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.

The Virginia Corp. of Richmond

TITLE

Preservice Examination Data

The Virginia Corp. of Richmond

M. R. Martin ANII 1-13-83

Liquid Penetrant

Examination Report

Customer	Plant	Unit	Loop / Zone
LP+L	Waterford	3	2B/13

Procedure	Examiner/Level	Date
ISI-3.1, R.O, F.C.4	Kevin White III	1-11-83

Component/Piping System	ISO Drawing No.	VCR Supervisor
S.G. #2 to Pump 2B	Zone 13, R.4, F.C.0	Daniel T Jensen

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-chek	29B-47
Developer	Sherwin	Dubl-chek	24C-6
Remover	Sherwin	Dubl-chek	225-B4

Weld/Item Number	Comments	PT Results NRI	PT Results RI	VT Results SAT.	VT Results UNSAT.
13-008	Area examined 25" thru 35" because this area was not accessible with MT	✓		✓	

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 3/1/82

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	2/13

Procedure	Examiner/Lev.	QCR Supervisor	Date
151-4.3 REV 0	~~[signature] I~~ Michael W. [illegible] II	Daniel [signature]	2-26-82

Component/Piping System	ISO Drawing No.	Surface Condition
RC PUMP 2B TO S/G #2	ZONE 13 REV 2 FC-1	GROUND

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	MAGNAFLUX	8A-RED	81M107

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	PARKER RESEARCH	CONTOUR/DA-200	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-006 LA		✓		✓	
13-009 LB		✓		✓	

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Dan Payne ANII 3/1/82

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	2/13

Procedure	Examiner/Level	VCR Supervisor	Date
ISI-4.3 REV 0	Michael W Rice II	Daniel J Jensen	2-27-82

Component/Piping System	ISO Drawing No.	Surface Condition
RC PUMP 2B TO S/G #2	ZONE-13-REV-2-FC1	GROUND

Type of Particles	Manufacturer	Type	Batch Number
__Wet ✓Dry ✓Visible __Flourescent	MAGNAFLUX	8A-RED	8IM107

Current	Machine Mfr.	Type/Model	Serial No.
✓AC __DC __HWDC	PARKER RESEARCH	CONTOUR/DA-200	5801

Magnetization	Coil	Prods	Yoke
✓Continuous __Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-005	PARTIAL EXAMINATION. AREA NOT EXAMINED IS FROM 80" (7 DIRECTION) TO 90" (7 DIRECTION).	✓		✓	
13-008	PARTIAL EXAMINATION. AREA NOT EXAMINED IS FROM 25" (7 DIRECTION) TO 35" (7 DIRECTION)	✓		✓	
13-010 LA		✓		✓	
13-013		✓		✓	
13-014 LB		✓		✓	

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 3/4/82

Customer	Plant	Unit	Loop/Zone
L.P.&L	Waterford	3	#2 #13

Procedure	Examiner/Level	VCR Supervisor	Date
151-4.3 / Rev. 0	David L. Eaton II	Daniel J. Jensen	3/2/82

Component/Piping System	ISO Drawing No.	Surface Condition
RC Pump 2B to Steam Gen. #2	Zone 13 - Rev. 2 - FC3	ground

Type of Particles	Manufacturer	Type	Batch Number
__ Wet X Dry X Visible __ Flourescent	Magnaflux	8A-Red	81M107

Current	Machine Mfr.	Type/Model	Serial No.
X AC __ DC __ HWDC	Parker Research	DA-200 contour	5801

Magnetization	Coil	Prods	Yoke
X Continuous; __ Residual	N/A Amps.; N/A No. Turns	N/A Spacing; N/A Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-001		✓		✓	
13-002		✓		✓	
13-004LA		✓		✓	
13-011		✓		✓	
13-018		✓		✓	
13-019LB		✓		✓	
13-020LA		✓		✓	

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 3/11/82

Customer	Plant	Unit	Loop / Zone
L P & L	WATERFORD	3	2B / 13

Procedure	~~Examiner~~ I Lvl.	VGR Supervisor	Date
151-4.3	Michael W Blow II	Daniel Jensen	3-10-82

Component / Piping System	ISO Drawing No.	Surface Condition
Cold Leg - RCP 2B TO S/G # 2	ZONE 13 REV 2 Fc. 2	GROUND

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	MAGNAFLUX	8A-RED	81M107

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	PARKER RESEARCH	CONTOUR / DA-200	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-015 LA		✓		✓	

Form MT-301

12/81

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

M.R. Martin, ANII 10/5/82

Customer	Plant	Unit	Loop / Zone
L P & L	WATERFORD	3	2B / 13

Procedure	Examiner/Level	VCR Supervisor	Date
151. 4.3 RO	Michael W Blw II	Daniel Jenson	3-11-82

Component / Piping System	ISO Drawing No.	Surface Condition
Cold Leg - RCP 2B TO S/G #2	ZONE 13 REV 2 FC-3	GROUND

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	MAGNAFLUX	8A-RED	2IM107

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	PARKER RESEARCH	Contour / DA-200	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-007 LB		✓		✓	

Form MT-301

12/81

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 3/25/82

Customer: LP&L	Plant: Waterford	Unit: 3	Loop/Zone: 2B/13
Procedure: ISI 4.3 Rev 0	Examiner/Level: Richard Dale II	VCR Supervisor: Daniel Jenson	Date: 3/24/82
Component/Piping System: Cold leg-SG#2 to RCP2B	ISO Drawing No.: Zone 13 Rev 2 Fc 3	Surface Condition: Ground	
Type of Particles: __Wet ✓Dry ✓Visible __Flourescent	Manufacturer: Magnaflux	Type: BA-Red	Batch Number: 81M107
Current: ✓AC __DC __HWDC	Machine Mfr.: Parker Research	Type/Model: Contour Probe DA-200	Serial No.: 4604
Magnetization: ✓Continuous __Residual	Coil: NA Amps. NA No. Turns	Prods: NA Spacing NA Amps.	Yoke: 8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-005	Re-examined after surface prep for U.T.	✓		✓	

*Note: Adequate field was achieved using a field indicator SN/15

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 3/29/82

Customer	Plant	Unit	Loop/Zone
LP&L	Water-ford	3	2B/13

Procedure	Examiner/Level	VCR Supervisor	Date
ISI 43 Rev 0	Michael W Blew II	Daniel Byrne	3-26-82

Component/Piping System	ISO Drawing No.	Surface Condition
Cold Leg RC #2 RCP 2B	Zone 13 Rev 2 FC-3	Ground

Type of Particles	Manufacturer	Type	Batch Number
___ Wet ✓ Dry ✓ Visible ___ Flourescent	MagnaFlux	8A Red	81M107

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC ___ DC ___ HWDC	Parker Research	Contour - DA200	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous	NA Amps.	NA Spacing	8 inches Spacing
___ Residual	NA No. Turns	NA Amps.	

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
13-003LB		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 4/26/82

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	2 / 13

Procedure	Examiner/Level	Date
ISI 3.1 R.0 F.C.2	Richard N Dale II Robert L Overstreet I	4-23-82

Component/Piping System	ISO Drawing No.	VCR Supervisor
Cold leg-R.C.P 28 to S.G. #2	Zone 13 R.2 F.C.3	Daniel Byrne

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-Chek	47L015
Developer	Sherwin	Dubl-Chek	129F6
Remover	Sherwin	Dubl-Chek	112C4

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results SAT.	VT Results UNSAT.
13-012		✓		✓	

Form PT-201

2/82

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 5/18/82

Customer	Plant	Unit	Loop/Zone
LP+L	Waterford	3	2 / 13
Procedure	**Examiner/Level**		**Date**
ISI 3.1 R.0 F.C.2	Robert J Overstreet II (Ultrs) Frk I		5-17-82
Component/Piping System	**ISO Drawing No.**	**QC Supervisor**	
Cold leg R.C.P. 2B to S.G. #2	Zone 13 R.0 F.C. 3	Daniel Jones	

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-Chek	476015
Developer	Sherwin	Dubl-Chek	129F6
Remover	Sherwin	Dubl-Chek	112C4

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
13-017		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 5/20/82

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	2/13

Procedure	Examiner/Level	Date
ISI 3.1 R.0 F.C. 2	Robert J. Overstreet II	5-19-82

Component/Piping System	ISO Drawing No.	VCR Supervisor
Cold leg RCP 2B S.G. 2	Zone 13 R.2 F.C. 3	Daniel Dena

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-Chek	472015
Developer	Sherwin	Dubl-Chek	129F6
Remover	Sherwin	Dubl-Chek	1124

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
13-016		✓		✓	

Form PT-201

The Virginia Corp. of Richmond

Dan Payne ANII 3/22/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	2/13

Component/Piping System	Examiner/Level	Date
R.C. Pump 2B to Steam Gen. #2	David L. Fakes II	March 10, 1982

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
~~ISI 2.3~~ ISI 2.5 Rev. 0	Zone 13 Rev. 2 Fig. 3	Daniel Fynn	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	Sonic	Mfgr.	Size	Cal. Block	UT-5
Model	MacKI	KB-Aerotech	.50"	Cal. Block	N/A
S/N	01610E	Freq.		Range Cal.	5"
Reject	OFF	2.25 Mhz		Calibration Checks	
Damp.	Min.	Serial No.			
Freq.	2.0 Mhz	J02184		IN	13:38
Rep. Rate	1K	Coax. Cable		Out	15:42
Filter	OFF	12' BNC-BNC			
Video	Norm.	Gain			
Couplant	Sonotrace 40 #8117	35dB			

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
13-012	12	3.24"	3.48"	2.94"	13-015LA	7'	3.42"	3.42"	3.42"
13-013	2	3.30"	3.54"	2.94"	13-015LA	8'	3.54"	3.48"	3.54"
13-013	4	3.54"	3.60"	2.94"					
13-013	6	3.60"	3.60"	2.94"					
13-013	8	3.36"	3.66"	2.94"					
13-013	10	3.36"	3.54"	2.94"					
13-015LA	1'	3.48"	3.48"	3.42"					
13-015LA	2'	3.36"	3.42"	3.36"					
13-015LA	3'	3.48"	3.42"	3.42"					
13-015LA	4'	3.48"	3.42"	3.42"					
13-015LA	5'	3.48"	3.42"	3.42"					
13-015LA	6'	3.48"	3.42"	3.42"					

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Day Payne ANII 3/22/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2/13	Zone 13 Rev.2 F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-23 Rev.0	O.D.	David L. Fo[illegible] II	Dana V [illegible]	3-10-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant:
Cold leg RCP 2B to St. Gen #2	~~36"~~ 30"	Butt	UT-6	Type Sonotrace 40 Batch No. 8117

Continuation Sheet Attached X Yes ____ No

Field Changes: Yes ____ No X
If Yes, Number

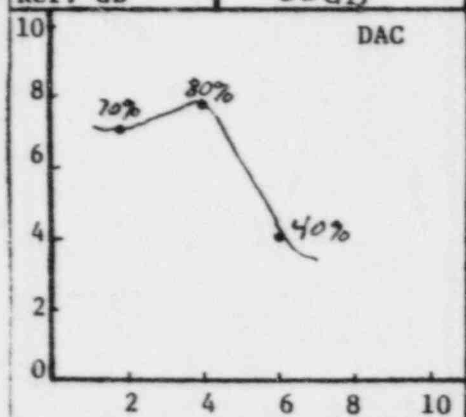
Transducer	0°	45°	60°
S/N	48807	N/A	N/A
Size	1"	N/A	N/A
Frequency	2.25 MHz	N/A	N/A
Beam Angle	0°	N/A	N/A

Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	05303E	RepRate	1K
Reject	off	Filter	off
Damp	Min	Coax	12' BNC to BNC
Freq.	2.0 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
1/4T	70%	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/2T	80%	4.0								
3/4T	40%	6.0								
1T	N/A	8.3								
Ref. dB	36dB									

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
13:50	15:40	N/A	N/A	N/A	N/A

DAC



DAC

DAC

Additional Comments/Sketch

Form UT-101

2/82

Don Payne ANII 3/22/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 3

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	2113	Zone 13 Rev. 2 F.C.3

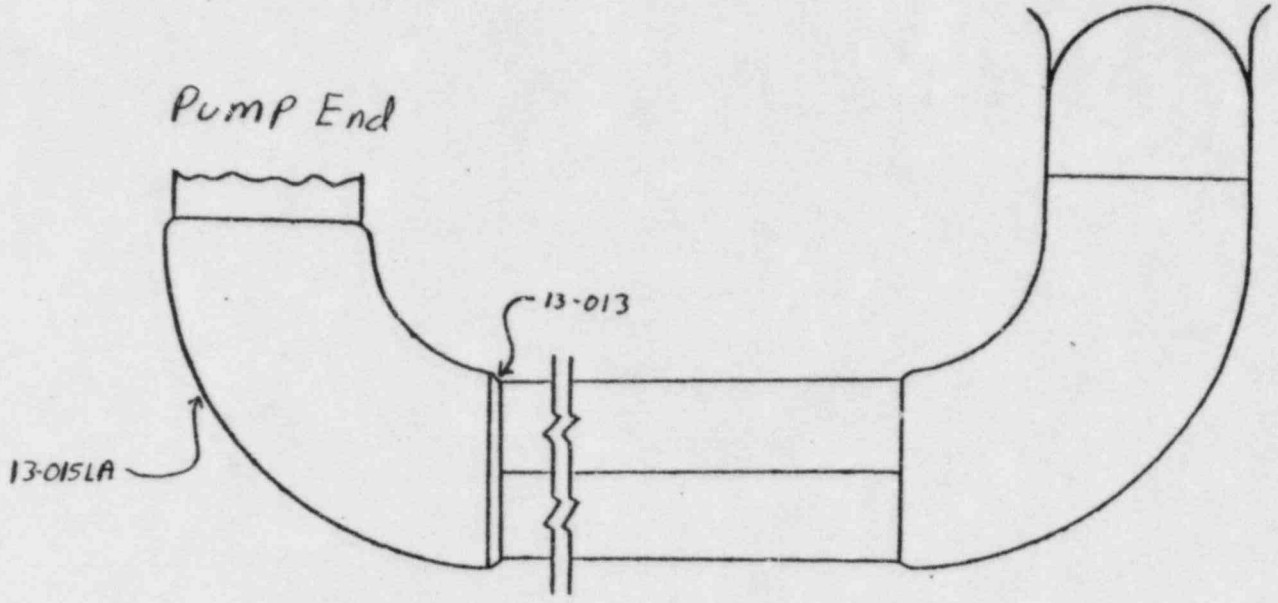
Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
1512.3 Rev. 0	O.D.	David L. Tolen II	Donald F. Jones	3-10-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
R.C. Pump 2B to Steam Gen. #3	30" Sch 140	Butt	UT-6	Sonotrace 40 8117

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-013		Par	N/A	N/A	N/A	Par	See attached sheet	Smooth	Ground	NI	Sat.	N/A
13-013A		Par	⊥	⊥	⊥	Yes	See attached sheet	Smooth	Ground Flush	NI	Sat.	⊥

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



Unable to maintain back reflection due to unparallel surfaces on weld # 13-013.

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Dan Payne ANII 3/22/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	28/13	Zone 13 Rev. 2 F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151 2.3 Rev 0	O.D.	Gary Longenecker II	Daniel Sims	3-12-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type	Batch No.
Cold leg RC Pump to S.G. #2	~~36"~~ 28" 30"	Butt	V1-6	Sonotrace 40	8117

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ___ No ✓

If Yes, Number

Transducer	0°	45°	60°
S/N	N/A	N/A	L19801
Size			1" Diam.
Frequency			2.25 mHz
Beam Angle			60°

Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	037046	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	12'
Freq.	2 mHz	Video	Normal

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep

2 & 5 Scan

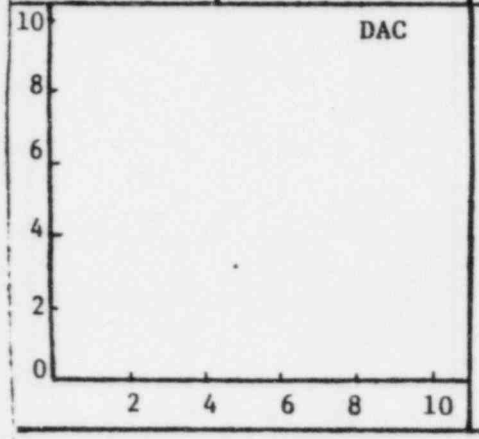
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2	1 3/8	1 5/16	1 7/8
80%	4	3 1/8	2 13/16	3 11/16
52%	6	4 13/16	4 1/4	5 7/16
22%	10	N/A	N/A	N/A
Ref. dB		64 dB		

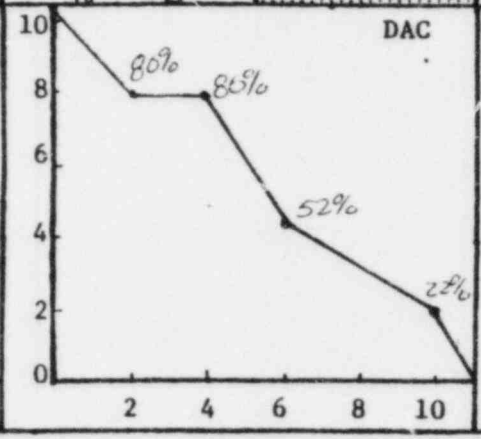
7 & 8 Scan

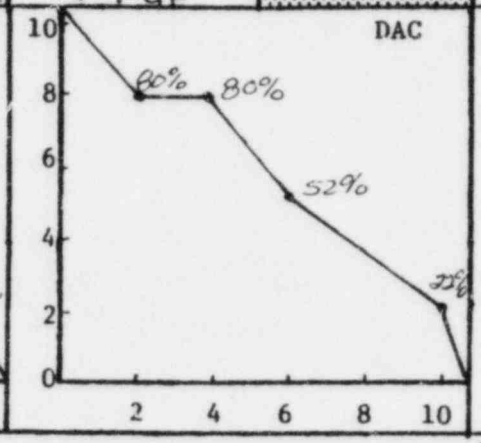
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2	1 5/8	1 5/16	1 7/8
80%	4	3 1/8	2 13/16	5/16
52%	6	4 13/16	4 1/4	5 7/16
22%	10	N/A	N/A	N/A
Ref. dB		64 dB		

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
N/A	N/A	N/A	N/A	9:45	1:00







Additional Comments/Sketch

Don Payne ANII 3/22/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP+L	Waterford	3	28/13	Zone 13 Rev. 2 F.C. 3

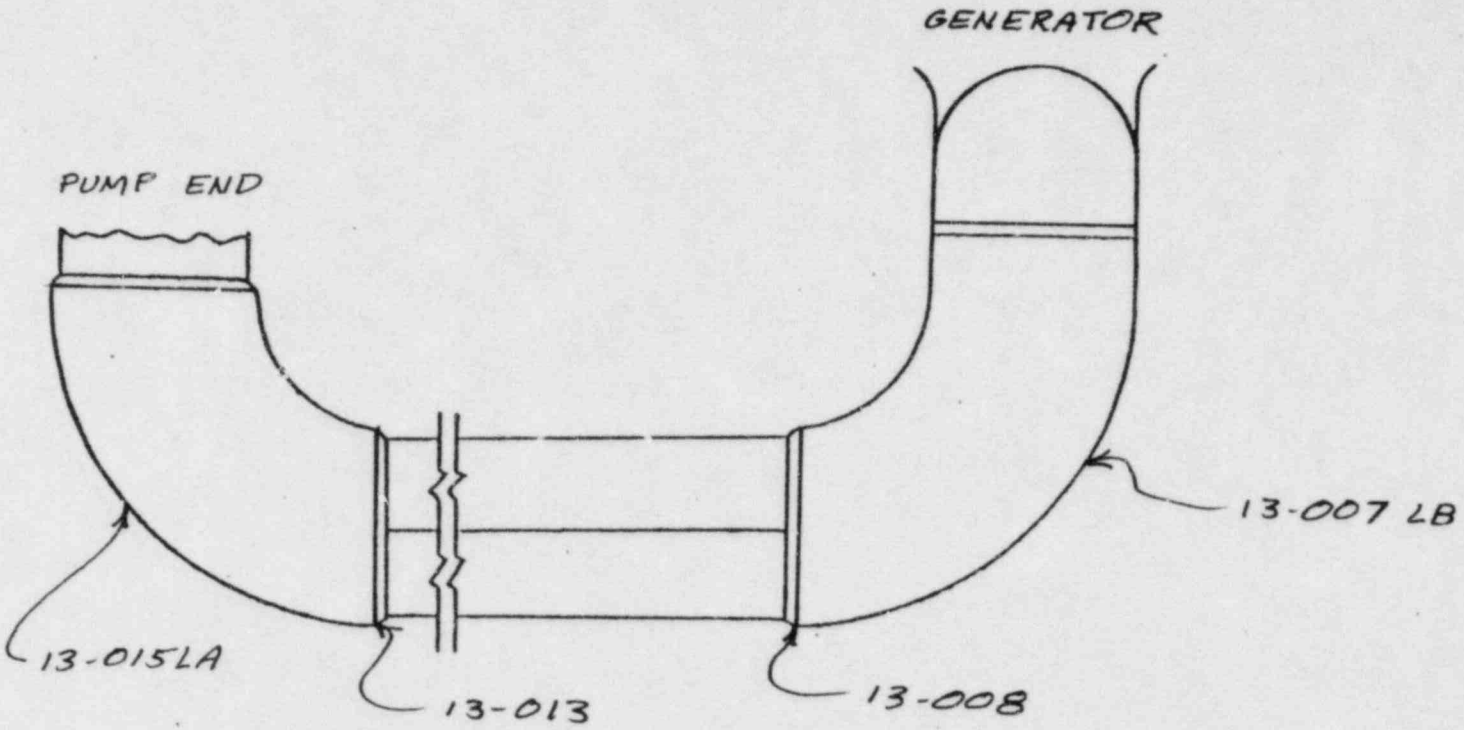
Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
1S12.3 Rev. 0	O.D.	Gary Longenecker II	Daniel T. Jones	3-12-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch
Cold leg - R.C. Pump to S.G. #2	~~36"~~ 30"	Butt	UT-6	Sonotrace 40#8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-002LB	N/A	N/A	Yes	Yes	Yes	N/A		Clean	Ground	NI	Sat.	
13-008	↓	↓	Part.	Part.	Part.	↓	See attached sheet	Clean	Ground	NI	Sat.	
13-013			Part.	Part.	Part.		See attached sheet	Clean	Ground	NI	Sat.	
13-015LA			Yes	Part.	Yes		See attached sheet	Clean	Ground	NI	Sat.	

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



The Virginia Corp. of Richmond

Date 3-12-82

Page 4 of 4

To: _____

Subject INSPECTION LIMITATIONS
ISO 13 R-2 F.C. 3

WELD NO 13-008 HAD INTERMITENT LOSS OF CONTACT WITH THE SURFACE AS A RESULT OF WELD GEOMETRY.

SCAN 2 LOSS OF APPROX. 55%
SCAN 5 LOSS OF APPROX. 10%
SCANS 7 & 9 LOSS OF APPROX. 10%

WELD NO 13-013 HAD INTERMITENT LOSS OF CONTACT WITH THE SURFACE AS A RESULT OF WELD GEOMETRY.

SCAN 2 LOSS OF APPROX. 10%
SCAN 5 LOSS OF APPROX. 55%
SCANS 7 & 8 LOSS OF APPROX. 10%

WELD NO 13-015LA HAD LOSS OF CONTACT WITH THE SUREFACE USING 1." DIA. 60° SHEAR WAVE BECAUSE OF 2 GROUND AREA. THESE AREA'S WILL BE COVERED WITH ½" DIA 60° SHEAR WAVE.

SCAN 5 WAS OBSTUCTED BY GROUND AREAS.

AREA 1 FROM DATUM IN 7 DIRECTION 46½" TO 47½" ON 5 SIDE FROM WELD CENTERLINE 4" TO 6"

AREA 2 FROM DATUM IN 7 DIRECTION 51" TO 51 ¾" ON 5 SIDE FROM WELD CENTERLINE 4 ⅜ TO 5½"

Signed Gary Longenecker

The Virginia Corp. of Richmond

Dan Payne ANII 3/22/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	2 113

Component/Piping System	Examiner/Level	Date
R.C. Pump 2B to Steam Gen. #2	David T. Token III	March 12, 1982

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI 2.3 Rev 0	Zone 13 Rev 2 Sh 3	Daniel D Jones	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	Sonic	Mfgr.	Size	Cal. Block	UT-6
Model	MarkII	KB-Aerotech	.50"	Cal. Block	N1A
S/N	01610E	Freq.		Range Cal.	7"
Reject	OFF	2.25		Calibration Checks	
Damp.	Min.	Serial No.			
Freq.	2.0 mhz	J02184		In	7:50
Rep. Rate	1K	Coax. Cable		Out	9.19
Filter	OFF	12' BNC-BNC			
Video	Norm	Gain			
Couplant	Sonotrace 40 # 8117	32dB			

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
13-007LB	1'	3.48"	3.42"	3.42"	13-008	10	3.06"	2.88"	3.54"
13-007LB	2'	3.42"	3.42"	3.42"					
13-007LB	3'	3.48"	3.42"	3.42"					
13-007LB	4'	3.54"	3.42"	3.42"					
13-007LB	5'	3.54"	3.42"	3.48"					
13-007LB	6'	3.54"	3.42"	3.42"					
13-007LB	7'	3.48"	3.42"	3.42"					
13-008	12	3.24"	2.88"	3.42"					
13-008	2	3.30"	2.88"	3.54"					
13-008	4	3.30"	2.88"	3.48"					
13-008	6	3.30"	2.88"	3.54"					
13-008	8	3.30"	2.88"	3.60"					

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Dan Payne ANII 3/23/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2/13	ZONE 13 Rev. 2 F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 Rev. 0	O.D.	David T. Forbes II	Denial Sims	3-12-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type	Batch No.
Cold leg-RCP 23 to St. Generator #2	36" x 30"	Butt	UT-6	Songtrace 90	817

Continuation Sheet Attached: X Yes ___ No

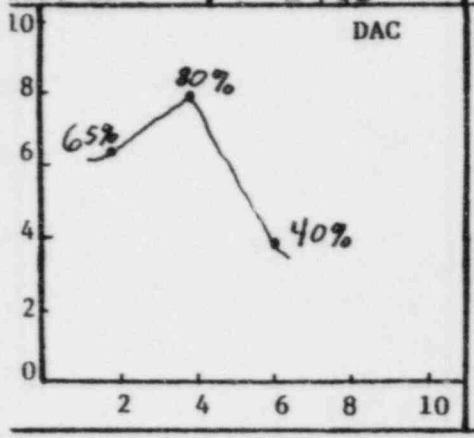
Field Changes: Yes ___ No X

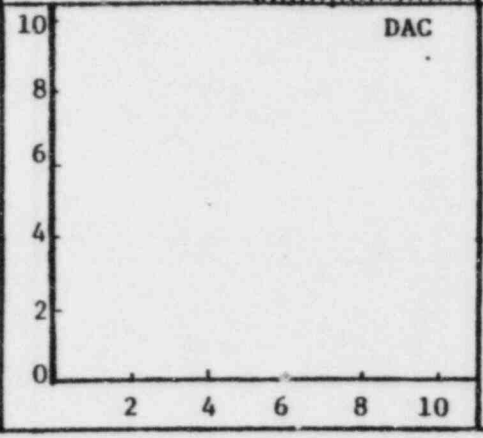
If Yes, Number

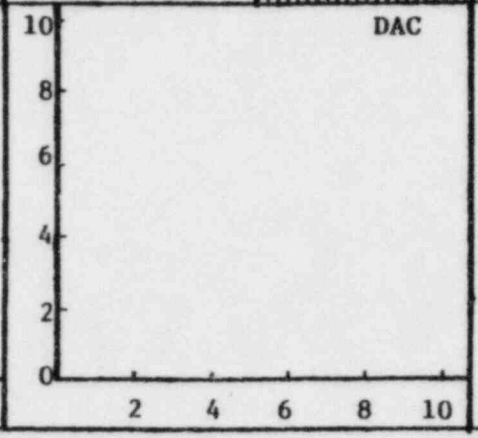
Transducer	0°	45°	60°
S/N	48807	N/A	N/A
Size	1"	N/A	N/A
Frequency	2.25 MHz	N/A	N/A
Beam Angle	0°	N/A	N/A

Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	053036	RepRate	1K
Reject	off	Filter	off
Damp	Min.	Coax	12' Blk to Blk
Freq.	2.0 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
					Sound Entry Point To:				Sound Entry Point To:		0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC	Signal Amp.	Sweep	Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	65%	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7:43	9:28	N/A	N/A	N/A	N/A
1/2T	80%	4.0														
3/4T	40%	6.0														
1T	N/A	8.3														
Ref. dB	34dB															







Additional Comments/Sketch

Form UT-101

2/82

Don Payne ANII 3/22/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 3

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	2/13	Zone 13 Rev. 2 F.C.3

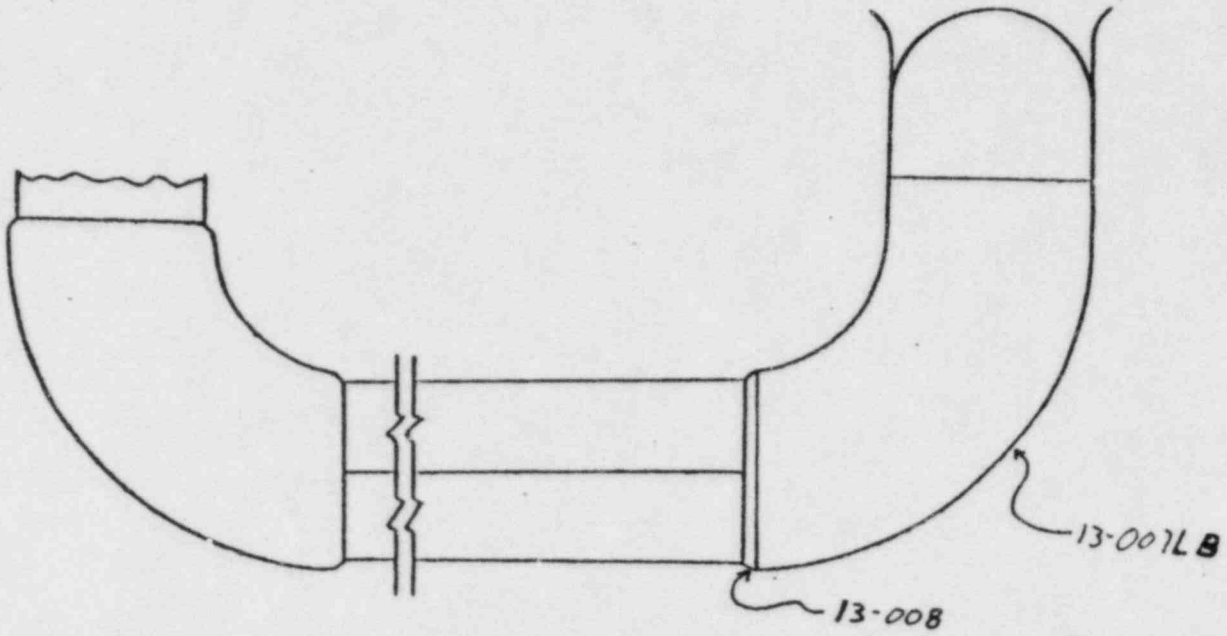
Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 Rev.0	O.D.	David L. [illegible] II	[signature]	3-12-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
R.C. Pump 2B to Steam Gen. #2	30" 36" ID	Butt	UT-6	Sonotrace 40 #8117

Weld No.		Base Metal Scan	Scan Direction 2	Scan Direction 5	Scan Direction 7 & 8	Scan Direction 0	Inspection Limitations	Surface Condition Base Metal	Surface Condition Weld	Examination Results UT	Examination Results Visual	Remarks
13-007 LR	DF	Par	N/A	N/A	N/A	Yes	See attached sheet	Smooth	Ground Flush	NI	Sat.	N/A
13-008		Par	⊥	⊥	⊥	Par	See attached sheet	Smooth	Ground	NI	Sat.	N/A

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



Unable to maintain back reflection due to unparallel surfaces of weld 13-008.

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Don Payne ANII 3/22/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 / 13	ZONE 13 - REV 2 FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 - REV 0	OD	BURLINGAME / II	Donald Dens	3-12-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant:
REACTOR COOLANT	~~36"~~ 30"	BUTT	UT-6 3 ½"	Type SONOTRACE 40 Batch No. 8117

Continuation Sheet Attached ✓ Yes ___ No

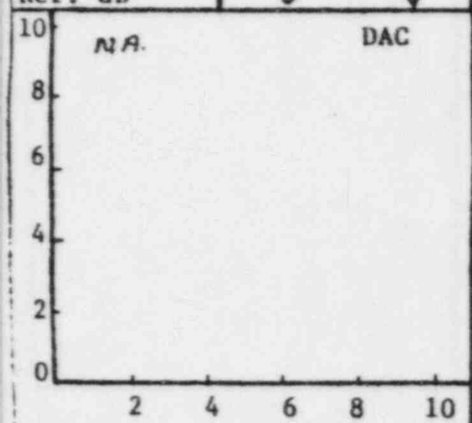
Field Changes: Yes ___ No ✓
If Yes, Number

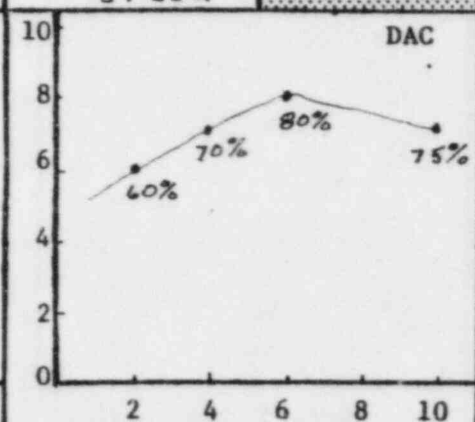
Transducer	0°	45°	60°
S/N	N/A	L19134	N/A
Size	↓	1.0"	↓
Frequency	↓	2.25 m.	↓
Beam Angle	↓	45°	↓

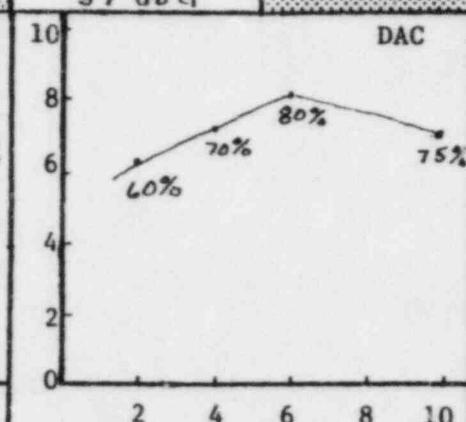
Instrument			
Mfgr.	SONIC	Model	FTS-MK1
S/N	780836	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MIN	Coax	12'
Freq.	2.25 MHZ.	Video	NORM.

	Calibration 0°		2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4 T	N.A.	N/A	60%	2.0	3/4	3/8	1 3/16	60%	2.0	3/4	3/8	1 3/16
1/2 T			70%	4.0	1 9/16	1 3/8	2.0	70%	4.0	1 9/16	1 3/8	2.0
3/4 T			80%	6.0	2 5/8	2 3/16	2 27/32	80%	6.0	2 5/8	2 3/16	2 27/32
5/4 T			75%	10.0				75%	10.0			
Ref. dB	↓	↓	57 dbG					57 dbG				

Calibration Checks	0°		45°		60°	
	In	Out	In	Out	In	Out
	N/A	N/A	0745	1130	N/A	N/A







Additional Comments/Sketch

Don Payne ANII 3/22/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 / 13	ZONE 13 - REV.2 FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 REV. 0	OD	BURLINGAME II	Daniel Dyna	3-12-82

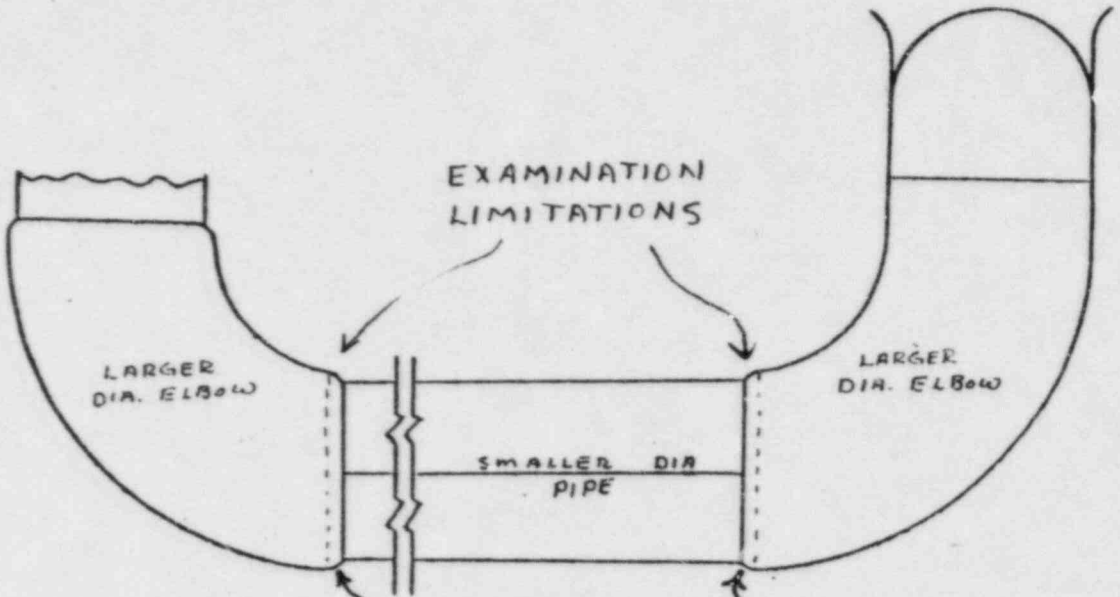
Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	36" 30"	BUTT	UT-6 3½"	SONOTRACE 40 / 8117

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-007	LB	NA	YES	YES	YES	NA		CLEAN	GROUND	NI	SAT	
13-008			PAR	PAR	PAR		SEE ATTACHMENT	CLEAN	GROUND	NRI	SAT	
13-013			PAR	PAR	PAR		SEE ATTACHMENT	CLEAN	GROUND	NRI	SAT	
13-015	LA		YES	YES	YES			CLEAN	GROUND	NI	SAT	

2/82

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



WELD NO.'S 13-013 & 13-008

≈ 12° TAPER

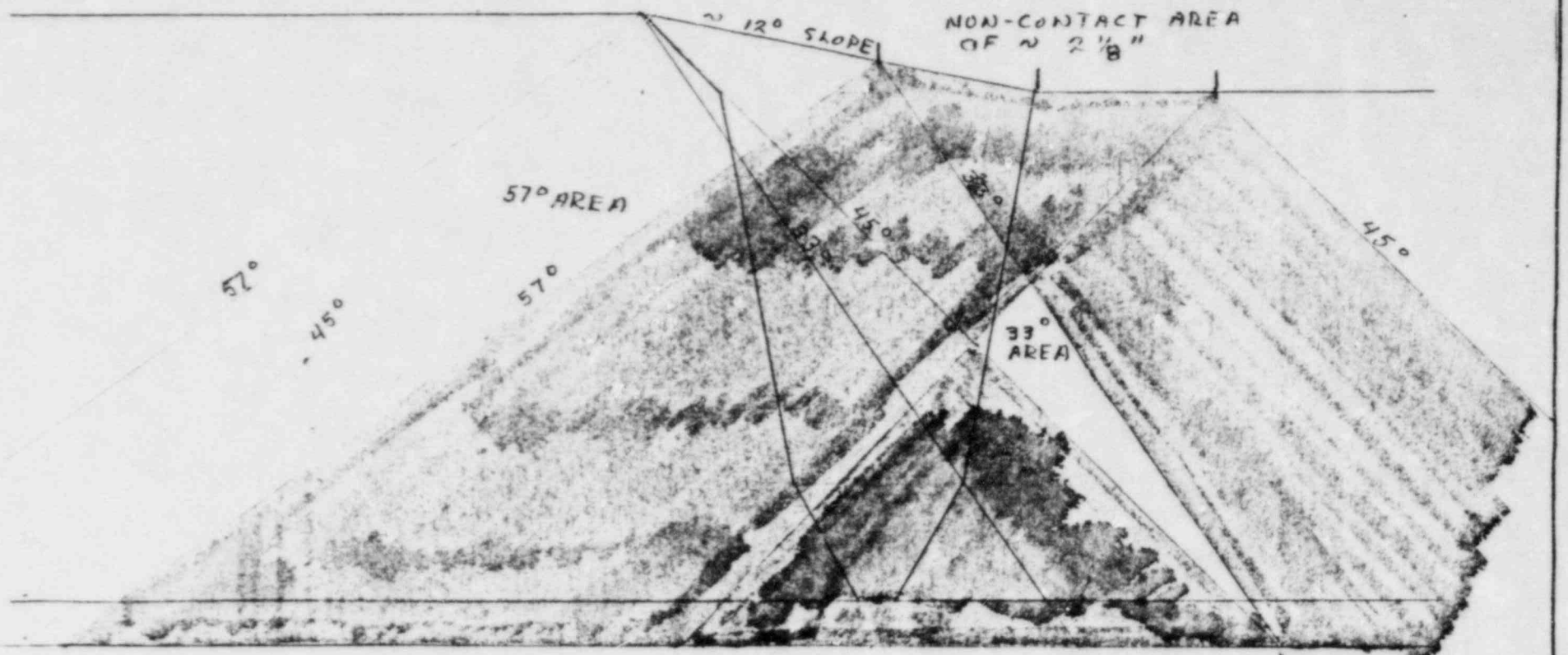
≈ 2½" LONG

TYP. 360°

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

RED AREA INDICATES NON-COVERAGE AREAS WITH IN THE TEST MATERAL



GREEN AREA INDICATES 45° COVERAGE FROM THE 2 1/4 5 SCANS OF THE WELD ROOT AREA.

SWEEP BACK FROM 45° TO 33°

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Dan Payne ANII 3/22/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2/13	Zone 13 R 2 F.C 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-23 R.0	O.D.	Gary Longenecker II	Daniel T Jones	3-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace Type 40 Batch No 8119
Cold leg RC Pump 2B to S.G. #2	~~36~~ 30"	Butt	UT-6	

Continuation Sheet Attached: ✓ Yes ___ No

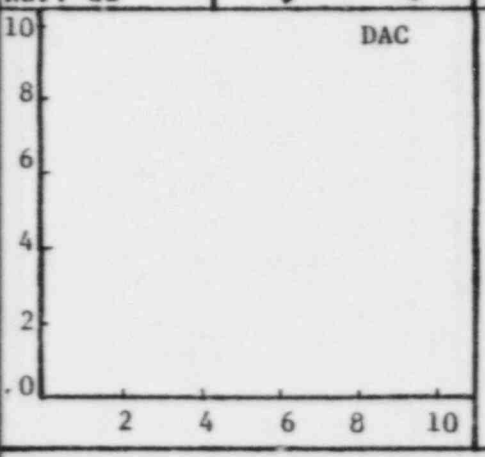
Field Changes: Yes ___ No ✓ If Yes, Number

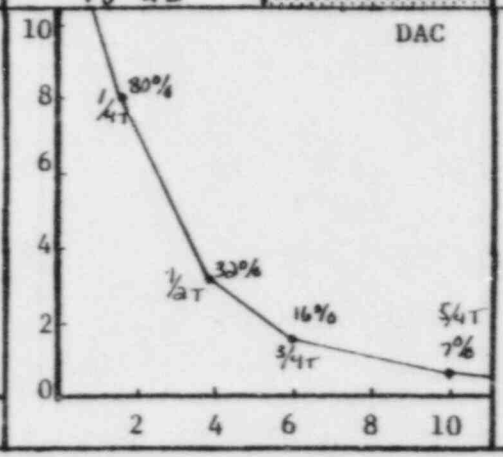
Transducer	0°	45°	60°
S/N	N/A	N/A	607152
Size			.5"
Frequency			2.25
Beam Angle			40°

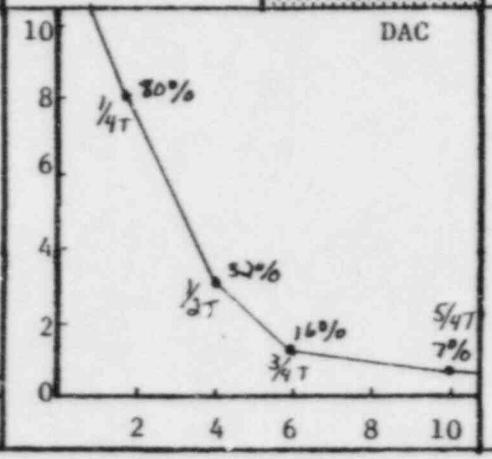
Instrument

Mfgr.	Sonic	Model	Mark I
S/N	05304E	RepRate	1K
Reject	off	Filter	off
Damp	min.	Coax	6'
Freq.	2.25	Video	Normal

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
					Sound Entry Point To:					Sound Entry Point To:			0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC		Signal Amp.	Sweep	Scribe Line	50% DAC		In	Out	In	Out	In	Out
													N/A	N/A	N/A	N/A	10:40	11:20
1/4 T	N/A	N/A	80%	2	1 1/2	1 1/4	1 13/16	80%	2	1 1/2	1 1/4	1 13/16						
1/2 T			32%	4	3 1/8	2 3/4	3 9/16	32%	4	3 1/8	2 3/4	3 9/16						
3/4 T			16%	6	4 5/8	3 15/16	5 7/16	16%	6	4 5/8	3 15/16	5 7/16						
5/4 T			7%	10	N/A	N/A	N/A	7%	10	N/A	N/A	N/A						
Ref. dB			48 db															







Additional Comments/Sketch

1/2" USED FOR BETTER COVERAGE

Dan Payne ANII 3/22/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop	Iso/drawing No.
LP+L	Waterford	3	2	Zone 13 R2 F.C.3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
1512.3 R.0	O.D.	Gary Longenecker II	Daniel B. Jones	3-19-82

Component/Piping System	Pipe Size ~~at~~	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg - R.C. Pump 2B to 5.6 #2	~~36~~ 30"	Butt	UT-6	Sonotrace 410 #8119

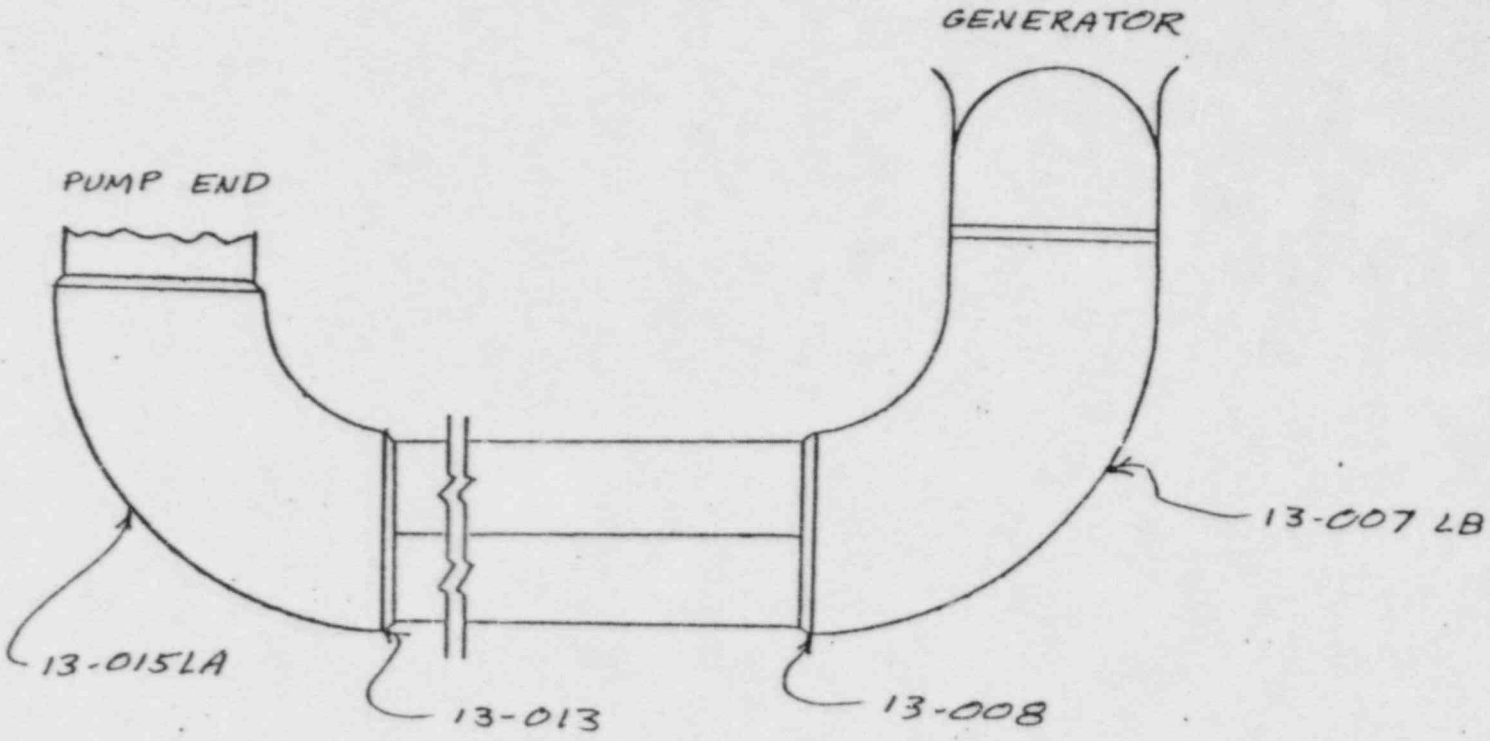
Weld No.	Xfer Check	Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-015LA	N/A	N/A	N/A	Yes	N/A	N/A	N/A	Clean	Ground	NI	Sat.	See attached Sheet

Form UT-101a

2/82

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



The Virginia Corp. of Richmond

Date 3-19-82

Page 4 of 4

To:

Subject REMARKS
150 13 R-2 F.C.-3

WELD NO 13-01SLA EXAMINED GROUND AREA'S WITH 1/2" DIA 60° SHEAR WAVE THAT WOULD NOT PERMIT CONTACT WITH 1." DIA. 60° SHEAR WAVE. 5 SCAN ONLY.

AREA 1 FROM DATUM IN 7 DIRECTION 46 1/2" TO 47 1/2" ON 5 SIDE FROM WELD CENTERLINE 4" TO 6."

AREA 2 FROM DATUM IN 7 DIRECTION 51" TO 51 3/4" ON 5 SIDE FROM WELD CENTERLINE 4 3/8" TO 5 1/2".

