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1010</i>	<i>1150</i>
<i>1/2T</i>			<i>45%</i>	<i>4.0</i>	<i>3 7/32</i>	<i>2 15/16</i>	<i>3 1/2</i>	<i>45%</i>	<i>4.0</i>	<i>3 7/32</i>	<i>2 15/16</i>	<i>3 1/2</i>						
<i>3/4T</i>			<i>35%</i>	<i>6.0</i>	<i>4 13/16</i>	<i>4 1/2</i>	<i>5 1/16</i>	<i>35%</i>	<i>6.0</i>	<i>4 13/16</i>	<i>4 1/2</i>	<i>5 1/16</i>						
<i>5/4T</i>			<i>20%</i>	<i>10.0</i>				<i>20%</i>	<i>10.0</i>									
Ref. dB	<i>↓</i>	<i>↓</i>	<i>57 db</i>					<i>57 DB</i>					<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>		



Additional Comments/Sketch





The
Virginia Corp.
of Richmond

Date 4-20-82

Page 4 of 5

To: _____

Subject EXAMINATION
LIMITATIONS
ISC-10 REV. 2 FC 1

WELD NO. 10-009 HAD INTERMITTENT LOSS OF CONTACT WITH SURFACE AS A RESULT OF CONDITION 4, SHOWN ON PAGE 3 ESTIMATED LOSS OF CONTACT FOR EACH SCAN IS LISTED:
SCAN 5 ~ 5%
SCAN 2 ~ 10%
SCANS 7 & 8 ~ 10%

WELD NO. 10-012 HAD INTERMITTENT LOSS OF CONTACT WITH THE SURFACE AS A RESULT OF CONDITIONS 2 3 & 4 SHOWN ON PAGE 3 ESTIMATED LOSS OF CONTACT FOR EACH SCAN IS LISTED:
SCAN 2 WAS OBSTRUCTED BY CONDITION 3 FOR ~ 4% AND CONDITION 4 FOR ~ 10%
SCAN 5 WAS OBSTRUCTED BY CONDITION 2 FOR ~ 2% AND CONDITION 4 FOR ~ 5%
SCANS 7 & 8 WERE OBSTRUCTED BY CONDITION 4 FOR ~ 10%

WELD NO. 10-013 HAD INTERMITTENT LOSS OF CONTACT WITH THE SURFACE AS A RESULT OF CONDITIONS 1, 3 & 4 SHOWN ON PAGE 3 ESTIMATED LOSS OF CONTACT FOR EACH SCAN IS LISTED:

Signed _____



The
Virginia Corp.
 of Richmond

Date 4-20-82

Page 5 of 5

To: _____

Subject EXAMINATION
LIMITATIONS
ISO-10, REV. 2, FC-1

WELD NO. 10-013 CONT.

SCAN 2 WAS OBSTRUCTED BY CONDITION
 1 FOR ~ 70% AND TOTALLY OBSTRUCTED
 BY CONDITION 3 FOR A LENGTH OF 39"
 SCANS 7 & 8 WERE OBSTRUCTED BY CONDITIONS
 1 & 3 FOR ~ 10%

Signed _____



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANII 4/23/82*

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1B/10	Isu/Drawing No. Zone 10, Rev 2, F.C. 1
Procedure ISI-2.3, Rev 0, F.C. 1	Exam Surface O.D.	Examiner/Level B. B. [Signature]	VCR Supervisor [Signature]	Date 4-20-82
Component/Piping System Cold Leg Reactor Vessel to RCP 1B		Pipe Size O.D.	Weld Type Butt	Cal. Block UT-10
		Couplant: Sonotrace		Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No **F.C. 1**
If Yes, Number

Transducer	0°	45°	60°	Instrument			
S/N	NA	L19801	NA	Mfgr.	Sonic	Model	FTS Mark I
Size		1.0"		S/N	03704E	RepRate	200
Frequency		2.25 MHz		Reject	Min	Filter	Hi
Beam Angle	<input checked="" type="checkbox"/>	45°	<input checked="" type="checkbox"/>	Damp	Min	Coax	12'
				Freq.	2 MHz	Video	Norm

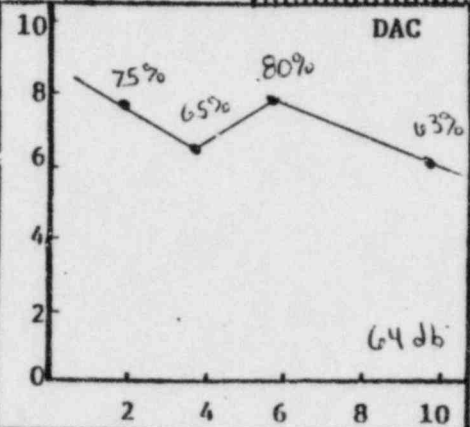
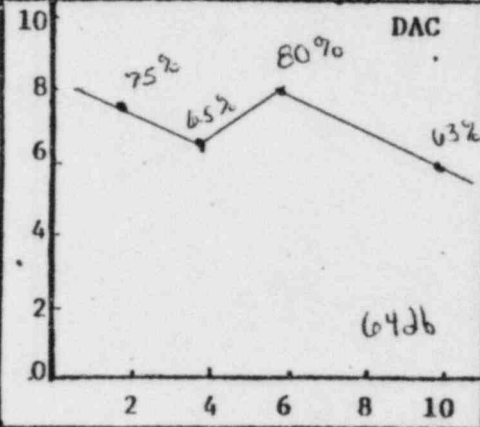
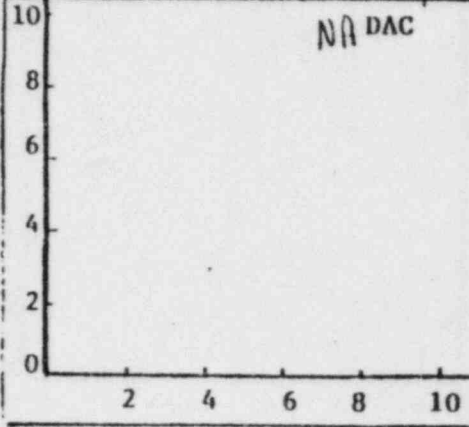
Calibration 0°

2 & 5 Scan

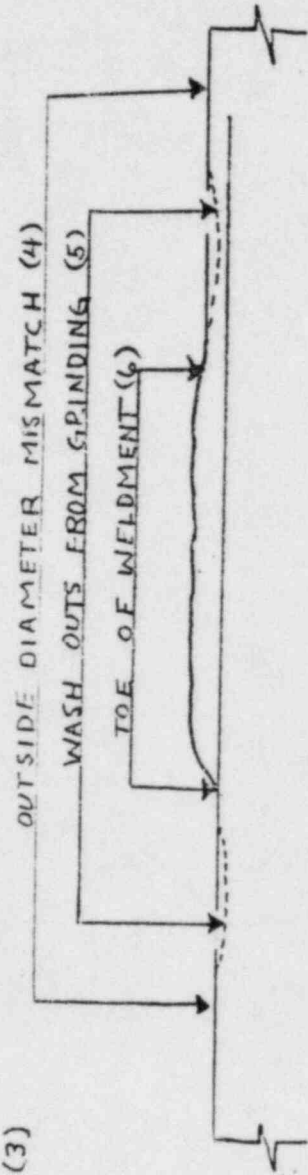
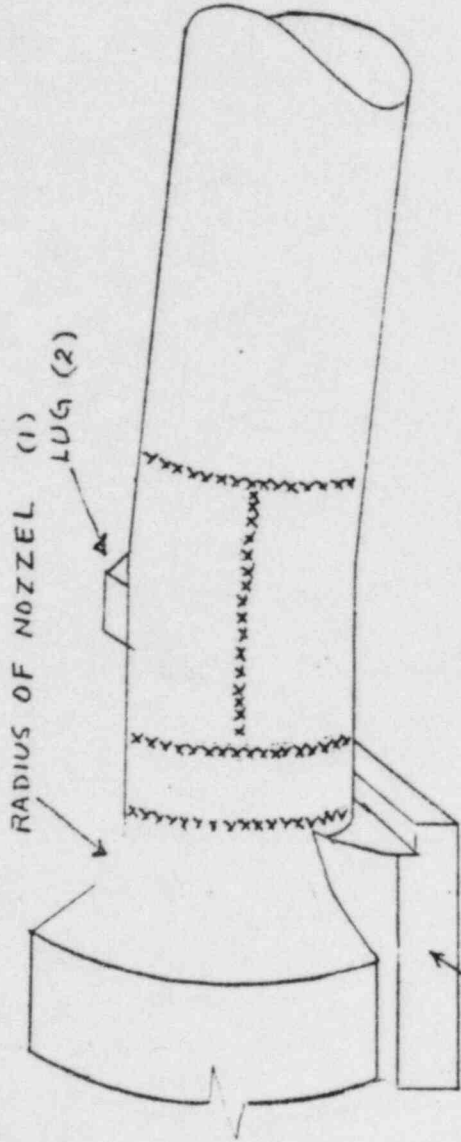
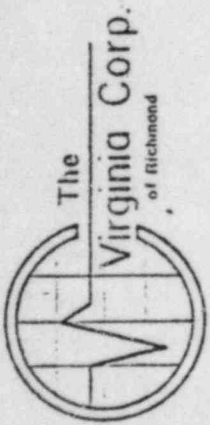
7 & 8 Scan

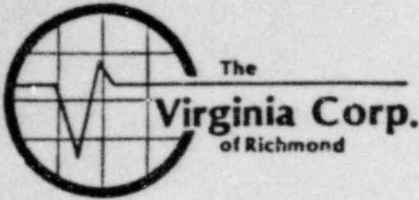
Calibration Checks

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	NA	NA	75%	2.0	2 1/32	7/16 1 1/4	75%	2.0	2 1/32	7/16 1 1/4	NA	NA	1015	1145	NA	NA
1/2 T			65%	4.0	1 1/16	1 5/32 1 1/2	65%	4.0	1 1/16	1 5/32 1 1/2			1215	1400		
3/4 T			80%	6.0	2 5/32	2 1/2 2 3/4	80%	6.0	2 5/32	2 1/2 2 3/4						
5/4 T			63%	10.0			63%	10.0								
Ref. dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	64 db				64 db				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Additional Comments/Sketch





Date N-20-82

Page 4 of 4

To: _____

Subject INSPECTION
LIMITATIONS
ISC-10-R2-FC1

WELD NO. 10-009 HAD INTERMITTENT CONTACT WITH THE SURFACE AS A RESULT OF CONDITION 4, SHOWN ON PAGE 3. ESTIMATED LOSS OF CONTACT FOR EACH SCAN IS LISTED:
SCAN 5 ~ 5%
SCAN 2 ~ 10%
SCANS 7 & 8 ~ 10%

WELD NO. 10-012 HAD INTERMITTENT CONTACT WITH THE SURFACE AS A RESULT OF CONDITION 4, SHOWN ON PAGE 3. ESTIMATED LOSS OF CONTACT FOR EACH SCAN IS LISTED:
SCAN 5 ~ 5%
SCAN 2 ~ 10%
SCANS 7 & 8 ~ 10%

WELD NO. 10-013 SCAN 2 AND SCANS 7 & 8 WERE OBSTRUCTED BY CONDITIONS 1 & 3, SHOWN ON PAGE 3. SCAN 2 WAS OBSTRUCTED TOTALLY FOR A LENGTH OF 39 INCHES FOR A LOSS OF ~34%, ~10% OF SCANS 7 & 8 WAS LOST. GOOD ROOT AREA COVERAGE WAS NOT OBTAINED, SHOULD BE RESCANED AT 30°

Signed _____



The
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of Richmond

Ultrasonic Examination Report

D. Payne ANII 4/23/82

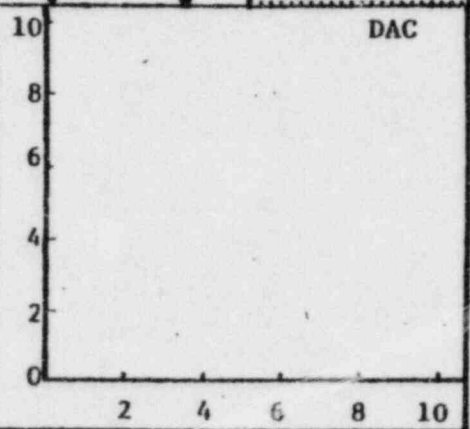
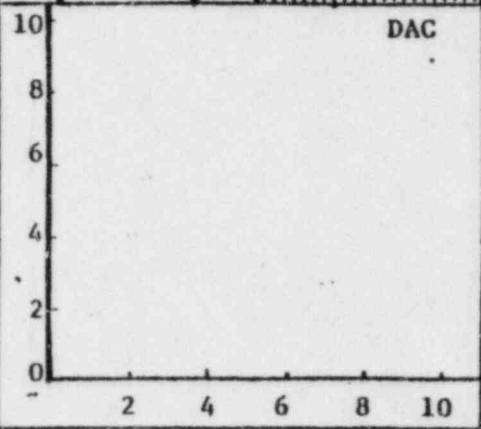
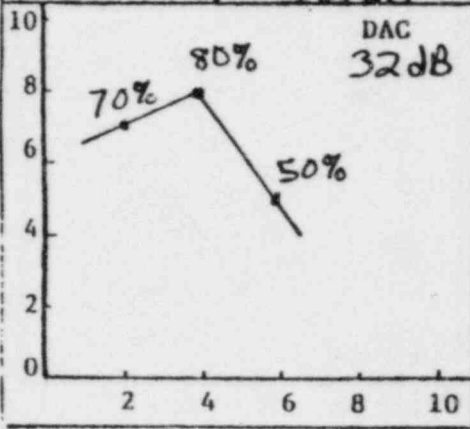
Customer LP+L		Plant Waterford		Unit 3	Loop/Zone 1B/10	Iso/Drawing No. Zone 10, Rev. 2, F.C. 1	
Procedure IST 23 Rev. 0 FC		Exam Surface OD	Examiner/Level W. Smith C.E. 7000/1		VCR Supervisor Daniel Jones		Date 4-20-82
Component/Piping System Cold leg - R.V. to R.C.P. 1B		Pipe Size 36"	Weid type Butt		Cal. Block UT-6	Couplant: Sonotrace Type 40 Batch No. 2119	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **1**

	Transducer			Instrument				
		0°	45°	60°	Mfr.	Sonic	Model	FTS Mark I
	S/N	48808	NA	NA	S/N	780836	RepRate	200
	Size	1"			Reject	off	Filter	k
	Frequency	2.25 MHz			Damp	Min	Coax	12' BNC
	Beam Angle	0°	↓	↓	Freq.	2	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	70%	2.0	NA	NA			NA	NA			0927	1100	NA	NA	NA	NA
1/2 T	80%	4.0														
3/4 T	50%	6.0														
1 T	NA	8.4														
Ref. dB	32 dB															



Additional Comments/Sketch



The
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Ultrasonic Examination Report *D. Payne ANZI 4/23/82*

Customer LP+L	Plant WATERFORD	Unit 3	Loop/Zone TA 10	Isa/Drawing No. ZONE 10 REV-2 FC-1
Procedure ISI 2.3 REV-0 FC-1	Exam Surface O.D.	Examiner/Level Sary Loupenek	VCR Supervisor David Dineen	Date 4-20-82
Component/Piping System COLD LEG RV TO RCP TA 1B	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number **FC-1**

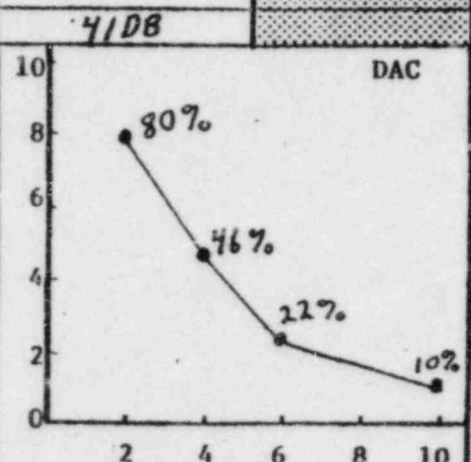
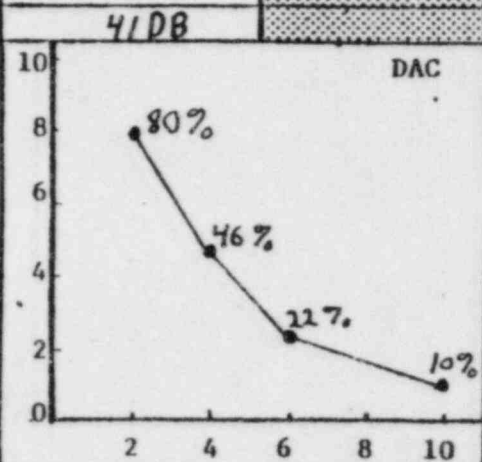
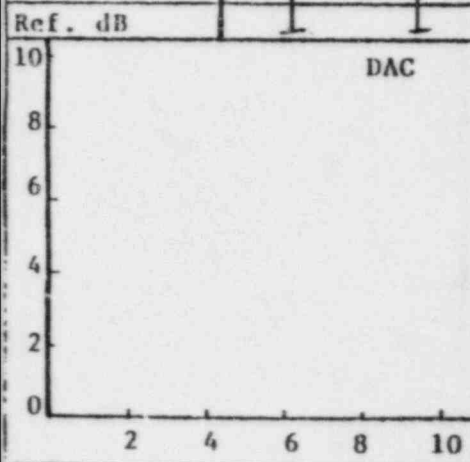
Transducer	0°	45°	60°	Instrument			
S/N	NA	D22063	NA	Mfg.	SONIC	Model	MARA I
Size		.5"		S/N	01610E	RepRate	1K
Frequency		2.25MHZ		Reject	OFF	Filter	OFF
Beam Angle		45°		Damp	MIN	Coax	6'
				Freq.	2	Video	NORM

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1/16	3/4 1/32	80%	2.0	1/16	3/4 1/32	NA	NA	1:15		NA	NA
1/2 T			46%	4.0	1 1/16	1 5/8 2	46%	4.0	1 1/16	1 5/8 2			3:00 ^{ERR}	5:25		
3/4 T			22%	6.0	2 5/8	2 7/8 3	22%	6.0	2 5/8	2 7/8 3						
1 T			NA	8.2			NA	8.2								
5/4 T			10%	10.0			10%	10.0								



Additional Comments/Sketch



The
Virginia Corp.
of Richmond

Date 4-20-82

Page 4 of 9

To: _____

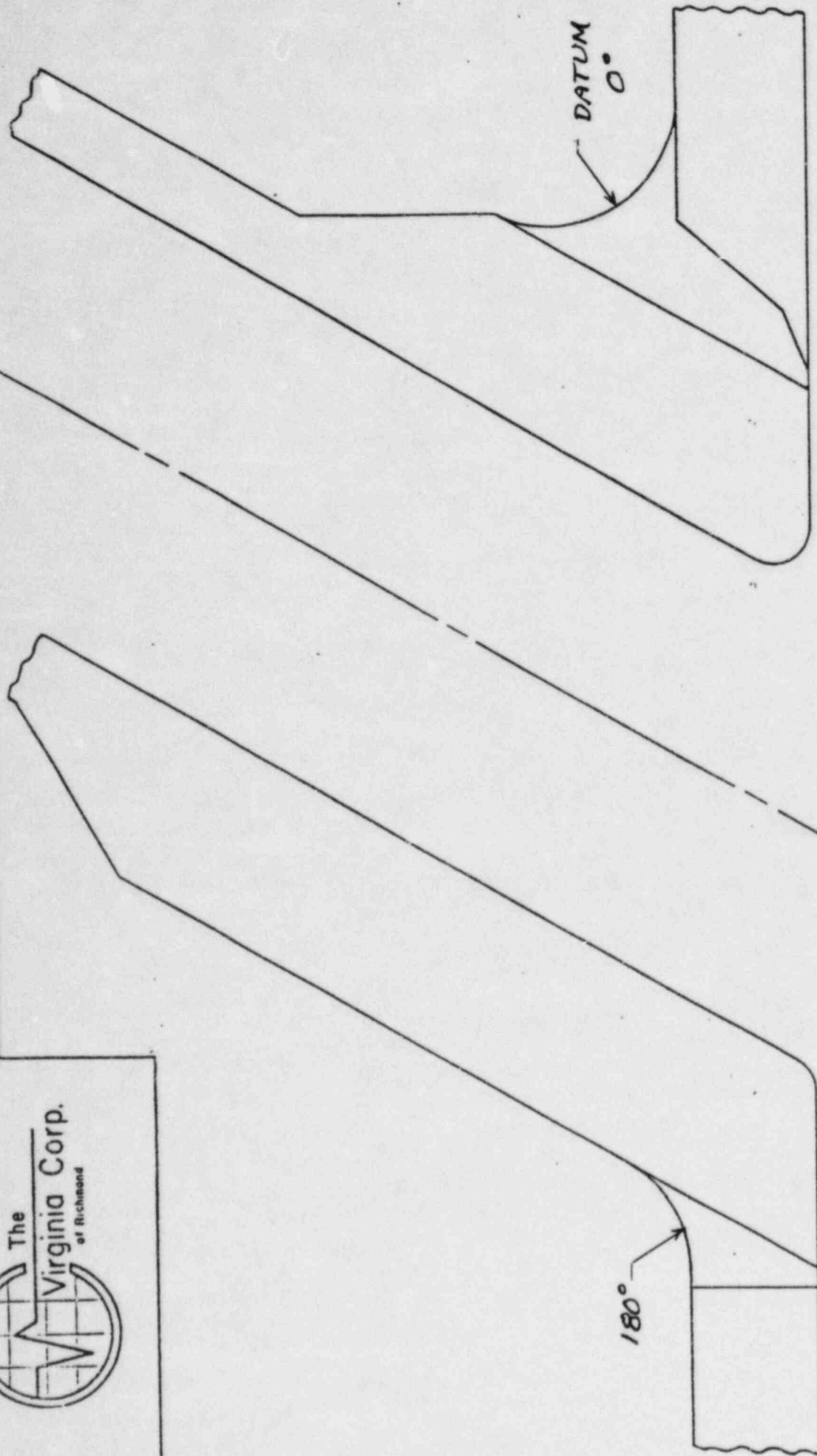
Subject INSPECTION LIMITATIONS
ZONE 10

WELD NO. 10-007 WAS ABLE TO MAINTAIN CONTACT
IN RADIUS AREA USING EXCESS COUPLANT.

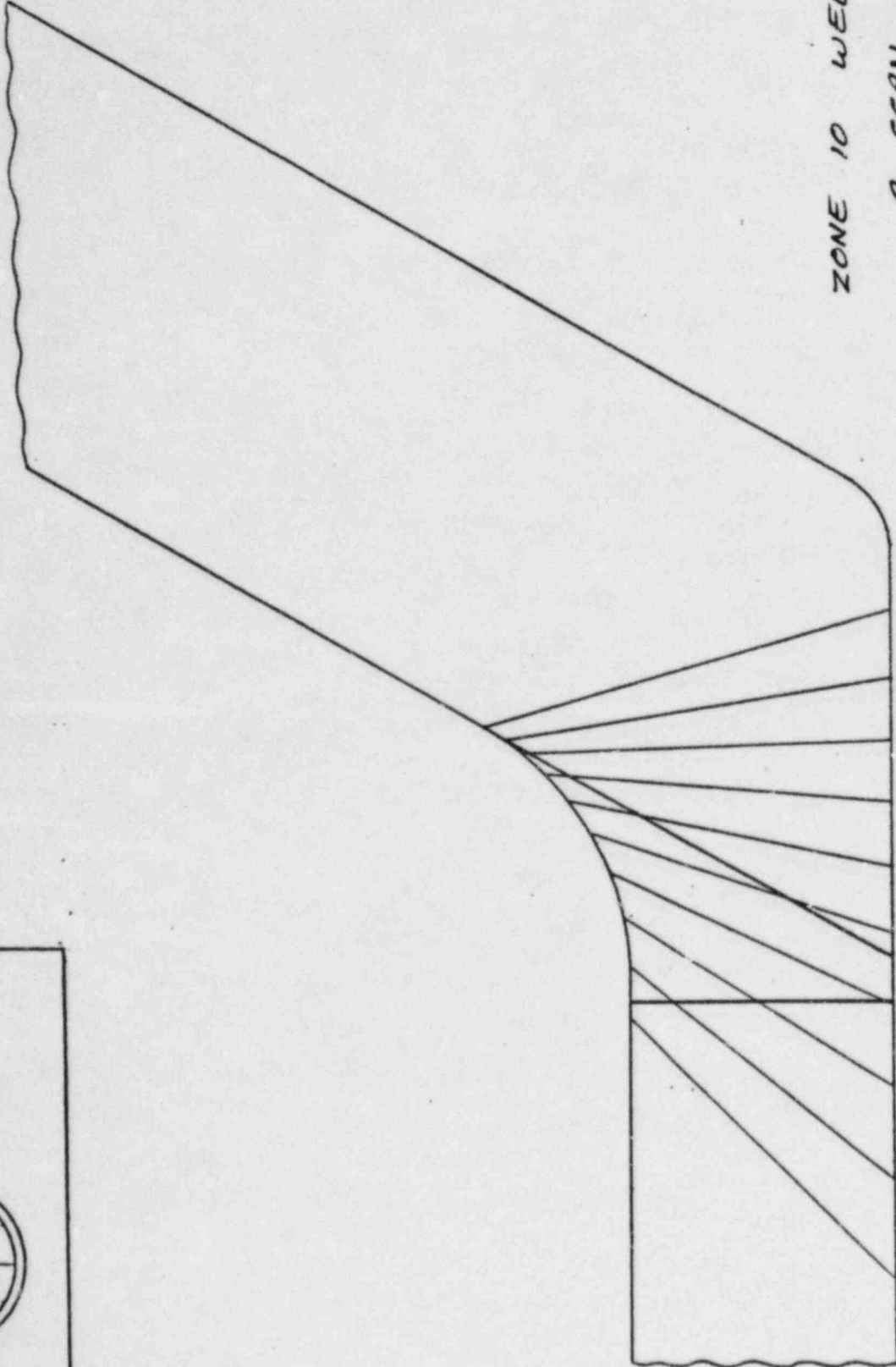
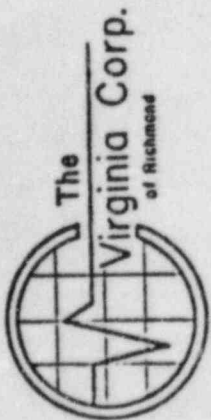
PARTIAL SCANS 2, 5, 7 & 8
DUE TO NOZZLE COMING OF 36" PIPE
AT 60°, THE ROOT WAS OFF SCREEN BECAUSE
OF RADIUS CAUSING INCREASED METAL PATH.
FROM APPROX. 0° (DATUM) TO 60° AND FROM
300° TO 360°.

OBVIOUS I.D. GEOMETRY WAS NOTED
IN 2 AND 5 SCANS

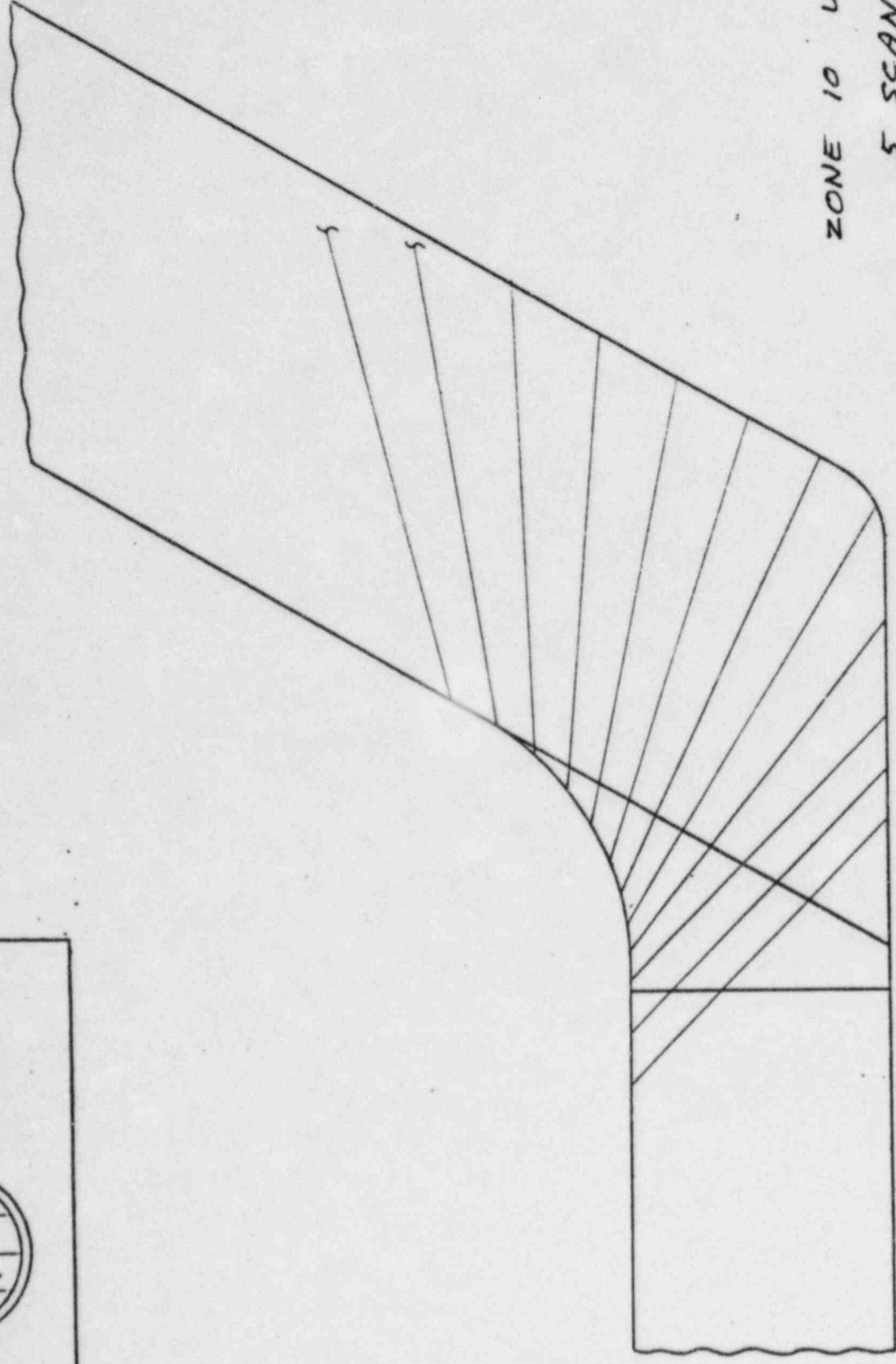
Signed Gary Longenecker



ZONE 10 WELD 10-007

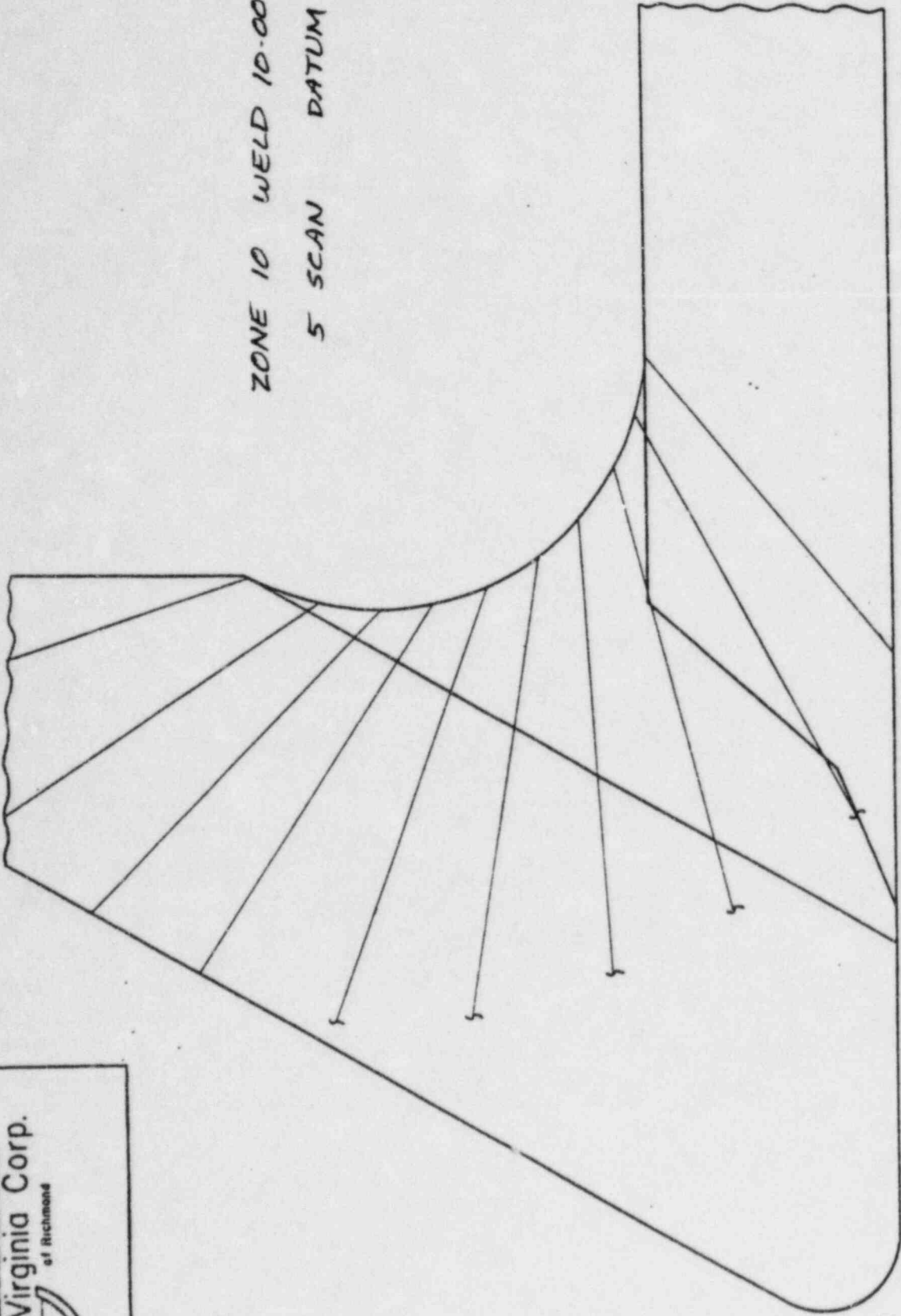


ZONE 10 WELD 10-007
2 SCAN 180°

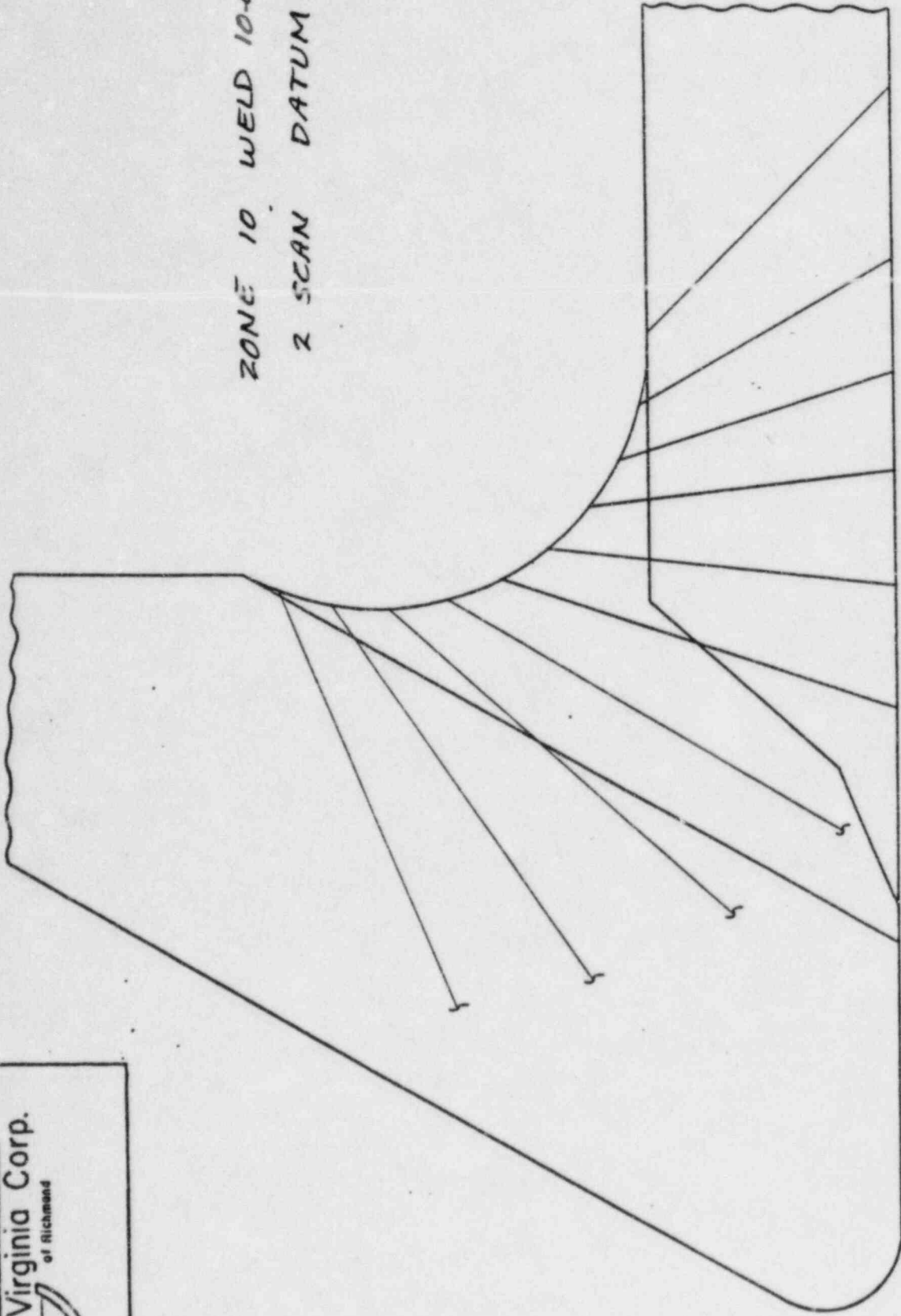


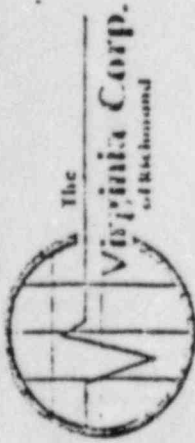
ZONE 10 WELD 10-007
5 SCAN 180°

ZONE 10 WELD 10-007
5 SCAN DATUM



ZONE 10 WELD 10-007
2 SCAN DATUM





Ultrasonic Examination Report

Loop/Zone: **1B, 10**
 Zone: **10, Rev. 2**
 FC-1

12/6/82

Customer: **LP&L**
 Plant: **WATERFORD**
 Unit: **3**
 Procedure: **ISI-23, Rev. 0, FC1**
 Exam Surface: **BURLINGAME II**
 Component/Piping System: **36" ID BUTT**
 REACTOR COOLANT

Yield Property: **55-82**
 Couplant: **SONOTRACE**
 Type: **40**
 Batch: **1181A**

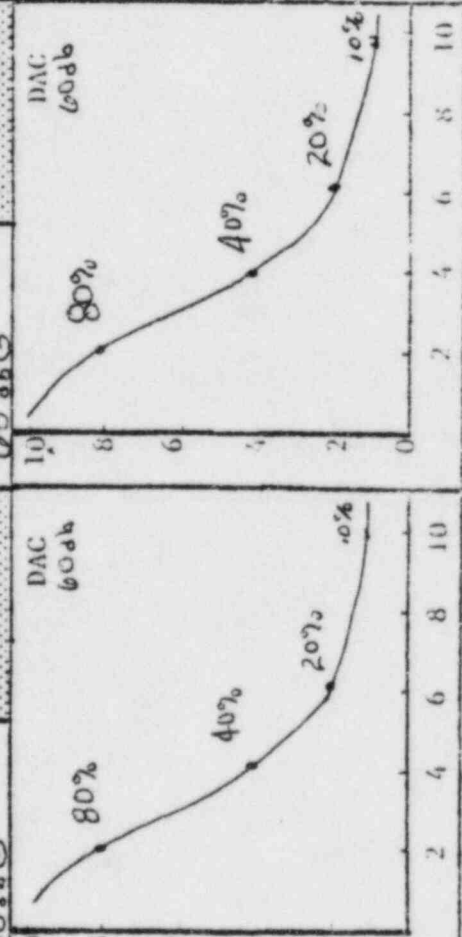
Transducer: **30"**
 S/N: **322935**
 Size: **1/2"**
 Frequency: **2.25 MHz**
 Beam Angle: **30°**

Model: **SOMIC**
 Rep Rate: **1000**
 Filter: **OFF**
 Gain: **12'**
 Voltage: **NORM**

Model: **FTS Model**

Calibration Location	Signal Amp.	Sweep	Sound Entry Point To: Set Line	50% DAC	2 & 5 Scan		7 & 8 Scan	
					Signal Amp.	Sweep	Sound Entry Point To: Set Line	50% DAC
1/4T	NA	NA	17/32	13/32	80%	2.0	17/32	13/32
1/2T	NA	NA	1 1/16	7/8	40%	4.0	1 1/16	7/8
3/4T	NA	NA	1 1/16	5/16	20%	6.0	1 1/16	5/16
1T	80%	8.6	-	-	80%	9.0	-	-
5/4T	10%	10	-	-	10%	10	-	-

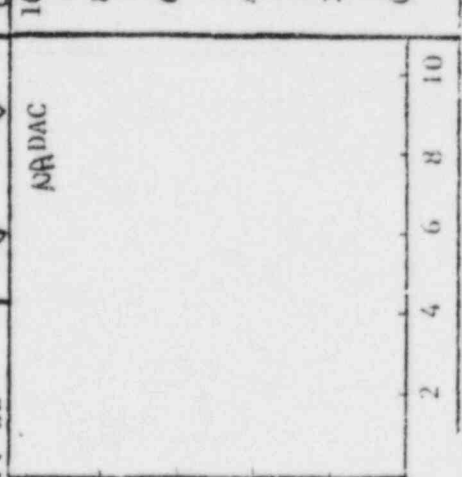
Calibration Chart	
In	Out
0.750	11/15
NA	NA
NA	NA
NA	NA



Additional Comments/Sketch

Field Changes: **FC1**

Calibration: **0"**





The
Virginia Corp.
 of Richmond

Date _____

Page _____ of _____

To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 10, REV 2, FC-1

10-013 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 2 WAS OBSTRUCTED FOR APPROX. 39" AT THE BASE OF THE NOZZLE BY A SUPPORT LUG, AND FOR 56" BY THE O.D. SLOPE OF THE NOZZLE, TAKING IN ACCOUNT; THE BEAM SPREAD, THE ROOT AREA OF THE WELD WAS COVERED. SCANS 7 3/8 WERE LIMITED ON THE SCAN 2 SIDE OF THE SUPPORT LUG AND O.D. SLOPE OF THE NOZZLE. ON THE SCAN 5 SIDE OF THE WELD, THE 7 3/8 SCANS WERE LIMITED BY THE O.D. MISMATCH BETWEEN THE NOZZLE EXTENSION AND ELBOW. ROOT AREA COVERAGE WAS GOOD WITH THE 7 3/8 SCANS.

012 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 2 WAS LIMITED TO A SMALL DEGREE BY O.D. MISMATCH BETWEEN THE NOZZLE EXTENSION AND ELBOW, ROOT AREA COVERAGE WAS GOOD. SCANS 7 3/8 WERE RESTRICTED AT THE WELD R- MISMATCH; ACCOUNTING FOR BEAM SPREAD, GOOD ROOT AREA COVERAGE WAS OBTAINED.

015, 017 THIS WELD FORMS A BRANCH CONNECTION, THE WELD CROWN FORMS THE RADIUS BETWEEN THE R.C. PIPE AND BRANCH NOZZLE. SCAN 2 WAS NOT PERFORMED BECAUSE THE ULTRASONIC BEAM IS DIRECTED AWAY FROM THE WELD ROOT. SCANS 7 3/8 WERE LIMITED BY THE RADIUS OF THE WELD CROWN.

Signed _____



Ultrasonic Examination Report D. Payne ANIE 5/26/82

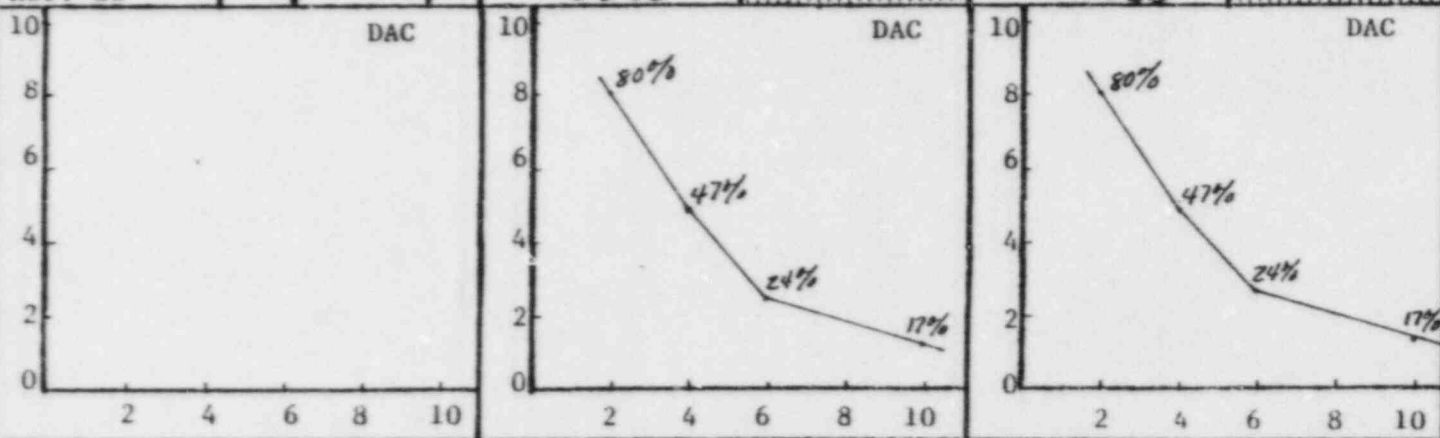
Customer LP&L		Plant WATERFORD	Unit 3	Loop/Zone 1B/10	Iso/Drawing No. ZONE 10, REV. 2, FC-1
Procedure ISI 23 REV. 0, FC-1	Exam Surface O.D.	Examiner/Level Nary Longenecker III		VCR Supervisor Daniel Jones	Date 5-8-82
Component/Piping System COLD LEG-RV TO R.C.P. 1B		Pipe Size 36" F.D. 60	Weld Type BUTT	Cal. Block UT-6 3.50"	Couplant: SONOTRACE Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 IF Yes, Number **FC-1**

Transducer	30°	45°	60°	Instrument			
S/N	J22935	N/A	N/A	Mfr.	SONIC	Model	FTS MARK I
Size	1/2"			S/N	01610E	RepRate	1K
Frequency	2.25MHz			Reject	OFF	Filter	OFF
Beam Angle	30°			Damp	MIN.	Coax	12'
				Freq.	2 MHz	Video	NORMAL

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4T	N/A	N/A	80%	2.0	15/32	3/8	1/32	80%	2.0	15/32	3/8	1/32	8:45	12:05	N/A	N/A	N/A	N/A
1/2T			47%	4.0	1 1/16	7/8	1/4	47%	4.0	1 1/16	7/8	1/4						
3/4T			24%	6.0	1 7/16	1 5/16	1 1/8	24%	6.0	1 7/16	1 5/16	1 1/8						
5/4T			17%	10.0				17%	10.0									
Ref. dB			58dB					58dB										



Additional Comments/Sketch



Ultrasonic Examination Report

A. Payne ANEZ 5/26/82

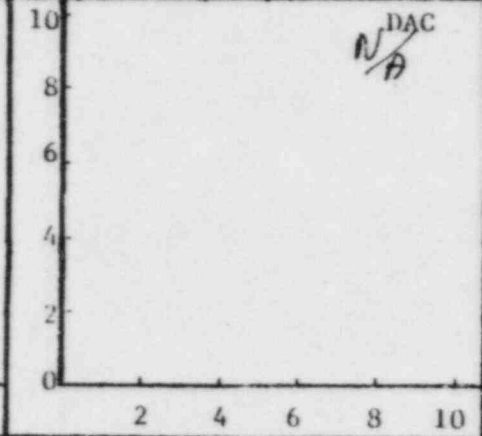
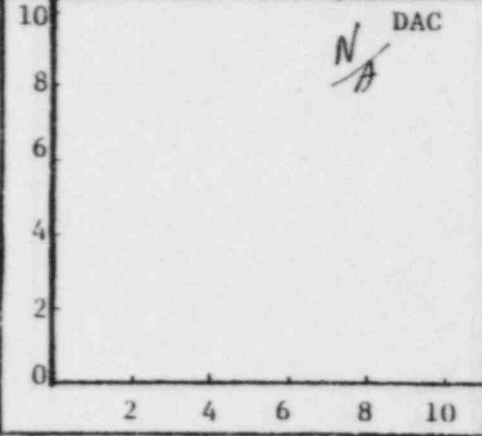
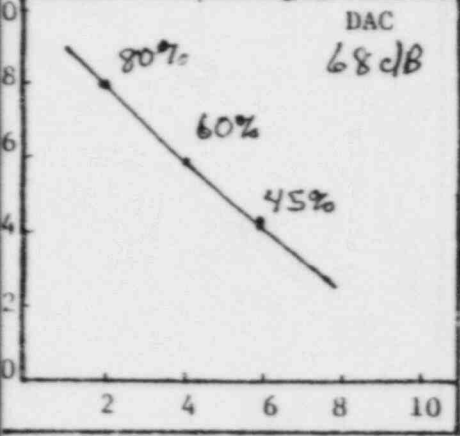
Customer LP+L		Plant Waterford		Unit 3	Loop/Zone 1B/10	Iso/Drawing No. Zone 10, Rev. 2, R.C.1	
Procedure ISI 2.3 EC.1	Rev. 0	Exam Surface IO	Examiner/Level <i>Richard Deed IT</i>		VCR Supervisor <i>Daniel Jensen</i>	Date 5-8-82	
Component/Piping System Cold leg - R.V. to R.C.P. 1B		Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6	Couplant: Sonotrace Type 40 Batch No. 8119		

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 IF Yes, Number **1**

	Transducer	0°	45°	60°	Instrument			
	S/N	48807	NA	NA	Mfr.	Sonic	Model	FTS MackI
	Size	1"			S/N	788836	RepRate	1K
	Frequency	2.25Mhz			Reject	off	Filter	High
Beam Angle	0°	↓	↓	Damp	Mic	Coax	12"	
				Freq.	2 Mhz	Video	Norm	

Calibration 0"			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1350	1545	NA	NA	NA	NA	
1/2 T	60%	4.0																		
3/4 T	45%	6.0																		
1 T	>100%	8.0																		



Additional Comments/Sketch



Ultrasonic Examination Report *D. De ANZI 5/20/82*

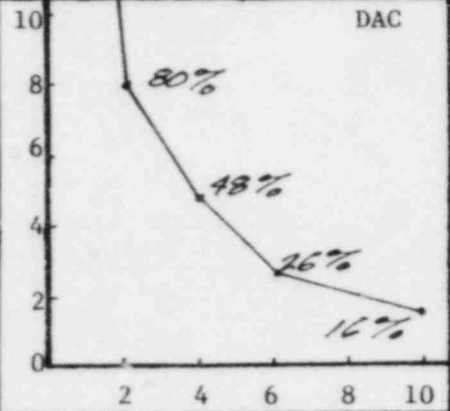
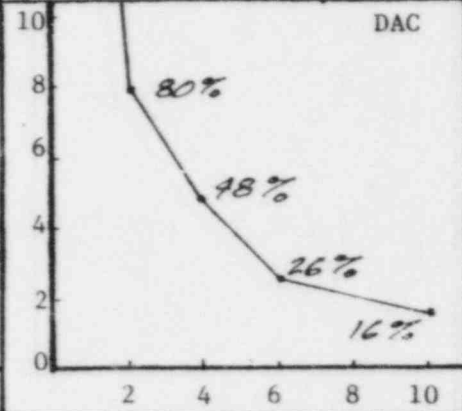
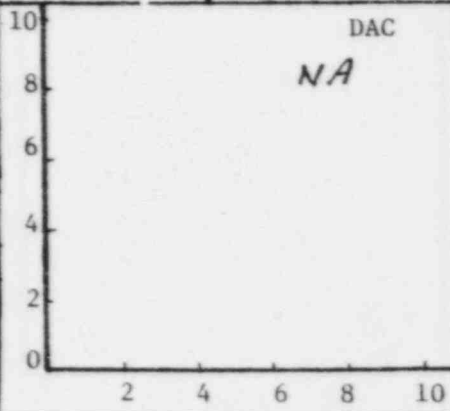
Customer LP&L		Plant WATERFORD	Unit 3	Loop/Zone 1B 10	Iso/Drawing No. ZONE 10 R-2, FC.1
Procedure ISI. 23 R.O, FC.1	Exam Surface O.D.	Examiner/Level Larry Longenecker II		VCR Supervisor David Jones	Date 5-11-82
Component/Piping System COLD LEG R.V. TO R.C.P. 1B		Pipe Size 36"	Weld Type BUTT	Cal. Block # UT-6	Couplant: SONOTRACE Type 40 Batch No. 819

Continuation Sheet Attached
 Yes No

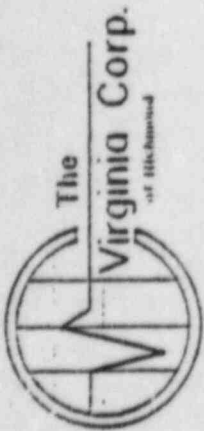
Transducer			Instrument				
	30°	45°	60°	Mfr.	SONIC	Model	MARK I
S/N	J22935	NA	NA	S/N	01610E	RepRate	1K
Size	.5" DIA.			Reject	OFF	Filter	H1
Frequency	225 MHz			Damp	MIN.	Coax	12'
Beam Angle	30°			Freq.	2. MHz.	Video	NORM.