Signed Gary Longenecker

The Virginia Corp. of Richmond

Don Payne ANII 4/2/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
L P & L	WATERFORD	3	2B / 13

Component/Piping System	Examiner/Level	Date
Cold leg 3/6 #2 TO RCP 2D	Michael W Blew II	3-25-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-2.5 REV 0	ZONE 13 RCS-2 FIG. 3	Daniel Jensen	[✓] Yes [ ] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	AEROTECH	Size	.50"
Model	MARK I			Cal. Block	UT-4
S/N	05303E	Freq.	1 MHz	Cal. Block	UT-6
Reject	OFF			Range Cal.	5"
Damp.	6	Serial No.	M15838	Calibration Checks	
Freq.	1			12:45	IN
Rep. Rate	3K	Coax. Cable	12' BNC TO BNC	2:45	CHECK
Filter	HIGH			4:30	OUT
Video	NORM	Gain	43 db		
Couplant	SONOTRACE 40 S/N 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
13-001	12	3.40"	3.65"	3.45"	13-003LB	6"	3.50"	3.50"	3.55"
13-001	2	3.40"	3.35"	3.30"	13-003LB	12"	3.50"	3.40"	3.40"
13-001	4	3.35"	3.35"	3.30"	13-003LB	18"	3.50"	3.40"	3.45"
13-001	6	3.35"	3.30"	3.35"	13-003LB	24"	3.50"	3.45"	3.45"
13-001	8	3.35"	3.30"	3.35"	13-003LB	30"	3.50"	3.40"	3.50"
13-001	10	3.40"	3.40"	3.30"	13-003LB	36"	3.45"	3.40"	3.50"
13-002	12	3.50"	3.45"	3.00"	13-003LB	42"	3.45"	3.55"	3.55"
13-002	2	3.20"	3.30"	3.40"	13-003LB	48"	3.45"	3.50"	3.60"
13-002	4	3.40"	3.30"	2.90"	13-004LA	3"	3.55"	3.55"	3.50"
13-002	6	3.35"	3.35"	2.90"	13-004LA	6"	3.50"	3.55"	3.60"
13-002	8	3.40"	3.35"	2.90"	13-004LA	9"	3.50"	3.60"	3.60"
13-002	10	3.40"	3.30"	2.95"	13-004LA	12"	3.55"	3.55"	3.60"

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet

for R. Payne ANII 8/4/82

Thickness Measurement

Continuation Page 2 of 3

Customer	Plant	Unit	Loop/Zone
L P & L	WATERFORD	3	2B / 13

Component/Piping System	Examiner/Level	Date
Cold LEG S/G #2 TO RCP 2B	Michael W Allen II	3-25-82

Procedure	Iso/Drawing No.	VCR Supervisor
151 · 2.5 REV 0	ZONE 13 REV 2 FC-3	Daniel F Jenson

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
13-004LA	15"	3.60"	3.60"	3.60"	13-009LB	7'	2.85"	2.90"	2.90"
13-004LA	18"	3.50"	3.60"	3.60"	13-009LB	8'	2.90"	2.90"	2.85"
13-005	12	3.70"	3.55"	3.50"	13-010LA	1'	2.85"	2.80"	2.90"
13-005	2	3.55"	3.55"	3.55"	13-010LA	2'	2.95"	2.85"	2.90"
13-005	4	3.55"	3.55"	3.60"	13-010LA	3'	2.95"	2.85"	2.90"
13-005	6	3.55"	3.55"	3.55"	13-010LA	4'	2.90"	2.85"	2.85"
13-005	8	3.60"	3.60"	3.60"	13-010LA	5'	2.90"	2.85"	2.85"
13-005	10	3.65"	3.60"	3.55"	13-010LA	6'	2.90"	2.85"	2.85"
13-006LA	6"	3.40"	3.50"	3.50"	13-010LA	7'	2.90"	2.85"	2.85"
13-006LA	12"	3.45"	3.55"	3.50"	13-010LA	8'	2.90"	2.85"	2.85"
13-006LA	18"	3.45"	3.55"	3.55"	13-014LB	6"	3.45"	3.45"	3.55"
13-006LA	24"	3.50"	3.55"	3.50"	13-014LB	12"	3.40"	3.45"	3.60"
13-006LA	30"	3.45"	3.50"	3.50"	13-014LB	18"	3.50"	3.50"	3.60"
13-006LA	36"	3.50"	3.50"	3.55"	13-014LB	24"	3.40"	3.45"	3.65"
13-009LB	1'	2.90"	2.85"	2.90"	13-014LB	30"	3.40"	3.40"	3.60"
13-009LB	2'	2.95"	2.90"	2.85"	13-014LB	36"	3.40"	3.40"	3.60"
13-009LB	3'	2.90"	2.90"	2.90"	13-014LB	42"	3.40"	3.45"	3.55"
13-009LB	4'	2.90"	2.90"	2.90"	13-018	12	3.30"	3.00"	3.65
13-009LB	5'	2.90"	2.90"	2.85"	13-018	2	3.30"	3.40"	3.60
13-009LB	6'	2.90"	2.90"	2.85"	13-018	4	3.20"	2.90"	3.60

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet

for D. Payne ANII 4/2/82

Thickness Measurement

Continuation Page 3 of 3

Customer	Plant	Unit	Loop/Zone
L P & L	WATERFORD	3	2B / 13

Component/Piping System	Examiner/Level	Date
Cold LEG 3/6 # 2 TO RCP 2B	Michael W Blew II	3-25-82

Procedure	Iso/Drawing No.	VCR Supervisor
151-2.5 REV 0	ZONE 13 REV 2 FC-3	Daniel Jensen

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
13-018	6	3.25"	2.90"	3.50"	NA	NA	NA	NA	NA
13-018	8	3.10"	2.90"	3.60"					
13-018	10	3.50"	2.95"	3.65"					
13-019LB		2.90	2.90	2.90					
13-020LA		2.90	2.90	2.85					

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Don Rayne ANII 4/2/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P AND L	WATERFORD	3	2B/13	ZONE 13, REV 2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
ISI 2,3 REV 0	O.D.	[redacted] II	Daniel J Jones	3-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: SONOTRACE Type 40 Batch No 8119
COLD LEG RCP 2B STEAM GEN #2	36"	BUTT	UT-6	

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

Mfgr.	SONIC	Model	FTS MARK 1
S/N	01610E	RepRate	1K
Reject	OFF	Filter	ri
Damp	MIN	Coax	12' BNC
Freq.	2	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	80%	1.5
1/2 T	80%	3.0
3/4 T	42%	4.5
1 T	SAT	6.0
Ref. dB	31	

2 & 5 Scan

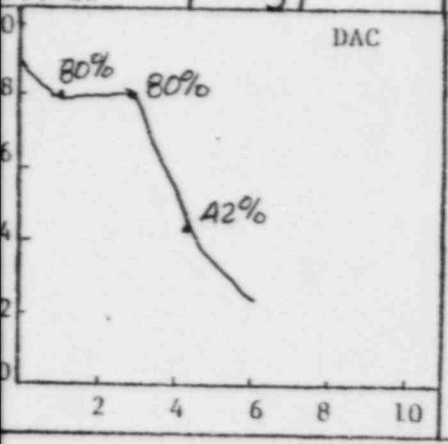
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA		
↓	↓		

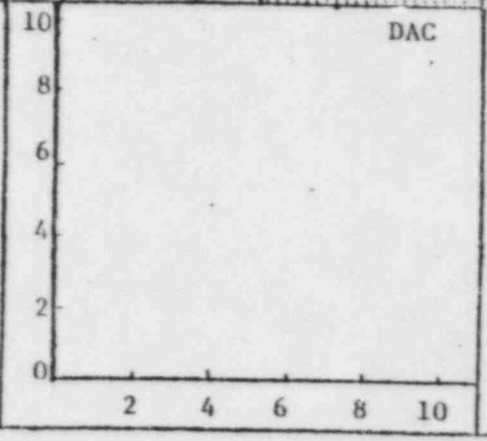
7 & 8 Scan

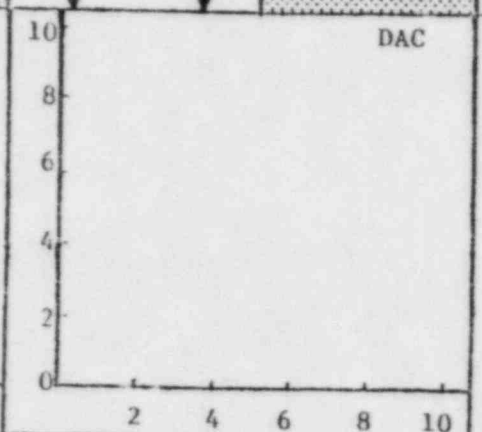
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA		
↓	↓		

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
845	1144	NA	NA	NA	NA
1313	1635				







Additional Comments/Sketch

Form UT-101

2/82

Don Payne ANII 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
L P AND L	WATERFORD	3	2B/13	ZONE 13, REV 2, F.G. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV 0	O.D.	R Stanfield	Daniel F Jones	3-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG RCP 2B STEAM GEN #2	36"	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-001		YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
13-002		YES	↓	↓	↓	YES		CLEAN	SMOOTH	NI	SAT	
13-018		YES				YES		CLEAN	SMOOTH	NI	SAT	
13-019LB		YES				YES		CLEAN	SMOOTH	NI	SAT	
13-020LA		YES				YES		CLEAN	SMOOTH	NI	SAT	

Dan Payne, ANII 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP AND L	WATERFORD	3	2B/13	ZONE 13, REV 2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV 0	O.D.	C R Stauff II	Daniel B Jenson	3-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: SONOTRACE
COLD LEG RCP 2B STEAM GEN # 2	36"	BUTT	UT-6	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

Mfgr.	SONIC	Model	ETS MARK 1
S/N	01610E	RepRate	1K
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12' BNC
Freq.	2	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	80%	1.5
1/2 T	80%	3.0
3/4 T	42%	4.5
1 T	SAT	6.0
Ref. dB	31	

2 & 5 Scan

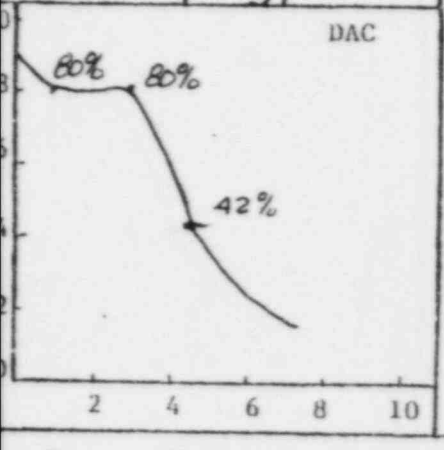
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA		

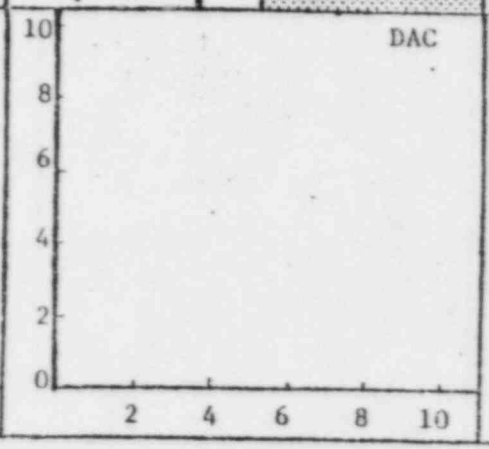
7 & 8 Scan

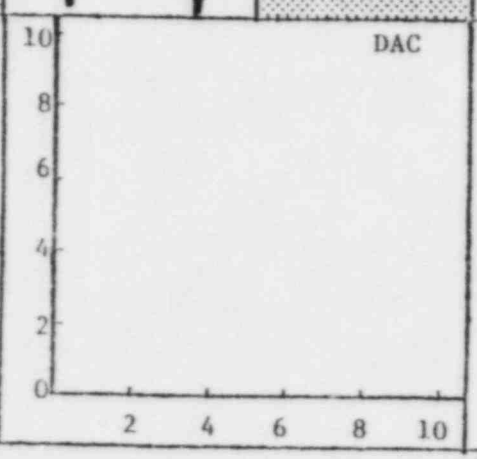
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA		

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
815	1035	NA	NA	NA	NA







Additional Comments/Sketch

Form UT-101

2/82

Don Payne ANII 4/3/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
L P AND L	WATERFORD	3	2B	ZONE 13, REV 2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV 0	O.D.	C R Stanfield II	Daniel J Jenson	3-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG R.C.P 2B STEAM GEN #2	36"	BUTT	UT-6	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	
13-	004LA	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
13-	005	YES				YES		CLEAN	SMOOTH	NI	SAT	
13-	006LA	YES				YES		CLEAN	SMOOTH	NI	SAT	
13-	009LB	YES				YES		CLEAN	SMOOTH	NI	SAT	
13-	010LA	YES				YES		CLEAN	SMOOTH	NI	SAT	
13-	014LB	YES				YES		CLEAN	SMOOTH	NI	SAT	
13-	003LB	YES				YES		CLEAN	SMOOTH	NI	SAT	

Ultrasonic Examination Report

Don Payne ANII 4/2/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP & L	Waterford	3	2B/13	Zone 13 Rev 2 FC-3

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
ISI-23 Rev 0	OD	[signature] Level III	Daniel [signature]	3-27-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant
Cold Leg - RCP 2B to Steam Gen. #2	30"	Butt	UT - 6	Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached ✓ Yes ___ No

Field Changes: Yes ___ No ✓
If Yes, Number

Transducer	0°	45°	60°
S/N	NA	LA134	NA
Size	↓	1.0"	↓
Frequency	↓	2.25 MHz	↓
Beam Angle	↓	44°	↓

Instrument

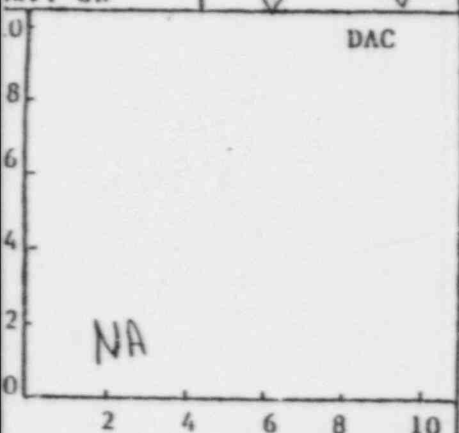
Mfgr.	Sonic	Model	FTS Mark I
S/N	01610E	RepRate	1K
Reject	off	Filter	off
Damp	off	Coax	12'
Freq.	2 MHz	Video	Diff

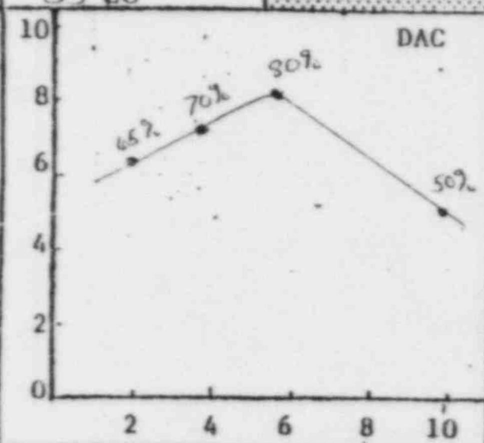
Calibration 0° / 2 & 5 Scan / 7 & 8 Scan

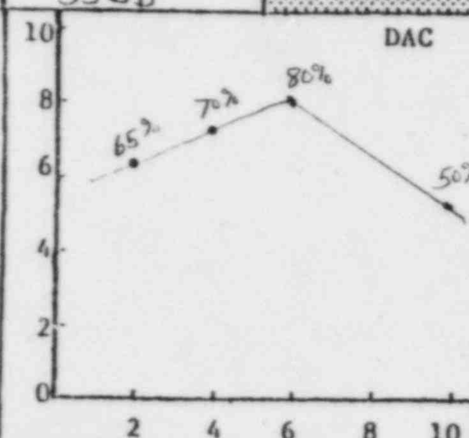
Calibration Reflector Location	0° Signal Amp.	0° Sweep	2 & 5 Signal Amp.	2 & 5 Sweep	2 & 5 Sound Entry Point To: Scribe Line	2 & 5 Sound Entry Point To: 50% DAC		7 & 8 Signal Amp.	7 & 8 Sweep	7 & 8 Sound Entry Point To: Scribe Line	7 & 8 Sound Entry Point To: 50% DAC	
1/4T	NA	NA	65%	2	5/8	13/32	1 1/8	65%	2	5/8	13/32	1 1/8
1/2T	↓	↓	70%	4.05	1 21/32	1 7/16	2	70%	4.05	1 21/32	1 7/16	2
3/4T	↓	↓	80%	6	2 5/8	2 5/16	2 23/32	80%	6	2 5/8	2 5/16	2 23/32
5/4T	↓	↓	50%	10				50%	10			
Ref. dB	↓	↓	55 DB					55 DB				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0800	1140	NA	NA
↓	↓	1315	1555	↓	↓







Additional Comments/Sketch

Don Payne ANII 7/8/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP AND L	WATERFORD	3	2B	ZONE 13 REV 2 F.C.3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV 0	O.D.	CR Stauff II	Daniel L. Jens	3-27-82

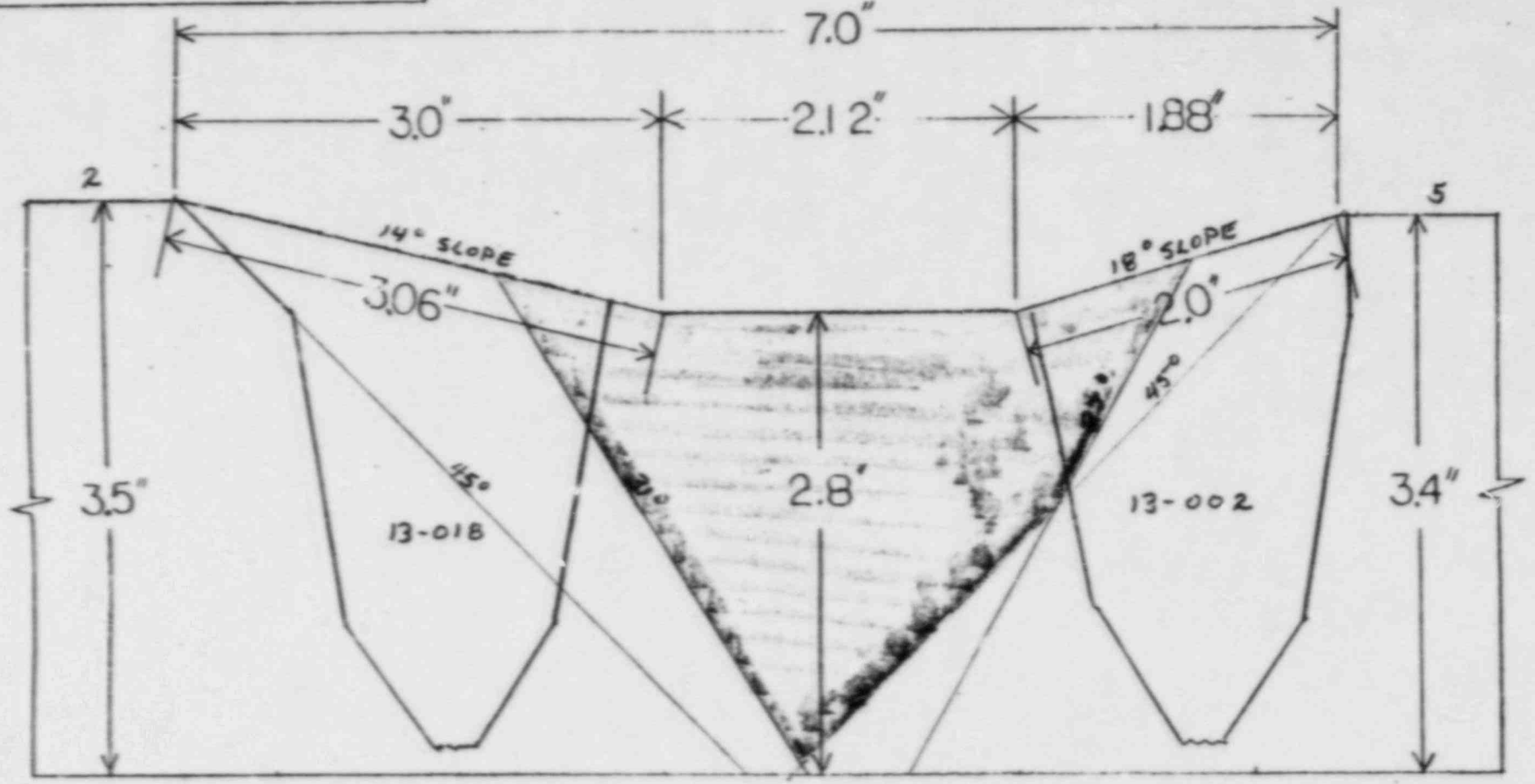
Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG RCP 2B STEAM GEN #2	~~36~~ "30"	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-	001	NA	PAR	PAR	YES	NA	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	002	↓	PAR	PAR	YES	↓	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	018		PAR	PAR	YES		SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	019LB		PAR	PAR	YES		SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	020LA		PAR	PAR	YES		SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	003LB		YES	YES	YES			CLEAN	SMOOTH	NI	SAT	
13-	004LA	↓	YES	YES	YES	↓		CLEAN	SMOOTH	NI	SAT	

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

ZONE 13



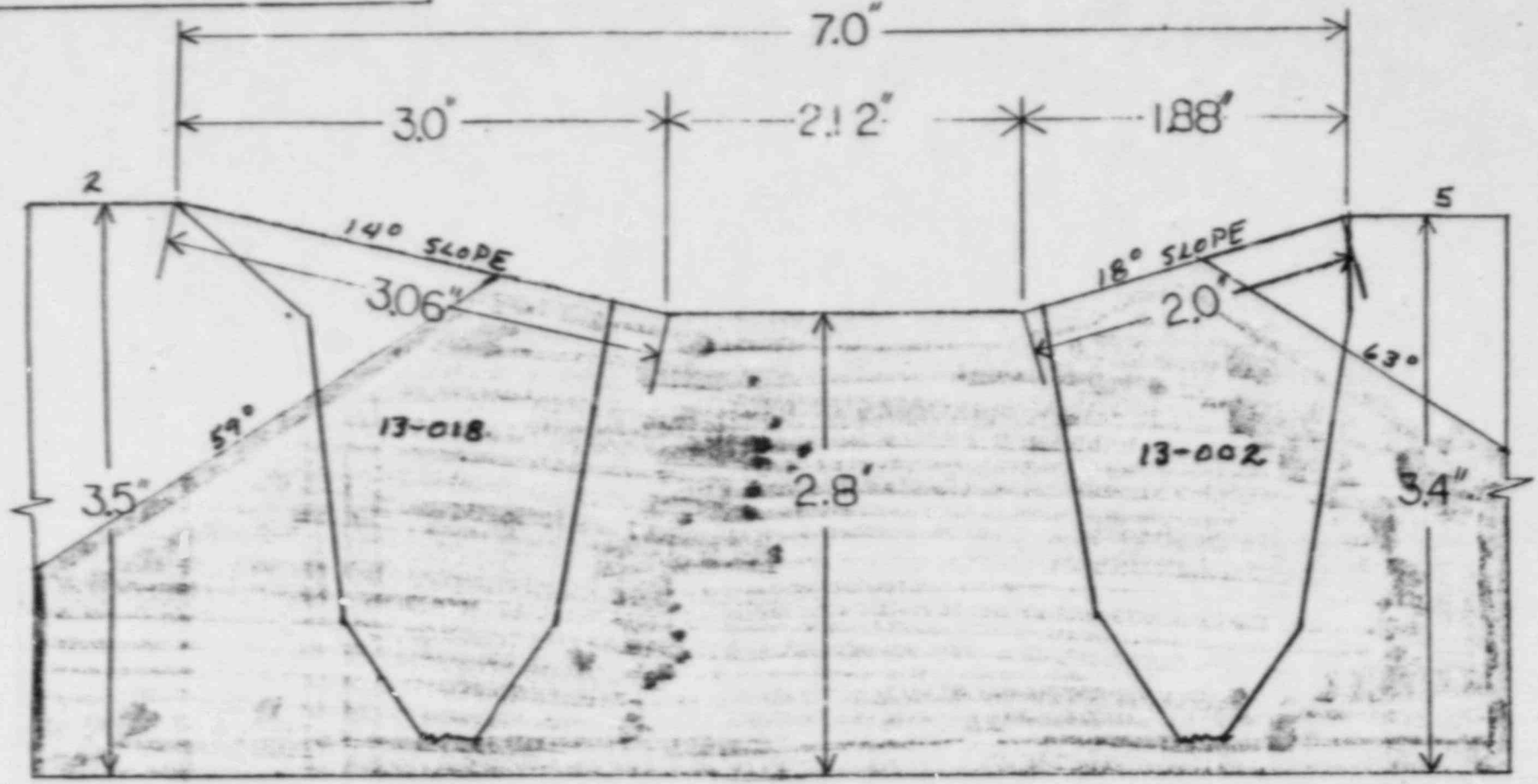
RED SHADED AREA SHOWS AREA NOT COVERED IN THE 2 SCAN ON WELD NO. 1-18 AND SCAN 5 ON WELD 13-002, USING A 1.0" DIA TRANSDUCER. (45°)

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

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

ZONE 13



RED SHADED AREA SHOWS AREA NOT COVERED WITH SCAN 5 ON WELD 13-018 AND SCAN 2 ON WELD 13-002, USING A 1" DIA TRANSDUCER 45°

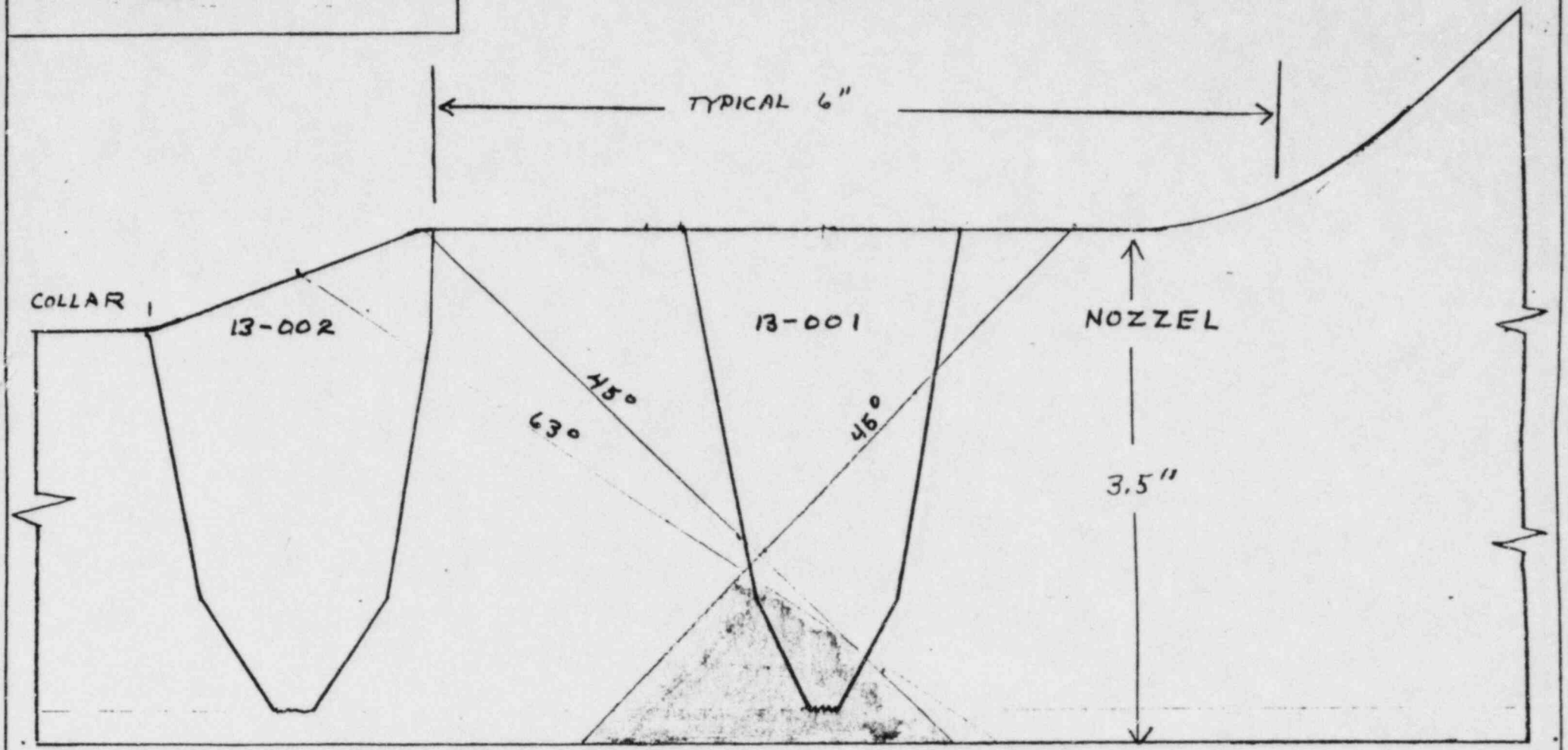
NOTE: TYPICAL COLD LEG TO STEAM GENERATOR FIT-UP SHOWN. EXACT DIMENSIONS MAY DIFFER.

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

NOZZEL CROSS SECTION

ZONE 13



RED SHADED AREA SHOWS AREA NOT COVERED BY 45° ANGLE BEAM EXAM. (SCAN'S 1 & 5)
WELD NO. 13-001.

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

The Virginia Corp. of Richmond

Date _____

Page 3 of 6

To: _____

Subject LOOP 2B/ZONE 13 LIMITATIONS

WELD 13-001 PARTIAL 2 AND 5 SCAN DUE TO GEOMETRY. SEE PAGE 6.

WELD 13-002 PARTIAL 2 AND 5 SCAN DUE TO GEOMETRY. SEE PAGES 4 AND 5

WELD 13-018 PARTIAL 2 AND 5 SCAN DUE TO GEOMETRY. SEE PAGES 4 AND 5

WELDS 13-019 LB AND 13-020 LA PARTIAL 2 AND 5 SCAN DUE TO GEOMETRY. SEE PAGES 4 AND 6

Signed C R [illegible]

The Virginia Corp. of Richmond

Ultrasonic Examination Report Don Rayne ANII 4/2/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP AND L	WATERFORD	3	2B/13	ZONE 13, REV 2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
ISI 2.3 REV 0	O.D.	CR Stanfield II	Daniel D Benson	3-29-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: SONOTRACE
COLD LEG RCP 2B STEAM GEN # 2	36" 30"	BUTT	UT-6	Type 40 Batch No. 8119

Continuation Sheet Attached: √ Yes ____ No

Field Changes: Yes ____ No √ If Yes, Number

Transducer	0°	45°	60°
S/N	NA	~~G 07152~~ *	NA
Size		1/2	
Frequency		2.25 MHz	
Beam Angle		45°	

Instrument

Mfgr.	SONIC	Model	ETS MARK II
S/N	01610 E	RepRate	1K
Reject	OFF	Filter	Hi
Damp	MIN	Conx	6'
Freq.	2	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	NA	NA
1/2 T		
3/4 T		
5/4 T		
Ref. dB		

2 & 5 Scan

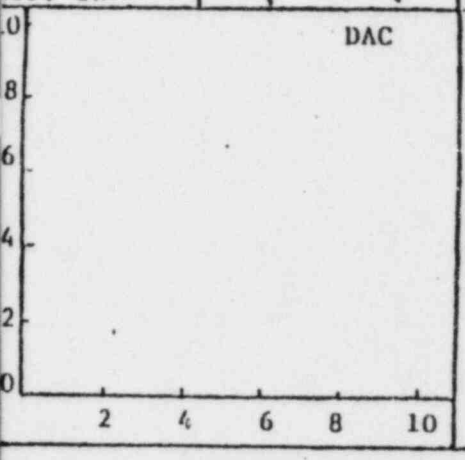
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80	2.0	29/32	3/4	1"
50	4.0	1 3/4	1 5/8	2 1/16
30	6.0	2 11/16	2 7/16	3"
10	10.0			
40				

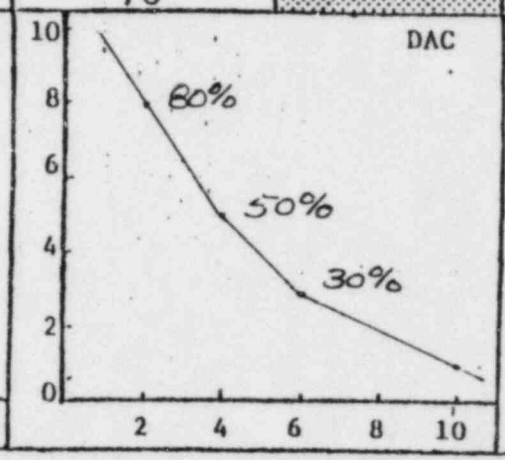
7 & 8 Scan

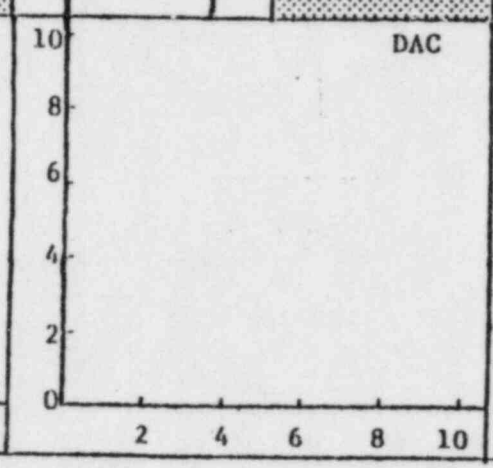
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
NA	NA		

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	1302	1445	NA	NA







Additional Comments/Sketch

* G 07152 DLT

Don Payne ANII 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP AND L	WATERFORD	3	2B	ZONE 13, REV 2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3, REV 0	O.D.	CR Sanford II	Daniel J Jones	3-29-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG RCP 2B TO STEAM GEN #2	36" 30"	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-	001	NA	PAR	PAR	NA	NA	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	002		PAR	PAR			SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	018		PAR	PAR			SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	019LB		PAR	PAR			SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
13-	020LA	↓	PAR	PAR	↓	↓	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	

The Virginia Corp. of Richmond

Date 3-29-82

To:

Subject ZONE 13 INSPECTION LIMITATIONS

WELDS 13-001, 13-002, 13-018, 13-019LB, AND 13-020LA HAD PARTIAL Z AND 5 SCAN COVERAGE DUE TO O.D. GEOMETRY.

See Page 4 of 4 for additional partial information.

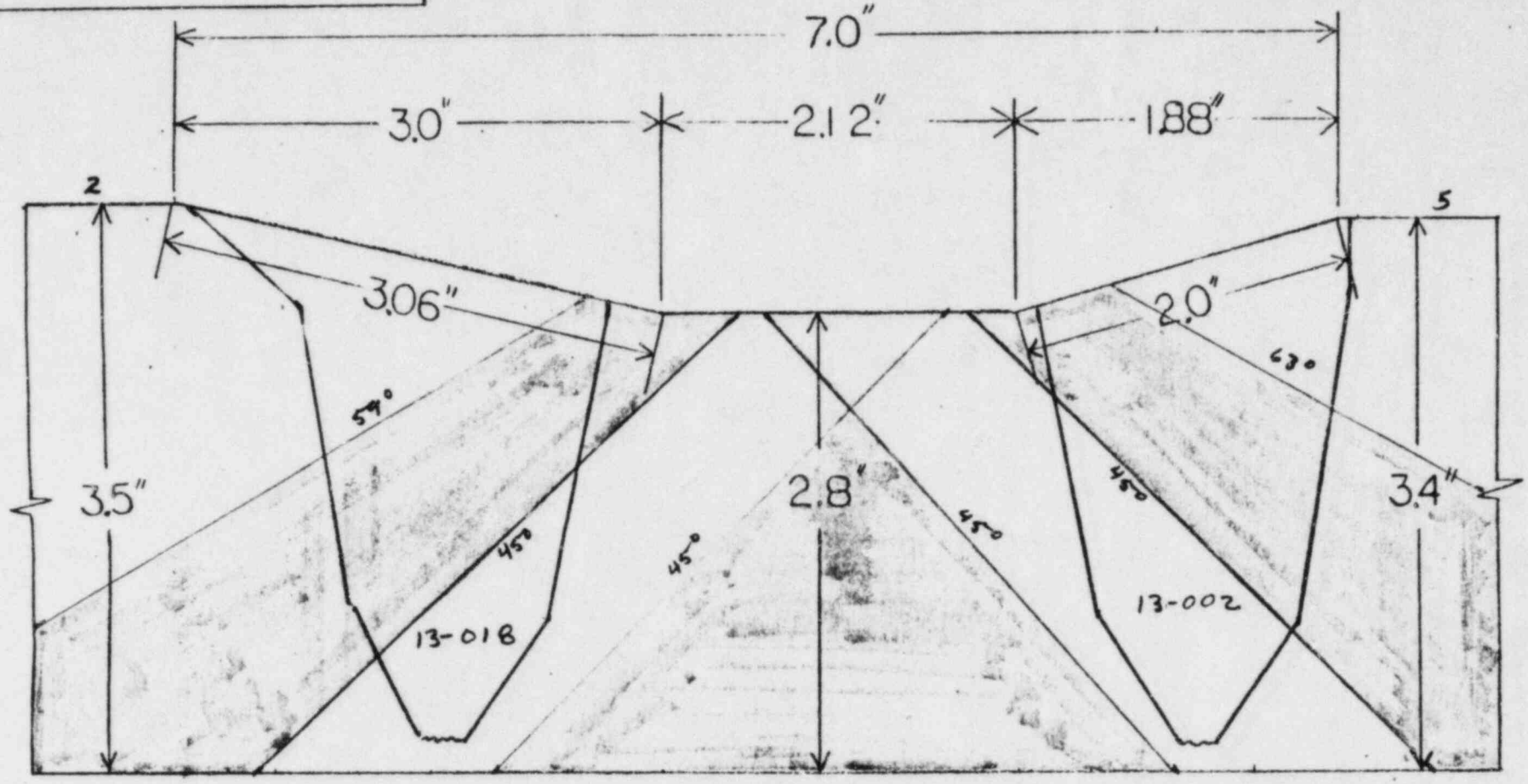
Daniel Jensen

Signed C.R. Stauffer

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

ZONE 13



RED SHADED AREAS SHOW AREAS NOT COVERED WITH THE 2 SCAN ON WELD 13-002 AND THE 5 SCAN ON WELD 13-018, USING A ½" MINI. TRANSDUCER. (45°)

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

The Virginia Corp. of Richmond

Ultrosonic Examination Report Don Payne ANII 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 Taubb II	VCR Supervisor: Daniel J Dina
Date: 3-29-82			
Component/Piping System: COLD LEG-RCP 2B 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°
S/N	NA	L19134	NA
Size	↓	1"	↓
Frequency		2.25 MHZ	
Beam Angle	↓	45°	↓

Instrument

Mfer.	SONIC	Model	FTS MARK I
S/N	01610E	RepRate	IK
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12' BNC
Freq.	2	Video	NORM

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	846	1038	NA	NA

Calibration 0°

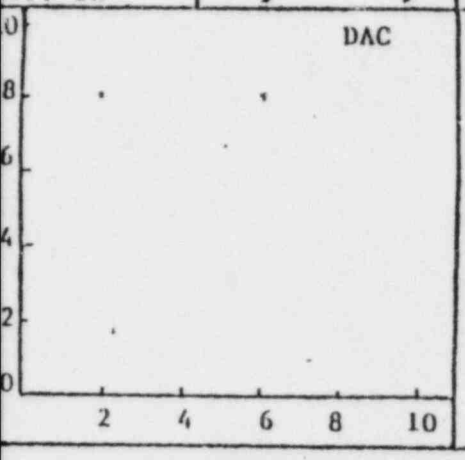
Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	NA	NA
1/2 T	↓	↓
3/4 T		
5/4 T		
Ref. dB		

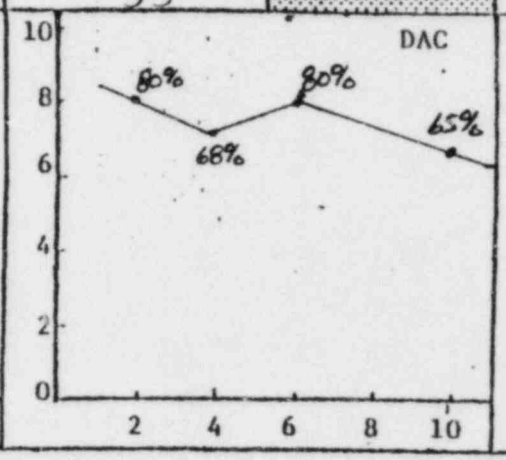
2 & 5 Scan

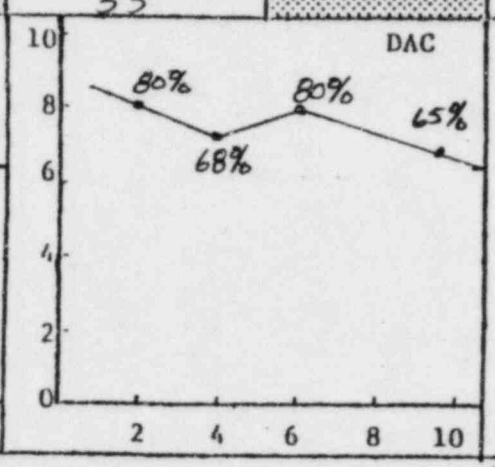
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80	2.0	5/8	7/16	3/32
68	4.0	1 11/16	1 3/8	1 3/32
80	6.0	2 5/8	2 3/16	2 9/32
65	10.0			
55				

7 & 8 Scan

Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80	2.0	5/8	7/16	3/32
68	4.0	1 11/16	1 3/8	1 3/32
80	6.0	2 5/8	2 3/16	2 9/32
65	10.0			
55				







Additional Comments/Sketch

Don Payne ANII 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP AND L	WATERFORD	3	2B	ZONE 13, REV 2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 23 REV 0	O.D.	CR Stanley II	Daniel Dyns	3-29-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG RCP 2B STEAM GEN #2	36" 30"	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-	006LA	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
13-	009LB	↓	YES	YES	YES	↓		CLEAN	SMOOTH	NRI	SAT	
13-	010LA	↓	YES	YES	YES	↓		CLEAN	SMOOTH	NI	SAT	
13-	014LB	↓	YES	YES	YES	↓		CLEAN	SMOOTH	NI	SAT	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Dan Rayne ANII 4/2/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/13	ZONE 13, REV. 2, FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.3 REV. 0	OD	BURLINGAME II	Dan Rayne	3-30-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: SONOTRACE
REACTOR COOLANT	30" OD ~~Sch~~ STD	BUTT	UT-6 3.5"	Type 40 Batch No. 8117

Continuation Sheet Attached: Yes ✓ No

Field Changes: Yes ____ No ✓

If Yes, Number

Transducer	0°	45°	60°
S/N	N/A	N/A	LMAC1
Size			40"
Frequency			2.25 MHz
Beam Angle	↓	↓	60°

Instrument

Mfer.	SONIC	Model	FTS-MK1
S/N	0530-1F	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MIN	Conx	12'
Freq.	3.25 MHz	Video	NORM.

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4		
1/2		
3/4		
5/4		
Ref. dB	↓	↓

2 & 5 Scan

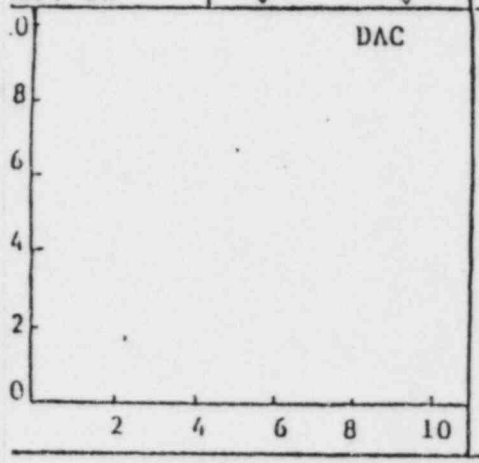
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2	1 5/8	1 1/4	1 27/32
68%	4	3 11/32	3 1/32	3 21/32
55%	6	4 3/4	4 11/32	5 11/32
10%	10			
74 dbG				

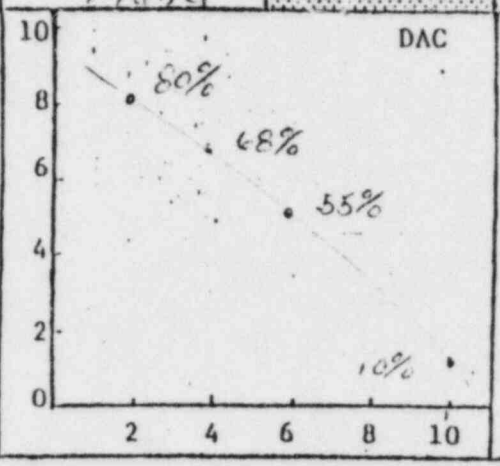
7 & 8 Scan

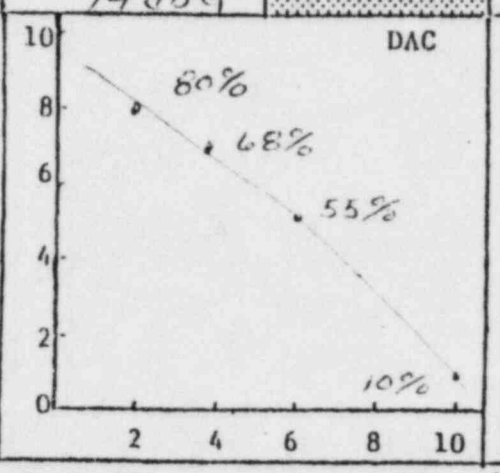
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2	1 5/8	1 1/4	1 27/32
68%	4	3 11/32	3 1/32	3 21/32
55%	6	4 3/4	4 11/32	5 11/32
10%	10			
74 dbG				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
				1310	1700
↓	↓	↓	↓		







Additional Comments/Sketch

Don R. Payne ANII 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP&L	WATERFORD	3	2B	ZONE 13, REV. 2, FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 REV. 0	OD	BURLINGAME II	Daniel Jensen	3-30-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30" 36"	BUTT	UT-6-35"	SONOTRACE 40 #8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-001		NA	PAR	PAR	YES	NA	SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
13-002		↓	PAR*	PAR	PAR	↓	SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
13-003	LB		YES	YES	YES			CLEAN	GROUND	NI	SAT	
13-004	LA		YES	YES	YES			CLEAN	GROUND	NI	SAT	
13-006	LA		YES	YES	YES			CLEAN	GROUND	NI	SAT	
13-009	LB		YES	YES	YES			CLEAN	GROUND	NI	SAT	
13-010	LA		YES	YES	YES			CLEAN	GROUND	NI	SAT	
13-014	LB		YES	YES	YES			CLEAN	GROUND	NI	SAT	
13-005			PAR	PAR	PAR		SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
13-018			PAR	PAR*	PAR		SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
13-019	LB		PAR	PAR	NO*		SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
13-20	LA	↓	PAR	PAR	NO*	↓	SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	

* SEE SUPPLEMENTAL CALIBRATION AND EXAMINATION, USING ½" MINI TRANSDUCER AND WEDGE

The Virginia Corp. of Richmond

Date _____

To: _____

Subject ZONE 13 INSPECTION LIMITATIONS

13-001 (SEE PAGE) THERE WAS NOT ENOUGH SURFACE AREA TO PERMIT THE BEAM TO CONTACT THE ROOT AREA OF THE WELD. ONLY THE UPPER HALF OF THE WELD AND H.A.Z. WAS EXAMINED. THE LOWER PORTION OF THE WELD WAS NOT EXAMINED. ~~THE ISSUE~~ TO OBTAIN A ROOT AREA EXAMINATION; DIFFERANT EQUIPMENT AND PROCEDURES WILL BE REQUIRED.

13-002 (SEE PAGE) PARTIAL EXAMINATION DUE TO OD SURFACE GEOMETRY. THE ROOT AREA WAS NOT SCANED WITH SCAN 2, A SMALL PERCENTAGE OF THE UPPER PORTION WAS LIMITED DURING SCAN 5. A SUPPLEMENTAL EXAMINATION WAS PREFORMED WITH A MINI ½" TRANSDUCER AND WEDGE IN THE 2 SCAN DIRECTION. THIS INCREASED THE VOLUME OF THE AREA TESTED, BUT THE ROOT AREA WAS STILL RESTRICTED.

13-005 A SMALL PORTION OF THE EXAM AREA WAS NOT EXAMINED DUE TO SOME MINOR OD SURFACE MISMATCH. IT IS FELT THAT A GOOD ROOT AREA EXAMINATION WAS PREFORMED

13-018 (SEE PAGE) PARTIAL EXAMINATION DUE TO OD SURFACE GEOMETRY. THE ROOT AREA WAS NOT SCANED WITH SCAN 5, A SMALL PERCENTAGE OF THE UPPER PORTION WAS LIMITED DURING SCAN 2. A SUPPLEMENTAL EXAM WAS PREFORMED WITH A MINI ½" TRANSDUCER AND WEDGE IN THE SCAN 2 DIRECTION. THIS INCREASED THE VOLUME OF AREA TESTED, BUT THE ROOT AREA WAS STILL RESTRICTED.

Signed _____

The Virginia Corp. of Richmond

Date _____

Page 4 of 9

To: _____

Subject EXAMINATION LIMITATIONS

13-019 LB AND 13-020 LA PARTIAL EXAMINATION IN THE 2 3/5 SCAN DIRECTIONS DUE TO O.D. SURFACE GEOMETRY. APPROX. 10% OF THE ROOT AREA WAS MISSED. NO 7 3/8 SCANS COULD BE PREFORMED DUE TO THE OD SURFACE GEOMETRY. A SUPPLEMENTAL EXAMINATION WAS PREFORMED USING A ½" TRANSDUCER AND WEDGE, THE VOLUME OF WELD AND WELD AREA EXAMINED WAS INCREASED BUT A MAJOR PORTION OF THE ROOT AREA WAS MISSED. APPROX. 60%

Signed _____

Dan Payne AN 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/13	ZONE 13, REV. 2, FC-3

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
ISI 2.3 REV. 0	OD	BERLINGAME II	Daniel Jenson	3-30-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
REACTOR COOLANT	30" SCH 36 STD	BUTT	UT-6 35"	Type 40 Batch No. 814

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ___ No ✓

If Yes, Number

Transducer	0°	45°	60°
S/N	N/A	N/A	E18164
Size			½"
Frequency			2.25 m
Beam Angle	↓	↓	60°

Instrument

Mfer.	SONIC	Model	FTS-4K1
S/N	05303E	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MIN.	Conx	6'
Freq.	2.25 MHZ	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
¼T		
½T		
¾T		
5/4T		
Ref. dB	↓	↓

2 & 5 Scan

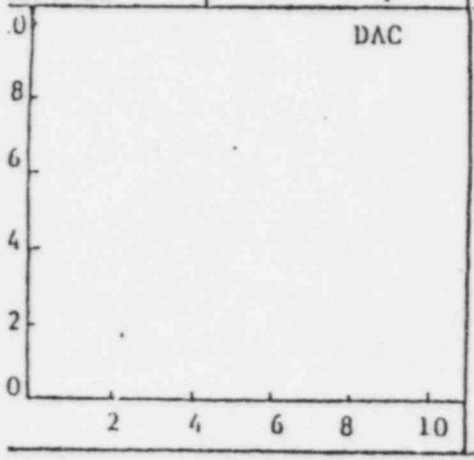
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2	1 15/32	1 3/4	1 3/4
30%	4	3 1/16	2 3/4	3 13/32
15%	6	4 3/8	2 25/32	5 3/4
4%	10			
43dbG				

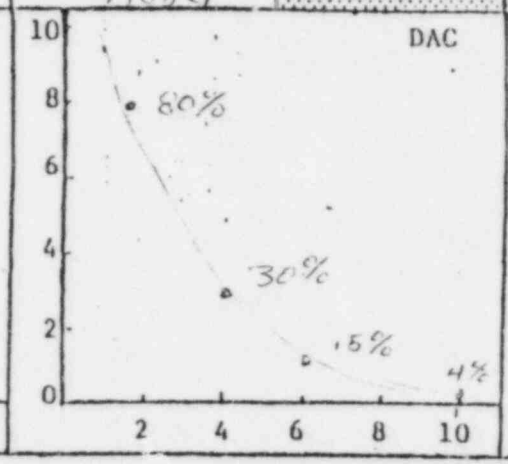
7 & 8 Scan

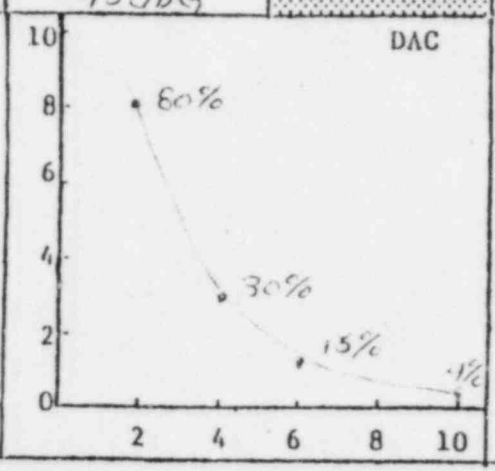
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2	1 15/32	1 3/4	1 3/4
30%	4	3 1/16	2 3/4	3 13/32
15%	6	4 3/8	2 25/32	5 3/4
4%	10			
43dbG				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
N/A	N/A	N/A	N/A	1315	1705
↓	↓	↓	↓		







Additional Comments/Sketch

½" XDUCER USED BECAUSE OF O.D. GEOM. AS PER ATTACHMENT DRAWING.

SCANS LISTED AS N.A. WERE NOT PREFORMED BECAUSE OF O.D. GEOM.