Field Changes:
 Yes No
 If Yes, Number 1

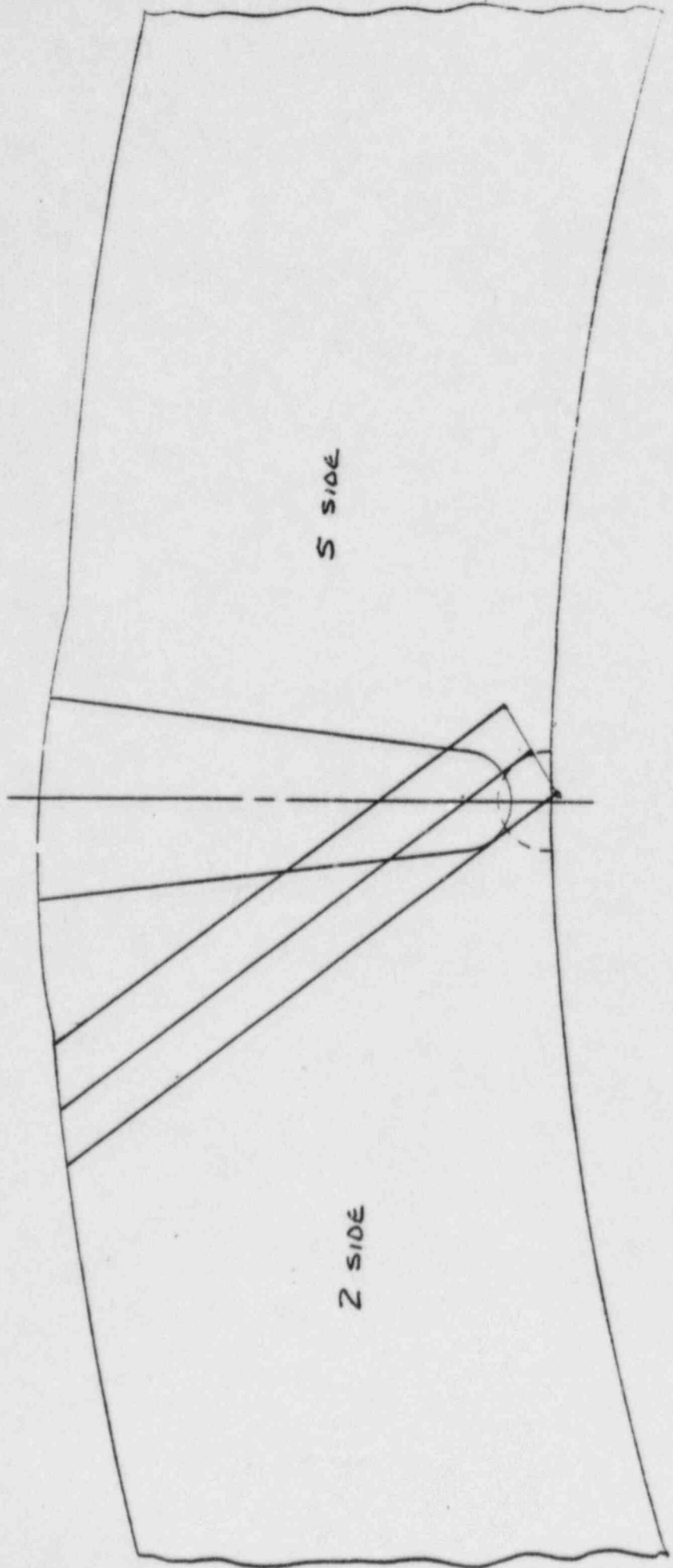
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1 7/32	3/8	2 1/32	80%	2.0	1 7/32	3/8	2 1/32	10:45	2:15	NA	NA	NA	NA
1/2 T			48%	4.0	1 3/32	2 1/32	1 1/32	48%	4.0	1 3/32	2 1/32	1 1/32						
3/4 T			26%	6.0	1 19/32	1 1/32	1 1/32	26%	6.0	1 19/32	1 1/32	1 1/32						
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA						
Ref. dB			59 dB				59 dB											

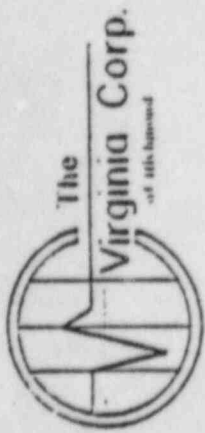


Additional Comments/Sketch

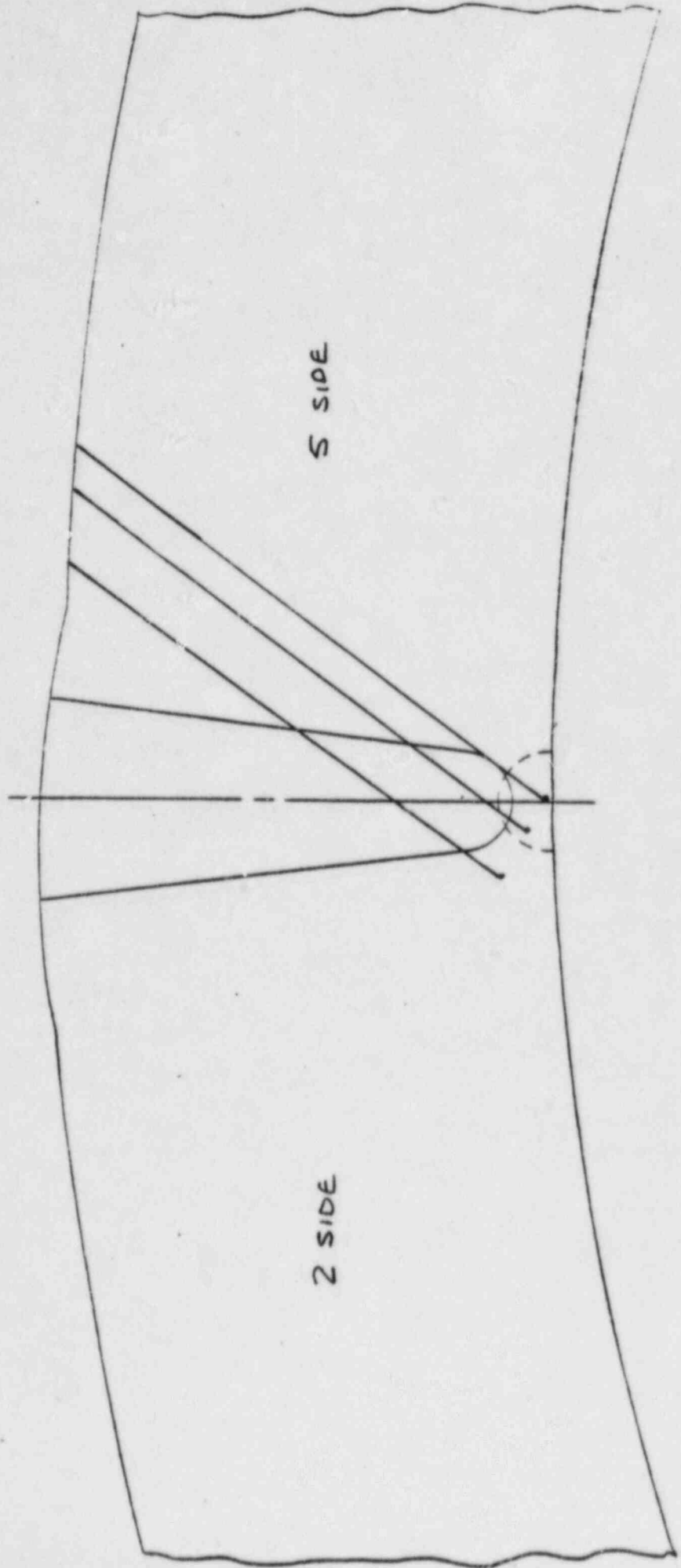


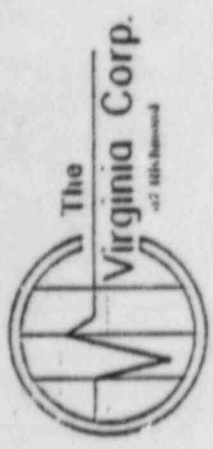
INDICATION No. 1



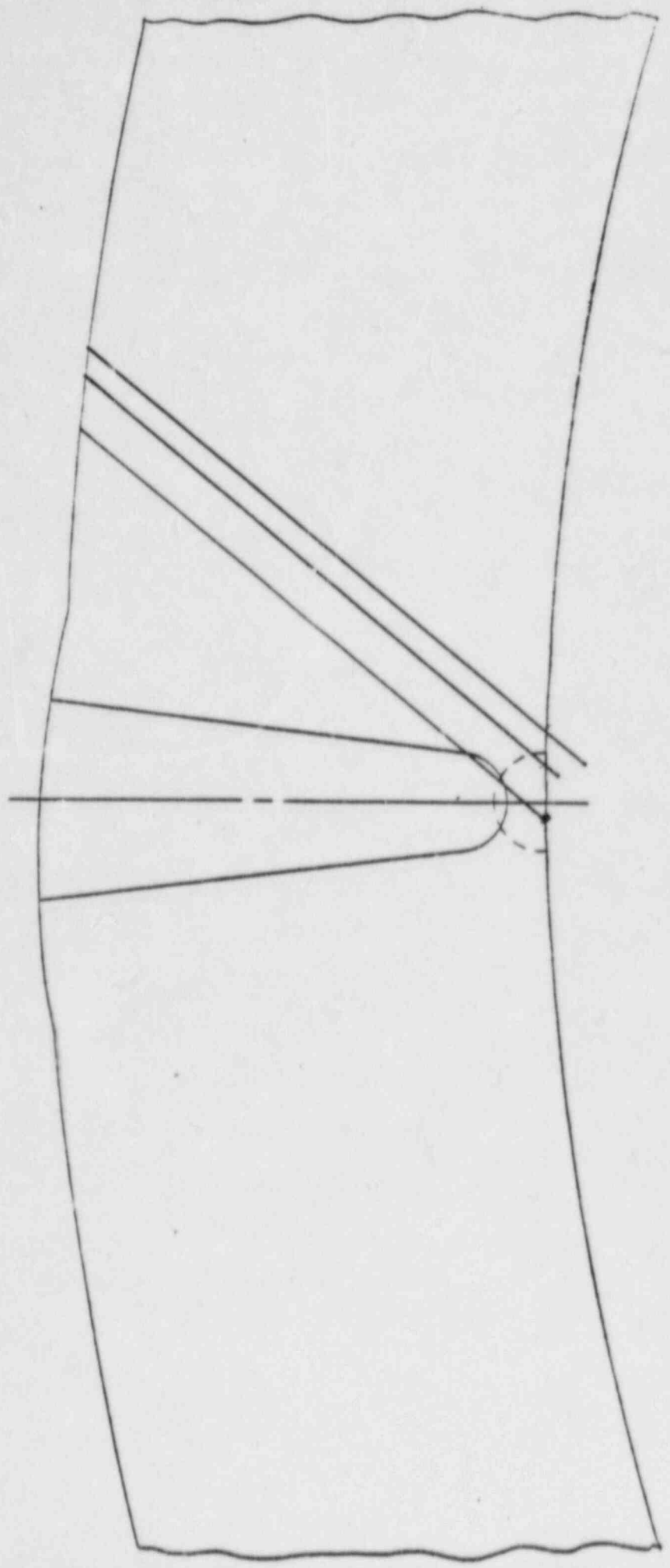


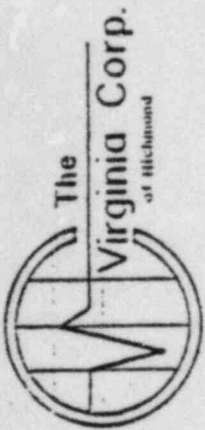
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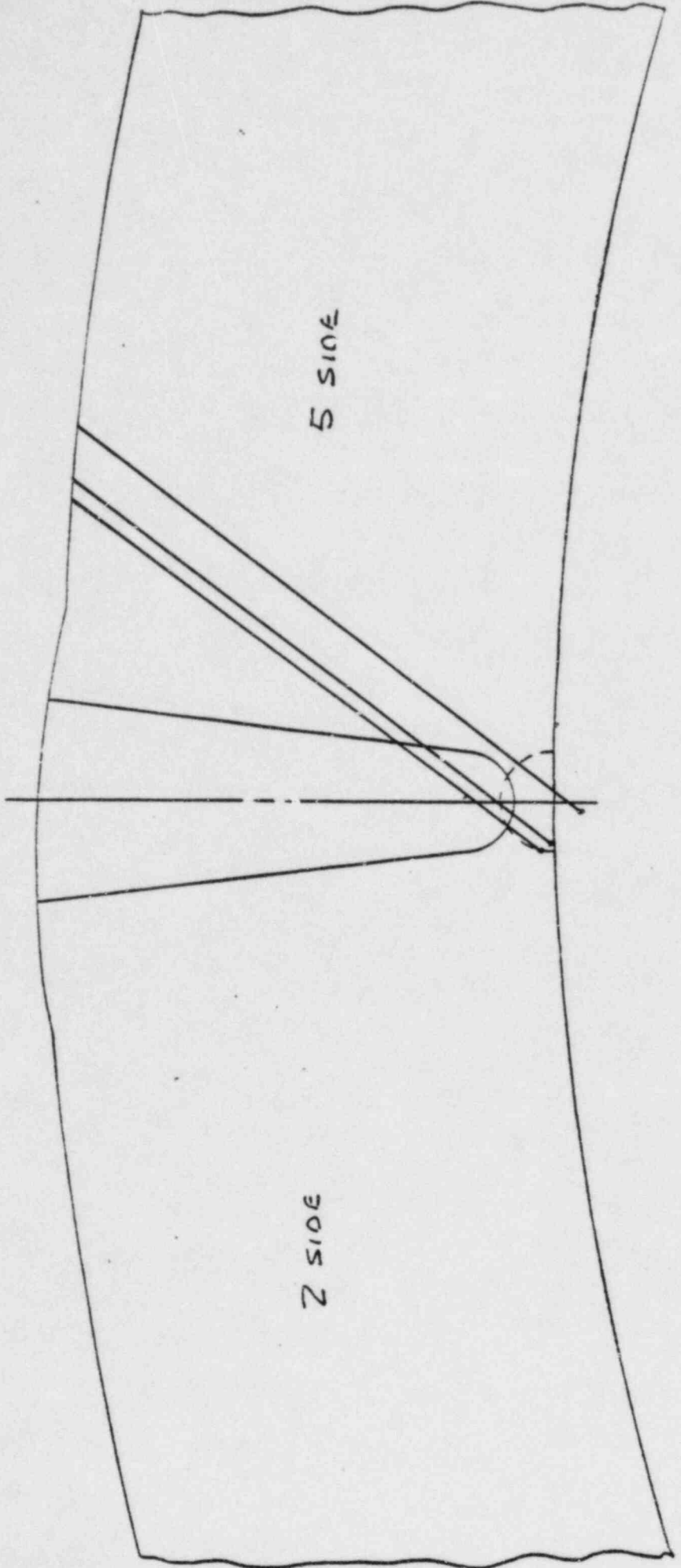


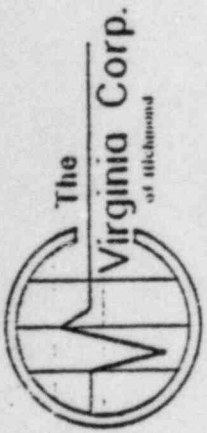
INDICATION No 3



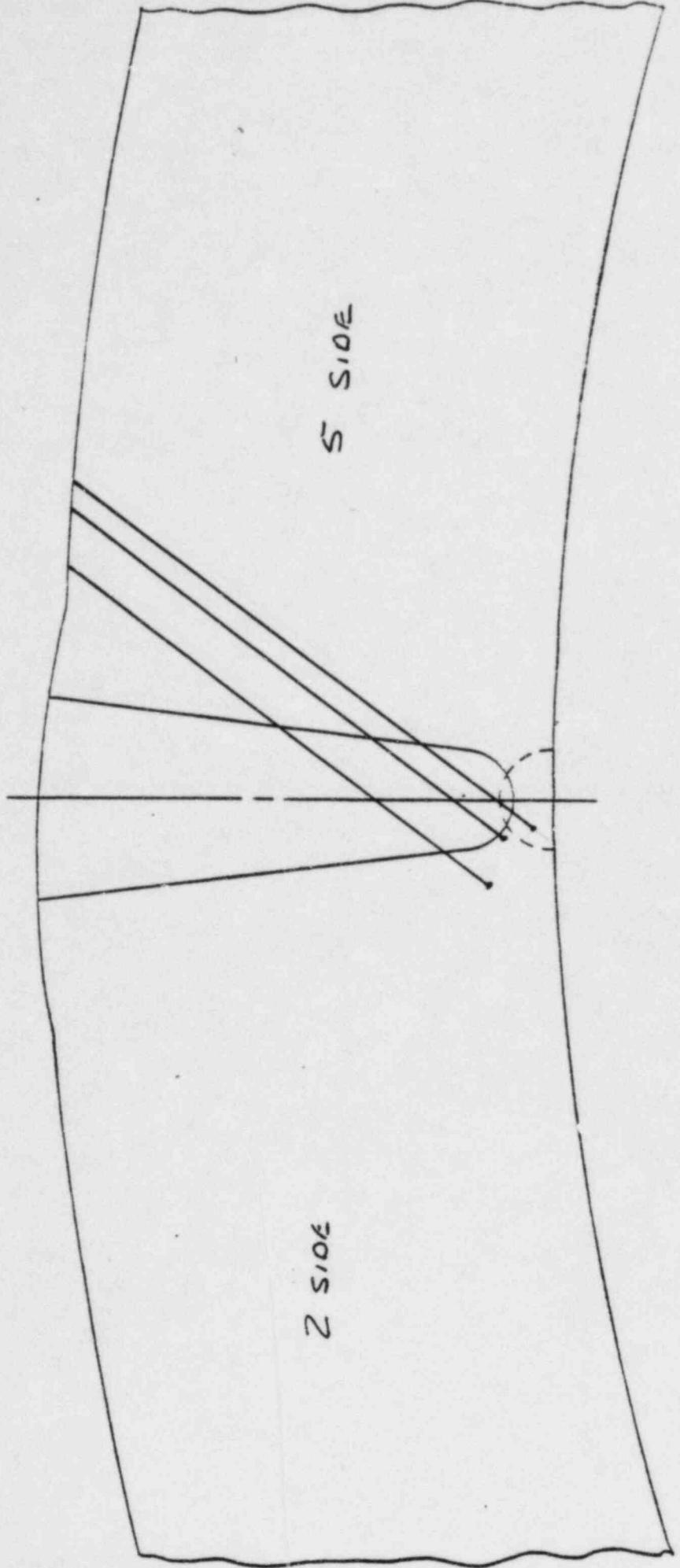


INDICATION No. 4

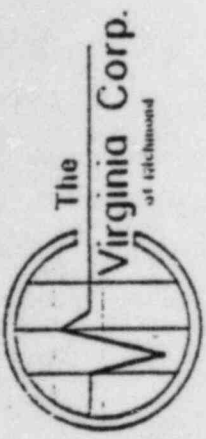




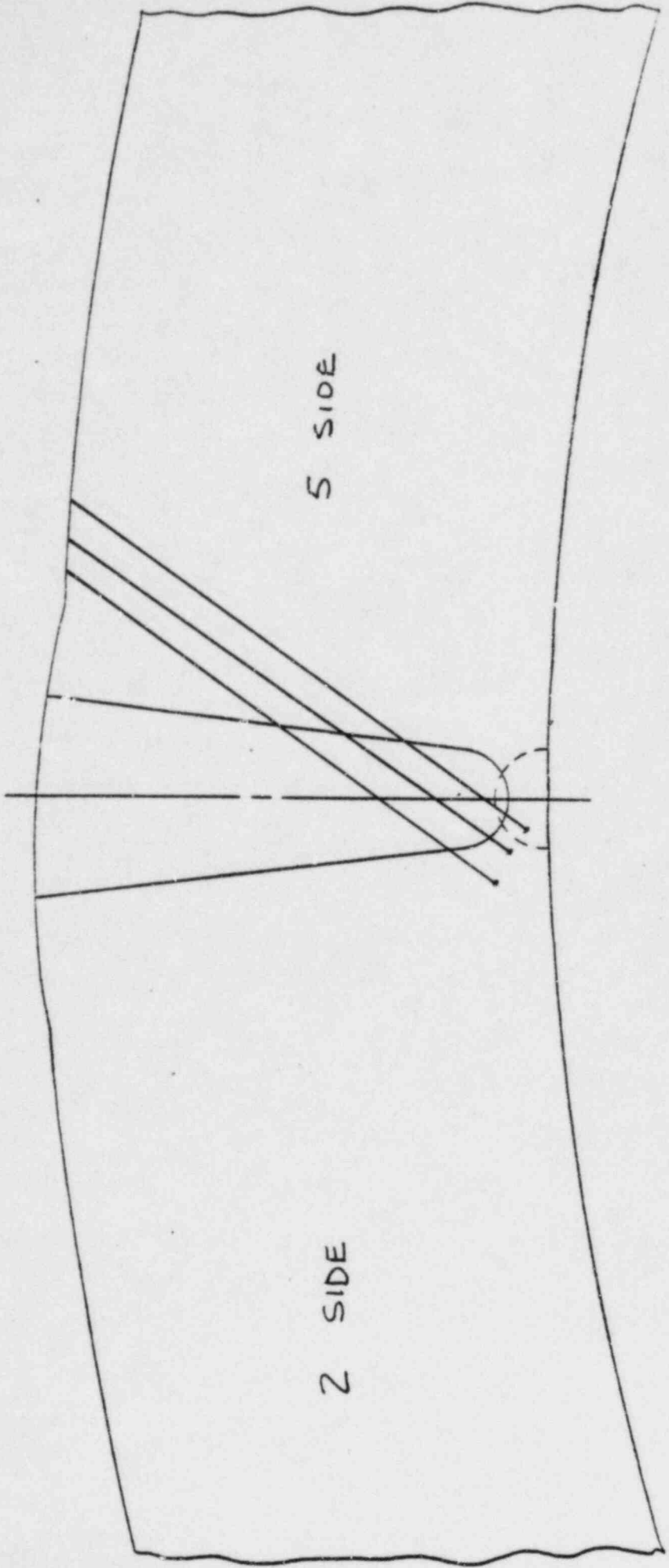
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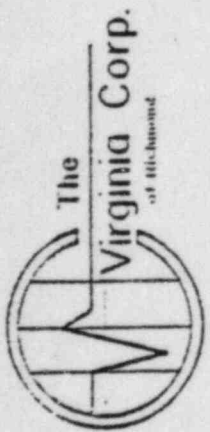


6

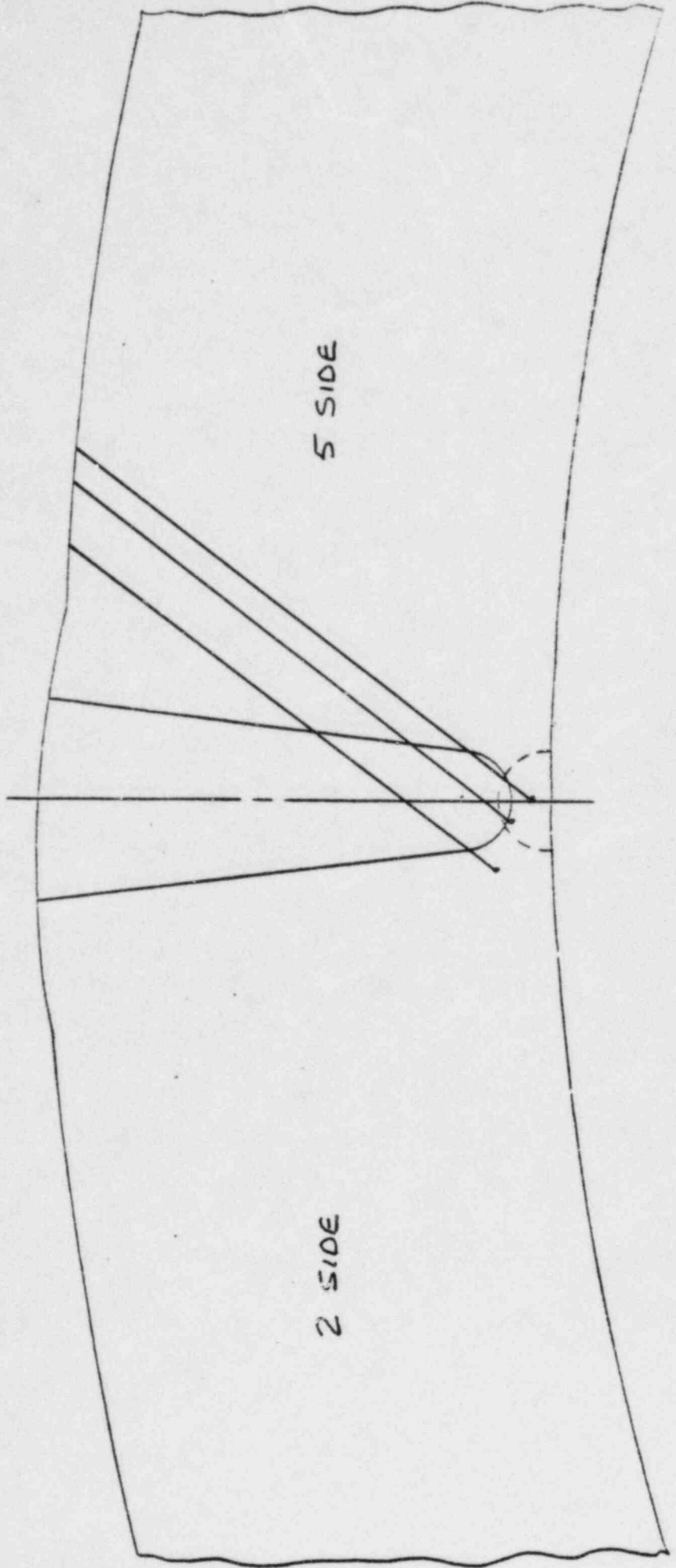


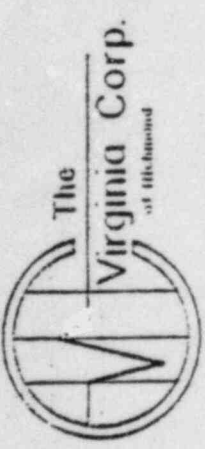
INDICATION No. 6



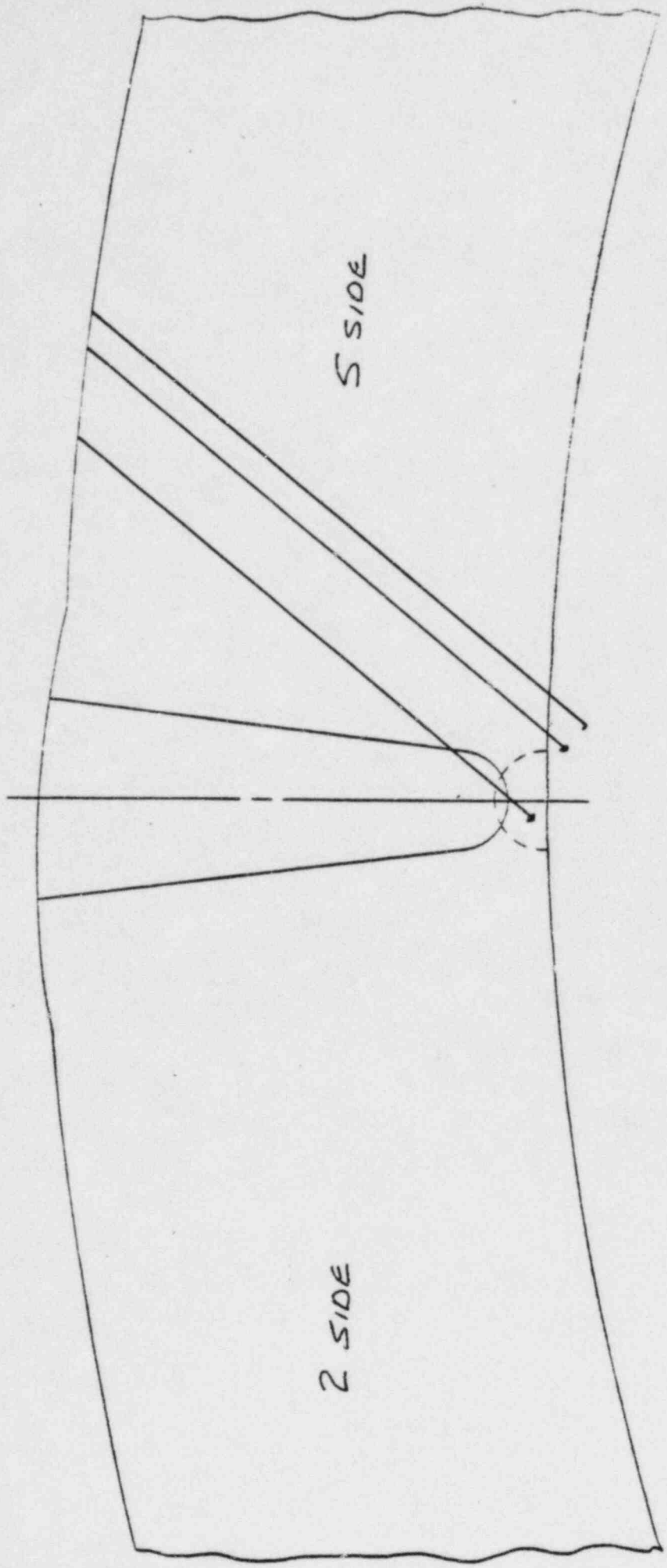


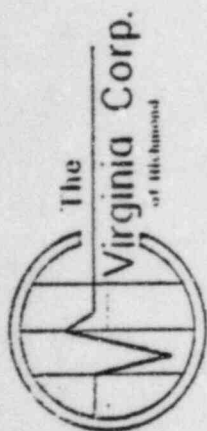
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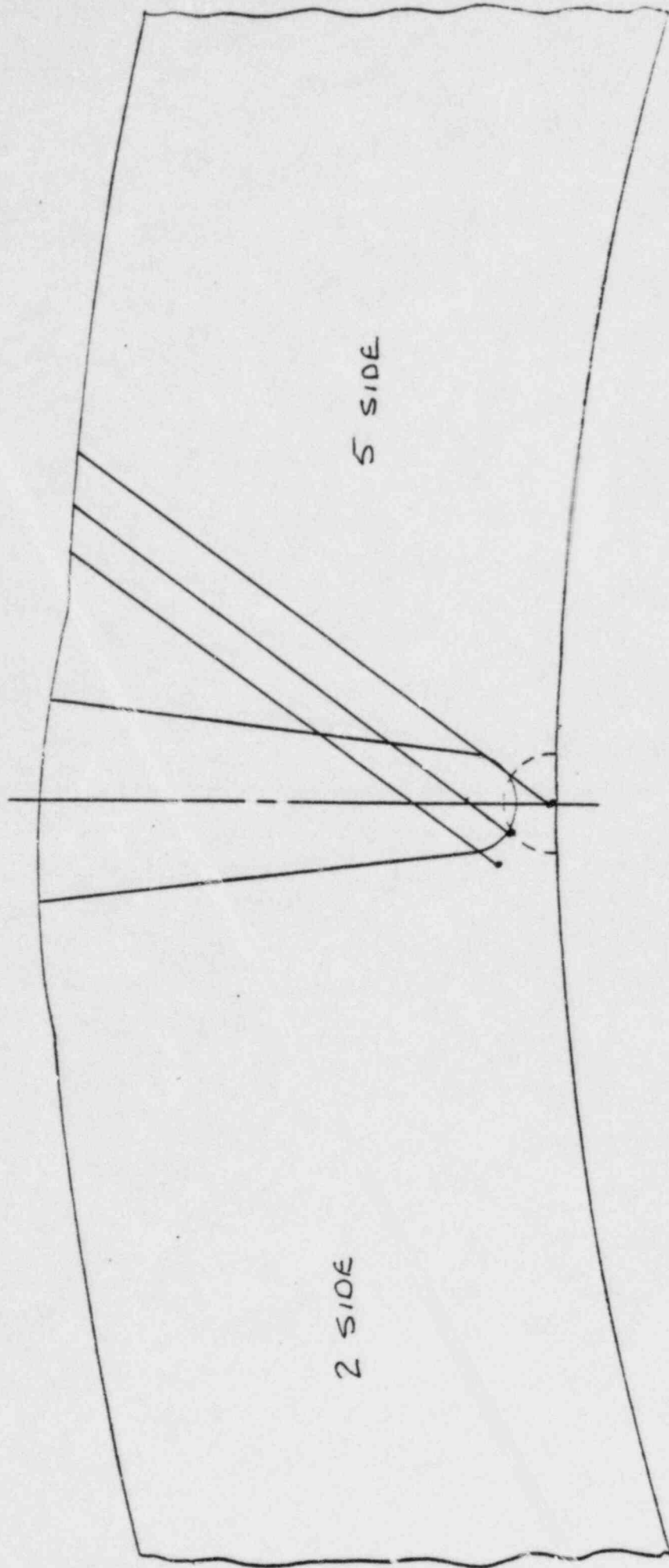


INDICATION No. 8





INDICATION No. 9





The Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne AN.II 5/26/82*

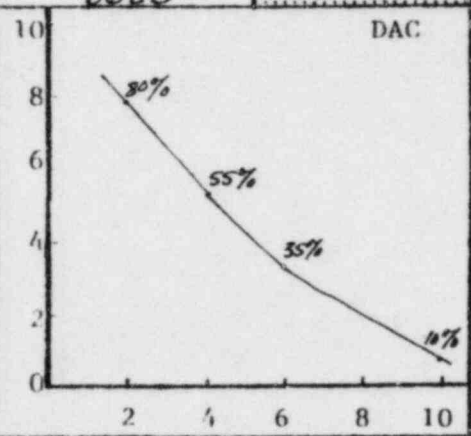
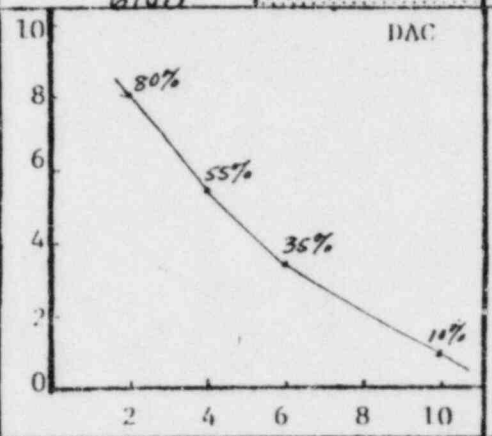
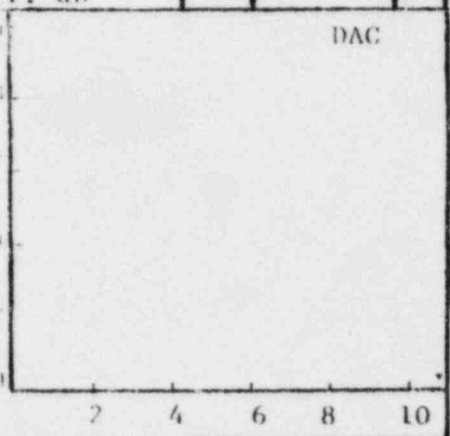
Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1B/10</i>	Iso/Drawing No. <i>ZONE 10, REV. #2, F.C.-1</i>
Procedure <i>ISI 2.3 REV. 0, F.C.+</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>A. Burlington II</i>	VCR Supervisor <i>Daniel Dena</i>	Date <i>5-15-82</i>
Component/Piping System <i>COLD LEG - REACTOR COOLANT</i>	Pipe Size <i>36"</i>	Weld Type <i>BLUTT</i>	Cal. Block <i>UT-6 3.50"</i>	Couplant: <i>SONOTRACE</i> Type <i>40</i> Batch No <i>8119</i>

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
Yes, Number *F.C.+2*

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument <i>366</i>			
	N/A	N/A	L19801	Mfg.	SONIC	Model	FTS-MARK I
			1"	S/N	03704E	RepRate	1K
			2.25MHz	Reject	OFF	Filter	OFF
		61°	Damp	MIN.	Coax	12'	
			Freq.	2. MHz	Video	NORMAL	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>2.0</i>	<i>13/16</i>	<i>5/16</i>	<i>2"</i>	<i>80%</i>	<i>2.0</i>	<i>13/16</i>	<i>5/16</i>	<i>2"</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>11:15</i>	<i>2:45</i>
<i>1/2 T</i>			<i>55%</i>	<i>4.0</i>	<i>3 1/2</i>	<i>3 1/32</i>	<i>3 1/8</i>	<i>55%</i>	<i>4.0</i>	<i>3 1/2</i>	<i>3 1/32</i>	<i>3 1/8</i>						
<i>3/4 T</i>			<i>35%</i>	<i>6.0</i>	<i>5 7/32</i>	<i>4 5/8</i>	<i>5 3/4</i>	<i>35%</i>	<i>6.0</i>	<i>5 7/32</i>	<i>4 5/8</i>	<i>5 3/4</i>						
<i>5/4 T</i>			<i>10%</i>	<i>10.0</i>				<i>10%</i>	<i>10.0</i>									



Additional Comments/Sketch



Ultrasonic Examination Report *A. Payne A.I.T. 5/20/82*

Customer <i>LP&L</i>		Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1B/10</i>	Iso/Drawing No. <i>Zone 10, Rev 2, F.C. 1</i>
Procedure <i>ISI-2.3 Rev. 0, FC+2</i>	Exam Surface <i>ID</i>	Examiner/Level <i>R. R. Burlingame II</i>		VCR Supervisor <i>Daniel Jones</i>	Date <i>5-15-82</i>
Component/Piping System <i>Reactor Coolant</i>		Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT 6, 3.50"</i>	Couplant: <i>Sonotape</i> Type <i>40</i> Batch No. <i>8119</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 Yes, Number *FC, 1*

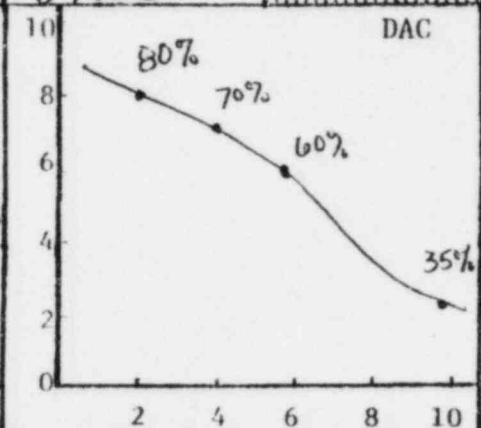
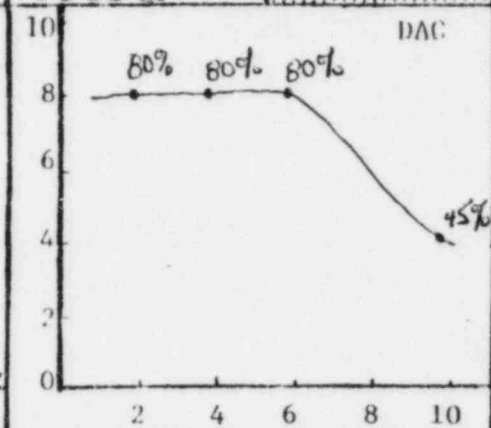
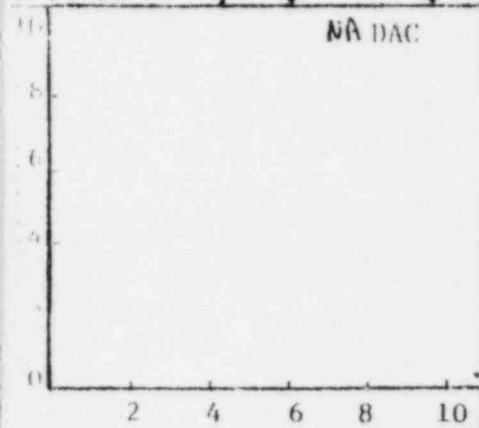
Transducer			Instrument				
	0°	45°	60°	Mfr.	Serial	Model	F.T.S. Mark I
S/N	<i>NA</i>	<i>L19134</i>	<i>NA</i>	<i>Sonic</i>	<i>05304E</i>	<i>RepRate</i>	<i>1000</i>
Size		<i>1.0"</i>		Reject	<i>OFF</i>	Filter	<i>H.</i>
Frequency		<i>2.25 MHz</i>		Damp	<i>Min</i>	Coax	<i>12'</i>
Beam Angle	<i>↓</i>	<i>45°</i>	<i>↓</i>	Freq.	<i>2 MHz</i>	Video	<i>Norm</i>

Calibration 0°

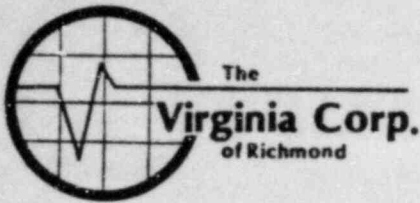
2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
					Scribe Line	50% DAC				Scribe Line	50% DAC		0°		45°		60°	
						In	Out				In	Out	In	Out				
<i>1/4T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>	<i>5/8</i>	<i>7/16</i>	<i>7/8</i>	<i>80%</i>	<i>2.0</i>	<i>5/8</i>	<i>7/16</i>	<i>7/8</i>	<i>NA</i>	<i>NA</i>	<i>1115</i>	<i>1445</i>	<i>NA</i>	<i>NA</i>
<i>1/2T</i>			<i>80%</i>	<i>4.0</i>	<i>1 5/8</i>	<i>1 3/8</i>	<i>1 3/4</i>	<i>70%</i>	<i>4.0</i>	<i>1 5/8</i>	<i>1 3/8</i>	<i>1 3/4</i>						
<i>3/4T</i>			<i>80%</i>	<i>6.0</i>	<i>2 1/4</i>	<i>2 3/8</i>	<i>2 3/4</i>	<i>60%</i>	<i>6.0</i>	<i>2 1/4</i>	<i>2 3/8</i>	<i>2 3/4</i>						
<i>5/4T</i>			<i>45%</i>	<i>9.7</i>				<i>35%</i>	<i>9.7</i>									
Ref. dB	<i>↓</i>	<i>↓</i>	<i>58 db G</i>					<i>59 db G</i>					<i>↓</i>	<i>↓</i>			<i>↓</i>	<i>↓</i>



Additional Comments/Sketch



Date _____

Page _____ of _____

To: _____

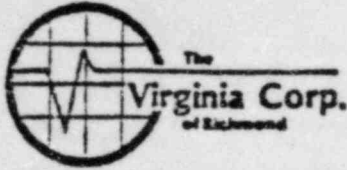
Subject EXAMINATION
Limitations
ZONE 10, Rev. 2, F.C.1

10-013 Scan 5 was not performed because coverage of the root area was obtained with the 45° and 60° angles. Scan 2 was obstructed for approx. 39" at the base of the nozzle by a support lug, and for 36.0° by the o.d. slope of the nozzle. Taking in account, the beam spread, the root area of the weld was covered. Scans 7 & 8 were limited on the scan 2 side of the support lug and o.d. slope of the nozzle. On the scan 5 side of the weld, the 7 & 8 scans were limited by the o.p. mismatch between the nozzle extension and elbow. Root area coverage was good with the 7 & 8 scans.

012-Scan 5 was not performed because coverage of the root area was obtained with the 45° and 60° angles. Scan 2 was limited to a small degree by o.p. mismatch between the nozzle extension and elbow, root area coverage was good. Scans 7 & 8 were restricted at the weld by mismatch; accounting for beam spread, good root area coverage was obtained.

005, 007-This weld forms a branch connection. The weld crown forms the radius between the R.C. pipe and branch nozzle. Scan 2 was not performed because the ultrasonic beam is directed away from the weld root. Scans 7 & 8 were limited by the radius of the weld crown.

Signed _____



W.R. Martin, ANIS 3-28-83
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1/10
Component/Piping System Reactor Coolant	Examiner/Level R. Burlingame II	Date 5-22-82	
Procedure ISI 2.5, R.O.	Iso/Drawing No. Zone 10 R.2, EC.1	VCR Supervisor Daniel Jensen	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. Sonic	Mfgr. Perotech	Size 1.0"	Cal. Block UT-15	
Model FTS - Mark I			Cal. Block N/A	
S/N 780836	Freq. 1.0 Mhz		Range Cal. 3/4" = 8 Div.	
Reject off	Serial No. 219814		Calibration Checks	
Damp. Min			0800	
Freq. 1.0 Mhz	Coax. Cable 12'		1045	
Rep. Rate 1K			1245	
Filter off	Gain 68 db G		1630	
Video Normal				
Couplant Sonotape 40 B. #8119				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
10-001	12	3.50"	3.28"	4.06"	N/A	N/A	N/A	N/A	N/A
	2	3.50"	3.32"	4.06"					
	4	3.43"	3.28"	4.06"					
	6	3.32"	3.28"	4.06"					
	8	3.50"	3.28"	4.06"					
✓	10	3.34"	3.32"	4.06"					
10-002	12	3.43"	3.35"	3.28"					
	2	3.51"	3.43"	3.32"					
	4	3.36"	3.35"	3.28"					
	6	3.04"	3.35"	3.28"					
	8	3.28"	3.43"	3.28"					
✓	10	3.32"	3.43"	3.32"	✓	✓	✓	✓	✓

Sketch/Identification



Ultrasonic Examination Report

2 of 7

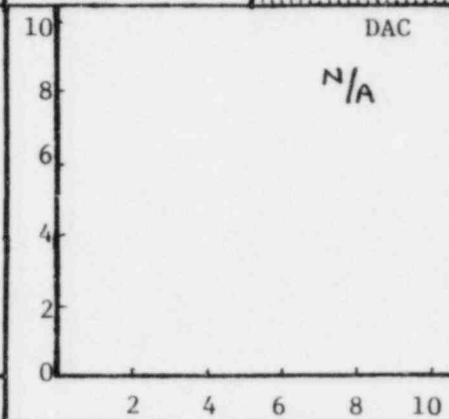
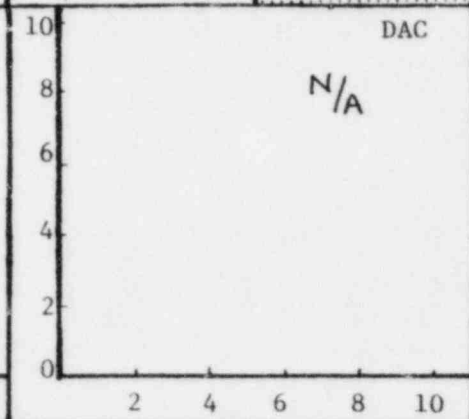
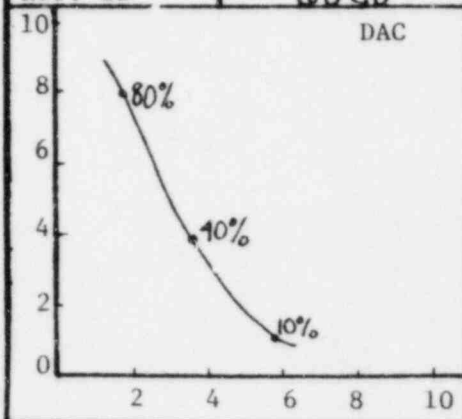
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1/10	Iso/Drawing No. ZONE 10 REV 2 F.C.1
Procedure ISI-2.8 R.1 F.C.1	Exam Surface O.D.	Examiner/Level R. Robinson II	VCR Supervisor Daniel Jensen	Date 5-22-82
Component/Piping System COLD LEG - Pump B to R.V.		Pipe Size 30"	Weld Type BUTT	Cal. Block # UT-15
		Couplant: SONOTRACE Type 40 Batch No. 8119		

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **F.C.1**

	Transducer	0°	45°	60°	Instrument			
	S/N	L19814	N/A	N/A	Mfr.	SONIC	Model	MARK I
	Size	1"			S/N	780836	RepRate	1K
	Frequency	1MHz			Reject	OFF	Filter	OFF
	Beam Angle	0°			Damp	MIN	Coax	6'
					Freq.	1MHz	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	80%	1.8	N/A	N/A	N/A		N/A	N/A	N/A		8:05	10:50	N/A	N/A	N/A	N/A
1/2 T	40%	3.8														
3/4 T	10%	5.8														
BACK	35%	8.0														
Ref. dB	68 db															



Additional Comments/Sketch

M.R. Martin, ANEI 5-28-82

Ultrasonic Examination Report

4 of 7



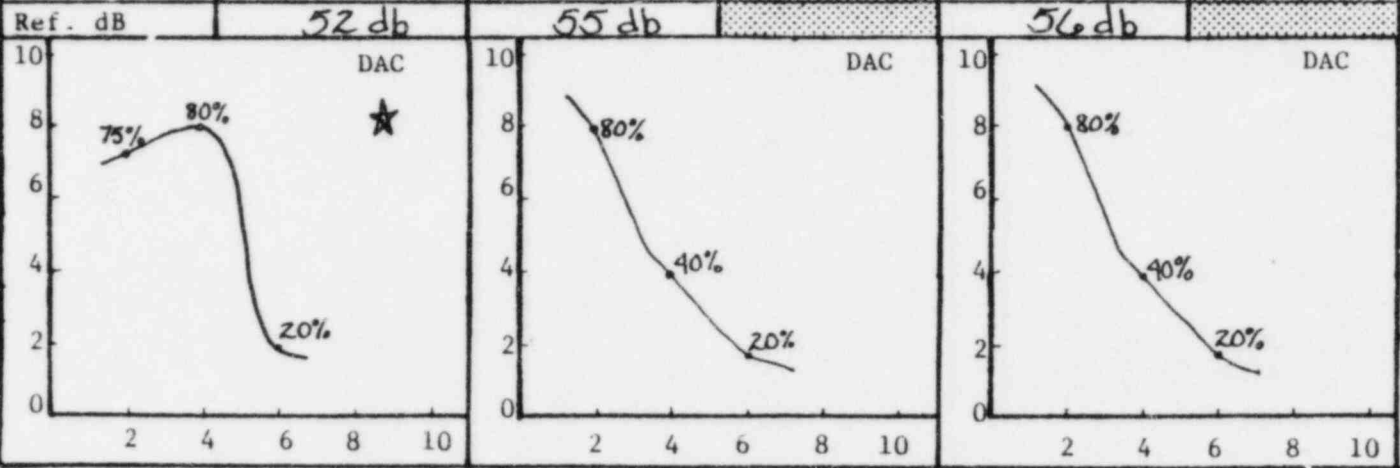
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1/10	Iso/Drawing No. ZONE 10 REV. 2 F.C.1
Procedure F.C.1	Exam Surface O.D.	Examiner/Level <i>Paul Jensen III</i>	VCR Supervisor <i>Daniel Jensen</i>	Date 5-22-82
Component/Piping System COLD LEG - PUMP B TO R.V.	Pipe Size 30"	Weld Type BUTT	Cal. Block UT-15	Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No *AB*
 If Yes, Number **F.C.1**

Transducer 2i5 (CS)	2i5 (SS)	7i8	Instrument			
S/N T8468	T8468	V3035	Mfgr. SONIC	Model MARK I	RepRate 1K	
Size 1.0"	1.0"	1.0"	S/N 01610E	Filter OFF	Coax 6'	
Frequency 1MHZ	1MHZ	1MHZ	Reject 3	Damp 4.5	Video NORM	
Beam Angle 45° L	45° L	45° L				

2i5 Scan (CS)			2 & 5 Scan S.S.			7 & 8 Scan			Calibration Checks									
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	75%	2.0	80%	2.0	N/A	N/A	N/A	80%	2.0	N/A	N/A	N/A	N/A	N/A	8:00	10:45	N/A	N/A
1/2T	80%	4.0	40%	4.0				40%	4.0						12:45	16:30		
3/4T	20%	6.0	20%	6.0				25%	6.0									



Additional Comments/Sketch

★ THE SHAPE OF THE DAC CURVE IS DUE TO THE RATIO OF CARBON STEEL METAL PATH TO THE STAINLESS STEEL METAL PATH. (OR INCONEL)

- SCANNING SENSITIVITY WAS 10 db ABOVE THE REFERENCE
- SEPARATE TRANSDUCERS WERE USED FOR AXIAL AND CIRC. SCANS



The Virginia Corp.
of Richmond

Date _____

Page 6 of 7

To: _____

Subject EXAMINATION
LIMITATIONS

ZONE 10, REV. 3, FC-1

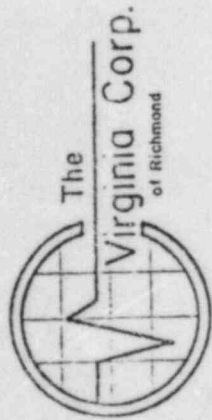
^{002 DJT}
~~10-613~~ ALL SCANS WERE RESTRICTED BY O.D. MISMATCH
BY PUMP TO SAFE END WELD AND SAFE END TO
PIPE WELD.

GOOD ROOT AREA COVERAGE WAS OBTAINED WITH
SCAN 5. MARGINAL ROOT AREA COVERAGE WAS
OBTAINED WITH SCAN 2. SCANS 7 & 8 WERE
LIMITED BY ABOUT 20% FOR THE COVERAGE AREA.

^{001 DJT}
~~10-613~~ (D.M WELD) ALL SCANS WERE RESTRICTED BY O.D
MISMATCH BY THE PIPE TO SAFE END WELD AND
THE SAFE END TO PUMP WELD.

GOOD ROOT AREA COVERAGE WAS OBTAINED WITH
SCAN 2. MARGINAL ROOT AREA COVERAGE WAS
OBTAINED WITH SCAN 5. SCANS 7 & 8 WERE LIMITED
BY ABOUT 30% FOR THE COVERAGE AREA.