Don Payne ANII 4/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP&L	WATERFORD	3	2B	ZONE 13, REV 3, FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, REV 0	OD	BURNINGAME II	Daniel Ayers	3-30-82

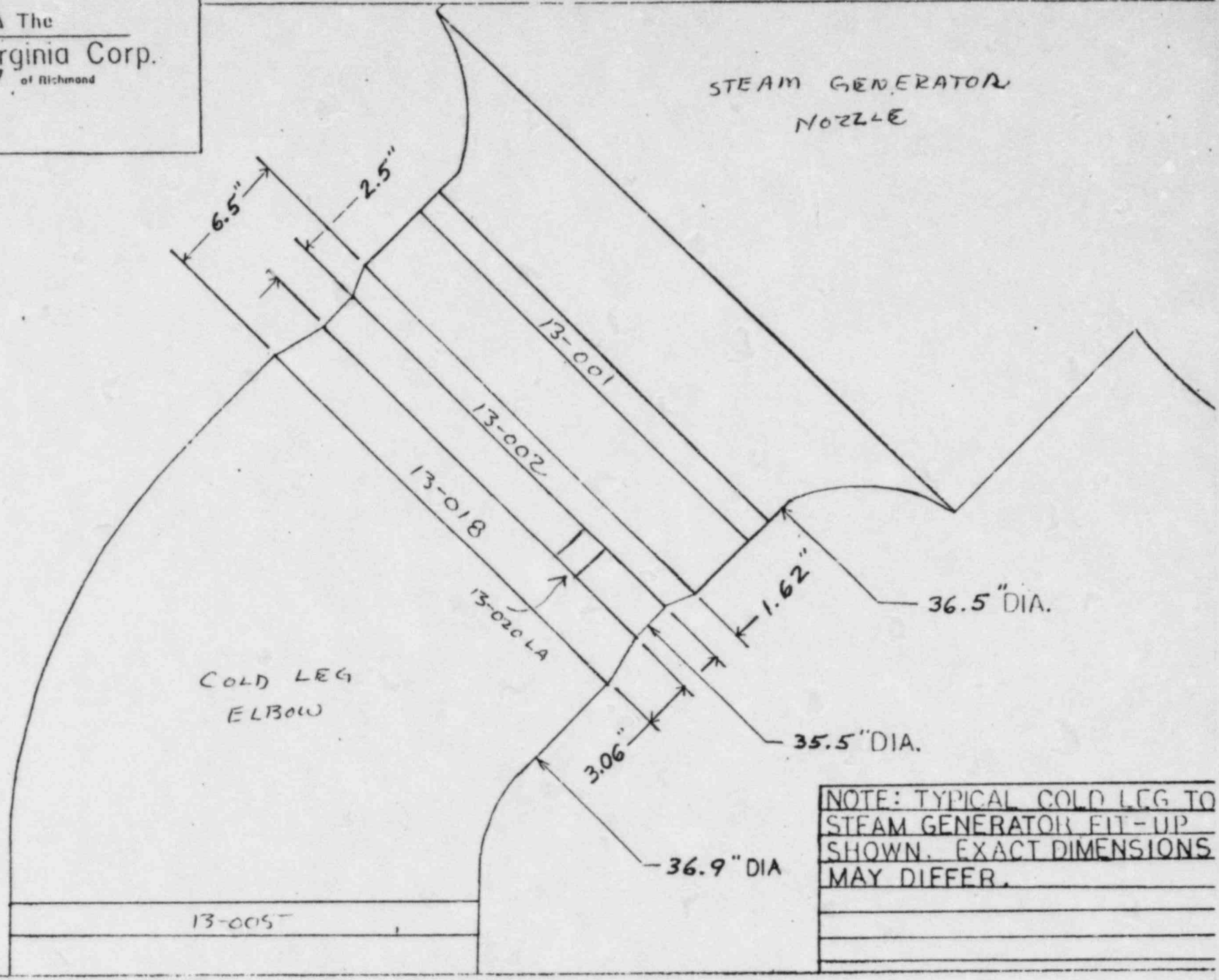
Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30" ID 36" OD	BUTT	UT-6-35"	SONICTRACE 40 #E119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-002		N/A	PAR	NA	NA	N/A		CLEAN	GROUND	NI	SAT	
13-018			NA	PAR	NA			CLEAN	GROUND	NI	SAT	
13-019	LB		NA	NA	PAR			CLEAN	GROUND	NI	SAT	
13-030	LA	↓	NA	NA	PAR	↓		CLEAN	GROUND	NI	SAT	

2:82

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



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

The Virginia Corp. of Richmond

Dan Payne ANII 4/7/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	2B / 13

Component/Piping System	Examiner/Level	Date
Reactor Coolant	BURLINGAME - II	3-31-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-2.5 Rev 0	13 Rev 2 FC-3	Daniel Burns	[ ] Yes [X] No

Equipment

Instrument	Transducer		Calibration
Mfgr. Sonic	Mfgr. Panametrics	Size .5"	Cal. Block
Model FTS Mark I			Cal. Block UT-6
S/N 780836	Freq. 2.25 MHz		Range Cal. 3.5" = 8 Div
Reject Min			Calibration Checks
Damp. Min	Serial No. 44651		0.500
Freq. 2 MHz			1.014
Rep. Rate 1K	Coax. Cable 6' twin Coax		
Filter off			
Video Norm	Gain 50 db		
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
13-011	12	3.106"	2.844"	NA					
"	2	3.15"	2.975"	↓					
"	4	3.50"	2.931"						
"	6	3.325"	2.844"						
"	8	3.412"	2.844"						
"	10	3.281"	2.844"						

Sketch/Identification

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

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2 / 13	Zone 13 R.2 F.C. 2A9 WRM

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
1S 2.3 R.0	O.D.	[illegible] II	Daniel Lyman	3-31-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type SONOTRACE 40 Batch No. 3119
Cold leg-R.C. Pump 2B to S.G. #2	34"	Butt	UT-6	

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ___ No ✓ If Yes, Number

Transducer	0°	45°	60°
S/N	44651		
Size	.5"		
Frequency	2.25 MHz		
Beam Angle	0°		

Instrument

Mfer.	Sonic	Model	Mark I
S/N	780836	RepRate	1K
Reject	Off	Filter	Off
Damp	Minimum	Coax	6'
Freq.	2.25	Video	Normal

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	80%	1.8
1/2 T	20%	4
3/4 T	12%	5.9
1 T	80%	8
	-8db	
Ref. dB	50 db	

2 & 5 Scan

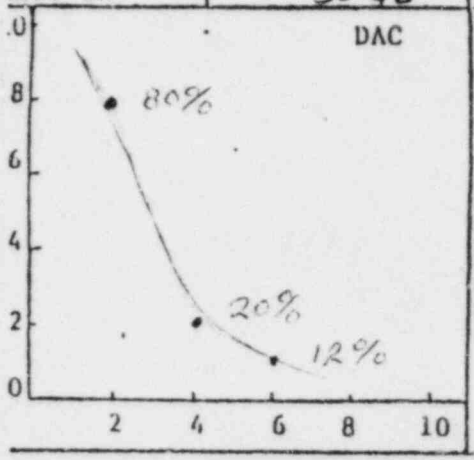
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
N A	N A	N A	N A N A

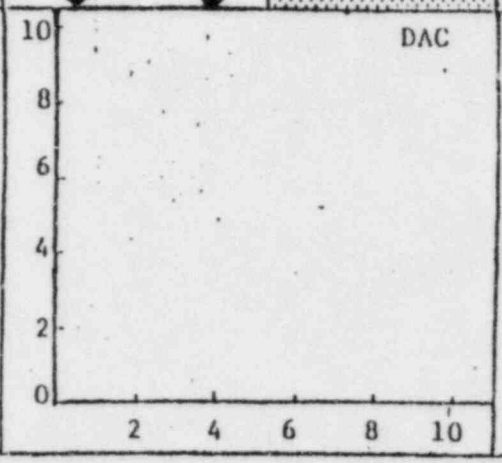
7 & 8 Scan

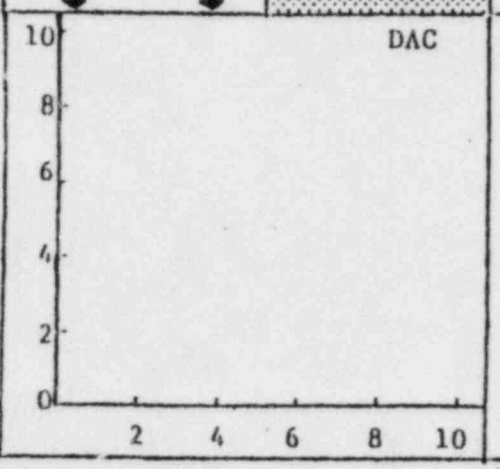
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
N A	N A	N A	N A N A

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
8:00	10:40				







Additional Comments/Sketch

M.R. Martin ANII 4-5-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	13	ZONE 13, R2, FC 23A&B

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151 23 R00	OD	BERLINGAME II	Daniel Johnson	3-31-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	36"	BUTT	UT-6, 35"	SONOTRACE 40 # 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
B-011		PAR	NA	NA	NA	PAR	SEE ATTACHED	CLEAN	GROUND	NI	SAT	

W.R. Martin, ANII 5-82

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2/13	ZONE 13 R2 F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
131 2.3 R0	O.D.	GR Burlingame II	Daniel Dena	3-31-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type	Batch No.
Cold leg-Reactor Coolant Pump 2B	36"	Butt	UT-6	Sonotrace 40	8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ___ No ✓ If Yes, Number

Transducer	0°	45°	60°
S/N		F19164	
Size		.5"	
Frequency		2.25 mHz	
Beam Angle		44°	

Instrument

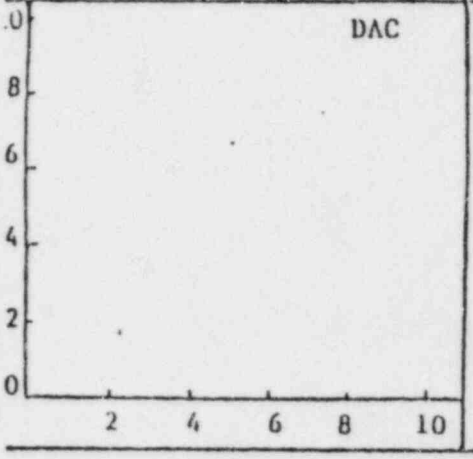
Mfer.	SONIC	Model	Mark I
S/N	01610E	RepRate	1K
Reject	off	Filter	off
Damp	MIN.	Conx	6'
Freq.	2.25	Video	Normal

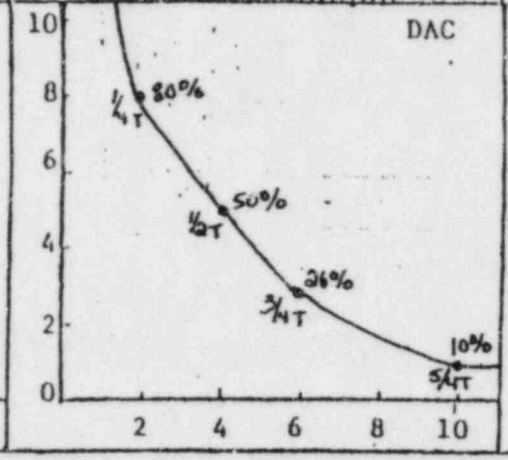
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4 T	N A		80%	2	7/8	23/32	31/32	80%	2	7/8	23/32	31/32
1/2 T			50%	4	1 35/32	1 21/32	2	50%	4	1 25/32	1 31/32	2
3/4 T			26%	6	2 5/8	2 1/8	2 1/8	26%	6	2 5/8	2 1/8	2 1/8
5/4 T			10%	10	N/A	N/A	N/A	10%	10	N/A	N/A	N/A

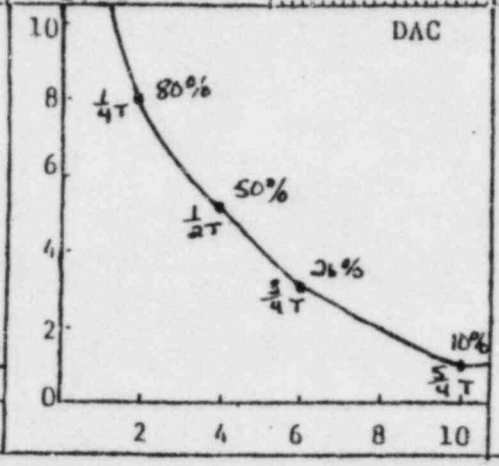
Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
		8:05	10:45		

Ref. dB







Additional Comments/Sketch

W. L. Martin, ANI 4-5-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP&L	Waterford	3	2	Zone 13 R 2 F.C. WRM

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 R.0	O.D.	R Burlingame II	Daniel Jenson	3-31-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg R.C. Pump 2B to S.G. #2	36"	Butt	UT-6	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	
12-011	N/A	N/A	PAR	NC	PAR	N/A		Clean	Ground	NI	Sat.	N/A

W. R. Martin, ANII 3-28-83

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2/~~3~~ 13	Zone 13 R2 F.C.3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.3 RO	OD	[illegible] II	Daniel Jensen	3-31-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Cold Leg R.C.P 2B To S6 #2	36"	Butt	UT-6 3.5"	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

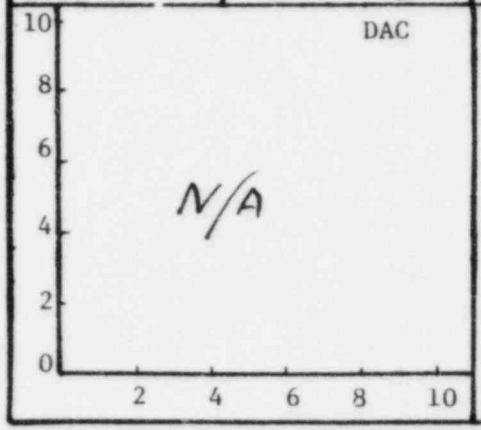
Field Changes: Yes ___ No ✓ If Yes, Number ___

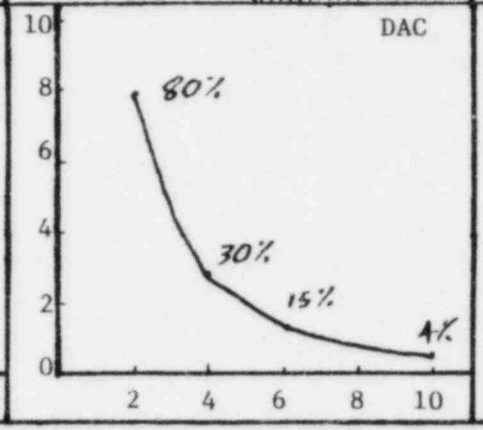
Transducer	0°	45°	60°
S/N	N/A	N/A	F18169
Size			.5"
Frequency			2.25 MHz
Beam Angle			60°

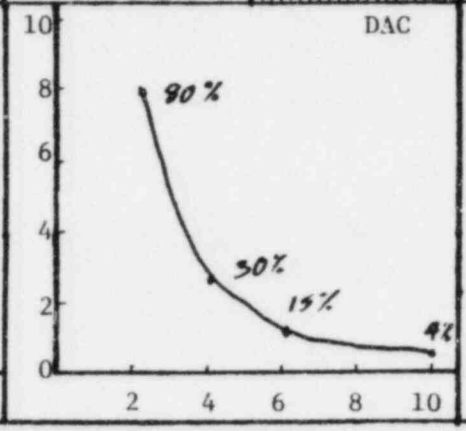
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	01610E	RepRate	1K
Reject	Off	Filter	Off
Damp	Min	Coax	6"
Freq.	2	Video	Normal

Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4 T	N/A	N/A	80 %	2.0	1 17/32	1 9/32	1 13/16	80 %	2.0	1 17/32	1 9/32	1 13/16
1/2 T			30 %	4.0	3.0	2 9/32	3 1/2	30 %	4.0	3.0	2 9/32	3 1/2
3/4 T			15 %	6.0	4 21/32	4 3/32	5 1/16	15 %	6.0	4 21/32	4 3/32	5 1/16
5/4 T			4 %	10.0	N/A	N/A	N/A	4 %	10.0	N/A	N/A	N/A
Ref. dB	↓	↓	43 db					43 db				

Calibration Checks						
0°		45°		60°	
In	Out	In	Out	In	Out
N/A	N/A	N/A	N/A	2:30	4:00
↓	↓	↓	↓	↓	↓







Additional Comments/Sketch

N/A

W.R. Martin, ANII 3-28-83

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP & L	Waterford	3	2/13	Zone-13, R2, F.C. 3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2,3 RO	OD	[illegible] II	Daniel J Jenson	3-31-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg - RCP 2B to S/G #2	36"	Butt	UT-6	Sonotrace 40/ #8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-001		N/A	No	Par	Par	N/A	N/A	Clean	Ground	NI	Sat.	N/A

Form UT-101a

2/82

The Virginia Corp. of Richmond

Date _____

Page 7 of 7

To: _____

Subject Inspection Limitations

13-C11 Base Metal & 0° Scans; The Weld is a Branch Connection Weld Have About A 3" Radius, Contact Was Difficult To maintain On The Weld & Only The Base Metal On The 36" Pipe Section Was Examined. No 2 Scan Was Performed ~~Because~~ Because The Sound Beam Would Be Diverted Away From The Root Area Scans 5, 7 & 8 Were Restricted By The Radius of The Sound 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: LP&L	Plant: WATERFORD	Unit: 3	Loop/Zone: 2B 13
Iso/Drawing No.: ZONE 13, REV. 2, FC 3	Procedure: TSI-2.3 REV 0, FC1	Exam Surface: O.D.	Examiner/Level: BURLINGAME II
VGR Supervisor: Daniel Dennon	Date: 5-5-82	Component/Piping System: REACTOR COOLANT	Pipe Size: 30 5/8" ID
Weld Type: BUTT	Cal. Block #: UT-6, 3.50"	Couplant: SONOTRACE	Type: 40 Batch No: 8119

Continuation Sheet Attached: ✓ Yes ___ No

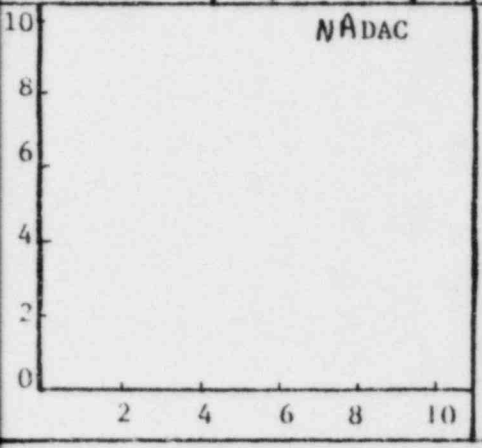
Field Changes: Yes ✓ No ___ If Yes, Number: FC 1

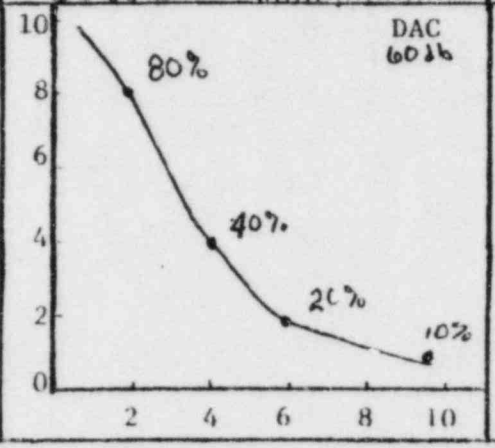
Transducer	30°	45°	60°
S/N	J22935	NA	NA
Size	1/2"	↓	↓
Frequency	2.25 MHz	↓	↓
Beam Angle	30°	↓	↓

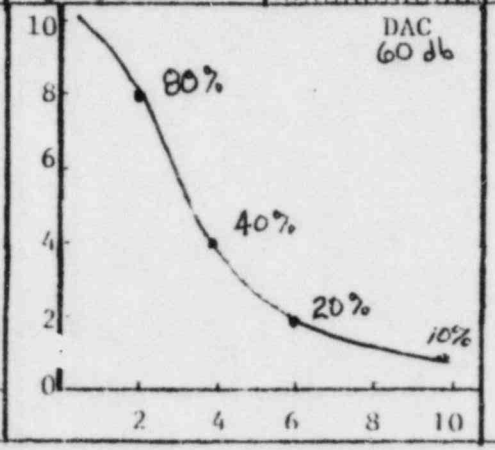
Instrument

Mfgr.	SONIC	Model	FTS Mark 1
S/N	01610E	RepRate	1000
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12'
Freq.	2 MHz	Video	NORM

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
					Sound Entry Point To:					Sound Entry Point To:			30°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC		Signal Amp.	Sweep	Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4T	NA	NA	80%	2.0	17/32	13/32	21/32	80%	2.0	17/32	13/32	21/32	0730	1115	NA	NA	NA	NA
1/2T			40%	4.0	1 1/16	7/8	1 3/32	40%	4.0	1 1/16	7/8	1 3/32						
3/4T			20%	6.0	1 7/16	1 5/16	1 27/32	20%	6.0	1 7/16	1 5/16	1 27/32						
1T			80%	8.6	-	-	-	80%	8.6	-	-	-						
			10%	10.	-	-	-	10%	10.	-	-	-						
Ref. dB	↓	↓	60 db G					60 db G							↓	↓	↓	↓







Additional Comments/Sketch

D. Byrd ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 3

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B 13	Zone 13, Rev 2 - FC 3 WRM

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0, FC1	O.D.	BURLINGAME II	Daniel Dens	5-5-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30 ~~36~~" ID	BUTT	UT 6, 3.50"	SONOTRACE 4D. BATCH 8117

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-	001	NA	NA	PAR	YES	NA	SLOPE OF NOZZLE	Clean	Ground	NI	SAT	
13-	002	NA	PAR	NA	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
13-	018	NA	NA	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
13-	019 LB	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
13-	020 LA	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	

The Virginia Corp. of Richmond

Date 5-5-82

Page 3 of 3

To: _____

Subject Examination Limitations

13-001 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 O.D slope of the nozzle. for 360°. Allowing For beam spread, root area coverage was obtained. Scans 7 & 8 were also restricted by the O.D. slope of the nozzle. Good root area coverage was obtained with the 7 & 8 scans.

13-007 R2 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 O.D. mismatch. Allowing For beam spread, root area coverage was obtained with the 30° angle.

13-018 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 O.D. mismatch. Allowing For beam spread, root area coverage was obtained with the 30° angle

13-019 LB & 13-020 LA are short (approx. 2") seams. All scans were restricted by gross O.D mismatch. The 30° angle in conjunction with the 45° and 60° angles, did give adequate coverage of the root area

Signed _____

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 13	ZONE 13 REV-2 F.C. 2 3 GL

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV-0 F.C. 2 GL	O.D.	Gary Longenecker II	Daniel Dena	5-18-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
COLD LEG - RCP 2B to STEAM GEN 2	36"	BUTT	UT-6	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ Yes, Number F.C. + 2 GL

Transducer	30°	45°	60°
S/N	J22935	NA	NA
Size	.5"		
Frequency	2.25 MHz		
Beam Angle	30°		

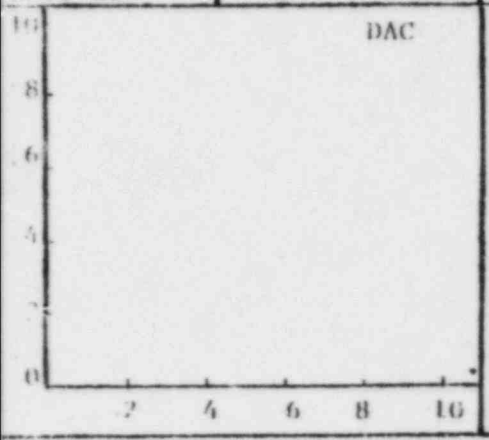
Instrument

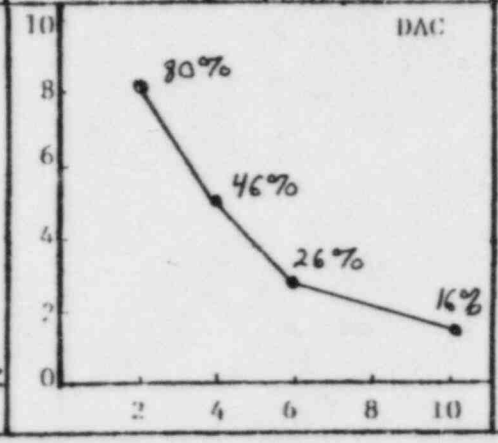
Mfgr.	SONIC	Model	MARK I
S/N	01610E	RepRate	1k
Reject	OFF	Filter	HI
Damp	MIN	Coax	12'
Freq.	2	Video	NORM

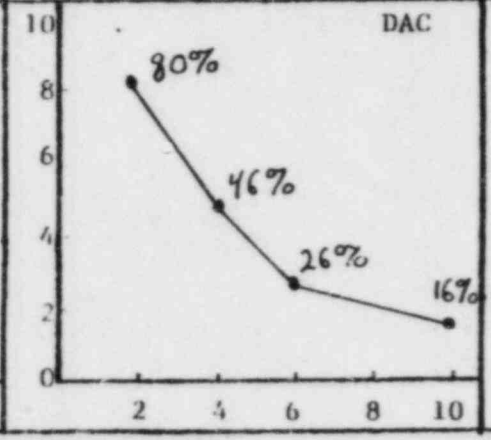
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4 T	NA	NA	80%	2.0	1/2	13/32	19/32	80%	2.0	1/2	13/32	19/32
1/2 T			46%	4.0	1 3/32	25/32	1 3/32	46%	4.0	1 3/32	25/32	1 3/32
3/4 T			26%	6.0	1 9/32	1 17/32	1 27/32	26%	6.0	1 9/32	1 17/32	1 27/32
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA
Ref. dB			62 DB					62 DB				

Calibration Checks

30°		45°		60°	
In	Out	In	Out	In	Out
2:40	5:00	NA	NA	NA	NA







Additional Comments/Sketch

D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrosonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P & L	WATERFORD	3	1 13	ZONE 13 R-2, F.C.3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
GL-2 ISI. 2.3 R0, F.C.4	O.D.	Gary Longenecker II	Daniel Dano	5-18-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG R.C.P. 2B TO S.G. 2	36"	BUTT	UT-6	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	
13-011	NA	NA	NO	PAR	PAR	NA	*	CLEAN	GROUND	NI	SAT.	

* BRANCH CONNECTION AND IT'S RADIUS

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B - 13	ZONE 13, REV. 2, FC-+3 WRM

Procedure WRM	Exam Surface	Examiner/Level	VCR Supervisor	Date
131 2.3, REV. 0, FC-+2	O.D.	BURLINGAME II	Daniel Dyna	5-18-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
REACTOR COOLANT PIPE	30" I.D.	BUTT	UT-6, 3.5"	Type 40 Batch No 8119

Continuation Sheet Attached: ✓Yes ___ No

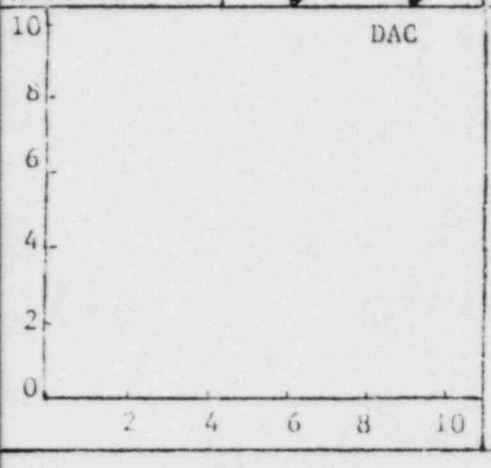
Field Changes: Yes ✓ No ___ WRM
If Yes, Number FC-+2

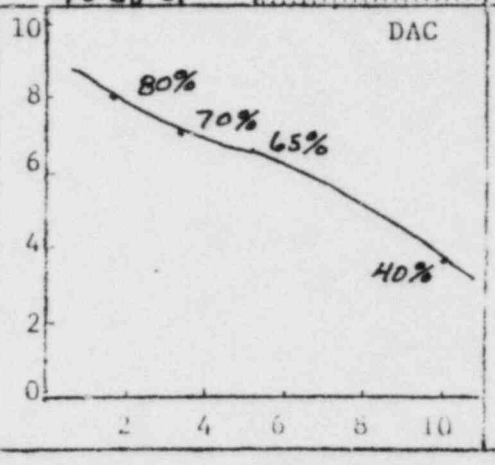
Transducer	30°	45°	60°
S/N	L19134	N.A.	N.A.
Size	1.0"		
Frequency	2.25 m.		
Beam Angle	30°		

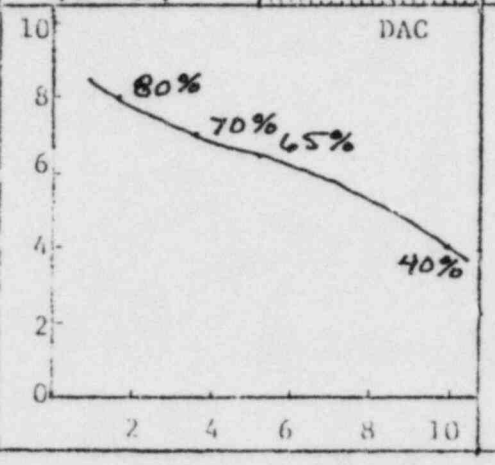
Instrument

Mfgr.	SONIC	Model	FTS-MK1
S/N	780836	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	1R'
Freq.	2. MHz.	Video	NORM

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
					Sound Entry Point To:					Sound Entry Point To:			30°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC		Signal Amp.	Sweep	Scribe Line	50% DAC		In	Out	In	Out	In	Out
													1240	1600	NA	NA	NA	NA
1/4T	NA	NA	80%	2	1 3/32	1 3/32	5/8	80%	2	1 3/32	1 3/32	5/8						
1/2T			70%	4	1 1/16	7/8	1 3/32	70%	4	1 1/16	7/8	1 3/32						
3/4T			65%	6	1 7/16	1 5/16	1 13/16	65%	6	1 7/16	1 5/16	1 13/16						
5/4T			40%	10	NA	NA	NA	40%	10	NA	NA	NA						
Ref. dB			70 db G					70 db G										







Additional Comments/Sketch

D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page of

Customer	Plant	Unit	Loop/ Zone	Line/Drawing No.
LP&L	WATERFORD	3	2B 13	ZONE 13, REV. 2, FC-3

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
151-2.3, REV. 0, FC-2	OD	BURLINGAME II	Daniel Jones	5-18-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block Compliant: Type & Batch
REACTOR COOLANT PIPE	30" ID	BUTT	UT-6, 35" SONOTRACE 40 ST 8119

Weld No.		Base Metal Seam	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-	003 LB	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
13-	004 LA		YES	YES	NA			CLEAN	GROUND	NI	SAT	
13-	005		NA	NA	PAR		O.D. MISMATCH	LIGHT RUST	GROUND	NI	SAT	
13-	006 LA		YES	YES	NA			CLEAN	GROUND	NI	SAT	
13-	007 LB		YES	YES	NA			CLEAN	GROUND	NI	SAT	
13-	008		NA	NA	PAR		O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
13-	009 LB		YES	YES	NA			CLEAN	GROUND	NI	SAT	
13-	010 LA		YES	YES	NA			CLEAN	GROUND	NI	SAT	
13-	013		NA	NA	PAR		O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
13-	014 LB		YES	YES	NA			CLEAN	GROUND	NI	SAT	
13-	015 LA		YES	YES	NA			CLEAN	GROUND	NI	SAT	

The Virginia Corp. of Richmond

Page ____ of ____

To: _____

Subject EXAMINATION LIMITATIONS ZONE 13, REV. 2, EC-1

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

13-005, 13-008, 13-013 WERE RESTRICTED BY O.D. MISMATCH BETWEEN MATING ELBOWS OR ELBOW TO PIPE FIT UP. SCANS 2 AND 5 WERE NOT REQUIRED. GOOD ROOT COVERAGE WAS OBTAINED WITH THE 30° 7/8 SCANS.

Signed _____

The Virginia Corp. of Richmond

D. Payne ANII 6/2/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP3L	WATERFORD	3	2 13

Component/Piping System	Examiner/Level	Date
REACTOR COOLANT	BURLINGAME II	5-25-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-2.5, REV. 0	ZONE 13, REV 2, FC-3	Daniel Brown	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration
Mfgr.	SONIC	Mfgr.	Size	Cal. Block UT-15
Model	FTS-MK1	AEROTECH	1.0"	Cal. Block
S/N	780836	Freq.		Range Cal. 3½ = 8 DIV
Reject	OFF	1.0 MHZ.		Calibration Checks
Damp.	MIN	Serial No.		0750
Freq.	1.0 MHZ	L19814		1135
Rep. Rate	1000	Coax. Cable		
Filter	OFF	12'		
Video	NORMAL	Gain		
Couplant	SONOTRACE 40, #8124	68 db G		

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
B-017	12	3.32	3.20	4.06	13-016	12	3.43	3.51	3.20
	2	3.32	3.16	4.06		2	3.43	3.51	3.16
	4	3.35	3.20	4.06		4	3.35	3.51	3.20
	6	3.32	3.28	4.06		6	3.43	3.43	3.28
	8	3.32	3.28	4.06		8	3.43	3.57	3.28
	10	3.32	3.20	4.06		10	3.43	3.57	3.20

Sketch/Identification

D. Payne ANII 6/2/82

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P+L	Waterford	# 3	2/13	Zone 13 Rev. 2 F.C. 3

Procedure *	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.8 Rev. 1 FC. 1	OD	BURLINGAME II	Daniel L Jens	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant:
Reactor Coolant	30" 3⅛	Butt	UT-15	Type Sonic 40 Batch No 8134

Continuation Sheet Attached: Yes ✓ No

Field Changes: Yes ✓ No

If Yes, Number FC. 1

Transducer	0°	45°	60°
S/N	L19814	NA	NA
Size	1"		
Frequency	1 mhz		
Beam Angle	0°		

Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	780836	RepRate	1K
Reject	off	Filter	off
Damp	Min.	Coax	6'
Freq.	1 mhz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
¼ T	80%	1.8
½ T	40%	3.8
¾ T	10%	5.8
Back	35%	8.0
Ref. dB	68 dB	

2 & 5 Scan

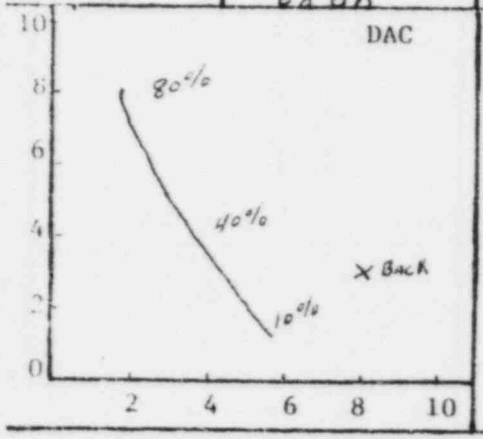
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA	NA	

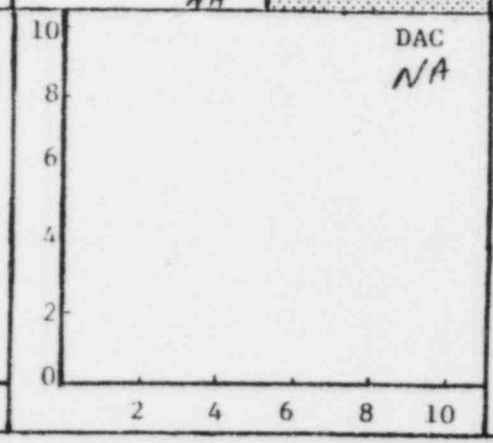
7 & 8 Scan

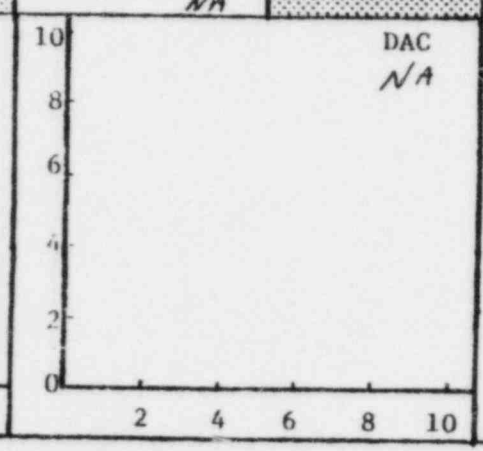
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA	NA	

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
0805	1050	NA	NA	NA	NA
1250	1635				







Additional Comments/Sketch

* See NCR #024 of Errata

D. Payne ANII 6/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 13	ZONE 13, REV. 2, FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
* FC-1 (B) ISI 3.E, REV. 8, 1	OD	BURLINGAME II	Daniel Dens	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30" ID	BUTT	UT-15	SONOTRACE 40 #8124

0

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13	017	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT	
13	016	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT	
												* SEE NCR #024 OF ERRATA

D. Payne ANII 7/28/82

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer: LP+L	Plant: WATERFORD	Unit: 3	Loop/Zone: 2 / 13	Iso/Drawing No.: Zone 13 Rev. 2, FC 3	
Procedure: Rev 1 151-28 for FC-1 *	Exam Surface: OD	Examiner/Level: BURNGHAME II & III	VCR Supervisor: Donald Payne	Date: 5-25-82	
Component/Piping System: REACTOR COOLANT	Pipe Size: 30" ID	Weld Type: BUTT	Cal. Block #: UT-15 3 1/2	Couplant: Sonotrace Type 40 Batch No. 8024	

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number FC-1

	2 1/4 5 (C.S.)	2 1/4 5 (SS)	7 1/4 8
Transducer			
S/N	T8468	T3468	V3035
Size	1.0"	1.0"	1.0"
Frequency	1 MHz	1 MHz	WB
Beam Angle	45°L	45°L	45°L

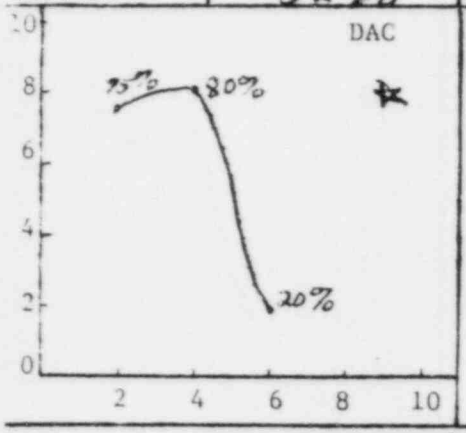
Instrument

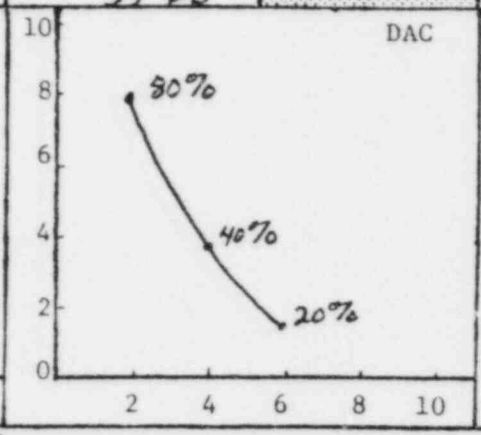
Mfgr.	Sonic	Model	FTS MKI
S/N	01610E	RepRate	1000
Reject	3	Filter	OFF
Damp	4.5	Coax	6'
Freq.	1MHz/WB	Video	Normal

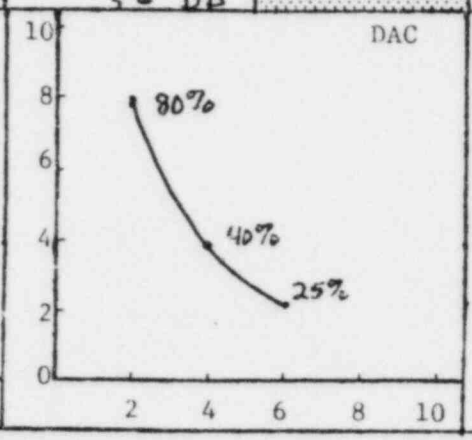
Calibration Reflector Location	2 1/4 5 SCAN (C.S.) Signal Amp.	Sweep	2 & 5 Scan (SS) Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		7 & 8 Scan Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4 T	75%	2	80%	2	NA	NA	NA	80%	2	NA	NA	NA
1/2 T	80%	4	40%	4				40%	4			
3/4 T	20%	6	20%	6				25%	6			
Ref. dB	52 DB		55 DB					56 DB				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0800	1045	NA	NA
		1245	1630		







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 scans.
- Seperate transducers were used For axial & Circ. scans.

Form UT-101 (MODIFIED)

* SEE NCR # 024 OF ERRATA 2/82

D. Payne ANII 6/7/82

The Virginia Corp. of Richmond

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Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2, 13	ZONE 13, REV. 2, FC-3

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
* FC-1 ISI-2.E REV. 8	OD	BURLINGAME II	Daniel Lyna	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30" ID	BUTT	UT-15	SCHOOTRACE 40 #8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13	C17	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETERY
13	C16	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETERY
							SEE ATTACHMENT					SEE ATTACHMENT FIG-1
												* SEE NCR # 024 OF ERRATA

The Virginia Corp. of Richmond

Date

To:

Subject EXAMINATION LIMITATIONS

ZONE 13 REV. 2 FC-3

13-017 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 COMMING 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.

13-016 (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.

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

TYP. PUMP TO SAFE END TO PIPE CONFIGURATION

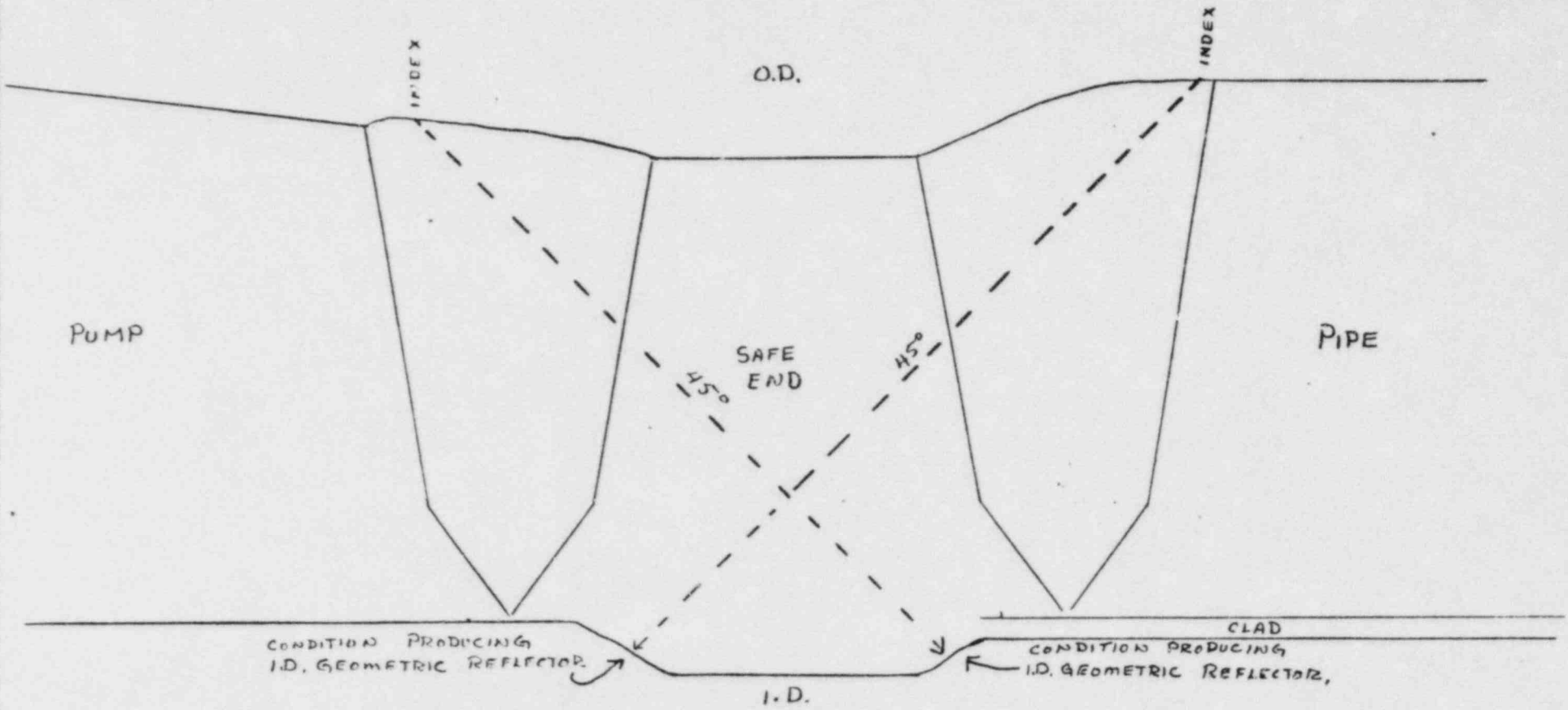


FIG. 1

5-28-82

The Virginia Corp. of Richmond

D. Payne ANII 7/19/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit #	Loop/Zone
L. P & L.	Waterford	3	2B / 13

Component/Piping System	Examiner/Level	Date
Cold Leg - RCP 2B to S/G 2	Michael W Blew II	7-10-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
TST-2.5, Rev 0, F.C.O	Zone 13, Rev 2, F.C. 8	Daniel J Jensen	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	Sonic	Mfgr.	Size	Cal. Block	UT-18
Model	Mark I	Panametrics	.5"	Cal. Block	NA
S/N	01058E	Freq.	2.25 MHz	Range Cal.	2.135"
Reject	Off			Calibration Checks	
Damp.	Min.	Serial No.	44651		
Freq.	2.0 MHz			In	1:15
Rep. Rate	1K	Coax. Cable	6' Dual	Out	1:40
Filter	Hi				
Video	Norm.	Gain	47 db		
Couplant	Sonotrace 10 S/N 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
13-012	12	.982"	.897"	1.281"	NA	NA	NA	NA	NA
13-012	2	.452"	.897"	1.281"					
13-012	4	1.068"	.854"	1.281"					
13-012	6	.939"	.897"	1.281"					
13-012	8	.897"	.811"	1.281"					
13-012	10	.897"	.854"	1.196"					
					⊥	⊥	⊥	⊥	⊥

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 7/19/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P & L.	Waterford	#3	2B/13	Zone 13 Rev 2, F.C. #4 thru 6

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-28 Rev 1, EC 1	O.D.	Michael W Blew II	Dennis Bowen	7-10-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type	Batch No.
Cold Leg - RCP 2B to Steam Generator 2	3.5"	Butt	UT-18	Sonotrace 40	8124

Continuation Sheet Attached: ✓ Yes ___ No

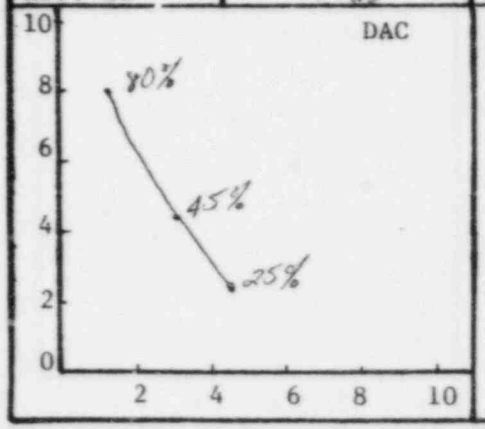
Field Changes: Yes ✓ No ___ If Yes, Number EC 1

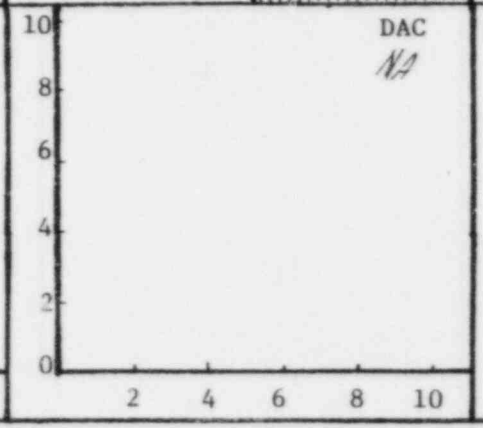
Transducer	0°	45°	60°
S/N	44651	NA	NA
Size	.5"		
Frequency	2.25 MHz		
Beam Angle	0°		

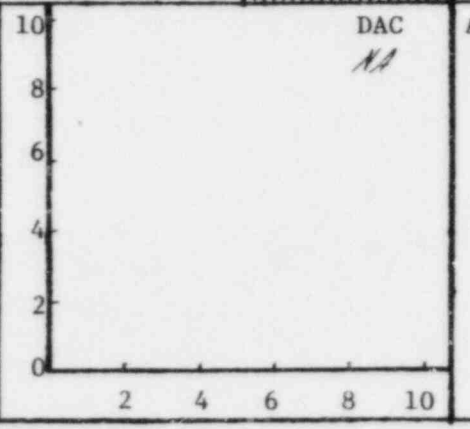
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	01058E	RepRate	1K
Reject	Off	Filter	Hi
Damp	Min.	Coax	6' Dual
Freq.	2.0 MHz	Video	Norm.

Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
¼ T	80%	1.3										
½ T	45%	2.8										
¾ T	25%	4.3										
Ref. dB	47 db											

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
1:15	4:40	NA	NA	NA	NA







Additional Comments/Sketch

D. Payne ANII 7/19/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P & L	WATERFORD	3	2B / 13	ZONE 13 REV 2 FC-B AWB 4

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.6 R-1 FC-1	O.D.	Michael W Blew II	[illegible]	7-10-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold Leg - S/G #2 to RCP 2B	3.5"	BUTT	UT-18	SONOTRACE 40 #8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-012		YES	NA	NA	NA	YES	NA	Smooth	Ground Smooth	NI	NI	NA

The Virginia Corp. of Richmond

Ultrasonic Examination Report

R. Payne ANII 7/19/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2/13	Zone 13 Rev. 2 F.C. 3 4

Procedure F.C. 2	Exam Surface	Examiner/Level	VCR Supervisor	Date
151 28 Rev 1	O.D.	David L. [illegible] II	[illegible]	7/15/82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant:
RCP 2B to St Gen 2	3.5"	Butt	UT-18	Type Sonotrace 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

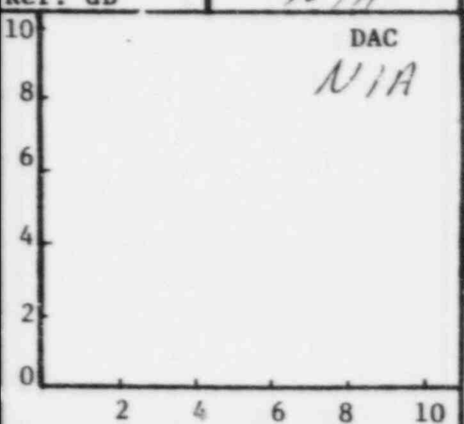
Field Changes: Yes ✓ No ___ If Yes, Number 2

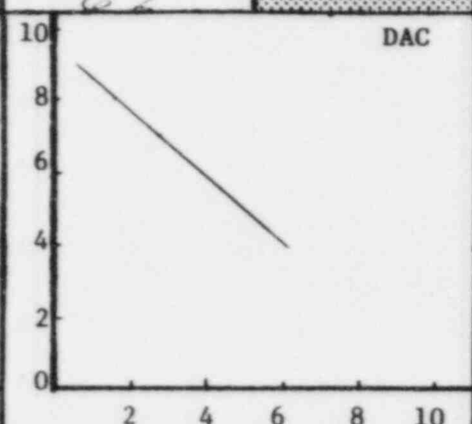
Transducer	30°	45°	60°
S/N	607150	N/A	N/A
Size	.50"		
Frequency	2.25 MHz		
Beam Angle	30°		

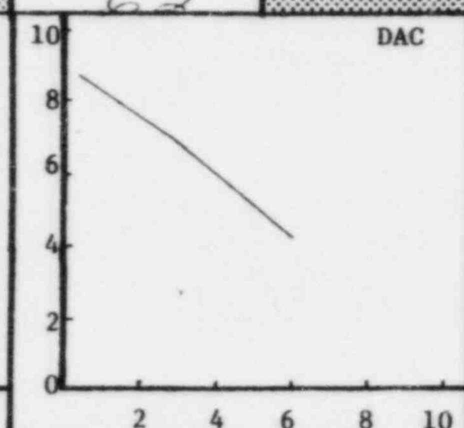
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	05473E	RepRate	1K
Reject	.3	Filter	Hi
Damp	Min.	Coax	6' RG-MD
Freq.	2.0 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
1/4 T	N/A	N/A	80%	1.5	N/A	N/A N/A	80%	1.5	N/A	N/A N/A
1/2 T			70%	3.0			70%	3.0		
3/4 T			55%	4.5			55%	4.5		
Ref. dB	N/A		62				62			

Calibration Checks	30° In	30° Out	45° In	45° Out	60° In	60° Out
	8:00	10:53	N/A	N/A	N/A	N/A







Additional Comments/Sketch

Calibration for carbon steel side.