Signed _____



TYR. PUMP TO SAFE END TO PIPE
CONFIGURATION

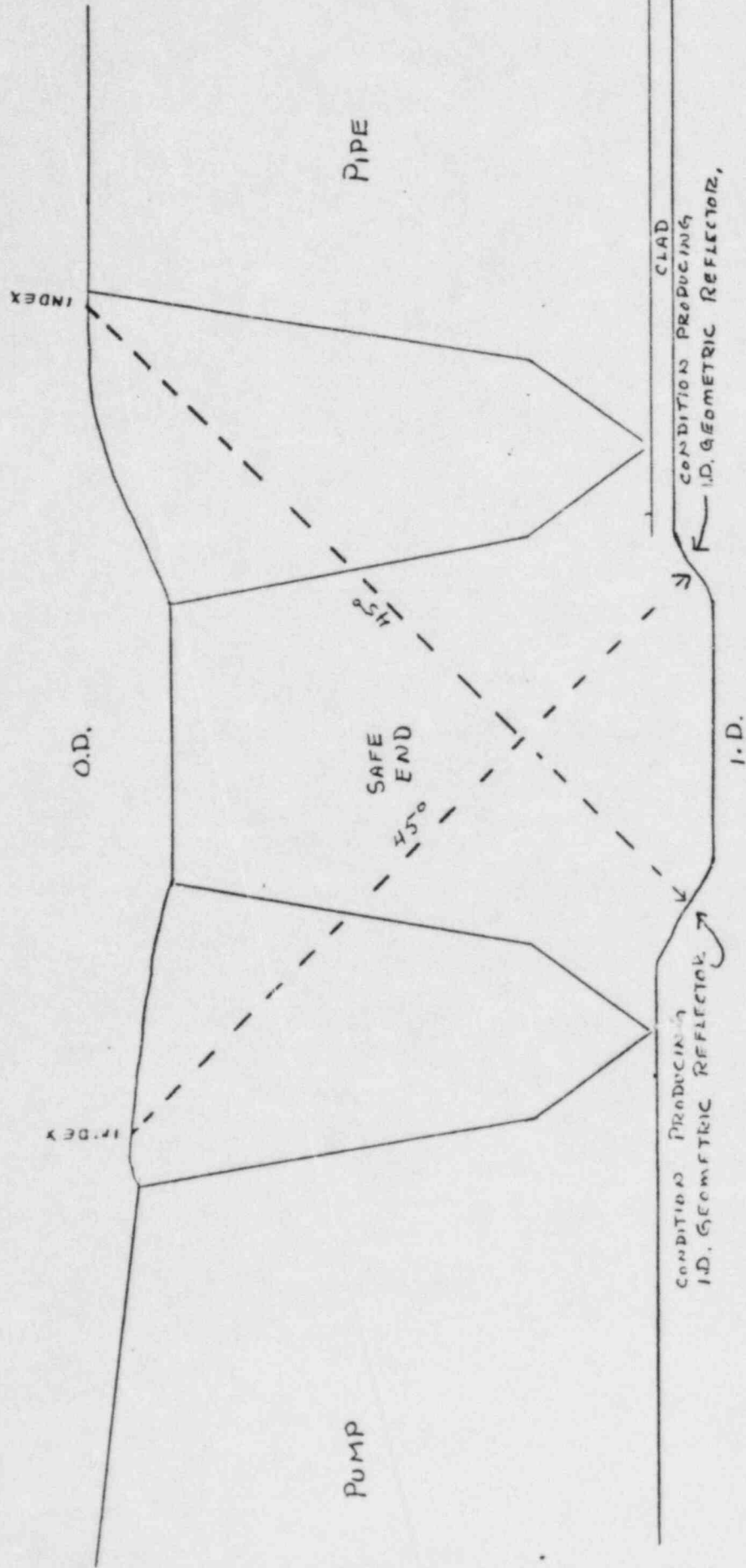


FIG. - 1

5-25-82



Ultrasonic Data Sheet
for *D. Payne ANII 1/24/82*
Thickness Measurement

Customer <i>L.P. & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1B / 10</i>
Component/Piping System <i>Reactor Vessel to R.C. Pump 1B</i>		Examiner/Level <i>David J. Zolman III</i>	Date <i>6/15/82</i>
Procedure <i>ISI-2.5 ACU.0</i>	Iso/Drawing No. <i>Zone 10/REV. 2 / EC. 5</i>	VCR Supervisor <i>Kenul Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Boometrics</i>	Size <i>.50"</i>	Cal. Block <i>WT-16</i>	Cal. Block <i>NIA</i>
Model <i>mk. 4</i>	Freq. <i>3.5 mhz.</i>		Range Cal. <i>2.2</i>	
S/N <i>01610E</i>	Serial No. <i>41874</i>		Calibration Checks	
Reject <i>OFF</i>	Coax. Cable, <i>6' Dual</i>		Int. <i>1:20 pm</i>	
Damp. <i>Min.</i>	Gain <i>50dB</i>		Final <i>2:40 pm</i>	
Freq. <i>2.0 mhz</i>				
Rep. Rate <i>1K</i>				
Filter <i>OFF</i>				
Video Norm.				
Couplant <i>Sonotrace 40 # 8124</i>				

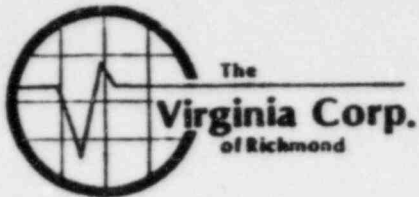
Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>10-008</i>	<i>12</i>	<i>NIA</i>	<i>NIA</i>	<i>1.57"</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>
<i>10-009</i>	<i>2</i>			<i>1.53"</i>					
<i>10-008</i>	<i>4</i>			<i>1.49</i>					
<i>10-008</i>	<i>6</i>			<i>1.51"</i>					
<i>10-008</i>	<i>8</i>			<i>1.47"</i>					
<i>10-008</i>	<i>10</i>			<i>1.53</i>					

Sketch/Identification

Ultrasonic Examination Report

D. Payne ANII 6/24/82



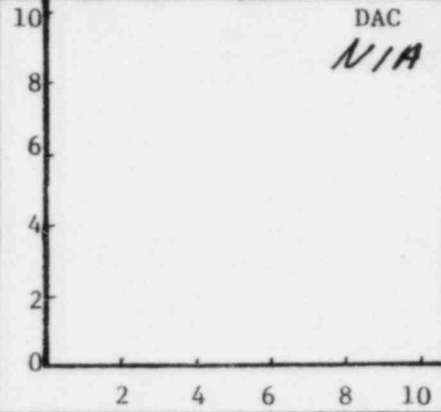
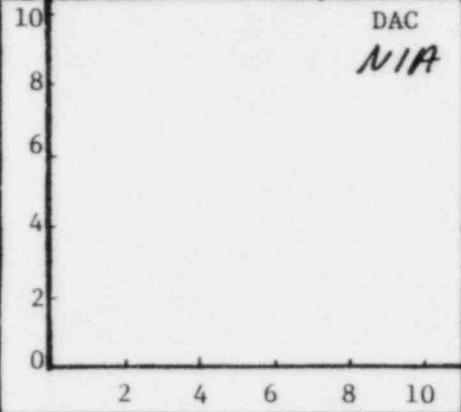
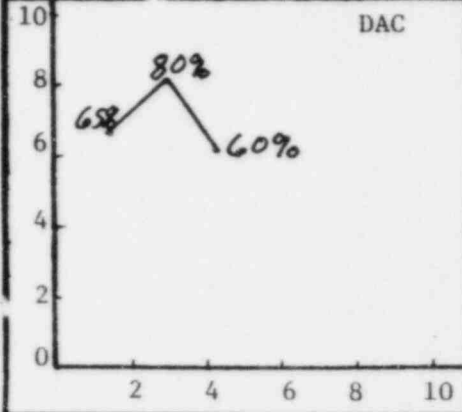
Customer LP&L		Plant Waterford	Unit 3	Loop/Zone 1B110	Iso/Drawing No. Zone 10 Rev. 2 E.C. 2
Procedure F.C. 1	Exam Surface O.D.	Examiner/Level David J. Fokan III		VGR Supervisor Robert Jones	Date 6/15/82
Component/Piping System Cold leg - Reactor Vess. to R.C.P. 1B		Pipe Size 12"	Weld Type BUTT	Cal. Block # UT-16	Couplant: Type 40 Batch No. 9134

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number **1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	KB2728	NIA	NIA	Mfr.	Sonic	Model	MacBE
	.50"			S/N	05473E	RepRate	1K
	2.25			Reject	OFF	Filter	OFF
	0°			Damp	MIA	Coax	6' Dual
				Freq.	2.0MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	65%	1.5	NIA	NIA	NIA	NIA	NIA	NIA	NIA	NIA	NIA	9:12	11:30	NIA	NIA	NIA	NIA
1/2 T	80%	3.0															
3/4 T	60%	4.5															
Ref. dB	66		NIA				NIA										



Additional Comments/Sketch
Cal. for carbon steel side only.



D. Payne ANII 6/24/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer L P & L	Plant Waterford	Unit 3	Loop/Zone 18/10
Component/Piping System Cold Leg - Reactor Vessel to RC.P. 1A	Examiner/Level D. Payne UT	Date 6-19-82	
Procedure ISE 2.5 Rev. 0	Iso/Drawing No. zone 2 Rev. 2 F.S. 2	VCR Supervisor Daniel Jones	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. Spais	Mfgr. Parametrics	Size .50"	Cal. Block UT-16	Cal. Block NA
Model Mark I	Freq. 2.25 Mhz	Serial No. 44632	Range Cal. 1.8"	Calibration Checks
S/N 01610E	Coax. Cable 6' BNC	Gain 50 dB	IN - 09:00	OUT - 11:45
Reject off	Filter Hi	Video Norm		
Damp. Min	Couplant Spontase 40 #8124			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
10-008	12	1.38"	1.33"	N/A	NA	NA	NA	NA	NA
10-008	2	1.38"	1.33"						
10-008	4	1.35"	1.31"						
10-008	6	1.35"	1.33"						
10-008	8	1.35"	1.35"						
10-008	10	1.37"	1.33"						

Sketch/Identification

Ultrasonic Examination Report D. Payne ANII 6/24/82



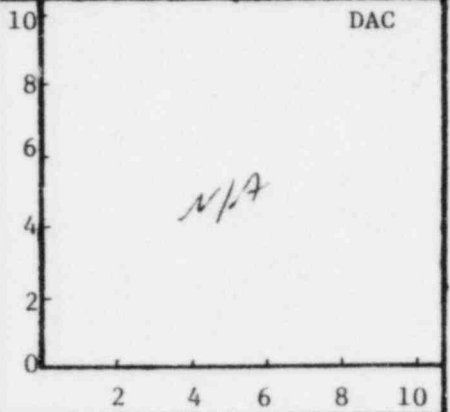
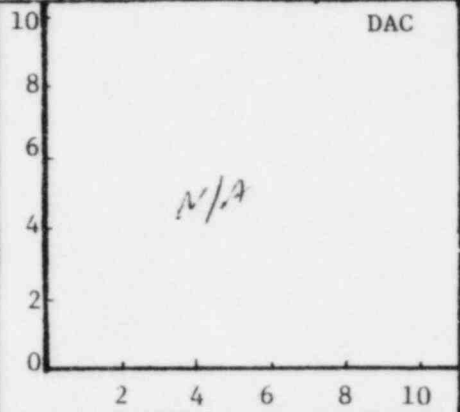
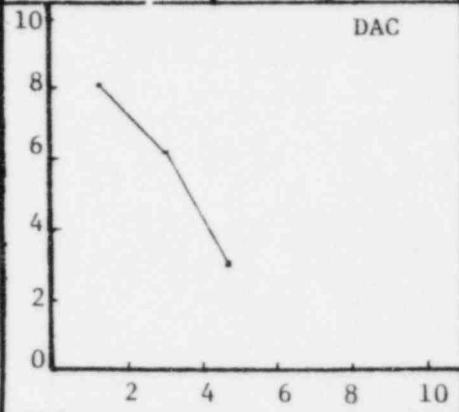
Customer LP & L		Plant WATER FORD		Unit III		Loop/Zone 1B/10		Iso/Drawing No. ZONE 10 / REV 2 F.C. 2 ddf	
Procedure ISI 28 REV 1		Exam Surface OD		Examiner/Level David J. Fokun II		VCR Supervisor Daniel Jensen		Date 6/19/82	
Component/Piping System (COLD) LEG-REACTOR VESSEL TO RCP 1B				Pipe Size 12"		Weld Type BUTT		Cal. Block UT-16	
						Couplant SONITAKE		Batch No 8124	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number 1

	Transducer			Instrument			
	S/N			Mfr.	Model	Mark I	
	Size			S/N	RepRate	1K	
	Frequency			Reject	Filter	HIGH	
Beam Angle			Damp	Coax	6 BNC-BNC		
			Freq.	Video	Norm		

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
					0900				1145		N/A		N/A		N/A	
1/4 T	80%	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/2 T	60%	3.2														
3/4 T	30%	4.5														
Ref. dB	43		N/A				N/A									



Additional Comments/Sketch
Cal. for weld & safe-end only

Ultrasonic Examination Report



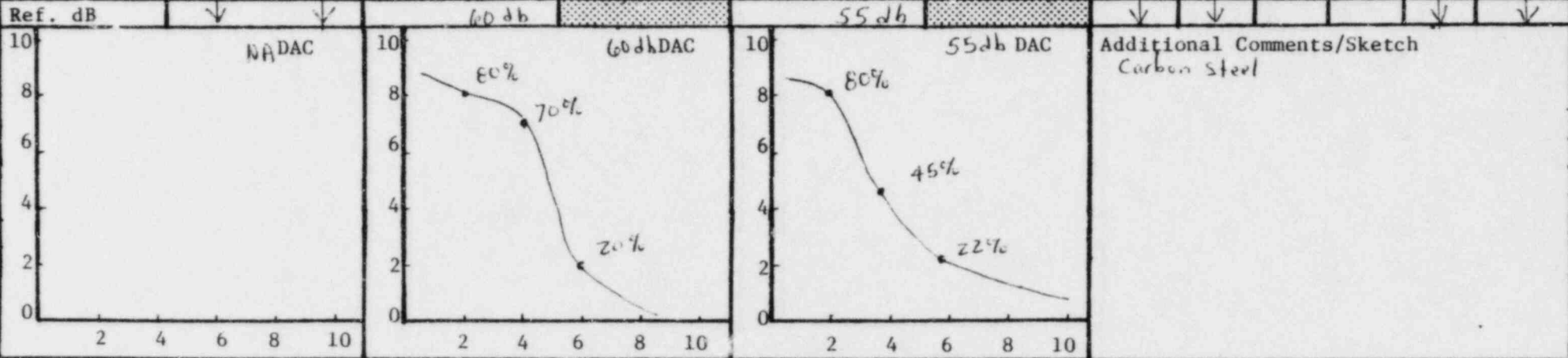
Customer <i>LPEL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1B/10</i>	Iso/Drawing No. <i>Zone 10, Rev 2, FCT 2 10A2</i>
Procedure <i>151-2.8, Rev 1, FCT 2</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>BURLINGAME II</i>	VOR Supervisor <i>Walter Jensen</i>	Date <i>6-19-82</i>
Component/Piping System <i>Cold Leg-Receiver Vessel to RCP 1B</i>	Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-16</i>	Couplant: Sonotrace Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *F.C. T2*

Transducer	0°	45° RL	60°	Instrument			
	S/N	NA	607152	Mfr.	Sonic	Model	FTS Mark I
	Size		1/2"	S/N	780836	RepRate	3000
	Frequency		2.25 MHz	Reject	1	Filter	Hi
	Beam Angle	↓	45°	Damp	M.W	Coax	10'

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4	NA	NA	80%	2.0			80%	1.8			NA	NA	830	1000	NA	NA
1/2			70%	4.0			45%	3.8								
3/4			20%	6.0			22%	5.8								



Ultrasonic Examination Report



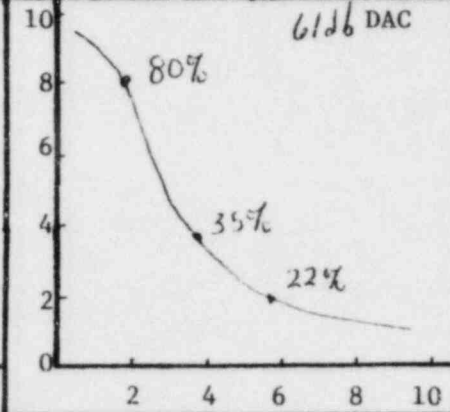
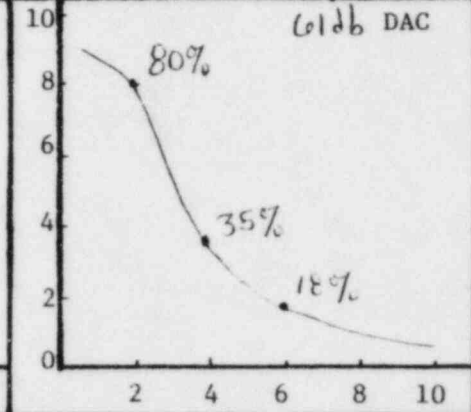
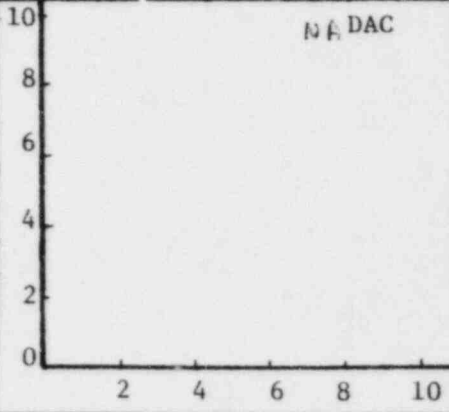
Customer <i>LP EL</i>		Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1B/10</i>	Iso/Drawing No. <i>Zone 10, Rev 2, FC+2</i>	
Procedure <i>151-2 & REFLECT</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>BURLINGAME</i>		VBR Supervisor <i>[Signature]</i>		Date <i>6-19-82</i>
Component/Piping System <i>Cold Leg-React. Vessel to PCA 1B</i>		Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-16</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8124</i>	

Continuation Sheet Attached
 Yes No

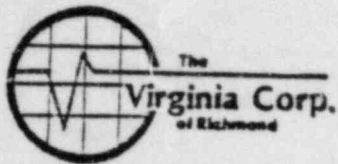
Field Changes:
 Yes No
 If Yes, Number *FC+2*

Transducer	0°	45° RL	60°	Instrument			
S/N	NA	601152	NA	Mfr.	Sonic	Model	FTS MLI
Size		1/2"		S/N	780836	RepRate	3000
Frequency		2.25 MHz		Reject	1	Filter	H.
Beam Angle	↓	43°	↓	Damp	MW	Coax	6'
				Freq.	2 MHz	Video	None

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4	NA	NA	80%	2.0			80%	1.8			NA	NA	6030	1000	NA	NA
1/2			35%	4.0			35%	3.8								
3/4			18%	6.0			22%	5.6								
Ref. dB	↓	↓	61 db				61 db				↓	↓			↓	↓



Additional Comments/Sketch
Austenitic



D. Payne ANNE 7/9/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant WATERFORD	Unit .3	Loop/Zone 18/10
Component/Piping System Cold Leg - Reactor Vessel TO RCP1B	Examiner/Level Michael W. Alow II	Date JULY 10, 1982	
Procedure ISI 2.5 REV 0	Iso/Drawing No. 10 REV 2 R-1	VCR Supervisor [Signature]	Continuation Sheet Attached Yes [] No [X]

Equipment

Instrument		Transducer		Calibration
Mfgr. SONIC	Mfgr. PANAMETRICS	Size .5"	Cal. Block UT-18	Cal. Block NA
Model MARK 1	Freq. 2.25 MHz	Serial No. 44651	Range Cal. 2.135"	Calibration Checks
S/N D105BE	Coax. Cable 6' DUAL	Gain 47db	IN 1:15	OUT 4:40
Reject OFF				
Damp. MIN				
Freq. 2.0 MHz				
Rep. Rate 1K				
Filter HI				
Video NORM				
Couplant Soudabloc 40 3/4 B124				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
10-006	12	1.110"	.854"	1.451"	NA	NA	NA	NA	NA
10-006	2	1.110"	.854"	1.451"					
10-006	4	1.132"	.897"	1.451"					
10-006	6	1.110"	.854"	1.409"					
10-006	8	1.068"	.811"	1.495"					
10-006	10	1.068"	.854"	1.495"					

Sketch/Identification



Ultrasonic Examination Report

7/19/82

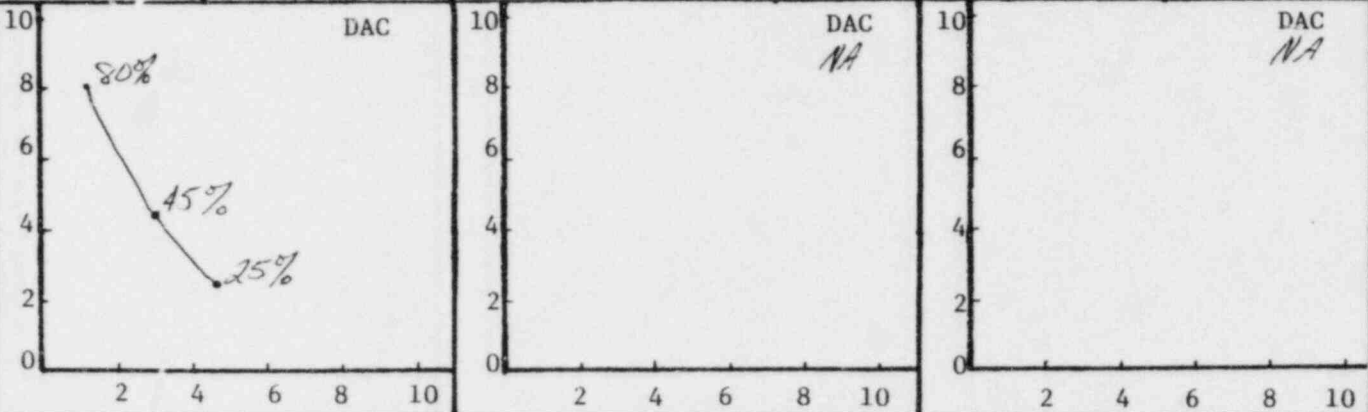
Customer <i>L.P. & L.</i>	Plant <i>Waterford</i>	Unit <i>#3</i>	Loop/Zone <i>1B/10</i>	Iso/Drawing No. <i>Zone 10, Rev. 2, F.C. X 2</i>
Procedure <i>ISI-28 R.1 F.C.1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Michael W. Blew II</i>	VGR Supervisor <i>Michael Jensen</i>	Date <i>7-10-82</i>
Component/Piping System <i>Cold Leg - Reactor Vessel to RCP 1B</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *F.C. 1*

Transducer	0°			45°			60°			Instrument			
	S/N	Size	Frequency	Beam Angle	Mfr.	S/N	Reject	Damp	Freq.	Model	RepRate	Filter	Video
	<i>44651</i>	<i>.5"</i>	<i>2.25MHz</i>	<i>0°</i>	<i>Sonic</i>	<i>01058E</i>	<i>OFF</i>	<i>Min.</i>	<i>2.0MHz</i>	<i>Mark I</i>	<i>1K</i>	<i>Hi</i>	<i>Norm.</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks								
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°		
					Scribe Line	50% DAC	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out		
<i>1/4 T</i>	<i>80%</i>	<i>4.3</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1:15</i>	<i>4:40</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>45%</i>																		
<i>3/4 T</i>	<i>25%</i>																		



Additional Comments/Sketch



Ultrasonic Examination Report

D. Pineda ANII 7/19/82

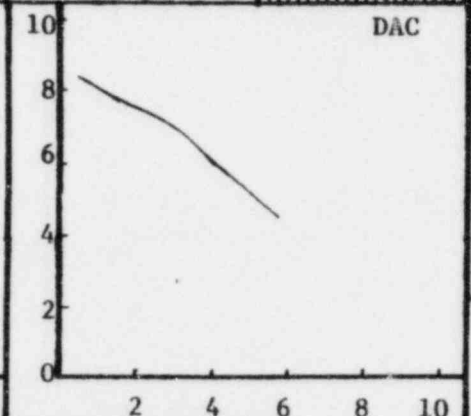
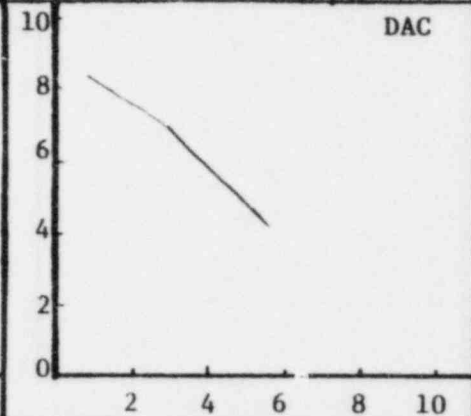
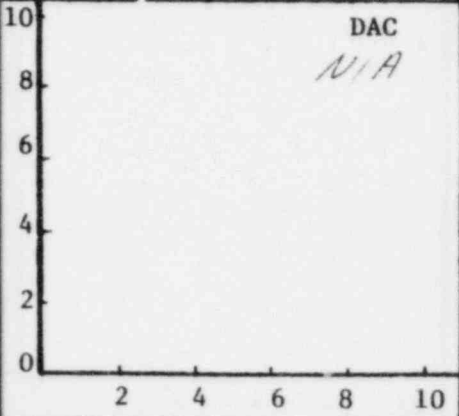
Customer <i>L P & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone Iso/Drawing No. <i>1110 Zone 10 Rev 2 F.C.X</i>
Procedure <i>10 2</i> <i>15128 Rev 1</i>	Exam Surface <i>C.O.</i>	Examiner/Level <i>Daniel J. Johnson III</i>	VCR Supervisor <i>Daniel J. Johnson</i>
Component/Piping System <i>Reactor Vessel to RCP 1B</i>	Pipe Size <i>35"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-18</i>
		Couplant: Type <i>40</i>	Date <i>7/15/82</i>
		Batch No. <i>8124</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *2*

Transducer S/N Size Frequency Beam Angle	30°	45°	60°	Instrument			
	<i>607150</i>	<i>NIA</i>	<i>NIA</i>	Mfgr.	<i>Sonic</i>	Model	<i>Macke</i>
	<i>50"</i>			S/N	<i>054735</i>	RepRate	<i>1X</i>
	<i>2.25 MHz</i>			Reject	<i>3</i>	Filter	<i>Hi</i>
	<i>30°</i>			Damp	<i>Mid.</i>	Coax	<i>6.8 MHz MD</i>
				Freq.	<i>2.0 MHz</i>	Video	<i>Norm</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NIA</i>	<i>NIA</i>	<i>80%</i>	<i>1.5</i>	<i>NIA</i>	<i>NIA</i>	<i>80%</i>	<i>1.5</i>	<i>NIA</i>	<i>NIA</i>	<i>8.00</i>	<i>10.50</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>
<i>1/2 T</i>			<i>70%</i>	<i>3.0</i>			<i>70%</i>	<i>3.0</i>								
<i>3/4 T</i>			<i>55%</i>	<i>4.5</i>			<i>55%</i>	<i>4.5</i>								
Ref. dB	<i>NIA</i>		<i>62</i>				<i>62</i>									



Additional Comments/Sketch
Calibration for carbon steel side



Ultrasonic Examination Report

D. Payne ANII 7/19/82

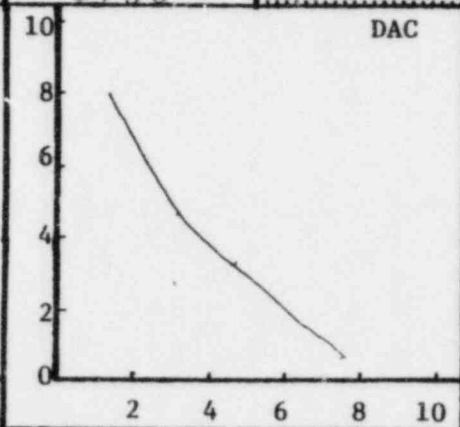
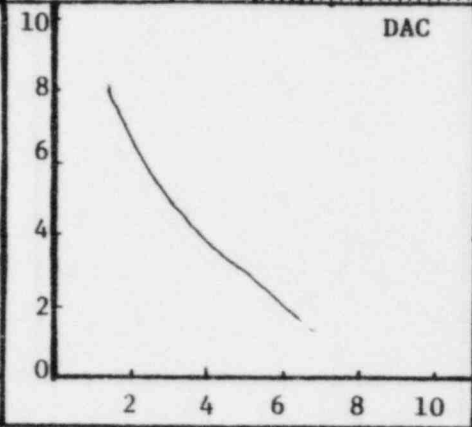
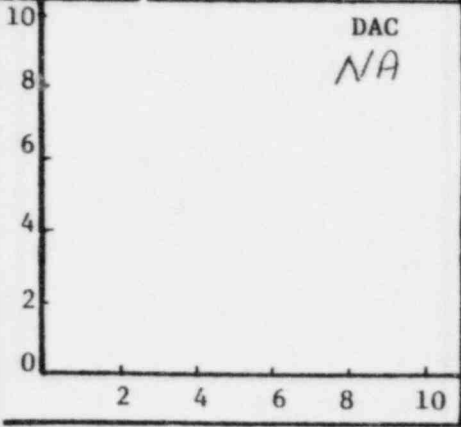
Customer <i>LP+L</i>		Plant <i>Waterford</i>		Unit # <i>3</i>	Loop/Zone <i>1/10</i>	Iso/Drawing No. <i>ZONE 10 Rev. 2 EC. 2</i>	
Procedure <i>F.C. 2 151-2.2 Rev 1</i>		Exam Surface <i>OD</i>	Examiner/Level <i>David T. Smith</i>		VCR Supervisor <i>W. Neal</i>		Date <i>7-15-82</i>
Component/Piping System <i>Reactor Vessel to RCP 1B</i>			Pipe Size <i>3.5"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-18</i>	Couplant: Type <i>Sonolite</i> Batch No. <i>812Y</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *EC. 2*

Transducer	30°	45°	60°	Instrument			
	S/N <i>602150</i>	<i>NA</i>	<i>NA</i>	Mfgr.	<i>Sonic</i>	Model	<i>MARK I</i>
	Size <i>1.50"</i>			S/N	<i>05473E</i>	RepRate	<i>1K</i>
	Frequency <i>2.25 MHz</i>			Reject	<i>3</i>	Filter	<i>H.</i>
Beam Angle	<i>30°</i>			Damp	<i>M.N.</i>	Coax	<i>6' BNC to MD</i>
				Freq.	<i>2.0 MHz</i>	Video	<i>Norm</i>

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>7:50</i>	<i>10:53</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>50%</i>	<i>3.0</i>				<i>50%</i>	<i>3.0</i>									
<i>3/4 T</i>			<i>35%</i>	<i>4.5</i>				<i>35%</i>	<i>4.5</i>									
<i>1 T</i>			<i>15%</i>	<i>6.5</i>				<i>10%</i>	<i>7.2</i>									
Ref. dB	<i>NA</i>		<i>63 dB</i>					<i>67 dB</i>										



Additional Comments/Sketch
Calibration for austenetic side



The
Virginia Corp.
of Richmond

Ultrasonic Data Sheet
for *Dan Payne ANZI*
Thickness Measurement *5/8/82*

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>211</i>
Component/Piping System <i>R.L. Pump 2A to Steam Gen. #2</i>	Examiner/Level <i>David J. Zoller LT</i>	Date <i>March 6, 1982</i>	
Procedure <i>ISI 2.5 Rev. 0</i>	Iso/Drawing No. <i>Zonell Rev. 25.62</i>	VCR Supervisor <i>Daniel J. Guss</i>	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

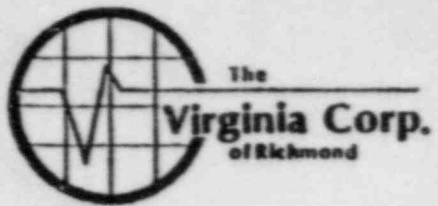
Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>KB-Aemtech</i>	Size <i>.50"</i>	Cal. Block <i>UT-6</i>	
Model <i>MARK I</i>			Cal. Block <i>N/A</i>	
S/N <i>01610E</i>	Freq. <i>2.25 MHz</i>	Range Cal. <i>5"</i>		
Reject <i>OFF</i>	Serial No. <i>J02172</i>		Calibration Checks	
Damp. <i>Min</i>	Coax. Cable <i>12' BNC-BNC</i>		<i>In 8:45</i>	
Freq. <i>2.0 MHz</i>	Gain <i>29dB</i>		<i>Out 10:50</i>	
Rep. Rate <i>1K</i>				
Filter <i>OFF</i>				
Video <i>Norm</i>				
Couplant <i>Sonotrace 40 #8117</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan
11-004LA	1'	3.43"	3.36"	3.36"	11-005	10	3.22"	2.80"	3.43"
11-004LA	2'	3.43"	3.36"	3.36"	11-010	12	2.87"	3.36"	2.80"
11-004LA	3'	3.43"	3.36"	3.36"	11-010	2	2.94"	3.50"	2.87"
11-004LA	4'	3.43"	3.36"	3.36"	11-010	4	3.29"	3.43"	2.80"
11-004LA	5'	3.43"	3.36"	3.36"	11-010	6	3.15"	3.50"	2.87"
11-004LA	6'	3.36"	3.36"	3.36"	11-010	8	3.29"	3.57"	2.87"
11-004LA	7'	3.43"	3.43"	3.36"	11-010	10	3.29"	3.50"	2.87"
11-005	12	3.36"	2.80"	3.36"	11-012LA	1'	3.43"	3.36"	3.43"
11-005	2	3.22"	2.73"	3.43"	11-012LA	2'	3.43"	3.43"	3.50"
11-005	4	3.29"	2.80"	3.50"	11-012LA	3'	3.36"	3.36"	3.50"
11-005	6	3.36"	2.87"	3.36"	11-012LA	4'	3.43"	3.36"	3.43"
11-005	8	3.29"	2.80"	3.43"	11-012LA	5'	3.43"	3.36"	3.43"

Sketch/Identification *Measurements taken beginning at centerline stamp.*



Ultrasonic Examination Report *Don Payne ANZI 3/4/82*

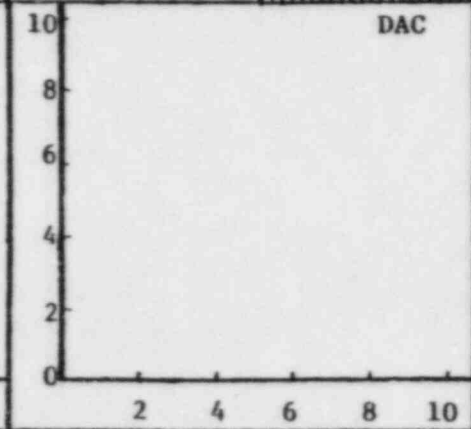
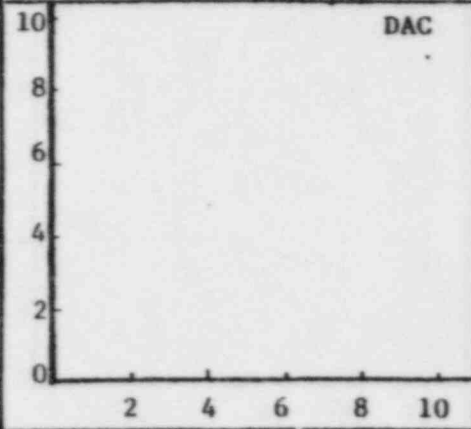
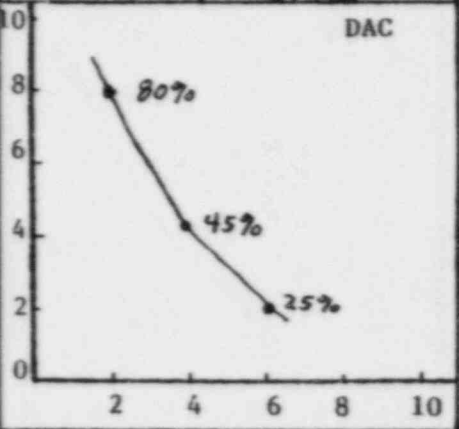
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 2/11	Iso/Drawing No. ZOR 11 Rev. 2 FC. 2
Procedure ISI-23 Rev. 0	Exam Surface OD	Examiner/Level David J. Payne II	VOR Supervisor David Payne	Date 3-6-82
Component/Piping System RC Pump 2A to Steam Ex. 2	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Type ^{SONOTRACE} Wa Batch No. 8117

Continuation Sheet Attached
 Yes No

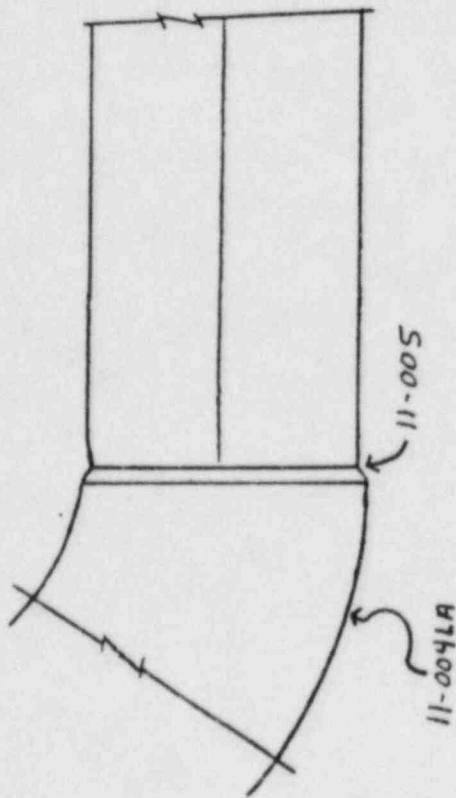
Field Changes:
 Yes No
 If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	JT2172	N/A	N/A	Mfr.	SONIC	Model	Mark I
	.50"	~	~	S/N	05504E	RepRate	1k
	2.25 MHz	~	~	Reject	off	Filter	off
	0°			Damp	N/A	Coax	12' BNC to BNC
				Freq.	2.0 MHz	Video	Norm

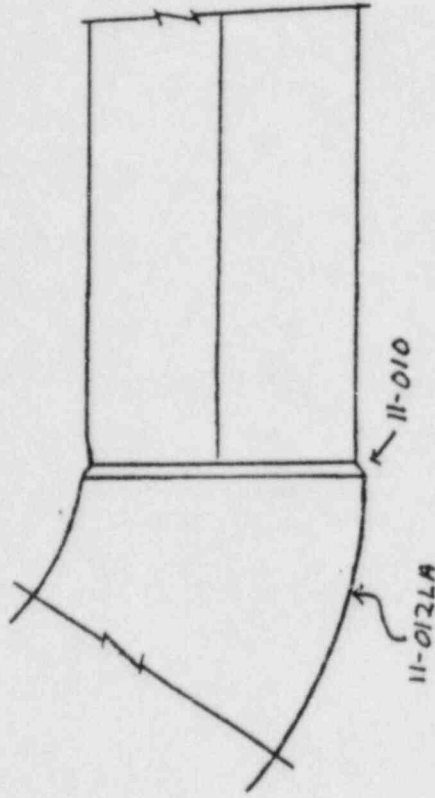
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	80%	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1:10	4:08	N/A	N/A	N/A	N/A	
1/2T	45%	4.0															
3/4T	25%	6.0															
1T	N/A	8.3															
Ref. dB		31 DB															



Additional Comments/Sketch



Unable to maintain back reflection due to unparallel surfaces of weld 11-005.



Unable to maintain back reflection due to unparallel surfaces on #11-010.



Ultrasonic Examination Report *Don Payne ANII 3/11/82*

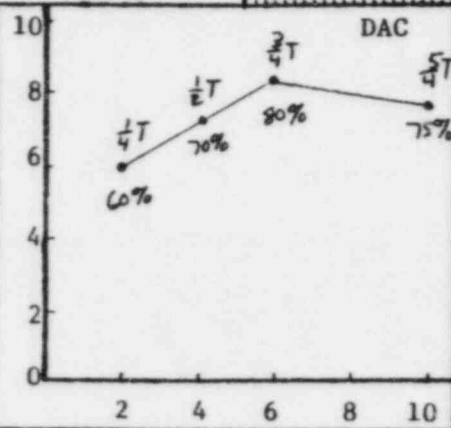
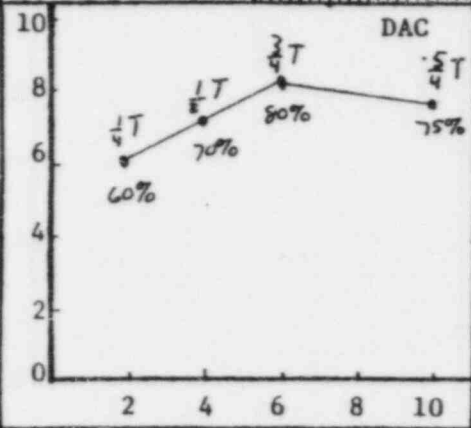
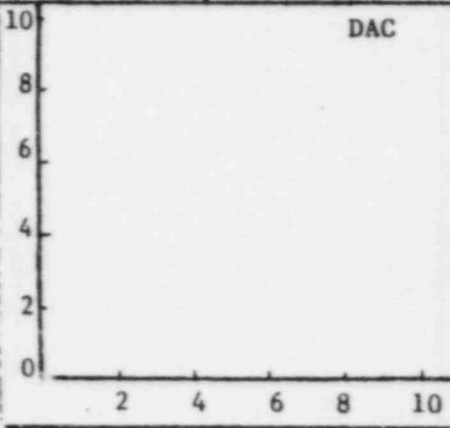
Customer <i>LP&L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>		Loop/Zone <i>2A/11</i>		Iso/Drawing No. <i>Zone 11 R.2 - F.C. 2</i>	
Procedure <i>ISI 2.3-R.0</i>		Exam Surface <i>O.D.</i>		Examiner/Level <i>R. B. Burlingame II</i>		VGR Supervisor <i>Donal Payne</i>		Date <i>3-6-82</i>	
Component/Piping System <i>Cold Leg - Reactor Coolant Pump</i>				Pipe Size <i>3"</i>		Weld Type <i>Butt</i>		Cal. Block # <i>UT-6</i>	
						Couplant: <i>SONOTRAKE</i>		Batch No. <i>8117</i>	

Continuation Sheet Attached
 Yes No

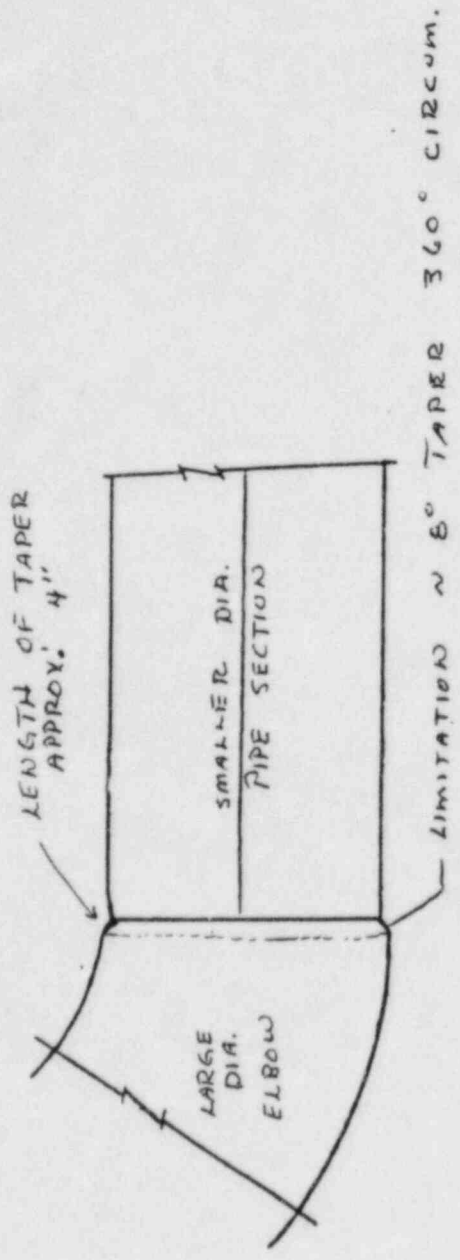
Field Changes:
 Yes No
 If Yes, Number

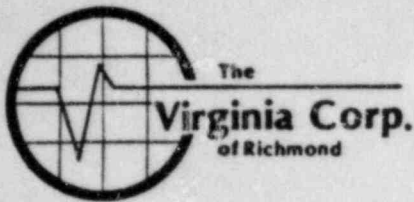
	Transducer			Instrument		
	S/N			Mfr.	Sonic	Model
	Size			S/N	780836	RepRate
	Frequency			Reject	NONE	Filter
	Beam Angle			Damp	Minimum	Coax
			Freq.	2.25 MHz	Video	
					Normal	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks								
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>60%</i>	<i>2</i>	<i>3/4"</i>	<i>3/8"</i>	<i>1 3/16"</i>	<i>60%</i>	<i>2</i>	<i>3/4"</i>	<i>3/8"</i>	<i>1 3/16"</i>	<i>NA</i>	<i>NA</i>	<i>1:00</i>	<i>4:15</i>	<i>NA</i>	<i>NA</i>	
<i>1/2 T</i>			<i>70%</i>	<i>4</i>	<i>1 1/16"</i>	<i>1 3/8"</i>	<i>2"</i>	<i>70%</i>	<i>4</i>	<i>1 9/16"</i>	<i>1 3/8"</i>	<i>2"</i>							
<i>3/4 T</i>			<i>80%</i>	<i>6</i>	<i>2 5/8"</i>	<i>1 3/4"</i>	<i>2 3/8"</i>	<i>80%</i>	<i>6</i>	<i>2 5/8"</i>	<i>1 3/4"</i>	<i>2 3/8"</i>							
<i>5/4 T</i>			<i>75%</i>	<i>10</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>75%</i>	<i>10</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>							
Ref. dB		56 db		56 db		56 db													



Additional Comments/Sketch





Date 2-4-82

Page 4 of 5

To: _____

Subject SCAN LIMITATIONS

15G-11-REV.2-FC1

WELD NO'S 11-005 AND 11-010; SCANS 2 5 7 & 8
WERE RESTRICTED BY A TAPER ON THE
WELD BETWEEN THE PIPE AND ELBOW.
THE LENGTH OF TAPER WAS ABOUT
4" WITH APPROX. AN 8° SLOPE.
THE NON-CONTACT AREA WAS ABOUT
2 1/8" LONG. (SEE SKETCH ON PAGE 3 & 5)

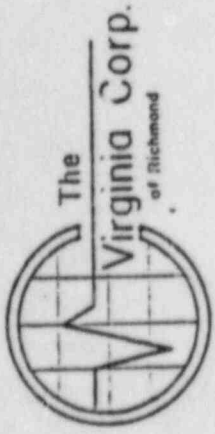
WITH THE TRANSDUCER ON THE
TAPER, SCAN 2 OF WELD NO 11-010 AND
SCAN 5 OF WELD NO. 11-005 HAD AN
APPROX. BEAM ANGLE OF 37° AT THE
INNER SURFACE, SCAN 5 OF WELD NO 11-010
AND SCAN 2 OF WELD NO 11-005 HAD AN
APPROX. BEAM ANGLE OF 53° AT THE
INNER SURFACE.

WELD METAL COVERAGE

11-010 APPROX. LOSS = 10% OF SCAN 2
APPROX. LOSS = 60% OF SCAN 5
APPROX. LOSS = 10% OF SCANS 7 & 8

11-005 APPROX. LOSS = 60% OF SCAN 2
APPROX. LOSS = 10% OF SCAN 5
APPROX. LOSS = 10% OF SCANS 7 & 8

Signed AP Burlingame



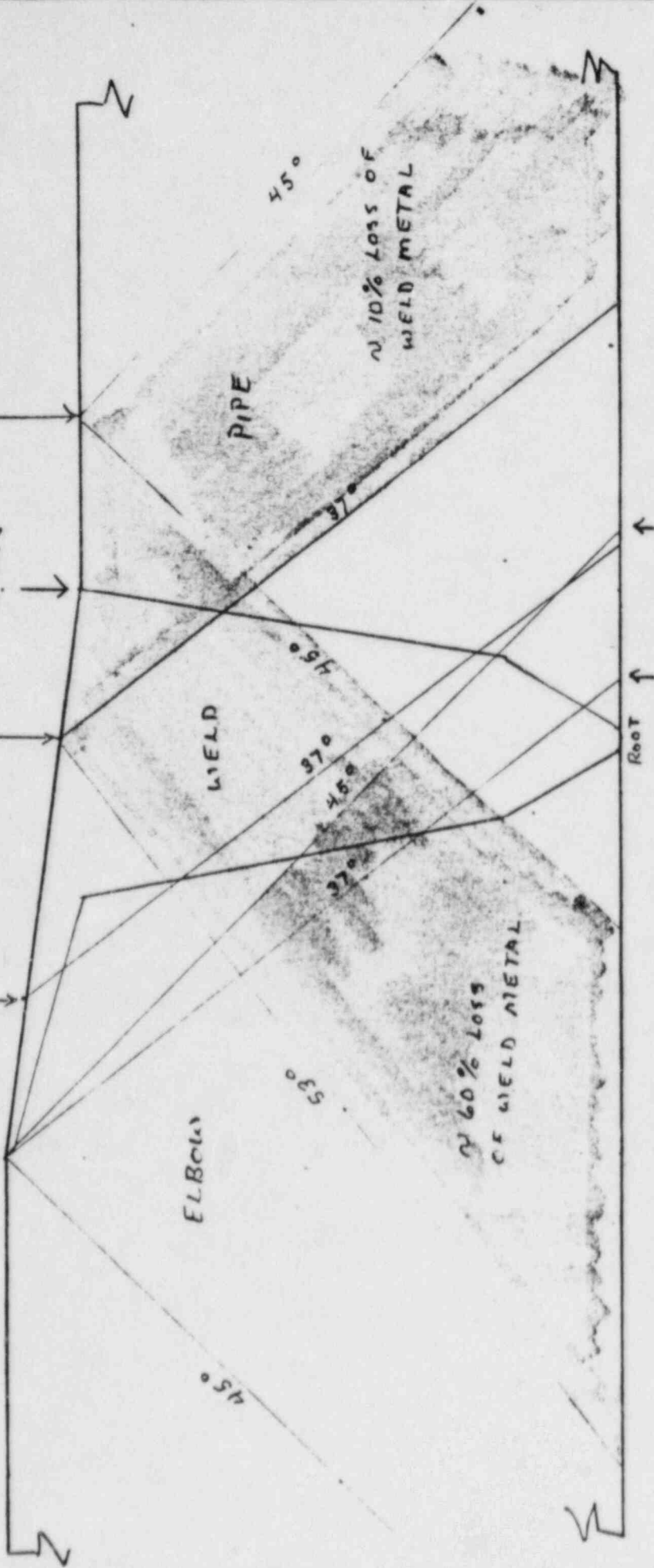
AREA OF TAPER

ID ANGLE CHANGE
AREA $\sim 1\frac{1}{8}$ "

LOSS OF CONTACT AND
I.D. BEAM ANGLE CHANGE
AREA $\sim 2\frac{1}{8}$ "

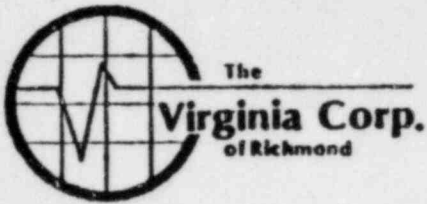
BEAM INDEX POINTS

BEAM INDEX POINTS



RED AREA INDICATES
WELD AREAS NOT COVERED
BY 235 SCANS

BEAM ANGLE AT I.D SWEEPS
BACKWARDS FOR APPROX 1"
AND CHANGES ANGLE BY
ABOUT 8°.



Ultrasonic Examination Report *Dan Payne ANZI 3/11/82*

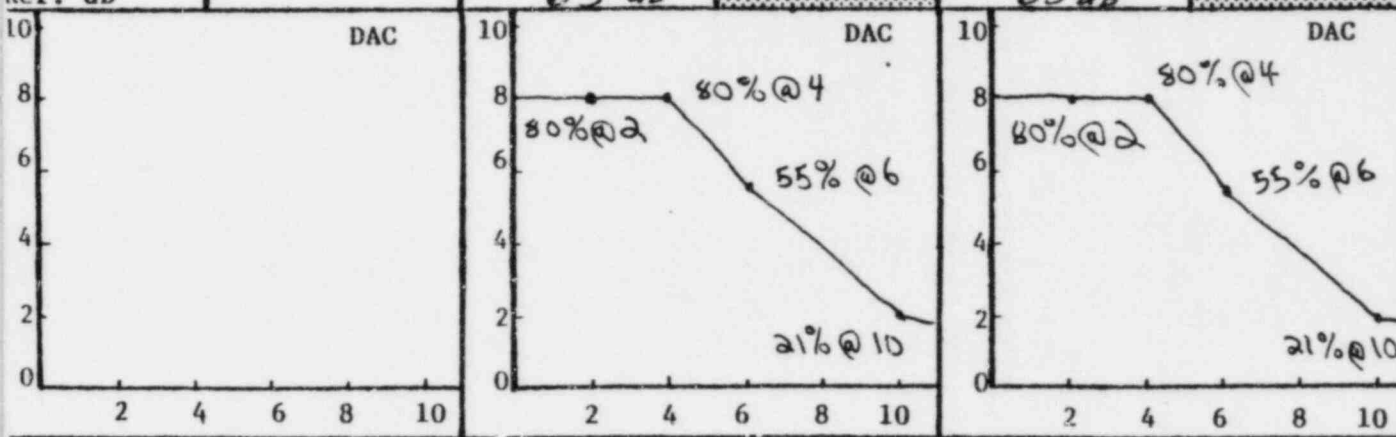
Customer <i>LP & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2 11</i>	Iso/Drawing No. <i>11 R-2 F.C. 2</i>
Procedure <i>ISI 2.3 R-0</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Navy Longenecker II</i>		VCR Supervisor <i>Daniel Payne</i>
Component/Piping System <i>COLD LEG R.C.P. 2A TO S.G. 2</i>		Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Date <i>3-6-82</i>
			Cal. Block <i>UT-6</i>	Couplant: <i>SONOTRACE</i> Type <i>30</i> Batch No. <i>8117</i>

Continuation Sheet Attached
 Yes No

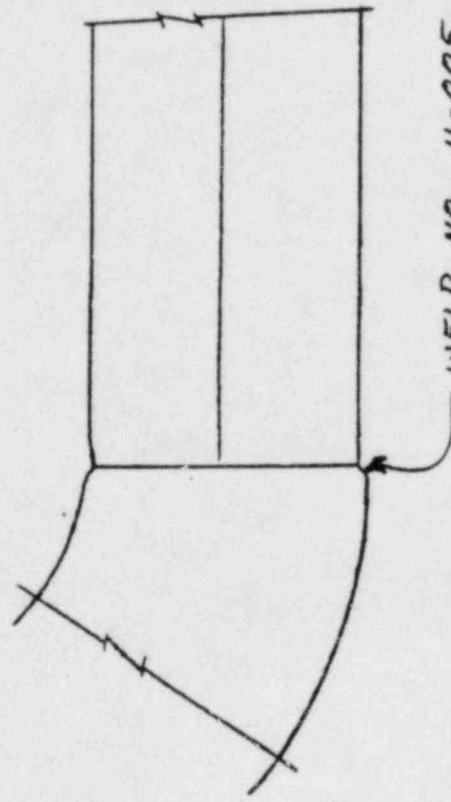
Field Changes:
 Yes No
 If Yes, Number _____

Transducer	0°	45°	60°	Instrument			
	S/N <i>N.A.</i>	S/N <i>N.A.</i>	S/N <i>L19801</i>	Mfr. <i>SONIC</i>	Model <i>MARK 1</i>	RepRate <i>3K</i>	Filter <i>OFF</i>
	Size <i>1" DIA.</i>	Size <i>1" DIA.</i>	Size <i>1" DIA.</i>	S/N <i>05303E</i>	Reject <i>OFF</i>	Coax <i>12'</i>	Video <i>NORM</i>
	Frequency <i>2.25 MHz</i>	Frequency <i>2.25 MHz</i>	Frequency <i>2.25 MHz</i>	Damp <i>MIN</i>	Freq. <i>2. MHz</i>	Beam Angle <i>62°</i>	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>N.A.</i>	<i>N.A.</i>	<i>80%</i>	<i>2.0</i>	<i>1 5/8</i>	<i>1 1/2</i>	<i>80%</i>	<i>2.0</i>	<i>1 5/8</i>	<i>1 1/2</i>	<i>N.A.</i>	<i>N.A.</i>	<i>N.A.</i>	<i>N.A.</i>	<i>1:50</i>	<i>4:15</i>
<i>1/2 T</i>	<i>I</i>	<i>I</i>	<i>80%</i>	<i>4.0</i>	<i>3 1/4</i>	<i>2 3/4</i>	<i>80%</i>	<i>4.0</i>	<i>3 1/4</i>	<i>2 3/4</i>	<i>I</i>	<i>I</i>	<i>I</i>	<i>I</i>		
<i>3/4 T</i>	<i>I</i>	<i>I</i>	<i>55%</i>	<i>6.0</i>	<i>4 1/8</i>	<i>1 5/8</i>	<i>55%</i>	<i>6.0</i>	<i>4 1/8</i>	<i>1 5/8</i>	<i>I</i>	<i>I</i>	<i>I</i>	<i>I</i>		
<i>5/4 T</i>	<i>I</i>	<i>I</i>	<i>21%</i>	<i>10.0</i>	<i>NA</i>	<i>NA NA</i>	<i>21%</i>	<i>10.0</i>	<i>NA</i>	<i>NA NA</i>	<i>I</i>	<i>I</i>	<i>I</i>	<i>I</i>		
Ref. dB		<i>63 db</i>				<i>63 db</i>										



Additional Comments/Sketch



WELD NO 11-005 AND SAME CONDITION
FOR WELD NO. 11-010



Date 3-6-82

Page 1 of 4

To: _____

Subject INSPECTION LIMITATIONS
ISO. 11 R-2 F.C. 2

WELD NO. 11-005 HAD INTERMITTENT LOSS OF CONTACT
WITH THE SURFACE AS A RESULT OF
WELD GEOMETRY SHOWN ON PAGE 3 OF
THIS REPORT.