Form UT-101 2/82

Ultrasonic Examination Report

D. Payne ANII 7/19/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP+L	Waterford	# 3	2/13	Zone 13 Rev. 2 FC 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
FC 2 ISI-2.8 Rev-1	OD	David J. Foker III	[illegible]	7-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type / Batch No.
RCP 2B to St. Gen. 2	35"	Butt	UT-18	Sonotrace / 8124

Continuation Sheet Attached: ✓ Yes ___ No

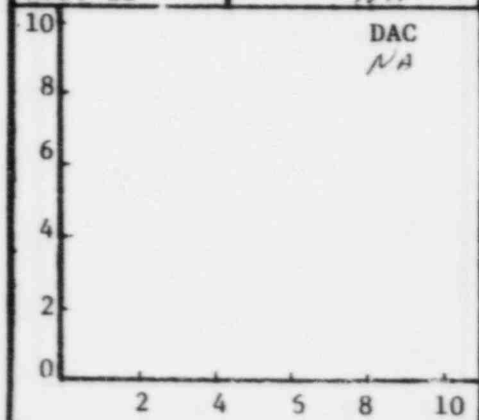
Field Changes: Yes ✓ No ___
If Yes, Number: FC 2

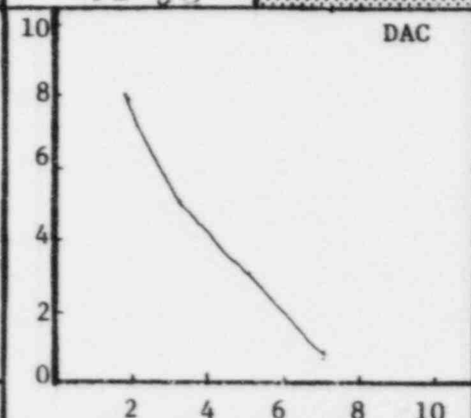
Transducer	30°	45°	60°
S/N	607150	NA	NA
Size	.50"		
Frequency	2.25 MHz		
Beam Angle	30°		

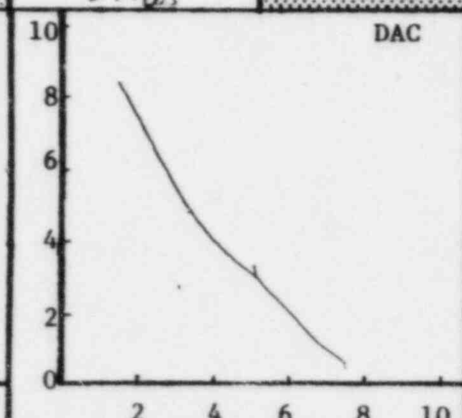
Instrument			
Mfgr.	Sonic	Model	Mach I
S/N	05473 E	RepRate	1K
Reject	3	Filter	Hi
Damp	Min	Coax	6' Bos Twin
Freq.	2.0 MHz	Video	Neg

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

Calibration Checks	30° In	30° Out	45° In	45° Out	60° In	60° Out
	7:50	10:53	NA	NA	NA	NA







Additional Comments/Sketch

Calibration for austenetic side

D. Payne ANII 7/19/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P+L	Waterford	# 3	2 / 13	Zone 13 Rev. 2 F.C. 34

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.8 Rev. 1 FC2	OD	David T. Fokes III	Daniel [illegible]	7-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
RCP 2B To St. Gen 2	3.5"	Butt	UT-18	Sonotrace 40 # 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
13-013		NA	Par	Par	Par	NA	Weld contour	Smooth	Contour Ground	NI	Sat.	Intermittent Geom 360° on S scan, resulting from dissimilar metal interface 50-90% DAC

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 2/26/82

Customer	Plant	Unit	Loop/Zone
L P & L	WATERFORD	3	2/14

Procedure	Examiner	VCR Supervisor	Date
151-4.3 REV0	~~Peter Hagermiller~~ Michael W Ster II (LWD)	Daniel J Jensen	2-25-82

Component/Piping System	ISO Drawing No.	Surface Condition
Reactor Vessel to R C Pump 2B	ZONE 14 REV 2 FC-1	GROUND

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	MAGNAFLUX	8A-RED	81M107

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	PARKER Research	Contour/DA-200	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
14-008 LA		✓		✓	
14-009 LB	PARTIAL EXAMINATION. AREA NOT EXAMINED IS FROM 38" (7 DIRECTION) TO 57" (7 DIRECTION)	✓		✓	
14-010		✓		✓	
14-011	PARTIAL EXAMINATION. AREA NOT EXAMINED IS FROM 32½" (7 DIRECTION) TO 78½" (7 DIRECTION)	✓		✓	
14-007		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 4/23/82

Customer	Plant	Unit	Loop/Zone
LP AND L	WATERFORD	3	2B/14

Procedure	Examiner/Level	Date
ISI 3.1, REVO, F.C. 2	C R Stanfill II	4-22-82

Component/Piping System	ISO Drawing No.	VCR Supervisor
COLD LEG RV TO RCP 2B	ZONE 14, REV 2, F.C. 1	Daniel Jones

	Manufacturer	Type	Batch No.
Penetrant	SHERWIN	DUBL-CHEK	47L015
Developer	SHERWIN	DUBL-CHEK	129F6
Remover	SHERWIN	DUBL-CHEK	112C4

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results SAT.	VT Results UNSAT.
14-001		✓		✓	
14-002		✓		✓	
14-006		✓		✓	
14-009LB		✓		✓	
14-011		✓		✓	

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

D. Payne ANII 4/23/82

Customer	Plant	Unit	Loop / Zone
LP AND L	WATERFORD	3	2B / 14

Procedure	Examiner/Level	VCR Supervisor	Date
ISI 4.3 REV 0	CR Taylor III	Daniel Dynan	4-22-82

Component/Piping System	ISO Drawing No.	Surface Condition
COLD LEG REACTOR VESSEL TO RCP 2B	ZONE 14, REV 2, EC 1	CLEAN

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	MAGNAFLUX	8A RED	8/M110

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	PARKER RESEARCH	CONTOUR PROBE	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
14-003 LA	FIELD INDICATOR SN 17 WAS	✓		✓	
14-004 LB	UTILIZED TO VERIFY FIELD	✓		✓	
14-005		✓		✓	

The Virginia Corp. of Richmond

D. Payne ANII 4/27/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP & L	WATERFORD	3	Z 14

Component/Piping System	Examiner/Level	Date
COLD LEG R.V. TO RCP. 2B	Gary Longenecker II	3-1-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
I.S.I. 2.5 R 0	14 R-2 F.C. 1	Daniel Jones	[X] Yes [ ] No

Equipment

Instrument		Transducer		Calibration
Mfgr.	SONIC	Mfgr. AEROTECH	Size .5" DIA.	Cal. Block UT-5
Model	MARK 1			Cal. Block
S/N	05304E	Freq. 2.25 MHZ.		Range Cal. 5"
Reject	OFF			Calibration Checks
Damp.	MIN.	Serial No. KB2728		
Freq.	2. MHZ.			3:30 CAL. IN
Rep. Rate	1K	Coax. Cable 6'		5:30 CAL. OUT
Filter	OFF			
Video	NORM	Gain 70 db		
Couplant	SONOTRACE 40 / S/N 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
14-007	12	3.33	3.47	3.27	14-008 LA	18"	3.33	3.47	3.33
14-007	2	3.33	3.47	3.27	14-008 LA	21"	3.33	3.47	3.33
14-007	4	3.33	3.47	3.27	14-008 LA	24"	3.33	3.47	3.33
14-007	6	3.33	3.47	3.27	14-008 LA	27"	3.33	3.47	3.47
14-007	8	3.33	3.47	3.20	14-008 LA	30"	3.33	3.33	3.33
14-007	10	3.47	3.47	3.20	14-009 LB	0"	3.33	3.27	3.27
14-008 LA	0"	3.20	3.13	3.13	14-009 LB	3"	3.53	3.47	3.47
14-008 LA	3"	3.40	3.40	3.40	14-009 LB	6"	3.53	3.40	3.47
14-008 LA	6"	3.33	3.40	3.40	14-009 LB	9"	3.47	3.40	3.40
14-008 LA	9"	3.40	3.40	3.33	14-009 LB	12"	3.47	3.33	3.33
14-008 LA	12"	3.40	3.40	3.33	14-009 LB	15"	3.47	3.33	3.33
14-008 LA	15"	3.33	3.40	3.33	14-009 LB	18"	3.47	3.33	3.33

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet

for D. Rayne ANII 4/27/82

Thickness Measurement

Continuation Page 2 of 2

Customer	Plant	Unit	Loop/Zone
LP & L	WATERFORD	3	2 14

Component/Piping System	Examiner/Level	Date
COLD LEG R.V. TO R.C.P. 2B	Gary Longeneckerll	3-1-82

Procedure	Iso/Drawing No.	VCR Supervisor
I.S.I. 2.5 R-0	14 R-2 F.C. 1	Daniel Jens

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
14-009 LB	21"	3.47	3.33	3.33	14-010	8	3.47	3.07	3.47
14-009 LB	24"	3.47	3.33	3.33	14-010	10	3.47	3.07	3.53
14-009 LB	27"	3.47	3.40	3.33	14-011	12	3.13	3.20	3.07
14-009 LB	30"	3.47	3.33	3.33	14-011	2	3.07	3.20	3.07
14-009 LB	33"	3.47	3.33	3.33	14-011	4	3.07	3.20	3.07
14-009 LB	36"	3.47	3.40	3.33	14-011	6	3.07	3.00	3.07
14-009 LB	39"	3.47	3.33	3.33	14-011	8	3.07	3.07	3.07
14-009 LB	42"	3.47	3.33	3.33	14-011	10	3.07	3.07	3.07
14-009 LB	45"	3.47	3.33	3.40					
14-009 LB	48"	3.47	3.33	3.33					
14-009 LB	51"	3.47	3.33	3.33					
14-009 LB	54"	3.47	3.33	3.33					
14-009 LB	57"	3.47	3.40	3.40					
14-009 LB	60"	3.47	3.40	3.40					
14-009 LB	63"	3.47	3.47	3.47					
14-009 LB	66"	3.53	3.47	3.47					
14-010	12	3.40	3.07	3.47					
14-010	2	3.33	3.07	3.47					
14-010	4	3.40	3.07	3.47					
14-010	6	3.53	3.07	3.47					

Sketch/Identification

Ultrasonic Examination Report

D. Payne ANII 7/27/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP AND L	WATERFORD	3	2B/14	ZONE 14, REV 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
TSI 2.3, REV 0, F.C. 1	O.D.	CR Stauffer II	Daniel Jensen	4-21-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant
COLD LEG REACTOR VESSEL TO RCP 2B	30"	BUTT	UT-6	SONOTRACE, Type 40, Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___
If Yes, Number 1

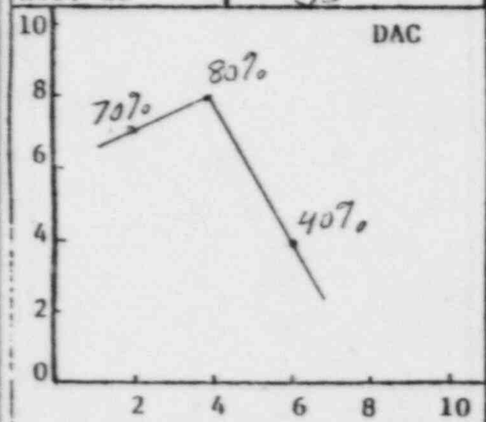
Transducer	0°	45°	60°
S/N	48807	NA	NA
Size	1"		
Frequency	2.25 MHZ		
Beam Angle	0°		

Instrument			
Mfgr.	SONIC	Model	FTS MARK I
S/N	05304E	RepRate	200
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12
Freq.	2	Video	NORM

Calibration Reflector Location (Calibration 0°)	Signal Amp.	Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Scan Sound Entry Point To: Scribe Line	2 & 5 Scan Sound Entry Point To: 50% DAC	7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Scan Sound Entry Point To: Scribe Line	7 & 8 Scan Sound Entry Point To: 50% DAC
1/4 T	70%	2.0	NA	NA			NA	NA		
1/2 T	80%	4.0								
3/4 T	40%	6.0								
1 T	NA	8.3								
Ref. dB	35									

Calibration Checks	0° In	0° Out	45° In	45° Out	60° In	60° Out
	747	1002	NA	NA	NA	NA

DAC



DAC (2 & 5 Scan): NA

DAC (7 & 8 Scan): NA

Additional Comments/Sketch

D. Payne ANII 4/27/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP AND L	WATERFORD	3	2B	ZONE 14, REV 2, F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3, REV 0, F.C.1	O.D.	CR [illegible]	Daniel Dana	4-21-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch
COLD LEG REACTOR VESSEL RCP 2B	36" 30"	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	007	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
14-	008LA	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
14-	009LB	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
14-	010	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
14-	011	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 7/27/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.	
LP+L.	Waterford	3	2B/14	Zone 14, Rev 2, F.C.1	

Procedure Rev 0	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 F.C.1	OD	[illegible] / [illegible]	Daniel [illegible]	4-21-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
Cold leg - R.V. to R.C.P. 2B	30"	Butt	UT-6	Type 40 Batch No. 8119

Continuation Sheet Attached ✓ Yes ____ No

Field Changes: Yes ✓ No ____
If Yes, Number 1

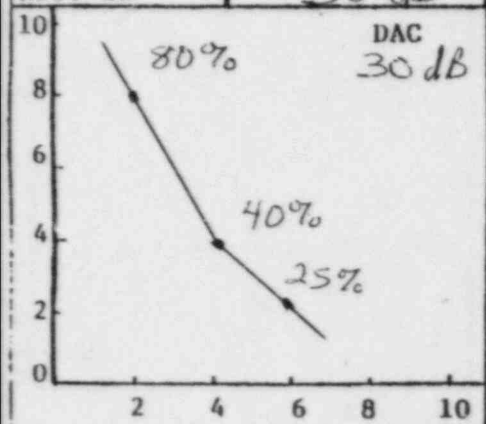
Transducer	0°	45°	60°
S/N	JO2184	N/A	N/A
Size	.50"		
Frequency	2.25 Mhz		
Beam Angle	0°		

Instrument			
Mfgr.	Sonic	Model	FTS Mark I
S/N	05304E	RepRate	200
Reject	off	Filter	hi
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: Scribe Line	50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
1/4 T	80%	2.0	N/A	N/A			N/A	N/A		
1/2 T	40%	4.0								
3/4 T	25%	6.0								
1 T	90%	8.4								
Ref. dB	30 dB									

Calibration Checks					
0° In	0° Out	45° In	45° Out	60° In	60° Out
1030	1112	N/A	N/A	N/A	N/A

DAC 30 dB



DAC N/A

DAC N/A

Additional Comments/Sketch

Form UT-101 2/82

D. Payne ANII 4/21/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP+L	Waterford	3	2B/14	Zone 14, Rev 2, F.C.1

Procedure Rev0	Exam Surface	Examiner/Level	VCR Supervisor	Date
TSI 2.3 F.C.1	OD	CR Stafford II / C.E. Forsdall I	Daniel Jens	4-21-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg - R.V. to R.C.P. 2B	36 "30"	Butt	UT-6	Sonotrace 40 / B. #8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-005		YES	NA	NA	NA	PAR	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	

Form UT-101a 2/82

The Virginia Corp. of Richmond

Date 4-21-82

Page 3 of 3

To: _____

Subject ZONE 14 LOOP 2B, WELD 14-005 ATTACHMENT SHEET

THE WELD AREA SCAN IS INDICATED AS PARTIAL DUE TO THE WELD HAVING A 3 1/2" RADIUS. SOUND ENTRY WAS THEREFORE LOST AT THE BASE OF THE RADIUS FOR APPROXIMATELY 1/2". THIS WAS TRUE ONLY FROM THE FOLLOWING DISTANCES AS MEASURED FROM THE V STAMP.

0" TO 10 1/4" }
20 1/4" TO 43 1/2" } CIRCUMFERENTIAL
53 1/2" TO 66 1/2" (0) }

Signed _____

Ultrasonic Examination Report

D. Payne ANII 4/27/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/14	14 R.2 FC.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 R.0 FC.1	OD	[signature] II	[signature]	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant
Cold leg RCP 2B to Reactor	30 3/8" RD	Butt	UT-6	Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___

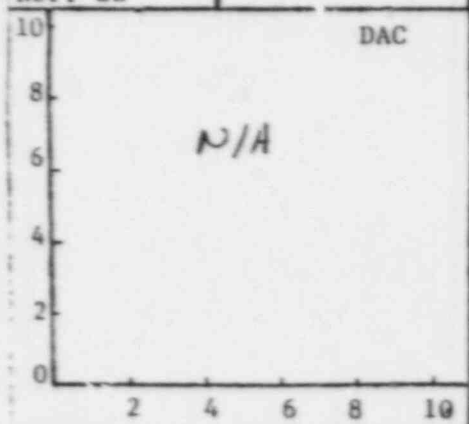
If Yes, Number 1

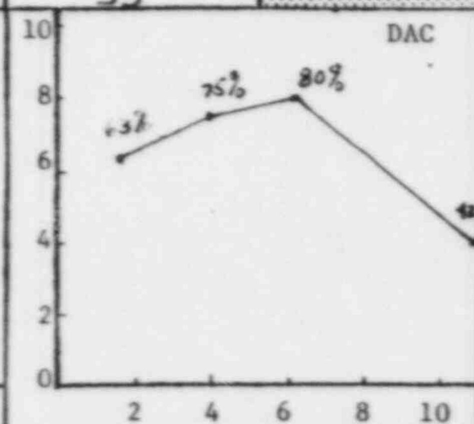
Transducer	0°	45°	60°
S/N	NA	NA	L19801
Size			1"
Frequency			2.25 MHZ
Beam Angle			~~45°~~ 60°

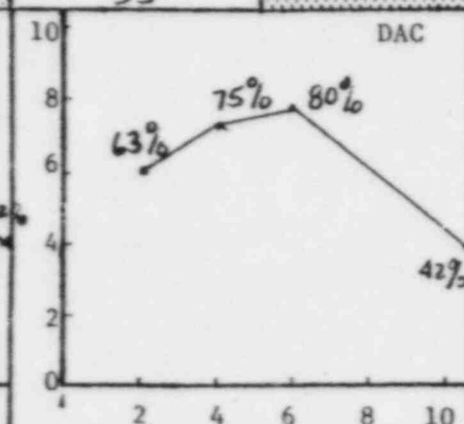
Instrument			
Mfgr.	Sonic	Model	MARK 1
S/N	780836	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	12'
Freq.	2 MHZ	Video	NORM

Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Scan Sound Entry Point To: Scribe Line	2 & 5 Scan Sound Entry Point To: 50% DAC		7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Scan Sound Entry Point To: Scribe Line	7 & 8 Scan Sound Entry Point To: 50% DAC	
1/4T	NA	NA	63%	2	1 9/32"	1 1/8	1 7/8	63%	2	1 9/32	1 1/8	1 7/8
1/2T			75%	4	3 5/32"	2 7/8	3 5/8	75%	4	3 5/32	2 7/8	3 5/8
3/4T			80%	6	4 25/32	4 1/2	5 9/16	80%	6	4 25/32	4 1/2	5 9/16
5/4T			42%	10				42%	10			
Ref. dB			55					55				

Calibration Checks	0° In	0° Out	45° In	45° Out	60° In	60° Out
	NA	NA	NA	NA	10:30	11:50
					1:10	4:50







Additional Comments/Sketch

Form UT-101 2/82

D. Payne ANII 4/27/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LPEL	WATERFORD	3	2B/14	14 R-2 FC-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2 3 R.0 FC.1	OD	Richard R Dybal II	Daniel A Jones	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg RCP 2B To Reactor	30 3/8" OD	Butt	UT-6	SONOTRACE 40 BATCH # 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	003LA	NA	Yes	Yes	Yes	NA		CLEAN	Smooth	NI	SAT	
14-	004LB		Yes	Yes	Yes			CLEAN	Smooth	NI	SAT	
14-	007		Yes	Yes	Yes			CLEAN	Smooth	NI	SAT	
14-	008LA		Yes	Yes	Yes			CLEAN	Smooth	NI	SAT	
14-	009LB		Yes	Yes	Yes			CLEAN	Smooth	NI	SAT	
14-	010		Yes	Yes	Yes			CLEAN	Smooth	NI	SAT	
14-	011		PAR	Yes	Yes		See ATTACHMENT	CLEAN	Smooth	NI	SAT	

Form UT-1010

2/82

The Virginia Corp. of Richmond

Date 4-23-82

Page 3 of 5

To:

Subject Zone 14 Loop 2B
Weld 14-011 Attachment sheet

The 2 scan of weld 14-011 is listed as a partial scan due to OD geometry

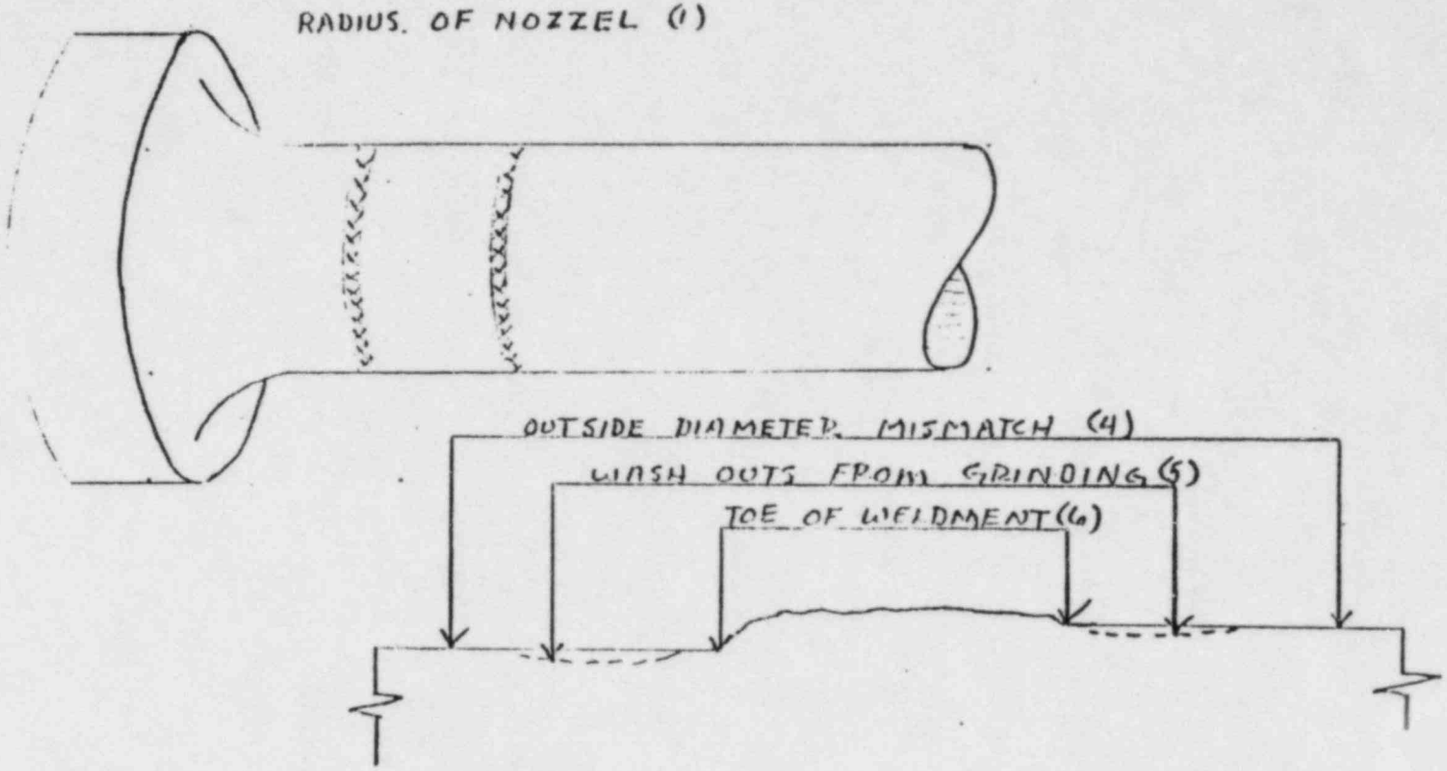
Reference note (1) of page 4 attached, indicating a nozzle bevel area adjacent to the weld

The sound coverage achevied is graphically illustrated on pg. 5

Signed Richard Dale

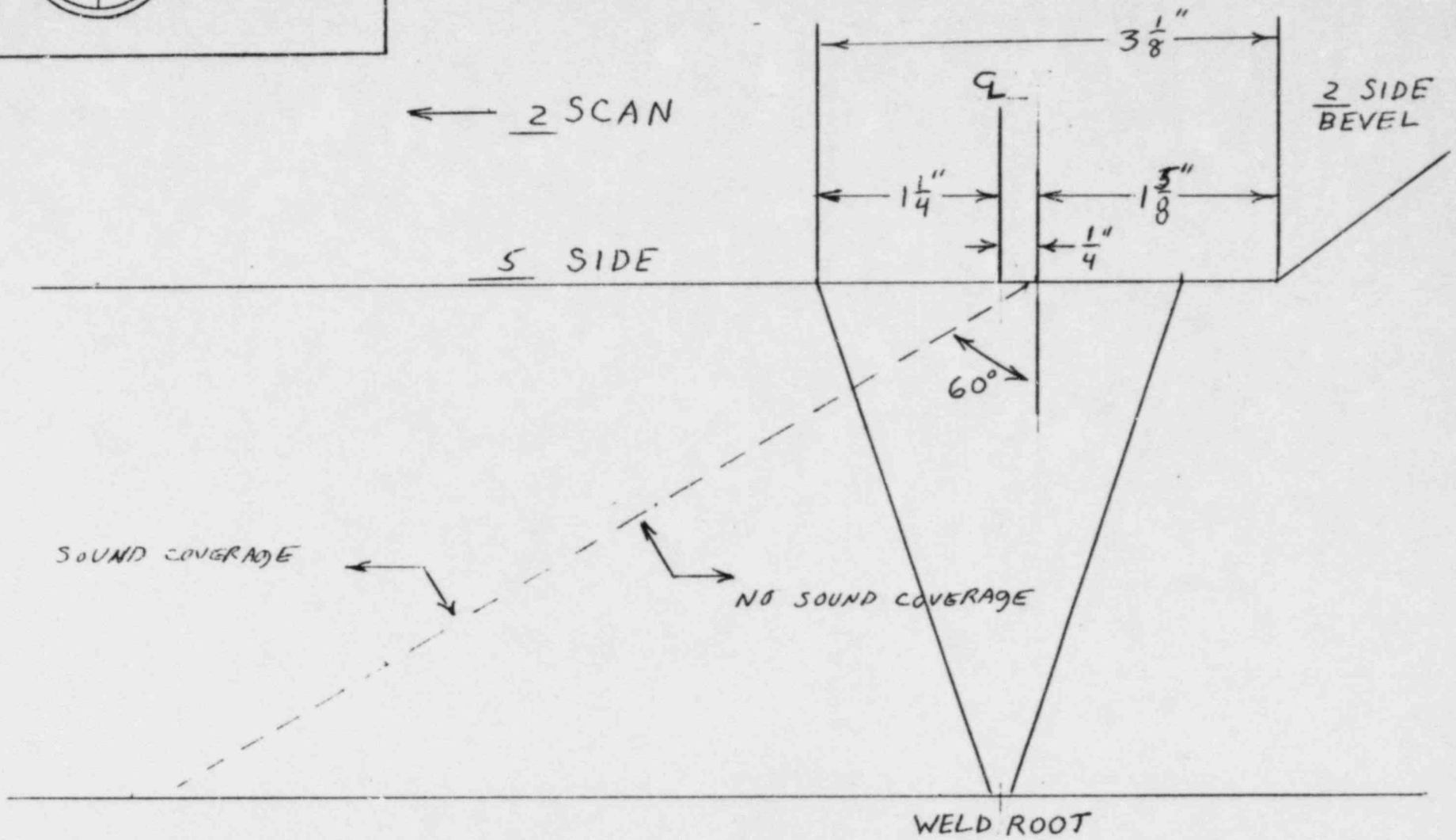
The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET PAGE OF



The Virginia Corp. of Richmond

D. Payne ANII 4/27/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	NA / 14

Component/Piping System	Examiner/Level	Date
COLD LEG R.V. TO PCP. 2B	Gary Longenecker II	4-23-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI 2.5 REV-0 FC-D	ZONE 14 REV-2 FC-1	Daniel F Jensen	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	Size	Cal. Block	UT-6
Model	MARK I	PANAMETRICS	1."	Cal. Block	NA
S/N	03704E	Freq.		Range Cal.	4.167
Reject	OFF	2.25 MHZ		Calibration Checks	
Damp.	MIN	Serial No.			
Freq.	2	48808		8:50	CAL IN
Rep. Rate	1k	Coax. Cable		12:30	CAL OUT
Filter	HI	12'		1:45	CAL IN
Video	NORM	Gain		4:10	CAL OUT
Couplant	SONOTRACE 40 S/N 8119	36 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
14-003LA	1'	3.417"	3.333"	3.375"	14-004LB	1'	3.250"	3.333"	3.333"
14-003LA	2'	3.333"	3.292"	3.333"	14-004LB	2'	3.250"	3.333"	3.333"
14-003LA	3'	3.417"	3.375"	3.333"	14-004LB	3'	3.250"	3.333"	3.292"
14-003LA	4'	3.292"	3.250"	3.333"	14-004LB	4'	3.292"	3.333"	3.333"
14-003LA	5'	3.417"	3.333"	3.375"	14-004LB	5'	3.292"	3.292"	3.333"
14-003LA	6'	3.417"	3.375"	3.375"	14-004LB	6'	3.333"	3.333"	3.292"
14-003LA	7'	3.417"	3.333"	3.333"	14-004LB	7'	3.292"	3.375"	3.333"
14-003LA	8'	3.417"	3.375"	3.375"	14-004LB	8'	3.333"	3.333"	3.250"
14-003LA	9'	3.417"	3.333"	3.375"	14-004LB	9'	3.292"	3.333"	3.292"
14-003LA	10'	3.333"	3.333"	3.375"	14-004LB	10'	3.375"	3.333"	3.292"
14-003LA	11'	3.333"	3.333"	3.375"	14-004LB	11'	3.333"	3.375"	3.375"
14-003LA	12	3.333"	3.375"	3.417"	14-004LB	12	3.333"	3.333"	3.375"

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report D. Payne ANII 4/27/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14 R-2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
I.S.I. 23 R.0 F.C.1	O.D.	Gary Longenecker III	Dan D. Jones	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant
COLD LEG R.V. TO R.C.P. 2B	36" 30"	BUTT	UT-6	SONOTRACE Type 40 Batch No. 8119

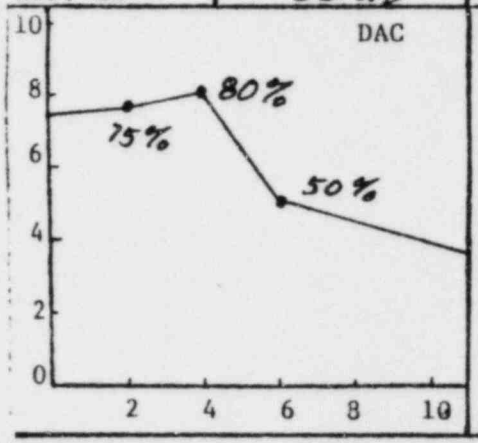
Continuation Sheet Attached: ✓ Yes ___ No

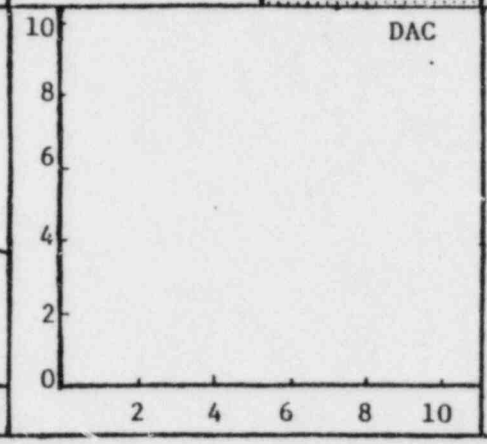
Field Changes: Yes ✓ No ___ If Yes, Number F.C. 1

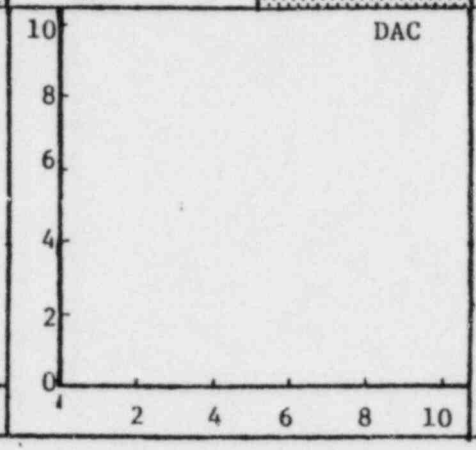
Transducer	0°	45°	60°
S/N	48808	N A	N A
Size	1." DIA.		
Frequency	2.25 MHz		
Beam Angle	0°		

Instrument			
Mfgr.	SONIC	Model	MARK I
S/N	03709E	RepRate	1K
Reject	OFF	Filter	HI
Damp	MIN.	Coax	12'
Freq.	2. MHz.	Video	NORM

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
					Sound Entry Point To:					Sound Entry Point To:			0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC		Signal Amp.	Sweep	Scribe Line	50% DAC		In	Out	In	Out	In	Out
													8:50	12:30	NA	NA	NA	NA
1/4 T	75%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1:45	4:15				
1/2 T	80%	4.0																
3/4 T	50%	6.0																
1 T	NA	8.4																
Ref. dB	36 db																	







Additional Comments/Sketch

D. Payne ANII 4/[illegible]/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14 R-2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
I.S.I. 2.3 R-0 F.C.1	O.D.	Gary Longenecker II	Daniel Dyer	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG R.V. TO R.C.P. 2B	~~36~~ 30" O.D.	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-003LA	NA	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT.	
14-004LB	NA	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT.	

Form UT-101a

2/82

The Virginia Corp. of Richmond

D. Payne ANII 4/27/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	NA/ 14

Component/Piping System	Examiner/Level	Date
COLD LEG - R.V. to R.C.P. 2B	Gary Longenecker II	4-23-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI 2.5 REV.-0 FC-0	ZONE 14 REV-2 FC-1	Daniel F Jones	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	Size	Cal. Block	UT-6
Model	MARK I	KB AEROTECH	.5"	Cal. Block	NA
S/N	01610E	Freq.		Range Cal.	4.162
Reject	OFF	2.25 MHZ		Calibration Checks	
Damp.	MIN	Serial No.			
Freq.	2	J02172		9:00 CAL. IN	
Rep. Rate	1k	Coax. Cable		12:35 CAL. OUT	
Filter	HI	12'		1:45 CAL. IN	
Video	NORM	Gain		4:15 CAL OUT	
Couplant	SONOTRACE 40 #N 8119	25 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
14-005	12	3.917"	NA	3.292"	NA	NA	NA	NA	NA
14-005	2	4.083"		3.333"					
14-005	4	3.750"		3.333"					
14-005	6	3.917"		3.250"					
14-005	8	3.667"		3.292"					
14-005	10	4.042"		3.292"					

Sketch/Identification

14-005 2 SIDE NA DUE TO NOZZLE CONFIGURATION

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 4/27/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14 R-2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
I.S.I. 2.3 R-0 F.C.1	O.D.	Gary Longenecker III	Dana C. Jones	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: SONOTRACE
COLD LEG R.V. TO R.C.P. 2B	36 & 30	BUTT	UT-6	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

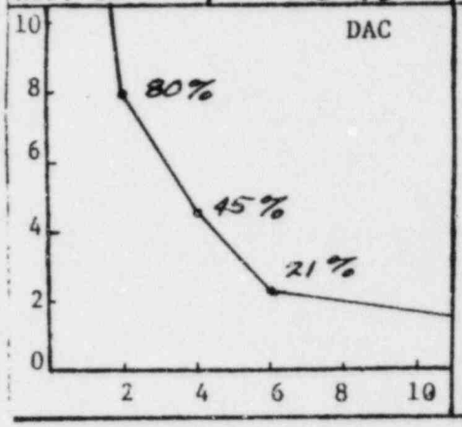
Field Changes: Yes ✓ No ___ If Yes, Number F.C. 1

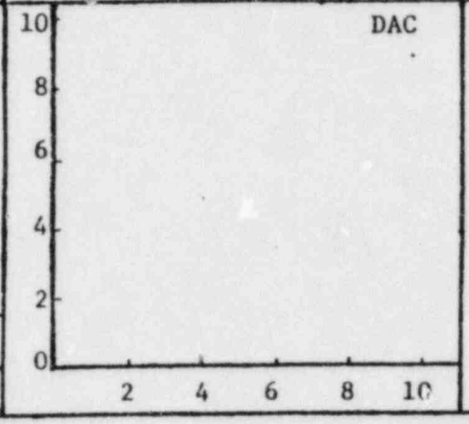
Transducer	0°	45°	60°
S/N	J02172	NA	NA
Size	.5" DIA.		
Frequency	2.25 MHz		
Beam Angle	0°		

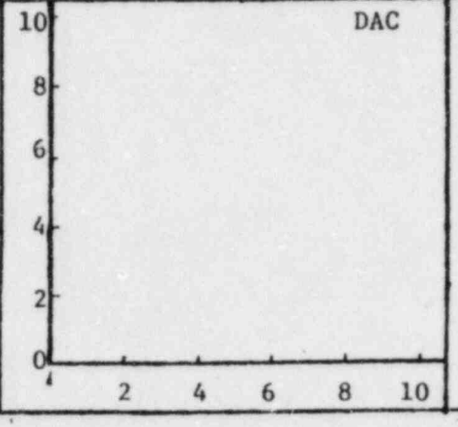
Instrument			
Mfgr.	SONIC	Model	MARK I
S/N	01610E	RepRate	1K
Reject	OFF	Filter	HI
Damp	MIN.	Coax	12'
Freq.	2. MHz	Video	NORM

Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/2 T	45%	4.0										
3/4 T	21%	6.0										
1 T	NA	8.4										
Ref. dB	25 dB											

Calibration Checks	0°		45°		60°	
	In	Out	In	Out	In	Out
	9:00	12:35	NA	NA	NA	NA
	1:45	4:15				







Additional Comments/Sketch

D. Payne ANII 4/27/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14 R-2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
I.S.I. 2.3 R.O FC.1	O.D.	Gary Langenecht II	Daniel Jones	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG R.V. TO R.C.P. 2B	36" 30"	BUTT	UT-6	SONOTRACE 40 8119

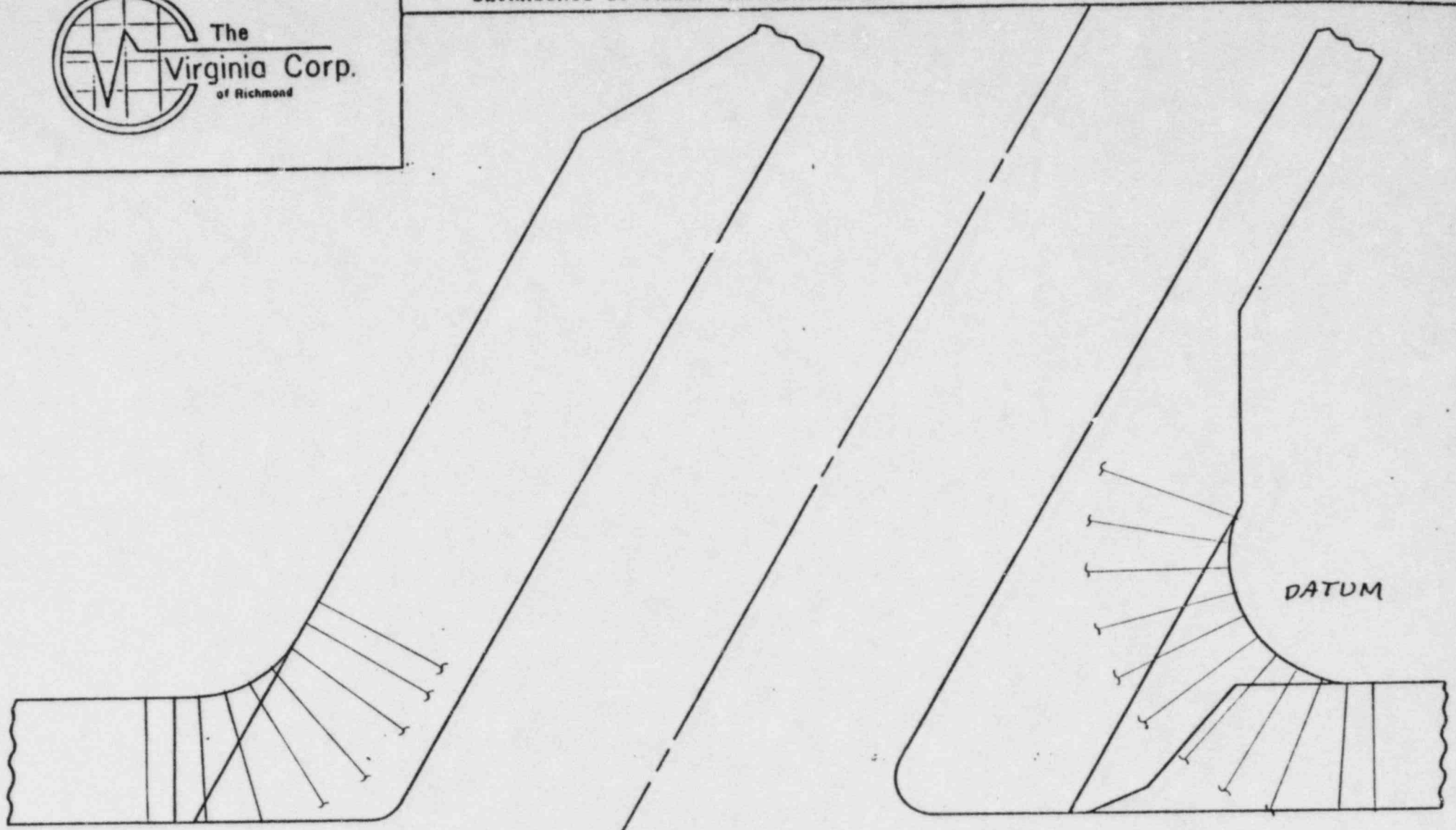
Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-005	NA	PAR	NA	NA	NA	PAR	*	CLEAN	GROUND	NI	SAT	

* BASE METAL SCAN ON 2 SIDE RUNS OFF SCREEN BECAUSE NOZZLE IS CLOSE TO 5" THICK 0° SCAN RUNS OFF SCREEN BECAUSE OF RADIUS ON DATUM SIDE CAUSING INCREASED METAL PATH AND NOZZLE THICKNESS

SEE ATTACHED SHEET

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



WELD NO. 14-005

The Virginia Corp. of Richmond

Ultrasonic Examination Report — D. Payne ANII 4/27/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP AND L	WATERFORD	3	2B/14	ZONE 14, REV 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3, REV 0, F.C. 1	O.D.	CR Scott II	Daniel J Jones	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
COLD LEG REACTOR VESSEL TO RCP 2B	36"	BUTT	UT-6	Type 40 Batch No 2119

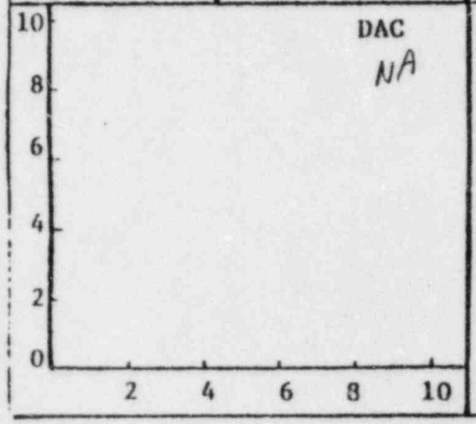
Continuation Sheet Attached: ✓ Yes ___ No

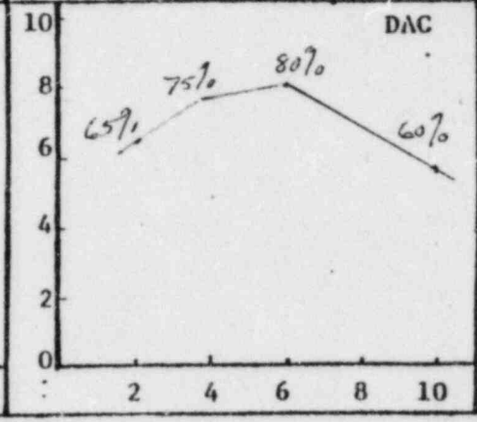
Field Changes: Yes ✓ No ___ If Yes, Number 1

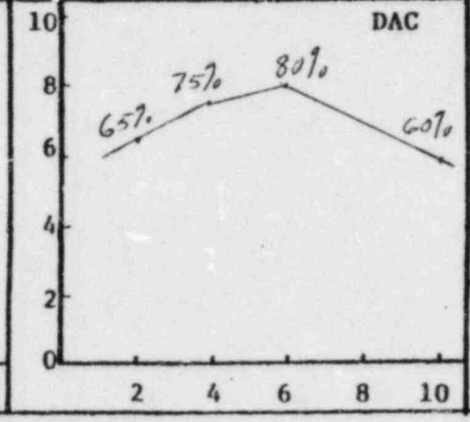
Transducer	0°	45°	60°
S/N	NA	419134	NA
Size		1"	
Frequency		2.25 MHz	
Beam Angle		45.5°	

Instrument			
Mfgr.	SONIC	Model	ETS MARK I
S/N	05304E	RepRate	200
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12'
Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
					Sound Entry Point To:				Sound Entry Point To:		0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC	Signal Amp.	Sweep	Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	65	2.0	5/8	13/32 / 3/16	65	2.0	5/8	13/32 / 3/16	NA	NA	0815	1115	NA	NA
1/2 T			75	4.0	1 21/32	1 1/2 / 1 13/32	75	4.0	1 21/32	1 1/2 / 1 13/32						
3/4 T			80	6.0	2 9/16	2 5/16 / 2 3/4	80	6.0	2 9/16	2 5/16 / 2 3/4						
5/4 T			60	10.0			60	10.0								
Ref. dB			60				60									







Additional Comments/Sketch

Form UT-101 2/82

D. Payne ANII 4/[illegible]/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop	Iso/drawing No.
LP AND L	WATERFORD	3	2B	ZONE 14, REV 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3, REV 0, F.C. 1	O.D.	[signature] II	[signature]	4-23-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch
COLD LEG REACTOR VESSEL TO RCP 2B	36"	BUTT	UT-6	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	003LA	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
14-	004LB	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
14-	007	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
14-	008LA	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
14-	009LB	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
14-	010	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
14-	011	NA	PAR	YES	YES	NA	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	

The Virginia Corp. of Richmond

Date 4-23-82

Page 3 of 5

To:

Subject ZONE 14, LOOP 2B, WELD 14-011 ATTACHMENT SHEET.

THE 2 SCAN OF WELD 14-011 IS LISTED AS A PARTIAL SCAN DUE TO GEOMETRY.

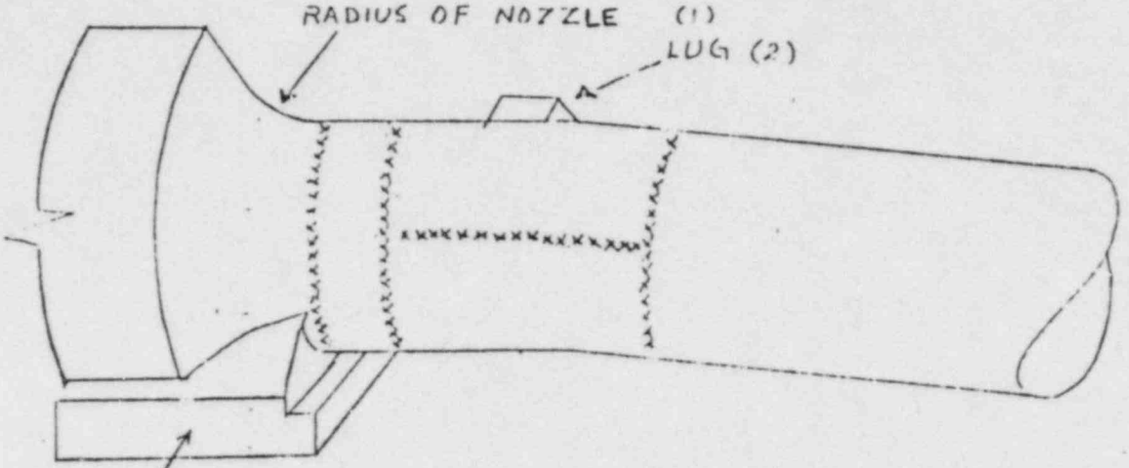
REFERENCE NOTE (1) OF PAGE 4 ATTACHED INDICATING A NOZZLE BEVEL AREA ATACENT TO THE WELD.

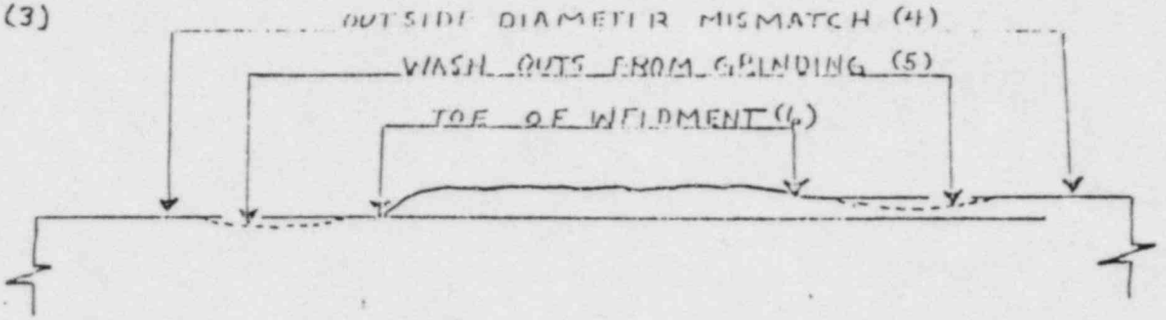
THE SOUND COVERAGE ACHIVED IS GRAPHICALLY ILLUSTRATED ON PAGE 5.

Signed C R Faulk

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

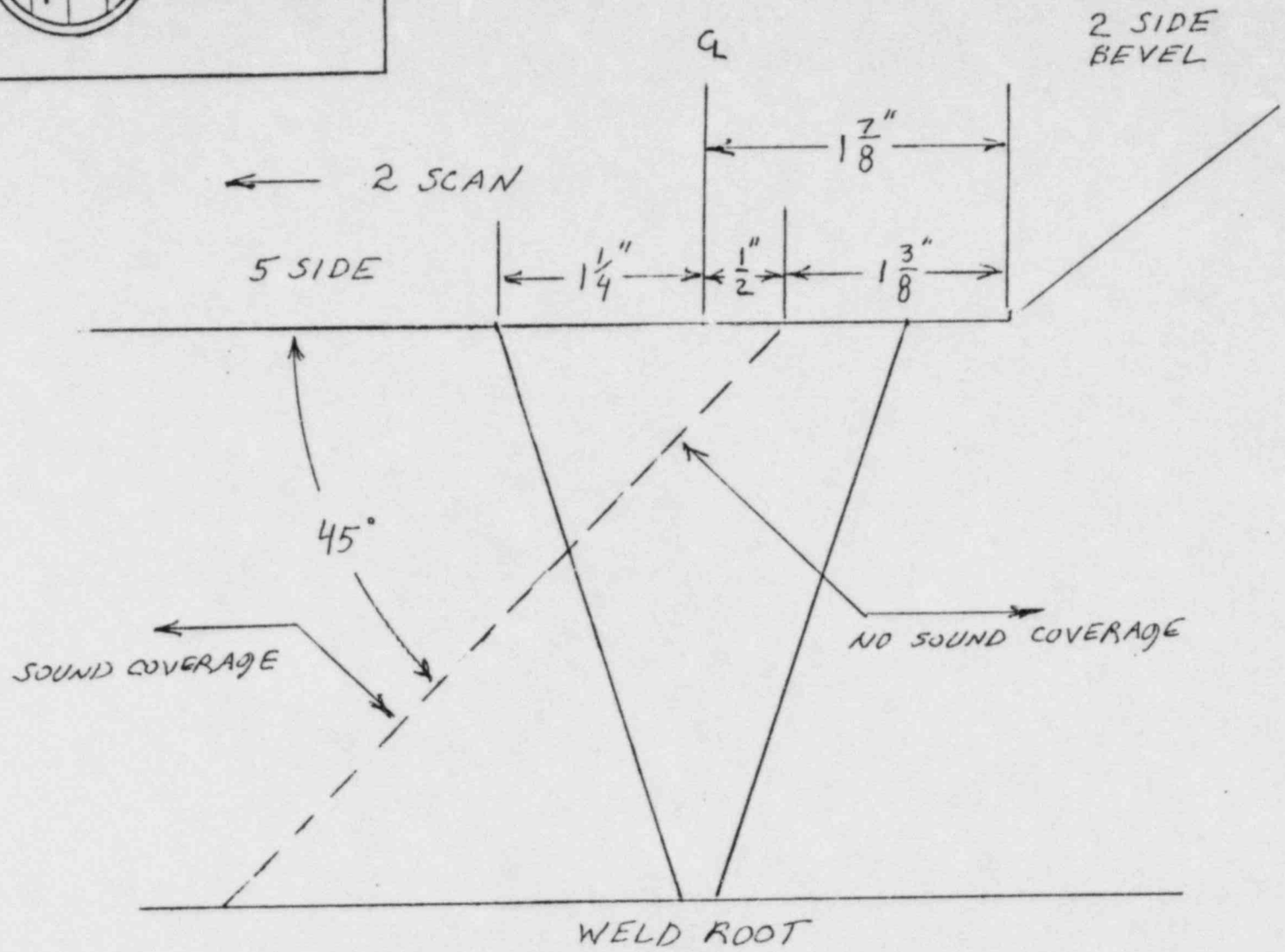




The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

WELD 14-011



The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 4/27/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2B/14	Zone 14, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0, F.C. 1	O.D.	C.R. Stanley II	Daniel Payne	4-24-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Cold Leg Reactor Vessel to RCP 2B	36"	Butt	UT-6	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

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

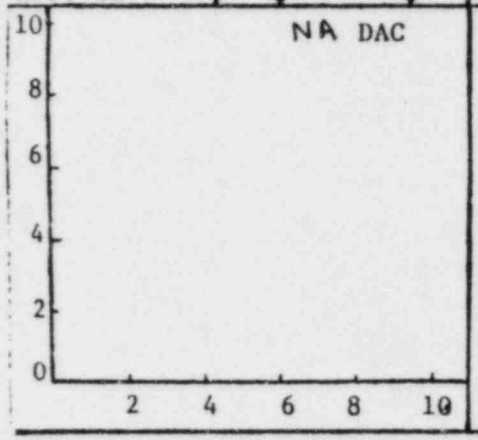
Transducer	0°	45°	60°
S/N	NA	G07150	NA
Size		1/2"	
Frequency		2.25 MHz	
Beam Angle	↓	45°	↓

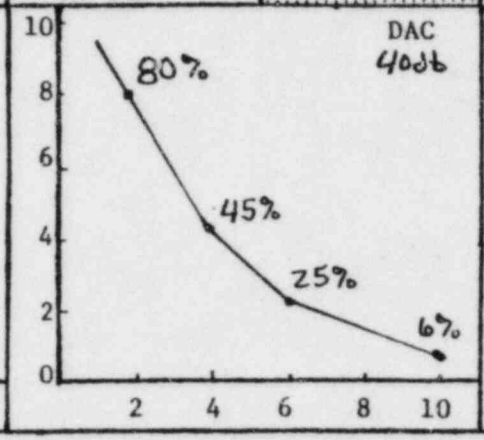
Instrument			
Mfgr.	Sonic	Model	FTS MARK I
S/N	05304E	RepRate	200
Reject	Min	Filter	OFF
Damp	Min	Coax	10'
Freq.	2 MHz	Video	Diff

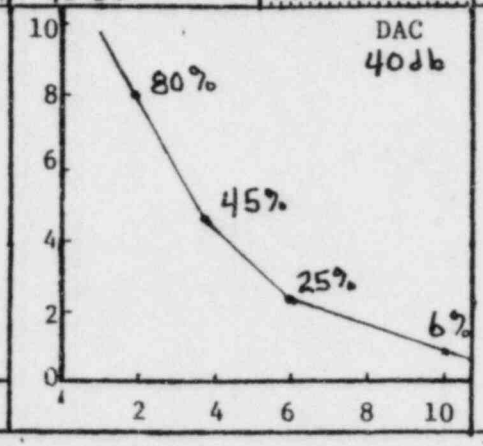
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4 T	NA	NA	80%	1.8	15/16	13/16	1 1/16	80%	1.8	15/16	13/16	1 1/16
1/2 T			45%	4.0	1 29/32	1 11/16	2 1/4	45%	4.0	1 29/32	1 11/16	2 1/4
3/4 T			25%	6.0	2 13/16	2 15/32	3 3/8	25%	6.0	2 13/16	2 15/32	3 3/8
5/4 T			6%	10.0				6%	10.0			
Ref. dB	↓	↓	40 db					40 db				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0930	1250	NA	NA







Additional Comments/Sketch

D. Payne ANII 4/27/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	2B/ 14	Zone 14, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0, F.C. 1	O.D	C.R. [signature] II	[signature]	4-24-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold Leg Reactor Vessel to RCP 2B	36"	Butt	UT-6	Sonotrace 40, Batch 819

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	005	NA	PAR	PAR	Yes	NA		Clean	Smooth	NI	SAT	

Form UT-101a

2/82

The Virginia Corp. of Richmond

Date 4-24-82

Page 3 of 6

To: _____

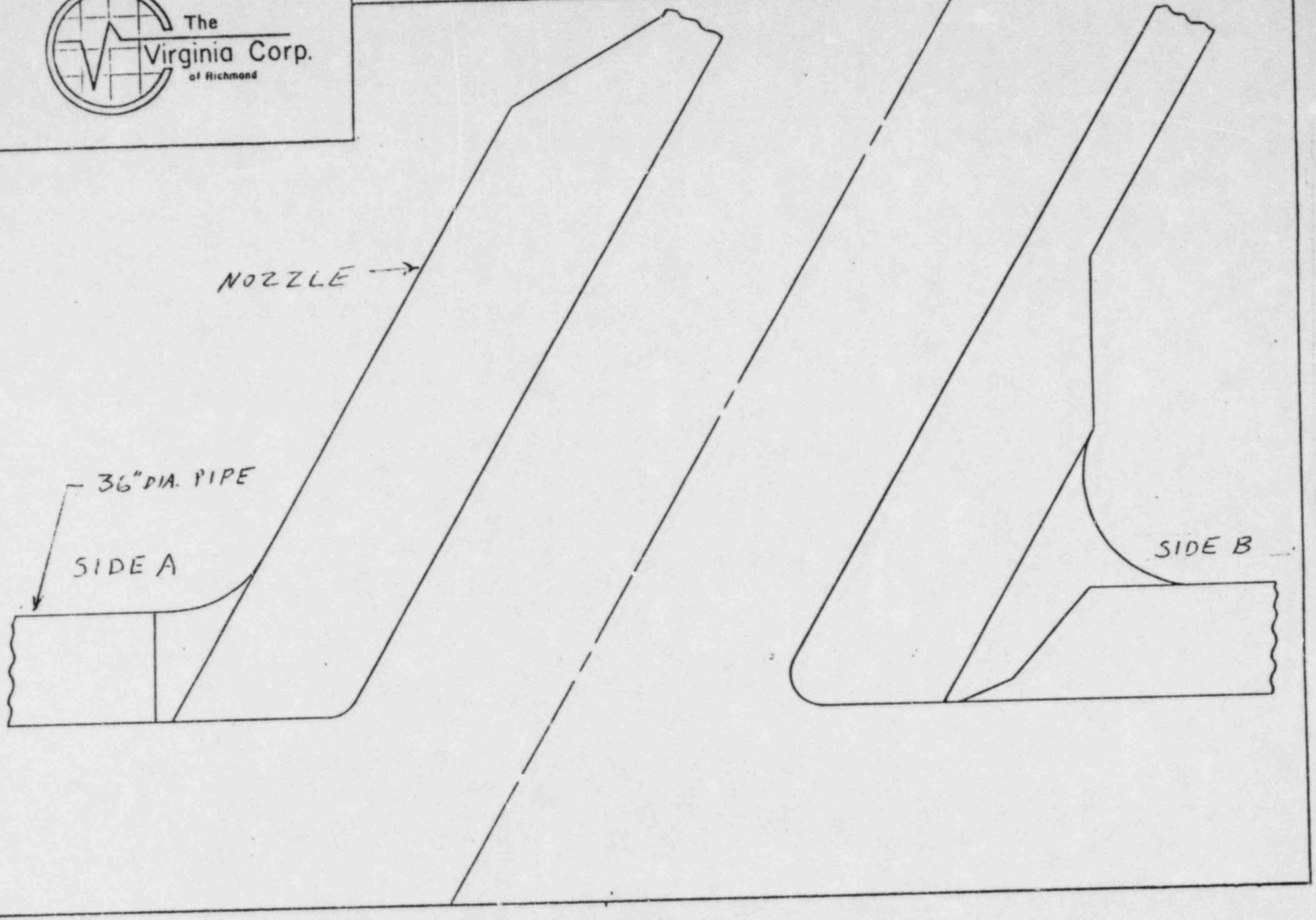
Subject SOUND COVERAGE LIMITATIONS

THE NOZZLE WELD IN THIS LOOP HAS A RADIUS WHICH CAUSES THE TRANSDUCER TO LIFT OFF NEAR THE CENTER OF THE RADIUS AND THUS LOSE SOUND ENTRY. THIS IS PARTICULARY TRUE FOR THE 2 AND 5 SCAN AND IS GRAPHICALLY ILLUSTRATED IN THE ATTACHED SKETCHS. THE ESTIMATED LACK OF SOUND COVERAGE AREAS ARE SHADED.

Signed CR Stark

The Virginia Corp. of Richmond

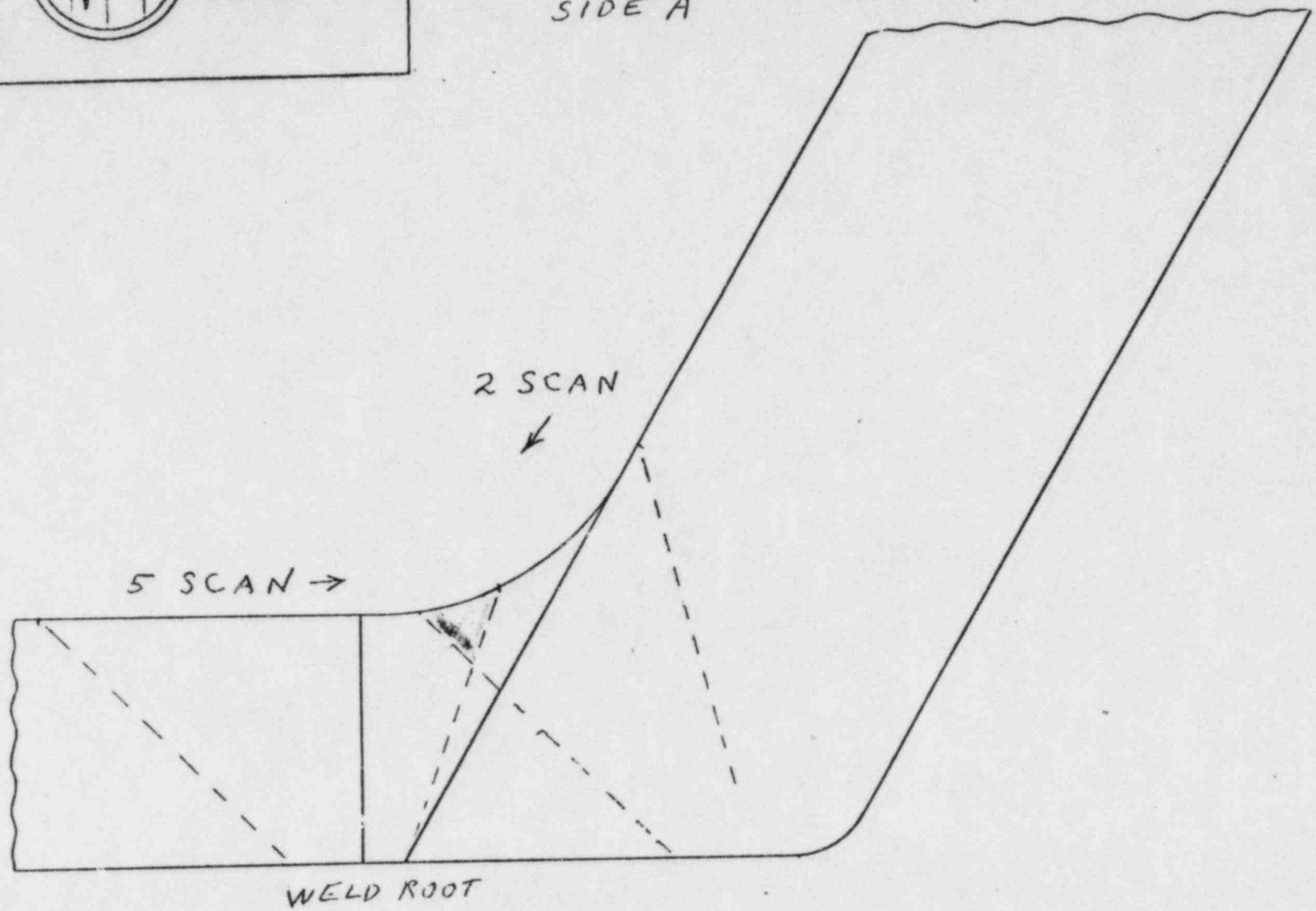
ULTRASONIC SUPPLEMENTAL DATA SHEET



The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

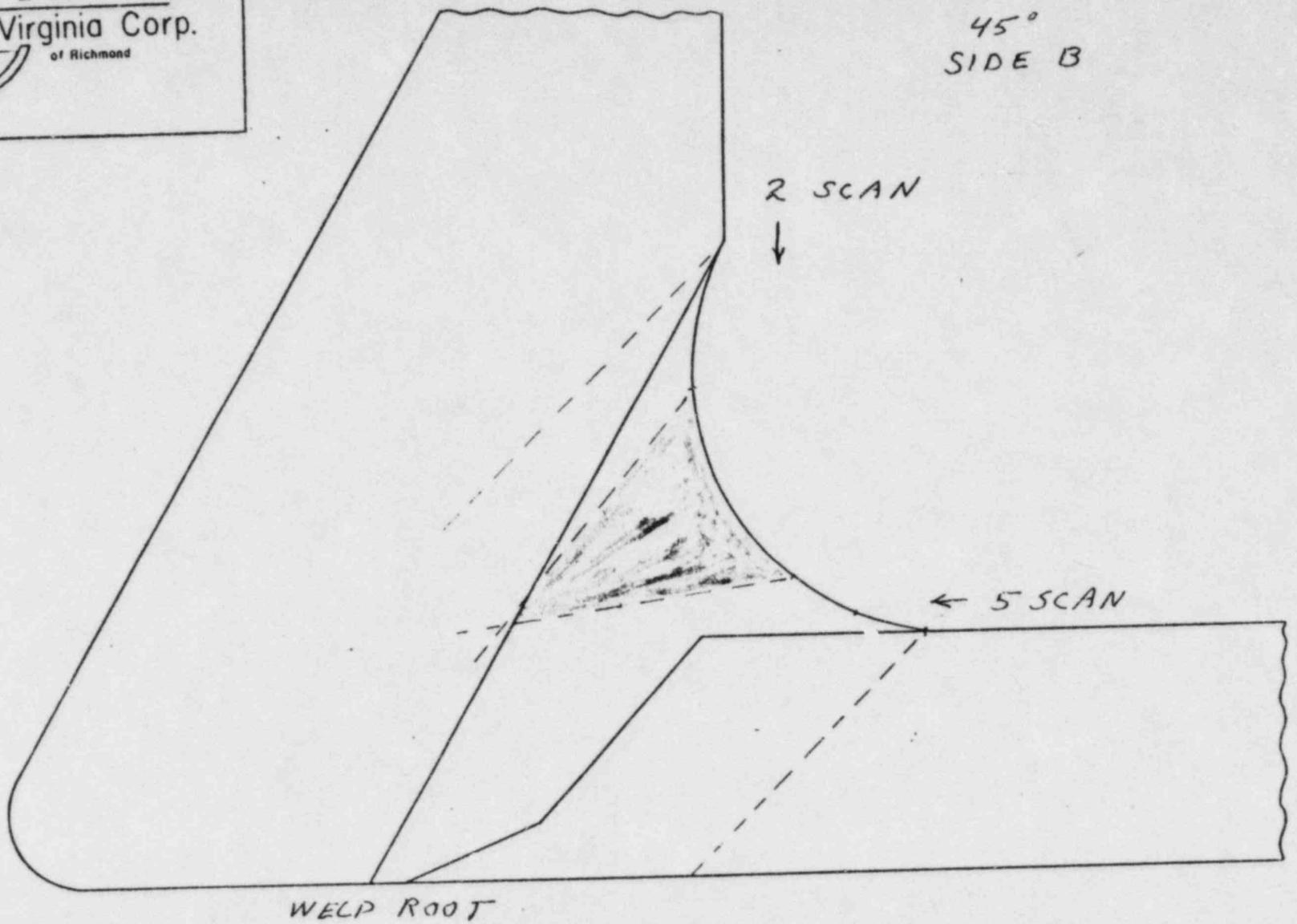
WELD 14-005
45°
SIDE A



The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

WELD 14-005
45°
SIDE B



The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 4/27/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP + L	Waterford	3	2B/14	Zone 14, Rev 2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.4 Rev 0 F.C.1	OD	[illegible] II	[illegible]	4-24-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant
Cold leg - R.V. to R.C.P. 2B	30"	Butt	UT-6	Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached ✓ Yes ____ No

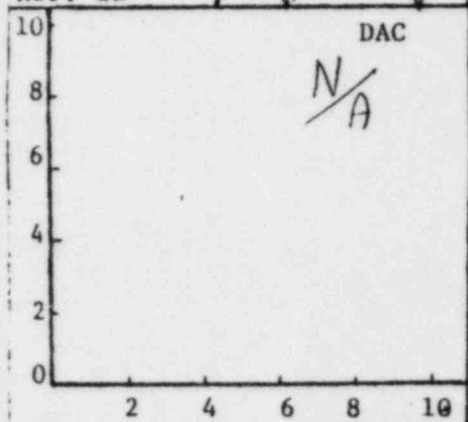
Field Changes: Yes ✓ No ____ If Yes, Number 1

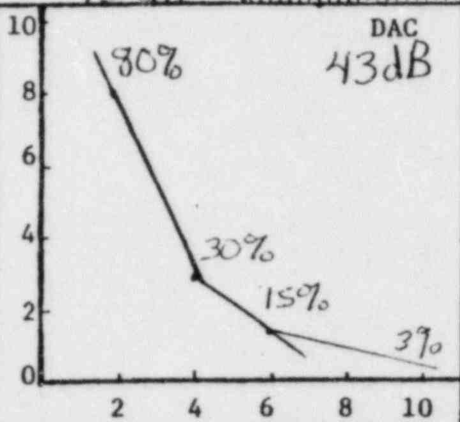
Transducer	0°	45°	60°
S/N	N/A	N/A	F18164
Size			.50"
Frequency			2.25 Mhz
Beam Angle			60°

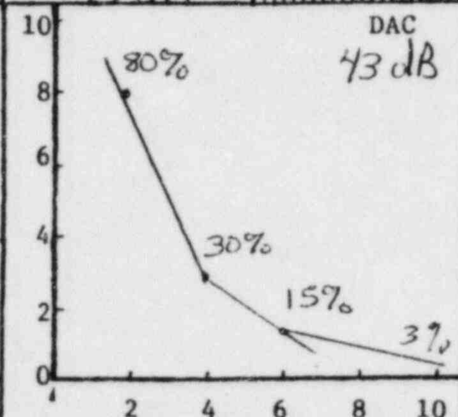
Instrument			
Mfgr.	Sonic	Model	FTS Mark I
S/N	01610E	RepRate	200
Reject	off	Filter	A
Damp.	Min	Coax	6'
Freq.	2 Mhz	Video	Norm

Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Scan Sound Entry Point To: Scribe Line	2 & 5 Scan Sound Entry Point To: 50% DAC		7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Scan Sound Entry Point To: Scribe Line	7 & 8 Scan Sound Entry Point To: 50% DAC	
1/4 T	N/A	N/A	80%	2.0	1 7/16	1 9/32	1 3/4	80%	2.0	1 7/16	1 9/32	1 3/4
1/2 T			30%	4.0	3.0	2 3/4	3 1/2	30%	4.0	3.0	2 3/4	3 1/2
3/4 T			15%	6.0	4 9/16	4 9/32	5 1/32	15%	6.0	4 9/16	4 9/32	5 1/32
5/4 T			3%	10.0				3%	10.0			
Ref. dB			43 dB					43 dB				

Calibration Checks	0° In	0° Out	45° In	45° Out	60° In	60° Out
	N/A	N/A	N/A	N/A	0950	1245







Additional Comments/Sketch

Form UT-101

2/82

D. Payne ANII 4/27/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P + L	Waterford	3	2B/14	Zone 14, Rev 2 F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 F.C. 1 Rev 0	OD	CR Clark II	Daniel L Jens	4-24-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg - R.V. to R.C.P. 2B	~~OD~~ 36" 30"	Butt	UT-6	Sonotrace 40 / B# 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-005		N/A	par	par	yes	N/A		clean	smooth	NI	sat	

Form UT-101a

2/82

The Virginia Corp. of Richmond

Date 4-24-82

Page 3 of 6

To: _____

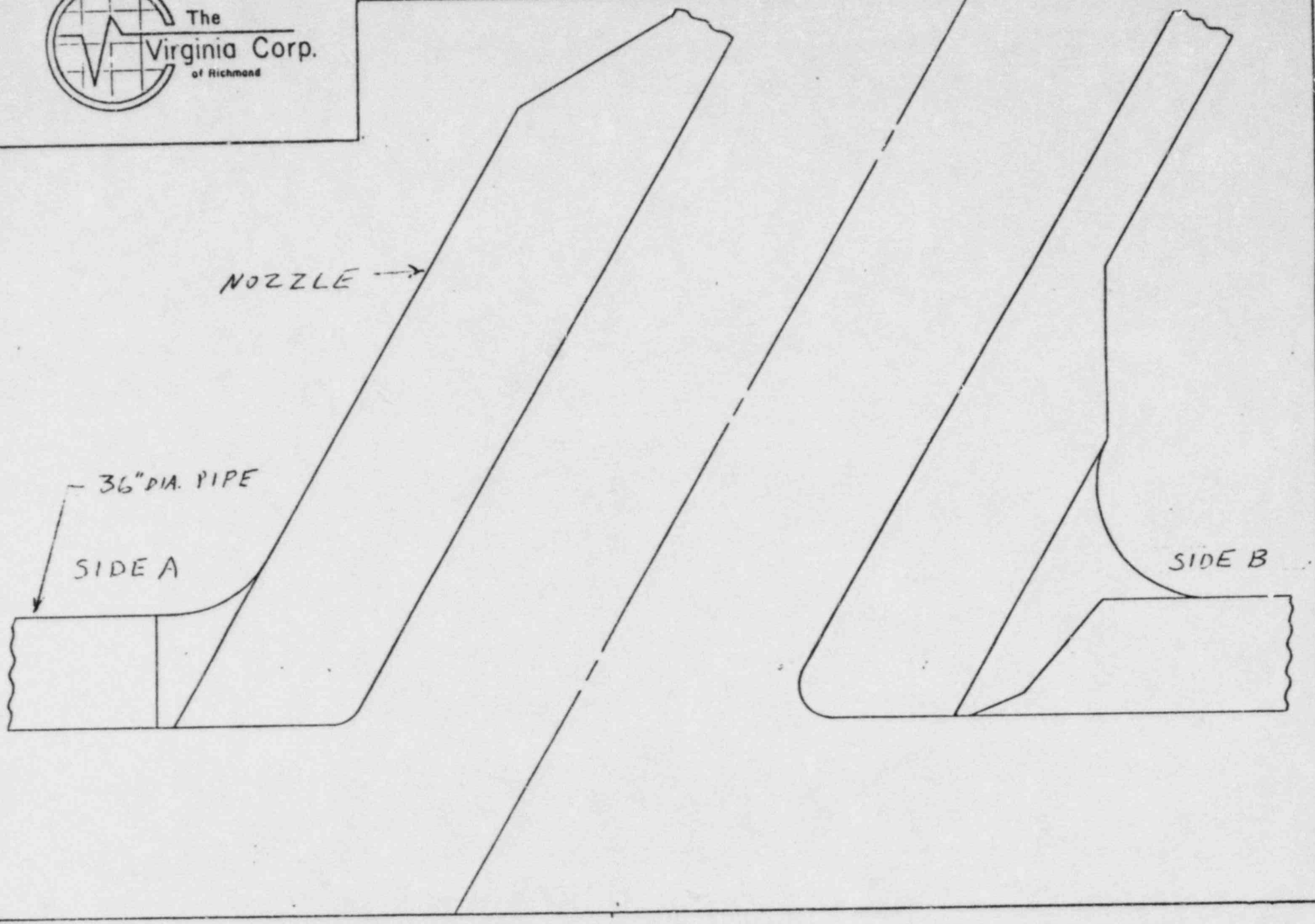
Subject SOUND COVERAGE LIMITATIONS

THE NOZZLE WELD IN THIS LOOP HAS A RADIUS WHICH CAUSES THE TRANSDUCER TO LIFT OFF NEAR THE CENTER OF THE RADIUS AND THUS LOSE SOUND ENTRY. THIS IS PARTICULARY TRUE FOR THE 2 AND 5 SCAN AND IS GRAPHICALLY ILLUSTRATED IN THE ATTACHED SKETCHS. THE ESTIMATED LACK OF SOUND COVERAGE AREAS ARE SHADED.

Signed CR Stanley

The Virginia Corp. of Richmond

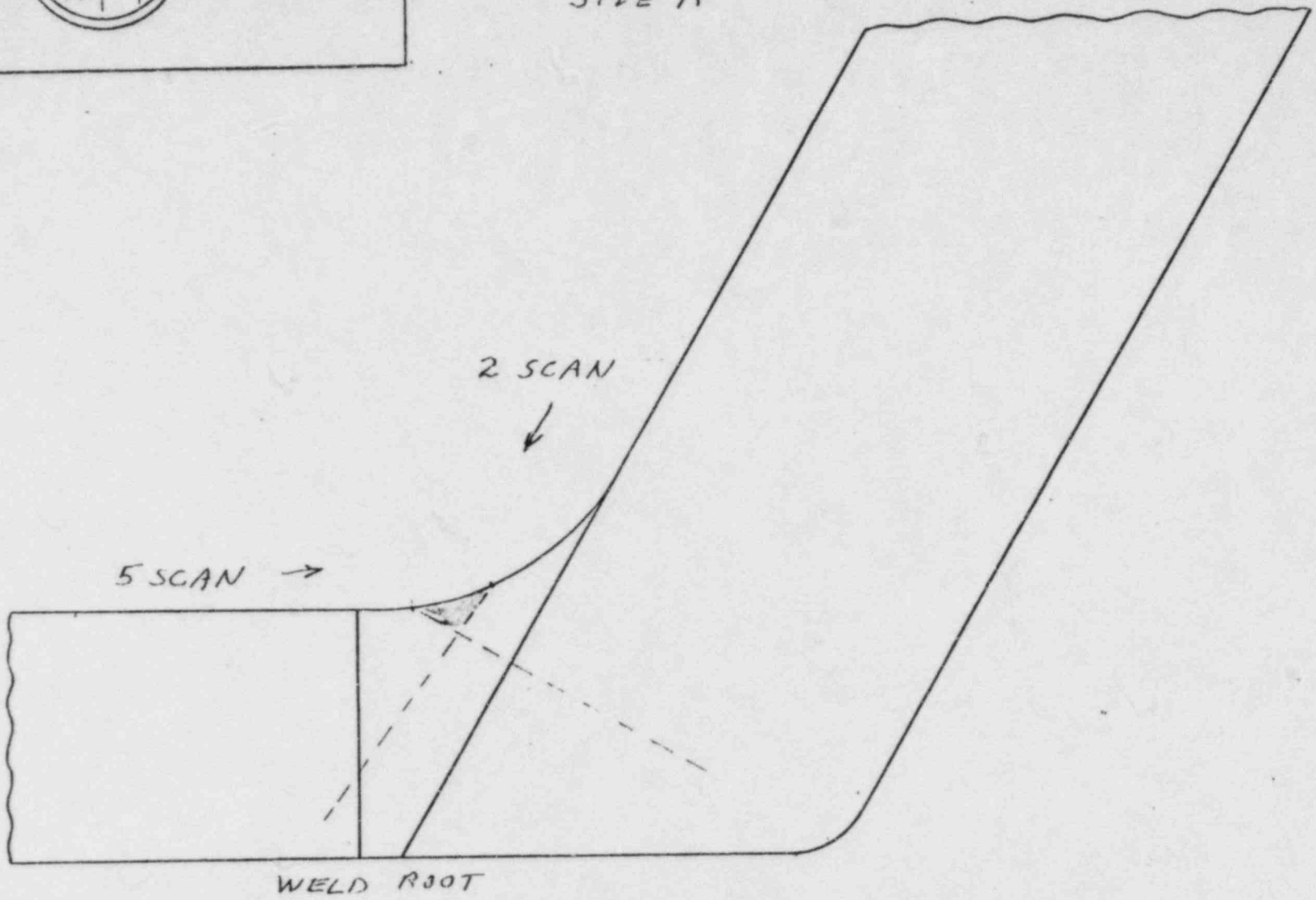
ULTRASONIC SUPPLEMENTAL DATA SHEET



The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

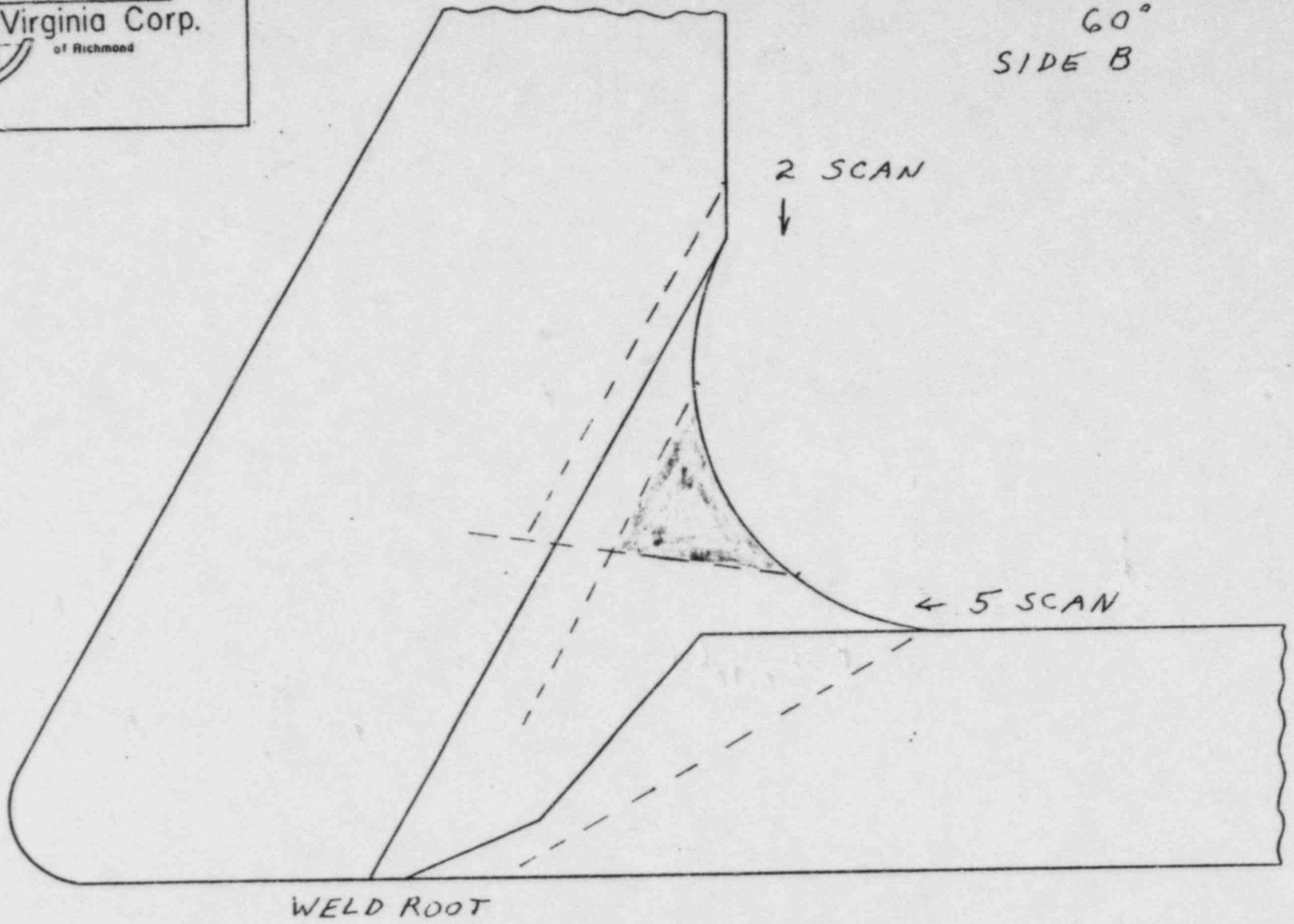
WELD 14-005
60°
SIDE A



The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

WELD 14-005
60°
SIDE B



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

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/14	ZONE 14 REV 2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 R.0 F.C.1	O.D.	BURLINGAME/II	Kevin White	5-9-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
COLD LEG - REACTOR COOLANT	30"-3/4" I.D	BUTT	UT-6 3.50"	Type 40 Batch No 8119

Continuation Sheet Attached: ✓ Yes ___ No

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

Transducer	30°	45°	60°
S/N	J22935	N/A	N/A
Size	1/2"	↓	↓
Frequency	2.25 MHz	↓	↓
Beam Angle	30°	↓	↓

Instrument

Mfgr.	SONIC	Model	ETS MARK I
S/N	01610E	RepRate	1000
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12'
Freq.	2 MHz	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	N/A	N/A
1/2 T		
3/4 T		
1 T		
5/4 T		
Ref. dB	↓	↓

2 & 5 Scan

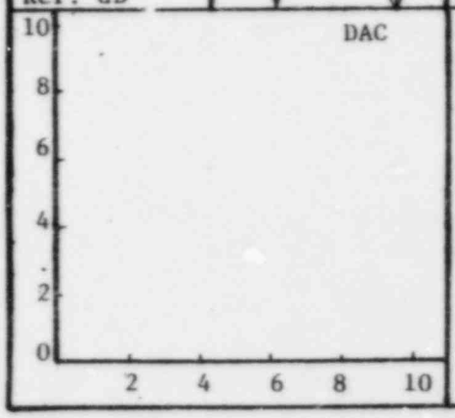
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2.0	17/32	13/32	21/32
40%	4.0	1 1/16	7/8	19/32
20%	6.0	1 7/16	1 5/16	1 23/32
80%	8.6			
10%	10.0			
60 db				

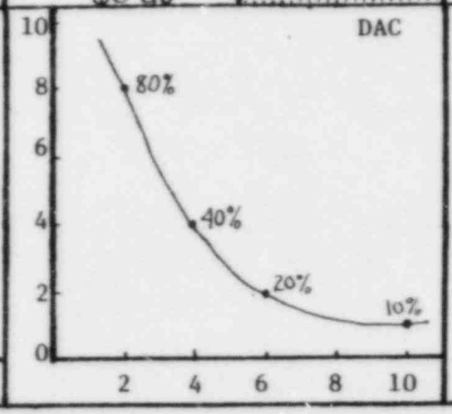
7 & 8 Scan

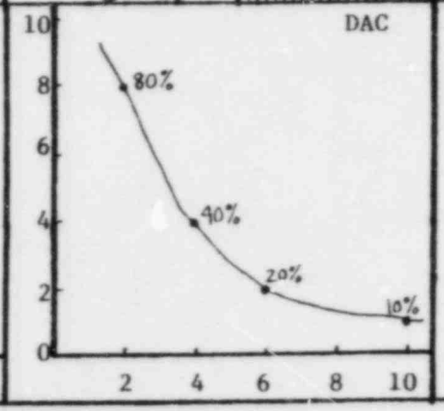
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2.0	17/32	13/32	21/32
40%	4.0	1 1/16	7/8	19/32
20%	6.0	1 7/16	1 5/16	1 23/32
80%	8.6			
10%	10.0			
60 db				

Calibration Checks

30° In	30° Out	45° In	45° Out	60° In	60° Out
12:45	14:40	N/A	N/A	N/A	N/A
		↓	↓	↓	↓







Additional Comments/Sketch

Form UT-101

2/82

Dr. Payne ANII 5/20/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	2B, 14	ZONE 14, REV 2, FC-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, REV 0, FC1	O.D.	BURLINGAME II	Daniel Glenn	5-4-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30"Sch 10" I.D.	BUTT	UT to 3.50"	Sonotrace 40, Batch 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	011	NA	PAR	NA	PAR	NA	SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
14-	010	NA	YES	NA	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
14-	005	NA	NO	YES	PAR	NA	BRANCH CONNECTION	CLEAN	GROUND	NI	SAT	
							SEE ATTACHMENT					

The Virginia Corp. of Richmond

Date 5-4-82

Page ____ of ____

To: ____

Subject Examination Limitations

14-011 Scan 5 was not performed because coverage of the root area was obtained with the 45° and 60° angles. Scan 2 was obstructed for approximately 39" at the base of the nozzle by a support lug and for 360° 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 weld by 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.D. mismatch between the nozzle extension and elbow. Root area coverage was good with the 7 & 8 scans.

14-010 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 & 8 were restricted at the weld by mismatch. Accounting for beam spread, good root area coverage was obtained.

14-005 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 ____

Ultrasonic Examination Report

The Virginia Corp. of Richmond

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/14	ZONE 14 REV.#2, F.C.-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV.0, F.C-1	O.D.	Gary Longenecker III	[signature]	5-8-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
COLD LEG- R.V. TO R.C.P. 2B	30" ~~36" I.D.~~	BUTT	UT-6 3.50"	Type 40 Batch No 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___

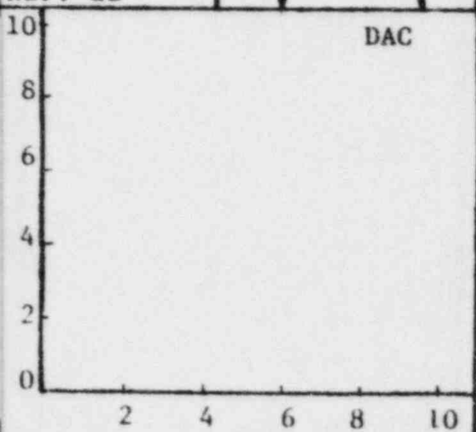
IF Yes, Number F.C.-1

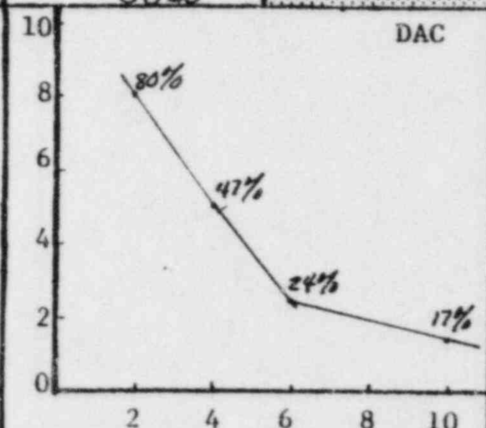
Transducer	30°	45°	60°
S/N	J22935	N/A	N/A
Size	1/2"		
Frequency	2.25MHz		
Beam Angle	30°		

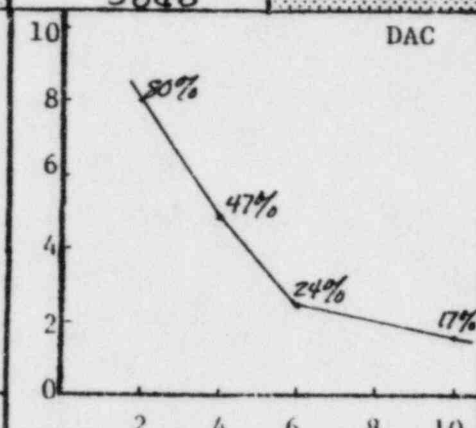
Instrument			
Mfgr.	SONIC	Model	FTS MARK I
S/N	01610E	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	12'
Freq.	2MHz	Video	NORMAL

Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Scan Sound Entry Point To: Scribe Line	2 & 5 Scan 50% DAC		7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Scan Sound Entry Point To: Scribe Line	7 & 8 Scan 50% DAC	
1/4T	N/A	N/A	80%	2.0	15/32	3/8	19/32	80%	2.0	15/32	3/8	19/32
1/2T			47% ~~56%~~	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				

Calibration Checks	30° In	30° Out	45° In	45° Out	60° In	60° Out
	8:45	12:05	N/A	N/A	N/A	N/A
	1:30	4:00				







Additional Comments/Sketch

Form UT-101

2/82

D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14 R-2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
I.S.I. 2.3 R-0 F.C.1	O.D.	Gary Longenecker II	David Dyer	5-8-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG R.V. TO R.C.P. 2B	36" 30" OD	BUTT	UT-6	SONOTRACE 40, 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-003LA	NA	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT.	
14-004LB	↓	↓	YES	YES	NA	↓		CLEAN	GROUND	NI	SAT.	
14-007	↓	↓	NA	NA	YES	↓		CLEAN	GROUND	NI	SAT.	
14-008LA	↓	↓	YES	YES	NA	↓		CLEAN	GROUND	NI	SAT.	
14-009LB	↓	↓	YES	YES	NA	↓		CLEAN	GROUND	NI	SAT.	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP+L	Waterford	3	2B/14	Zone 14, Rev. 2, F.C.1

Procedure Rev. 0	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 F.C.1	ID	[signature] II	[signature]	5-8-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Cold leg - R.V. to R.C.P. 2B	30 3/16	Butt	UT-106	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___

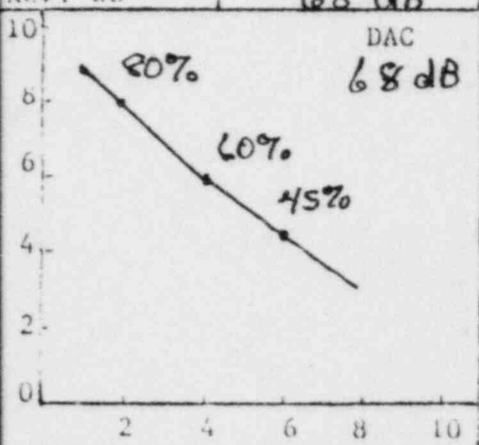
If Yes, Number 1

Transducer	0°	45°	60°
S/N	48807	N/A	N/A
Size	1"	↓	↓
Frequency	2.25Mhz	↓	↓
Beam Angle	0°	↓	↓

Instrument			
Mfr.	Sonic	Model	FTS Mark I
S/N	280836	RepRate	1K
Reject	off	Filter	High
Damp	Min.	Coax	12'
Freq.	2 Mhz	Video	Norm

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

Calibration Checks	0° In	0° Out	45° In	45° Out	60° In	60° Out
	1350	1545	N/A	N/A	N/A	N/A



DAC N/A (2 & 5 Scan)

DAC N/A (7 & 8 Scan)

Additional Comments/Sketch

Form UT-101 2/82

D. Payne ANII [illegible]/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer: L P+L	Plant: Waterford	Unit: 3	Loop/Zone: 2B/14	Iso/Drawing No.: Zone 14, Rev 2, F.C.1	
Procedure: IST 2.3 F.C.1 Rev. 0	Exam Surface: I.D.	Examiner/Level: [signature] II	VCR Supervisor: [signature]		Date: 5-8-82
Component/Piping System: Cold leg - R.V. to R.C.P. 2B	Pipe Size: 30 ~~36~~" OD	Weld Type: Butt	Cal. Block: UT-6	Couplant: Type & Batch #: Sonotrace 40 #8119	

Weld No.		Base Metal Scan	Scan Direction 2	Scan Direction 5	Scan Direction 7 & 8	Scan Direction 0	Inspection Limitations	Surface Condition Base Metal	Surface Condition Weld	Examination Results UT	Examination Results Visual	Remarks
14-010		Yes	N/A	N/A	N/A	Yes		clean	Ground	NI	Sat	
14-011		Yes	N/A	N/A	N/A	Yes		clean	Ground	NI	Sat	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2B/14	Zone 14, Rev 2, FC.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-23, Rev 0, FC+ (WRM DG 2)	I.D.	R. Burlingame II	Daniel [illegible]	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant
Reactor Coolant	~~30"~~ 30"	Butt	UT 6, 3.50"	Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
✓ Yes ____ No

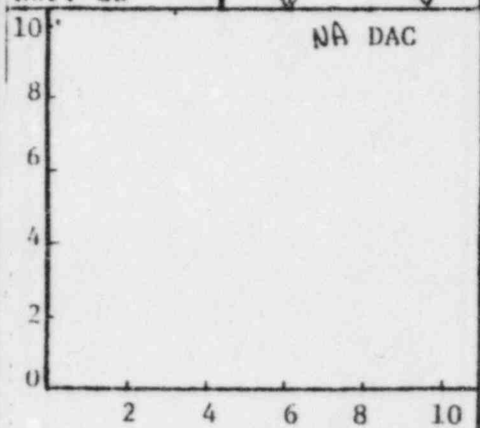
Field Changes: (WRM DG)
Yes ✓ No ____
If Yes, Number 2 FC+

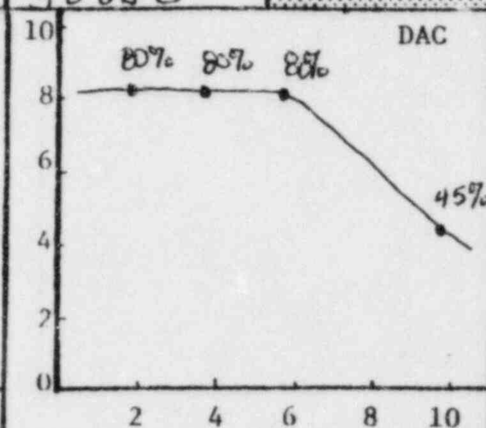
Transducer	0°	45°	60°
S/N	NA	619134	NA
Size		1.0"	
Frequency		2.25 MHz	
Beam Angle		45°	

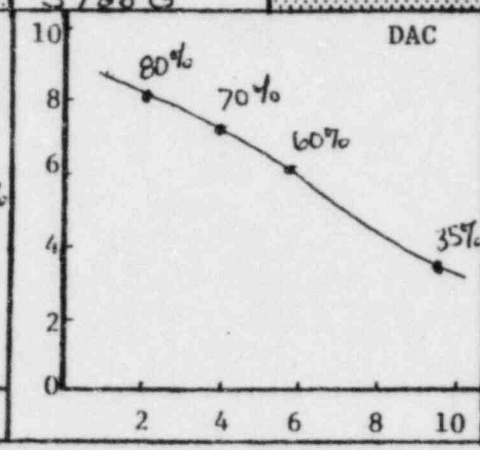
Instrument			
Mfgr.	Sonic	Model	FTS Mark 1
S/N	05304E	RepRate	1000
Reject	OFF	Filter	Hi
Damp	Min	Coax	12'
Freq.	2 MHz	Video	Norm

Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Sound Entry Point To: Scribe Line	2 & 5 Sound Entry Point To: 50% DAC		7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Sound Entry Point To: Scribe Line	7 & 8 Sound Entry Point To: 50% DAC	
1/4 T	NA	NA	80%	2.0	5/8	7/16	7/8	80%	2.0	5/8	7/16	7/8
1/2 T			80%	4.0	1 5/8	1 3/8	1 27/32	70%	4.0	1 5/8	1 3/8	1 27/32
3/4 T			80%	6.0	2 19/32	2 3/8	2 3/4	60%	6.0	2 19/32	2 3/8	2 3/4
5/4 T			45%	9.7				35%	9.7			
Ref. dB			58 db G					59 db G				

Calibration Checks	0° In	0° Out	45° In	45° Out	60° In	60° Out
	NA	NA	1115	1445	NA	NA







Additional Comments/Sketch

Form UT-101

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D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

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Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	2B/14	Zone 14, Rev 2, FC. 1

Procedure	Exam Surface	Examiner/Level	VER Supervisor	Date
151-2.3, Rev 0, FC 2	I.D.	R. Burlingame II	Daniel Jones	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Reactor Coolant	36" 30"	B-H	UT 6, 3.50"	Sonotrace 40, Batch 819

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	010	NA	YES	YES	YES	NA		Clean	Ground	NRI	SAT	@ 180° 25% DAC-SPOT
14-	011	NA	YES	YES	YES	NA		Clean	Ground	NI	SAT	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/15/82

Customer: LP&L	Plant: WATERFORD	Unit: 3	Loop/Zone: 2B/14	Iso/Drawing No.: ZONE 14, REV. #2, F.C.-1	
Procedure: ~~VRM 002~~ ISI 2.3, REV. #0, F.C.-1	Exam Surface: I.D.	Examiner/Level: [signature] II	V&R Supervisor: Daniel Dyna	Date: 5-15-82	
Component/Piping System: COLD LEG - REACTOR COOLANT	Pipe Size: 30" ~~36~~"	Weld Type: BUTT	Cal. Block #: UT-6 · 3.50"	Couplant: SONOTRACE Type 40 Batch No 8119	

Continuation Sheet Attached: ✓ Yes ___ No

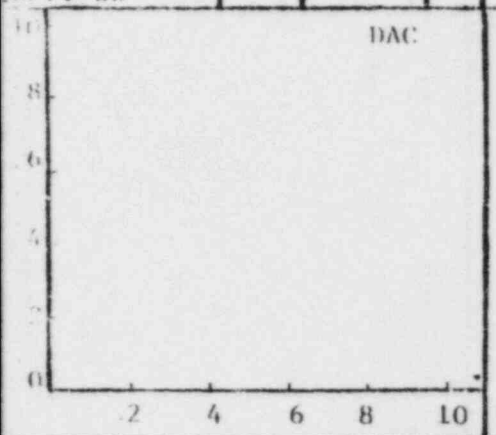
Field Changes: Yes ✓ No ___ Yes, Number ~~VRM 049~~ F.C.-1-2

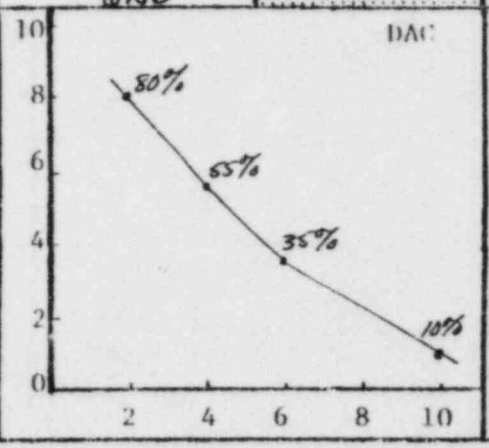
Transducer	0°	45°	60°
S/N	N/A	N/A	L19801
Size			1"
Frequency			2.25 MHz
Beam Angle			61°

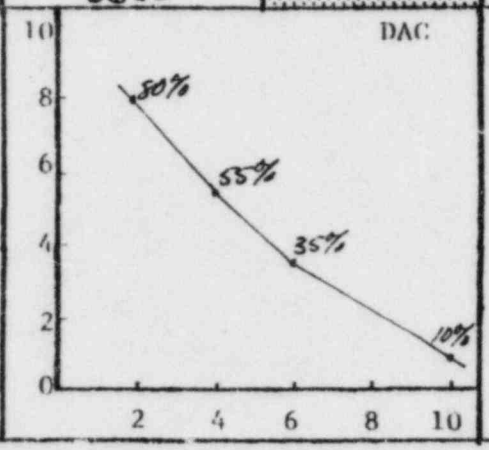
Instrument			
Mfgr.	SONIC	Model	FTS-MARK1
S/N	03704E	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	12'
Freq.	2 MHz	Video	NORMAL

Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4T	N/A	N/A	80%	2.0	13/16	5/16	2"	80%	2.0	13/16	5/16	2"
1/2T			55%	4.0	3 1/2	3 3/32	3 9/16	55%	4.0	3 1/2	3 3/32	3 9/16
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
S/4T			10%	10.0				10%	10.0			
Ref. dB			61dB					66dB				

Calibration Checks	0°		45°		60°	
	In	Out	In	Out	In	Out
	N/A	N/A	N/A	N/A	11:15	2:45







Additional Comments/Sketch

D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2/14	ZONE 14, REV. 2, F.C.-1

Procedure	Exam Surface	Examiner/Level	VER Supervisor	Date
ISI 2.3, REV. 0, F.C.-7	I.D.	[signature] II	Daniel F Jenn	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG - REACTOR COOLANT	36" - 30"	BUTT	UT-6 3.50"	SONOTRACE 40 8119

Weld No.		Base Metal Seam	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-010		N/A	YES	YES	YES	N/A		CLEAN	GROUND	NI	SAT	
14-011		N/A	YES	YES	YES	N/A		CLEAN	GROUND	NI	SAT	

The Virginia Corp. of Richmond

D. Payne ANII 6/2/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	2 / 14

Component/Piping System	Examiner/Level	Date
REACTOR COOLANT	BURLINGAME II	5-25-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-2.5 REV. 0	ZONE 14, REV. 2, FC-1	Daniel Dyna	[ ] Yes [X] No

Equipment

Instrument	Transducer		Calibration
Mfgr. SONIC	Mfgr. AEROTECH	Size 1.0"	Cal. Block UT-15
Model FTS-MK1			Cal. Block
S/N 780836	Freq. 1.0 MHz.		Range Cal. 3½" = 5 DIV.
Reject OFF			Calibration Checks
Damp. MIN	Serial No. 219814		0750
Freq. 1.0 MHz.			1135
Rep. Rate 1000	Coax. Cable 12'		
Filter OFF			
Video NORMAL	Gain 68 db		
Couplant SONOTRACE 40 #8119			

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
14-001	12	3.32	3.20	4.06	14-002	12	3.12	3.20	3.20
	2	3.35	3.28	4.06		2	3.12	3.20	3.28
	4	3.32	3.20	4.06		4	3.20	3.20	3.30
	6	3.32	3.28	4.06		6	3.20	3.12	3.28
	8	3.35	3.28	4.06		8	3.12	3.28	3.28
	10	3.35	3.28	4.06		10	3.12	3.28	3.28

Sketch/Identification

D. Payne ANII 6/2/82

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P + L	Waterford	# 3	2 / 14	Zone 14 Rev. 2 FC-1

Procedure *	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.8 Rev 0 FC1 (NRM 10-?)	O D	Burlingame II	Daniel Jensen	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant:
Reactor coolant	30" 3 1/8	Butt	UT-15	Type Son 0 Batch No 8124

Continuation Sheet Attached ✓ Yes ___ No

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

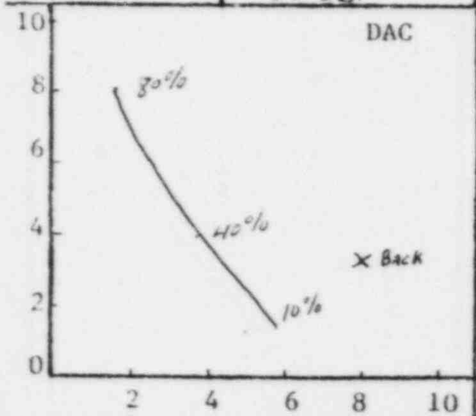
Transducer	0°	45°	60°
S/N	L19814	NA	NA
Size	1"		
Frequency	1 mhz		
Beam Angle	0°		

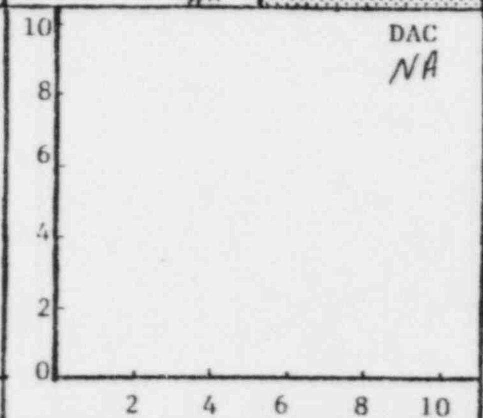
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	780836	RepRate	1K
Reject	off	Filter	off
Damp	min	Coax	6'
Freq.	1 mhz	Video	Norm

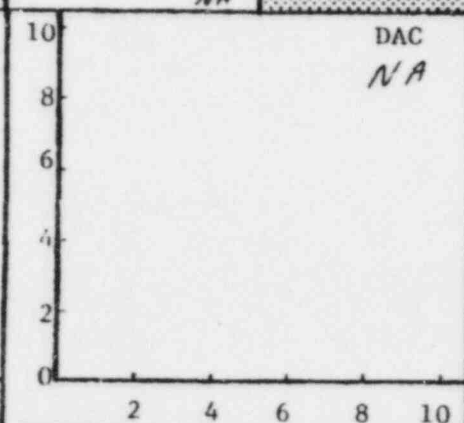
Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
1/4 T	80%	1.8	NA	NA	NA		NA	NA	NA	
1/2 T	40%	3.8								
3/4 T	10%	5.8								
Back	35%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

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
0805	10:50	NA	NA	NA	NA
12:50	16:35				







Additional Comments/Sketch

* See NCR # 024 of Errata

Form UT-101

2/82

D. Payne ANII 6/2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14, REQ. 2, FC-1

Procedure*	Exam Surface	Examiner/Level	VCR Supervisor	Date
FC-1 Rev #1 ISI-2.8 REV #1	OD	BURLINGAME II	Daniel Glenn	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30" ID	BUTT	UT-15	SONOTRACE 40 # 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	CC1	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT	
14-	CC2	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT	
												* SEE NCR #024 OF ERRATA

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Q. Payne VANII 6/2/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP+L	Waterford	3	2 / 14	Zone 14 Rev. 2 FC-1

Procedure*	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8 Rev 8 FC-1	OD	BURLINGAME II	Daniel Dens	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
Reactor Coolant	30" ID	Butt	UT-15 3 1/8"	Type 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number FC-1

	2 3/5 (C.S.)	2 3/5 (S.S.)	7 3/8
Transducer	2 3/5 (C.S.)	2 3/5 (S.S.)	7 3/8
S/N	T8468	T8468	V3035
Size	1.0"	1.0"	1.0"
Frequency	1MHz	1MHz	WB
Beam Angle	45°L	45°L	45°L

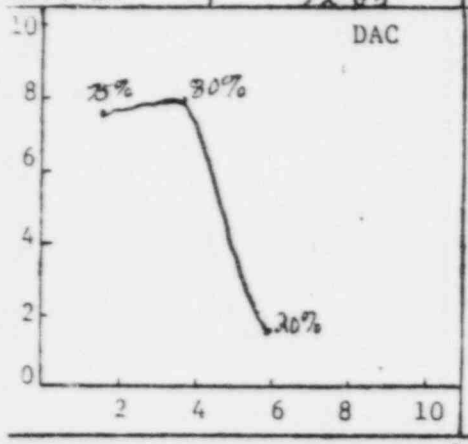
Instrument

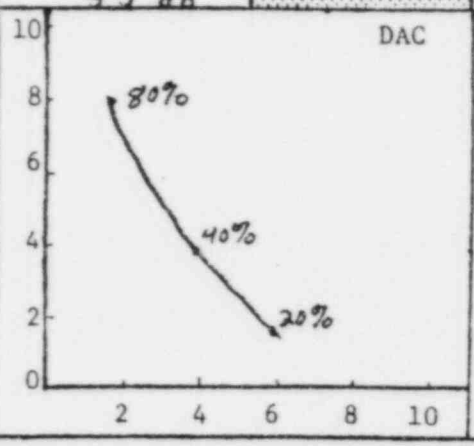
Mfgr.	Sonic	Model	FTS-MKI
S/N	016 10 E	RepRate	1000
Reject	3	Filter	OFF
Damp	4.5	Coax	6'
Freq.	1MHz/WB	Video	Norm

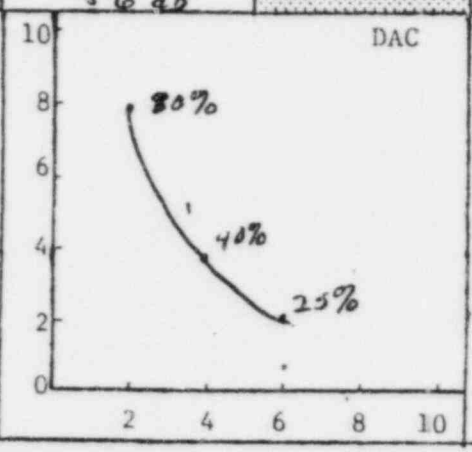
2 3/5 SCAN (C.S.)			2 & 5 Scan (SS)					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4T	75%	2	80%	2	NA	NA	NA	80%	2	NA	NA	NA
1/2T	80%	4	40%	4				40%	4			
3/4T	20%	6	20%	6				25%	6			
Ref. dB	52 db		55 db					56 db				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0800	1645	NA	NA
		1245	1630		







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 Sens.
- Seperate Transducers were used For Axial and Circ. Scans.