SCAN 2 LOSS OF APPROX. 60%

SCAN 5 LOSS OF APPROX. 10%

SCANS 7 & 8 LOSS OF APPROX. 10%.

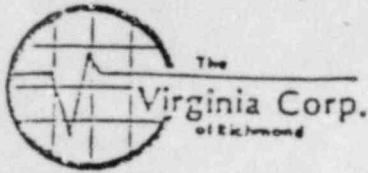
WELD NO. 11-010 HAD INTERMITTENT LOSS OF CONTACT
WITH THE SURFACE AS A RESULT OF
WELD GEOMETRY SHOWN ON PAGE 3 OF
THIS REPORT.

SCAN 2 LOSS OF APPROX. 10%

SCAN 5 LOSS OF APPROX. 60%

SCANS 7 & 8 LOSS OF APPROX. 10%.

Signed Larry Longenecker



W.R. Martin, ANSS 4-5-P2
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP & L	Plant Watersford	Unit 3	Loop/Zone 2A/11
Component/Piping System Cold Leg 5/8" #2 to RCP 2A	Examiner/Level Michael W Blaw II	Date 3-24-82	
Procedure ISI-2.5 Rev 0	Iso/Drawing No. Zone 11 Rev 2 FC-2	VCR Supervisor Daniel Jensen	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. Sonic	Mfgr. Aerotech	Size 1.50"	Cal. Block UT-4	
Model Mark I	Freq. 1 MHz		Cal. Block UT-6	
S/N 05303E	Serial No. M15838		Range Cal. 5"	
Reject OFF	Coax. Cable 12' BNC to BNC		Calibration Checks	
Damp. 6	Gain 43 DB		10:00 in	
Freq. 1			11:40 out	
Rep. Rate 3k			1:00 in	
Filter High			4:30 out	
Video norm				
Couplant Sonotrace 40 3/4" 8119				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan
11-0034B	6"	3.50"	3.40"	3.45"	11-0084A	6'	3.00"	2.90"	2.85"
11-0034B	12"	3.50"	3.40"	3.40"	11-0084A	7'	2.90"	2.85"	2.85"
11-0034B	18"	3.60"	3.40"	3.40"	11-0084A	8'	2.95"	2.80"	2.90"
11-0034B	24"	3.45"	3.35"	3.40"	11-0094B	1'	2.90"	2.85"	2.90"
11-0034B	30"	3.45"	3.40"	3.40"	11-0094B	2'	2.90"	2.85"	2.85"
11-0034B	36"	3.40"	3.30"	3.45"	11-0094B	3'	2.90"	2.85"	2.90"
11-0034B	42"	3.45"	3.35"	3.40"	11-0094B	4'	2.90"	2.80"	2.90"
11-0084A	1'	2.90"	2.85"	2.85"	11-0094B	5'	2.90"	2.70"	2.90"
11-0084A	2'	2.95"	2.85"	2.85"	11-0094B	6'	2.65"	2.80"	2.85"
11-0084A	3'	3.00"	2.85"	2.90"	11-0094B	7'	2.85"	2.90"	2.80"
11-0084A	4'	3.00"	2.85"	2.90"	11-0094B	8'	2.85"	2.90"	2.85"
11-0084A	5'	3.00"	2.85"	2.90"	11-0114B	6"	3.45"	3.50"	3.50"

Sketch/Identification



Ultrasonic Data Sheet

M.A. Martin, for
ANIS 4-5-82

Thickness Measurement

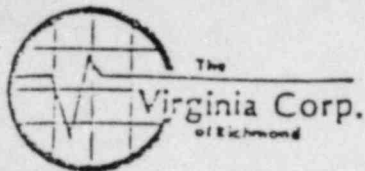
Continuation Page 2 of 3

Customer LP & L	Plant Watersford	Unit 3	Loop/Zone 2A/11
Component/Piping System Cold Leg 3/6 #2 to RCP 2A	Examiner/Level <i>Michael W. Blaw II</i>	Date 3-24-82	
Procedure ISI-2.5 Rev 0	Iso/Drawing No. Zone 11 Rev 2 Fc-2	VCR Supervisor <i>Daniel Jensen</i>	

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
11-011LB	12"	3.45"	3.40"	3.50"	NA	NA	NA	NA	NA
11-011LB	18"	3.45"	3.50"	3.50"					
11-011LB	24"	3.50"	3.45"	3.50"					
11-011LB	30"	3.50"	3.50"	3.50"					
11-011LB	36"	3.45"	3.40"	3.50"					
11-013	12	3.55"	3.50"	3.55"					
11-013	2	3.65"	3.70"	3.50"					
11-013	4	3.65"	3.70"	3.55"					
11-013	6	3.55"	3.50"	3.40"					
11-013	8	3.60"	3.50"	3.50"					
11-013	10	3.60"	3.55"	3.60"					
11-015LB	3"	3.45"	3.50"	3.50"					
11-015LB	6"	3.50"	3.55"	3.55"					
11-015LB	9"	3.45"	3.50"	3.55"					
11-015LB	12"	3.50"	3.60"	3.55"					
11-015LB	15"	3.45"	3.55"	3.55"					
11-015LB	18"	3.40"	3.45"	3.55"					
11-015LB	21"	3.55"	3.50"	3.50"					

Sketch/Identification



M.R. Martin, ANEF 4-5-82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 2A/11
Component/Piping System Cold Leg 46 #2 TO RCP 2A	Examiner/Level Michael W. Blum II	Date 3-25-82	
Procedure ISI-2.5 REV 0	Iso/Drawing No. ZONE 11 REV 2 R-2	VCR Supervisor <i>[Signature]</i>	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration	
Mfgr. SONIC	Mfgr. AEROTECH	Size .50"	Cal. Block UT-4		
Model MARK I	Freq. 1 MHz		Cal. Block UT-6		
S/N 05303E	Serial No. M15838		Range Cal. 5"		
Reject OFF			Calibration Checks		
Damp. 6			12:45 IN		
Freq. 1			2:45 CHECK		
Rep. Rate 3K	Coax. Cable 12' BNC TO BNC		4:30 OUT		
Filter HIGH					
Video NORM	Gain 43 db				
Couplant SONOTRAC 40 4N B119					

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
11-013	12	3.55"	3.60"	3.60"	11-014 LA	42"	3.50"	3.60"	3.50"
11-013	2	3.70"	3.60"	3.60"	11-014 LA	48"	3.55"	3.60"	3.50"
11-013	4	3.80"	3.60"	3.55"	11-016	12	3.30"	3.35"	2.85"
11-013	6	3.60"	3.55"	3.40"	11-016	2	3.35"	3.30"	2.80"
11-013	8	3.60"	3.55"	3.55"	11-016	4	3.30"	3.35"	2.80"
11-013	10	3.65"	3.55"	3.55"	11-016	6	3.30"	3.40"	2.80"
11-014 LA	6"	3.50"	3.55"	3.50"	11-016	8	2.80"	3.35"	3.25"
11-014 LA	12"	3.40"	3.55"	3.40"	11-016	10	2.80"	3.25"	3.20"
11-014 LA	18"	3.45"	3.55"	3.40"	11-017	12	3.30"	3.30"	3.35"
11-014 LA	24"	3.45"	3.55"	3.40"	11-017	2	3.30"	3.40"	3.30"
11-014 LA	30"	3.40"	3.55"	3.45"	11-017	4	3.30"	3.30"	3.35"
11-014 LA	36"	3.40"	3.55"	3.45"	11-017	6	3.40"	3.35"	3.40"

Sketch/Identification

W.R. Martin, ANIE 4-5-



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report

Customer LP AND L	Plant WATERFORD	Unit 3	Loop/Zone 2A/11	Iso/Drawing No. ZONE 11, REV 2 F.C. 2
Procedure ISIZ.3 REV 0	Exam Surface O.D.	Examiner/Level CRS/II	VCR Supervisor <i>Daniel Jones</i>	Date 3-25-82
Component/Piping System COLD LEG RP2A TO STRANGEN #2	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

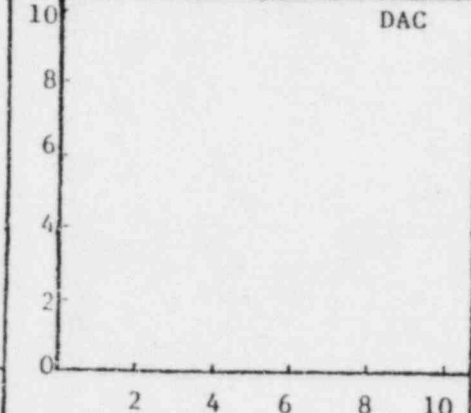
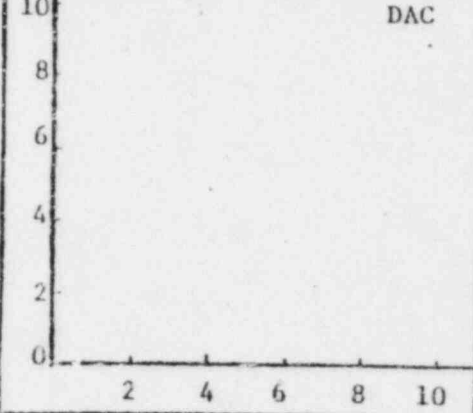
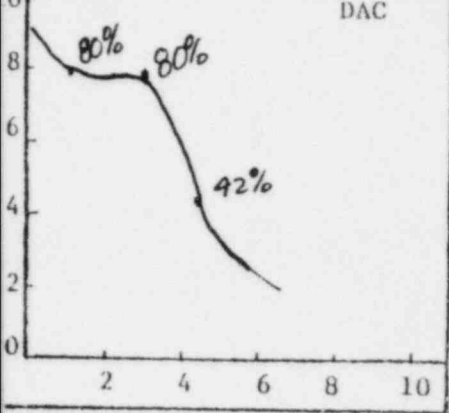
Field Changes:
Yes No
If Yes, Number

Transducer	0°	45°	60°
S/N	48808	NA	NA
Size	1"		
Frequency	2.25-MHz		
Beam Angle	0°		

Instrument			
Mfr.	SONIC	Model	FIS MARK I
S/N	01610E	RepRate	1K
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12" BNC
Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:	
					Scribe Line	50% DAC			Scribe Line	50% DAC
1/4 T	80%	1.5	NA	NA			NA	NA		
1/2 T	80%	3.0								
3/4 T	42%	4.5								
1 T	SAT	6.0								
Ref. dB	31									

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
845	1144				
1313	1635				



Additional Comments/Sketch



W.R. Martin, ANEE 4-2-82

Ultrasonic Examination Report

Customer LP AND L		Plant WATERFORD		Unit 3		Loop/Zone 2A/11		Iso/Drawing No. ZONE II, REV 2, F.C. 2	
Procedure ISI 2.3 REV 0		Exam Surface O.D.		Examiner/Level CR [Signature] II C Frank [Signature]		VCR Supervisor Daniel Jensen		Date 3-27-82	
Component/Piping System COOLED RP 2A SYSTEM GEN 2				Pipe Size 36"		Weld Type BUTT		Cal. Block UT-6	
						Couplant: SONOTRACE		Type 40	
						Batch No. 8119			

Continuation Sheet Attached
 Yes No

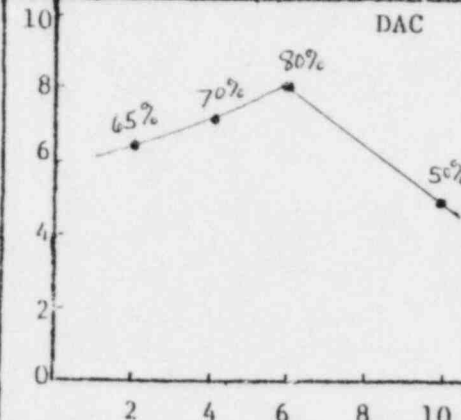
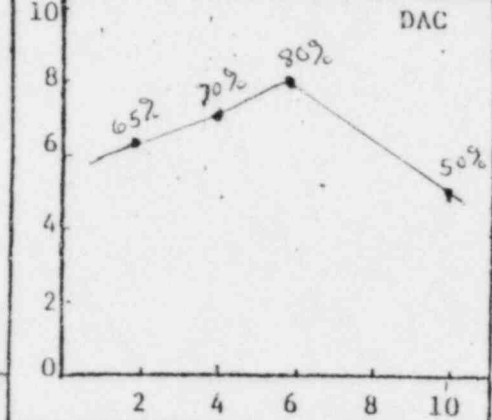
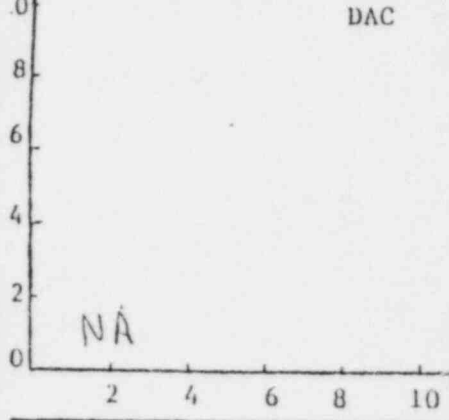
Field Changes:
 Yes No
 If Yes, Number

Transducer			Instrument			
0°	45°	60°	Mfer.	SONIC [Signature]	Model	ETS MARK I
S/N	NA	L19134	S/N	01610 [Signature]	RepRate	LK
Size		1.0"	Reject	OFF	Filter	HI
Frequency		2.25 MHz	Damp	MIN	Coax	12' BNC
Beam Angle		44°	Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:	
					Scribe Line	50% DAC			Scribe Line	50% DAC
1/4 T	NA	NA	65%	2	5/8	1 13/32 1 1/8	65%	2	5/8	1 13/32 1 1/8
1/2 T			70%	4.05	1 2 1/32	1 7/16 2	70%	4.05	1 2 1/32	1 7/16 2
3/4 T			80%	6	2 5/8	2 7/16 2 3/32	80%	6	2 5/8	2 7/16 2 3/32
5/4 T			50%	10			50%	10		

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
NA	NA	0800	1140	NA	NA
		1315	1555		

Ref. dB: 55 DB 55 DB 55 DB



Additional Comments/Sketch



The
Virginia Corp.
of Richmond

Date 3-22-82

Page 3 of 7

To: _____

Subject INDICATION IN
WELD NUMBER 11-003LB
DETECTED IN 45° ULTRASONIC
TEST SCAN DIRECTION 8

A GEOMETRICAL INDICATION WAS DETECTED
WITH THE FOLLOWING PARAMETERS:

MAX % DAC - 100 - 4dB

INDICATION LENGTH - 360°

MINIMUM DEPTH - 3 1/2" S.U. POS. / 74 SWEEP

MAXIMUM DEPTH - 4 1/2" S.U. POS. / 80 SWEEP

BEAM ANGLE - 45°

BEAM DIRECTION - SCAN 8

NOMINAL THICKNESS - 3 1/2"

Signed _____



The
Virginia Corp.
of Richmond

Date 3-27-82

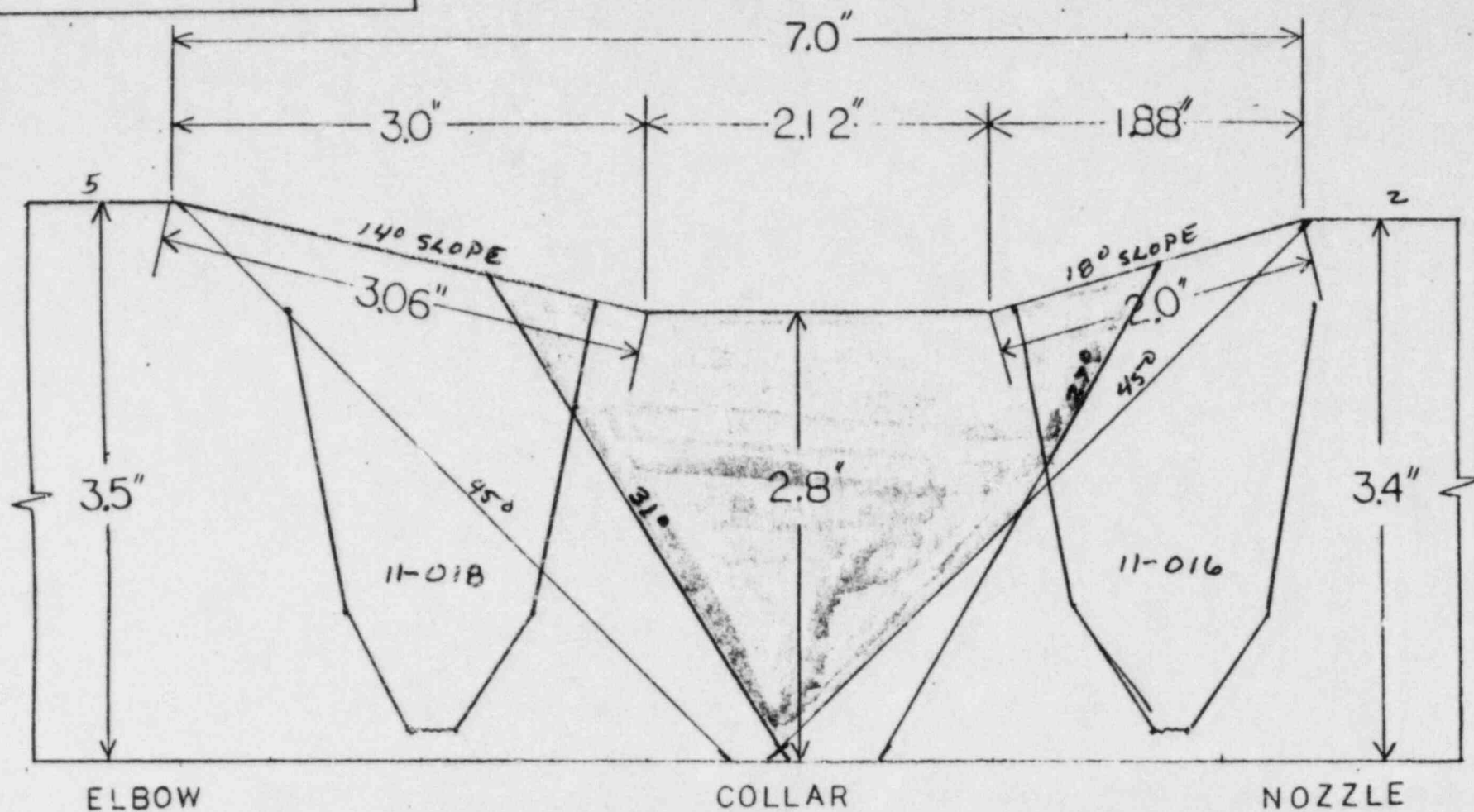
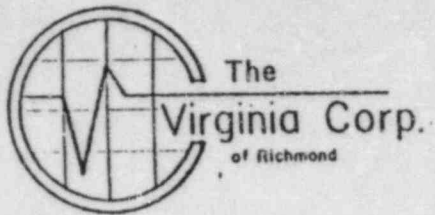
Page 4 of 7

To: _____

Subject LOOP 2A / ZONE 11
LIMITATIONS

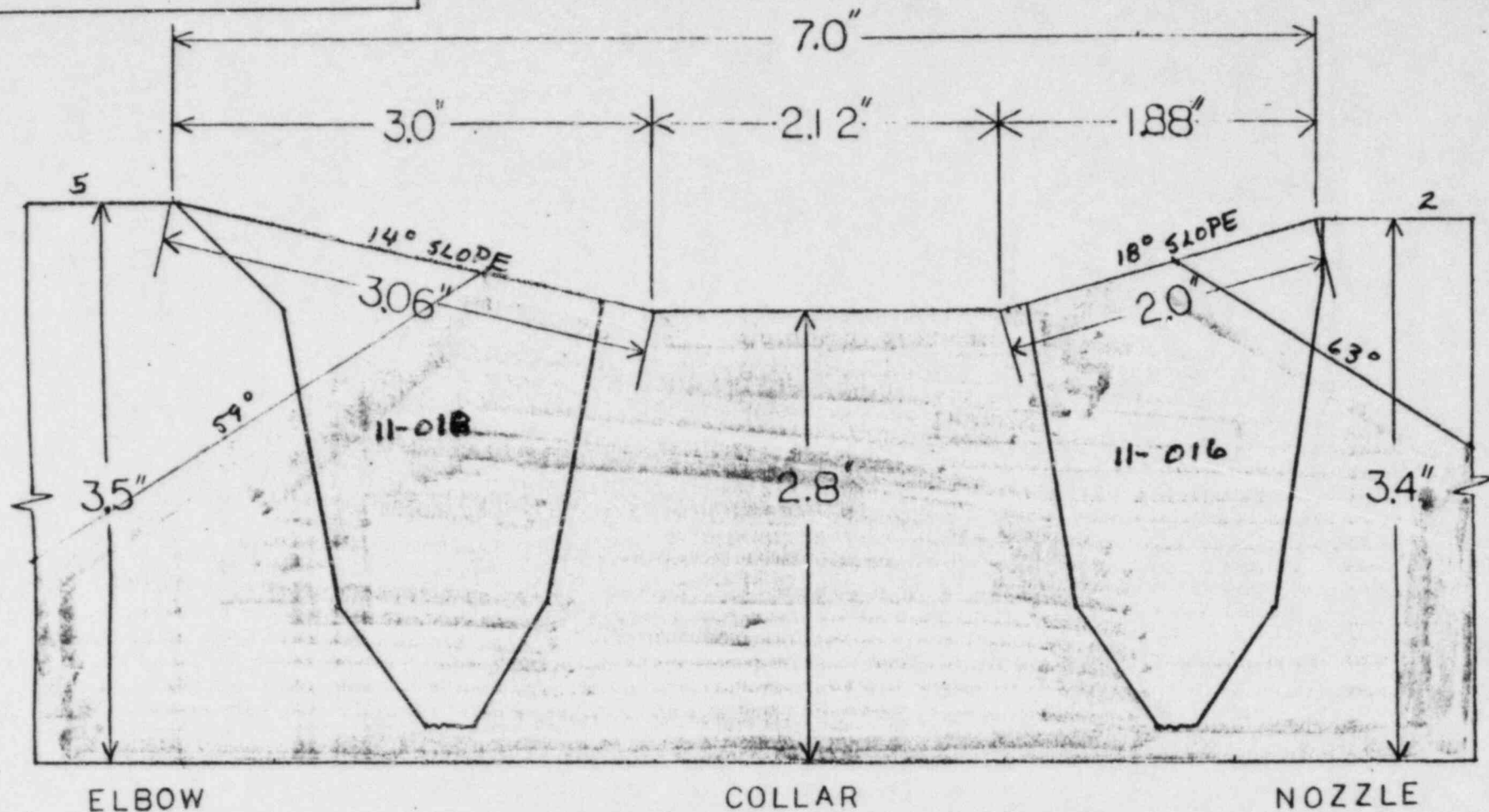
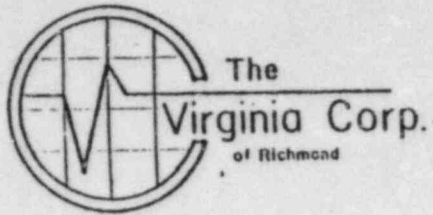
WELD 11-016 PARTIAL 2 AND 5 SCAN DUE TO
GEOMETRY - SEE PAGES 5 AND 6.
WELD 11-017 PARTIAL 2 AND 5 SCAN DUE TO
GEOMETRY - SEE PAGE 7.
WELD 11-018 PARTIAL 2 AND 5 SCAN DUE TO
GEOMETRY - SEE PAGES 5 AND 6.
WELDS 11-019 LA AND 11-020 LB PARTIAL 2 AND 5
SCAN DUE TO GEOMETRY - SEE PAGES 5 AND 7

Signed CRC



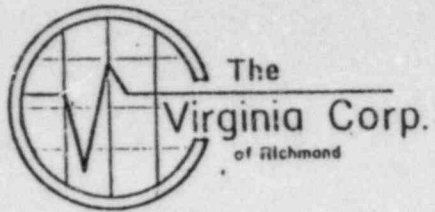
RED SHADED AREA SHOWS AREA NOT COVERED WITH THE 5 SCAN ON WELD 11-018 AND THE 2 SCAN ON WELD 11-016, USING A 1" DIA. TRANSDUCER (45°)

NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.



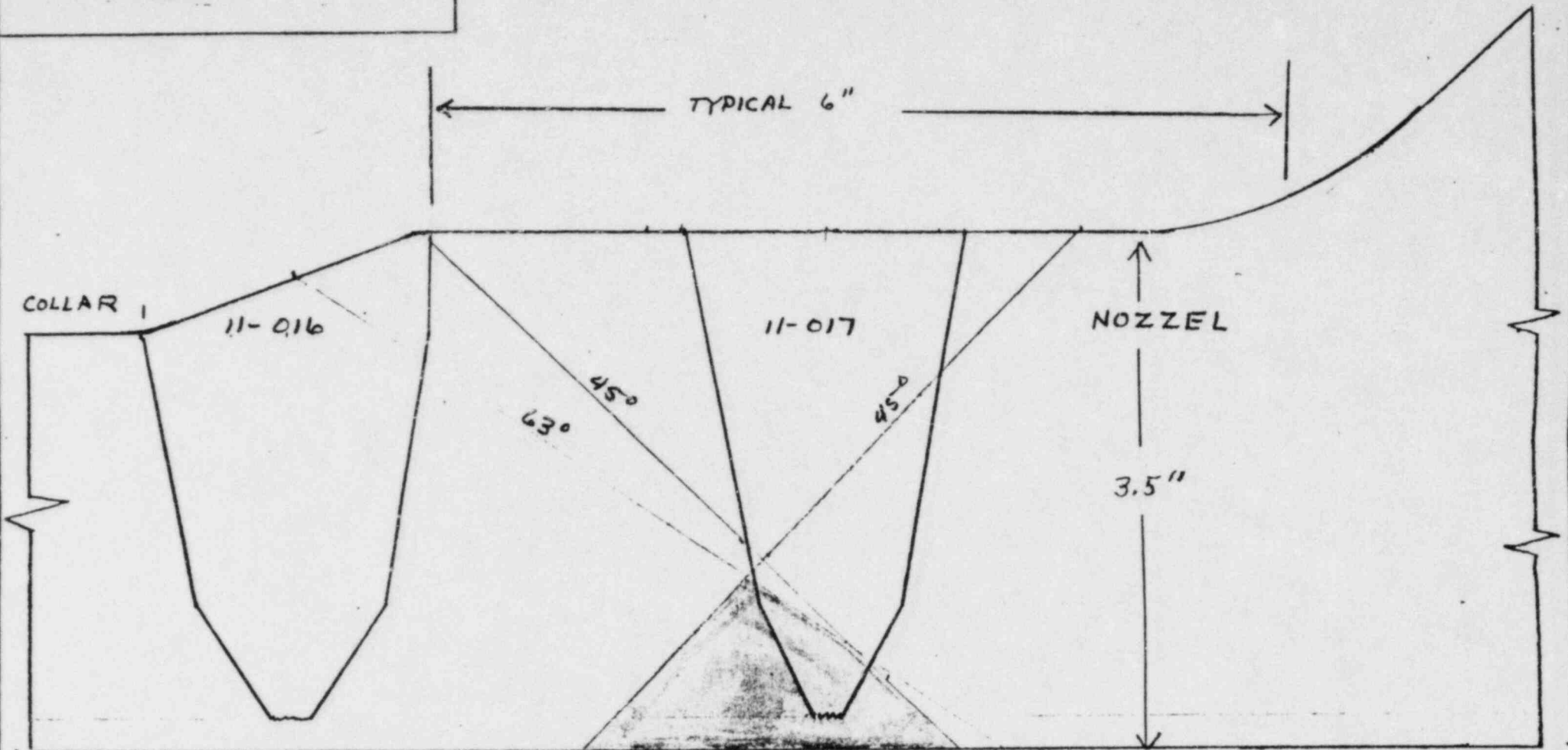
RED SHADED AREA SHOWS AREA NOT COVERED WITH SCAN 2 ON WELD 11-016 AND SCAN 5 ON WELD NO 11-018, USING A 1" DIA TRANSDUCER. (45°)

NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.



NOZZEL CROSS SECTION

ZONE 11



RED SHADED AREA SHOWS AREA
NOT COVERED BY 45° ANGLE BEAM
EXAM. (SCANS 2 & 5)
WELD NO. 11-017

NOTE: TYPICAL NOZZEL TO
ELBOW FIT-UP ON STEAM
GENERATORS SHOWN. EXACT
DIMENSIONS MAY DIFFER



Ultrasonic Examination Report

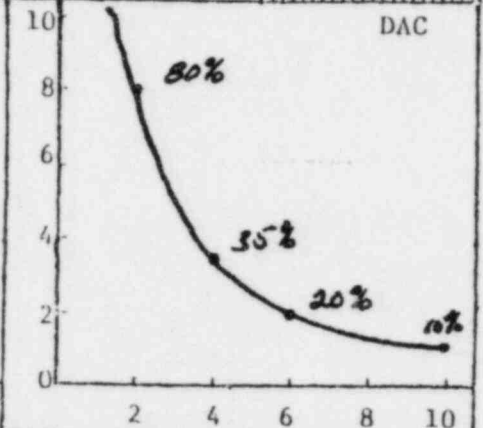
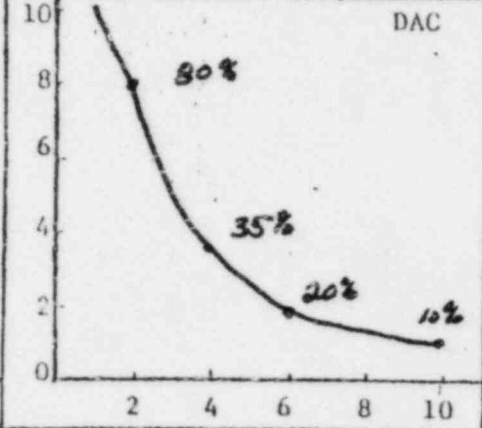
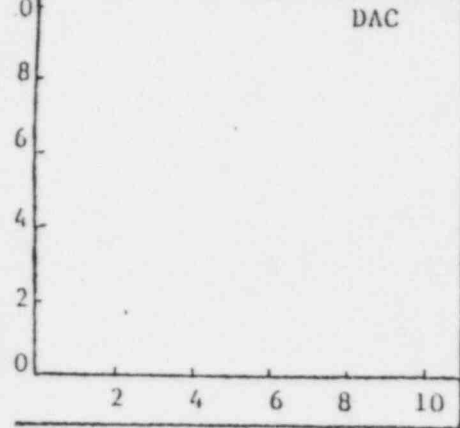
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 2A/11	Iso/Drawing No. ZONE 11 REV-2 AC-2
Procedure ISI-2.3 REV 0	Exam Surface O.D.	Examiner/Level Michael V Blawie	VCR Supervisor Daniel Jensen	Date 3-27-82
Component/Piping System Cold LEG 3/6 #2 TO RCP 2A		Pipe Size 36" 30'	Weld Type BUTT	Cal. Block / Couplant: UT-6 Type 40 Batch No B119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
S/N	NA	NA	F18164	Mfer.	SONIC	Model	MARK I
Size	I	I	.50"	S/N	05303E	RepRate	1 K
Frequency	I	I	2.25 MHz	Reject	OFF	Filter	OFF
Beam Angle	I	I	60°	Damp	MIN	Coax	6' BUC TO MD
				Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out			
44 T	NA	NA	80%	2.0	1 7/16	1 7/16	1 3/32	80%	2.0	1 7/16	1 7/16	1 3/32	NA	NA	NA	NA	10:00	11:30		
42 T	I	I	35%	4.0	3"	2 9/32	3 1/32	35%	4.0	3"	2 9/32	3 1/32	I	I	I	I	1:00	2:15		
34 T	I	I	20%	6.0	4 1/32	4 1/32	5 1/32	20%	6.0	4 1/32	4 1/32	5 1/32	I	I	I	I				
54 T	I	I	10%	10.0				10%	10.0				I	I	I	I				
Ref. dB			46 db					46 db					I	I	I	I				



Additional Comments/Sketch



To: _____

Subject INSPECTION
LIMITATIONS
ZONE 11 REV 2 FC-2

11-016 - COVERAGE WAS INCREASED BY USING
.50" TRANSDUCER.

SCAN 2 - DECREASED TO 20% LOSS OF
COVERAGE.

SCAN 5 - DECREASED TO 70% LOSS OF
COVERAGE.

11-018 - COVERAGE WAS INCREASED BY USING
.50" TRANSDUCER.

SCAN 2 - DECREASED TO 50% LOSS OF
COVERAGE.

SCAN 5 - DECREASED TO 10% LOSS OF
COVERAGE

11-019 LA - COVERAGE WAS INCREASED BY USING
.50" TRANSDUCER

SCAN 7 - DECREASED TO 40% LOSS OF
COVERAGE

SCAN 8 - DECREASED TO 20% LOSS OF
COVERAGE

11-020 LB - COVERAGE WAS INCREASED BY USING
.50" TRANSDUCER

SCAN 7 - DECREASED TO 40% LOSS OF
COVERAGE

SCAN 8 - DECREASED TO 20% LOSS OF
COVERAGE

Signed Michael W. Blaw



Ultrasonic Examination Report

Customer L P & L	Plant WATERFORD	Unit 3	Loop/Zone 2A/11	Iso/Drawing No. ZONE 11 REV 2 FC-2
Procedure ISI-2.3 REV 0	Exam Surface O. D.	Examiner/Level Michael V. Oler II	VCR Supervisor Daniel J. Gens	Date 3-26-82
Component/Piping System Cold LEG 7/8" #2 TO RCP 2A	Pipe Size 3" 30"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No B119

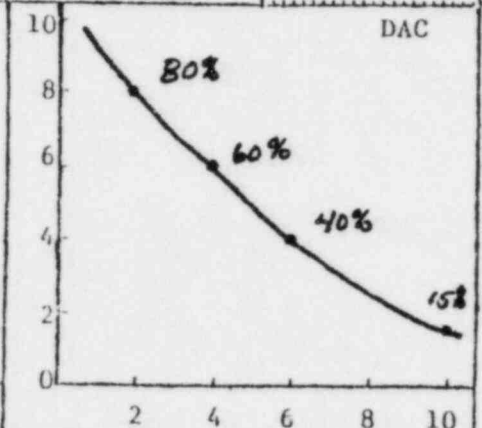
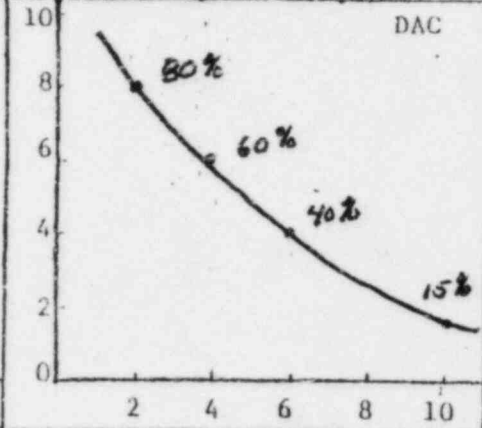
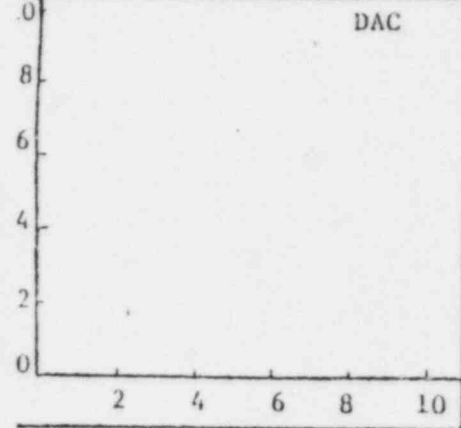
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
S/N	NA	NA	L19801	Mfr.	SONIC	Model	MARK I
Size	I	I	1.0"	S/N	03704E	RepRate	1 K
Frequency	I	I	2.25 MHz	Reject	OFF	Filter	OFF
Beam Angle			61°	Damp	MIN	Coax	12" AVG TO AVG
				Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan						7 & 8 Scan					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:				
					Scribe Line	50% DAC				Scribe Line	50% DAC			
1/4 T	NA	NA	80%	2.0	1 1/2	1 3/4	1 5/8	80%	2.0	1 1/2	1 3/4	1 5/8		
1/2 T			60%	4.0	3 3/8	2 1/2	3 1/4	60%	4.0	3 3/8	2 1/2	3 1/4		
3/4 T			40%	6.0	5 1/8	4 1/4	5 1/2	40%	6.0	5 1/8	4 1/4	5 1/2		
5/4 T			15%	10.0				15%	10.0					
Ref. dB			64 db						64 db					

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
NA	NA	NA	NA	3:00	4:35



Additional Comments/Sketch



The
Virginia Corp.
of Richmond

Date 3-26-82

Page 3 of 3

To: _____

Subject INSPECTION
LIMITATIONS
ZONE - 11 REV 2 FC-2

11-008 LA - HAD PARTIAL LOSS OF COVERAGE WITH
LONG SEAM WELD DUE TO O.D. GEOMETRY
OF WELDS 11-005 AND 11-010.

11-009 LB - HAD PARTIAL LOSS OF COVERAGE WITH
LONG SEAM WELD DUE TO O.D. GEOMETRY
OF WELDS 11-005 AND 11-010.

11-011 LB - HAD PARTIAL LOSS OF COVERAGE WITH
LONG SEAM WELD DUE TO O.D. GEOMETRY
OF WELDS 11-010 AND 11-013

11-015 LB - HAD PARTIAL LOSS OF COVERAGE WITH
LONG SEAM WELD DUE TO O.D. GEOMETRY
OF WELD 11-018.

Signed Michael W Blw



The
Virginia Corp.
of Richmond

Date 3-29-82

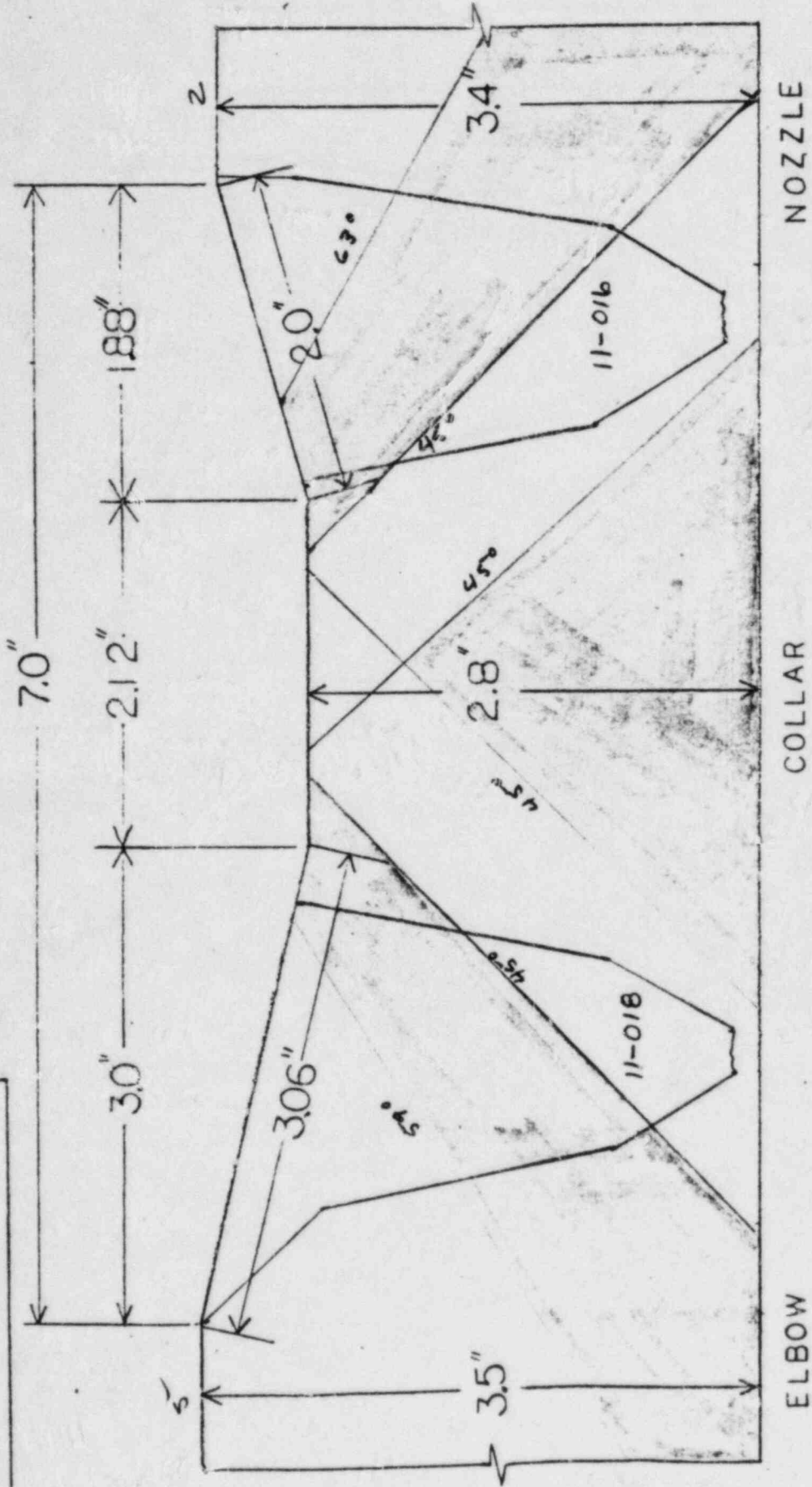
Page 3 of 4

To: _____

Subject ZONE 11
INSPECTION
LIMITATIONS

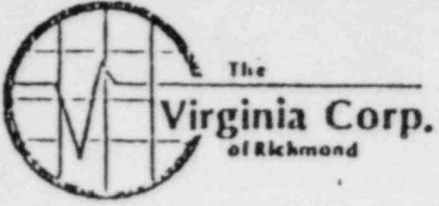
WELDS NUMBER 11-016, 11-017, 11-018, 11-019 LA,
AND 11-020 LB HAD PARTIAL SCAN 2 AND 5
COVERAGE DUE TO O.D. GEOMETRY. SEE PAGE 4.

Signed CK [Signature]



RED SHADED AREAS SHOW AREAS NOT COVERED WITHIN THE 5 SCAN ON WELD NO. 11-016 AND THE 2 SCAN ON WELD NO. 11-018, WITH A 1/2" MIN. X-DUCER (45°)

MAY DIFFER.



Ultrasonic Examination Report

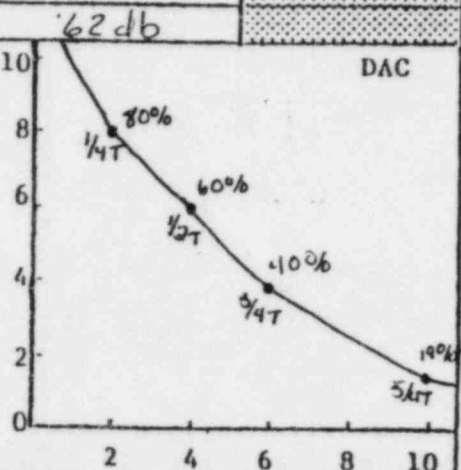
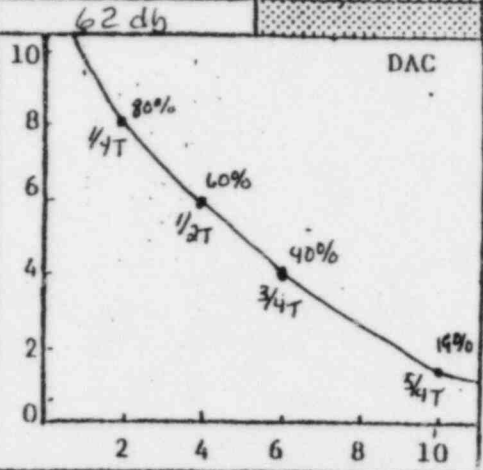
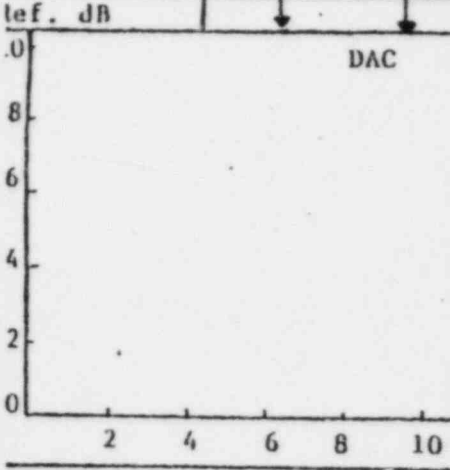
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 2 11	Iso/Drawing No. Zone 11 R.2 F.C.2
Procedure 151 2.3 R.O	Exam Surface O.P.	Examiner/Level Gary Longenecker II	VCR Supervisor Daniel J. Jones	Date 5-29-82
Component/Piping System Cold leg - RC Pump 2A to S.G. #2		Pipe Size 36" 30	Weld Type Butt	Cal. Block UT-6
		Couplant: Type <u>Sonotrace 40</u>		Batch No. 8119

Continuation Sheet Attached
 Yes No

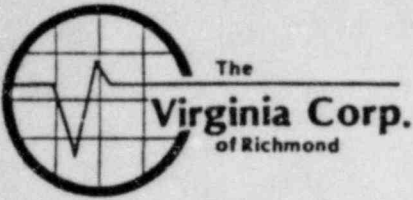
Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
S/N	N/A	N/A	D15041	Mfr.	Sonic	Model	Mark I
Size			1"	S/N	03704E	RepRate	1K
Frequency			2.25 MHz	Reject	OFF	Filter	OFF
Beam Angle			62°	Damp	MINIMUM	Coax	12'
				Freq.	2	Video	Normal

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	N/A	N/A	80%	2	1 3/8	1 1/4	2"	80%	2	1 5/8	1 1/4	2"	N/A	N/A	N/A	N/A	2:20	4:10
1/2T			60%	4	3 1/2	3"	3 3/8	60%	4	3 1/2	3"	3 3/8						
3/4T			40%	6	5"	4 1/2	5 5/8	40%	6	5"	4 1/2	5 5/8						
5/4T			19%	10	N/A	N/A	N/A	19%	10	N/A	N/A	N/A						



Additional Comments/Sketch



Date 3-29-82

Page 3 of 3

To: _____

Subject INSPECTION LIMITATIONS
ZONE 11 R-2 F.C-2

WELD NO 11-003LB HAD PARTIAL LOSS OF COVERAGE AT THE
ENDS OF THE LONG SEAM WELD DUE TO
O.D. WELD GEOMETRY OF WELDS 11-002
AND 11-005.