Form UT-101 (MODIFIED)

*SEE NCR #024 OF ERRATA 2/82

D. Payne ANII 6/3/82

The Virginia Corp. of Richmond

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Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2 14	ZONE 14, REV 2, FC-1

Procedure*	Exam Surface	Examiner/Level	VCR Supervisor	Date
LSI-3.8 Rev 8 FC-1 Rev 1	OD	BURLINGAME II	Daniel Jones	5-25-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	30" ID	BUTT	UT-15	SONOTRACE 40 # 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14	001	NA	PAR	PAR	PAR	NA		CLEAN	GROUND	NI	SAT	GEOMETERY
14	002	NA	PAR	PAR	PAR	NA		CLEAN	GROUND	NI	SAT	GEOMETERY
							SEE ATTACHMENT					SEE FIG-1
												*SEE NCR #024 OF ERRATA

The Virginia Corp. of Richmond

Date

To:

Subject EXAMINATION LIMITATIONS

ZONE 14, REV. 2, FC-1

14-001 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.

14-002 (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

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

TYP. PUMP TO SAFE END TO PIPE CONFIGURATION

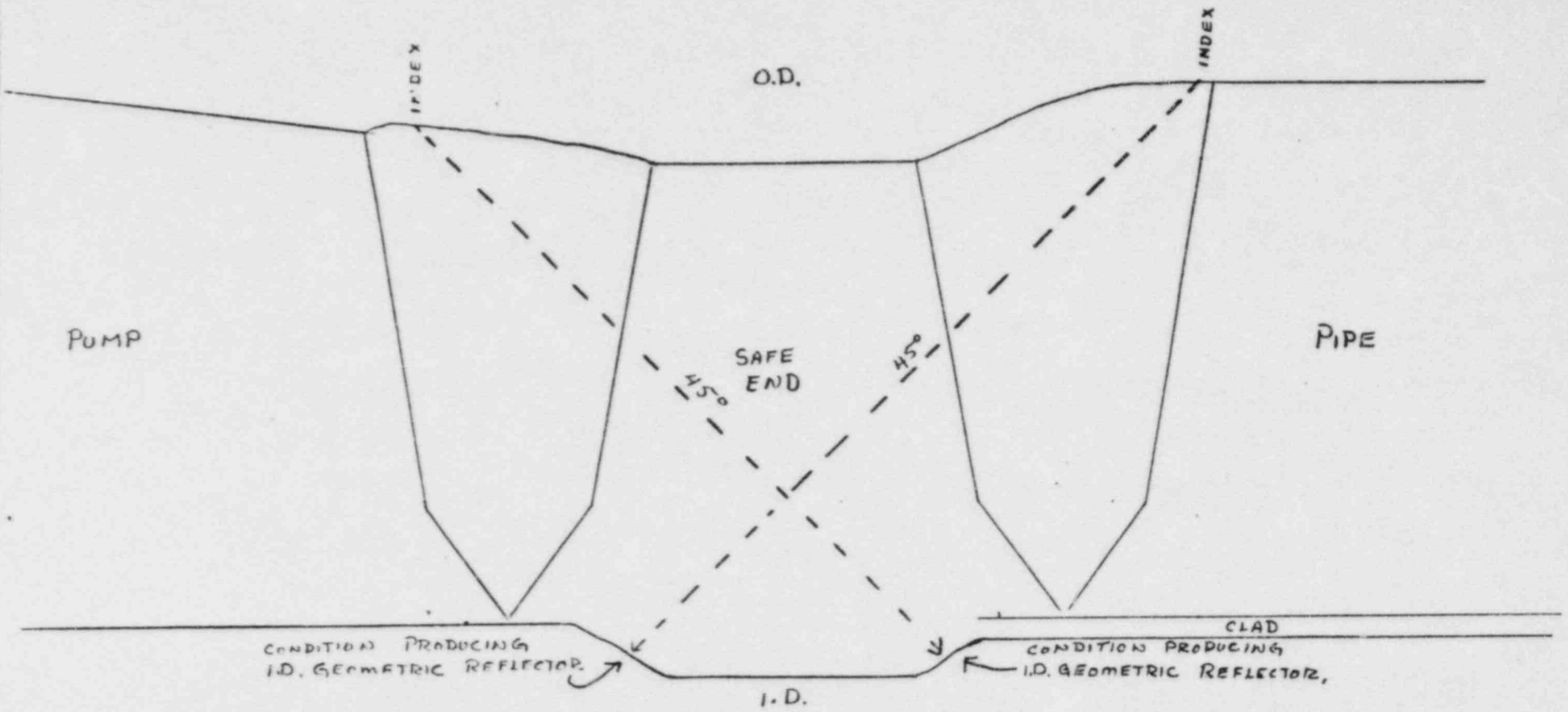


FIG-1

5-28-82

The Virginia Corp. of Richmond

D. Payne ANII 6/24/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
L. P. & L.	Waterford	3	2B / 14

Component/Piping System	Examiner/Level	Date
Reactor Vessel to R.C. Pump 2B	David L. Foteen / II	6/15/82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI - 2.5 Rev. 0	Zone 14/Rev. 2/Fig. 2	Daniel Jensen	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	Sonic	Mfgr.	Parametrics	Cal. Block	UT-16
Model	Mk 1	Size	.50"	Cal. Block	N/A
S/N	01610E	Freq.	3.5 mhz.	Range Cal.	2.2
Reject	off	Serial No.	41874	Calibration Checks	
Damp.	N/A	Coax. Cable	6' Dual	Int.	1:20 pm
Freq.	2.0 mhz	Gain	50 dB	Final	2:40 pm
Rep. Rate	1 K				
Filter	off				
Video	Norm.				
Couplant	Sonotrace 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
14-006	12	N/A	N/A	1.42"	N/A	N/A	N/A	N/A	N/A
14-006	2			1.45"					
14-006	4			1.47"					
14-006	6			1.45"					
14006	8			1.45"					
14-006	10			1.45"					

Sketch/Identification

Form UT-105 2/82

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

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/14	ZONE 14 REV. 2 F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8 REV. 1	O.D.	David L. Tokey III	Daniel T. Jensen	6-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
COLD LEG - REACTOR TO R.C.P 2B	12"	BUTT	UT-16	Type 40 Batch No 8129

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ___ No ✓ If Yes, Number ___

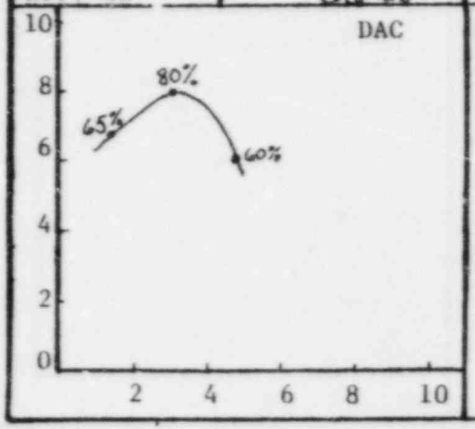
Transducer	0°	45°	60°
S/N	KB2728	N/A	N/A
Size	.50"		
Frequency	2.25 MHz		
Beam Angle	0°		

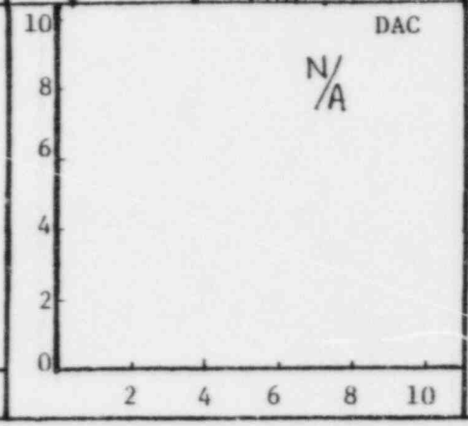
Instrument			
Mfgr.	SONIC	Model	MARK I
S/N	05473E	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN	Coax	6' DUAL
Freq.	2.0 MHz	Video	NORM

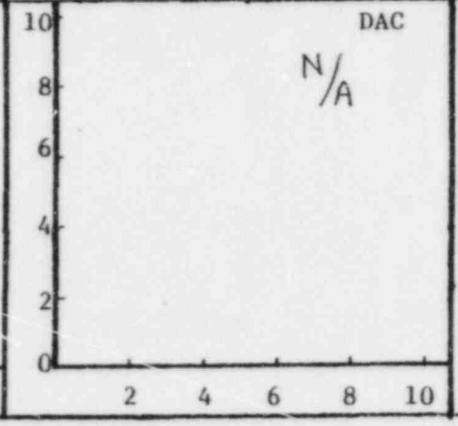
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4T	65%	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/2T	80%	3.0										
3/4T	60%	4.5										
Ref. dB	66 db											

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
9:12	11:30	N/A	N/A	N/A	N/A







Additional Comments/Sketch

CALIBRATION FOR CARBON STEEL SIDE ONLY.

Form UT-101

2/82

D. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P & L	Waterford	# 3	2B/ 14	Zone 14 Rev. 2 FC

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151. 28 Rev. 1 FC 4	OD	David L Fokken II	Daniel J Jensen	6-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold leg- Reactor Ves to R.C.P. 2B	12"	Butt	UT-16	Sonotrace 40 Batch 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-006		Yes	N/A	N/A	N/A	Yes	N/A	Smooth	Contour	NI	Sat	Inspection of carbon steel side only

Form UT-101a

2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne, ANII 6/24/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2B/14	Zone 14, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VOR Supervisor	Date
ISI-2.8, Rev 1, FC 1	O.D.	BURLINGAME II	Daniel Lyman	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Cold Leg - Reactor Vessel to RCP 2B	12"	Butt	UT-16	Type 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number FC 1

Transducer	0°	45° RL	60°
S/N	NA	607152	NA
Size		1/2"	
Frequency		2.25 MHz	
Beam Angle	↓	43°	↓

Instrument			
Mfgr.	Sonic	Model	FTS Mark 1
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	Yes
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4	NA	NA
1/2		
3/4		
Ref. dB	↓	↓

2 & 5 Scan

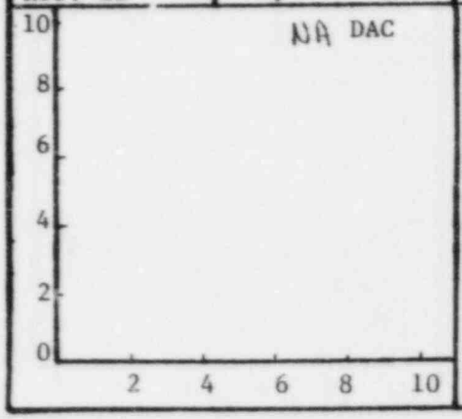
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	2.0		
35%	4.0		
18%	6.0		
61 db			

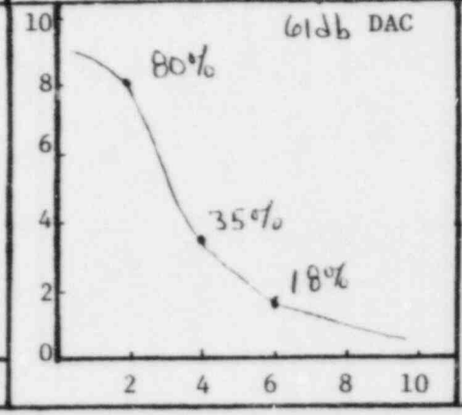
7 & 8 Scan

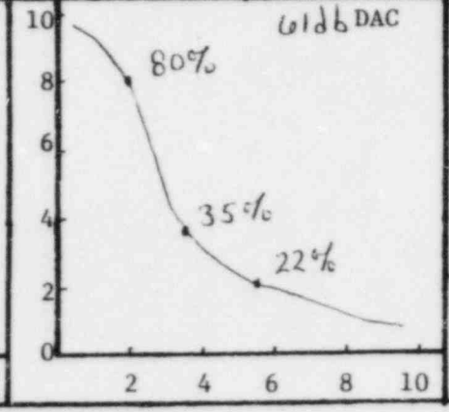
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	1.8		
35%	3.8		
22%	5.6		
61 db			

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0830	1000	NA	NA
↓	↓			↓	↓







Additional Comments/Sketch
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Form UT-101

2/82

Ultrasonic Examination Report

D. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	2B / 14	Zone 14, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8, Rev 1, FC 1	OD	BURLINGAME II	[signature]	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace Type 40	Batch No 8124
Cold Leg-Reactor Vessel to RCP 2B	12"	Butt	UT-16		

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number FC 1

Transducer	0°	45° RL	60°
S/N	NA	607153	NA
Size		1/2	
Frequency		2.25 MHz	
Beam Angle	↓	45°	↓

Instrument			
Mfgr.	Sonic	Model	FTS MK 1
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	6'
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4	NA	NA
1/2		
3/4		
Ref. dB	↓	↓

2 & 5 Scan

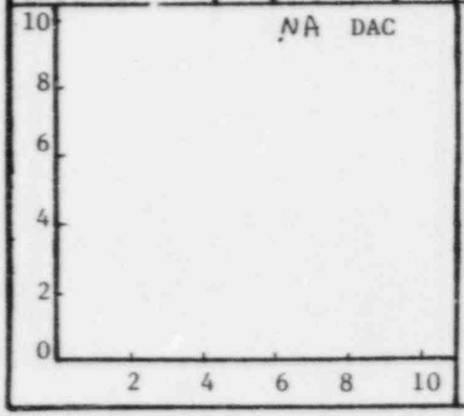
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	2.0		
70%	4.0		
20%	6.0		
60 db			

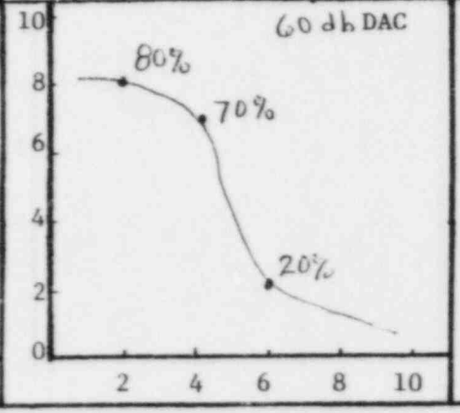
7 & 8 Scan

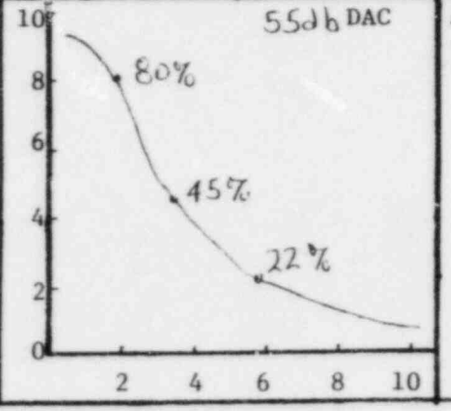
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	1.8		
45%	3.8		
22%	5.8		
55 db			

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0830	1000	NA	NA
↓	↓			↓	↓







Additional Comments/Sketch
Carbon Steel

Form UT-101

2/82

D Payne ANII 6/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	2B / 14	Zone 14, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8, Rev 1, FC 1	O.D.	BURLINGAME II	Daniel Payne	6-17-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold Leg - Reactor Vessel to RCP 2B	12"	Butt	UT-16	Sonotrace 40, Batch 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-	006	NA	PAR	PAR	PAR	NA	SMALL LIMITATION FROM WELD NO 20-001 AND SLOPE OF NOZZEL. GOOD ROOT AREA COVERAGE WAS OBTAINED.	CLEAN	GROUND	NI	SAT	

Form UT-101a

2/82

The Virginia Corp. of Richmond

D. Payne ANII 6/24/82

Ultrasonic Data Sheet for Thickness Measurement

Customer: LP&L	Plant: WATERFORD	Unit: III	Loop/Zone: 2B/14
Component/Piping System: COLD LEG • REACTOR VESSEL to RCP 2B	Examiner/Level: David L. Foken / II		Date: 6/19/82
Procedure: ISI 2.5 REV. O	Iso/Drawing No.: ZONE14/REV2 FC1	VCR Supervisor: Daniel Lyons	Continuation Sheet Attached [ ] Yes [✓] No

Equipment

Instrument		Transducer		Calibration
Mfgr.	Sonic	Mfgr.: Parametrics	Size: .50"	Cal. Block: UT-16
Model	Mark I			Cal. Block: N/A
S/N	01610 E	Freq.: 2.25 mhz		Range Cal.: 1.8"
Reject	OFF			Calibration Checks
Damp.	Min	Serial No.: 44652		(IN) 0900 (OUT) 1145
Freq.	2.0 mhz			
Rep. Rate	1K	Coax. Cable: 6' BNC-BNC		
Filter	HIGH			
Video	Norm	Gain: 50 db		
Couplant	Soundsafe 40 / Batch # 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
14-006	12	1.42"	1.33"	N/A	N/A	N/A	N/A	N/A	N/A
14-006	2	1.46"	1.31"						
14-006	4	1.46"	1.28"						
14-006	6	1.42"	1.31"						
14-006	8	1.42"	1.28"						
14-006	10	1.46"	1.31"						

Sketch/Identification

Form UT-105 2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

R. Payne, ANII 6/24/82

Customer: LP & L	Plant: WATERFORD	Unit: III	Loop/Zone: 2B/14	Iso/Drawing No.: ZONE 14 / REV 2 F.C. 2 of 2	
Procedure: F.C.1 ISI 2.8 REV. 1	Exam Surface: O.D.	Examiner/Level: David L. Fobian III	VGR Supervisor: Daniel Jensen	Date: 6/19/82	
Component/Piping System: COLD LEG - REACTOR VESSEL TO RCP 2B	Pipe Size: 12"	Weld Type: Butt	Cal. Block: UT-16	Couplant: Type SONOTRACE 40 Batch No. 8104	

Continuation Sheet Attached: ✓ Yes ___ No

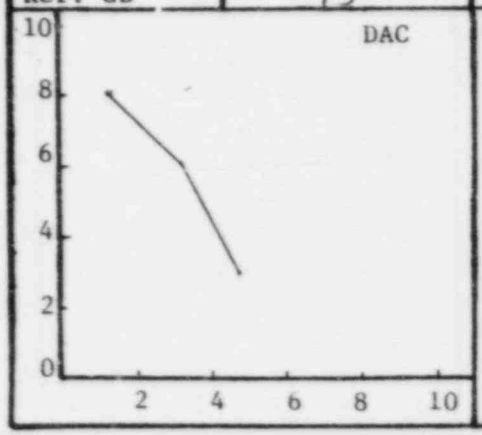
Field Changes: Yes ✓ No ___ If Yes, Number 1

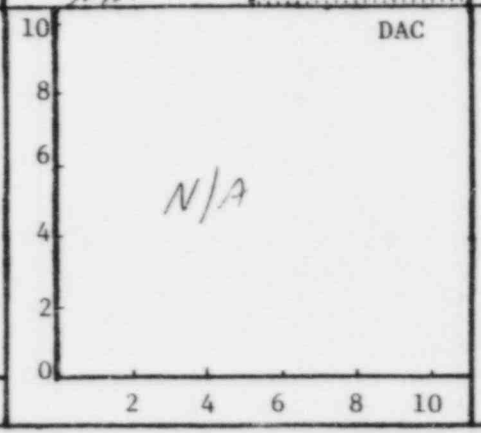
Transducer	0°	45°	60°
S/N	44652	N/A	N/A
Size	.50"		
Frequency	2.25 mhz		
Beam Angle	0°		

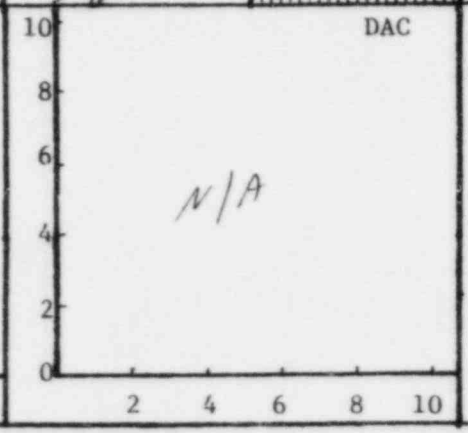
Instrument

Mfgr.	Sonic	Model	Mark I
S/N	01610 E	RepRate	1K
Reject	OFF	Filter	HIGH
Damp	Min.	Coax	6' BNC-BNC
Freq.	2 mhz	Video	NORM

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
					Sound Entry Point To:					Sound Entry Point To:			0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC		Signal Amp.	Sweep	Scribe Line	50% DAC		In	Out	In	Out	In	Out
													0900	1145	N/A	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						
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

T. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP & L	WATERFORD	III	2B / 14	ZONE 14 / REV. 2 F.C. 2 of 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
15128 REV. 1 FC. 1	OD	David L. Johnson	Daniel Lyons	6/19/82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG - REACTOR VESSEL TO RCP 2B	12"	Butt	UT-16	SonoTrace 40 / 8134

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-006		Yes	N/A	N/A	N/A	Yes	N/A	Smooth	Ground	N.	Sat.	Inspection of weld & safe-end only

Form UT-101a

2/82

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 2/26/82

Customer	Plant	Unit	Loop /Zone
L,P+L	Waterford	3	1 / 15

Procedure	Examiner/Level	VCR Supervisor	Date
ISI 4.3 Rev. 0	[illegible] I/LTD; David L. Foster III	Daniel [illegible]	Feb. 25, 1982

Component/Piping System	ISO Drawing No.	Surface Condition
Steam Generator #1 to Reactor Vessel	Zone 15 Rev. 2 FC1	Ground

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	Magna flux	8A-Red	81M107

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	Parker Research	DA-200 Contour	5801

Magnetization	Coil	Prods	Yoke
✓ Continuous; __ Residual	NA Amps.; NA No. Turns	NA Spacing; NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
15-001		✓		✓	
15-002		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

Don Payne ANII 3/5/82

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	1/15

Procedure	Examiner/Level	Date
ISI 3.1 RO F.C. 2	James A Slater II / Robert J Overstreet II	3-4-82

Component/Piping System	ISO Drawing No.	VTR Supervisor
Hot leg steam generator to reactor	ZONE 15 R2 F.C. 1	Daniel B Jensen

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-chek	474015
Developer	sherwin	Dubl-check	129F6
Remover	Sherwin	Dubl-check	11264

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
15-007		✓		✓	

Form PT-201

2/82

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

Don Payne ANII 3/5/82

Customer	Plant	Unit	Loop/Zone
L P & L	WATERFORD	3	1 / 15

Procedure	Examiner/Level	VCR Supervisor	Date
151-4.3 R 0	Michael V Blow II	Daniel Jenson	3-4-82

Component/Piping System	ISO Drawing No.	Surface Condition
HOT LEG S/G #1 TO REACTOR VESSEL	ZONE 15 REV 2 FC-1	GROUND

Type of Particles	Manufacturer	Type	Batch Number
__Wet ✓Dry ✓Visible __Flourescent	MAGNAFLUX	BA-RED	81M107

Current	Machine Mfr.	Type/Model	Serial No.
✓AC __DC __HWDC	PARKER RESEARCH	CONTOUR / DA-200	5801

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
15-011		✓		✓	
15-012 LA		✓		✓	
15-013 LB		✓		✓	
15-014		✓		✓	
15-015		✓		✓	

Form MT-301

12/81

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

Don Payne ANII 3/9/82

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	1 / 15
Procedure	**Examiner/Level**		**Date**
ISI 31 R0 F.C. 2	James M. Everett II / Robert Chester II		3-8-82
Component/Piping System	**ISO Drawing No.**	**VCR Supervisor**	
Hot leg Steam generator #1	Zone 15 R2 F.C. 1	Daniel L Jensen	

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-chek	47L015
Developer	Sherwin	Dubl-chek	129F6
Remover	Sherwin	Dubl-chek	112C4

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results SAT.	VT Results UNSAT.
15-008		✓		✓	

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

D. Payne ANII 4/22/82

Customer	Plant	Unit	Loop/Zone
LP AND L	WATERFORD	3	NA / 15

Procedure	Examiner/Level	VCR Supervisor	Date
ISI 4.3, REV 0	CR Starkey II	Daniel L Jens	4-21-82

Component/Piping System	ISO Drawing No.	Surface Condition
HOT LEG-STEAM GENERATOR #1 TO REACTOR VESSEL	ZONE 15, REV 2, F.C. 1	CLEAN

Type of Particles	Manufacturer	Type	Batch Number
__ Wet V Dry V Visible __ Flourescent	MAGNA-FLUX	8A RED	81M110

Current	Machine Mfr.	Type/Model	Serial No.
V AC __ DC __ HWDC	PARKER RESEARCH	CONTOUR PROBE	4604

Magnetization	Coil	Prods	Yoke
V Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
15-003LB	1) FIELD INDICATOR SN 17 WAS	V		V	
15-004LA	UTILIZED TO VERIFY FIELD.	V		V	
15-005	2) WELD 15-014 WAS RE-TESTED	V		V	
15-014	DUE TO ADDITIONAL SURFACE	V		V	
	PREPARATION FOR THE ULTRASONIC				
	TEST.				

The Virginia Corp. of Richmond

Magnetic Particle Examination Report

D. Payne ANII 4/23/82

Customer	Plant	Unit	Loop/Zone
LP AND L	WATERFORD	3	NA/15

Procedure	Examiner/Level	VCR Supervisor	Date
ISI 4.3, REV 0	[signature] II	[signature]	4-22-82

Component/Piping System	ISO Drawing No.	Surface Condition
HOT LEG - STEAM GEN #1 TO REACTOR VESSEL	ZONE 15, REV 2, F.C. 1	CLEAN

Type of Particles	Manufacturer	Type	Batch Number
__ Wet ✓ Dry ✓ Visible __ Flourescent	MAGNAFLUX	8A RED	81M110

Current	Machine Mfr.	Type/Model	Serial No.
✓ AC __ DC __ HWDC	PARKER RESEARCH	CONTOUR PROBE	4604

Magnetization	Coil	Prods	Yoke
✓ Continuous __ Residual	NA Amps. NA No. Turns	NA Spacing NA Amps.	8" Spacing

Weld / Item	Comments	MT Results NRI	MT Results RI	VT Results Sat	VT Results Unsat
15-010	FIELD INDICATOR SN 17 WAS UTILIZED TO VERIFY FIELD	✓		✓	

Form MT-301 12/81

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 4/23/82

Customer	Plant	Unit	Loop/Zone
LP AND L	WATERFORD	3	NA/15

Procedure	Examiner/Level	Date
ISI 3.1, REV0, F.C. 2	CR Stanford II	4-22-82

Component/Piping System	ISO Drawing No.	VCR Supervisor
HOT LEG - STEAM GEN #1 TO RV	ZONE 15, REV 2, F.C. 1	Daniel Dyson

	Manufacturer	Type	Batch No.
Penetrant	SHERWIN	DUBL-CHEK	47L015
Developer	SHERWIN	DUBL-CHEK	129F6
Remover	SHERWIN	DUBL-CHEK	112C4

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
15-006		✓		✓	
15-009		✓		✓	

Form PT-201

The Virginia Corp. of Richmond

Ultrasonic Examination Report D. Payne ANII 5/4/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP AND L	WATERFORD	3	~~AA~~/15	ZONE 15, REV 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI L-3, REVO. F.C.1	O.D.	CR Griffith	Daniel Dean	4-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: SONITRACE
HOT LEG STEAM GEN #1 TO RV	40"	BUTT	UT-4	Type 40 Batch No 8119

Continuation Sheet Attached: V Yes ___ No

Field Changes: Yes V No ___ If Yes, Number 1

Transducer	0°	45°	60°
S/N	46803	NA	NA
Size	1"		
Frequency	2.25 MHz		
Beam Angle	0°		

Instrument

Mfgr.	SONIC	Model	ETS MARK I
S/N	05304E	RepRate	200
Reject	OFF	Filter	HI
Damp	MIN	Coax	12'
Freq.	2	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4T	80	2.0
1/2T	60	4.0
3/4T	40	6.0
1T	NA	8.2
Ref. dB		

2 & 5 Scan

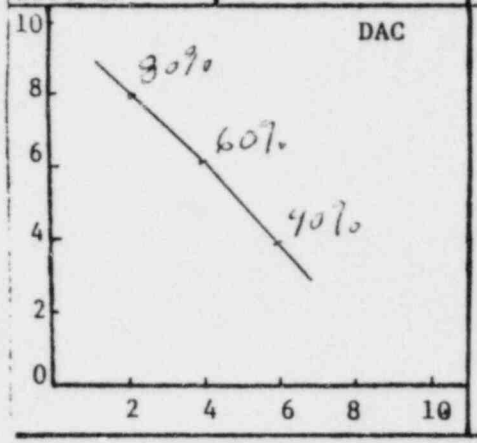
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA		

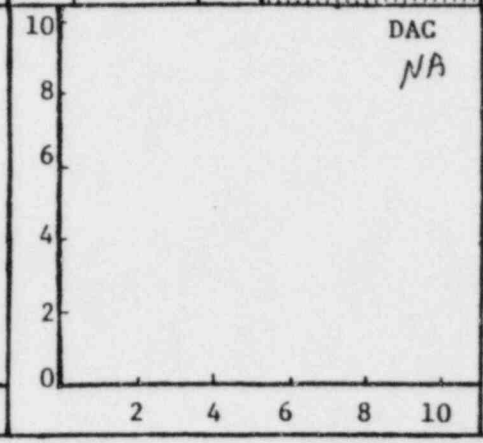
7 & 8 Scan

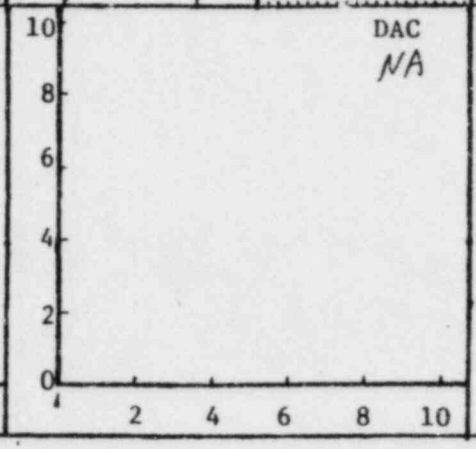
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA		

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
1038	1155	NA	NA	NA	NA
1249	1615	NA	NA	NA	NA







Additional Comments/Sketch

Form UT-101 2/82

D. Payne ANII 5/4/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP AND L	WATERFORD	3	~~RC~~ / 15	ZONE 15, REV 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3, REV 0, F.C. 1	O.D.	R. Parker III	Donald Dena	4-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
HOT LEG STEAM GEN #1 TO RV	40"	BUTT	UT-4	SONITRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	003A	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
15-	004A	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
15-	011	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
15-	012A	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
15-	013B	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	
15-	014	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	

D. Payne ANII 5/4/82

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 3, F.C. 1

Procedure	Exam Surface	Examiner/Level	VT Supervisor	Date
151-2.3, Rev 0, FC 1	O.D.	Bolingame II	Daniel Benson	4-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block ID	Couplant: Sonotrace
Reactor Coolant	42" O.D.	Butt	UT-4, 4.70"	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

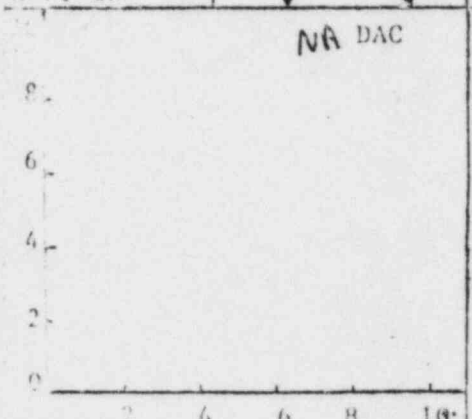
Field Changes: Yes ✓ No ___ If Yes, Number F.C. 1

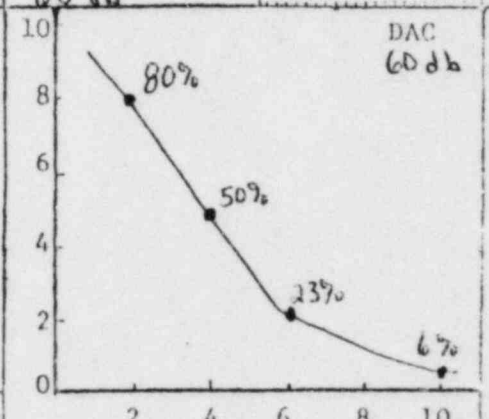
Transducer	0°	45°	60°
S/N	NA	NA	419801
Size	↓	↓	1.0"
Frequency			2.25 MHz
Beam Angle			61°

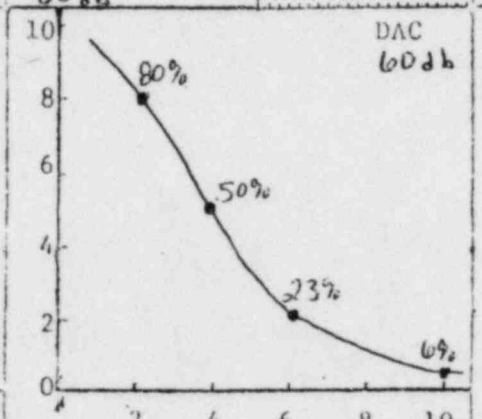
Instrument

Mfer.	Sonic	Model	FTS Mark 1
S/N	03704E	RepRate	1000
Reject	OFF	Filter	Hi
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: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		0° In	0° Out	45° In	45° Out	60° In	60° Out
1/4T	NA	NA	80%	2.0	2 7/32	1 7/8	2 1/2	80%	2.0	2 7/32	1 7/8	2 1/2	NA	NA	NA	NA	1415	1700
1/2T			50%	4.0	4 5/8	4 5/32	4 33/32	50%	4.0	4 5/8	4 5/32	4 33/32						
3/4T			23%	6.0	6 7/8	6 1/2	7 11/16	23%	6.0	6 7/8	6 1/2	7 11/16						
5/4T			6%	10.0				6%	10.0									
Ref. dB			60 db					60 db										







Additional Comments/Sketch

D. Payne ANII 5/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.3, Rev 0, F.C. 1	O.D.	BURNHAM II	Daniel Dens	4-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Reactor Coolant	42" I.D.	Butt	UT-4, 4.76	Sonotrace 40 Batch 819

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	003LB	NA	YES	YES	YES	NA		Clean	Ground	NI	SAT	
15-	004LA	↓	YES	YES	YES	↓		Clean	Ground	NI	SAT	
15-	011		PAR	PAR	PAR		O.D. Mismatch *	Clean	Ground	NI	SAT	
15-	012LA		YES	YES	YES			Clean	Ground	NI	SAT	
15-	013LB		YES	YES	YES			Clean	Ground	NI	SAT	
15-	014		YES	YES	YES			Clean	Ground	NI	SAT	
15-	015	↓	PAR	YES	PAR	↓	O.D. SLOPE OF NOZZLE *	Clean	Ground	NI	SAT	

* SEE ATTACHMENT

D. Payne ANII

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VGK Supervisor	Date
ISI-2.3, Rev 0, FC 1	O.D.	BERLINGAME II	Daniel Dena	4-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Reactor Coolant	42" ID	Butt	UT-4, 4.70"	Type 40 Batch No. 8119

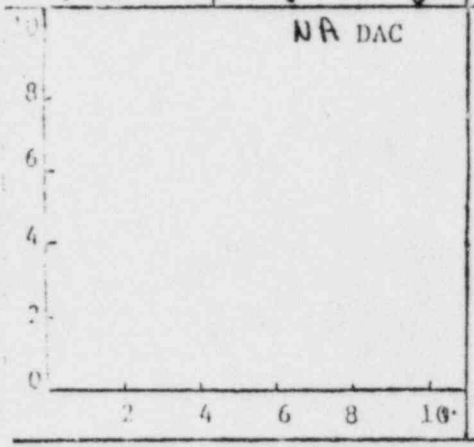
Continuation Sheet Attached: ✓ Yes ___ No

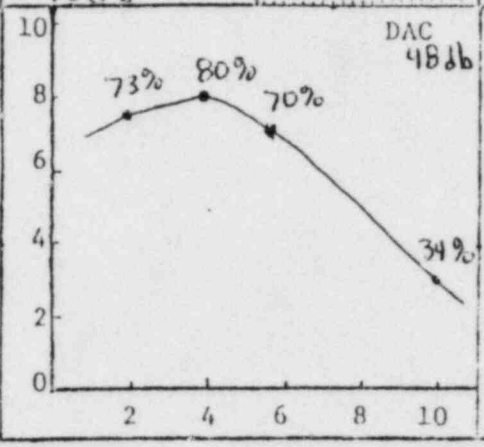
Field Changes: Yes ✓ No ___ If Yes, Number F.C. 1

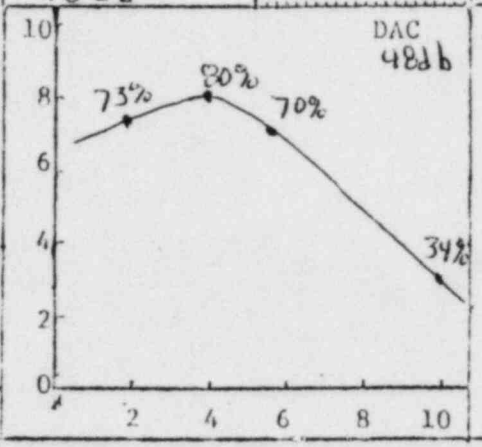
Transducer	0°	45°	60°
S/N	NA	L-19134	NA
Size		1.0"	
Frequency		2.25 MHz	
Beam Angle		45°	

Instrument			
Mfgr.	Sonic	Model	PTS Mark I
S/N	780836	RepRate	1000
Reject	OFF	Filter	Hi
Damp	Min	Conx	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: Scribe Line	50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		0° In	0° Out	45° In	45° Out	60° In	60° Out
¼T	NA	NA	73%	2.0	25/32	5/8	1 11/32	73%	2.0	25/32	5/8	1 11/32	NA	NA	1400	1700	NA	NA
½T			80%	4.0	2 9/32	2 5/32	2 13/32	80%	4.0	2 9/32	2 5/32	2 13/32						
¾T			70%	6.0	3 21/32	3 5/8	3 13/16	70%	6.0	3 21/32	3 5/8	3 13/16						
5/4T			34%	10.0				34%	10.0									
dB			48 db					48 db										







Additional Comments/Sketch

D. Payne ANII 5/4

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	1 / 15	Zone 15, Rev 2, Fig 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.3, Rev 0, FC1	O.D.	BURLINGAME II	Daniel D Jones	4-26-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Reactor Coolant	42" ID	Butt	WT 4-4.70"	Sonotrace 40 Batch 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	003 LB	NA	YES	YES	YES	NA		Clean	Ground	NI	SAT	
15-	004 LA		YES	YES	YES			Clean	Ground	NI	SAT	
15-	011		PAR	PAR	PAR		O.D. MISMATCH *	Clean	Ground	NI	SAT	
15-	012 LA		YES	YES	YES			Clean	Ground	NI	SAT	
15-	013 LB		YES	YES	YES			Clean	Ground	NI	SAT	
15-	014		YES	YES	YES			Clean	Ground	NI	SAT	
15-	015	↓	PAR	YES	PAR	↓	O.D. SLOPE OF NOZZLE *	Clean	Ground	NI	SAT	

* SEE ATTACHMENT

The Virginia Corp. of Richmond

Date 4-21-82

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To:

Subject EXAMINATION LIMITATIONS ZONE 15, DEV. 2, EC-1

15-C11 ALL SCANS LIMITED BY MISMATCH BETWEEN THE PIPE AND ELBOW ALSO ON THE SCAN 5 SIDE BY NOZZLE BRANCH CONNECTIONS. SEE SKETCH

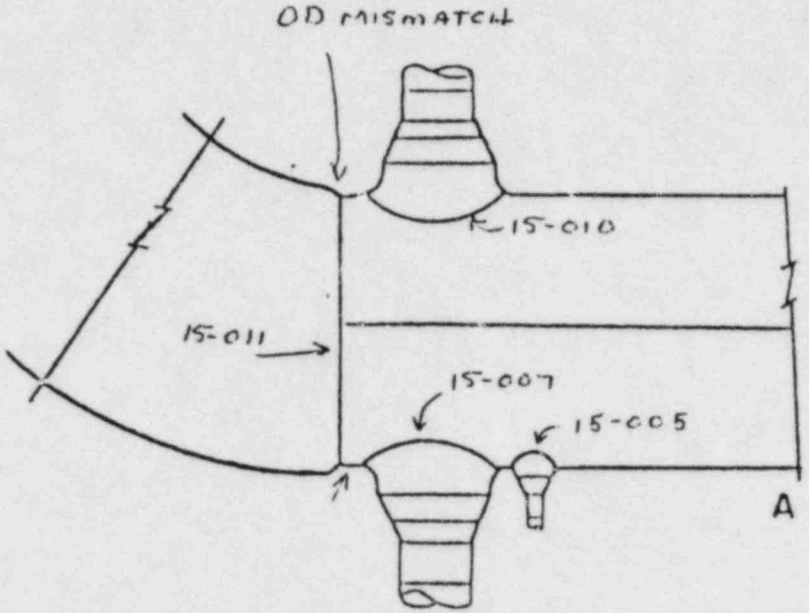
SCAN 2 APPROX. LOSS - 5% OF SCAN AREA
SCAN 5 APPROX LOSS - 10% OF SCAN AREA
SCANS 7 & 8 APPROX. LOSS - 10% OF SCAN AREA.
A GOOD SCAN OF ROOT AREA WAS MAINTAINED WITH THE 45° ANGLE. THE 60° SCAN DID NOT INTERSECT THE ID OF THE TEST PART APPROX 20% OF THE SCANS DIRECTED CIRCUMFERENTIALLY AROUND THE PIPE WAS LOST AT THE ID.

15-C15 SCANS 2 7 & 8 WERE LIMITED BY THE I.D. SLOPE OF THE NOZZLE AT THE STEAM GENERATOR. SCANS 7 & 8 WERE LIMITED BY APPROX 10% BUT HAD GOOD COVERAGE OF THE ROOT AREA @ 45°. SCAN 2 WAS LIMITED BY APPROX 20%. ROOT AREA COVERAGE WAS NOT GOOD @ 45° SCAN 2 SHOULD BE RESCANNED AT APPROX. 30°
THE 60° SCANS DID NOT INTERSECT THE ID OF THE TEST PART. APPROX. 20% OF THE SCAN AREA WITH THE BEAM DIRECTED CIRCUMFERENTIALLY AROUND THE PIPE WAS LOST AT THE ID.