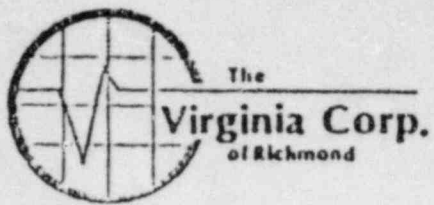
WELD NO. 11-013 HAD INTERMITTENT LOSS OF COVERAGE
DUE TO O.D. WELD GEOMETRY OF WELD
11-013

SCAN 2 FOR A LOSS OF APPROX. 15%

SCAN 5 FOR A LOSS OF APPROX. 15%

SCANS 7&8 FOR A LOSS OF APPROX. 15%

Signed Nary Longenecker



Ultrasonic Examination Report

Customer LP-L	Plant WATERFORD	Unit 3	Loop/Zone 2A/11	Iso/Drawing No. ZONE 11 REV 2 FC-2
Procedure ISI 2-3 REV 0	Exam Surface O.D.	Examiner/Level Michael J Blw II	VPR Supervisor Donald J Gens	Date 3-27-82
Component/Piping System COLD LEG 3/4 #2 TO RCP 2A	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. 8119

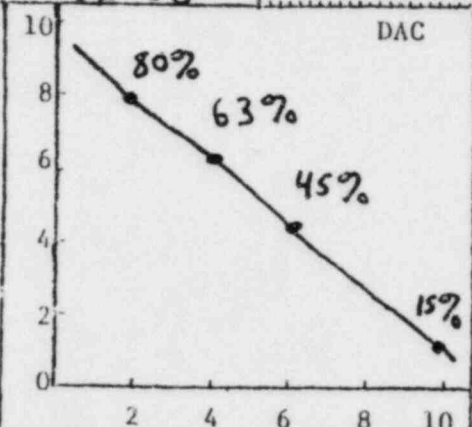
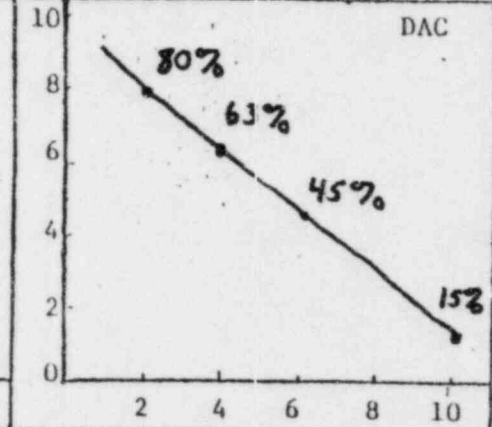
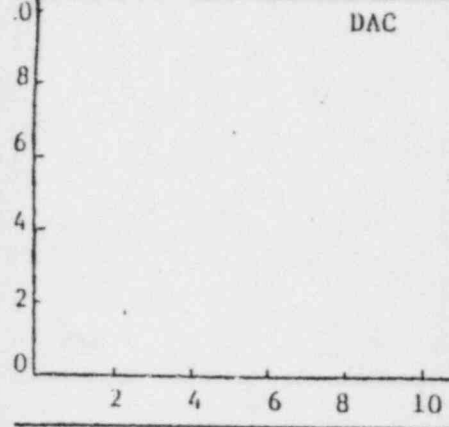
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

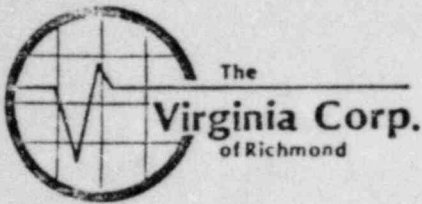
Transducer	0°	45°	60°	Instrument				
	S/N	NA	NA	L19801	Mfr.	SONIC	Model	MARK 1
	Size	I	I	1.0"	S/N	03704E	RepRate	1K
	Frequency	I	I	2.5 MHZ	Reject	OFF	Filter	OFF
Beam Angle	I	I	61°	Damp	MIN	Coax	12' BNC to BNC	
				Freq.	2	Video	NORM	

Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		
					Scribe Line	50% DAC				Scribe Line	50% DAC	
1/4 T	NA	NA	80%	2.0	1 23/32	1 3/8	1 13/32	80%	2.0	1 1/2	1 3/8	1 29/32
1/2 T	I	I	63%	4.0	3 1/4	2 7/8	3 1/4	63%	4.0	3 1/4	2 7/8	3 1/4
3/4 T	I	I	45%	6.0	4 3/32	4 25/64	5 15/32	45%	6.0	4 23/32	4 25/64	5 15/32
5/4 T	I	I	15%	10.0				15%	10.0			
	I	I										
	I	I										

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
NA	NA	NA	NA	10:30	11:30
I	I	I	I		
I	I	I	I		
I	I	I	I		



Additional Comments/Sketch



Date 3-27-82

Page 3 of 4

To: _____

Subject INSPECTION LIMITATIONS
ZONE 11 R-2 F.C. 2

WELD NO 11-019 LA HAD PARTIAL LOSS OF COVERAGE ON THE
END OF THE LONG SEAM WELD DUE TO
WELD 11-018

WELD NO 11-016 HAD PARTIAL LOSS OF COVERAGE DUE TO
WELDS 11-018 AND 11-017

SCAN 2 FOR A LOSS OF APPROX. 30%

SCAN 5 FOR A LOSS OF APPROX. 90%

SCANS 7 & 8 FOR A LOSS OF APPROX. 15%

WELD NO. 11-017 HAD PARTIAL LOSS OF COVERAGE DUE TO
WELD 11-016 AND NOZZLE RADIUS

SCAN 2 FOR A LOSS OF APPROX. 70%

SCAN 5 FOR A LOSS OF APPROX. 55%

SCANS 7 & 8 FOR A LOSS OF APPROX. 10%

WELD NO. 11-018 HAD PARTIAL LOSS OF COVERAGE DUE TO
O.D. WELD GEOMETRY OF WELDS 11-016 AND
11-018

SCAN 2 FOR A LOSS OF APPROX. 75%

SCAN 5 FOR A LOSS OF APPROX. 15%

SCANS 7 & 8 FOR A LOSS OF APPROX. 10%

WELD NO. 11-019 LA HAD PARTIAL LOSS OF COVERAGE DUE TO
O.D. WELD GEOMETRY OF WELDS 11-016
AND 11-018

SCAN 2 FOR A LOSS OF APPROX. 22%

SCAN 5 FOR A LOSS OF APPROX. 22%

SCAN 7 FOR A LOSS OF APPROX. 55%

SCAN 8 FOR A LOSS OF APPROX. 40%

Signed Michael W. Blow



The
Virginia Corp.
 of Richmond

Date 3-27-82

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To: _____

Subject INSPECTION LIMITATIONS
ZONE 11 R-2 F.C. 2

WELD NO 11-020LB HAD PARTIAL LOSS OF COVERAGE
DUE TO O.D. WELD GEOMETRY OF
WELDS 11-016 AND 11-018

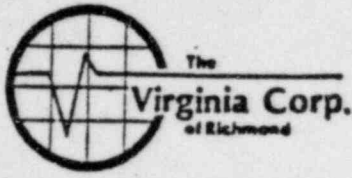
SCAN 2 FOR A LOSS OF APPROX. 22%

SCAN 5 FOR A LOSS OF APPROX. 22%

SCAN 7 FOR A LOSS OF APPROX. 55%

SCAN 8 FOR A LOSS OF APPROX. 40%

Signed Michael V. Blaw



Don Payne ANZI 4/1/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LPEL	Plant Waterford	Unit 3	Loop/Zone 2A/11
Component/Piping System Reactor Coolant		Examiner/Level B. J. ... II	Date 3-31-82
Procedure ISI-2.5 Rev 0	Iso/Drawing No. 11/Rev 2 FC-2	VCR Supervisor Daniel ...	Continuation Sheet Attached [] Yes [x] No

Equipment

Instrument		Transducer		Calibration
Mfgr. Sonic	Mfgr. Panametrics	Size .5"	Cal. Block	
Model FTS MARK I	Freq. 2.25 MHz		Cal. Block UT-6	
S/N 780836	Serial No. 44651		Range Cal. 3.5" = 8 Div	
Reflect Min	Coax. Cable 6' twin Coax		Calibration Checks	
Damp. Min	Gain 50dB		2800	
Freq. 2 MHz			1145	
Rep. Rate 1K				
Filter off				
Video NORM				
Couplant Sonotrace 40 Batch 8119				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
11-006	12	3.325"	2.80"	NA					
"	2	3.325"	2.80"						
"	4	3.062"	2.844"						
"	6	3.15"	2.844"						
"	8	3.062"	2.80"						
"	10	3.325"	2.80"						

Sketch/Identification



The Virginia Corp.
of Richmond

Ultrasonic Examination Report

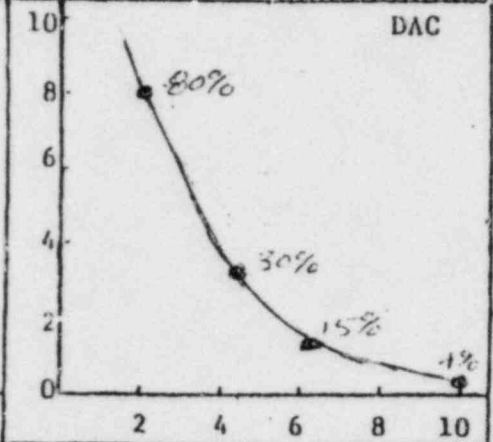
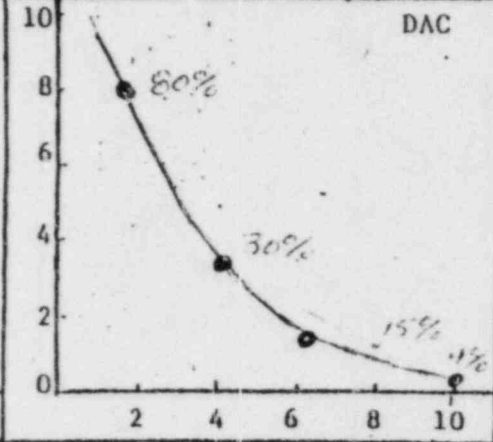
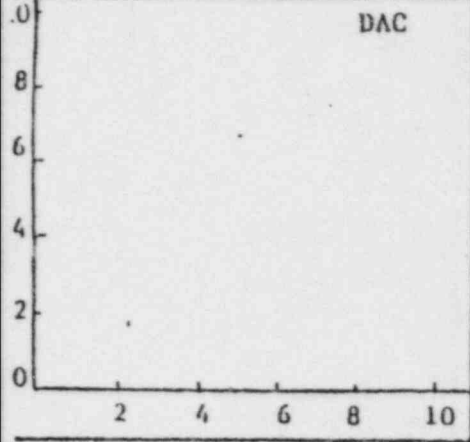
Customer <i>LP 3L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>	Loop/Zone <i>2, 11</i>	Iso/Drawing No. <i>ZONE 11, R2, FC-2</i>	
Procedure <i>ISI 23 REV D</i>		Exam Surface <i>OD</i>		Examiner/Level <i>BURLINGAME II</i>		VCR Supervisor <i>Daniel Jensen</i>	
Component/Piping System <i>REACTOR COOLANT</i>		Pipe Size <i>36"</i>		Weld Type <i>BOU</i>		Date <i>3-31-82</i>	
Cal: Block <input checked="" type="checkbox"/>		Couplant: <i>SONOTRACE</i>		UT-6, 3.5"		Type <i>40</i> Batch No. <i>8119</i>	

Continuation Sheet Attached
 Yes No

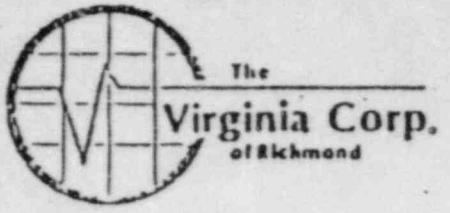
Field Changes:
Yes No
If Yes, Number

Transducer	0°	45°	60°	Instrument			
	S/N <i>N/A</i>	S/N <i>N/A</i>	S/N <i>FIP164</i>	Mfer. <i>SONIC</i>	Model <i>01610E</i>	RepRate <i>1000</i>	FTS-MK1
	Size		<i>1/2"</i>	Reject <i>OFF</i>	Filter <i>OFF</i>		
	Frequency <i>2.25m</i>		<i>60°</i>	Damp <i>MIN</i>	Coax <i>6'</i>		
Beam Angle				Elec. <i>2.25 MHz</i>	Video <i>NORMAL</i>		

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
<i>1/4T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>2</i>	<i>1 1/2</i>	<i>1 3/4</i>	<i>1 7/8</i>	<i>80%</i>	<i>2</i>	<i>1 1/2</i>	<i>1 3/4</i>	<i>1 7/8</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>1430</i>	<i>1600</i>		
<i>1/2T</i>			<i>30%</i>	<i>4</i>	<i>30</i>	<i>2 3/4</i>	<i>3 1/2</i>	<i>30%</i>	<i>4</i>	<i>30</i>	<i>2 3/4</i>	<i>3 1/2</i>								
<i>3/4T</i>			<i>15%</i>	<i>6</i>	<i>4 3/4</i>	<i>4 3/4</i>	<i>5 1/4</i>	<i>15%</i>	<i>6</i>	<i>4 3/4</i>	<i>4 3/4</i>	<i>5 1/4</i>								
<i>5/4T</i>			<i>4%</i>	<i>10</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>4%</i>	<i>10</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>								
Ref. JB			<i>43 dB</i>						<i>43 dB</i>											



Additional Comments/Sketch



Ultrasonic Examination Report

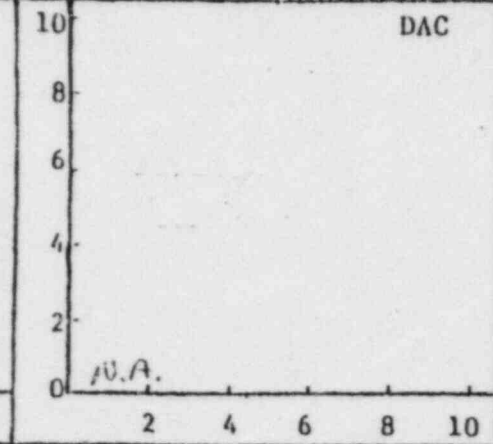
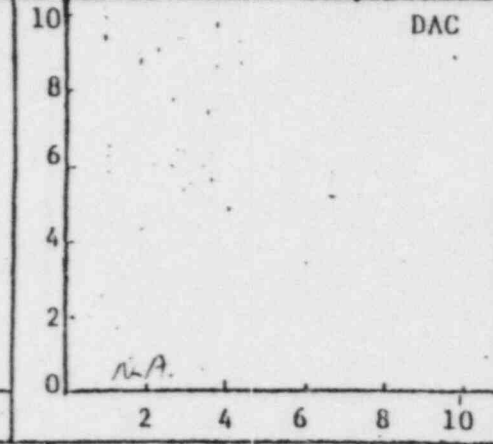
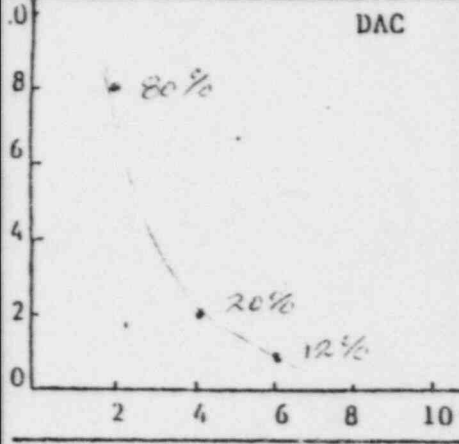
Customer LP 3 L	Plant WATERFORD	Unit 3	Loop/Zone 2, 11	Isa/Drawing No. ZONE 11, REV. 2, FC-267
Procedure ISI-23 REV. 0	Exam Surface OD	Examiner/Level BURNINGHAM II	Vet Supervisor Daniel Jones	Date 3-31-82
Component/Piping System REACTOR COOLANT		Pipe Size 36"	Weld Type BUTT	Cal: Block UT-6, 3.5"
			Couplant: SONTRACE	Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	44651	N/A	N/A	Mfer.	SONIC	Mod:1	ETS-MKI
	.5"			S/N	780836	RepRate	1000
	2.25m			Reject	OFF	Filter	OFF
	0°			Damp	min.	Coax	6'

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	80%	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	0800	1040	N/A	N/A	N/A	N/A
1/2T	20%	4															
3/4T	12%	5.9															
1T	80%	8															
	-6 db																
Ref. dB	50 db																



Additional Comments/Sketch



Ultrasonic Examination Report

W.R. Merten ANEE 1-5-82

PAGE 5 OF 7

Customer LP 7 L	Plant WATERFORD	Unit 3	Loop/Zone 2/11	Isa/Drawing No. ZONE 11, REV. 2 FC 22
Procedure ISI-2.3, REV 0	Exam Surface OD	Examiner/Level B. WILKINS/AME II	VCR Supervisor Donald Jensen	Date 3-31-82
Component/Piping System REACTOR COOLANT	Pipe Size 36"	Weld Type BeTT	Cnl: Block UT-6 3.5"	Couplant: SONOTRACE Type 40 Batch No. 519

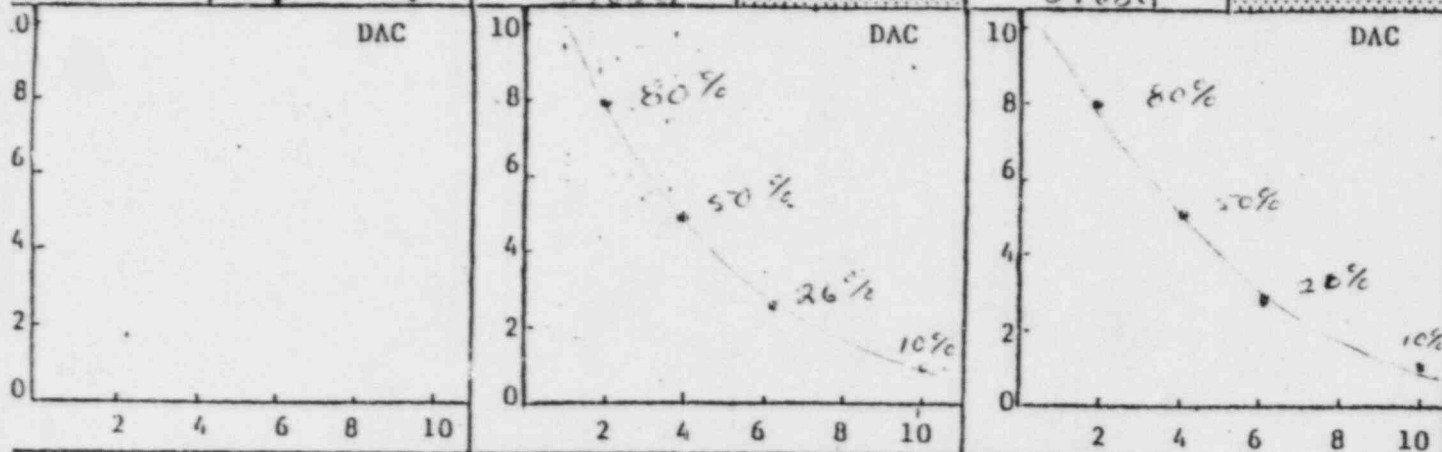
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
		F1E164		Mfr.	SONIC	Model	F75-MK1
		1/2"		S/N	C1610E	RepRate	1000
		2.25 M		Reject	OFF	Filter	OFF
	44°			Damp	MIN	Coax	6'
				Freq.	2.25 MHz	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:	
					Scribe Line	50% DAC			Scribe Line	50% DAC
1/4T	N/A	N/A	80%	2	1/8	23/32 31/32	80%	2	3/8	23/32 31/32
1/2T			50%	4	1 23/32	1 31/32 2	50%	4	1 23/32	1 31/32 2
3/4T			26%	6	2 5/8	2 3/4 2 7/8	26%	6	2 3/4	2 3/4 2 7/8
5/4T			10%	10	NA	NA NA	10%	10	NA	NA NA
ref. dB			39 dB				39 dB			

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
		CRCS	1045		



Additional Comments/Sketch



The

Virginia Corp.
of Richmond

Date _____

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To: _____

Subject INSPECTION

LIMITATIONS

11-006. BASE METAL AND 0° SCANS. THE WELD IS A
BRANCH CONNECTION WELD HAVING ABOUT A 3"
RADIUS, CONTACT WAS DIFFICULT TO MAINTAIN
ON THE WELD AND ONLY THE BASE METAL ON
THE 36" PIPE SECTION WAS EXAMINED. NO. 5
SCAN WAS NOT PERFORMED BECAUSE THE
SCAND BEAM WOULD BE DIRECTED AWAY FROM
THE ROOT AREA. SCANS 2, 7 & 8 WERE RESTRICTED
BY THE RADIUS OF THE WELD CROWN. THE
CENTER LINE OF THE SCAND BEAM DID PASS THROUGH
THE ROOT AREA OF THE WELD.

Signed _____

RB



The Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANII 5/26/82*

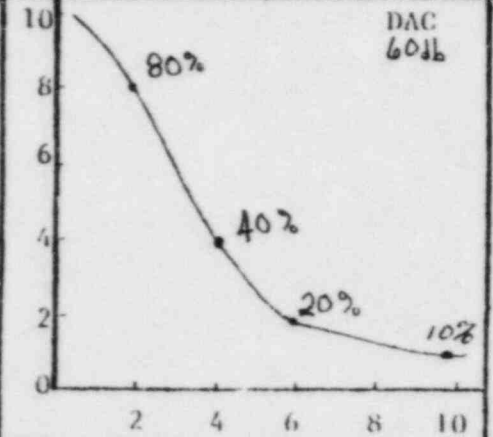
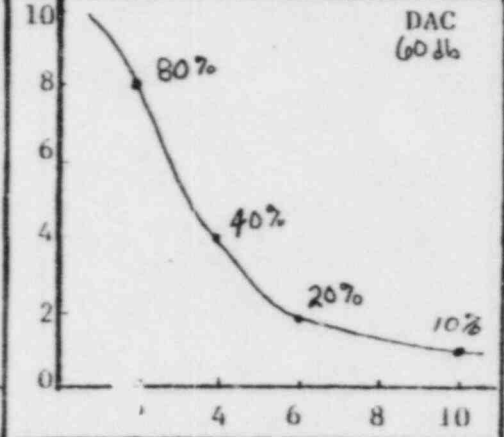
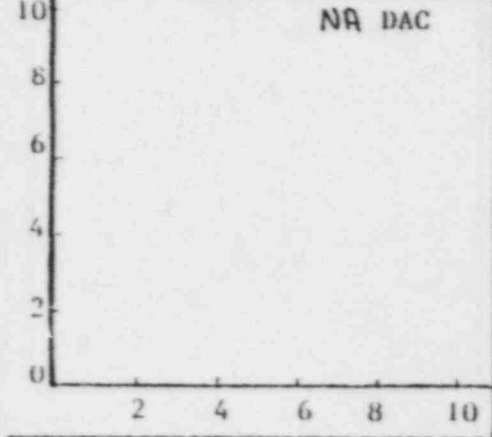
Customer LPFL	Plant WATERFORD	Unit 3	Loop/Zone 2A 11	ISO/Drawing No. ZONE 11, REV 2, FC-2
Procedure ISI-2.3, REV 0, FCI	Exam Surface O.D.	Examiner/Level BURLINGAME II	Var Supervisor <i>[Signature]</i>	Date 5-4-82
Component/Piping System REACTOR COOLANT	Pipe Size 36" ID	Weld Type BUTT	Cal. Block UT 6, 3.50"	Compliant: SONOTRAC Type 40 Batch # 8119

Continuation Sheet Attached
 Yes No

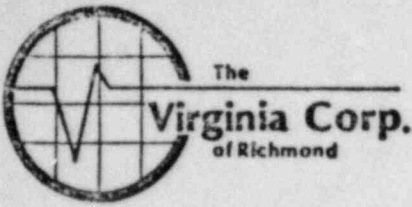
Field Changes:
Yes No
If Yes, Number **F.C. 1**

Transducer	30°	45°	60°	Instrument			
S/N	J22935	NA	NA	Mfr.	SONIC	Model	ETS MARK I
Size	1/2"			S/N	01610E	RepRate	1000
Frequency	2.25 MHz			Reject	OFF	Filter	H ₁
Beam Angle	30°	↓	↓	Damp	MIN	Coax	12'
				Freq.	2 MHz	Video	NORM

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out			
1/4T	NA	NA	80%	2.0	1 1/32	1 1/32	2 1/32	80%	2.0	17/32	1 1/32	2 1/32	12.45	16.40	NA	NA	NA	NA		
1/2T			40%	4.0	1 1/16	7/8	1 1/8	40%	4.0	1 1/16	7/8	1 1/8								
3/4T			20%	6.0	1 1/16	5/16	2 1/32	20%	6.0	1 1/16	5/16	2 1/32								
1T			80%	8.6	-	-	-	80%	8.6	-	-	-								
5/4			10%	10	-	-	-	10%	10	-	-	-								
Ref. dB	↓	↓	60 dB G						60 dB G						↓	↓	↓	↓		



Additional Comments/Sketch



Date 5-4-82

Page 3 of 3

To: _____


Subject EXAMINATION
LIMITATIONS
ZONE II, REV. 2, FC-2

11-016 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 2 WAS RESTRICTED BY THE OD SLOPE OF THE NOZZLE. FOR 360° ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED. SCANS 7 & 8 WERE ALSO RESTRICTED BY THE OD SLOPE OF THE NOZZLE. GOOD ROOT AREA COVERAGE WAS OBTAINED WITH THE 7 & 8 SCANS.

11-017 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 5, 7 & 8 WERE RESTRICTED BY GROSS OD MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED WITH THE 30° ANGLE.

11-018 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 2, 7 & 8 WERE RESTRICTED BY GROSS OD MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED WITH THE 30° ANGLE.

11-019LA & 11-020LB ARE SHORT (APPROX 2") SCANS. ALL SCANS WERE RESTRICTED BY GROSS O.D. MISMATCH. THE 30° ANGLE IN CONJUNCTION WITH THE 45° & 60° ANGLES, DID GIVE ADEQUATE COVERAGE OF THE ROOT AREAS.

Signed 



Ultrasonic Examination Report

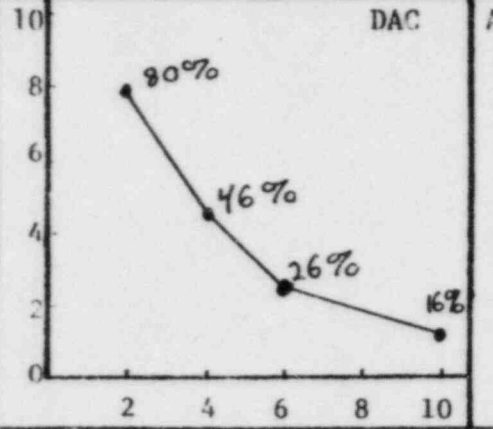
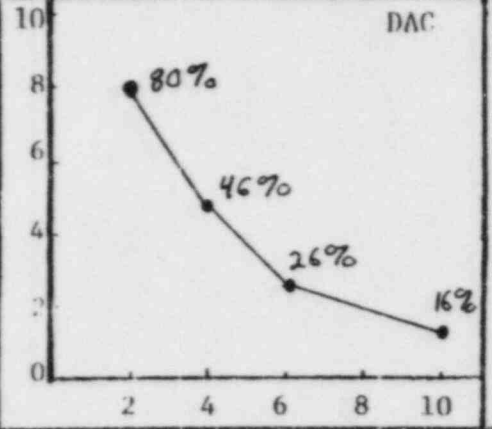
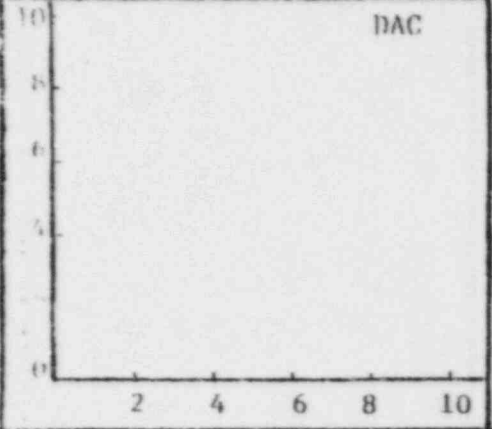
Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 2 11	Iso/Drawing No. ZONE 11 REV-2 FC-2
Procedure ISI 2.3 REV-0 FC-2	Exam Surface O.D.	Examiner/Level Nary Longenecker II		VCR Supervisor Daniel J. Jno
Component/Piping System COLD LEG - RCP 2A TO STEAM GEN. #2		Pipe Size 36"	Weld Type BUTT	Date 5-18-82
		Cal. Block # UT-6	Couplant: SONOTRACE Type 40 Batch No 8119	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 Yes, Number **62 FC-2**

Transducer			Instrument				
	70°	45°	60°	Mfr.	SONIC	Model	MARK I
S/N	J22935	NA	NA	S/N	OK10E	RepRate	1K
Size	1.5"			Reject	OFF	Filter	H1
Frequency	2.25MHZ			Damp	MIN	Coax	12'
Beam Angle	30°			Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1/2	13/32	19/32	80%	2.0	1/2	13/32	19/32						
1/2 T			46%	4.0	1 3/32	29/32	1 1/32	46%	4.0	1 3/32	29/32	1 1/32						
3/4 T			26%	6.0	1 19/32	1 1/32	1 13/32	26%	6.0	1 19/32	1 1/32	1 13/32						
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA						
Ref. dB				62 DB					62 DB									



Additional Comments/Sketch



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Ultrasonic Examination Report *D. Payne ANEI 5/26/82*

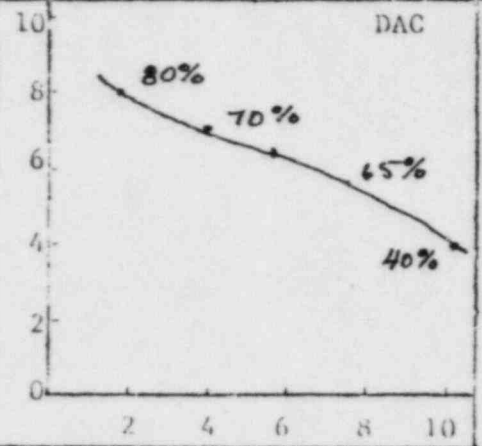
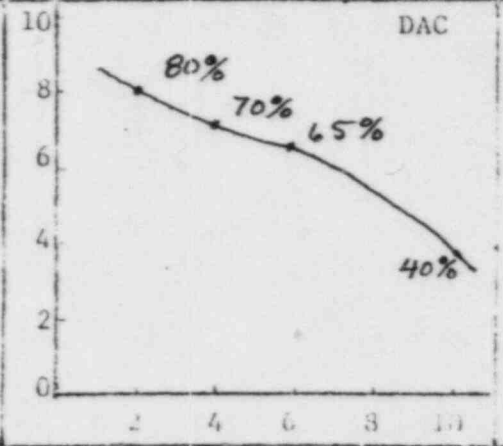
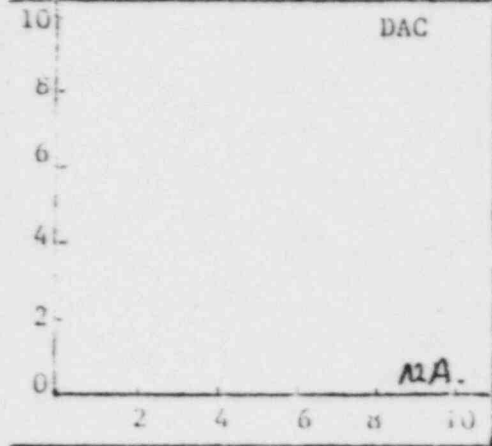
Customer LP3L	Plant WATERFORD	Unit 3	Loop/Zone 2A-11	ISO/Drawing No. ZONE 11, REV 2, FC-1
Procedure ISI-R-3 REV D FC-1	Exam Surface OD	Examiner/Level BURLINGAME II	VCR Supervisor <i>Daniel J. Jones</i>	Date 5-18-82
Component/Piping System REACTOR COOLANT PIPE	Pipe Size 30" ID	Weld Type BUTT	Cal. Block UT-6 35"	Couplant: SONOTRACE Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **FC-2^B**

Transducer	30°	45°	60°	Instrument			
S/N	119134	NA	NA	Mfr.	SONIC	Model	FTS-MK1
Size	1.0"			S/N	780836	Reprate	1000
Frequency	2.25 m			Reject	OFF	Filter	OFF
Beam Angle	30°			Damp	MIN.	Coax	12'
				Freq.	2. MHz	Video	NORM.

Calibration 0°			2 & 3 Scan						7 & 8 Scan						Calibration Check:					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°			
					Scribe Line	50% DAC	50% DAC			Scribe Line	50% DAC	50% DAC	In	Out	In	Out	In	Out		
1/4T	NA	NA	80%	2	1 1/32	1 1/32	5/8	80%	2	1 1/32	1 1/32	5/8	0735	1040	NA	NA	NA	NA		
1/2T			70%	4	1 1/16	7/8	1 1/8	70%	4	1 1/16	7/8	1 1/8								
3/4T			65%	6	1 1/4	1 1/16	1 1/8	65%	6	1 1/4	1 1/16	1 1/8								
5/4T			40%	10	NA	NA	NA	40%	10	NA	NA	NA								
Ref. dB			70 dB G					70 dB G												



Additional Comments/Sketch



The
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Date _____

Page _____ of _____

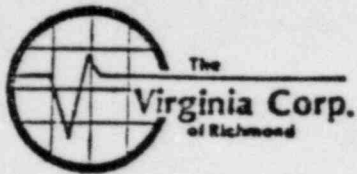
To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 11, REV. 2, FC-1

SCAN DIRECTIONS THAT ARE LISTED AS "N.A." WERE NOT REQUIRED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45° AND 60° ANGLES.

11-005, 11-010 WERE RESTRICTED BY O.D. MISMATCH BETWEEN THE ELBOW AND PIPE. SCANS 2 AND 5 WERE NOT REQUIRED. GOOD ROOT COVERAGE WAS OBTAINED WITH THE 30° 738 SCANS.

Si. : - 



D. Boyd ANZI 9/2/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LPFL</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2, 11</i>
Component/Piping System <i>REACTOR COOLANT</i>	Examiner/Level <i>BURLINGAME II</i>	Date <i>5-25-82</i>	
Procedure <i>ISI-3.5 REV. 0</i>	Iso/Drawing No. <i>ZONE 11, REV. 2</i>	VCR Supervisor <i>[Signature]</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

FC-2 Equipment

Instrument	Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>AEROTECH</i>	Size <i>1.0"</i>	Cal. Block <i>UT-15</i>
Model <i>FTS-MK1</i>	Freq. <i>1.0 MHz</i>		Cal. Block
S/N <i>780836</i>	Serial No. <i>L19814</i>		Range Cal. <i>3/4" = 8 DIV.</i>
Reject <i>OFF</i>	Coax. Cable <i>12'</i>		Calibration Checks <i>0750</i> <i>1135</i>
Damp. <i>MIN</i>	Gain <i>68 db G</i>		
Freq. <i>1.0 MHz</i>			
Rep. Rate <i>1000</i>			
Filter <i>OFF</i>			
Video <i>NORMAL</i>			
Couplant <i>SONOTRACE 40 II</i>			

Examination Results

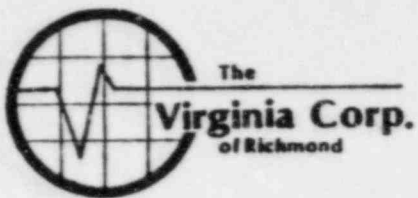
Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>11-001</i>	<i>12</i>	<i>3.28</i>	<i>NA*</i>	<i>4.06</i>	<i>11-002</i>	<i>12</i>	<i>3.67</i>	<i>3.59</i>	<i>NA*</i>
	<i>2</i>	<i>3.12</i>		<i>4.06</i>		<i>2</i>	<i>3.67</i>	<i>3.59</i>	
	<i>4</i>	<i>3.28</i>		<i>4.06</i>		<i>4</i>	<i>3.67</i>	<i>3.57</i>	
	<i>6</i>	<i>3.35</i>		<i>4.06</i>		<i>6</i>	<i>3.43</i>	<i>3.57</i>	
	<i>8</i>	<i>3.43</i>		<i>4.06</i>		<i>8</i>	<i>3.43</i>	<i>3.57</i>	
	<i>10</i>	<i>3.35</i>		<i>4.06</i>		<i>10</i>	<i>3.57</i>	<i>3.57</i>	<i>V</i>

Sketch/Identification

W. R. Martin, ANII 5-28-83

Ultrasonic Examination Report

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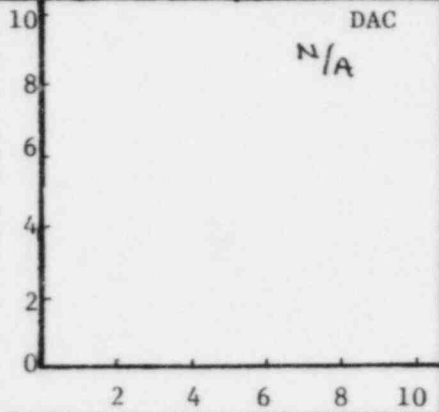
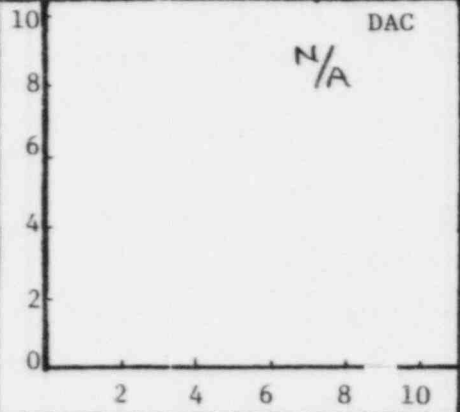
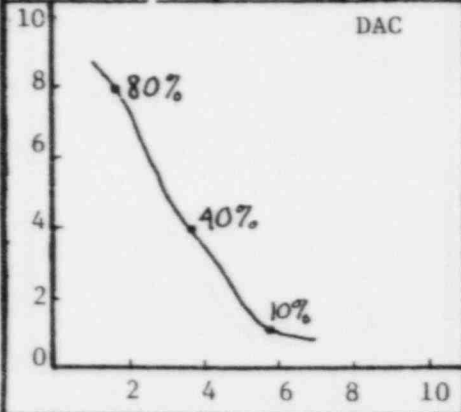
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone Z/11	Iso/Drawing No. ZONE II REV.2 F.C.2
Procedure ISI-Z.8 R.F.C.1	Exam Surface O.D.	Examiner/Level R. B. ... II	VCR Supervisor Daniel Jensen	Date 5-25-82
Component/Piping System REACTOR COOLANT	Pipe Size/Weld Type 30" 3/8 BUTT	Cal. Block # UT-15 3/8	Couplant: SONOTRACE	Batch No. 8124

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **F.C.1**

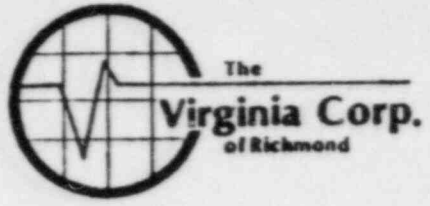
Transducer	0°	45°	60°	Instrument			
S/N	L19814	N/A	N/A	Mfr.	SONIC	Level	MARK I
Size	1"			S/N	780836	RepRate	1K
Frequency	1MHZ			Reject	OFF	Filter	OFF
Beam Angle	0°			Damp	MIN	Coax	6'
				Freq.	1MHZ	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	80%	1.8	N/A	N/A	N/A		N/A	N/A	N/A		8:05	10:50	N/A	N/A	N/A	N/A
1/2T	40%	3.8														
3/4T	10%	5.8														
BACK	35%	8.0														
Ref. dB	68 db															



Additional Comments/Sketch

W.R. Martin, ANFF 2-28-83



Ultrasonic Examination Report

4 of 7

Customer LP&L		Plant WATERFORD		Unit 3	Loop/Zone 2/11	Iso/Drawing No. ZONE 11 REV. 2 FC 2	
Procedure FC-1 1512.8 REV. 1	Exam Surface OD	Examiner/Level <i>[Signature]</i>		VCR Supervisor Daniel Jensen		Date 5-25-82	
Component/Piping System REACTOR COOLING			Pipe Size 30" ID	Weld Type BUTT	Cal. Block # UT-15 3 1/8"	Couplant: Type 40	Batch No B124

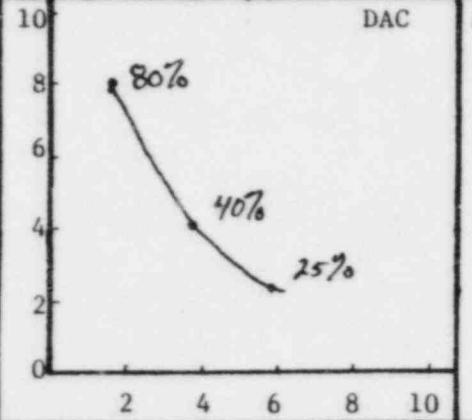
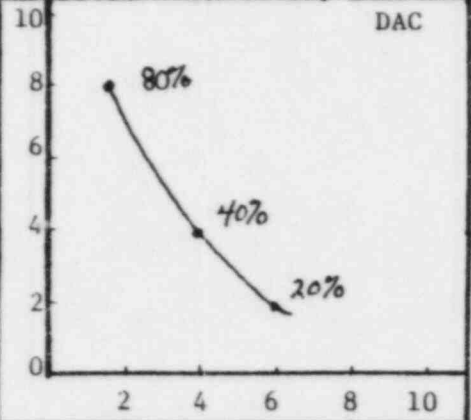
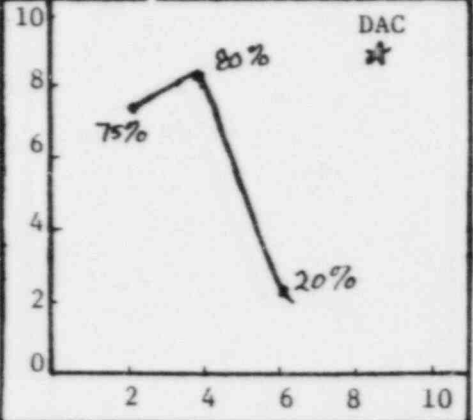
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *FC-1*

Transducer	2i5 (CS)	2i5 (SS)	7i8	Instrument			
S/N	T 8468	T 8468	V 3035	Mfer.	SONIC	Model	FTS MARK I
Size	1.0"	1.0"	1.0"	S/N	01610E	RepRate	1000
Frequency	1 MHz	1 MHz	1 MHz	Reject	3	Filter	CSS
Beam Angle	45°L	45°L	45°L	Damp	4.5	Coax	6'

2i5 Scan (CS)			2 & 5 Scan S.S.			7 & 8 Scan			Calibration Checks									
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	75%	2.0	80%	2.0	NA	NA	NA	80%	2.0	NA	NA	NA	NA	NA	0800	1045	NA	NA
1/2T	80%	4.0	40%	4.0				40%	4.0						1245	1630		
3/4T	20%	6.0	20%	6.0				25%	6.0									

Ref. dB 52 db 55 db 56 db



Additional Comments/Sketch

★ The shape of the DAC curve is due to the ratio of carbon steel metal path to the stainless steel metal path (or inwards)

- Scanning sensitivity was 10db above the reference sens.
- Separate transducers were used for axial and circular scans.



To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 11, REV. 2, FC-2

11-001 All ANGLE BEAM SCANS WERE RESTRICTED BY OD MISMATCH BY THE PUMP TO SAFE END WELD AND SAFE END TO PIPE WELD. SCAN 5 WAS ALSO RESTRICTED BY A 1" LINE COMING OFF THE PUMP NOZZLE.

GOOD ROOT AREA COVERAGE WAS OBTAINED WITH THE 2 AND 5 DIRECTION SCANS.

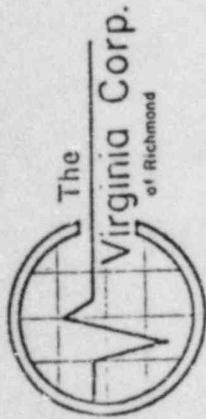
SCANS 7 AND 8 WERE LIMITED BY ABOUT 15% FOR THE COVERAGE AREA.

11-002 (DM WELD) All ANGLE BEAM SCANS WERE RESTRICTED BY O.D. MISMATCH BY THE PIPE TO SAFE END WELD AND THE SAFE END TO PUMP WELD.

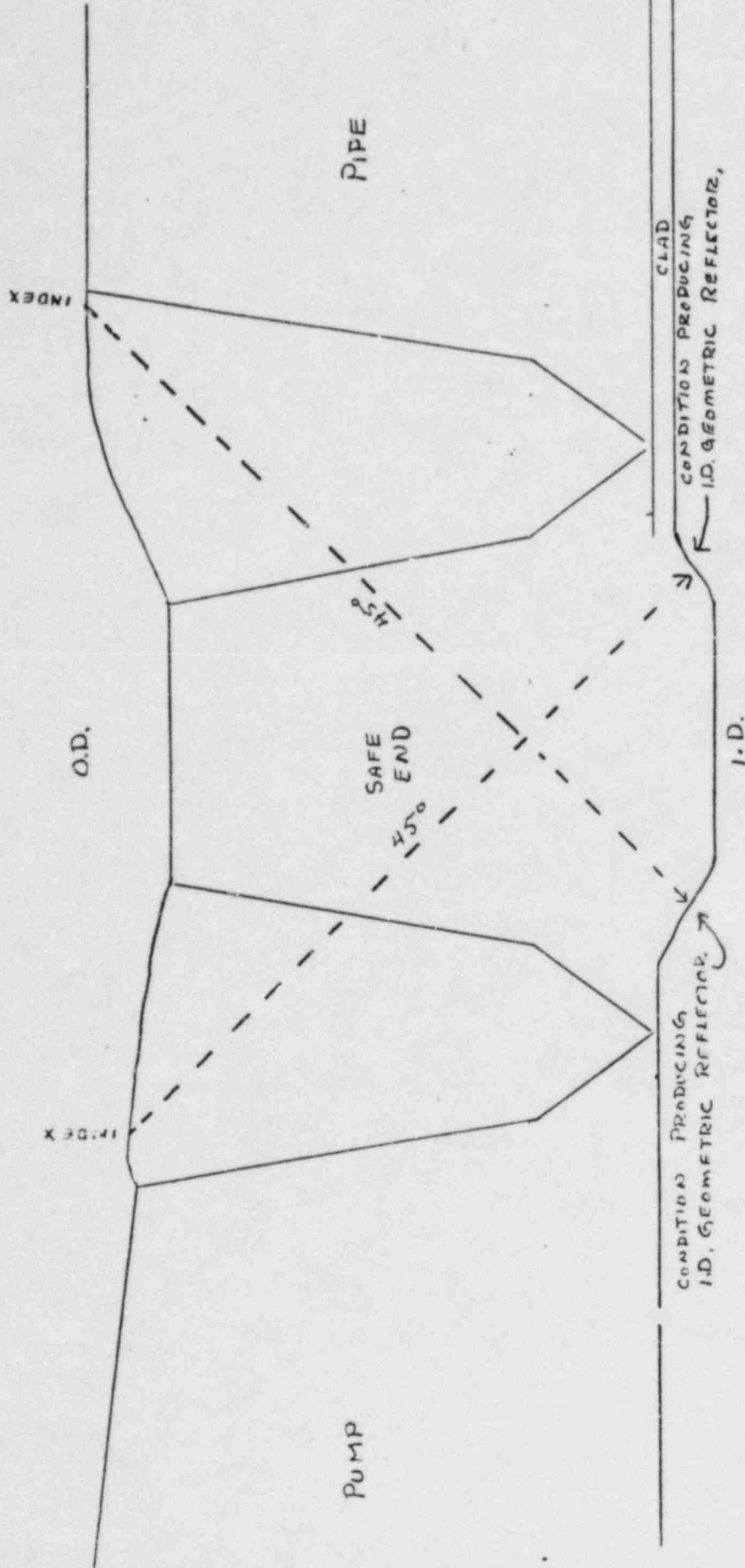
GOOD ROOT AREA COVERAGE WAS OBTAINED WITH THE 2 AND 5 ^{DIRECTION} SCANS.

SCANS 7 + 8 WERE LIMITED BY ABOUT 15% FOR THE COVERAGE AREA.

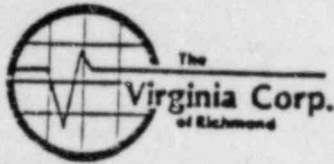
Signed _____



TYR PUMP TO SAFE END TO PIPE
CONFIGURATION



5-28-82



D. Payne ANEI 7/19/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>L P & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2A/11</i>
Component/Piping System <i>Cold Leg - 96" x 2 TO RCP 2A</i>	Examiner/Level <i>Michael W. Blaw II</i>	Date <i>July 10, 1982</i>	
Procedure <i>ISI 2.5 REV 0</i>	Iso/Drawing No. <i>11 REV 2 FC 2</i>	VCR Supervisor <i>Michael W. Blaw II</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration	
Mfgr. <i>SONIC</i>	Mfgr. <i>PANAMETRICS</i>	Size <i>.5"</i>	Cal. Block <i>UT-18</i>		
Mode <i>MARK I</i>	Freq. <i>2.25 MHz</i>		Cal. Block <i>NA</i>		
S/N <i>010585</i>	Serial No. <i>44651</i>		Range Cal. <i>2.135"</i>		
Reject <i>OFF</i>	Coax. Cable <i>6' DUAL</i>		Calibration Checks		
Damp. <i>MIN</i>	Gain <i>47 db</i>		<i>IN 11:15</i>		
Freq. <i>2.0 MHz</i>			<i>OUT 4:40</i>		
Rep. Rate <i>1K</i>					
Filter <i>H1</i>					
Video <i>NORM</i>					
Couplant <i>SONOTANCE 40 9/2 8124</i>					

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>11-007</i>	<i>12</i>	<i>1.110"</i>	<i>.854"</i>	<i>1.281"</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>11-007</i>	<i>2</i>	<i>1.089"</i>	<i>.854"</i>	<i>1.281"</i>					
<i>11-007</i>	<i>4</i>	<i>1.068"</i>	<i>.854"</i>	<i>1.281"</i>					
<i>11-007</i>	<i>6</i>	<i>1.110"</i>	<i>.854"</i>	<i>1.281"</i>					
<i>11-007</i>	<i>8</i>	<i>1.110"</i>	<i>.897"</i>	<i>1.281"</i>					
<i>11-007</i>	<i>10</i>	<i>1.089"</i>	<i>.854"</i>	<i>1.281"</i>					

Sketch/Identification



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANET 7/19/82*

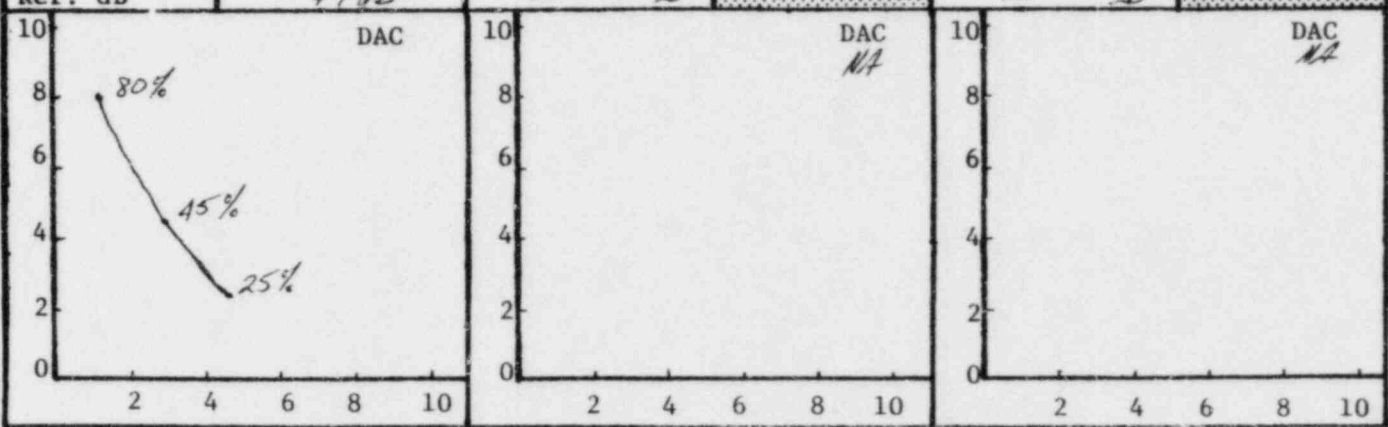
Customer <i>L.P.#L.</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2A/11</i>	Iso/Drawing No. <i>Zonell, Acc. 2, F.C. #3</i>
Procedure <i>ISI-28 Rev. 1, F.C. 1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Michael W Blaw II</i>	VGR Supervisor <i>Dennis Johnson</i>	Date <i>7-10-82</i>
Component/Piping System <i>Cold Leg - RCP 2A to Steam Generator 2</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-18</i>	Couplant: <i>Sonotrace 40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number *F.C. 1*

Transducer	0°	45°	60°	Instrument			
S/N	<i>44651</i>	<i>NA</i>	<i>NA</i>	Mfr.	<i>Sonic</i>	Model	<i>Mark I</i>
Size	<i>.5"</i>			S/N	<i>01058E</i>	RepRate	<i>1K</i>
Frequency	<i>2.25 MHz</i>			Reject	<i>OFF</i>	Filter	<i>Hi</i>
Beam Angle	<i>0°</i>			Damp	<i>Min.</i>	Coax	<i>6' Dual</i>
				Freq.	<i>20 MHz</i>	Videa	<i>Norm.</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>80%</i>	<i>1.3</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1:15</i>	<i>4:40</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>45%</i>	<i>2.8</i>															
<i>3/4 T</i>	<i>25%</i>	<i>4.3</i>															
Ref. dB	<i>47dB</i>																



Additional Comments/Sketch



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R. Payne ANIE 7/19/82

Customer <i>L P & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/11</i>	Iso/Drawing No. <i>Zonell Rev 2 F.L. 3 d/f</i>
Procedure <i>FL2 15128 Rev 1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Donald J. Payne III</i>	VCR Supervisor <i>R. Payne</i>	Date <i>7/15/82</i>
Component/Piping System <i>RCP 2A to Sr Gen. 2</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-18</i>	Couplant: Type <i>40</i> Batch No. <i>822</i>

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number *2*

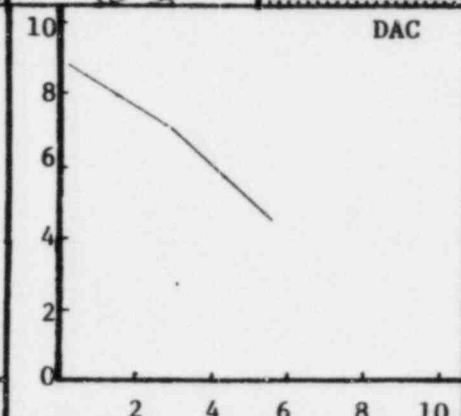
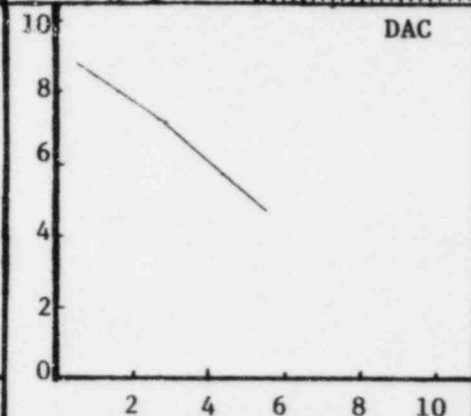
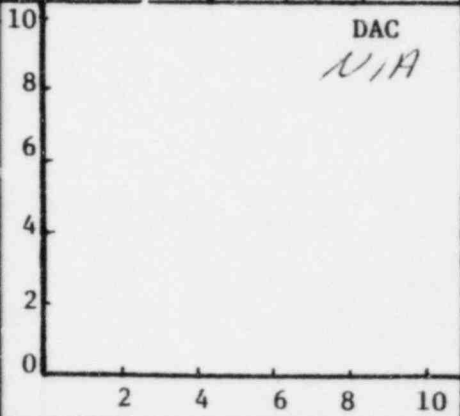
Transducer	30°	45°	60°	Instrument			
	S/N <i>607150</i>	<i>NIA</i>	<i>NIA</i>	Mfr. <i>Sonic</i>	Model <i>Mark I</i>	RepRate <i>1K</i>	
	Size <i>50"</i>			S/N <i>05473F</i>	Filter <i>Hi</i>		
	Frequency <i>2.25 MHz</i>			Reject <i>3</i>	Coax <i>6' BNC-MI</i>		
Beam Angle <i>30°</i>			Damp <i>Min</i>	Freq. <i>2.0 MHz</i>	Video <i>Norm</i>		

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	30°		45°		60°	
											In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NIA</i>	<i>NIA</i>	<i>80%</i>	<i>1.5</i>	<i>NIA</i>	<i>NIA</i>	<i>80%</i>	<i>1.5</i>	<i>NIA</i>	<i>NIA</i>	<i>8:00</i>	<i>10:53</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>	<i>NIA</i>
<i>1/2 T</i>			<i>70%</i>	<i>3.0</i>			<i>70%</i>	<i>3.0</i>								
<i>3/4 T</i>			<i>55%</i>	<i>4.5</i>			<i>55%</i>	<i>4.5</i>								
Ref. dB	<i>NIA</i>		<i>62</i>				<i>62</i>									



Additional Comments/Sketch
Calibration for Carbon Steel side.



Ultrasonic Examination Report

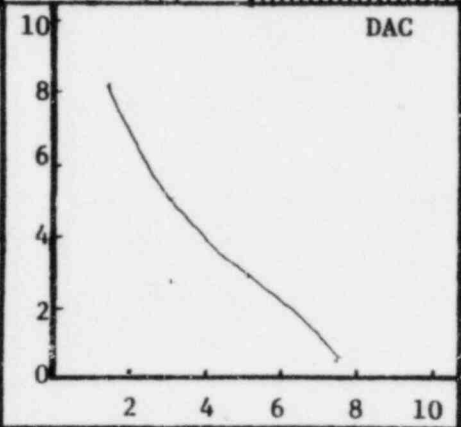
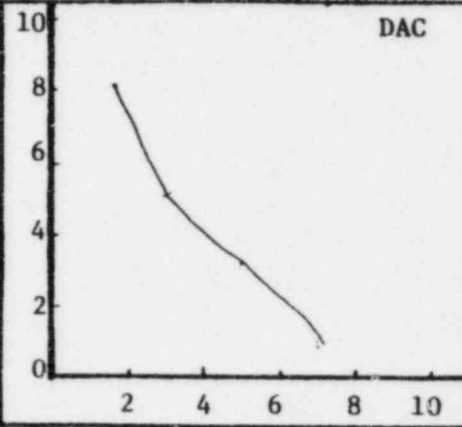
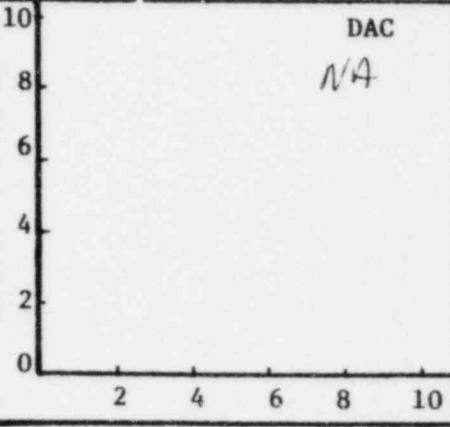
Customer <i>LP+L</i>		Plant <i>Waterford</i>		Unit <i># 3</i>		Loop/Zone <i>2/11</i>		Iso/Drawing No. <i>Zone 11 Rev. 2 FC 3 dlf</i>	
Procedure <i>IST-2.8 Rev 1 FC 3</i>		Exam Surface <i>OD</i>		Examiner/Level <i>David J. Fink</i>		VCR Supervisor <i>David J. Fink</i>		Date <i>7-15-82</i>	
Component/Piping System <i>RCP 2A to St Gen 2</i>				Pipe Size <i>3.5"</i>		Weld Type <i>BUTT</i>		Cal. Block # <i>UT-18</i>	
						Couplant: <i>Type 5040</i>		Batch No. <i>8124</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *FL 2*

Transducer			Instrument				
	<i>30°</i>	<i>45°</i>	<i>60°</i>	Mfr.	<i>SONIC</i>	Model	<i>MA 6 I</i>
	<i>607150</i>	<i>NA</i>	<i>NA</i>	S/N	<i>05473 E</i>	RepRate	<i>1K</i>
	<i>1.50"</i>			Reject	<i>3</i>	Filter	<i>Hi</i>
	<i>2.25 MHz</i>			Damp	<i>MIN.</i>	Coax	<i>6' 20' 1000</i>
	<i>30°</i>			Freq.	<i>2.0 MHz</i>	Video	<i>NA</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>7.50</i>	<i>10.53</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>50%</i>	<i>3.0</i>				<i>60%</i>	<i>3.0</i>									
<i>3/4 T</i>			<i>35%</i>	<i>4.5</i>				<i>35%</i>	<i>4.5</i>									
<i>1 T</i>			<i>15%</i>	<i>6.5</i>				<i>10%</i>	<i>7.2</i>									
Ref. dB	<i>NA</i>		<i>63 dB</i>					<i>67 dB</i>										

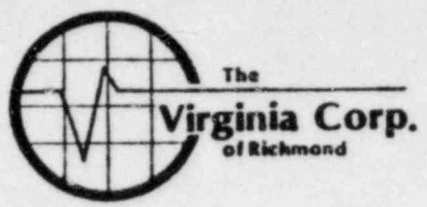


Additional Comments/Sketch
Calibration for austenetic side.

M.R. Martin, ANFI 11-9-82

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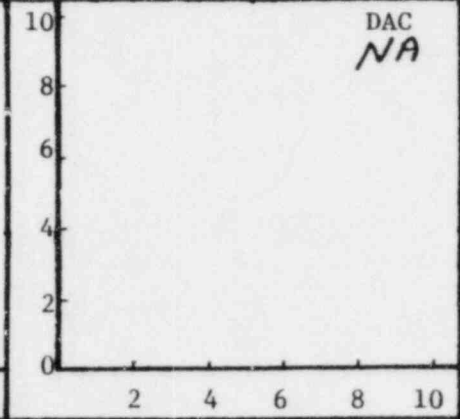
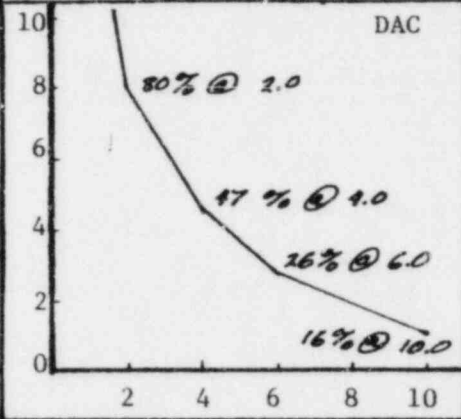
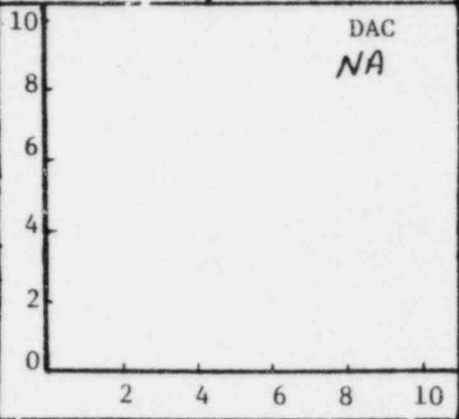
Customer LP+L	Plant Waterford	Unit # 3	Loop/Zone 2/11	Iso/Drawing No. ZONE 11 Rev. 2 F.C. 2
Procedure ISI-2.3 Rev. 0 FC 2	Exam Surface OD	Examiner/Level Nary Longenecker II	VCR Supervisor Daniel Jensen	Date 7-19-82
Component/Piping System Cold Leg RCP 2A To S.G.	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type SONOTRAK 40 Batch No. 8124

Continuation Sheet Attached
 Yes No

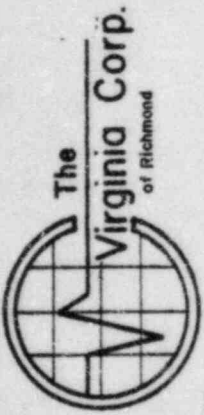
Field Changes:
 Yes No
 If Yes, Number **2**

Transducer	30°	45°	60°	Instrument			
S/N	M04140	NA	NA	Mfg.	SONIC	Model	MARK I
Size	.50"			S/N	05473 E	RepRate	1K
Frequency	2.25 MHz			Reject	off	Filter	H:
Beam Angle	32°			Damp	MIN.	Coax	12' BNC To BNC
				Freq.	2.0 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	NA	NA	80%	2.0	550	420	640	NA	NA	NA	NA	NA	1:15	5:10	NA	NA	NA	NA
1/2 T			47%	4.0	1.15	960	1.28											
3/4 T			26%	6.0	1.6	1.36	1.82											
5/4 T			16%	10														
Ref. dB	NA		58 dB					NA										

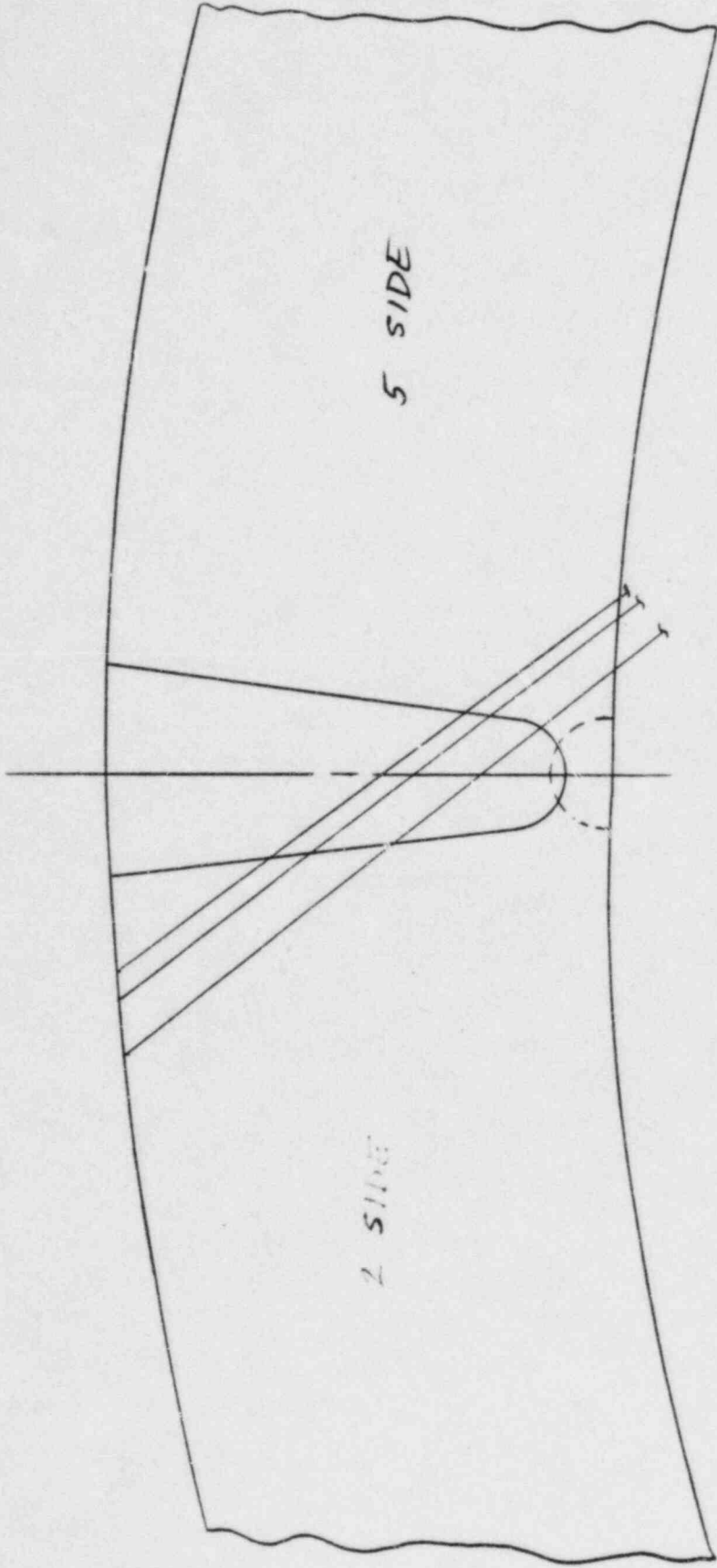


Additional Comments/Sketch



WELD NO 11-009LB

INDICATION NO. 1



M.R. Martin, ANII 11-9-82



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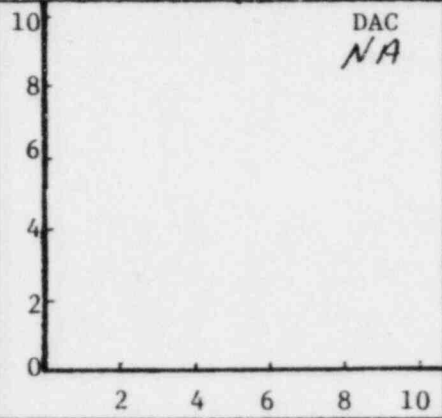
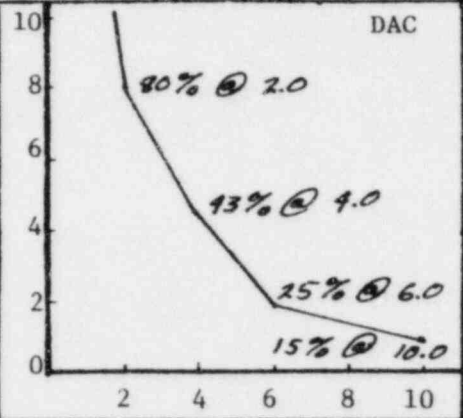
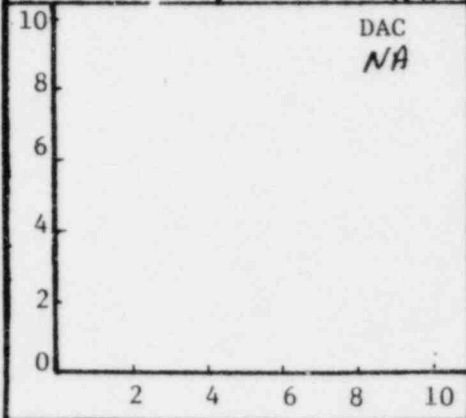
Customer LP+L	Plant Waterford	Unit # 3	Loop/Zone 2/11	Iso/Drawing No. ZONE 11 Rev. 2 FC-2
Procedure ISI-2.3 Revo FC-2	Exam Surface 00	Examiner/Level Navy Longonecker II	VCR Supervisor Daniel Jensen	Date 7-20-82
Component/Piping System Cold 164 RCP 2A TO SB # 2	Pipe Size 36"	Weld Type BUTT	Cal. Block # UT-6	Couplant: Type SONOTRAC-40 Batch No. 8124

Continuation Sheet Attached
 Yes No

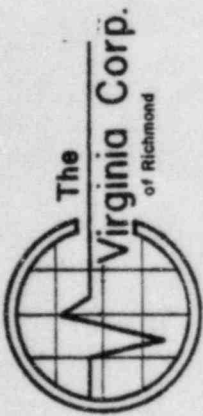
Field Changes:
 Yes No
 If Yes, Number **2**

Transducer	30°	45°	60°	Instrument			
S/N	ME4140	NA	NA	Mfr.	Sonic	Model	MARK I
Size	.50"			S/N	05473 F	RepRate	1K
Frequency	2.26 mhz			Reject	OFF	Filter	Hi
Beam Angle	30°			Damp	Min.	Coax	12' Rev. To BNC
				Freq.	2.0 mhz	Video	Norm

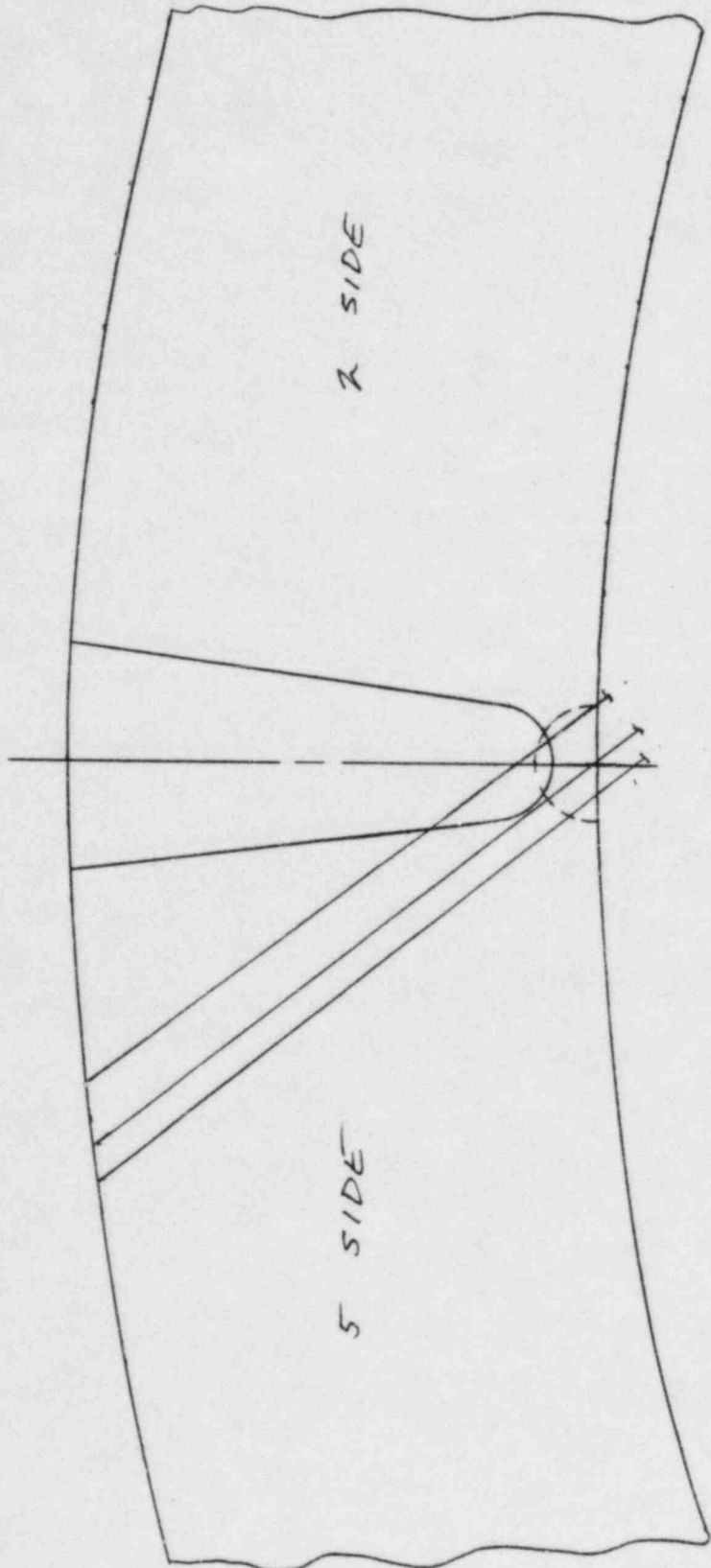
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	NA	NA	80%	2.0	.50	400	620	NA	NA	NA	NA	8:50	12:30	NA	NA	NA	NA
1/2 T			43%	4.0	1.12	.94	1.24										
3/4 T			25%	6.0	1.54	1.34	1.76										
5/4 T			15%	10													
Ref. dB	NA		57dB				NA										



Additional Comments/Sketch

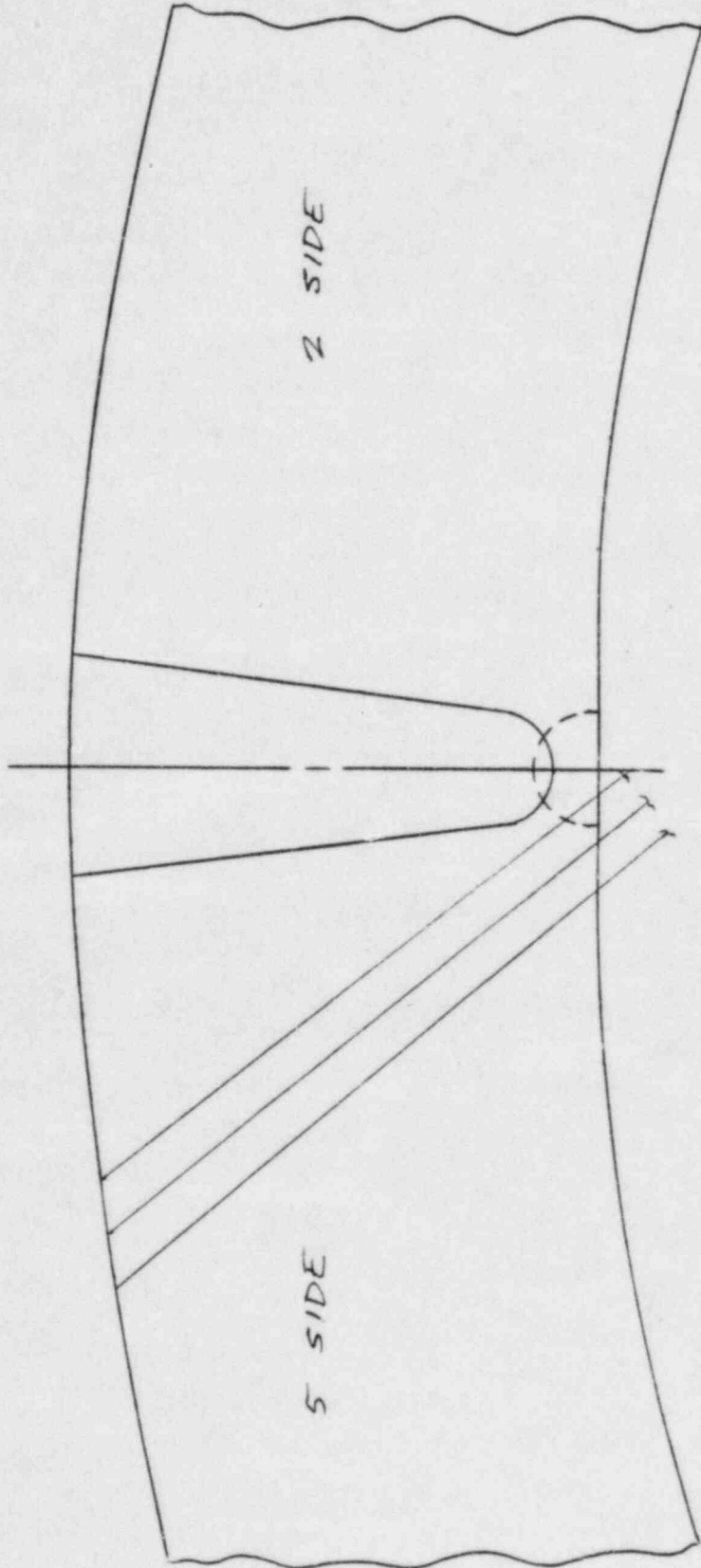


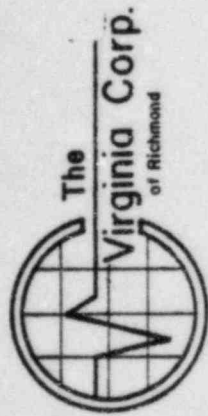
WELD NO 11-008 LA
INDICATION NO. 1



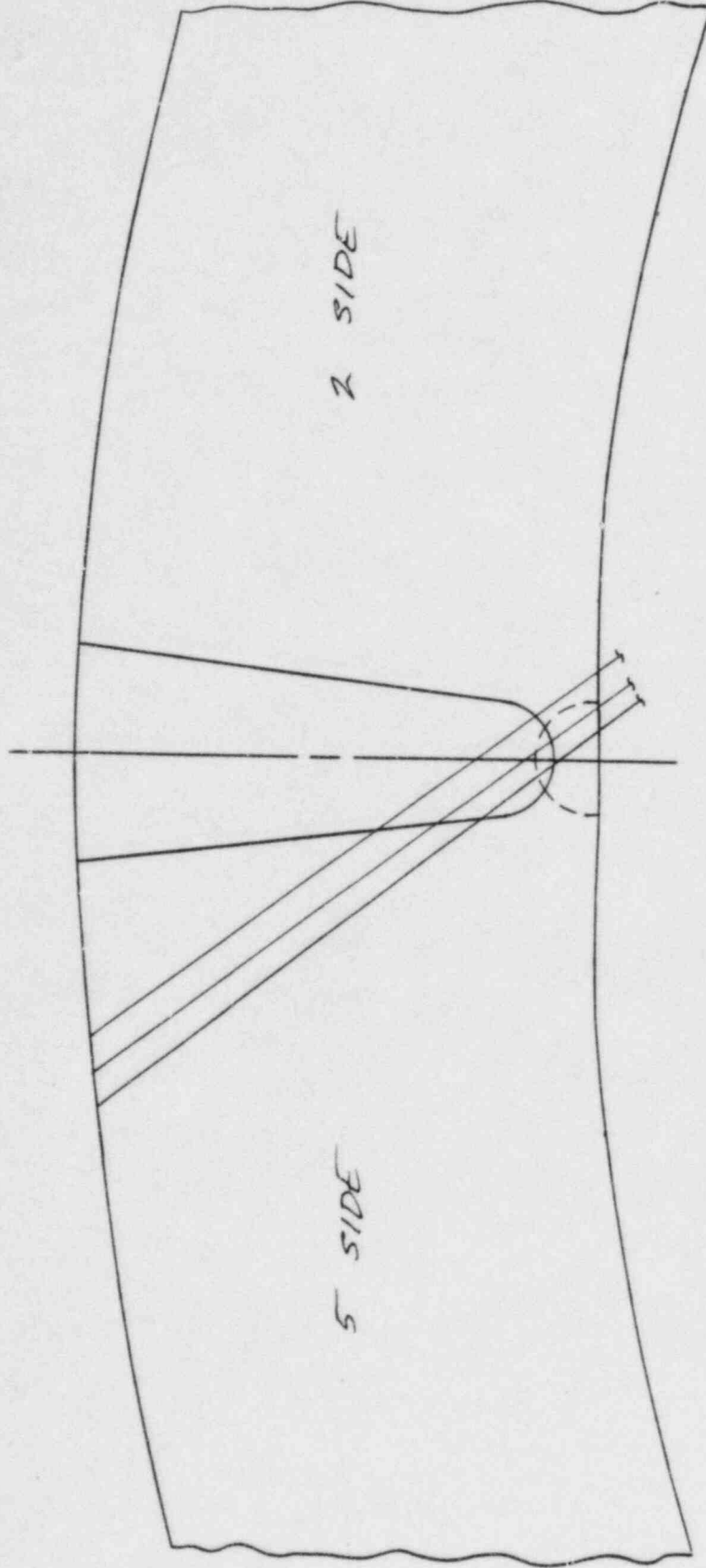


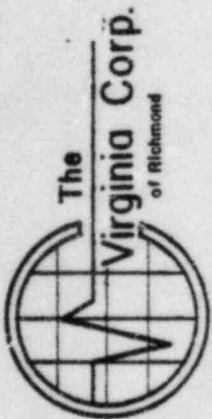
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INDICATION NO. 2



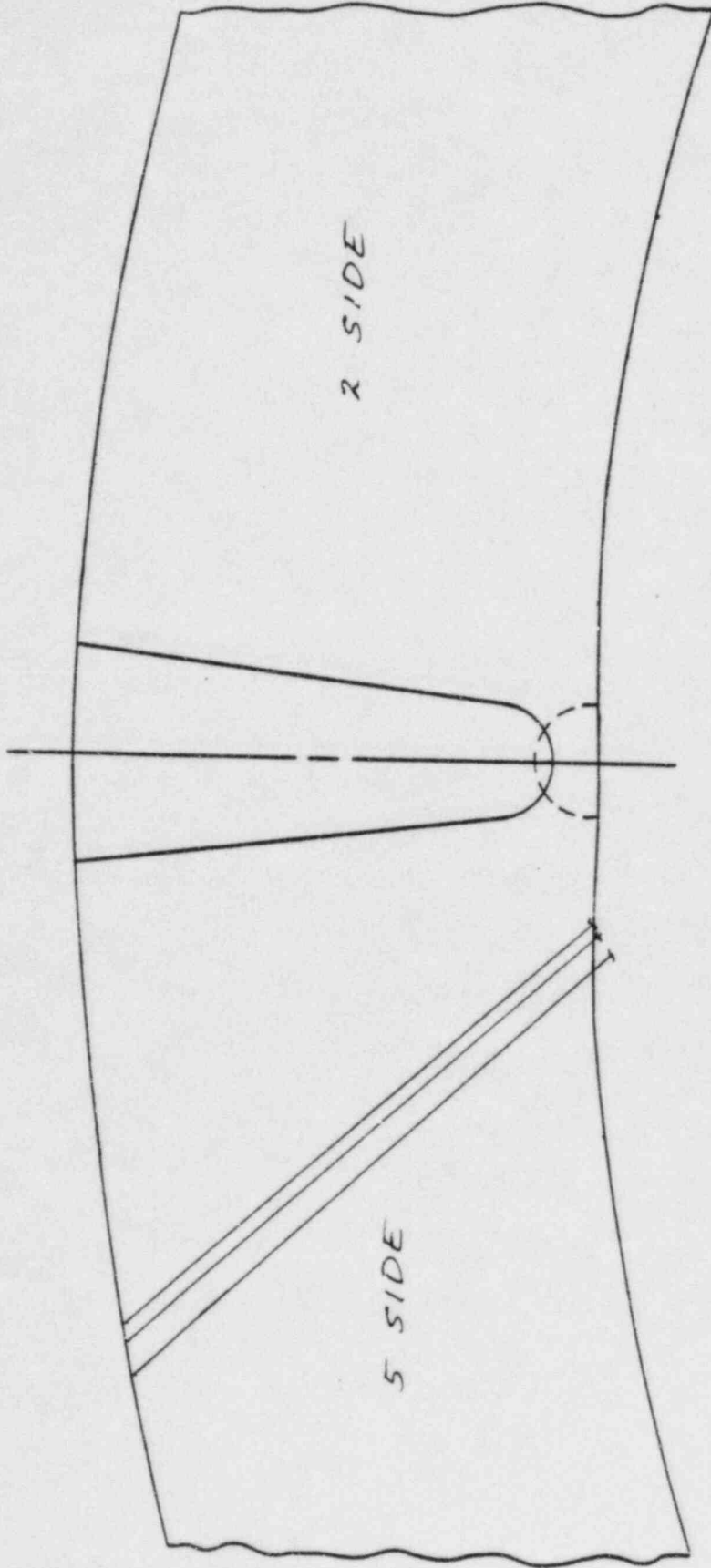


WELD NO 11-008 LA
INDICATION NO. 3



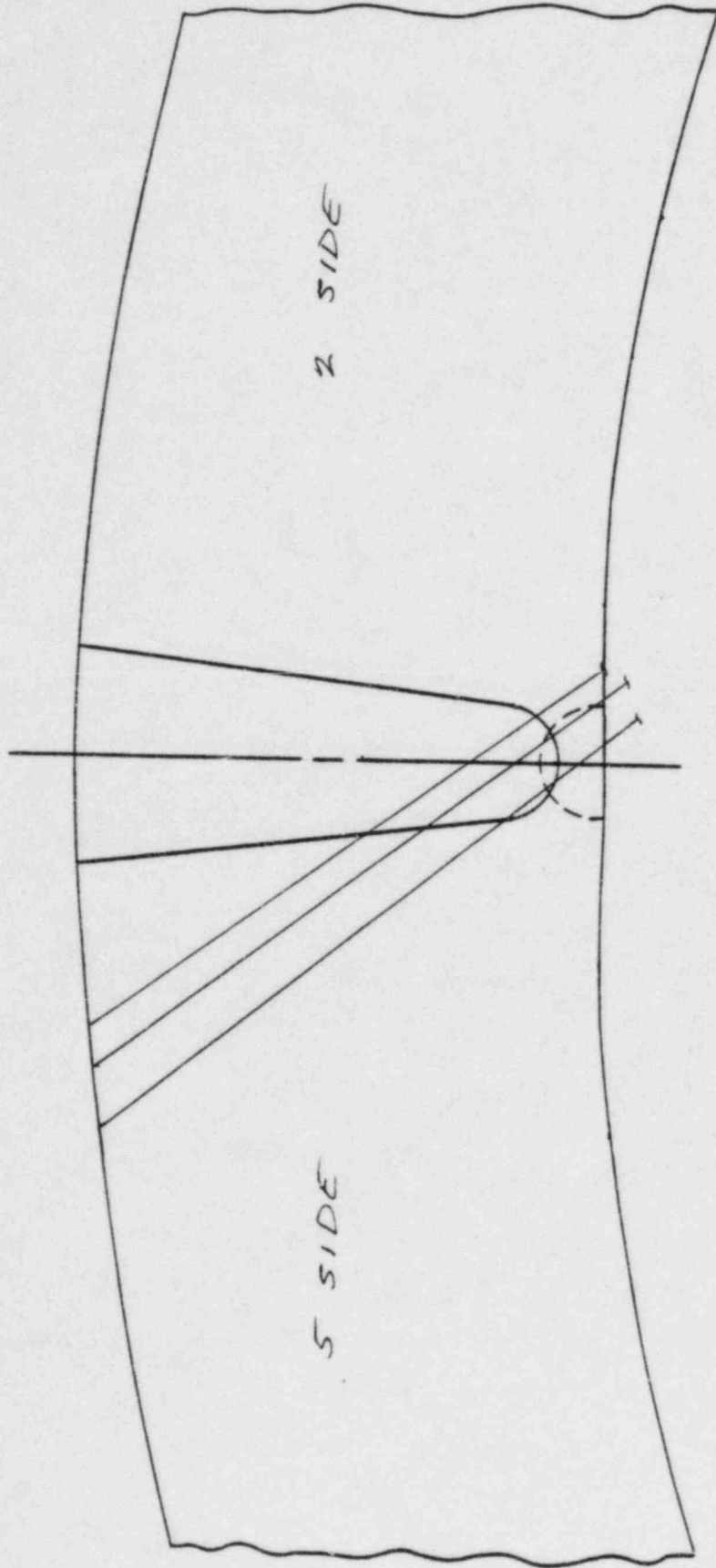


WELD NO. 11-008LA
INDICATION NO. 9





WELD NO. 11-008LA
INDICATION NO. 5





D. Payne ANZI 4/1/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 2 12
Component/Piping System COLD LEG R.V. TO R.C.P 2A	Examiner/Level Gary Longenecker II	Date 3-1-82	
Procedure I.S.I. 2.5 R-0	Iso/Drawing No. 12 R-2 F.C. 1	VCR Supervisor Danil Denis	Continuation Sheet Attached [X] Yes [] No

Equipment

Instrument		Transducer		Calibration
Mfgr.	SONIC	Mfgr.	AEROTECH	Cal. Block UT-5
Model	MARK 1	Size	.5" DIA.	Cal. Block
S/N	05304E	Freq.	2.25 MHZ.	Range Cal. 5"
Reject	OFF	Serial No.	KB2728	Calibration Checks
Damp.	MIN.	Coax. Cable	6'	3:30 CAL IN.
Freq.	2 MHZ.	Gain	70 dB	5:30 CAL OUT
Rep. Rate	1K			
Filter	OFF			
Video	NORM			
Couplant	SONOTRACE 40			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan
12-001	12	3.13	3.20	3.20	12-010 LA	0"	3.33	3.27	3.33
12-001	2	3.13	3.13	3.13	12-010 LA	3"	3.47	3.53	3.47
12-001	4	3.13	3.20	3.20	12-010 LA	6"	3.47	3.47	3.47
12-001	6	3.13	3.13	3.13	12-010 LA	9"	3.47	3.47	3.47
12-001	8	3.13	3.13	3.33	12-010 LA	12"	3.47	3.47	3.47
12-001	10	3.13	3.07	3.20	12-010 LA	15"	3.47	3.47	3.47
12-002	12	3.27	3.47	3.13	12-011 LB	0"	3.33	3.33	3.33
12-002	2	3.27	3.47	3.13	12-011 LB	3"	3.47	3.47	3.47
12-002	4	3.33	3.47	3.13	12-011 LB	6"	3.40	3.40	3.40
12-002	6	3.27	3.47	3.13	12-011 LB	9"	3.40	3.33	3.33
12-002	8	3.33	3.47	3.07	12-011 LB	12"	3.40	3.33	3.33
12-002	10	3.33	3.47	3.13	12-011 LB	15"	3.33	3.33	3.33

Sketch/Identification



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Ultrasonic Examination Report *D. Payne ANIS 4/26/82*

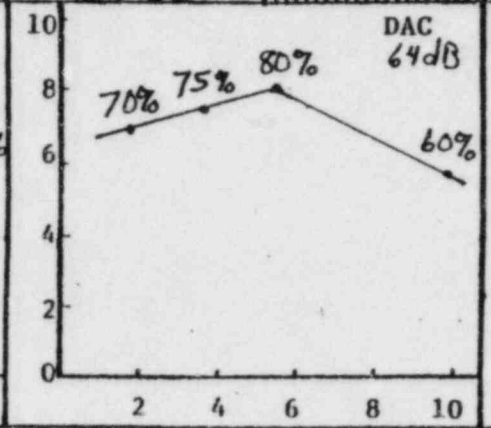
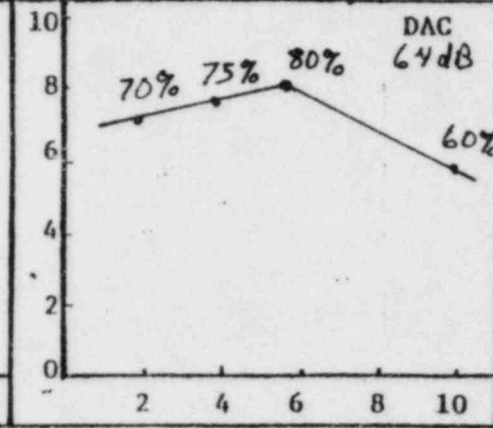
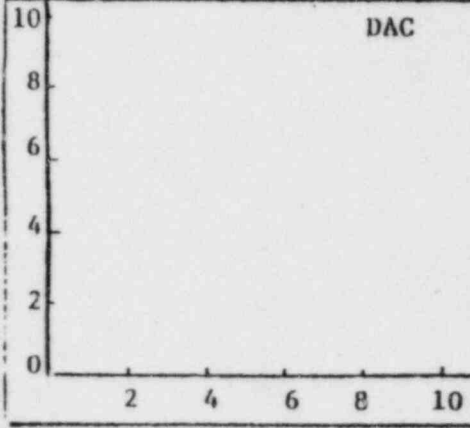
Customer L P + L		Plant Waterford		Unit 3	Loop/Zone 2A/12	Iso/Drawing No. Zone 12, Rev 2, F.C. 1	
Procedure ISI 2.3 F.C. 1	Rev 0	Exam Surface OD	Examiner/Level CE. Farrell		VCR Supervisor Daniel Sina		Date 4-19-82
Component/Piping System Cold leg - R.V. to R.C.P. 2A			Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant Sonotrace	Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **1**

	Transducer	0°	45°	60°	Instrument			
	S/N	N/A	L19801	N/A	Mfr.	Sonic	Model	F.T.S. Marke
	Size		1.0"		S/N	03704E	RepRate	200
	Frequency		2.25 Mhz		Reject	off	Filter	H.
Beam Angle	↓	45°	↓	Damp	Min	Coax	12'	
				Freq.	2 Mhz	Video	Norm	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	N/A	N/A	70%	2.0	2 1/32	3/16	1 1/32	70%	2.0	2 1/32	3/16	1 1/32	N/A	N/A	0805	1140	N/A	N/A
1/2 T			75%	4.0	1 1/16	1 1/16	2	75%	4.0	1 1/16	1 1/16	2						
3/4 T			80%	6.0	2 1/32	2 1/32	2 3/4	80%	6.0	2 1/32	2 1/32	2 3/4						
5/4 T			60%	10.0				60%	10.0									
Ref. dB	↓	↓	64 dB					64 dB										



Additional Comments/Sketch



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Ultrasonic Examination Report *D. Payne ANII 4/26/82*

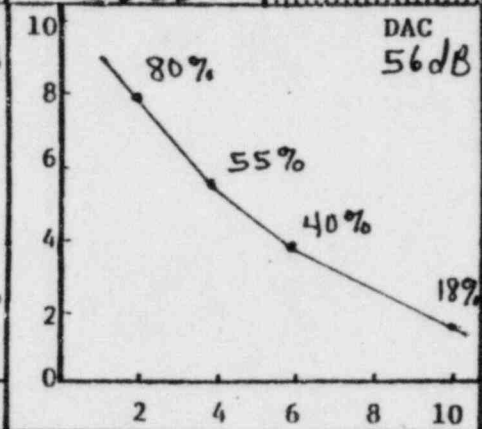
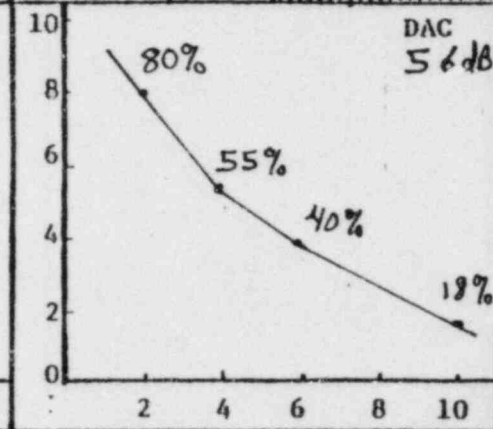
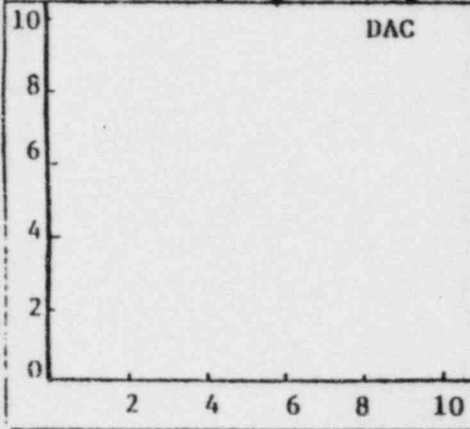
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 2A/12	Isa/Drawing No. Zone 12, Rev 2, F.C. 1
Procedure ISI 2.3 F.C.1	Exam Surface OD	Examiner/Level CK/CE.7/AD/I	VGR Supervisor Donal Jones	Date 4-19-82
Component/Piping System Cold leg - R.V. to RC.P. 2A	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	NA	619134	Mfg.	Sonic	Model	FTS Mark I
			1.0"	S/N	05304E	RepRate	200
			2.25 Mhz	Reject	off	Filter	hi
			61°	Damp	Min.	Coax	12'
			Ereq.	2 Mhz	Video	Norm	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1 7/16	1 3/2 1 3/4	80%	2.0	1 9/16	1 3/2 1 3/4	NA	NA	NA	NA	0825	1145
1/2 T			55%	4.0	3 7/16	2 5/8 3 1/8	55%	4.0	3 7/16	2 5/8 3 1/8						
3/4 T			40%	6.0	4 1 3/16	4 1 3/8 5 1/4	40%	6.0	4 1 3/16	4 1 3/8 5 1/4						
5/4 T			18%	10.0			18%	10.0								
Ref. dB			56 dB				56 dB									



Additional Comments/Sketch



The
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Ultrasonic Examination Report *D. Payne ANII 4/26/82*

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 2A/12	Iso/Drawing No. Zone 12, Rev 2, FC.1
Procedure ISI-2.3, Rev 0, FC.1	Exam Surface O.D.	Examiner/Level BURKINGAME	VCR Supervisor Daniel Payne	Date 4-20-82
Component/Piping System Cold Leg Reactor Vessel to RCP 2A	Pipe Size O.D.	Weld Type Butt	Cal. Block UT-6	Couplant: Snoutace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number **FC-1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	L19801	NA	Mfr.	Some	Model	FTS Mark I
		1.0"		S/N	03704E	RepRate	200
		2.25 MHz		Reject	M.N	Filter	H.
	↓	45°	↓	Damp	Min	Coax	12'
			Freq.	2 MHz	Video	Norm	

Calibration 0°

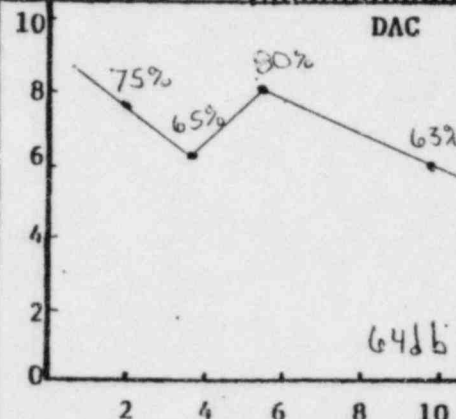
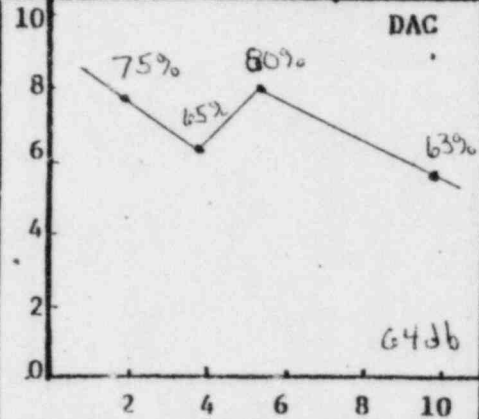
2 & 5 Scan

7 & 8 Scan

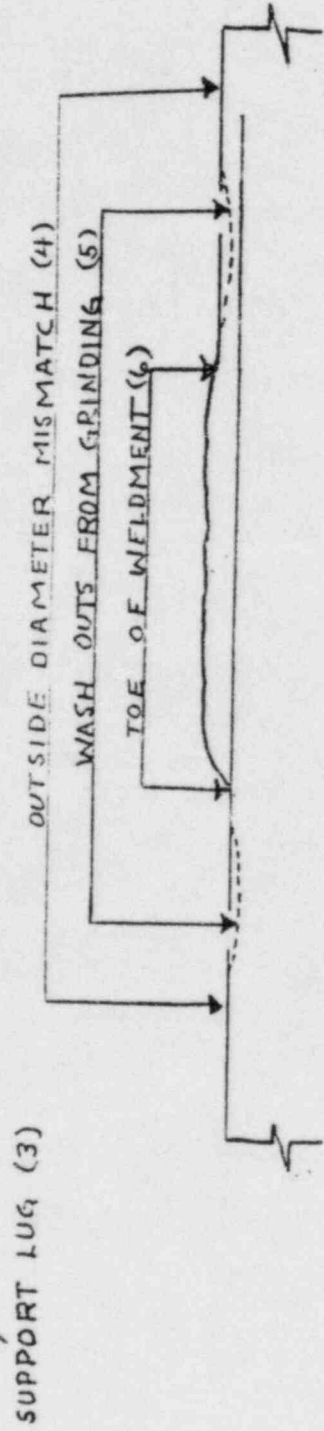
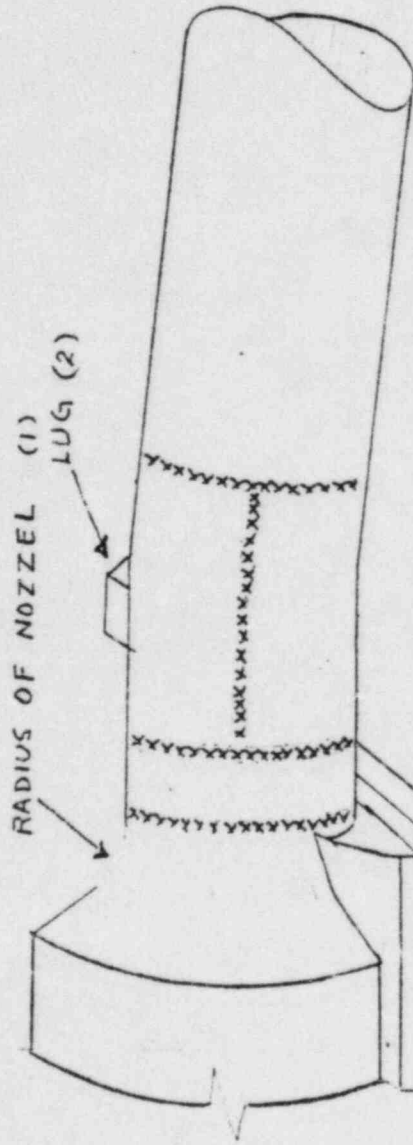
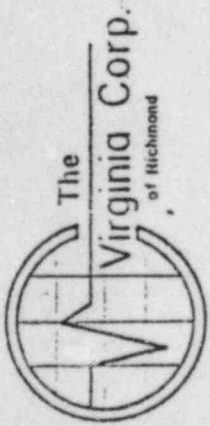
Calibration Checks

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4T	NA	NA	75%	2.0	2 1/32	7/16	75%	2.0	2 1/32	7/16	NA	NA	1015	1145	NA	NA
1/2T			65%	4.0	1 1/16	15/32	65%	4.0	1 1/16	15/32			1215	1400		
3/4T			80%	6.0	2 5/8	2 1/2	80%	6.0	2 5/8	2 1/2						
5/4T			63%	10.0			63%	10.0								
Ref. dB	↓	↓	64 dB				64 dB				↓	↓			↓	↓

NA^{DAC}



Additional Comments/Sketch





The
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 of Richmond

Date 4-20-82


Page 4 of 4

To: _____

Subject EXAMINATION
LIMITATIONS
ISC 42, PR 1.7, FC 1

WELD NO. 12-002 HAD INTERMITTENT CONTACT WITH THE SURFACE AS A RESULT OF CONDITION 4, SHOWN ON PAGE 3. ESTIMATED LOSS OF CONTACT FOR EACH SCAN IS LISTED.
 SCAN 5 APPROX. 10%
 SCAN 2 APPROX. 10%
 SCANS 7 & 8 APPROX. 10%

WELD NO. 12-001 SCANS 5 AND SCANS 7 & 8 WERE OBSTRUCTED BY CONDITIONS 1 & 3. SCAN 5 WAS OBSTRUCTED TOTALLY FOR A LENGTH OF 39 INCHES, FOR A LOSS OF APPROX. 34%. APPROX. 10% OF SCANS 7 & 8 WAS LOST. GOOD ROOT AREA COVERAGE WAS NOT OBTAINED. WELD SHOULD BE SCANNED AT 30°.