Signed

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET



SCAN LIMITATIONS ON
WELD 15-011 FROM
NOZZLE BRANCH CONNECTIONS
TYP. TOP & BOTTOM. LIMITED
SCANS ON WELDS 010 AND 007
FROM O.D. MISMATCH BETWEEN
PIPE AND ELBOW AT WELD
NO. 15-011

The Virginia Corp. of Richmond

D. Payne ANII 5/4/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	1/15

Component/Piping System	Examiner/Level	Date
Hot Leg-Steam Gen. to Reactor Vessel	[signature] II	4-27-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI-2.5, Rev 0, F.C. 0	Zone 15, Rev 2, F.C. 1	[signature]	[X] Yes [ ] No

Equipment

Instrument	Transducer		Calibration
Mfgr. Sonic	Mfgr. KB Aerotech	Size ½"	Cal. Block UT-4
Model FTS Mark 1			Cal. Block ———
S/N 01610E	Freq. 2.25 MHz		Range Cal. 10 B.W. = 9.40"
Reject Min			Calibration Checks
Damp. Min	Serial No. KB2728		
Freq. 2 MHz			1350 - 1615
Rep. Rate 200	Coax. Cable 6' twin Coax		
Filter Hi			
Video Norm	Gain 76 db		
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
15-003LB	0"	3.95"	4.04"	3.95"	15-004LA	0"	4.04"	3.95"	3.95"
"	12"	3.95"	4.04"	3.95"	"	12"	3.95"	3.95"	3.95"
"	24"	3.95"	4.04"	3.95"	"	24"	3.95"	3.95"	3.95"
"	36"	3.95"	4.04"	3.95"	"	36"	4.04"	3.95"	4.04"
"	48"	3.95"	3.95"	4.04"	"	48"	3.95"	3.95"	3.95"
"	60"	3.95"	4.04"	3.95"	"	60"	3.95"	3.95"	3.95"
"	72"	3.95"	3.95"	4.04"	"	72"	3.95"	3.95"	3.95"
"	84"	3.95"	3.95"	3.95"	"	84"	3.95"	4.04"	3.95"
"	96"	3.95"	3.95"	3.95"	"	96"	3.95"	3.95"	3.85"
"	108"	3.95"	3.95"	3.95"	"	108"	3.85"	3.95"	4.04"
"	120"	3.85"	3.95"	3.95"	"	120"	3.85"	3.85"	3.95"
"	132"	3.95"	3.95"	3.95"	"	132"	3.95"	3.95"	3.95"

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for D. Payne ANII 5/4/82

Thickness Measurement

Continuation Page 2 of 2

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	1/15

Component/Piping System	Examiner/Level	Date
Hot Leg-Steam Gen to Reactor Vessel	[signature] II	4-27-82

Procedure	Iso/Drawing No.	VCR Supervisor
151-2.5, Rev 0, F.C.0	Zone 15, Rev 2, F.C. 1	[signature]

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
15-005	12	4.79"	1.88"	3.95"	15-012 LA	24"	4.51"	4.61"	4.51"
"	2	4.51"	1.97"	3.95"	15-013 LB	0"	4.51"	4.51"	4.51"
"	4	4.70"	1.97"	3.95"	"	12"	4.51"	4.51"	4.51"
"	6	4.51"	1.97"	3.95"	"	24"	4.51"	4.42"	4.42"
"	8	4.51"	1.97"	4.04"	"	36"	4.51"	4.51"	4.61"
"	10	4.51"	1.88"	4.04"	"	48"	4.51"	4.61"	4.61"
15-010	12	4.42"	3.95"	4.32"	15-014	12	4.61"	4.61"	4.51"
"	2	4.32"	3.95"	4.51"	"	2	4.61"	4.51"	4.61"
"	4	4.51"	3.95"	4.51"	"	4	4.51"	4.51"	4.51"
"	6	4.32"	3.95"	4.51"	"	6	4.70"	4.70"	4.61"
"	8	4.32"	3.95"	4.42"	"	8	4.70"	4.61"	4.51"
"	10	4.32"	3.95"	4.51"	"	10	4.70"	4.61"	4.61"
15-011	12	4.23"	4.51"	3.95"					
"	2	4.14"	4.51"	3.95"					
"	4	4.32"	4.70"	4.04"					
"	6	4.23"	4.61"	4.04"					
"	8	4.23"	4.51"	4.04"					
"	10	4.14"	4.61"	3.95"					
15-012 LA	0"	4.51"	4.51"	4.51"					
"	12"	4.51"	4.61"	4.51"					

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/4/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.3, Rev 0, FC 1	O.D.	Burlingame II	Daniel Jens	4-29-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
Reactor Coolant	42" ID	Butt	UT-4, 4.70"	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

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

Transducer	0°	45°	60°
S/N	KB2728	NA	NA
Size	1/2"		
Frequency	2.25 MHz		
Beam Angle	0°		

Instrument

Mfgr.	Sonic	Model	FIS Mark I
S/N	01610 E	RepRate	200
Reject	Min	Filter	Hi
Damp	Min	Coax	6' twin Coax
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4T	80%	2.0
1/2T	25%	4.0
3/4T	20%	6.0
T	10%	8.2
Ref. dB	72 db 6	

2 & 5 Scan

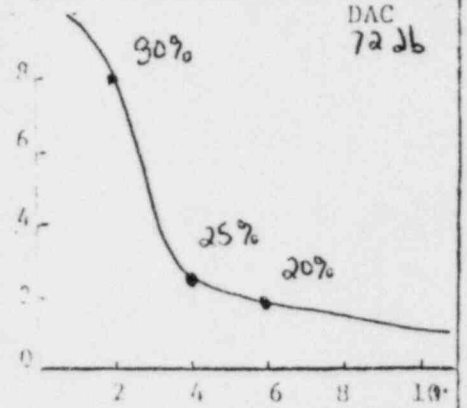
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA	NA	NA NA

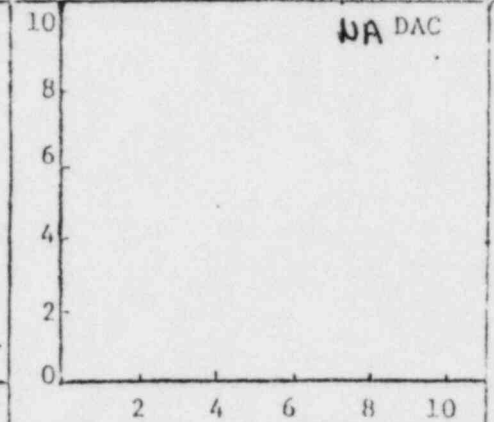
7 & 8 Scan

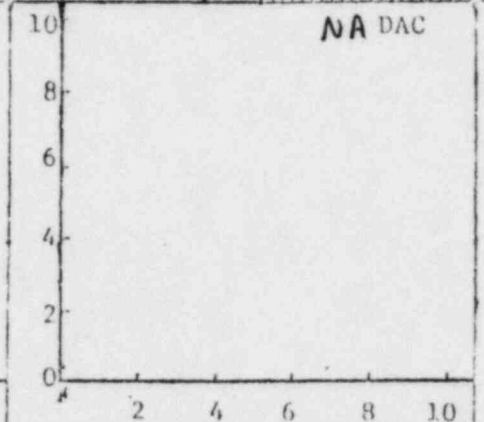
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
NA	NA	NA	NA NA

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
0755	1015	NA	NA	NA	NA







Additional Comments/Sketch

R. Payne ANII 5/4/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	1 / 15	Zone 15, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0 FC 1	O.D.	BURLINGAME II	Daniel Dena	4-29-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Hot Leg Steam Gen #1 to Reactor Vessel	40" 42"ID	Butt	UT-4	Sonotrace 40 Batch 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15 -	005	PAR	NA	NA	NA	PAR	NOZZLE BRANCH *	CLEAN	GROUND	NI	SAT	
15 -	010	PAR	NA	NA	NA	PAR	NOZZLE BRANCH *	CLEAN	GROUND	NI	SAT	

* SEE ATTACHMENT

The Virginia Corp. of Richmond

D. Payne ANII 9/4/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	1 / 15

Component/Piping System	Examiner/Level	Date
REACTOR COOLANT	BURLINGAME II	5-1-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151 2.5 Deg WRM, REV. 0, FC+	ZONE 15, REV. 2, FC-1	Daniel Jons	[ ] Yes [✓] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	KBI	Cal. Block	UT-4
Model	FTS-MK I	Size	1/2" DIA.	Cal. Block	—
S/N	03704E	Freq.	2.25 MHZ.	Range Cal.	4.9" = 8 DIV.
Reject	OFF	Serial No.	KB 2728	Calibration Checks	0800 HRS.
Damp.	MIN	Coax. Cable	TWIN 6' COAX.		1125 HRS.
Freq.	2. MHZ.	Gain	87 db G		
Rep. Rate	1000				
Filter	HI				
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
15-007	12	4.77"	4.90"	4.16"	15-002	12	4.16"	4.04"	4.22"
	2	4.90"	4.90"	4.10"		2	4.10"	3.98"	4.16"
	4	4.53"	4.90"	4.04"		4	4.16"	4.04"	4.16"
	6	4.53"	4.90"	4.28"		6	4.16"	4.04"	4.16"
	8	4.77"	4.90"	4.16"		8	4.04"	4.16"	4.16"
	10	4.90"	4.90"	4.28"		10	4.16"	4.22"	4.16"
15-001	12	4.16"	4.10"	4.22"	15-015	12	4.77"	4.90"	4.77"
	2	3.98"	4.22"	4.28"		2	4.77"	4.83"	4.70"
	4	4.22"	4.16"	4.22"		4	4.77"	4.77"	4.83"
	6	4.28"	4.16"	4.16"		6	4.77"	4.77"	4.77"
	8	4.16"	4.16"	4.16"		8	4.77"	4.77"	4.77"
	10	4.16"	4.16"	4.16"		10	4.77"	4.83"	4.83"

Sketch/Identification

D. Payne ANII 5/4/82

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Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.3 Rev 0, FC 1	O.D.	BURLINGAME II	Daniel Payne	5-1-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
Reactor Coolant	42" ~~O.D.~~	Butt	UT-4, 4.70"	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

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

Transducer	0°	45°	60°
S/N	48808	NA	NA
Size	1.0"		
Frequency	2.25 MHz		
Beam Angle	0°		

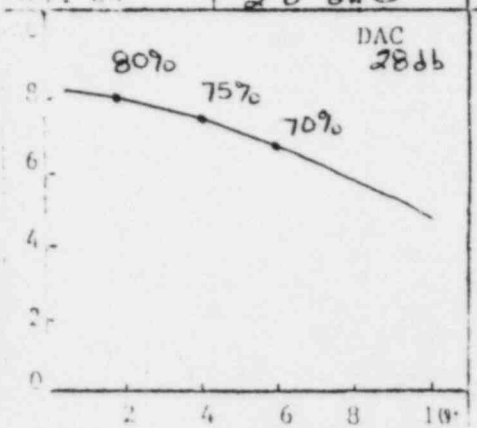
Instrument

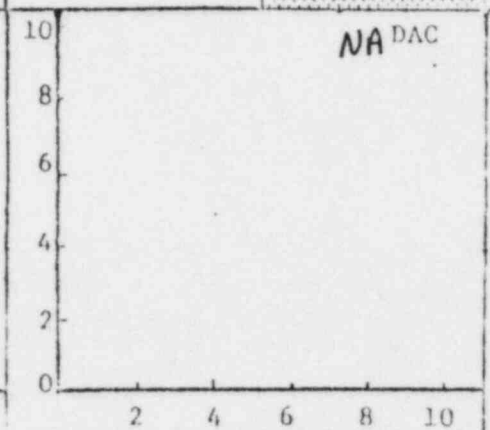
Mfer.	Sonic	Model	ETS Mark I
S/N	780836	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MIN	Conx	6'
Freq.	2 MHz	Video	Norm

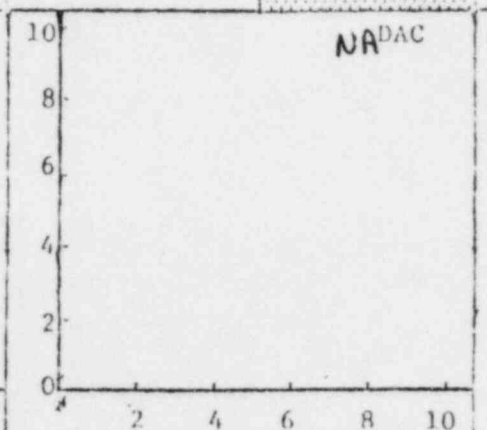
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/2 T	75%	4.0										
3/4 T	70%	6.0										
1 T	100%	8.2										
Ref. dB	28 db G											

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
0840	1200	NA	NA	NA	NA







Additional Comments/Sketch

Form UT-101

2/82

D. Payne ANII

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0, FC 1	O.D.	BURLINGAME II	Daniel Johns	5-1-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Reactor Coolant	42" ID	Butt	UT-4, 4.70"	Sonotrace 40, Batch #8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	001	PAR	NA	NA	NA	YES	O.D. Slope & Nozzle *	clean	Ground	NI	SAT	
15-	002	PAR	↓	↓	↓	YES	O.D. Mismatch *	clean	Ground	NI	SAT	
15-	007	PAR	↓	↓	↓	PAR	O.D. Slope of Nozzle *	clean	Ground	NI	SAT	
15-	015	PAR	NA	NA	NA	PAR	O.D. SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	

* See Attachment

Di Payne ANII [illegible]

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1/15	ZONE 15, REV.2, F.C-1

Procedure FC-1	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 REV.0	OD	BURLINGAME II	[signature]	5/1/82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
REACTOR COOLANT	42" OD	BUTT	UT-4 4.9"	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No

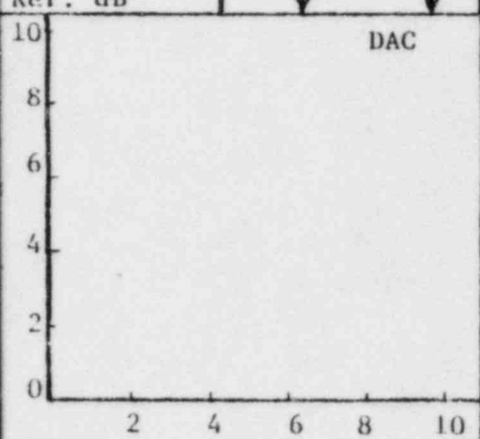
IF Yes, Number F.C-1

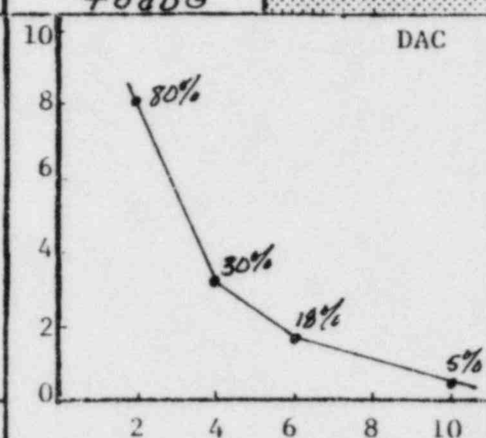
Transducer	0°	45°	60°
S/N	N/A	J22935	N/A
Size	↓	1/2"	↓
Frequency	↓	2.25MHz	↓
Beam Angle	↓	46°	↓

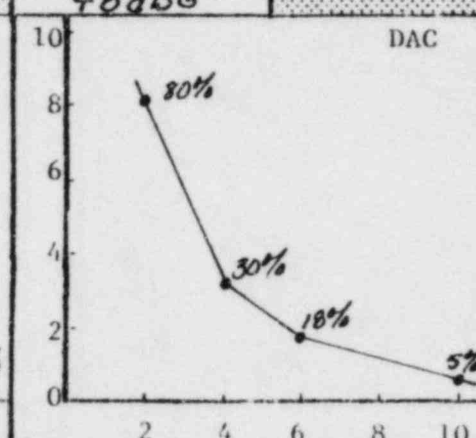
Instrument			
Mfgr.	SONIC	Model	FTS MARK I
S/N	01610E	RepRate	3K
Reject	OFF	Filter	HI
Damp.	MIN	Coax	12'
Freq.	2MHz	Video	NORM.

Calibration Reflector Location	Calibration 0°: Signal Amp.	Calibration 0°: Sweep	[illegible] Scan: Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC		[illegible] Scan: Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
1/4T	N/A	N/A	80%	2.0	1 1/8	31/32	1 3/8	80%	2.0	1 1/8	31/32	1 3/8
1/2T	↓	↓	30%	4.0	2 13/32	2	2 28/32	30%	4.0	2 13/32	2	2 28/32
3/4T	↓	↓	18%	6.0	3 5/8	3 3/16	4	18%	6.0	3 5/8	3 3/16	4
5/4T	↓	↓	5%	10.0				5%	10.0			
Ref. dB	↓	↓	48dBG					48dBG				

Calibration Check: 0° In	0° Out	45° In	45° Out	60° In	60° Out
N/A	N/A	900	1200	N/A	N/A







Additional Comments/Sketch

D. Payne ANII 5/4/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1/15	ZONE 15 REV. 2 F.C-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 REV.0 F.C-1	O.D.	BURLINGAME II	Daniel A Jens	5/1/82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant Type & Batch
REACTOR COOLANT	42" I.D. OD	BUTT	UT-4 4.9"	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Surface Condition Weld	Examination Results UT	Examination Results Visual	Remarks
15-	001	N/A	PAR	PAR	YES	N/A	O.D. SLOPE OF NOZZLE *	CLEAN	GROUND	NI	SAT	
15-	002		PAR	PAR	YES		O.D. MISMATCH *	CLEAN	GROUND	NI	SAT	
15-	005		NO	PAR	PAR		O.D. SLOPE OF NOZZLE *	CLEAN	GROUND	NI	SAT	
15-	007		NO	PAR	PAR		O.D. SLOPE OF NOZZLE *	CLEAN	GROUND	NI	SAT	
15-	010		NO	PAR	PAR		O.D. SLOPE OF NOZZLE *	CLEAN	GROUND	NI	SAT	
							* SEE ATTACHMENT					

D. Payne ANEE 5/4

Ultrasonic Examination Report

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The Virginia Corp. of Richmond

Customer: LP&L	Plant: Waterford	Unit: 3	Loop/Zone: 1/15	Iso/Drawing No.: Zone 15, Rev 2, F.C. 1	
Procedure: 151-2.3, Rev 0, FC1	Exam Surface: O.D.	Examiner/Level: Burlingame II	VCR Supervisor: Daniel Payne	Date: 5-1-82	
Component/Piping System: Reactor Coolant		Pipe Size: 42" ~~Ex~~	Weld Type: Butt	Cal. Block No.: UT-4, 4.70"	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°
S/N	NA	NA	L 19801
Size	↓	↓	1.0"
Frequency			2.25 MHz
Beam Angle			60°

Instrument

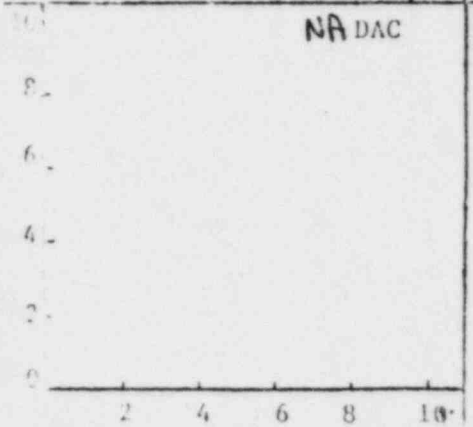
Mfgr.	Sonic	Model	FTS Mark I
S/N	05304E	RepRate	3000
Reject	OFF	Filter	Hi
Damp	MIN	Coax	12'
Freq.	2 MHz	Video	Diff

Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Scan Sound Entry Point To: Scribe Line	2 & 5 Scan Sound Entry Point To: 50% DAC		7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Scan Sound Entry Point To: Scribe Line	7 & 8 Scan Sound Entry Point To: 50% DAC	
1/4 T	NA	NA	80%	2.0	2 7/32	1 7/8	2 1/2	80%	2.0	2 7/32	1 7/8	2 1/2
1/2 T			60%	4.0	4 5/8	4 5/32	4 23/32	60%	4.0	4 5/8	4 5/32	4 23/32
3/4 T			30%	6.0	6 7/8	6 1/2	7 11/16	30%	6.0	6 7/8	6 1/2	7 11/16
5/4 T			10%	10.0				10%	10.0			

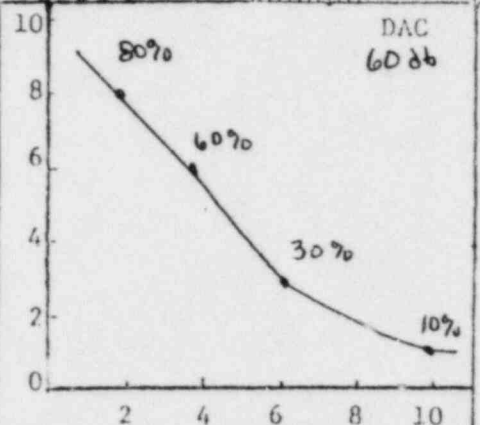
Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	NA	NA	0835	12.00

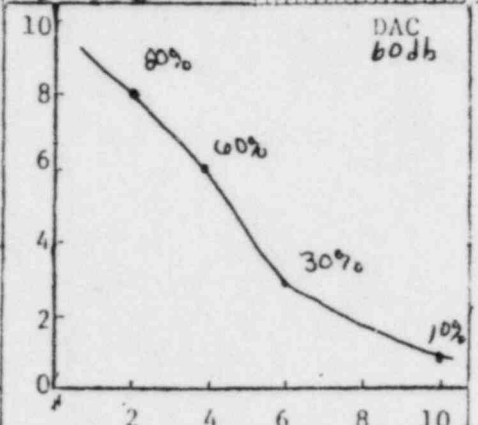
Ref. dB: NA DAC



60 db G



60 db G



Additional Comments/Sketch

D. Payne ANII 5/4/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Reac. F.C.I

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0, F.C.I	O.D.	BURLINGAME II	Daniel Dyna	5-1-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Reac. Coolant	42" ID OD	Butt	UT-4, 4.20"	Sonotrace 40, Batch 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition: Base Metal	Surface Condition: Weld	Examination Results: UT	Examination Results: Visual	Remarks
15-	001	NA	PAR	PAR	Yes	NA	O.D. Slope of Nozzle *	CLEAN	GROUND	NI	SAT	
15-	002		PAR	PAR	Yes		O.D. Mismatch *	CLEAN	GROUND	NI	SAT	
15-	005		No	PAR	PAR		O.D. Slope of Nozzle *	CLEAN	GROUND	NI	SAT	
15-	007		No	PAR	PAR		O.D. Slope of Nozzle *	CLEAN	GROUND	NI	SAT	
15-	010	↓	No	PAR	PAR	↓	O.D. Slope of Nozzle *	CLEAN	GROUND	NI	SAT	

* SEE ATTACHMENT

Form UT-101c

The Virginia Corp. of Richmond

Date 5-1-82

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To:

Subject EXAMINATION LIMITATIONS ZONE 15

15-001 & 15-002 FORM THE NOZZLE TO PIPE WELDS. SCAN 5 ON BOTH WELDS IS LIMITED BY THE RADIUS OF THE NOZZLE. SCAN 2 ON WELD 15-001 IS LIMITED BY O.D. MISMATCH BETWEEN THE NOZZLE EXTENTION AND THE PIPE. SCAN 5 ON WELD 15-002 IS LIMITED BY O.D. MISMATCH ALSO. GOOD ROOT AREA COVERAGE WAS OBTAINED ON BOTH WELDS AT 45° & 60° DURING SCAN 2. NO ROOT AREA COVERAGE WAS OBTAINED DURING SCAN 5 OF BOTH WELDS AT 60°. PARTIAL ROOT AREA COVERAGE WAS OBTAINED ON WELD 15-002 AT 45° AND NO COVERAGE FOR WELD 15-001. GOOD ON WELD COVERAGE WAS OBTAINED WITH SCANS 7 & 8 AT 45°, THE 7 & 8 SCANS AT 60° DID NOT INTERSECT THE I.D. SURFACE. SEE FIG. 1 FOR OD LIMITATIONS.

15-005, 15-007 & 15-010 ARE ALL BRANCH CONNECTIONS ON THE 42" I.D. REACTOR COOLANT PIPE. THE LIMITATIONS ARE THE WELD RADIUS AT EACH OF THE BRANCH CONNECTIONS AND THE O.D. MISMATCH BETWEEN THE PIPE AND ELBOW. SEE FIG 2. NO SCAN 2 WAS DETERMINED ON ANY OF THE WELDS BECAUSE THE ULTRASONIC BEAM IS DIRECTED AWAY FROM THE ROOT AREA. THE 60° BEAM ANGLE DID NOT INTERSECT THE I.D. SURFACE WHEN THE BEAM WAS DIRECTED CIRCUMFERENTIALLY TO PARALLEL THE P.C. ROOT PATTERN [illegible]

Signed

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET PAGE 9 OF 10

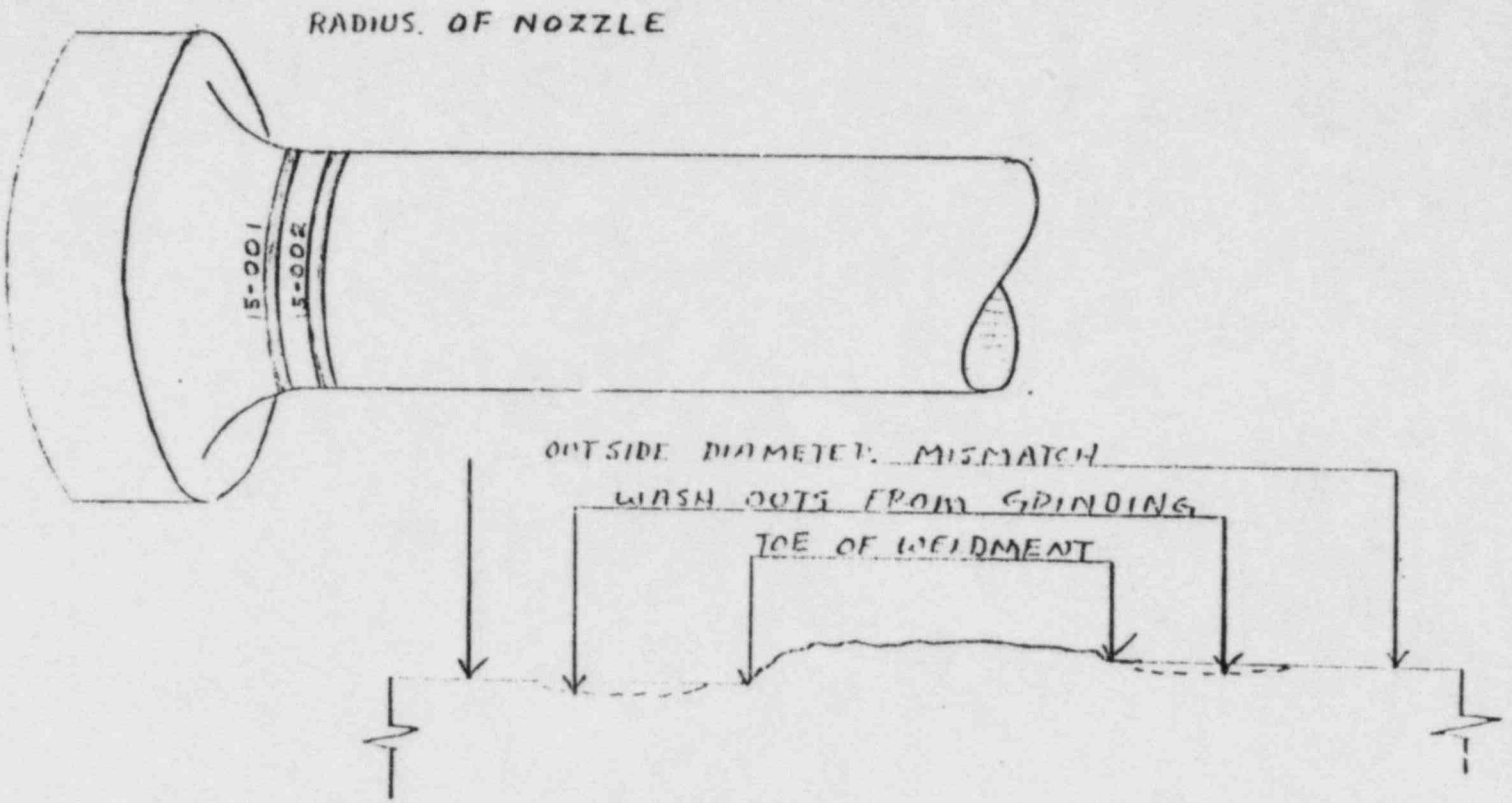


FIG. 1

The Virginia Corp. of Richmond

ULTRASONIC SUPPLEMENTAL DATA SHEET

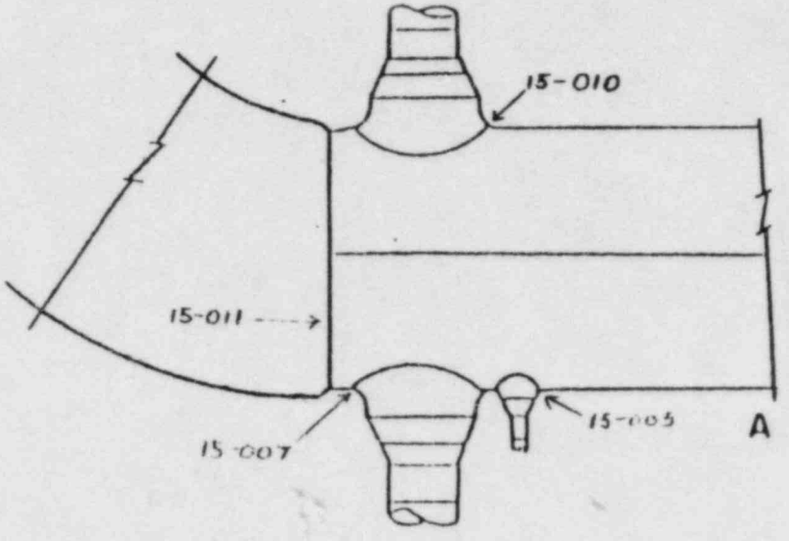


FIG. 2

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1/15	ZONE 15 REV. 2, F.C.-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3, REV. 0, FC-1	O.D.	BURLINGAME II	Daniel Johnson	5-7-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
REACTOR COOLANT	42" ID	BUTT	UT-4 4.90"	Type 40 Batch No. 8119

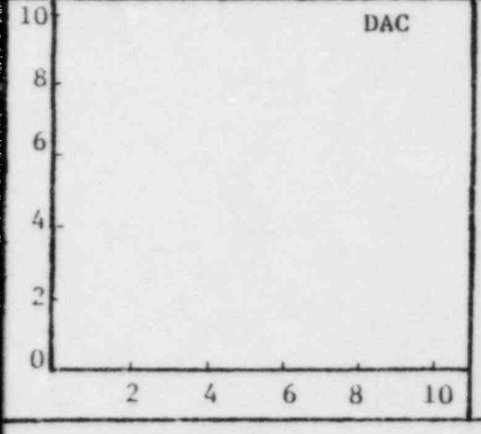
Continuation Sheet Attached: ✓ Yes ___ No

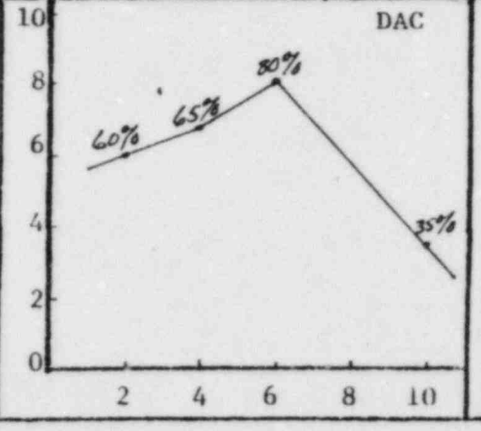
Field Changes: Yes ✓ No ___ If Yes, Number F.C.-1

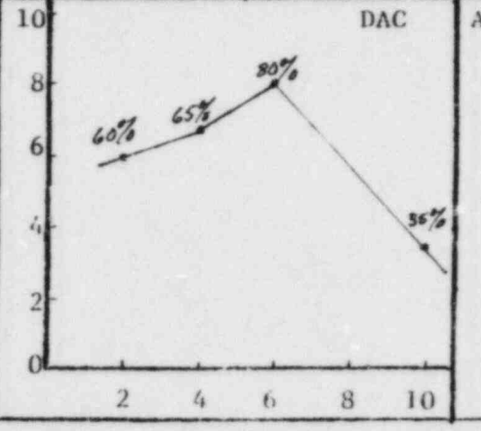
Transducer	30°	45°	60°
S/N	L19801	N/A	N/A
Size	1.0"		
Frequency	2.25 MHz		
Beam Angle	31°		

Instrument			
Mfgr.	SONIC	Model	FTS-MARK I
S/N	05304E	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	12'
Freq.	2 MHz	Video	NORMAL

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks: 30°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	N/A	N/A	60%	2.0	3/8	5/16 9/16	60%	2.0	3/8	5/16 9/16	12:30	4:00	N/A	N/A	N/A	N/A
1/2T			65%	4.0	1 3/8	1.0 1 7/16	65%	4.0	1 3/8	1.0 1 7/16						
3/4T			80%	6.0	2 1/8	1 3/4 2 1/4	80%	6.0	2 1/8	1 3/4 2 1/4						
5/4T			35%	10.0			35%	10.0								
Ref. dB			70dBG				70dBG									







Additional Comments/Sketch

Form UT-101

2/82

D. Payne ANII 5/20/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1 15	ZONE 15, RCV-2, EC-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
1512.3, REV 0, EC-1	O.D.	[illegible]RLINGAME II	Daniel Dyer	5-7-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	42" ID	BUTT	UT-4, 49"	SONOTRACE 40 # 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	001	NA	NA	PAR	YES	NA	O.D. SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
15-	002	NA	NA	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
15-	003LB	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
15-	005	NA	NO	PAR	PAR	NA	BRANCH CONNECTION	CLEAN	GROUND	NI	SAT	
15-	007	NA	NO	PAR	PAR	NA	BRANCH CONNECTION	CLEAN	GROUND	NI	SAT	
15-	010	NA	NO	PAR	PAR	NA	BRANCH CONNECTION	CLEAN	GROUND	NI	SAT	
15-	014	NA	PAR	NA	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	
15-	015	NA	PAR	NA	YES	NA	O.D. SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
15-	012LA	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
15-	013LB	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	

The Virginia Corp. of Richmond

Date 5-7-82

Page 3 of 4

To: _____

Subject EXAMINATION LIMITATIONS ZONE 15, REV 2 EC 1

15-001 SCAN 2 WAS NOT PREFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45°&60° SCANS. SCAN 5 WAS RESTRICTED BY THE OD SLOPE OF THE NOZZLE, BUT ROOT AREA COVERAGE WAS OBTAINED. SCANS 7&8 WERE LIMITED BY A SMALL DEGREE BY THE O.D SLOPE, GOOD ROOT AREA COVERAGE WAS OBTAINED.

15-002, SCAN 2 WAS NOT PREFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45°&60° ANGLE SCANS, SCAN 5 WAS LIMITED BY O.D MISMATCH BETWEEN THE R.C PIPE AND NOZZLE EXTENTION. GOOD ROOT AREA COVERAGE WAS OBTAINED SCANS 7&8 WERE LIMITED BY A SMALL DEGREE BY THE MISMATCH ALLOWING FOR BEAM SPREAD, ADEQUATE COVERAGE OF THE ROOT AREA WAS OBTAINED.

15-004, 15-007, 15-010 ARE NOZZLE BRANCH CONNECTIONS SCAN 2 WAS NOT PREFORMED BECAUSE THE ULTRASONIC BEAM IS DIRECTED AWAY FROM THE WELD ROOT. SCAN 5 WAS LIMITED BY THE RADIUS OF THE WELD CROWN BETWEEN THE R.C. PIPE AND THE BRANCH NOZZLE. ROOT AREA COVERAGE WAS OBTAINED. SCANS 7&8 WERE ALSO LIMITED BY THE RADIUS OF THE WELD CROWN AND RESTRICTED TO THE SCAN 5 SIDE OF THE WELD. ALLOWING FOR BEAM SPREAD, ADEQUATE COVERAGE OF THE ROOT AREA WAS OBTAINED.

15-01 SCAN 5 WAS NOT PREFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45°&60° ANGLES. SCAN 2 WAS LIMITED BY OD MISMATCH BETWEEN THE R.C. PIPE AND NOZZLE EXTENSION. GOOD ROOT AREA COVERAGE WAS OBTAINED.

cont.

Signed _____

The Virginia Corp. of Richmond

Date 5-7-82

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To:

Subject EXAMINATION LIMITATIONS CONT.
ZONE 1T, REV.2, FC-1

SCANS 7,8 WERE LIMITED TO A SMALL DEGREE BY THE OD MISMATCH. ALLOWING FOR BEAM SPREAD, COVERAGE OF THE ROOT AREA WAS OBTAINED.

1T-1T. SCAN 5 WAS NOT PREFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45° & 60° ANGLES. SCAN 2 WAS LIMITATED BY THE O.D. SLOPE OF THE NOZZLE, BUT ROOT AREA COVERAGE WAS OBTAINED. SCANS 7,8 WERE LIMITED TO A SMALL DEGREE BY THE O.D SLOPE, ROOT AREA COVERAGE WAS OBTAINED.

Signed

Ultrasonic Examination Report

The Virginia Corp. of Richmond

D. Payne ANII 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP+L	Waterford	3	1/15	Zone 15, Rev. 2 F.C. 1

Procedure Rev. 0	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 F.C.+2	I. D.	Richard De... II	Daniel ...	5-8-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Hot leg - Steam Gen. 1 to R.V.	42"	Butt	UT-4	Type 40 Batch No. 8119

Continuation Sheet Attached ✓ Yes ___ No

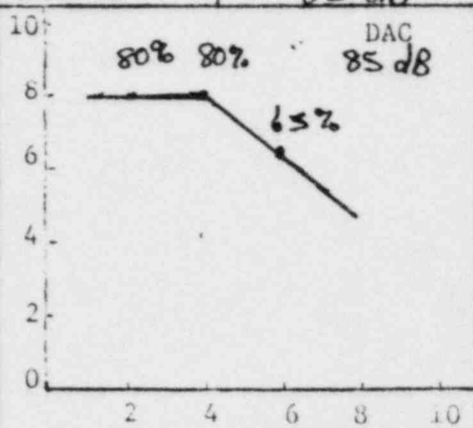
Field Changes: Yes ✓ No ___
If Yes, Number 2

Transducer	0°	45°	60°
S/N	48807	N/A	N/A
Size	1"	↓	↓
Frequency	2.25 Mhz	↓	↓
Beam Angle	0°	↓	↓

Instrument			
Mfgr.	Sonic	Model	FTS Mark I
S/N	788836	RepRate	1K
Reject	off	Filter	High
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: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4 T	80%	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/2 T	80%	4.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
3/4 T	65%	6.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
1 T	≥100%	8.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Ref. dB	85 dB											

Calibration Checks					
0° In	0° Out	45° In	45° Out	60° In	60° Out
0900	1130	N/A	N/A	N/A	N/A



DAC N/A

DAC N/A

Additional Comments/Sketch

D. Payne ANII [illegible]/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.	
LP+L	Wateford	3	1 / 15	Zone 15, Rev 2, F.C. 1	
Procedure: ISI 2.3 Rev. 0 F.C.+2	Exam Surface: I.D.	Examiner/Level: [signature] II		VCR Supervisor: [signature]	Date: 5-8-82
Component/Piping System: Hot Leg - Steam Gen. 1 to R.V.		Pipe Size: 42"	Weld Type: Butt	Cal. Block: UT-4	Couplant: Type & Batch #: Sonotrace 40 #8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-001		Yes	N/A	N/A	N/A	Yes		clean	Ground	NI	Sat	
15-002		Yes	N/A	N/A	N/A	Yes		clean	Ground	NI	Sat	

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

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/19	ZONE 19 REV 2 F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 R.0 F.C.1 (WRM 2)	I.D.	BURLINGAME / II	Terry White	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
Cold Leg - Reactor Coolant	36"	Butt	UT-6 3.50"	Type 9C Batch No 8119

Continuation Sheet Attached: ✓ Yes ____ No

Field Changes: Yes ✓ No ____ If Yes, Number F.C.1 (WRM 2)

Transducer	0°	45°	60°
S/N	N/A	N/A	L19801
Size			1"
Frequency			2.25 MHz
Beam Angle			61°

Instrument

Mfgr.	SONIC	Model	ETS MARK I
S/N	03709E	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN	Coax	12'
Freq.	2 MHz	Video	NORMAL

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	N/A	N/A
1/2 T		
3/4 T		
5/4 T		
Ref. dB		

2 & 5 Scan

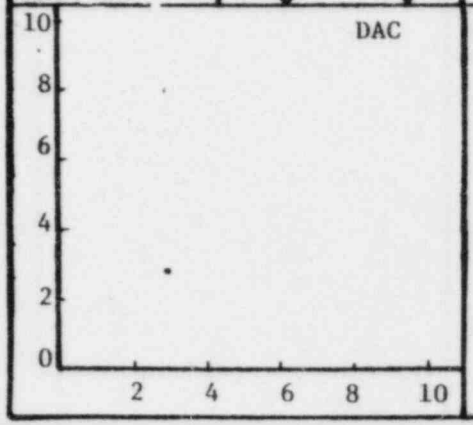
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2.0	13/16	5/16	2"
55%	4.0	3 1/2	3 3/32	3 5/16
35%	6.0	5 9/32	4 5/8	5 3/4
10%	10.0			
61 db				

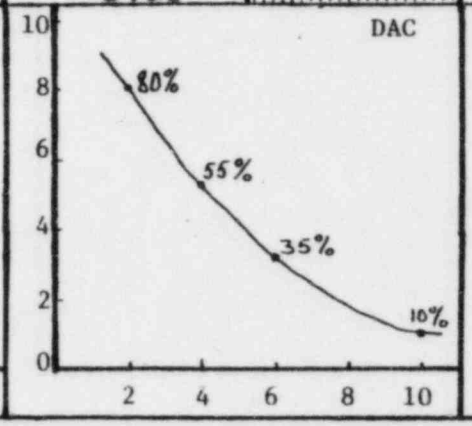
7 & 8 Scan

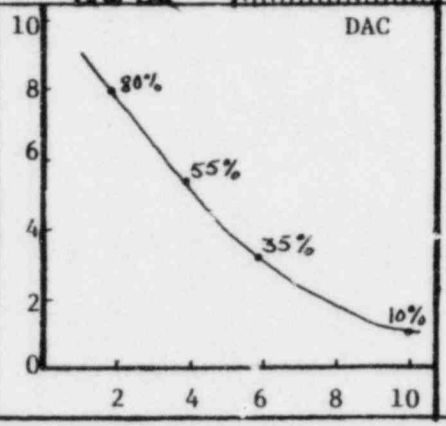
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC	
80%	2.0	13/16	5/16	2"
55%	4.0	3 1/2	3 3/32	3 5/16
35%	6.0	5 9/32	4 5/8	5 3/4
10%	10.0			
66 db				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
N/A	N/A	N/A	N/A	11:15	2:45







Additional Comments/Sketch

Form UT-101

2/82

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

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	2B/ 14	ZONE 14 REV 2 F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 R.O F.C.1 (WRM 2)	I.D.	BURLINGAME / II	Kevin White	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
COLD LEG - REACTOR COOLANT	36"	BUTT	UT-6 3.50"	SONOTRACE 40 # 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
14-010		N/A	YES	YES	YES	N/A		CLEAN	GROUND	NI	SAT	
14-011		N/A	YES	YES	YES	N/A		CLEAN	GROUND	NI	SAT	

Form UT-101a

2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 5/20/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1/15	ZONE 15, REV. #2, F.C.-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, REV. 0, F.C.-1	I.D.	R. Burlingame II	Daniel Dean	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
HOT LEG - S.G. #1 TO R.V.	42"	BUTT	CAL-4	Type 40 Batch No 8119

Continuation Sheet Attached: ✓ Yes ____ No

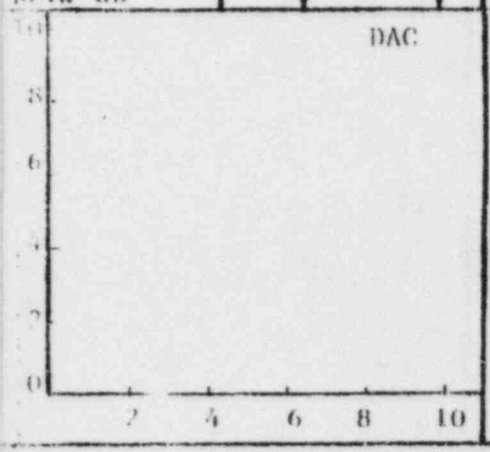
Field Changes: Yes ✓ No ____ Yes, Number F.C.-1

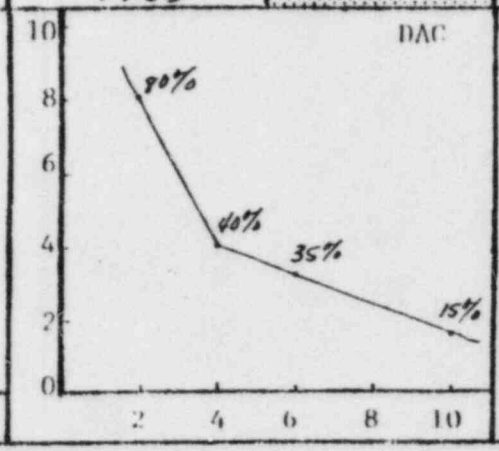
Transducer	0°	45°	60°
S/N	N/A	N/A	C19801
Size			1"
Frequency			2.25 MHz
Beam Angle			61°

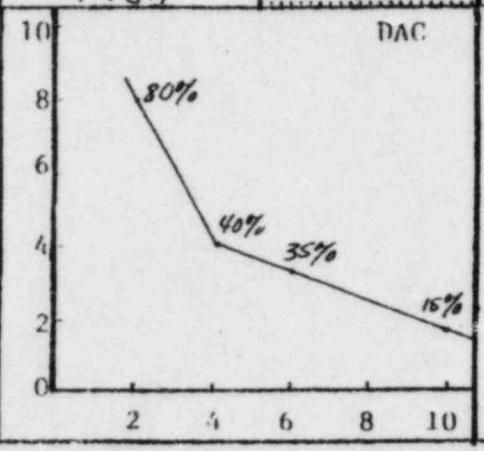
Instrument			
Mfgr.	SONIC	Model	FTS-MARK I
S/N	03704E	RepRate	1K
Reject	OFF	Filter	OFF
Damp	MIN.	Coax	12'
Freq.	2 MHz	Video	NORMAL

Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4T	N/A	N/A	80%	2.0	2 7/32	1 7/8	2 1/2	80%	2.0	2 7/32	1 7/8	2 1/2
1/2T			40%	4.0	4 5/8	4 15/32	4 25/32	40%	4.0	4 5/8	4 15/32	4 25/32
3/4T			35%	6.0	6 7/8	6 1/2	7 7/16	35%	6.0	6 7/8	6 1/2	7 7/16
5/4T			15%	10.0				15%	10.0			
Ref. dB			74dB					74dB				

Calibration Checks	0°		45°		60°	
	In	Out	In	Out	In	Out
	N/A	N/A	N/A	N/A	8:00	10:15







Additional Comments/Sketch

D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P&L	WATERFORD	3	1/15	ZONE 15, REV. #2, F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, REV. 0, FC4	ID	[signature]	[signature]	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
HOT LEG - S.G. #1 TO R.V.	42"	BUTT	UT-4	SONOTRACE 40 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition: Base Metal	Surface Condition: Weld	Examination Results: UT	Examination Results: Visual	Remarks
15-001		N/A	YES	YES	YES	N/A		CLEAN	GROUND	NI	SAT	
15-002		N/A	YES	YES	YES	N/A		CLEAN	GROUND	NI	SAT	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII, 5/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1 / 15	Zone 15, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3, Rev 0, FC 1 (RRm Dkg 2)	ID	R. Burlingame II	Daniel Dena	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
Reactor Coolant	42"	Butt	UT-4, ~~4.90~~	Type 40 Batch No. 8119

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___

Yes, Number F.C. 1

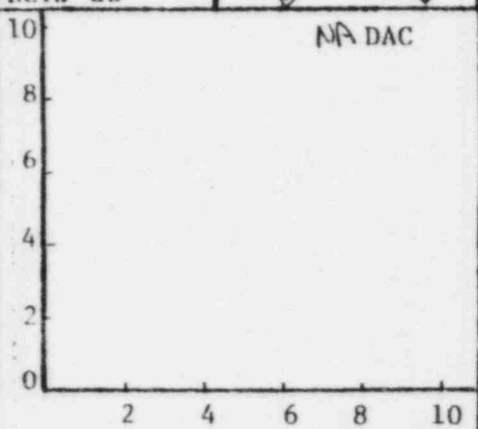
Transducer	0°	45°	60°
S/N	NA ↓	219134	NA ↓
Size		1.0"	
Frequency		2.25 MHz	
Beam Angle		45°	

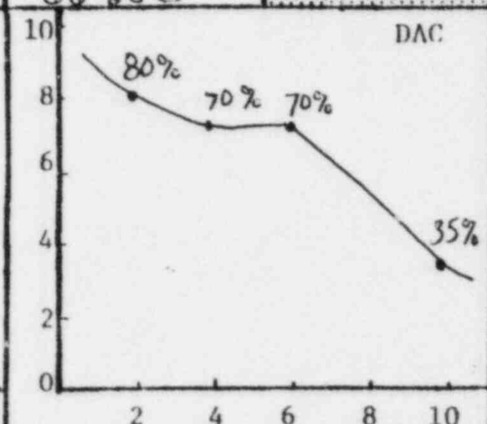
Instrument			
Mfgr.	Sonic	Model	FTS Mark 1
S/N	05304E	RepRate	1000
Reject	OFF	Filter	Hi
Damp	Min	Coax	12'
Freq.	2 MHz	Video	Norm

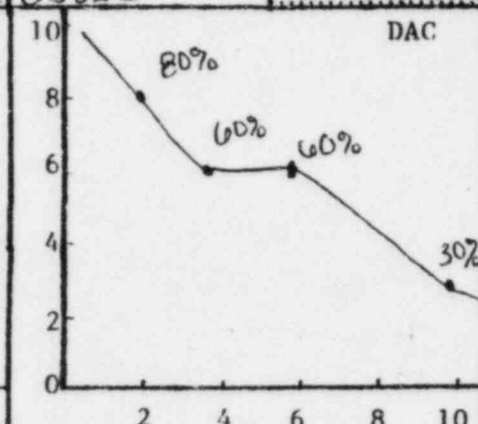
Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Scan Sound Entry Point To: Scribe Line	2 & 5 Scan Sound Entry Point To: 50% DAC		7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Scan Sound Entry Point To: Scribe Line	7 & 8 Scan Sound Entry Point To: 50% DAC	
1/4T	NA ↓	NA ↓	80%	2.0	31/32	33/32	1 3/16	80%	2.0	31/32	5/16	1 15/16
1/2T			70%	4.0	2 11/32	2 1/16	2 15/32	60%	4.0	2 11/32	1 33/32	2 15/32
3/4T			70%	6.0	3 5/8	3 13/32	3 37/32	60%	6.0	3 5/8	3 3/32	4 3/32
5/4T			35%	9.8				30%	9.8			
Ref. dB			66 dbG					63 dbG				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA ↓	NA ↓	8:00 AM	10:15 AM	NA ↓	NA ↓







Additional Comments/Sketch

Form UT-101 2/82

D. Payne ANII 5/26/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page of

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-23, Rev 0, FC +2	ID	[signature] II	[signature]	5-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Reactor Coolant	42"	Butt	UT 4, 440	Sonotrace 40, Batch # 8119

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	001	NA	YES	YES	YES	NA		Smooth	Ground	NI	SAT	
15-	002	NA	YES	YES	YES	NA		Smooth	Ground	NI	SAT	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/8/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1 15	ZONE 15, REQ 3, FC-1

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
UI-2.3, REV 0, FC 7	OD	BURLINGAME II	Daniel Payne	6-4-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
REACTOR COOLANT	42" ID	BUTT	UT-4, 4.9"	Type 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ IF Yes, Number 1 2 NRM

	Transducer	30°	45°	60°
	S/N	L19134	NA	NA
	Size	1.0"	↓	↓
	Frequency	2.25 mHz	↓	↓
	Beam Angle	70°	↓	↓

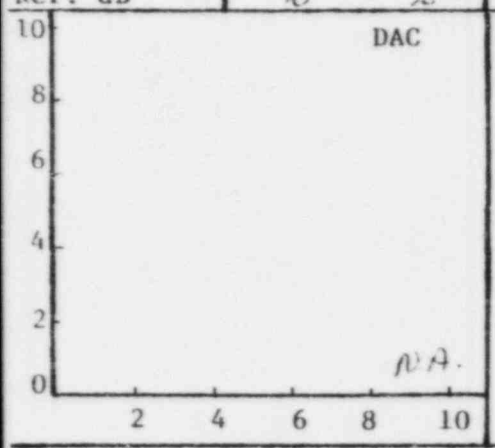
Instrument

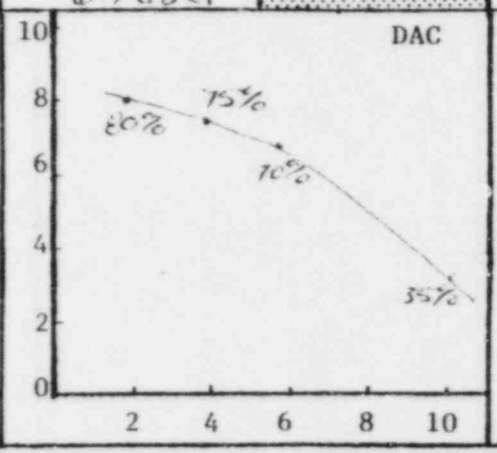
Mfgr.	SCAN C	Model	ETS-mk.1
S/N	01610E	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MID	Coax	12'
Freq.	2.0 mHz	Video	NORM

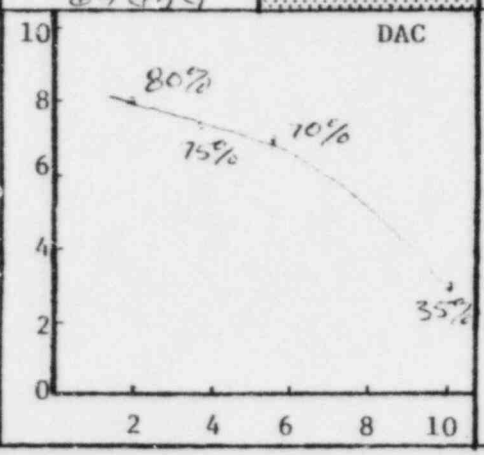
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
¼T	NA	NA	80%	2	NA	NA	NA	80%	2	NA	NA	NA
½T			75%	4				75%	4			
¾T			70%	6				70%	6			
5/4T			35%	10				35%	10			
					↓	↓	↓			↓	↓	↓
Ref. dB	↓	↓	6.4 dbG					6.4 dbG				

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
1345	1575	NA	NA	NA	NA
		↓	↓	↓	↓







Additional Comments/Sketch

N.A. INDICATES THAT NO SCAN WAS PREFORMED, DUE TO, A O.D. GEOMETRIC CONDITION.