Signed 



Ultrasonic Examination Report *D. Payne ANII 4/26/82*

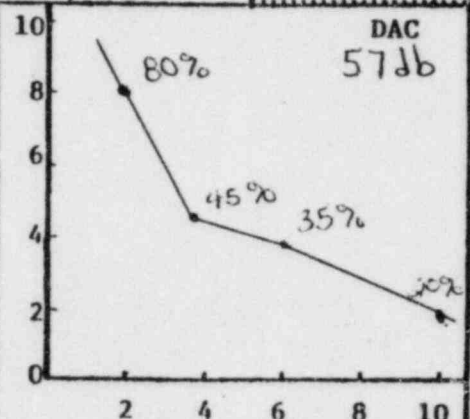
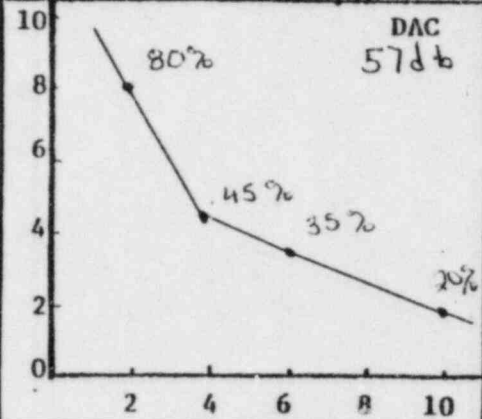
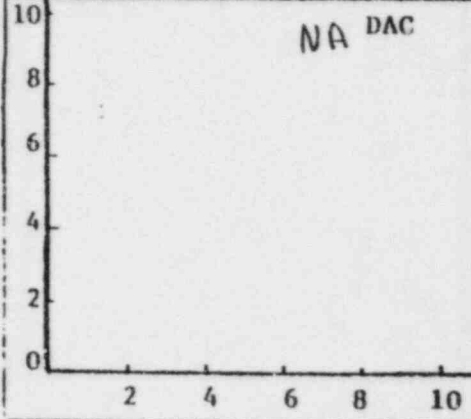
Customer <i>LPEL</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>2A/12</i>	Iso/Drawing No. <i>Zone 12, Res 2, F.C. 1</i>	
Procedure <i>ISI-2.3, Rev. 0, F.C. 1</i>		Exam Surface <i>O.D.</i>	Examiner/Level <i>BORLINGS II</i>		VCR Supervisor <i>Denise Jones</i>		Date <i>4-20-82</i>
Component/Piping System <i>Cold Leg Reactor Vessel to RCP 2A</i>			Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-10</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8119</i>	

Continuation Sheet Attached
 Yes No

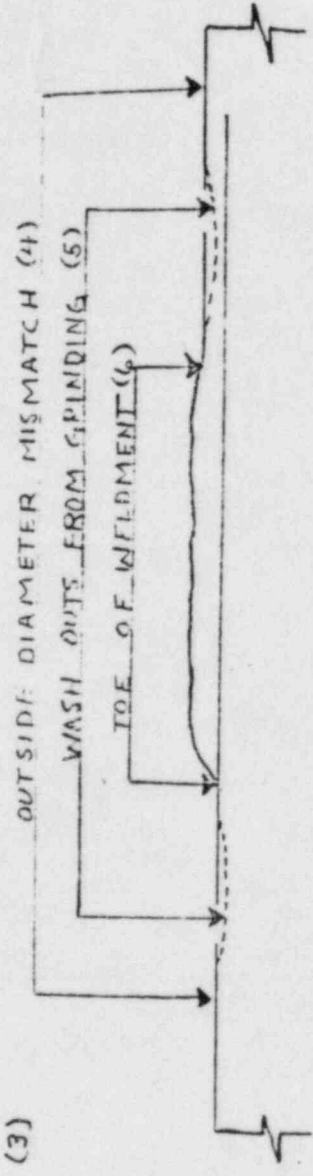
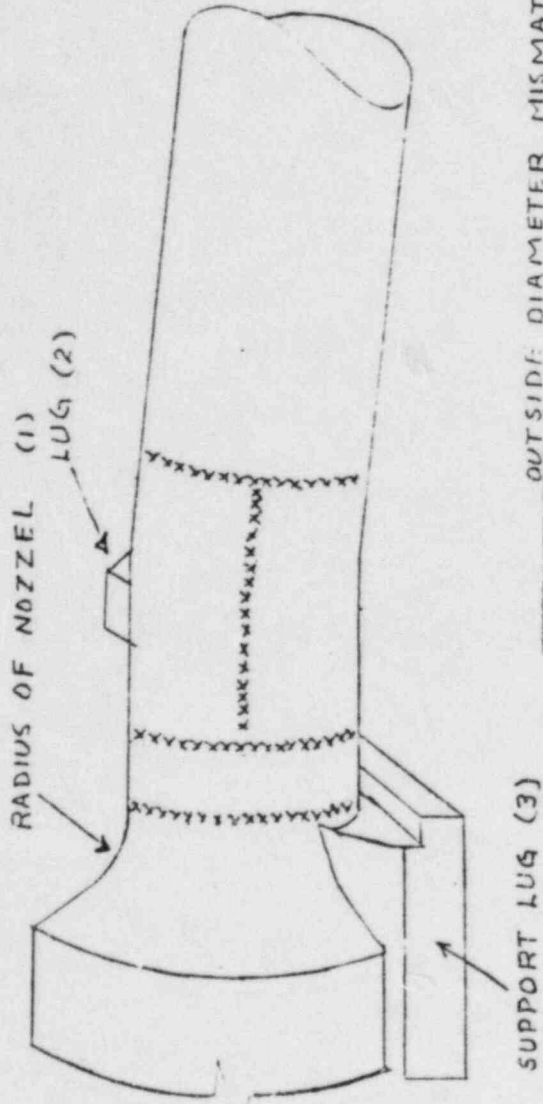
Field Changes:
 Yes No
 If Yes, Number *F.C. 1*

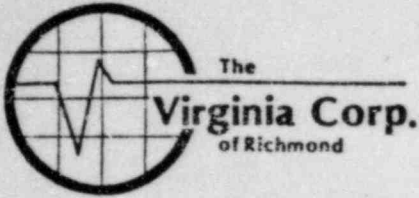
	Transducer			Instrument				
	S/N	<i>0°</i>	<i>45°</i>	<i>60°</i>	Mfr.	<i>SONIC</i>	Model	<i>FTS Mark I</i>
	Size	<i>NA</i>	<i>NA</i>	<i>L19134</i>	S/N	<i>05304E</i>	RepRate	<i>200</i>
	Frequency			<i>1.0"</i>	Reject	<i>MIN</i>	Filter	<i>Hi</i>
	Beam Angle	<i>2.25 MHz</i>		<i>61°</i>	Damp	<i>MIN</i>	Coax	<i>12'</i>
				Freq.	<i>2 MHz</i>	Video	<i>Norm</i>	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>	<i>1 7/32</i>	<i>1 13/32</i>	<i>80%</i>	<i>2.0</i>	<i>1 7/32</i>	<i>1 13/32</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1010</i>	<i>1150</i>
<i>1/2T</i>			<i>45%</i>	<i>4.0</i>	<i>3 9/32</i>	<i>2 15/32</i>	<i>45%</i>	<i>4.0</i>	<i>3 9/32</i>	<i>2 15/32</i>					<i>1220</i>	<i>1405</i>
<i>3/4T</i>			<i>35%</i>	<i>6.0</i>	<i>4 13/16</i>	<i>4 33/64</i>	<i>35%</i>	<i>6.0</i>	<i>4 13/16</i>	<i>4 33/64</i>						
<i>5/4T</i>			<i>20%</i>	<i>10.0</i>			<i>20%</i>	<i>10.0</i>								
Ref. dB	<i>NA</i>	<i>NA</i>	<i>57 db</i>				<i>57 db</i>				<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>		



Additional Comments/Sketch





Date 4/20/82

Page 4 of 4

To: _____

Subject EXAMINATION
LIMITATIONS
ISC 12 REV. 2 FC-1

WELD NO. 12-002. SCAN 5 LIMITED BY CONDITIONS 1³/₃
FOR ~10% AND CONDITION 4 FOR ~5%
SCAN 2 LIMITED BY CONDITION 2
FOR ~4% AND CONDITION 4 FOR ~5%
SCANS 7¹/₈ LIMITED BY CONDITION 4
FOR ~15%

WELD NO 12-001 SCAN 5 LIMITED TOTALLY BY
CONDITION 3 FOR 39", AND LIMITED
BY CONDITION 1 FOR ~75%
SCAN 2 LIMITED BY CONDITION 4
ON WELD 12-002 FOR ~10% AND
CONDITIONS 1³/₃ FOR ~15%
SCANS 7¹/₈ LIMITED BY CONDITIONS
1³/₃ FOR ~15%

Good Root AREA COVERAGE WAS
NOT OBTAINED, WELD SHOULD BE
RE SCANNED AT 30"

Signed _____



The
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of Richmond

Ultrasonic Examination Report *D. Payne ANII 4/26/82*

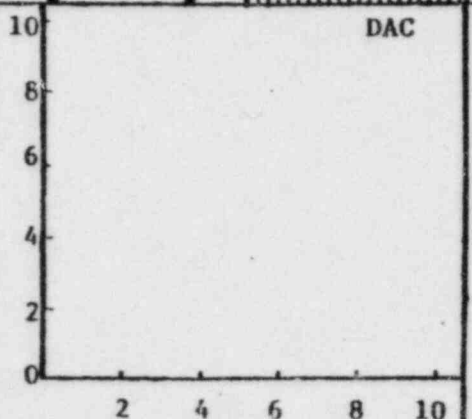
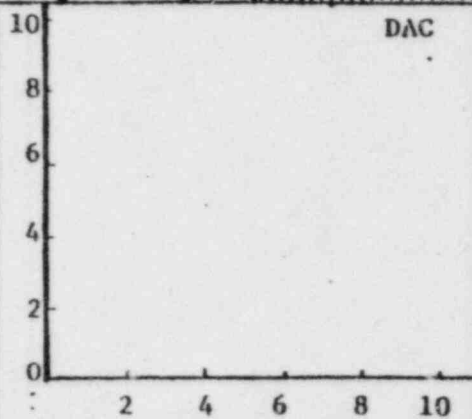
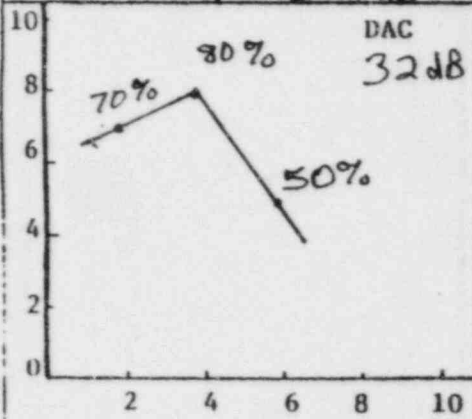
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 2A/12	Iso/Drawing No. Zone 12, Rev. 2, F.C.1
Procedure ISI 2.3 Rev. 0, F.C.1	Exam Surface OD	Examiner/Level C. E. [Signature]	VCR Supervisor Daniel [Signature]	Date 4-20-82
Component/Piping System Cold leg - RV to R.C.P. 1B	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
Yes No

Field Changes:
Yes No
If Yes, Number **1**

Transducer	0°	45°	60°	Instrument			
S/N	48808	NA	NA	Mfr.	Sonic	Model	FTS Mark I
Size	1"			S/N	780836	RepRate	200
Frequency	2.25MHz			Reject	OFF	Filter	hi
Beam Angle	0°	↓		Damp	Min	Coax	12' BNC
				Freq.	2	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	70%	2.0	NA	NA			NA	NA			0927	1100	NA	NA	NA	NA
1/2 T	80%	4.0														
3/4 T	50%	6.0														
1 T	NA	8.4														
Ref. dB	32dB															



Additional Comments/Sketch



The
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Ultrasonic Examination Report *Don Payne ANEI 4/2/82*

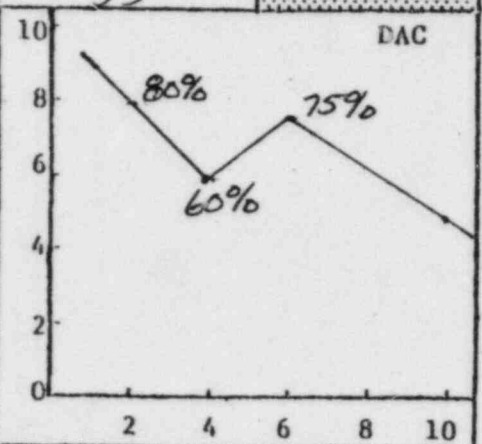
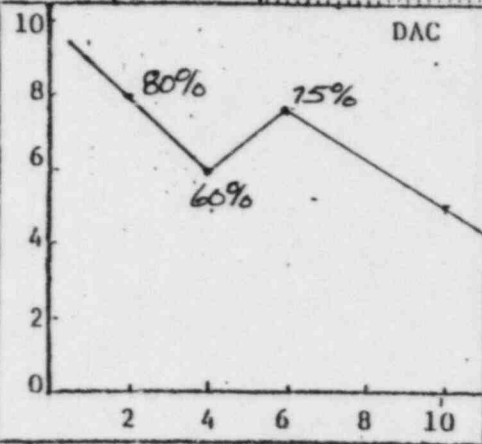
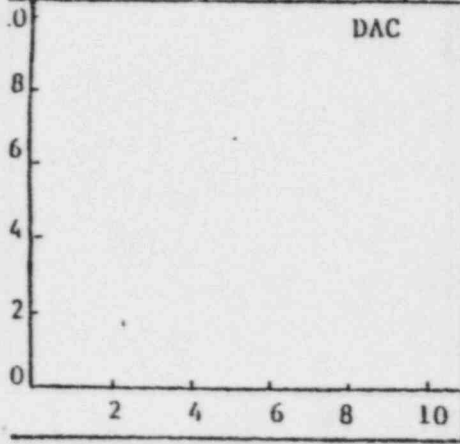
Customer LP AND L	Plant WATERFORD	Unit 3	Loop/Zone 2B/13	Iso/Drawing No. ZONE 13, REV 2, F.C. 3
Procedure ISI 2.3, REVO	Exam Surface O.D.	Examiner/Level CR Smith II	VCR Supervisor Daniel J. Jones	Date 3-29-82
Component/Piping System COLD LED-RCP 2B TO STEAM GEN #2		Pipe Size 36" 30"	Weld Type BUTT	Cal: Block UT-6
		Couplant: SONOTRACE		Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number

Transducer	0°	45°	60°	Instrument			
	S/N	NA	619134	Mfr.	SONIC	Model	EDS MARK I
	Size		1"	S/N	016101E	RepRate	1K
	Frequency		2.25 MHz	Reject	OFF	Filter	HI
Beam Angle		45°	Damp	MIN	Coax	12' BNC	
			Freq.	2	Video	ALARM	

Calibration 0°			2 & 3 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	NA	NA	80	2.0	1 1/16	1 3/8 1°	80	2.0	1 1/16	1 3/8 1°	NA	NA	1520	1620	NA	NA
1/2T			60	4.1	1 5/8	1 3/4 2°	60	4.1	1 5/8	1 3/4 2°						
3/4T			75	6.0	2 1/16	2 1/8 2 1/8	75	6.0	2 1/16	2 1/8 2 1/8						
5/4T			50	10.0			50	10.0								

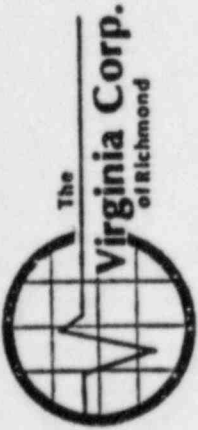


Additional Comments/Sketch

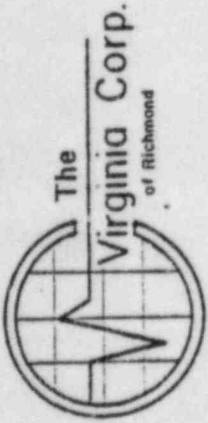
Don Payne ANII 4/3/82

Indication Record

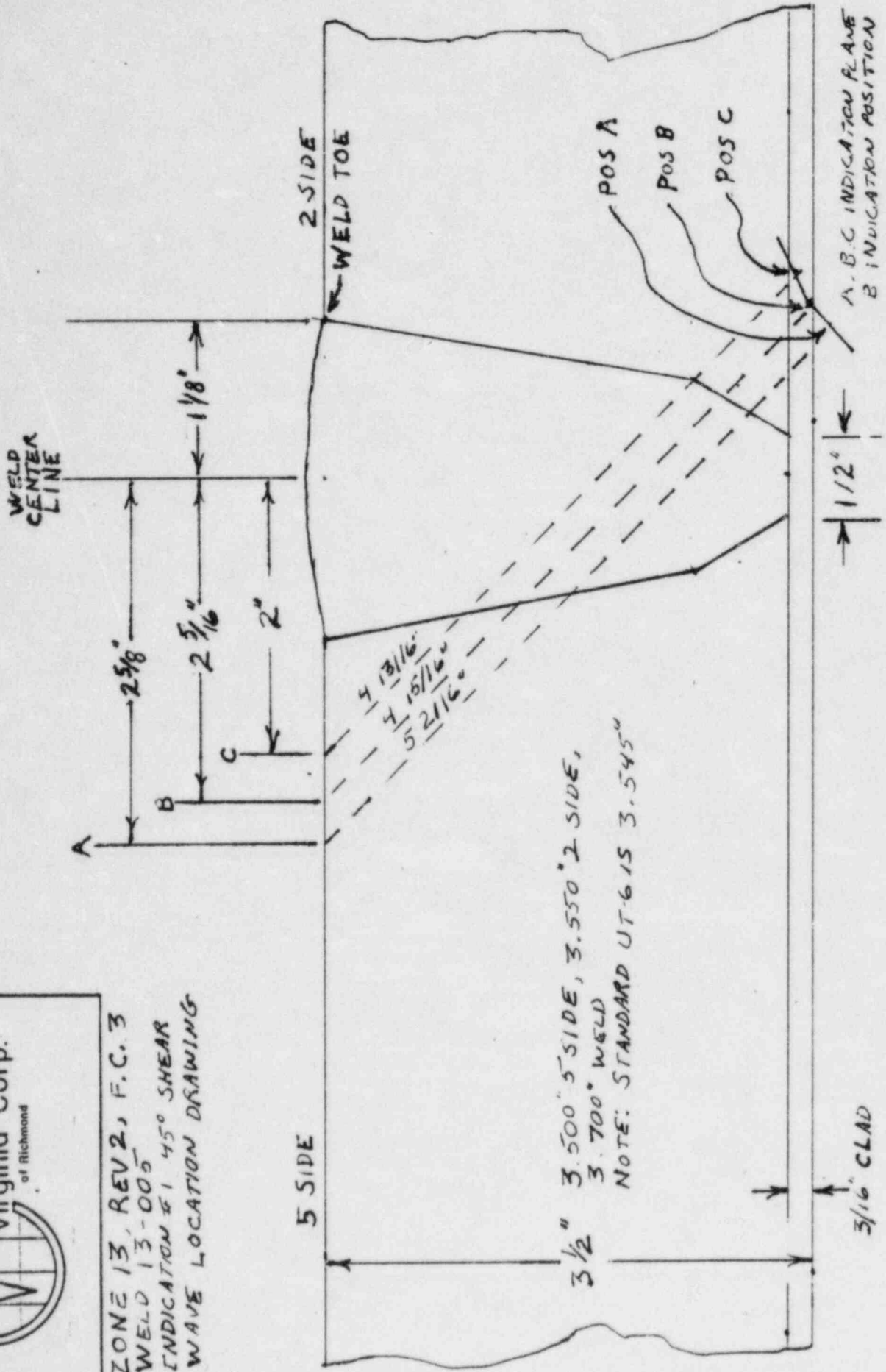
Ultrasonic Examination Report



Customer LP AND L		Plant WATERFORD		Unit 3		Loop 2.B	
Procedure ISI 2.3 REV 0		Examiner/Level CR Smith II		VCR Supervisor Daniel Payne		Date 2-29-82	
Component/Piping System COLD LEG RCP 20 STEAM GEN 2				ISO Drawing No. ZONE 13, REV 2, F.C. 3			
Minimum Depth S.U. Sweep Pos. Reading		Maximum Depth S.U. Sweep Pos. Reading		Beam Angle Dir.		Beam Thickness 2 Side	
2" 7.8		2 5/8" 8.4		45° 5		3.55"	
Indication Length From To		Base Metal Thickness 5 Side		Weld Thick.		Remarks	
106 1/2" 8"		3.50"		3.70"		14 1/2" LENGTH	
Weld No.		Ind. No.		Max. % DAC			
13-005		1		75			



ZONE 13, REV 2, F.C. 3
WELD 13-005
INDICATION #1 45° SHEAR
WAVE LOCATION DRAWING





D. Payne ANEE 4/26/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 2 12
Component/Piping System COLD LEG R.V. TO R.C.P. 2A	Examiner/Level Gary Longenecker II	Date 4-17-82	
Procedure I.S.I. 2.5 R-0	Iso/Drawing No. ZONE 12 R-2 FC1	VCR Supervisor Daniel Jones	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr.	SONIC	Mfgr.	Size	Cal. Block
Model	MARK I	PANAMETRIC	1. " DIA.	UT-6
S/N	03704E	Freq.		Cal. Block
Reject	OFF	2.25 MHZ.		Range Cal. 4.268"
Damp.	MIN.	Serial No.		Calibration Checks
Freq.	2 MHZ.	48808		1:30 CAL. IN
Rep. Rate	1 K	Coax. Cable		4:45 CAL. OUT
Filter	H1	12'		
Video	NORM	Gain		
Couplant	SONOTRACE 40 B119	35 db		

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
12-003LA	DATUM	3.500	3.500	3.500	12-003LA	12'	3.329	3.372	3.415
12-003LA	1'	3.287	3.329	3.372	12-003LA	13'	3.287	3.372	3.372
12-003LA	2'	3.329	3.329	3.372	12-004LB	DATUM	3.585	3.500	3.415
12-003LA	3'	3.287	3.329	3.329	12-004LB	1'	3.329	3.372	3.329
12-003LA	4'	3.287	3.372	3.372	12-004LB	2'	3.287	3.329	3.329
12-003LA	5'	3.287	3.372	3.372	12-004LB	3'	3.287	3.329	3.372
12-003LA	6'	3.329	3.372	3.372	12-004LB	4'	3.287	3.329	3.329
12-003LA	7'	3.287	3.372	3.372	12-004LB	5'	3.329	3.329	3.329
12-003LA	8'	3.329	3.372	3.372	12-004LB	6'	3.372	3.329	3.329
12-003LA	9'	3.329	3.372	3.372	12-004LB	7'	3.287	3.329	3.287
12-003LA	10'	3.329	3.372	3.372	12-004LB	8'	3.287	3.329	3.329
12-003LA	11'	3.329	3.372	3.329	12-004LB	9'	*	3.287	3.287

Sketch/Identification * 3" BRANCH CONNECTION WELD NO. 12-005



Ultrasonic Examination Report *D. Payne ANIZI 4/26/82*

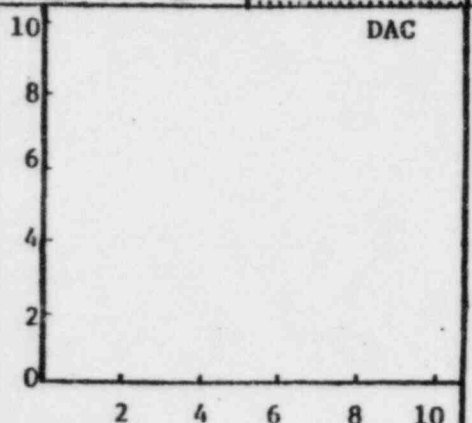
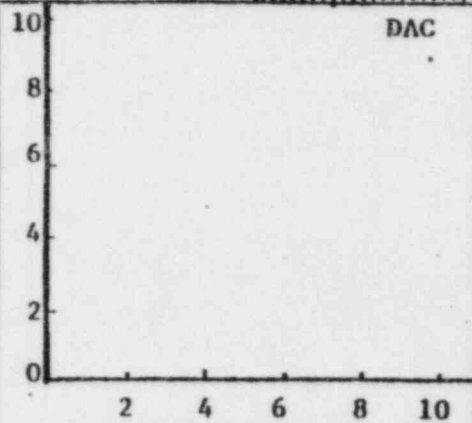
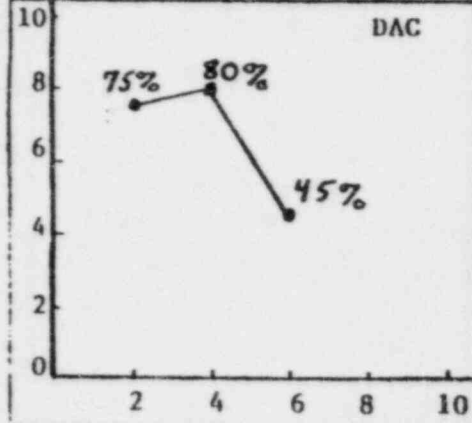
Customer LP+L		Plant WATERFORD	Unit 3	Loop/Zone 2 12	ISO/Drawing No. ZONE12 REV-2 FC-1
Procedure ISI 2.3 REV-0 K-1	Exam Surface O.D.	Examiner/Level <i>Nary Longenecker II</i>		VCR Supervisor <i>Daniel Jensen</i>	Date 4-17-82
Component/Piping System COLD LEG R.V. to R.C.P. 2A		Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

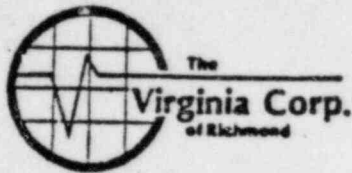
Field Changes:
 Yes No
 If Yes, Number **FC-1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	48808	NA	NA	Mfr.	SONIC	Model	MARK I
	1.0"			S/N	03704E	RepRate	1K
	2.25MHZ			Reject	OFF	Filter	HI
	0			Damp	MIN	Coax	12'
				Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	75%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	1:30	4:45	NA	NA	NA	NA
1/2 T	80%	4.0															
3/4 T	45%	6.0															
1 T		8.2															
Ref. dB	35 DB																



Additional Comments/Sketch



D. Payne ANZI 4/26/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP+L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2A 12</i>
Component/Piping System <i>COLD LEG RV. TO RCP 2A</i>	Examiner/Level <i>Nary Longmacker II</i>	Date <i>4-20-82</i>	
Procedure <i>ISI 2.5 REV-0</i>	Iso/Drawing No. <i>ZONE 12 REV-2 FC-1</i>	VOR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>KB AEROTECH</i>	Size <i>.5"</i>	Cal. Block <i>US-6</i>	
Model <i>MARK I</i>			Cal. Block	
S/N <i>01610E</i>	Freq. <i>2.25 MHZ</i>		Range Cal. <i>4.167"</i>	
Reject <i>OFF</i>			Calibration Checks	
Damp. <i>MIN</i>	Serial No. <i>J02172</i>		<i>8:10 IN</i>	
Freq. <i>2</i>	Coax. Cable <i>12'</i>		<i>9:30 OUT</i>	
Rep. Rate <i>1K</i>				
Filter <i>HI</i>				
Video <i>NORM</i>	Gain <i>25 DB</i>			
Couplant <i>SONOTRACE 40 S/N 8119</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>12-006</i>	<i>12</i>	<i>3.708</i>	<i>NA</i>	<i>3.292</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>12-006</i>	<i>2</i>	<i>3.625</i>		<i>3.250</i>					
<i>12-006</i>	<i>4</i>	<i>3.917</i>		<i>3.292</i>					
<i>12-006</i>	<i>6</i>	<i>3.958</i>		<i>3.292</i>					
<i>12-006</i>	<i>8</i>	<i>3.958</i>		<i>3.250</i>					
<i>12-006</i>	<i>10</i>	<i>3.917</i>		<i>3.417</i>					
<i>12-008</i>	<i>12</i>	<i>3.833</i>		<i>3.250</i>					
<i>12-008</i>	<i>2</i>	<i>3.875</i>		<i>3.292</i>					
<i>12-008</i>	<i>4</i>	<i>3.667</i>		<i>3.292</i>					
<i>12-008</i>	<i>6</i>	<i>3.708</i>		<i>3.333</i>					
<i>12-008</i>	<i>8</i>	<i>3.667</i>		<i>3.292</i>					
<i>12-008</i>	<i>10</i>	<i>3.750</i>		<i>3.292</i>					

Sketch/Identification



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report

D. Payne ANZI 4/26/82

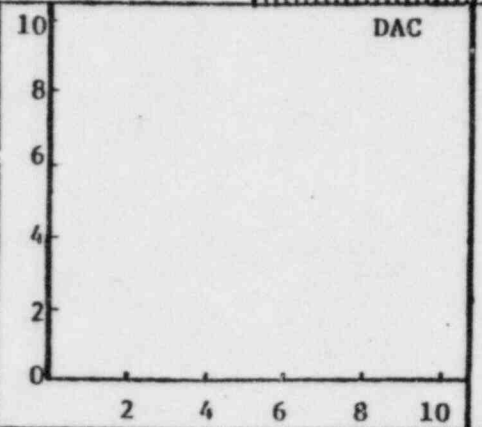
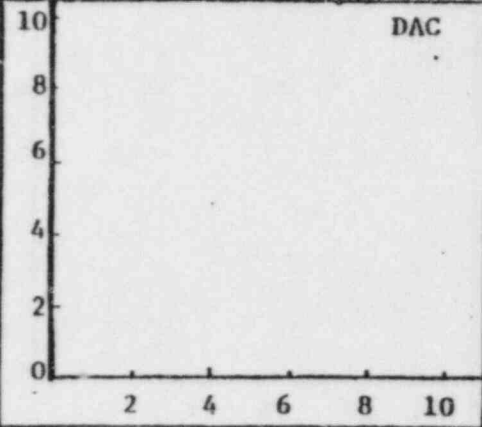
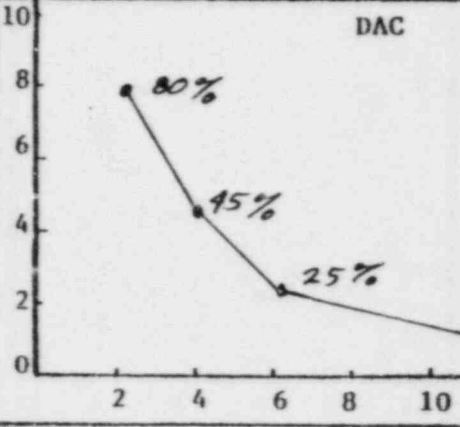
Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 2 12	Iso/Drawing No. ZONE 12 R-2 F.C.1
Procedure I.S.I. 2.3 R.O.F.C.1	Exam Surface O.D.	Examiner/Level <i>Navy Honorable</i> II	VER Supervisor <i>Daniel Jensen</i>	Date 4-20-82
Component/Piping System COLD LEG R.V. TO R.C.P. 2A	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. B119

Continuation Sheet Attached
 Yes No

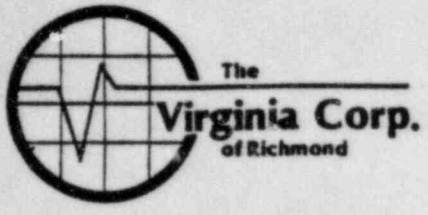
Field Changes:
 Yes No
 If Yes, Number **F.C.1**

Transducer	0°	45°	60°	Instrument			
	S/N J02172	NA	NA	Mfr. SONIC	Model MARK 1	RepRate 1K	
Size .5" DIA				S/N 01610E	Filter H1	Coax 12'	
Frequency 2.25 MHz				Reject OFF	Damp MIN.	Freq. 2 MHz	Video NORM
Beam Angle 0°							

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks								
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out	
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8:10	9:30	NA	NA	NA	NA
1/2 T	45%	4.0																	
3/4 T	25%	6.0																	
1 T	NA	8.9																	
Ref. dB	25 db																		



Additional Comments/Sketch



Date 4-20-81

Page 3 of 3

To: _____

Subject INSPECTION LIMITATIONS
ZONE 12 WELDS
12-006
12-008

WELD NO 12-006 0° SCAN HAD A PARTIAL DUE
TO NOZZLE RADIUS CAUSING LOSS
OF CONTACT
BASE METAL SCAN HAD PARTIAL
ON 2 SIDE DUE TO NOZZLE CONFIGUR-
ATION.

WELD NO. 12-008 0° SCAN HAD A PARTIAL DUE TO
NOZZLE RADIUS CAUSING LOSS OF
CONTACT, AND INCREASED METAL PATH
FROM 0° TO 60° AND 300° TO 360°.
BASE METAL SCAN HAD PARTIAL ON
2 SIDE DUE TO NOZZLE CONFIGURATION.

Signed Larry Longenecker



The
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Ultrasonic Examination Report *D. Payne ANE 4/26/82*

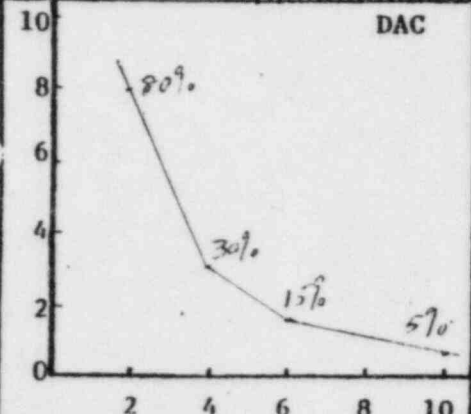
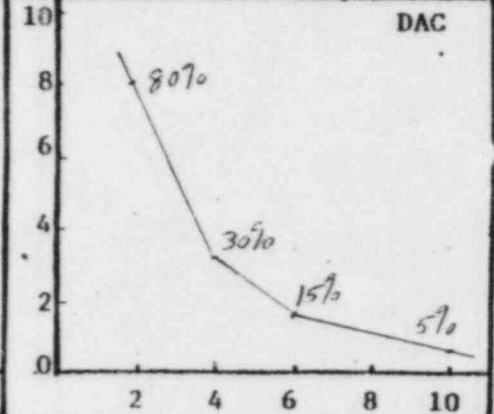
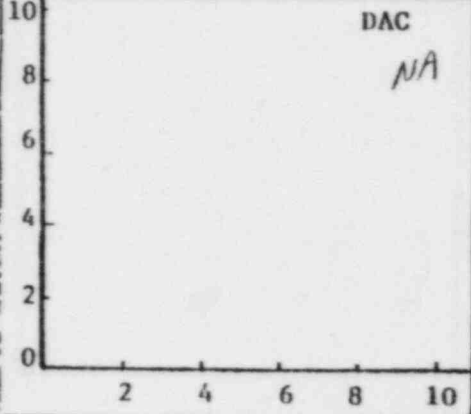
Customer <i>LP AND L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2A/12</i>	Iso/Drawing No. <i>ZONE 12, REV 2, F.C. 1</i>
Procedure <i>ISI 2.3, REV 0, F.C. 1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>CR [Signature]</i>	VCR Supervisor <i>[Signature]</i>	Date <i>4-19-82</i>
Component/Piping System <i>COLD LEG REACTOR VESSEL TO RCP 2A</i>	Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-6</i>	Couplant: <i>SONOTRACE</i> Type <i>40</i> Batch No <i>8119</i>

Continuation Sheet Attached
 Yes No

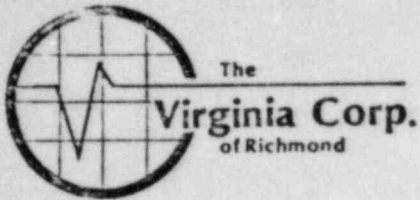
Field Changes:
 Yes No
 If Yes, Number *1*

Transducer	<i>0°</i>	<i>45°</i>	<i>60°</i>	Instrument			
S/N	<i>NA</i>	<i>NA</i>	<i>F18164</i>	Mfr.	<i>SONIC</i>	Model	<i>ETS MARK I</i>
Size			<i>.50"</i>	S/N	<i>05304E</i>	RepRate	<i>200</i>
Frequency			<i>2.25 MHz</i>	Reject	<i>OFF</i>	Filter	<i>HI</i>
Beam Angle	<i>Y</i>	<i>Y</i>	<i>60°</i>	Damp	<i>MIN</i>	Coax	<i>6</i>
				Freq.	<i>2</i>	Video	<i>NORM</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80</i>	<i>1.6</i>	<i>1 1/2</i>	<i>1 9/32 1 3/8</i>	<i>80</i>	<i>1.6</i>	<i>1 1/2</i>	<i>1 9/32 1 3/8</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1412</i>	<i>1605</i>
<i>1/2 T</i>			<i>30</i>	<i>3.9</i>	<i>3 1/32</i>	<i>2 3/4 3 1/16</i>	<i>30</i>	<i>3.9</i>	<i>3 1/32</i>	<i>2 3/4 3 1/16</i>						
<i>3/4 T</i>			<i>15</i>	<i>6.0</i>	<i>4 5/8</i>	<i>4 3/32 5 1/16</i>	<i>15</i>	<i>6.0</i>	<i>4 5/8</i>	<i>4 3/32 5 1/16</i>						
<i>5/4 T</i>			<i>5</i>	<i>10.0</i>			<i>5</i>	<i>10.0</i>								
Ref. dB	<i>Y</i>	<i>Y</i>	<i>49</i>				<i>49</i>									



Additional Comments/Sketch



Date 4-19-82

Page 3 of 6

To: _____

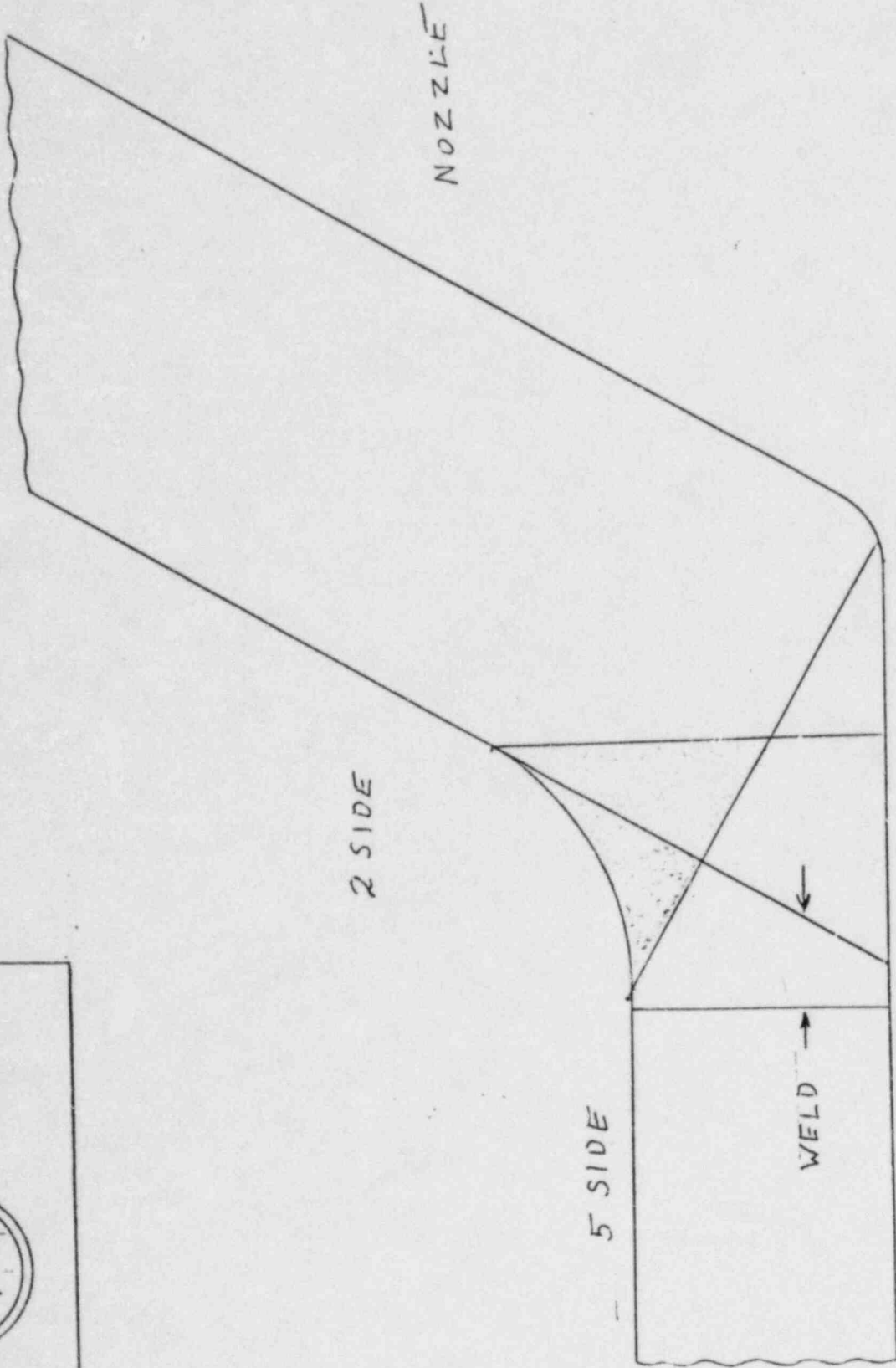
Subject ZONE 12, LOOP 2A,
WELDS 12-006 AND
12-008 ATTACHMENT
HEET.

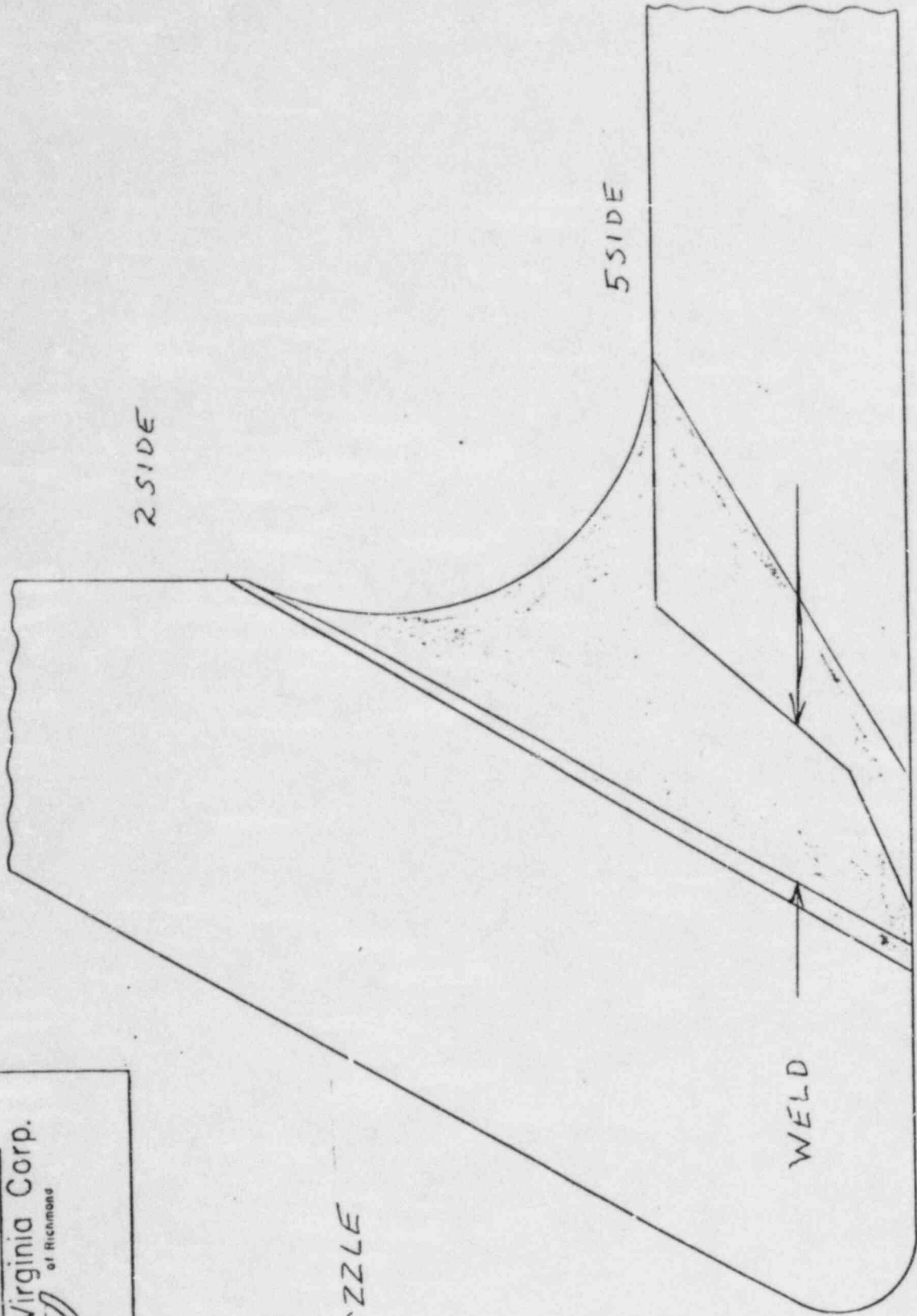
WELDS 12-006 AND 12-008 ARE NOZZLE BRANCH CONNECTION WELDMENTS WITH A CURVED RADIUS WELD AREA WHICH CAUSES VARYING DEGREES OF LOSS OF SOUND COVERAGE.

THIS IS GRAPHICALLY DEPICTED ON THE FOLLOWING PAGES WITH THE AREA NOT COVERED HIGHLIGHTED OR SHADED.

- PAGE 4 WELD 12-008 GREATER ANGLE
- PAGE 5 WELD 12-008 LESSER ANGLE
- PAGE 6 WELD 12-006 TYPICAL

Signed CR [Signature]





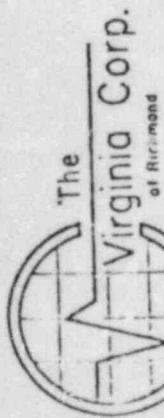
2 SIDE

5 SIDE

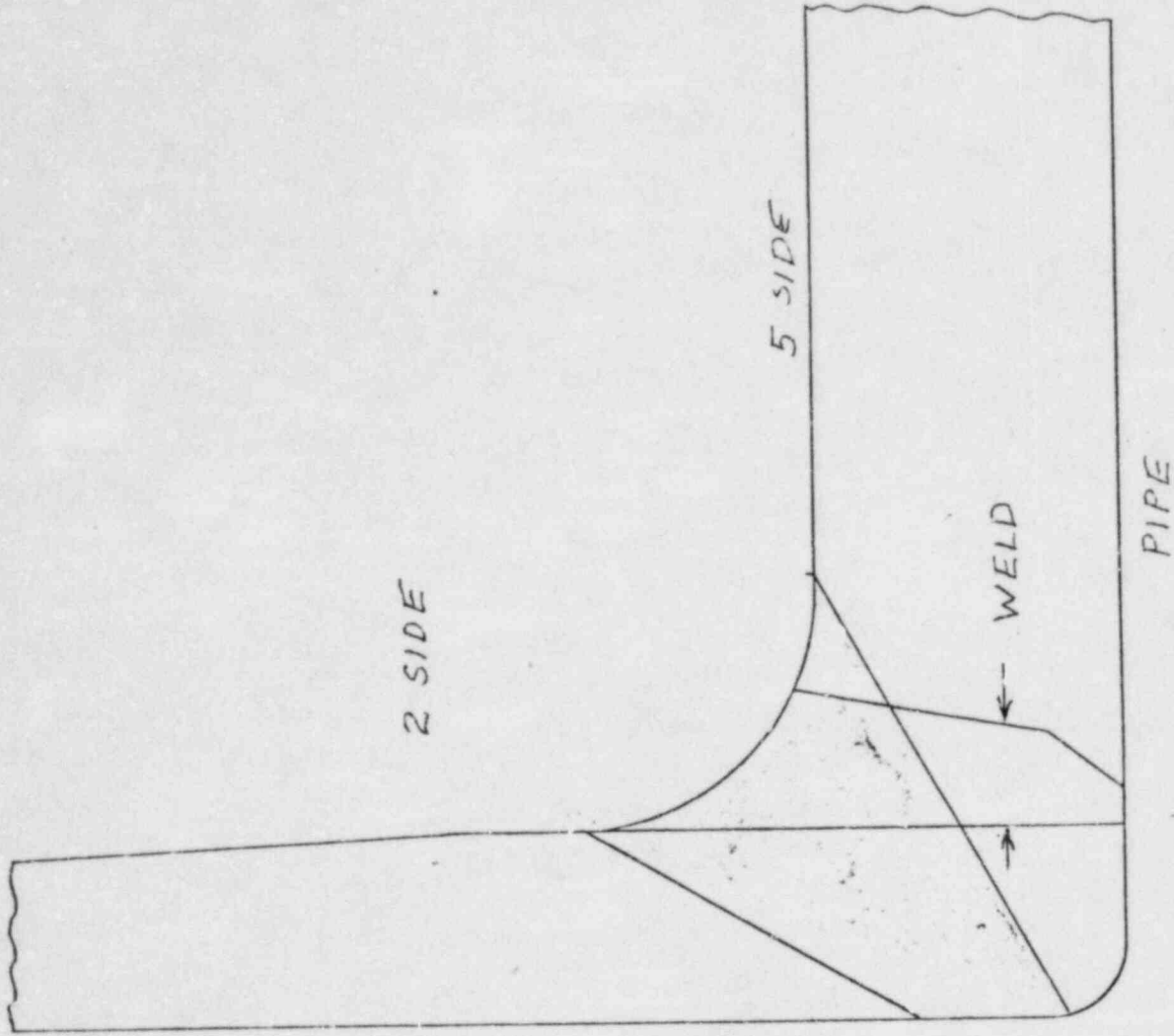
WELD

PIPE

NOZZLE

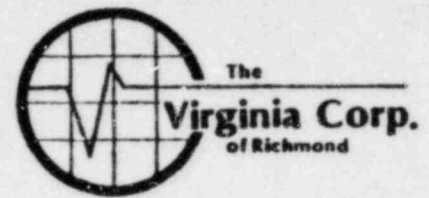


NOZZLE



M.R. Martin, ANII 12-3-82

Ultrasonic Examination Report



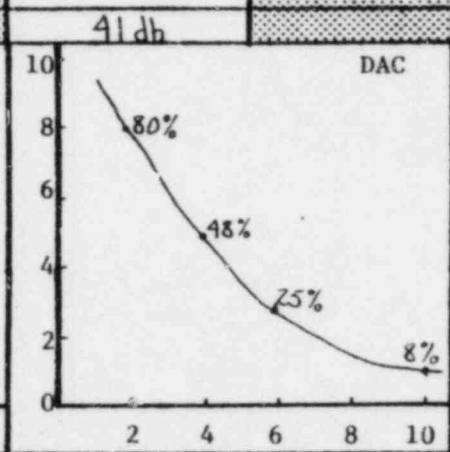
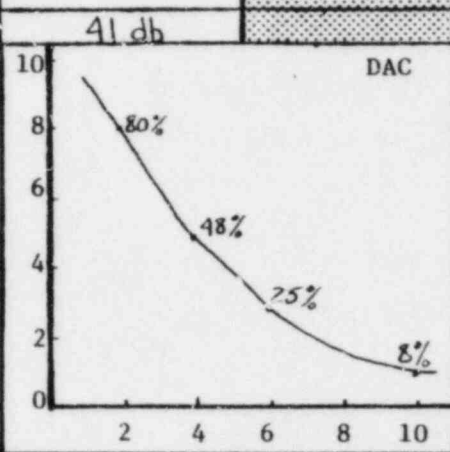
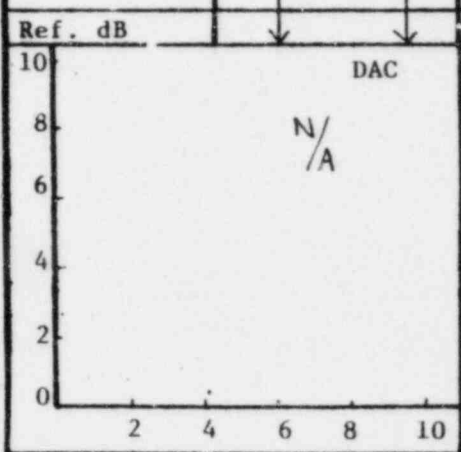
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 2A 12	Iso/Drawing No. ZONE 12 REV. 2 F.C. 1
Procedure F.C. 1	Exam Surface O.D.	Examiner/Level BURLINGAME/IT	CR Supervisor Kevin White	Date 4-26-82
Component/Piping System REACTOR COOLANT		Pipe Size 36"	Weld Type BUTT	Cal. Block # UT-6/35"
		Couplant: SONOTRACE Type 40 Batch No 8119		

Continuation Sheet Attached
 Yes No

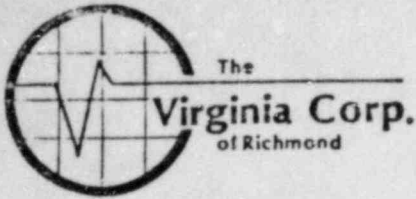
Field Changes:
 Yes No
 If Yes, Number **F.C. 1**

Transducer	0°	45°	60°	Instrument			
	S/N N/A	D22063	N/A	Mfer. SONIC	Model 05304E	RepRate 1000	FIS MARK I
	Size 1/2"	2.25 MHz		S/N OFF	Filter OFF	Coax 6'	
	Frequency 44°			Reject MIN	Coax 6'		
Beam Angle	↓	↓	↓	Freq. 2 MHz	Video NORM		

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	N/A	N/A	80%	2	7/8"	3/4" 1.0	80%	2	7/8"	3/4" 1.0	N/A	N/A	0830	0945	N/A	N/A
1/2T			48%	4	1 13/16	1 5/8 1 3/2	48%	4	1 13/16	1 5/8 1 3/2						
3/4T			25%	6	2 19/32	2 7/32 2 3/2	25%	6	2 19/32	2 7/32 2 3/2						
5/4T			8%	10			8%	10								



Additional Comments/Sketch



Date 11-26-63

Page 3 of 3

To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 12, REV. 2, FC 1

WELD NO'S 12-006 AND 12-008

THE WELDS FORM THE RADIUS BETWEEN THE
NOZZLE AND THE REACTOR COOLANT PIPE. THE
ROOT AREA CAN BE SCANNED DURING SCAN 5 BUT
CONTACT IS LOST BEFORE THE BEAM CAN PASS
COMPLETELY THROUGH THE WELD. CONTACT FOR
SCAN 7 3/4 CAN ONLY BE MAINTAINED ON THE
SIDE 5 SIDE OF THE WELD. PARTIAL COVERAGE OF
THE HAZ AND ROOT AREA WAS OBTAINED BY
DIRECTING THE BEAM AT A TANGENT TO THE WELDS
SCAN 2 WAS NOT PERFORMED BECAUSE THE BEAM IS
DIRECTED AWAY FROM THE WELD AND N.A.Z.

Signed _____



The Virginia Corp.
OF RICHMOND

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No

IF Yes, Number **FC-1**

Customer: **LPPL**
 Procedure: **WATERFORD**
 Exam Surface: **EXAMINER/LEVEL**
 Component/Piping System: **BUZZING SA ME**
151 23 REV. 0 FC-1
REACTOR COOLANT

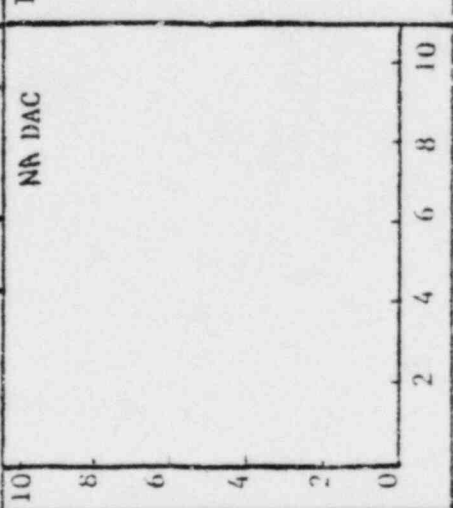
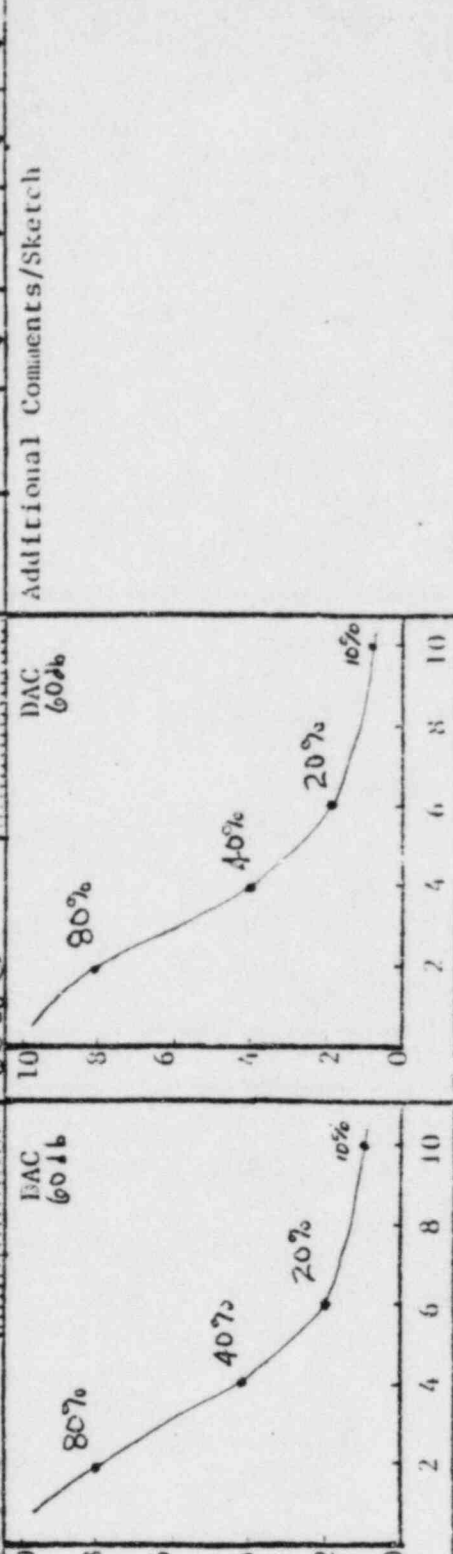
Plant: **WATERFORD**
 Unit: **3**
 Exam Surface: **EXAMINER/LEVEL**
 Component/Piping System: **BUZZING SA ME**
151 23 REV. 0 FC-1
REACTOR COOLANT

Transducer: **30°**
 S/N: **22935**
 Size: **1/2"**
 Frequency: **2.25 MHz**
 Beam Angle: **30°**

Material: **STEEL**
 S/N: **1000**
 Reject: **OFF**
 Dump: **MIN**
 Freq.: **2 MHz**

Calibration	Ref. dB	0°		2 & 5 Scan		7 & 8 Scan		Sound Entry Point To:	Additional Comments/Sketch
		Signal Amp.	Sweep	Signal Amp.	Sweep	Signal Amp.	Sweep		
1/4T	NA	NA	NA	80%	2.0	80%	2.0	1 3/32	NA
1/2T	NA	NA	NA	40%	4.0	40%	4.0	1 1/16	NA
3/4T	NA	NA	NA	20%	6.0	20%	6.0	1 1/16	NA
1T	NA	NA	NA	80%	8.6	80%	9.0	1 1/16	NA
5/4T	NA	NA	NA	10%	10	10%	10	1 1/16	NA

Calibration	Ref. dB	0°		2 & 5 Scan		7 & 8 Scan		Sound Entry Point To:	Additional Comments/Sketch
		Signal Amp.	Sweep	Signal Amp.	Sweep	Signal Amp.	Sweep		
NA	NA	NA	NA	80%	2.0	80%	2.0	1 3/32	NA
NA	NA	NA	NA	40%	4.0	40%	4.0	1 1/16	NA
NA	NA	NA	NA	20%	6.0	20%	6.0	1 1/16	NA
NA	NA	NA	NA	80%	8.6	80%	9.0	1 1/16	NA
NA	NA	NA	NA	10%	10	10%	10	1 1/16	NA



Loop/Zone: **ISO/Drawing No.**
2A-12
 Zone: **REV. 2**
 FC-1

Inspector: **Donald Jensen**
 Date: **5-4-82**

Cal. Block #: **40**
 Type: **40**
 Batch #: **819**

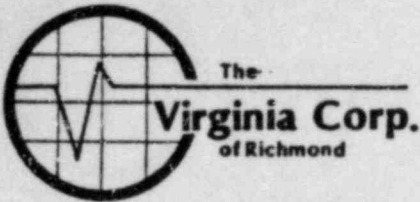
Refractometer: **FTS Mark I**
 Rep. Rate: **1000**
 Filter: **H.**
 Coax: **12'**
 Video: **Norm**

30° Calibration Chart:

In	Out	In	Out
12.45	16.40	NA	NA

45° Calibration Chart:

In	Out	In	Out
NA	NA	NA	NA



Date 5-4-82

Page _____ of _____

To: _____

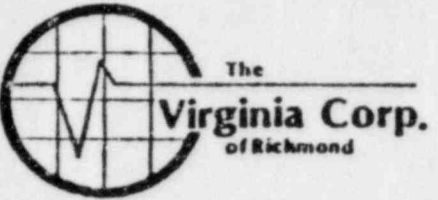
Subject EXAMINATION
LIMITATIONS
ZONE 12, REV. 2, FC-1

12-001 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 5 WAS OBSTRUCTED FOR APPROX. 39" AT THE BASE OF THE NOZZLE BY A SUPPORT LUG, AND FOR 360° BY THE OD SLOPE OF THE NOZZLE. TAKING IN ACCOUNT BEAM SPREAD THE ROOT AREA OF THE WELD WAS COVERED. SCANS 7+8 WERE LIMITED ON THE 5 SCAN SIDE OF THE WELD BY THE SUPPORT LUG AND OD SLOPE OF THE NOZZLE. ON THE 2 SCAN SIDE OF THE WELD THE 7+8 SCANS WERE LIMITED BY THE OD MISMATCH BETWEEN THE NOZZLE EXTENSION AND ELBOW. ROOT AREA COVERAGE WAS GOOD WITH THE 7+8 SCANS.

12-002 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 7+8 WERE RESTRICTED AT THE WELD BY MISMATCH ACCOUNTING FOR BEAM SPREAD, GOOD ROOT AREA COVERAGE WAS OBTAINED.

12-006 + 12-008 THESE WELDS FORM BRANCH CONNECTIONS, THE WELD CROWN FORMS THE RADIUS BETWEEN THE R.C. PIPE AND BRANCH NOZZLE. SCAN 2 WAS NOT PERFORMED BECAUSE THE ULTRASONIC BEAM IS DIRECTED AWAY FROM THE WELD ROOT. SCANS 7+8 WERE LIMITED BY THE RADIUS OF THE WELD CROWN.

Signed _____



Ultrasonic Examination Report

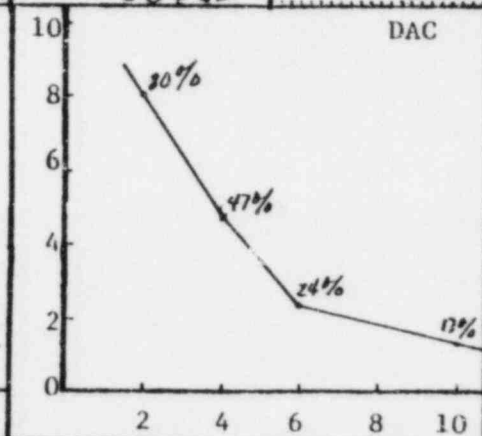
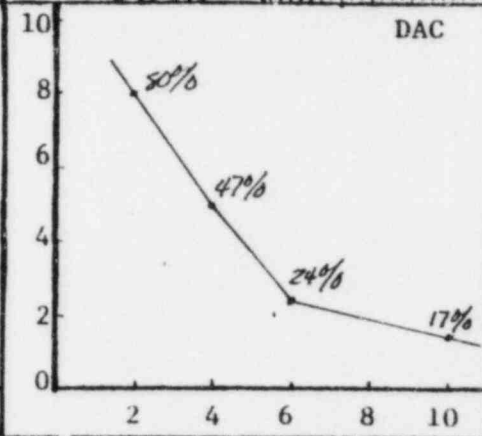
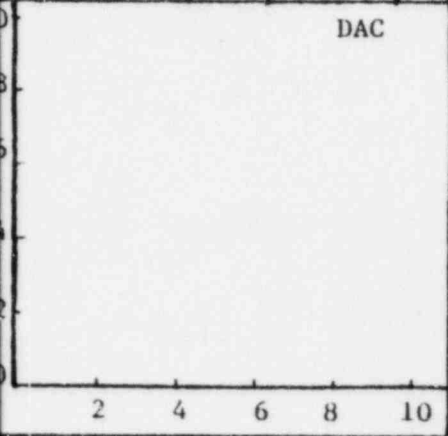
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 2A/12	Iso/Drawing No. ZONE 12, REV. 2, FC-1
Procedure ISI 2.3 REV. 0, FC-1	Exam Surface O.D.	Examiner/Level Nancy Longenecker II	VGR Supervisor Daniel Dema	Date 5-8-82
Component/Piping System COLD LEG - RV TO R.C.P. 2A	Pipe Size 36" #8	Weld Type BUTT	Cal. Block # UT-6 350"	Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 IF Yes, Number **FC-1**

Transducer	30°	45°	60°	Instrument			
	S/N J22935	N/A	N/A	Mfer. SONIC	Model FTS MARK I	RepRate 1K	Filter OFF
Size	1/2"			S/N 01610E	Reject OFF	Coax 12'	Video NORMAL
Frequency	2.25MHz			Damp MIN.	Freq. 2MHz		
Beam Angle	30°						

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4T	N/A	N/A	80%	7.0	15/32	3/8	1 1/32	80%	7.0	15/32	3/8	1 1/32	8:45	12:05	N/A	N/A	N/A	N/A		
1/2T			47%	4.0	1 1/16	7/8	1 1/4	47%	4.0	1 1/16	7/8	1 1/4								
3/4T			24%	6.0	1 7/16	1 5/16	1 13/16	24%	6.0	1 7/16	1 5/16	1 13/16								
5/4T			17%	10.0				17%	10.0											
Ref. dB			58dB						58dB											



Additional Comments/Sketch



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *D. Payne ANII 5/26/82*

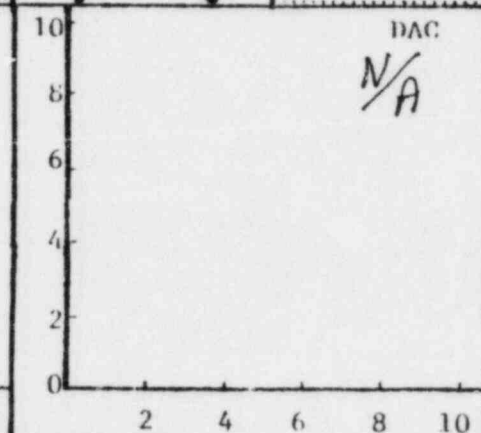
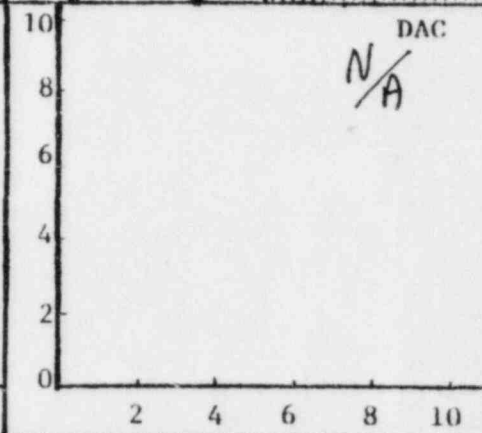
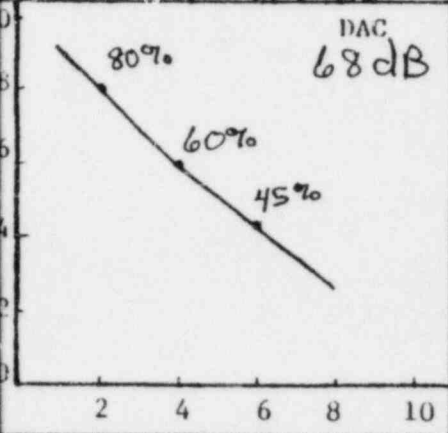
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 2A/12	Iso/Drawing No. Zone 12, Rev. 2 F.C. 1
Procedure Rev 0 ISE 2.3 F.C. 1	Exam Surface ID	Examiner/Level R. DeWitt	VCR Supervisor Daniel Jones	Date 5-8-82
Component/Piping System Cold leg - R.V. to R.C.P. 2A	Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6	Couplant: Sonotrace Type 40 Batch No. 8/19

Continuation Sheet Attached
Yes No

Transducer	Instrument		
	S/N	Model	RepRate
0°	48807	Sonic	FTS Mark I
45°	NA		1K
60°	NA		High
Size	1"	S/N * 788036	Filter
Frequency	2.25MHz	Reject	Coax
Beam Angle	0°	Damp	12'
		Freq.	Video
			Norm

Field Changes:
Yes No
If Yes, Number **1**

Calibration 0°			2 & 5 Scan			7 & 8 Scan			Calibration Checks									
Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1350	1545	NA	NA	NA	NA
1/2 T	60%	4.0																
3/4 T	45%	6.0																
1 T	>100%	8.0																
Ref. dB	68 dB																	



Additional Comments/Sketch
* 780836 DLJ



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Ultrasonic Examination Report *D. Payne ANET 5/20/82*

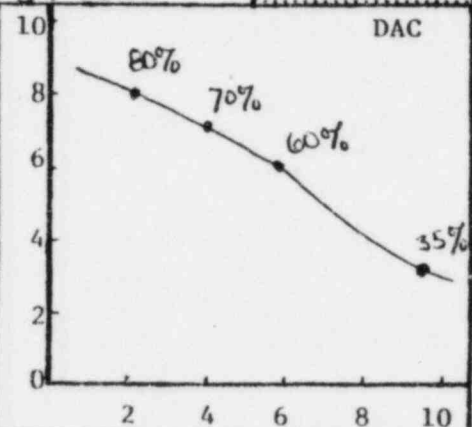
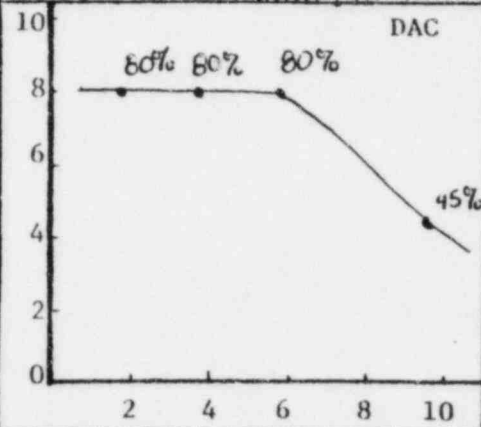
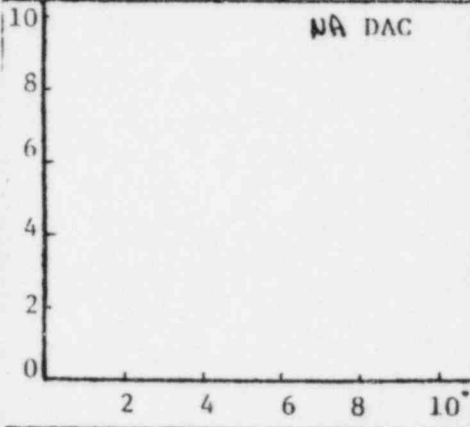
Customer <i>LPCL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2A/12</i>	Iso/Drawing No. <i>Zone 12, Rev. 1, FC. 1</i>
Procedure <i>ISI-2.3, Rev. 0, FC. 1</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>R. R. Williams II</i>	VGR Supervisor <i>Manuel Denis</i>	Date <i>5-15-82</i>
Component/Piping System <i>Reactor Coolant</i>	Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT 6, 3.50"</i>	Couplant: <i>Scotchtrace</i> Type <i>40</i> Batch No. <i>8119</i>

Continuation Sheet Attached
 Yes No

Field Changes: *NA*
Yes No
If Yes, Number *2*
F.C. 1

Transducer	0°	45°	60°	Instrument			
	S/N <i>NA</i>	<i>L19134</i>	<i>NA</i>	Mfer.	Sonic	Model	PTS Mark 1
Size	<i>1.0"</i>			S/N	<i>05304E</i>	RepRate	<i>1000</i>
Frequency	<i>2.25MHz</i>			Reject	<i>OFF</i>	Filter	<i>Hi</i>
Beam Angle	<i>∇</i>	<i>45°</i>	<i>∇</i>	Damp	<i>Hi</i>	Coax	<i>12'</i>
				Freq.	<i>2MHz</i>	Video	<i>Norm</i>

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
<i>1/4T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>	<i>5/8</i>	<i>7/16</i>	<i>7/8</i>	<i>80%</i>	<i>2.0</i>	<i>5/8</i>	<i>7/16</i>	<i>7/8</i>	<i>NA</i>	<i>NA</i>	<i>1115</i>	<i>1445</i>	<i>NA</i>	<i>NA</i>		
<i>1/2T</i>			<i>80%</i>	<i>4.0</i>	<i>1 5/8</i>	<i>1 3/8</i>	<i>1 1/2</i>	<i>70%</i>	<i>4.0</i>	<i>1 3/8</i>	<i>1 1/8</i>	<i>1 3/4</i>								
<i>3/4T</i>			<i>80%</i>	<i>6.0</i>	<i>2 1/32</i>	<i>2 3/8</i>	<i>2 3/4</i>	<i>60%</i>	<i>6.0</i>	<i>2 1/32</i>	<i>2 3/8</i>	<i>2 3/4</i>								
<i>5/4T</i>			<i>45%</i>	<i>9.7</i>				<i>35%</i>	<i>9.7</i>											
Ref. dB	<i>∇</i>	<i>∇</i>	<i>58 dB G</i>					<i>59 dB G</i>					<i>∇</i>	<i>∇</i>	<i>∇</i>	<i>∇</i>	<i>∇</i>	<i>∇</i>		



Additional Comments/Sketch



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Ultrasonic Examination Report *D. Payne ANET 5/26/82*

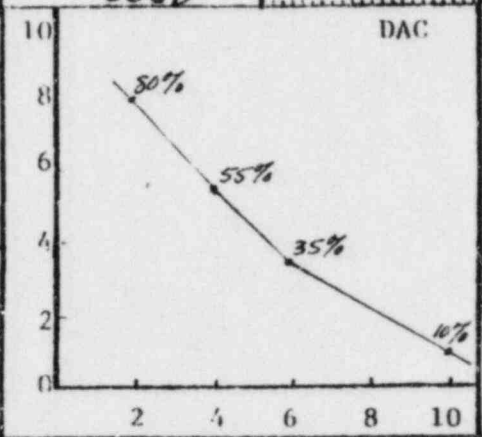
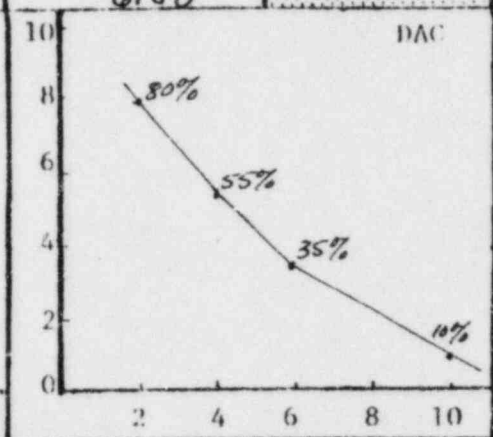
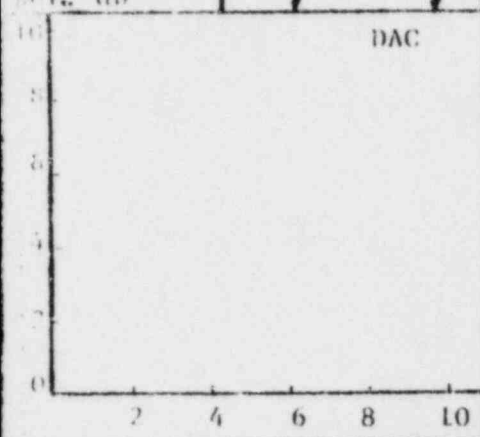
Customer CP&L	Plant WATERFORD	Unit 3	Loop/Zone ZA/12	Iso/Drawing No. ZONE 12, REV. #2, F.C.-1
Procedure <i>WKM 809 2</i> ISI 2.3, REV. #0, F.C.1	Exam Surface I.D.	Examiner/Level <i>AD... J</i>	VGR Supervisor <i>Daniel J...</i>	Date 5-15-82
Component/Piping System COLD LEG - REACTOR COOLANT	Pipe Size 36"	Weld Type BUTT	Cal. Block # UT6 3.50"	Couplant: SONOTRACE Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
Yes, Number **F.C.-12**

Transducer	Instrument		
	Mfg.	Model	FTS-MARK I
S/N	SONIC		
Size	03704E	RepRate	1K
Frequency	2.25MHz	Filter	OFF
Beam Angle	61°	Coax	12'
		Video	NORMAL

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4T	N/A	N/A	80%	2.0	13/16	5/16	2"	80%	2.0	13/16	5/16	2"	N/A	N/A	N/A	N/A	11:15	2:45		
1/2T			55%	4.0	3 1/2	3 3/32	3 5/16	55%	4.0	3 1/2	3 3/32	3 5/16								
3/4T			35%	6.0	5 9/32	4 5/8	5 3/4	35%	6.0	5 9/32	4 5/8	5 3/4								
5/4T			10%	10.0				10%	10.0											



Additional Comments/Sketch



D. Payne ANIE 6/12/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP3L	Plant WATERFORD	Unit 3	Loop/Zone 2/12
Component/Piping System REACTOR COOLANT	Examiner/Level BURLINGAME II B	Date 5-25-82	
Procedure ISI-R.S., REV. D	Iso/Drawing No. ZONE 12, REV. 2	VCR Supervisor Daniel Payne	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

FC-1 Equipment

Instrument		Transducer		Calibration
Mfgr. <i>ISONIC</i>	Mfgr. <i>AEROTECH</i>	Size <i>1.0"</i>	Cal. Block <i>UT-15</i>	
Model <i>FTS-MK1</i>	Freq. <i>1.0 MHz.</i>	Cal. Block		
S/N <i>7A0836</i>	Serial No. <i>L 19814</i>	Range Cal. <i>3/4" = F.D.D.</i>		
Reject <i>OFF</i>	Coax. Cable <i>12'</i>	Calibration Checks		
Damp. <i>MIN</i>	Gain <i>68 db</i>	<i>0750</i>		
Freq. <i>1.0 MHz.</i>		<i>1135</i>		
Rep. Rate <i>1000</i>				
Filter <i>OFF</i>				
Video <i>NORMAL</i>				
Couplant <i>SONOTRACE 40 #819</i>				

AK# 8124

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>12-013</i>	<i>12</i>	<i>3.59</i>	<i>NA*</i>	<i>4.06</i>	<i>12-012</i>	<i>12</i>	<i>3.12</i>	<i>3.20</i>	<i>NA*</i>
	<i>2</i>	<i>3.43</i>		<i>4.06</i>		<i>2</i>	<i>3.20</i>	<i>3.25</i>	
	<i>4</i>	<i>3.51</i>		<i>4.06</i>		<i>4</i>	<i>3.12</i>	<i>3.20</i>	
	<i>6</i>	<i>3.57</i>		<i>4.06</i>		<i>6</i>	<i>3.12</i>	<i>3.20</i>	
	<i>8</i>	<i>3.57</i>		<i>4.06</i>		<i>8</i>	<i>3.20</i>	<i>3.25</i>	
	<i>10</i>	<i>3.59</i>	<i>V</i>	<i>4.06</i>		<i>10</i>	<i>3.20</i>	<i>3.20</i>	<i>V</i>

Sketch/Identification

D. Payne ANZI 6/2/82



Ultrasonic Examination Report

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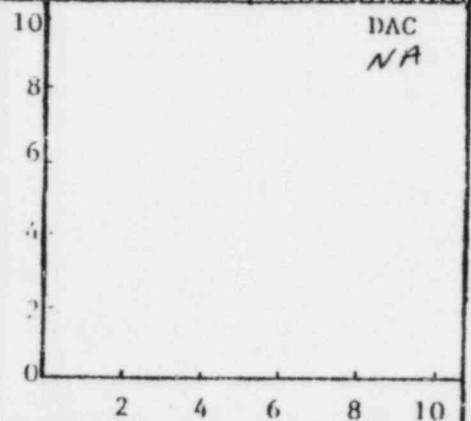
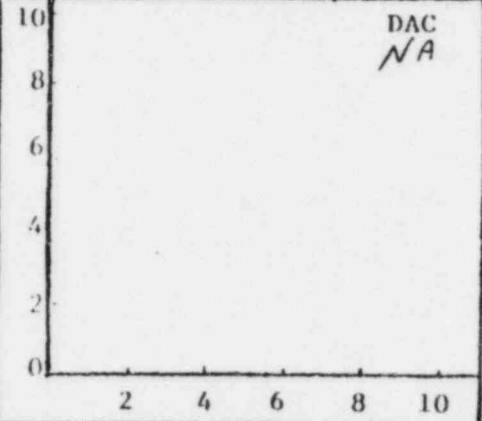
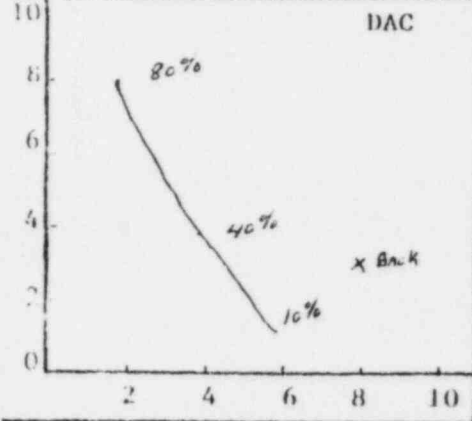
Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>#3</i>	Loop/Zone <i>2/12</i>	Isd/Drawing No. <i>Zone 12, Rev. 2 FC.1</i>
Procedure <i>ISI-2.8 Rev. 10/81</i>	Exam Surface <i>OD</i>	Examiner/Level <i>BURLINGAME II</i>	NCR Supervisor <i>Daniel Dena</i>	Date <i>5-25-82</i>
Component/Piping System <i>Reactor Coolant</i>		Pipe Size <i>30" 3/8</i>	Weld Type <i>BUTT</i>	Cal. Block # <i>UT-15 3/8</i>
		Couplant: Type <i>Sonolux</i> Batch No. <i>8124</i>		

Continuation Sheet Attached
 Yes No

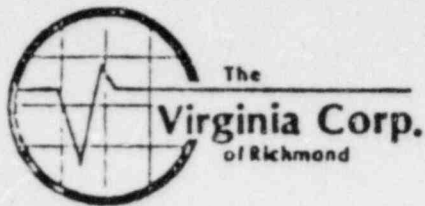
Field Changes:
 Yes No
 IF Yes, Number *FC.1*

Transducer	0°	45°	60°	Instrument			
	S/N <i>L19814</i>	<i>NA</i>	<i>NA</i>	Mfr. <i>Sonic</i>	Model <i>Mark I</i>	RepRate <i>1K</i>	
	Size <i>1"</i>			S/N <i>780836</i>	Filter <i>off</i>	Coax <i>6'</i>	
	Frequency <i>1MA2</i>			Reject <i>off</i>	Damp <i>Mid</i>	Video <i>Norm</i>	
Beam Angle	<i>0°</i>	<i>I</i>	<i>I</i>	Freq. <i>1MHz</i>			

Calibration 0"			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>80%</i>	<i>1.8</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>		<i>NA</i>	<i>NA</i>	<i>NA</i>		<i>1250</i>	<i>1635</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>40%</i>	<i>3.8</i>														
<i>3/4 T</i>	<i>10%</i>	<i>5.8</i>														
<i>Back</i>	<i>35%</i>	<i>8.0</i>														
Ref. dB	<i>68dB</i>		<i>NA</i>				<i>NA</i>									



Additional Comments/Sketch
NA INDICATES NO BEAD
DUE TO A OD GEOMETRIC
CONDITION.
 * SEE NCR # 024 OF ERRATA



Ultrasonic Examination Report

D. GAYNE ANET 12/82

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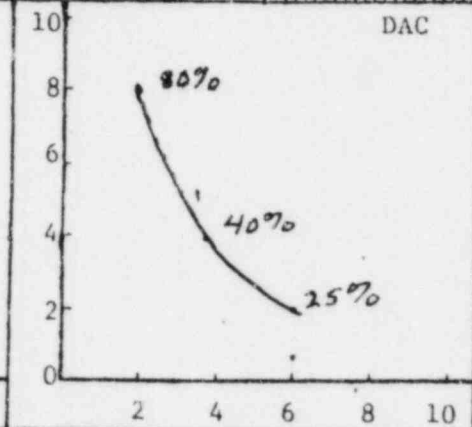
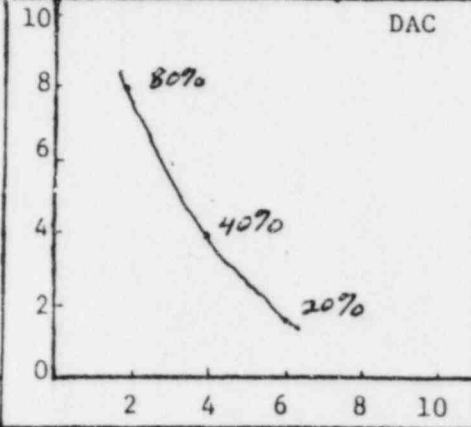
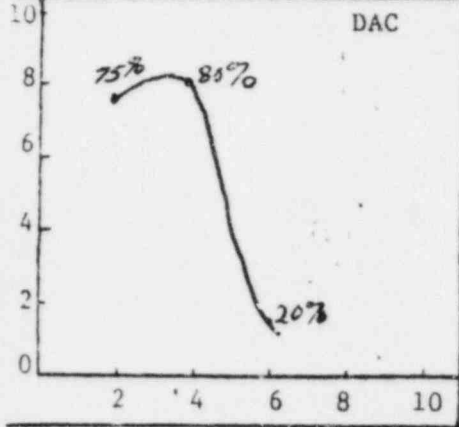
Customer LP-4	Plant WATERFORD	Unit 3	Loop/Zone 2/12	Iso/Drawing No. Zone 12 Rev. 2 FC-1
Procedure 1-B 151-2.8 Rev. VFC-1	Exam Surface OD	Examiner/Level BURLINGAME JT	VCR Supervisor Daniel Gene	Date 5-25-82
Component/Piping System Reactor Coolant	Pipe Size 30" ID	Weld Type Butt	Cal. Block UT-15 3 1/8"	Couplant: Scotchtrace Type 40 Batch No 8124

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **FC-1**

Transducer	275 (C.S.)	275 (SS)	738	Instrument			
S/N	T8468	T8468	V3035	Mfer.	Sonic	Model	ETS-MK1
Size	1.0"	1.0"	1.0"	S/N	01610E	RepRate	1000
Frequency	1MHz	1MHz	1MHz	Reject	3	Filter	OFF
Beam Angle	45°L	45°L	45°L	Damp	4.5	Coax	6'
				Freq.	1MHz/WB	Video	NORM

275 SCAN (C.S.)			2 & 5 Scan (SS)			7 & 8 Scan			Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	75%	2	80%	2	NA	NA	80%	2	NA	NA	NA	NA	0800	1045	NA	NA
1/2 T	80%	4	40%	4			40%	4					1245	1630		
3/4 T	20%	6	20%	6			25%	6								
Ref. dB	52 DB		55 DB				56 DB									



Additional Comments/Sketch

- * The Shape of the DAC Curve is due to the ratio of Carbon Steel metal path to the stainless steel metal path (or Inconel).
- Scanning sensitivity was 16db. above the reference Sens.
- Separate transducers were used for axial and Circ. Scans



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Date _____

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To: _____

Subject EXAMINATION
LIMITATIONS

ZONE 12, REL 3, FC-1

12-C13 ALL SCANS WERE RESTRICTED BY O.D. MISMATCH
BY PUMP TO SAFE END WELD AND SAFE END TO
PIPE WELD.
GOOD ROOT AREA COVERAGE WAS OBTAINED WITH
SCAN 5. MARGINAL ROOT AREA COVERAGE WAS
OBTAINED WITH SCAN 2. SCANS 7 & 8 WERE
LIMITED BY ABOUT 20% FOR THE COVERAGE AREA.

12-C12 (D.M. WELD) ALL SCANS WERE RESTRICTED BY O.D.
MISMATCH BY THE PIPE TO SAFE END WELD AND
THE SAFE END TO PUMP WELD.
GOOD ROOT AREA COVERAGE WAS OBTAINED WITH
SCAN 2. MARGINAL ROOT AREA COVERAGE WAS
OBTAINED WITH SCAN 5. SCANS 7 & 8 WERE LIMITED
BY ABOUT 30% FOR THE COVERAGE AREA.

Signed _____



TYR PUMP TO SAFE END TO PIPE
CONFIGURATION

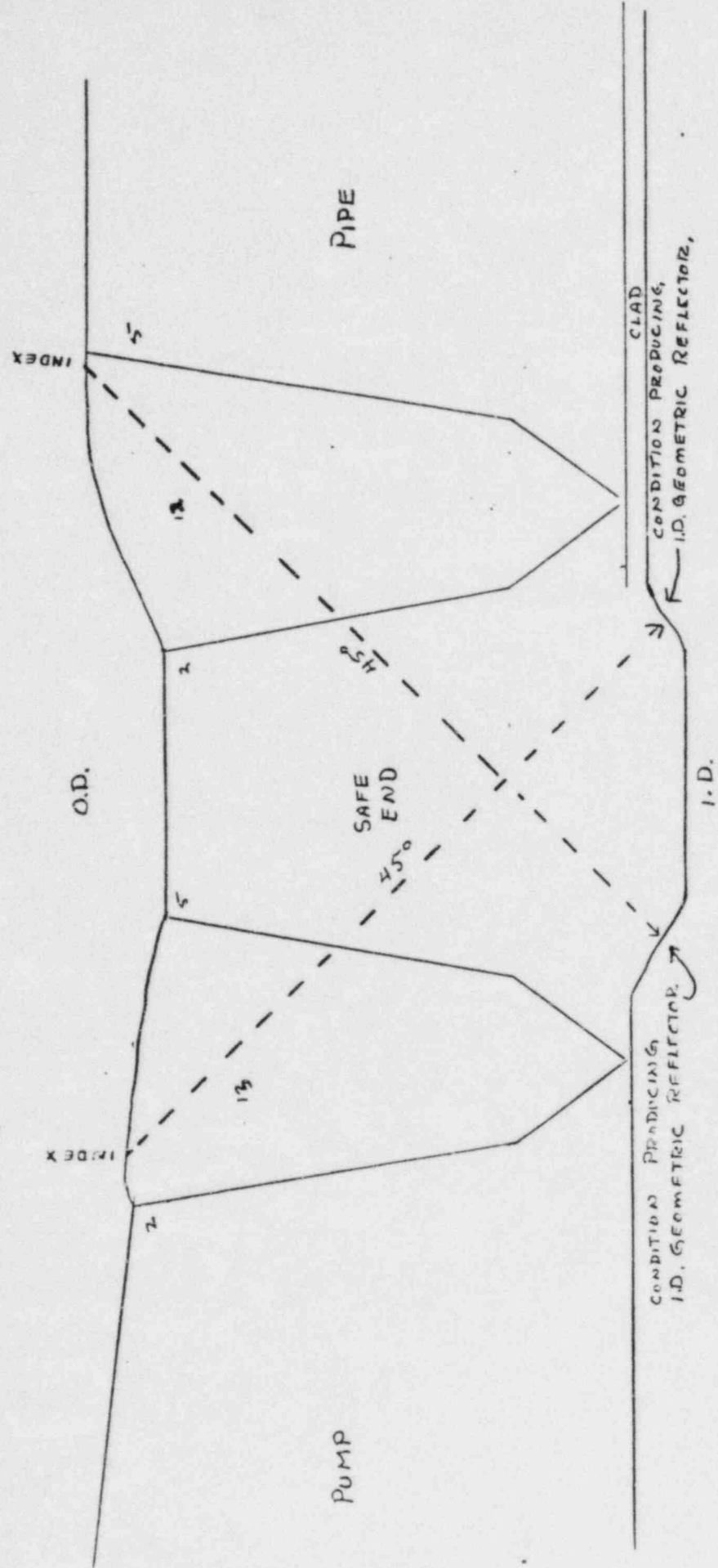


FIG-1

5-28-82



D. Payne ANII 7/19/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer L P + L	Plant WATERFORD	Unit 3	Loop/Zone 2A / 12
Component/Piping System Cold Lig-Reactor Vessel To RCP2A	Examiner/Lev. 1 Michael W. Blair II	Date JULY 10, 1982	
Procedure ISI 2.5 REV 0	Iso/Drawing No. 2 12 REV 2 EX	VCR Supervisor Nancy Jensen	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. SONIC	Mfgr. PANAMETRICS	Size .5"	Cal. Block UT-1A	
Model MARK I	Freq. 2.25 MHz	Cal. Block NA		Range Cal. 2.135"
S/N C105BE	Serial No. 44651	Calibration Checks		
Reject OFF	Coax. Cable 6' DUAL	IN 1:15		OUT 4:40
Damp. M.V.	Gain 47 db			
Freq. 2.0 MHz				
Rep. Rate 1K				
Filter HI				
Video NORM				
Couplant SOMTRACC 40 % B124				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
12-007	12	1.366"	1.196"	1.623"	NA	NA	NA	NA	NA
12-007	2	1.451"	1.281"	1.708"					
12-007	4	1.451"	1.281"	1.687"					
12-007	6	1.451"	1.196"	1.666"					
12-007	8	1.451"	1.196"	1.708"					
12-007	10	1.451"	1.153"	1.666"					

Sketch/Identification



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Ultrasonic Examination Report

D. Payne ANIT 7/9/82

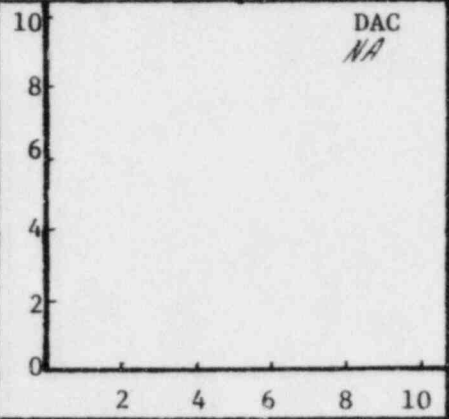
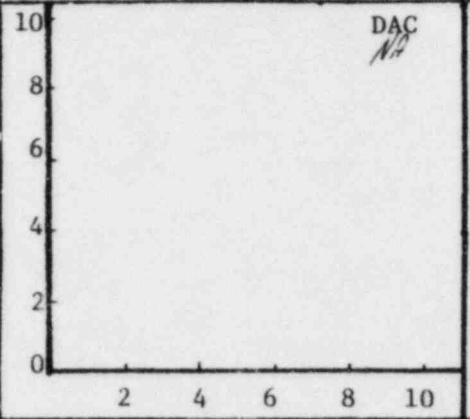
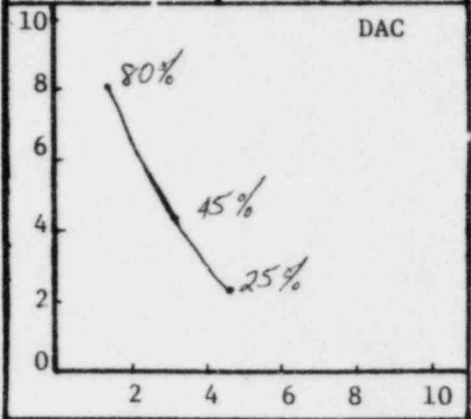
Customer <i>L.P.E.L.</i>		Plant <i>Waterford</i>		Unit <i>#3</i>	Loop/Zone <i>2A/12</i>	Iso/Drawing No. <i>Zone 12, Rev. 2, F.C. X 2</i>	
Procedure <i>ISI-28 Rev. 1, F.C. 1</i>		Exam Surface <i>O.D.</i>	Examiner/Level <i>Michael W. Brown II</i>		VCR Supervisor <i>David P. Payne</i>		Date <i>7-10-82</i>
Component/Piping System <i>Cold Leg - Reactor Vessel to RCP 2A</i>			Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-18</i>	Couplant: <i>Senotrace</i> Type <i>40</i> Batch No. <i>8124</i>	

Continuation Sheet Attached
Yes No

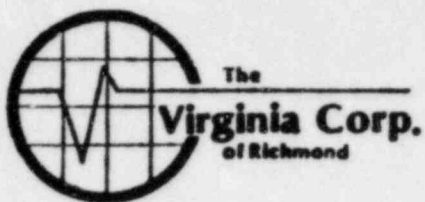
Field Changes:
Yes No
If Yes, Number *F.C. 1*

Transducer	0°	45°	60°	Instrument			
S/N	<i>44651</i>	<i>NA</i>	<i>NA</i>	Mfgt.	<i>Sonic</i>	Model	<i>Mark I</i>
Size	<i>.5"</i>			S/N	<i>01058E</i>	RepRate	<i>1K</i>
Frequency	<i>2.25 MHz</i>			Reject	<i>OFF</i>	Filter	<i>Hi</i>
Beam Angle	<i>1°</i>			Damp	<i>Min.</i>	Coax	<i>6' Dual</i>
				Freq.	<i>2.0 MHz</i>	Video	<i>Norm.</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks								
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>80</i>	<i>1.3</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>1:15</i>	<i>4:40</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>45</i>	<i>2.8</i>																	
<i>3/4 T</i>	<i>25</i>	<i>4.3</i>																	
Ref. dB	<i>47 db</i>																		



Additional Comments/Sketch



Ultrasonic Examination Report

G. Payne ANCI 7/19/82

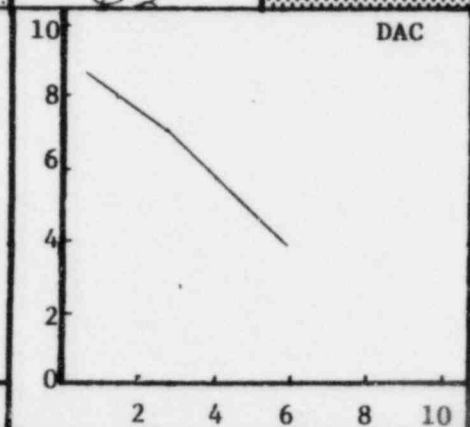
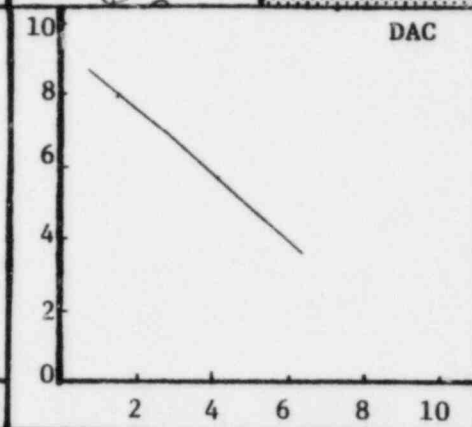
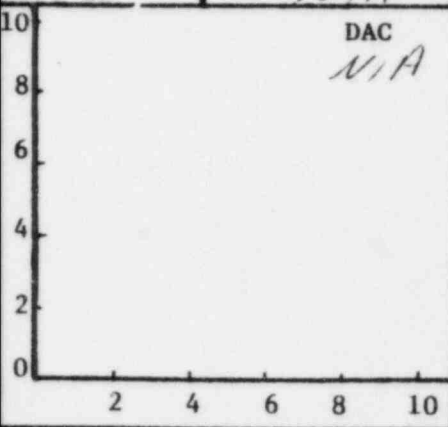
Customer <i>L P & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/12</i>	Iso/Drawing No. <i>Zone 12 Rev 2 FCX2</i>
Procedure <i>I.C.2</i>	Exam Surface <i>0.0</i>	Examiner/Level <i>David T. Payne II</i>	VCR Supervisor <i>Kevin Payne</i>	Date <i>7/15/82</i>
Component/Piping System <i>Reactor Vess to RCP 2A</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *2*

Transducer S/N Size Frequency Beam Angle	30°	45°	60°	Instrument			
	<i>607150</i>	<i>N/A</i>	<i>N/A</i>	Mfg.	<i>Senic</i>	Model	<i>Mark I</i>
	<i>.50"</i>			S/N	<i>05473E</i>	ReRate	<i>1K</i>
	<i>2.25MHz</i>			Reject	<i>3</i>	Filter	<i>Hi</i>
	<i>30°</i>			Damp	<i>Min</i>	Coax	<i>W/BNC-MO</i>
				Freq.	<i>2.0MHz</i>	Video	<i>Norm</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>1.5</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>1.5</i>	<i>N/A</i>	<i>N/A</i>	<i>8.00</i>	<i>10.53</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>1/2T</i>			<i>70%</i>	<i>3.0</i>			<i>70%</i>	<i>3.0</i>								
<i>3/4T</i>			<i>55%</i>	<i>4.5</i>			<i>55%</i>	<i>4.5</i>								
Ref. dB	<i>N/A</i>		<i>62</i>				<i>62</i>									



Additional Comments/Sketch
Calibration for carbon steel side.



Ultrasonic Examination Report

D. Payne ANII 7/19/82

Customer <i>LP 22</i>		Plant <i>Waterford</i>		Unit # <i>3</i>	Loop/Zone <i>2/12</i>	Iso/Drawing No. <i>ZONE 12 Rev. 2 FC. 22</i>	
Procedure <i>F. 2.2</i>		Exam Surface <i>OD</i>	Examiner/Level <i>David J. Folan III</i>		VCR Supervisor <i>Kevin [Signature]</i>		Date <i>7-15-82</i>
Component/Piping System <i>Reactor Vess. to R/P 2A</i>			Pipe Size <i>3.5"</i>	Weld Type <i>BUTT</i>	Cal. Block # <i>UT-18</i>	Couplant: <i>Type Soudaloc Batch No. 8724</i>	

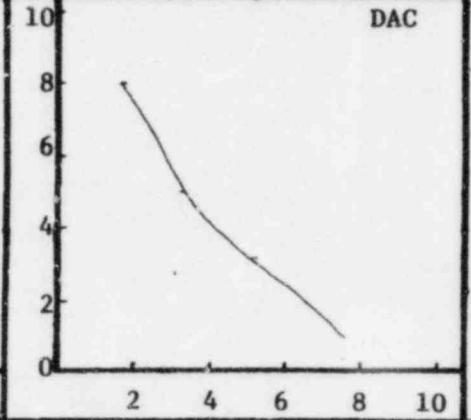
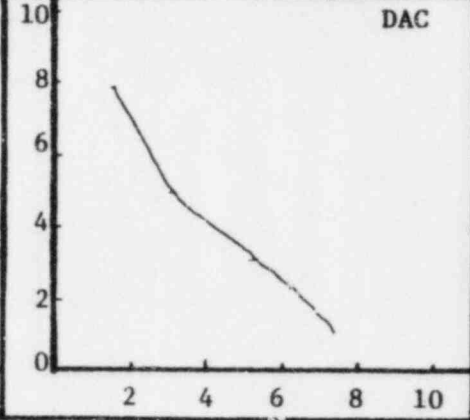
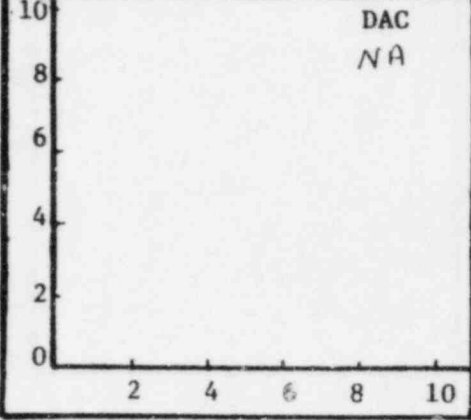
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *FC. 2*

	Transducer	<i>30°</i>	<i>45°</i>	<i>60°</i>	Instrument			
	S/N	<i>60150</i>	<i>NA</i>	<i>NA</i>	Mfr.	<i>SONIC</i>	Model	<i>MARK I</i>
	Size	<i>1.50"</i>			S/N	<i>05473 E</i>	RepRate	<i>14</i>
	Frequency	<i>2.25 MHz</i>			Reject	<i>3</i>	Filter	<i>Hi</i>
	Beam Angle	<i>30°</i>			Damp	<i>M.N.</i>	Coax	<i>6' BNC to MA</i>
					Freq.	<i>2.0 MHz</i>	Video	<i>Norm.</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>7:50</i>	<i>10:53</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>50%</i>	<i>3.0</i>				<i>50%</i>	<i>3.0</i>									
<i>3/4 T</i>			<i>35%</i>	<i>4.5</i>				<i>35%</i>	<i>4.5</i>									
<i>1 T</i>			<i>15%</i>	<i>6.5</i>				<i>10%</i>	<i>7.2</i>									

Ref. dB *NA* *63 dB* *67 dB*



Additional Comments/Sketch
Calibration for austenetic side.



D. Payne ANII 9/24/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2A/12</i>
Component/Piping System <i>Cold leg - R.V. to R.C.P. 2A</i>	Examiner/Level <i>David J. Fokun III</i>	Date <i>6-15-82</i>	
Procedure <i>ISI 2.5 Rev. 0</i>	Iso/Drawing No. <i>Zone 12 Rev. 2-82</i>	VCR Supervisor <i>Walter Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfr. <i>Sonic</i>	Mfr. <i>Panometrics</i>	Size <i>.50"</i>	Cal. Block <i>UT-16</i>
Model <i>ETS Mark I</i>			Cal. Block <i>NA</i>
S/N <i>01610K</i>	Freq. <i>3.5 Mhz</i>		Range Cal. <i>2.2"</i>
Reject <i>off</i>			Calibration Checks
Damp. <i>Min</i>	Serial No. <i>41874</i>		
Freq. <i>2 Mhz</i>			Initial - <i>1:20 PM</i>
Rep. Rate <i>1K</i>	Coax. Cable <i>6' Dual</i>		Final - <i>2:40 PM</i>
Filter <i>OFF</i>			
Video <i>Norm</i>	Gain <i>50 dB</i>		
Couplant <i>Sonotrace 40.8 8/24</i>			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>12-009</i>	<i>12</i>	<i>N/A</i>	<i>N/A</i>	<i>1.51"</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>12-009</i>	<i>2</i>			<i>1.51"</i>					
<i>12-009</i>	<i>4</i>			<i>1.42"</i>					
<i>12-009</i>	<i>6</i>			<i>1.42"</i>					
<i>12-009</i>	<i>8</i>			<i>1.47"</i>					
<i>12-009</i>	<i>10</i>			<i>1.53"</i>					

Sketch/Identification



Ultrasonic Examination Report

D. Payne ANII 6/24/82

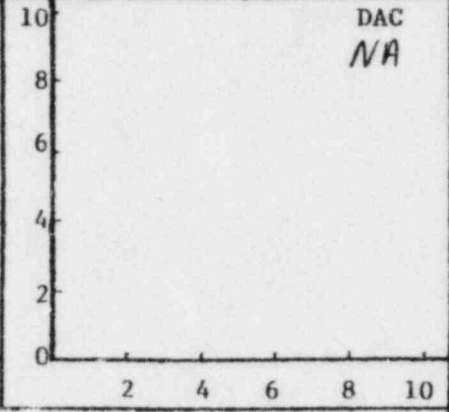
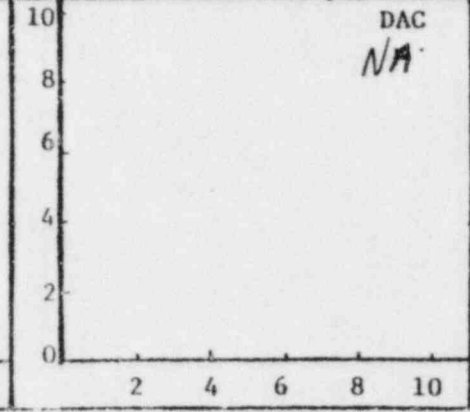
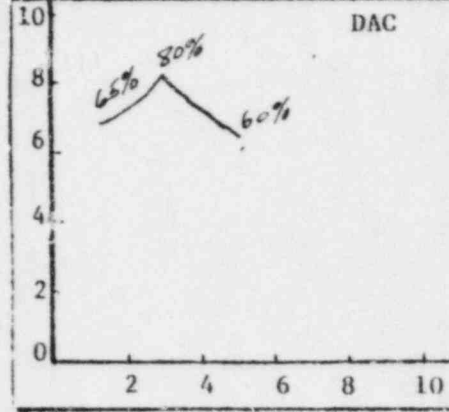
Customer LP+L		Plant Waterford		Unit # 3	Loop/Zone 2A/12	Iso/Drawing No. Zone 12 Rev. 2 F.C. #2	
Procedure F.C. 1 1512.8 Rev. 1		Exam Surface O.D.	Examiner/Level David J. Fisher		VCR Supervisor Daniel Jensen		Date 6/15/82
Component/Piping System Cold leg - Reactor V. to RCP 2A			Pipe Size 12"	Weld Type BUTT	Cal. Block UT-16	Couplant: Type Sonogel Batch No. 8124	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number **1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	MB2728	NA	NA	Mfr.	SONIC	Model	MARK I
	1/2"			S/N	25473E	RepRate	1K
	2.25 MHz			Reject	off	Filter	off
	0°			Damp	Min	Coax	6' Dual
				Freq.	2.0 MHz	Video	None

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	65%	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	9:12 AM	11:30 AM	NA	NA	NA	NA
1/2 T	80%	3.0															
3/4 T	60%	4.5															
Ref. dB	66 dB																



Additional Comments/Sketch

Cal. for carbon steel side only



D. Payne ANII 6/24/82
Ultrasonic Data Sheet
 for
Thickness Measurement

Customer LP&L	Plant WATERFORD	Unit III	Loop/Zone 2A/12
Component/Piping System CCLDLEG. REACTOR VESSEL TO RCP 2A		Examiner/Level David J. Zelen II	Date 6/10/82
Procedure IS125 REV. 0	Iso/Drawing No. 24 ZONE 12/REV 2 FL 2	VCR Supervisor Nene Jensen	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer	Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Parameetrics</i>	Cal. Block <i>WT-16</i>
Model <i>MARK I</i>	Size <i>.50"</i>	Cal. Block <i>N/A</i>
S/N <i>01610 E</i>	Freq. <i>2.25 mhz</i>	Range Cal. <i>1.8"</i>
Reject <i>OFF</i>	Serial No. <i>44652</i>	Calibration Checks <i>(I.V) 0900 (O.V) 1145</i>
Damp. <i>Min.</i>	Coax. Cable <i>6' BMC-BNC</i>	
Freq. <i>2.0 mhz</i>	Gain <i>50 db</i>	
Rep. Rate <i>1K</i>		
Filter <i>HIGH</i>		
Video <i>Norm</i>		
Couplant <i>SonicTrace 40 / Batch #8124</i>		

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
12-009	12	1.46"	1.33"	N/A	N/A	N/A	N/A	N/A	N/A
12-009	2	1.42"	1.33"						
12-009	4	1.38"	1.35"						
12-009	6	1.38"	1.33"						
12-009	8	1.42"	1.33"						
12-009	10	1.46"	1.35"						

Sketch/Identification*



Ultrasonic Examination Report

D. Payne ANII 6/24/82

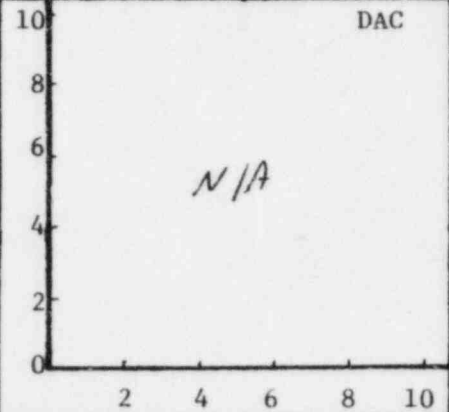
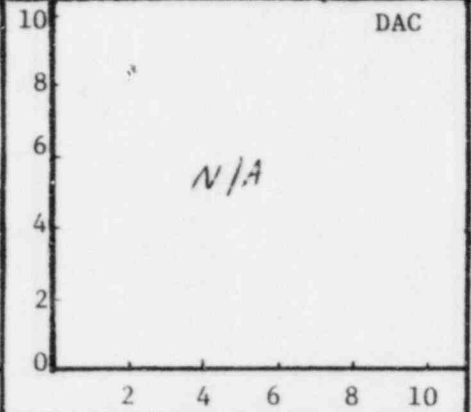
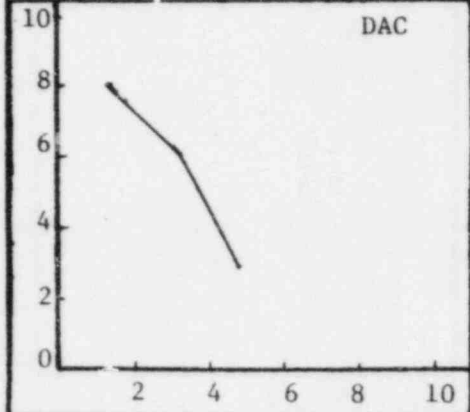
Customer LP & L		Plant WATERFORD	Unit III	Loop/Zone 2A/12	Iso/Drawing No. ZONE 12 / REV 2 FC. 2 dlt
Procedure FC 1 1512.8 REV 1	Exam Surface Q.D.	Examiner/Level David S. Johnson		VER Supervisor [Signature]	Date 6/19/82
Component/Piping System COIL LEG - REACTOR VESSEL TO RCP 2A		Pipe Size 12"	Weld Type Butt	Cal. Block UT-16	Couplant: ECNO TRACE Type 40 Batch No. 8124

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number **1**

Transducer			Instrument			
	0°	45°	60°	Mfr.	Serial	Model
S/N	44652	N/A	N/A	Senic	01610 E	MKII
Size	.50"			S/N		RepRate
Frequency	2.25 MHz			Reject	OFF	Filter
Beam Angle	0°			Damp	Min	Coax
				Freq.	2 whz	Video
						Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	80%	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0900	1145	N/A	N/A	N/A	N/A
1/2T	60%	3.0															
3/4T	30%	4.5															
Ref. dB	43		N/A				N/A										



Additional Comments/Sketch
Cal. for weld & safe-end only



Ultrasonic Examination Report *D. Payne ANII 9/24/82*

Customer <i>LPCL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone Iso/Drawing No. <i>2A/12 Zone 12, Rev 2, FC+208</i>
Procedure <i>151-2.8, Rev 1, FC 2</i>	Exam Surface <i>OD</i>	Examiner/Level <i>BURLINGAME</i>	VCR Supervisor <i>Daniel Jensen</i>
Component/Piping System <i>Cold Leg - Reactor Vessel to RCP 2A</i>	Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Date <i>6-19-82</i>
		Cal. Block <i>UT-16</i>	Couplant: Sonotrace Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Changes: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, Number <i>FC+2</i>	Transducer	0°	45° RL	60°	Instrument			
	S/N	NA	607152	NA	Mfr.	Sonic	Model	FTS Mark I
	Size		1/2"		S.N	780830	RepRate	3000
	Frequency		2.25 MHz		Reject	1	Filter	H.
	Beam Angle	↓	43°	↓	Damp	M/W	Coax	6'
				Freq.	2 MHz	Video	Norm	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4	NA	NA	80%	2.0			80%	1.8			NA	NA	0830	1000	NA	NA
1/2			70%	4.0			45%	3.8								
3/4			20%	6.0			22%	5.8								
Ref. dB	↓	↓	60 db				55 db				↓	↓			↓	↓