D. Payne ANII 6/8/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1 15	ZONE 15, REV. 2, EC-1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.3 REV. 0, A-7	OD	BURLINGAME II	Daniel L Jones	6-4-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
REACTOR COOLANT	42" ID	BUTT	UT-4, 4.9"	SONOTRACE 40 # 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15	CO4 LA	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
15	C11	NA	NA	NA	YES	NA		CLEAN	GROUND	NI	SAT	

D. Payne ANII 6/24/82

Ultrasonic Data Sheet for Thickness Measurement

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone
LP+L	Waterford	3	1 / 15

Component/Piping System	Examiner/Level	Date
Steam Gen #1 - Reactor Vessel	David L. Zoken / II	6/15/82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-2.5 Rev.0	Zone 15 Rev. 2	Daniel Jensen	[ ] Yes [4] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	Sonic	Mfgr. Panametric	Size .50"	Cal. Block	UT-16
Model	Mark I			Cal. Block	N/A
S/N	01610E	Freq. 3.5		Range Cal.	2.2"
Reject	OFF			Calibration Checks	
Damp.	Min	Serial No. 41874		Initial 1:20 p.m.	
Freq.	2.0 mhz			Final 2:40 p.m.	
Rep. Rate	1k	Coax. Cable 6' Dual			
Filter	OFF				
Video	Norm	Gain 50 dB			
Couplant	Sonotrace 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
15-008	12	N/A	N/A	1.45"	N/A	N/A	N/A	N/A	N/A
15-008	2			1.40"					
15-008	4			1.42"					
15-008	6			1.45"					
15-008	8			1.45"					
15-008	10			1.45"					
15-009	12		1.45"						
15-009	2		1.44"						
15-009	4		1.45"						
15-009	6		1.45"						
15-009	8		1.45"						
15009	9		1.45						

Sketch/Identification

Form UT-105 2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/24/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP+L	Waterford	#3	1/15	Zone 15, Rev. 2, F.C. 2 X dlf

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
F.C. 1 ISI 2.8 Rev. 1	O.D	David L Zoh... II	Daniel Jensen	6-15-82

Component/Piping System	Pipe	Size	Weld Type	Cal. Block #	Couplant:
Hot leg - Steam Gen. 1 To Reactor Ves.	15-008 14"	15-009 12"	BUTT	UT-16	Type Sonic 40 Batch No. 8124

Continuation Sheet Attached ✓ Yes ___ No

Field Changes: Yes ✓ No ___

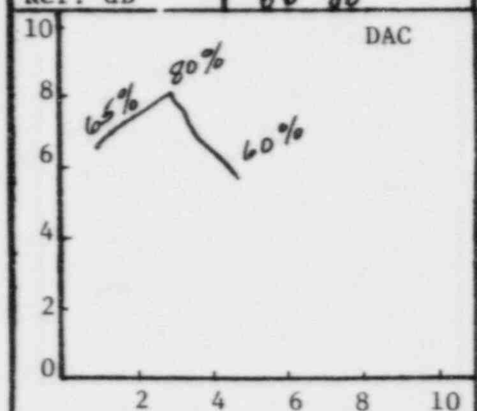
If Yes, Number F.C. 1

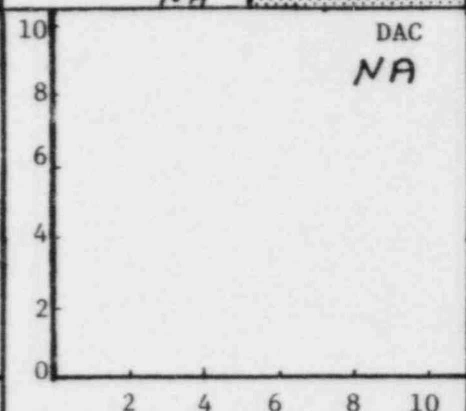
Transducer	0°	45°	60°
S/N	KB2728	NA	NA
Size	1/2"		
Frequency	2.25 mhz		
Beam Angle	0°		

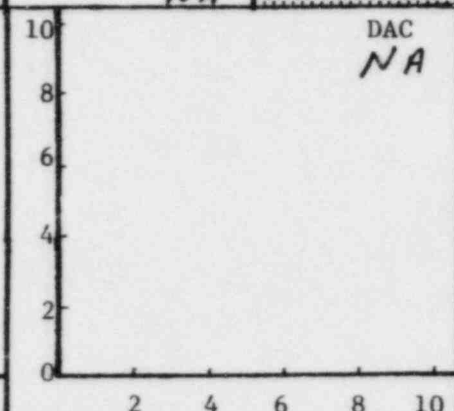
Instrument			
Mfgr.	Sonic	Model	mark I
S/N	05473 E	RepRate	1 K
Reject	off	Filter	off
Damp	Min.	Coax	6' Dual
Freq.	2.0 mhz	Video	Norm.

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

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
9:12	11:30	NA	NA	NA	NA







Additional Comments/Sketch

Cal. for carbon steel side only

Form UT-101

2/82

N.R. Martin ANII 12-17-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1 / 15	ZONE 15 REV. 2 F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8 R.1 F.C.1	O.D.	David L. Foster II	Kevin L. White	6-15-82

Component/Piping System	Pipe Size		Weld Type	Cal. Block	Couplant: Type & Batch #
	15-008	15-009			
HOT LEG - STEAM GEN 1 TO REACTOR	14"	12"	BUTT	UT-16	SONOTRACE 40 #8124

Weld No.		Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
			2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
15-008		YES	N/A	N/A	N/A	YES	N/A	SMOOTH	GROUND	NI	SAT	CARBON
15-009		YES	N/A	N/A	N/A	YES	N/A	SMOOTH	GROUND	NI	SAT	STEEL SIDE ONLY

The Virginia Corp. of Richmond

W.R. Martin, ANII 12-17-82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	1 / 15

Component/Piping System	Examiner/Level	Date
HOT LEG - STM. GEN 1 TO REACTOR	Harold L. Foken III	6-19-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-Z.5 REV. 0	ZONE 15 R.2 FC.2	Kevin White	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	Size	Cal. Block	UT-16
Model	MARK I	PANAMETRICS	.50"	Cal. Block	N/A
S/N	01610 E	Freq.		Range Cal.	1.8"
Reject	OFF	2.25 MHz		Calibration Checks	
Damp.	MIN	Serial No.			
Freq.	2.0 MHz	44652		INITIAL	09:00
Rep. Rate	1K	Coax. Cable		FINAL	11:45
Filter	HIGH	6'			
Video	NORM	Gain			
Couplant	SONOTRACE 40 #8129	50 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
15-008	12	1.28"	1.24"	N/A	N/A	N/A	N/A	N/A	N/A
	2	1.28"	1.24"						
	4	1.26"	1.24"						
	6	1.24"	1.24"						
	8	1.22"	1.24"						
	10	1.24"	1.22"	↓					
15-009	12	1.38"	N/A	1.31					
	2	1.38"		1.31					
	4	1.38"		1.31					
	6	1.38"		1.29					
	8	1.38"		1.31					
	10	1.42"	↓	1.31	↓	↓	↓	↓	↓

Sketch/Identification

W.R. Martin, ANII 12-17-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	11 15	Zone 15 Rev. 2 F.C.2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.8 Rev.1 F.C.1	OD	David L. Foker II	Kevin White	6/19/82

Component/Piping System	Pipe 15-008	Size 15-009	Weld Type	Cal. Block #	Couplant: Sonotrace
Hot Leg - Steam Gen. #1 to R.V.	14"	12"	Butt	UT-16	Type 40 Batch No. 8124

Continuation Sheet Attached ✓ Yes ____ No

Field Changes: Yes ✓ No ____

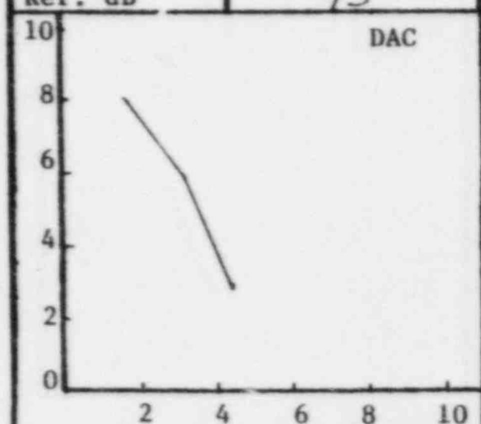
If Yes, Number 1

Transducer	0°	45°	60°
S/N	44652	N/A	N/A
Size	.50"		
Frequency	2.25 mhz		
Beam Angle	0°		

Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	01610E	RepRate	1K
Reject	OFF	Filter	High
Damp	Min.	Coax	6' BNC-BNC
Freq.	2.0 mhz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
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
1/2 T	60%	3.2								
3/4 T	30%	4.5								
Ref. dB	43									

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
0900	11:45	N/A	N/A	N/A	N/A



DAC (2 & 5 Scan): N/A

DAC (7 & 8 Scan): N/A

Additional Comments/Sketch

Cal. for safe-end + weld only.

Form UT-101 2/82

W. R. Martin, ANII 12-17-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop / Zone	Iso/Drawing No.
L P & L	Waterford	3	1 / 15	Zone 15, R-2, F.C.-2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISE 2.8 R-1, F.C.-1	O.D.	David L. Tolen III	Kevin White	6/19/82

Component/Piping System	Pipe Size 15-008	Pipe Size 15-009	Weld Type	Cal. Block	Couplant: Type & Batch #
Hot leg - Steam Gen. I to R.V.	14"	12"	Butt	UT-16	Scantrose 40 / B# 3124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-008		Yes	N/A	N/A	N/A	Yes	N/A	Smooth	Ground	NI	Sat	Inspection of weld & Sufe-end only
15-009		Yes	N/A	N/A	N/A	Yes	N/A	Smooth	Ground	NI	Sat	

The Virginia Corp. of Richmond

Ultrasonic Examination Report

R. Payne ANII 6/24/82

Customer: LP&L	Plant: Waterford	Unit: 3	Loop/Zone: 1/15	Iso/Drawing No.: Zone 15, Rev 2, FC1	
Procedure: ISI-2.8, Rev 1, FC1	Exam Surface: OD	Examiner/Level: BURLINGAME II	VCR Supervisor: Donna Jensen	Date: 6-19-82	
Component/Piping System: Hot Leg - Steam Gen #1 to Reactor Vessel	Pipe Size: 14"	Weld Type: Butt	Cal. Block #: UT-16	Couplant: Sonotrace Type 40 Batch No. 8129	

Continuation Sheet Attached: ✓ Yes ____ No

Field Changes: Yes ✓ No ____ If Yes, Number FC.1

Transducer	0°	45°RL	60°
S/N	NA	607152	NA
Size		1/2"	
Frequency		2.25 MHz	
Beam Angle	↓	45°	↓

Instrument			
Mfgr.	Sonic	Model	FTS Mark 1
S/N	780636	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	6'
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4	NA	NA
1/2		
3/4		
Ref. dB	↓	↓

2 & 5 Scan

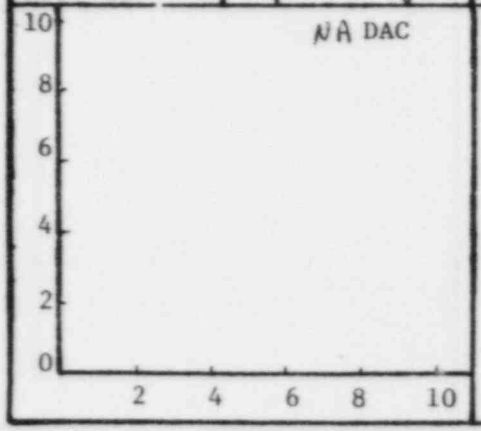
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	2.0		
70%	4.0		
20%	6.0		
60db			

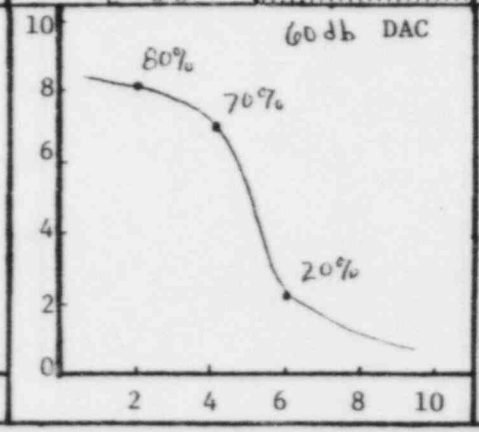
7 & 8 Scan

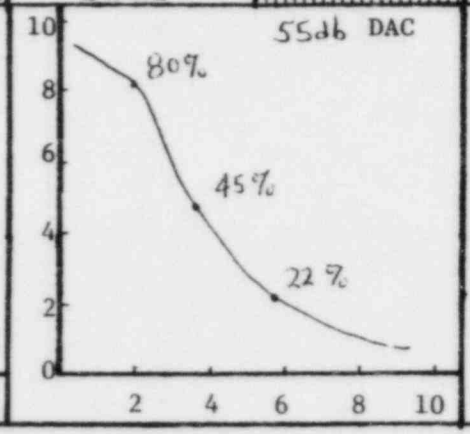
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	1.8		
45%	3.8		
22%	5.8		
55db			

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0830	1000	NA	NA
				↓	↓







Additional Comments/Sketch
Carbon steel

Ultrasonic Examination Report

D. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, FC1

Procedure	Exam Surface	Examiner/Level	VGR Supervisor	Date
ISI-2.8 Rev1 FC1	O.D.	BURLINGAME II	Daniel F. Jensen	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Hot Leg-Steam Gen. #1 to Reactor Vessel	14"	B-H	UT-16	Type 40 Batch No. 8129

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number FC1

Transducer	0°	45° PL	60°
S/N	NA	607152	NA
Size	↓	1½	↓
Frequency	↓	2.25 MHz	↓
Beam Angle	↓	43°	↓

Instrument			
Mfgr.	Sonic	Model	FTS MK 1
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	6'
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4	NA	NA
1/2	↓	↓
3/4	↓	↓
Ref. dB	↓	↓

2 & 5 Scan

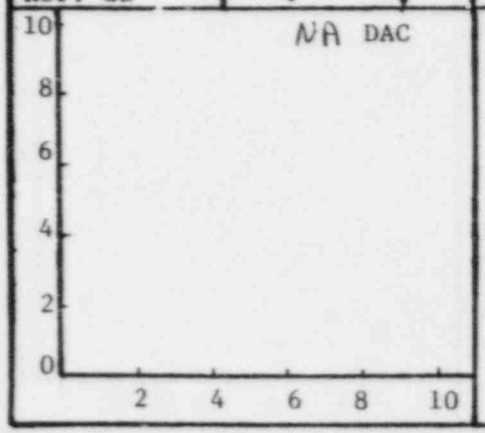
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	2.0		
35%	4.0		
18%	6.0		
(6)db			

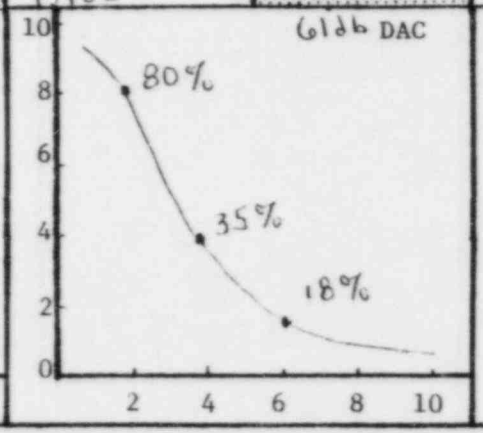
7 & 8 Scan

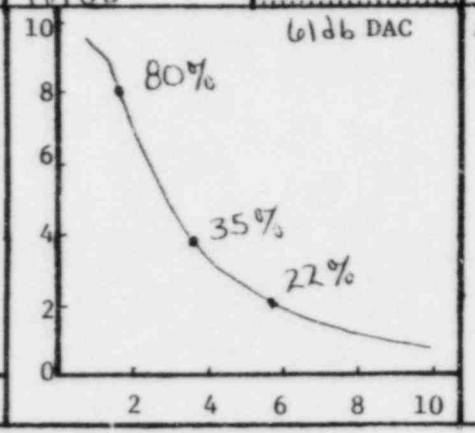
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	1.8		
35%	3.8		
22%	5.6		
(6)db			

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0830	1000	NA	NA
↓	↓			↓	↓







Additional Comments/Sketch
Austenitic

D. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev2, FC1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.8, Rev 1, FC1	O.D	BURLINGAME II	Daniel Jensen	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Hot Leg- Steam Gen. #1 to Reactor Vessel	14"	Butt	UT-16	Sonotrace 40 Batch 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	008	NA	YES	PAR	YES	NA	SLOPE OF NOZZEL GOOD ROOT AREA COVERAGE WAS OBTAINED.	CLEAN	GROUND	NI	SAT	

Form UT-101a

2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/24/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP & L	Waterford	3	1/15	Zone 15, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.8 Rev 1 FC 1	O.D.	BURLINGAME II		6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Surface
Hot Leg Steam Gen. #1 to Reactor Vessel	12"	Butt	UT-16	Type 40 Batch No. 8124

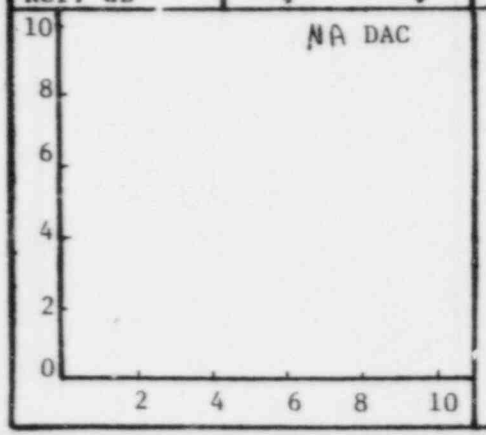
Continuation Sheet Attached: ✓ Yes ___ No

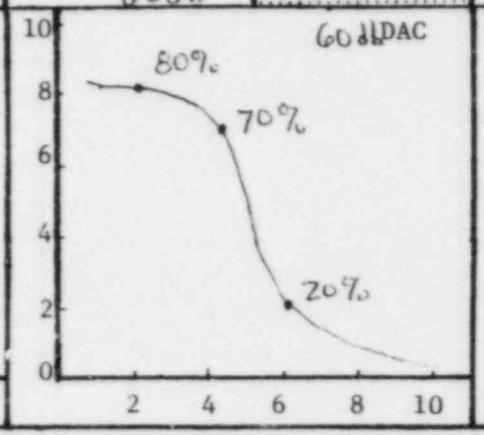
Field Changes: Yes ✓ No ___ If Yes, Number FC 1

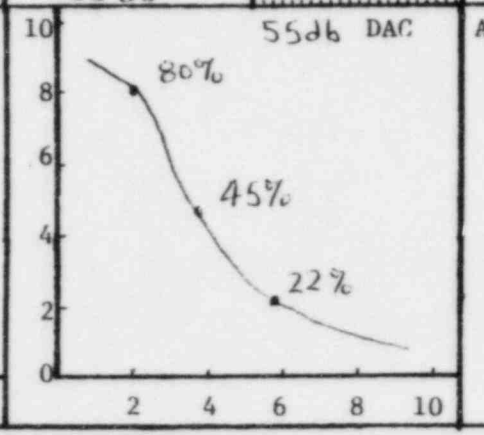
Transducer	0°	45° RL	60°
S/N	NA	607152	NA
Size	↓	1½"	↓
Frequency		2.25 MHz	
Beam Angle	↓	43°	↓

Instrument			
Mfgr.	Sonic	Model	ETS Mark I
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	6'
Freq.	2 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
					Sound Entry Point To:				Sound Entry Point To:		0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC	Signal Amp.	Sweep	Scribe Line	50% DAC	In	Out	In	Out	In	Out
											Min	NA	0830	1000	NA	NA
1/4	NA	NA	80%	2.0			80%	1.8								
½			70%	4.0			45%	3.8								
3/4			20%	6.0			22%	5.8								
Ref. dB	↓	↓	60 db				55 db				↓	↓			↓	↓







Additional Comments/Sketch
Carbon Steel

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/24/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, FC1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8 Rev 1, FC 1	O.D.	BURLINGAME II	Daniel P. Payne	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
#1 Leg Steam Gen #4 & Reactor Vessel	12"	Butt	UT-16	Type 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number FC 1

Transducer	0°	45° RL	60°
S/N	NA	607152	NA
Size	↓	½"	↓
Frequency	↓	2.25 MHz	↓
Beam Angle	↓	43°	↓

Instrument			
Mfgr.	Sonic	Model	FTS MK1
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	6'
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4	NA	NA
1/2	↓	↓
3/4	↓	↓
Ref. dB	↓	↓

2 & 5 Scan

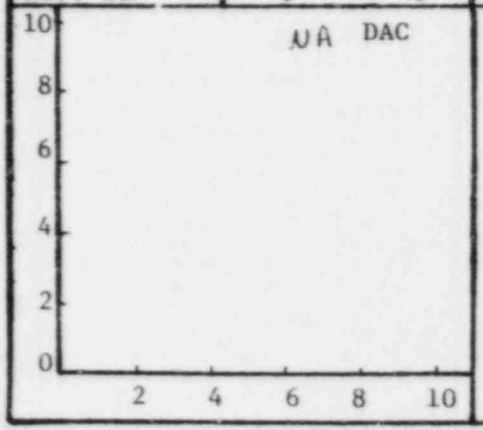
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	2.0		
35%	4.0		
18%	6.0		
6 1db			

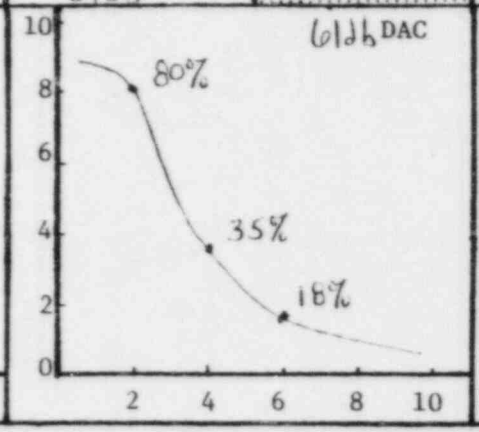
7 & 8 Scan

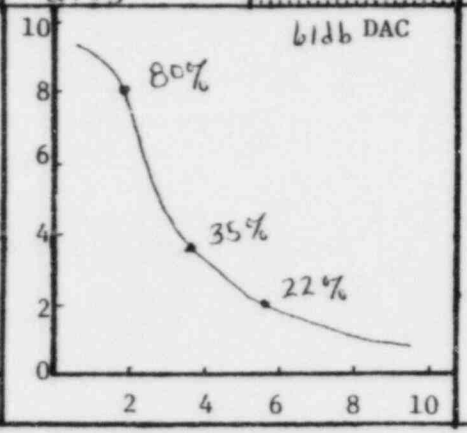
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	1.8		
35%	3.8		
22%	5.8		
6 1db			

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	0830	1000	NA	NA







Additional Comments/Sketch
Austenitic

D. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1/15	Zone 15, Rev 2, FC1

Procedure	Exam Surface	Examiner/Level	VER Supervisor	Date
ISI-2.8, Rev 1, FC1	O.D	BURLINGAME II	[signature]	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Hot Leg - Steam Gen #1 to Reactor Vessel	12"	B-H	UT-16	Sonotrace 40, Batch B124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-	004	NA	PAR	PAR	PAR	NA	LIMITED BY WELD NO. 16-001, GOOD ROOT AREA COVERAGE WAS OBTAINED.	CLEAN	GROUND	NI	SAT.	

Form UT-101a

2/82

The Virginia Corp. of Richmond

D. Payne ANII 7/19/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	WATERFORD	3	1/1/15

Component/Piping System	Examiner/Level	Date
Hot Leg - S/G #1 To Reactor	Michael W Blew II	July 10, 1982

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI 2.5 Rev 0	15 Rev 2 Sh 2	Daniel H Jensen	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration
Mfgr.	Sonic	Mfgr.	Size	Cal. Block UT-1E
Model	MARK I	Panametrics	.5"	Cal. Block NA
S/N	010586	Freq.	2.25 MHz	Range Cal. 2.135"
Reject	OFF			Calibration Checks
Damp.	MIN	Serial No.	44651	
Freq.	2.0 MHz			IN 1.15
Rep. Rate	1K	Coax. Cable	6' Dual	OUT 4.40
Filter	HI			
Video	NORM	Gain	47 db	
Couplant	Sonotrace 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
15-CC6	12	1.281"	.897"	1.537"	NA	NA	NA	NA	NA
15-CC6	2	1.196	1.068"	1.495"					
15-CC6	4	1.281"	1.068"	1.495"					
15-CC6	6	1.196"	.782"	1.537"					
15-CC6	8	1.238	1.025"	1.495"					
15-CC6	10	1.281"	1.068"	1.495"					
					~	~	~	~	~

Sketch/Identification

Ultrasonic Examination Report

R. Payne ANII 7/19/82

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.	
L. P. & L.	Waterford	# 3	1 / 15	Zone 15, Rev. 2, F.C.# 2 MWB	
Procedure	**Exam Surface**	**Examiner/Level**	**VCR Supervisor**		**Date**
ISI-28 Rev 1, F.C. 1	O.D.	Michael W Blew II	[illegible]		7-10-82
Component/Piping System		**Pipe Size**	**Weld Type**	**Cal. Block #**	**Couplant:**
Hot Leg - Steam Generator 1 to Reactor Vessel		20"	Butt	UT-18	Type Sonotrace 40 Batch No. 8124

Continuation Sheet Attached ✓ Yes ____ No

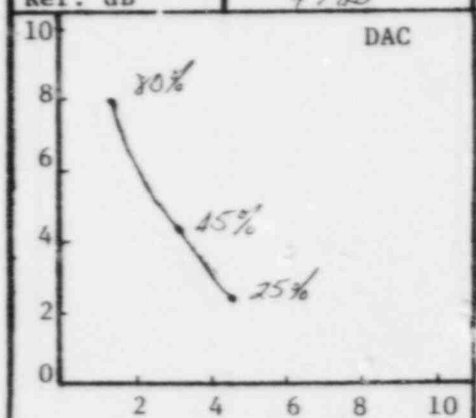
Field Changes: Yes ✓ No ____ If Yes, Number F.C. 1

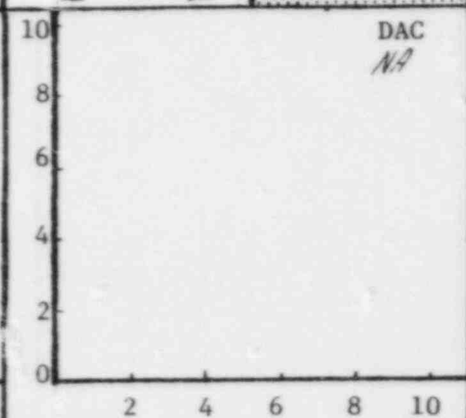
Transducer	0°	45°	60°
S/N	41651	NA	NA
Size	.5"		
Frequency	2.25 MHz		
Beam Angle	0°		

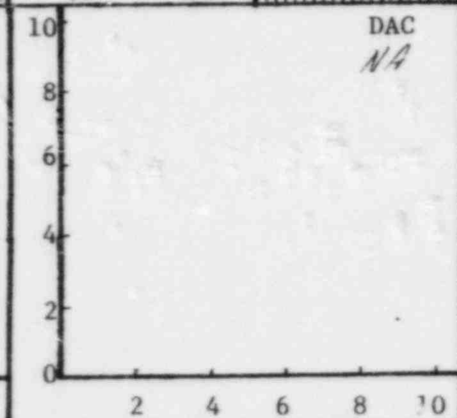
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	01058E	RepRate	1K
Reject	Off	Filter	Hi
Damp	Min.	Coax	6' Dual
Freq.	20 MHz	Video	Norm.

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

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
1:15	4:40	NA	NA	NA	NA







Additional Comments/Sketch

Form UT-101

2/82

D. Payne ANII 7/19/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer: L P & L	Plant: WATERFORD	Unit: 3	Loop/Zone: 1 / 15	Iso/Drawing No.: MWB 2 ZONE 15 REV 2 FCX	
Procedure: ISI 2.8 R-1 FC-1	Exam Surface: O.D.	Examiner/Level: Michael W. Blew II	VCR Supervisor: Daniel J. Jensen	Date: 7-10-82	
Component/Piping System: HOT LEG - S/G #1 TO RV	Pipe Size: 42.0"	Weld Type: BUTT	Cal. Block: UT-18	Couplant: Type & Batch #: SONOTRACE 40 % B124	

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-006		YES	NA	NA	NA	YES	NA	Smooth	Ground Smooth	NI	NI	NA

Form UT-101a

2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 7/19/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	1115	Zone 15 Rev. 2 F.C.

Procedure	Exam Surface	Examiner/Level	VER Supervisor	Date
F.C. 2 1312 8 Rev. 1	O.D.	David [illegible]	[illegible]	7/15/82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant
St. Gen 1 to Reactor Ves	2.0" Nom. 3.5"	Butt	UT-18	Sonotrace Type 40 Batch No. 8127

Continuation Sheet Attached: ✓ Yes ___ No

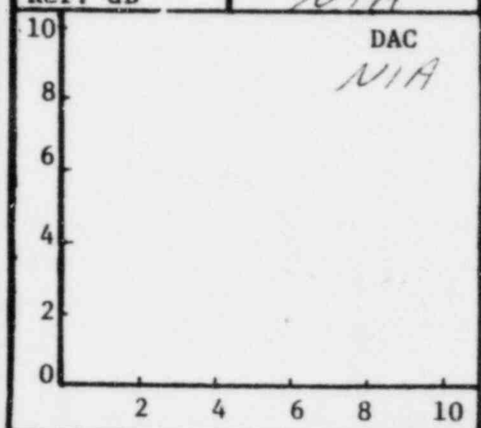
Field Changes: Yes ✓ No ___
If Yes, Number 2

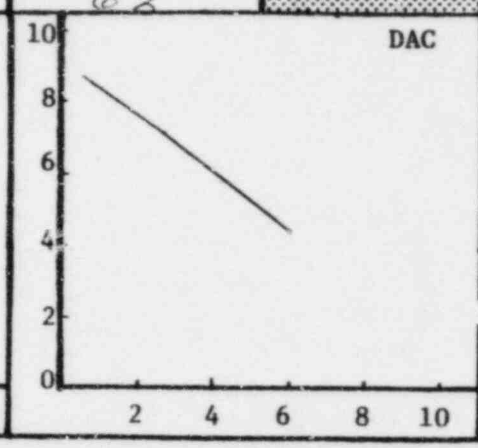
Transducer	30°	45°	60°
S/N	607150	N/A	N/A
Size	.50"		
Frequency	2.25Mhz		
Beam Angle	30°		

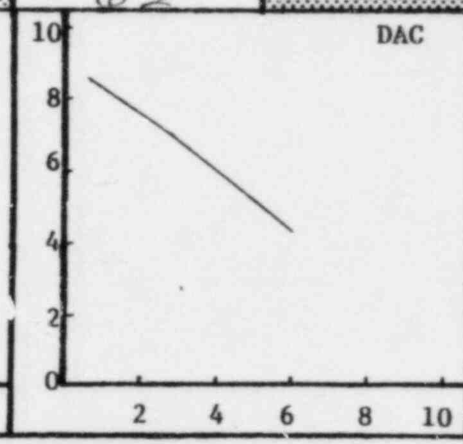
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	05473E	RepRate	1K
Reject	3	Filter	Hi
Damp	Min.	Coax	6' BNC-MD
Freq.	2.0mhz	Video	Norm

Calibration Reflector Location	Calibration 0° Signal Amp.	Calibration 0° Sweep	2 & 5 Scan Signal Amp.	2 & 5 Scan Sweep	2 & 5 Sound Entry Point To: Scribe Line	2 & 5 Sound Entry Point To: 50% DAC	7 & 8 Scan Signal Amp.	7 & 8 Scan Sweep	7 & 8 Sound Entry Point To: Scribe Line	7 & 8 Sound Entry Point To: 50% DAC
1/4T	N/A	N/A	80%	1.5	N/A	N/A N/A	80%	1.5	N/A	N/A N/A
1/2T			70%	3.0			70%	3.0		
3/4T			55%	4.5			55%	4.5		
Ref. dB	N/A		62				62			

Calibration Checks	30° In	30° Out	45° In	45° Out	60° In	60° Out
	8:00	10:33	N/A	N/A	N/A	N/A







Additional Comments/Sketch

Calibration for carbon steel side.

Form UT-101 2/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

R. Payne ANII 7/19/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L.P. + L	Waterford	#3	1/15	Zone 15 Rev.2 F.C. X (Iff-2)

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
F.C. 2 ISI-2.8 Rev1	O D	David L. Foken III	[signature]	7-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant:
St. Gen. #1 to Reactor ves	3.5 20"	Butt	UT-18	Type Sonotrac Batch No. 8124

Continuation Sheet Attached ✓ Yes ___ No

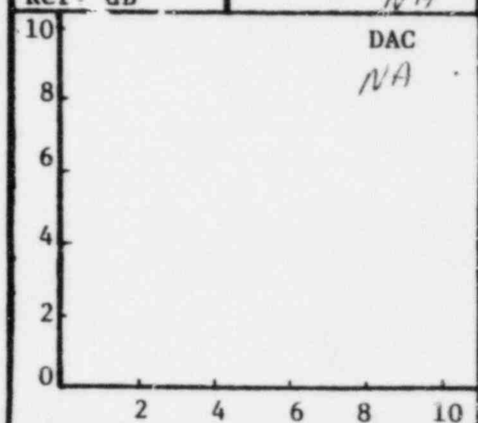
Field Changes: Yes ✓ No ___
If Yes, Number FC 2

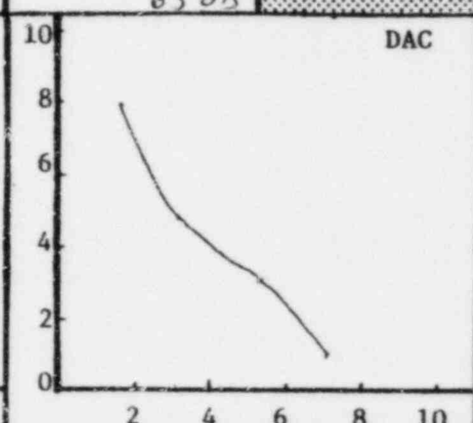
Transducer	30°	45°	60°
S/N	607150	NA	NA
Size	.50"		
Frequency	2.25 mhz		
Beam Angle	30°		

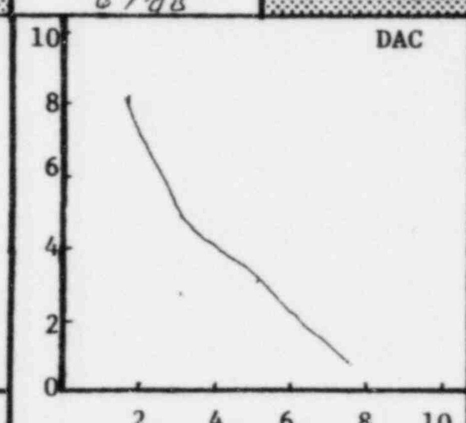
Instrument			
Mfgr.	Sonic	Model	Mark I
S/N	03473 E	RepRate	1K
Reject	3	Filter	Hi
Damp	min.	Coax	6' BNC to micro
Freq.	2.0 mhz	Video	Norm

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

Calibration Checks	30° In	30° Out	45° In	45° Out	60° In	60° Out
	750	1053	NA	NA	NA	NA







Additional Comments/Sketch

Calibration for austenetic side.

Form UT-101 2/82

D. Payne ANII 7/19/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P + L	Waterford	#3	1 / 15	Zone 15 Rev. 2 FC 2 dlf

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8 Rev. 1 FC 2	OD	David L. Fobare III	Diane Payne	7-15-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
ST. GEN. # 1 to Reactor Ves.	3.5" 2.0" MAR	BUTT	UT-18	SONOTRACE 40 Batch # 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-006		NA	Par	Par	Par	NA	Weld contour	Smooth	Contour Ground	NI	Sat.	N/A

Form UT-101a

2/82

D. Payne ANII 8/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P & L	WATERFORD	3	1 15	ZONE 15 R-2, F.C.2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI. 1.3 R-0, F.C.2	O.D.	Gary Longenecker II		8-20-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
HOT LEG S.G. # 1 TO R.V.	42" I.D.	BUTT	UT-4	Type 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number 2

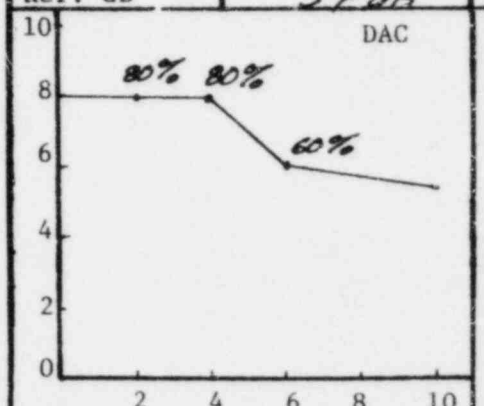
Transducer	0°	45°	60°
S/N	48807	NA	NA
Size	1." DIA.		
Frequency	2.25 MHZ		
Beam Angle	0°		

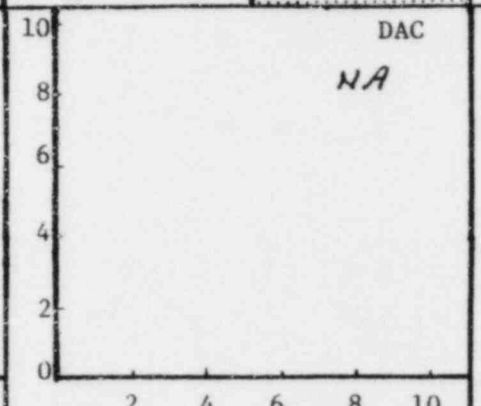
Instrument			
Mfgr.	SONIC	Model	MARK 1
S/N	01058E	RepRate	3K
Reject	OFF	Filter	HI
Damp	MIN.	Coax	12'
Freq.	2. MHZ.	Video	NORM

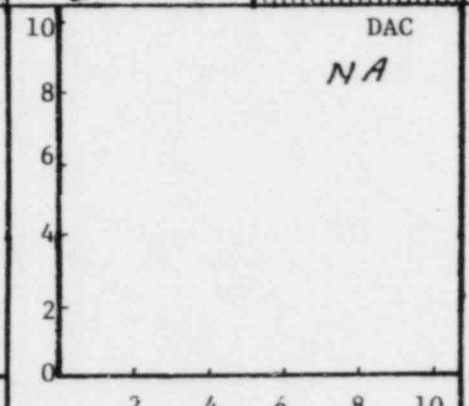
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/2 T	80%	4.0										
3/4 T	60%	6.0										
1 T	NA	8.2										
Ref. dB	34 db											

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
7:30	10:15	NA	NA	NA	NA







Additional Comments/Sketch

D. Payne ANII 8/25/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1 15	ZONE 15 R-2, F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI 2.3 R-0, F.C. 2	O.D.	Gary Longenecker II		8-20-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
HOT LEG. S.G. #1 TO R.V.	42" I.D.	BUTT	UT-4	SONOTRACE 40 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
15-003LB	NA	PAR	NA	NA	NA	PAR	SEE ATTACHED SHEET	CLEAN	GROUND	N.I.	SAT.	
15-004LA		YES				PAR	SEE ATTACHED SHEET	CLEAN	GROUND	N.I.	SAT.	
15-011		PAR				PAR	SEE ATTACHED SHEET	CLEAN	GROUND	N.I.	SAT.	
15-012LA		YES				YES		CLEAN	GROUND	N.I.	SAT.	
15-013LB		YES				YES		CLEAN	GROUND	N.I.	SAT.	
15-014		YES				YES		CLEAN	GROUND	N.I.	SAT.	

The Virginia Corp. of Richmond

DATE 8-20-82

TO

SUBJECT INSPECTION LIMITATIONS
ZONE 15 R-2, F.C. 2

WELD NO. 15-003LB 0° & BASE METAL SCAN'S WERE OBSTRUCTED BY 3 GOUGES.
1. IN Z DIRECTION FROM 40" TO 42" & FROM ℄ TO 1½" ON S SIDE.
2. IN Z DIRECTION FROM 10'-9" TO 10'-10" & FROM 3" TO 6" ON S SIDE.
3. IN Z DIRECTION FROM 10'-10¼" TO 11'-¼" & FROM 3" TO 6" ON S SIDE

WELD NO. 15-004LA 0° SCAN WAS OBSTRUCTED BY 1" INSTRUMENT CONNECTION. IN Z DIRECTION 7'-5" & ON ℄ OF WELD.

WELD NO. 15-011 BASE METAL SCAN WAS OBSTRUCTED BY 2 INSTRUMENT CONNECTIONS 1".
1. IN Z DIRECTION 21½" & 5" ON S SIDE.
2. IN Z DIRECTION 140" & 5" ON S SIDE.
0° & BASE SCANS WERE OBSTRUCTED BY 2 BRANCH CONNECTIONS ON S SIDE.
1. IN Z DIRECTION FROM 68" TO 95".
2. IN Z DIRECTION FROM 147" TO PAST DATUM 13"

SIGNED Gary Longenecker

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 2/3/82

Customer	Plant	Unit	Loop/Zone
L.P.&L.	Waterford	3	16

Procedure	Examiner/Level	Date
ISI-3.1 R.O F.C.1	Jamie B Slater II	2-3-82

Component/Piping System	ISO Drawing No.	VCR Site Supervisor
Pressurizer Surge Line	zone 16	Daniel Dunson

Material Batch Nos: Manufacturer Sherwin Type Dubl-Chek

Penetrant 47L-015 Developer 14B6 Remover 112 C4

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results Sat.	VT Results Unsat
16-005		✓		✓	
16-008		✓		✓	
16-009		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

D. Payne ANII 2-4-82

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	16

Procedure	Examiner/Level	Date
ISI-Z1, RO, FC2	Jamie R Slater II	2-4-82

Component/Piping System	ISO Drawing No.	VCR Site Supervisor
Pressurizer Surge Line	zone 16	Daniel Dans

Material Batch Nos. Manufacturer Sherwin Type Dye-Chek

Penetrant H7L-015 Developer 1HB6 Remover 112CH

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results Sat.	VT Results Unsat
16-001		✓		✓	
16-002		✓		✓	
16-004		✓		✓	
16-013		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

Don Payne ANII 2/8/82

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	1/16

Procedure	Examiner/Level	Date
ISI-31 RO, F.C. 2	Jamie R. Slater II / James M. Smith III	2-5-82

Component/Piping System	ISO Drawing No.	VCR Site Supervisor
Pressurizer Surge Line	zone 16	Daniel L. Jensen

Material Batch Nos.
Penetrant 47L-015 Manufacturer Sherwin Type Dubl-Chek
Developer 14B6 Remover 112CH

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results Sat.	VT Results Unsat
16-003		✓		✓	
16-010		✓		✓	
16-011		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

Don Payne ANII 2/5/82

Customer: LP&L	Plant: Waterford	Unit: 3	Loop/Zone: 1/16
Procedure: ISI-3.1 RO F.C.2	Examiner/Level: Jamie R Sliter II		Date: 2-682
Component/Piping System: Pressurizer Surge Line	QSO Drawing No.: Zone 16	VCR Site Supervisor: Daniel Dunn	
Material Batch Nos.	Manufacturer: Sherwin	Type: Dubl-Chek	
Penetrant: HTL-015	Developer: 1486	Remover: 112 CH	

Weld Number	Comments	PT Results NRI	PT Results RJ	VT Results Sat.	VT Results Unsat
16-006		✓		✓	
16-007		✓		✓	

Form PT-201 12/81

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

Don Payne ANII 2/9/82

Customer: L.P.&L.	Plant: Waterford	Unit: 3	Loop/Zone: 1/26
Procedure: ISI-3.1, RQ, FC2	Examiner/Level: Jamie A Slater II		Date: 2-8-82
Component/Piping System: Pressurizer Surge Line	ISO Drawing No.: Zone 16	VSR Site Supervisor: Daniel Jones	
Material Batch Nos. Penetrant: 476-015	Manufacturer: Sherwin Developer: 1486	Type: Dubl-Chek Remover: 1124	

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results Sat.	VT Results Unsat
16-014		✓		✓	
16-015		✓		✓	
16-016		✓		✓	
16-017		✓		✓	

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

Don Payne ANII 2/11/82

Customer	Plant	Unit	Loop/Zone
LP+L	Waterford	3	N/A/16

Procedure	Examiner/Level	Date
ISI-3.1 Rev.0 F.C.2	Michael V Blew II / Stephen L Morris I	2-10-82

Component/Piping System	ISO Drawing No.	VCR Site Supervisor
Pressurizer Surge Line	Zone 16 Rev.2 F.C.1	Daniel Dyson

Material Batch Nos. Manufacturer Sherwin ENG. Type Dubl-Chek

Penetrant 471015 Developer 1486 Remover 11264

Weld Number	Comments	PT Results NRI	PT Results RI	VT Results Sat.	VT Results Unsat
16-018		✓		✓	
16-019		✓		✓	

Form PT-201 12/81

The Virginia Corp. of Richmond

Liquid Penetrant Examination Report

W. R. Martin, ANII 9-20-82

Customer	Plant	Unit	Loop / Zone
L P & L	WATERFORD	3	NA 16

Procedure	Examiner/Level	Date
I.S.I. 3.1 R-0, FC 4	Gary Longenecker II	9-16-82

Component/Piping System	ISO Drawing No.	VCR Supervisor
PRESSURIZER SURGE LINE	ZONE 16 R-2, FC. 2	Daniel J Jensen

	Manufacturer	Type	Batch No.
Penetrant	SHERWIN	DUBL-CHEK	47L-015
Developer	SHERWIN	DUBL-CHEK	129-F6
Remover	SHERWIN	DUBL-CHEK	110-H4

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
16-013		✓		✓	
16-016		✓		✓	
	REEXAMINED DUE TO ℄ STAMP HAD BEEN REMOVED.				

Form PT-201

2/82

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for Dan Payne ANII 2/26/82

Thickness Measurement

1 of 6

Customer	Plant	Unit	Loop/Zone
LP&L / EBASCO	WATERFORD	3	16 RZ FC1

Component/Piping System	Examiner/Level	Date
SURGE LINE	R BURLINGAME / II	2-22-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
151-2.5 R.0	16 RZ FC1	Daniel F Jones	[✓] Yes [ ] No

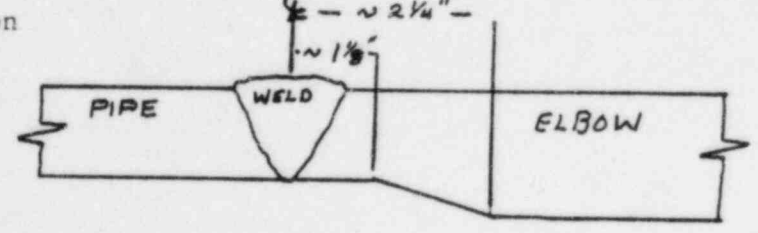
Equipment

Instrument		Transducer		Calibration
Mfgr.	SONIC	Mfgr. KRAUTKRAMER	Size ½" PC	Cal. Block UT-23
Model	ETS-MK I			Cal. Block UT-23
S/N	03704E	Freq. 2.25 mHz		Range Cal. 1.25 @ 8 DIV.
Reject	OFF			Calibration Checks
Damp.	MIN	Serial No. KB 2728		0730
Freq.	2.25 mHz.			1135
Rep. Rate	1000	Coax. Cable TWIN 6'		1300
Filter	OFF			1520
Video	NORM	Gain 76 db G		
Couplant	SONOTRACE 40 / 8117			

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
16-002	5-12	1.31"		16-002	2-12	> 1.5"	
	5-2	1.30"			2-2	1.50"	
	5-4	1.31"			2-4	> 1.5"	
	5-6	1.31"			2-6	> 1.5"	
	5-8	1.31"			2-8	> 1.5"	
	5-10	1.31"			2-10	> 1.5"	
	12	1.30"		16-003	5-12	> 1.5"	
	2	1.25"			5-2	1.50"	
	4	1.33"			5-4	> 1.5"	
	6	1.30"			5-6	> 1.5"	
	8	1.25"			5-8	> 1.5"	
	10	1.25"			5-10	1.50"	

Sketch/Identification



TYP. PIPE TO ELBOW INTERFACE.

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for Thickness Measurement

Dan Payne 2/26/82

Continuation Page 2 of 6

Customer	Plant	Unit	Loop/Zone
LP+L / EBASCO	WATERFORD	3	16 R2 FC1

Component/Piping System	Examiner/Level	Date
SURGE LINE	R BURLINGAME / II	2-22-82

Procedure	Iso/Drawing No.	VCR Supervisor
151-2.5 R.0.	16 R2 FC1	Daniel Dynan

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks
16-003	12	1.16"	
	2	1.16"	
	4	1.17"	
	6	1.19"	
	8	1.19"	
	10	1.19"	
	2-12	1.17"	
	2-2	1.17"	
	2-4	1.19"	
	2-6	1.19"	
	2-8	1.19"	
↓	2-10	1.20"	
16-004	5-12	1.19"	
	5-2	1.19"	
	5-4	1.16"	
	5-6	1.17"	
	5-8	1.16"	
	5-10	1.16"	
	12	1.22"	
↓	2	1.17"	

Weld Number	Meas. Point	Thick. Reading	Remarks
16-004	4	1.160"	
	6	1.19"	
	8	1.17"	
	10	1.19"	
	2-12	>1.5"	
	2-2	>1.5"	
	2-4	>1.5"	
	2-6	1.48"	
	2-8	1.47"	
↓	2-10	1.48"	
16-005	5-12	1.50"	
	5-2	>1.5"	
	5-4	>1.5"	
	5-6	1.48"	
	5-8	1.36"	
↓	5-10	1.45"	

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet
for Don Payne ANII 7/26/82
Thickness Measurement
Continuation Page 3 of 6

Customer	Plant	Unit	Loop/Zone
LP+L / EBASCO	WATERFORD	3	16 R2 FC1

Component/Piping System	Examiner/Level	Date
SURGE LINE	R BURLINGAME RII James T Burlingame	2-22-82

Procedure	Iso/Drawing No.	VCR Supervisor
151 2.5 R.0	16 R2 FC1	Donald F Jones

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
16-005	12	1.23"		16-007	4	1.20"	
	2	1.23"			6	1.25"	
	4	1.19"			8	1.23"	
	6	1.17"			10	1.23"	
	8	1.20"			2-12	1.25"	
	10	1.19"			2-2	1.22"	
	2-12	1.23"			2-4	1.28"	
	2-2	1.23"			2-6	1.23"	
	2-4	1.20"			2-8	1.23"	
	2-6	1.25"			2-10	1.25"	
	2-8	1.25"		16-008	5-12	1.23	
	2-10	1.25"			5-2	1.25	
16-007	5-12	> 1.5"			5-4	1.25	
	5-2	> 1.5"			5-6	1.25	
	5-4	> 1.5"			5-8	1.25	
	5-6	> 1.5"			5-10	1.22	
	5-8	> 1.5"					
	5-10	> 1.5"					
	12	1.81"					
	2	1.22"					

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for Dan Payne ANII 2/26/82
Thickness Measurement
Continuation Page 4 of 6

Customer	Plant	Unit	Loop/Zone
LP+L / EBASCO	WATERFORD	3	16R2 FC1

Component/Piping System	Examiner/Level	Date
SURGE LINE	RB R BURLINGAME / II	2-22-82

Procedure	Iso/Drawing No.	VCR Supervisor
151-2.5 R.0	16 R2 FC1	Daniel F Jensen

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
16-008	12	1.20"		16-009	4	1.28"	
	2	1.33"			6	1.22"	
	4	1.25"			8	1.20"	
	6	1.26"			10	1.18"	
	8	1.25"			2-12	1.25"	
	10	1.22"			2-2	1.25"	
	2-12	>1.5"			2-4	1.25"	
	2-2	1.45"			2-6	1.25"	
	2-4	1.46"			2-8	1.26"	
	2-6	>1.5"			2-10	1.25"	
	2-8	>1.5"		16-011	5-12	>1.5"	
	2-10	>1.5"			5-2	>1.5"	
16-009	5-12	1.50"			5-4	>1.5"	
	5-2	1.50"			5-6	1.48"	
	5-4	1.50"			5-8	>1.5"	
	5-6	1.50"			5-10	1.45"	
	5-8	>1.5"			X	~~1.34"~~ RB	
	5-10	1.50"			X		
	12	1.25"			X		
	2	1.25"			X		

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for Don Payne ANII 2/26/82

Thickness Measurement

Continuation Page 5 of 6

Customer	Plant	Unit	Loop/Zone
LP+L / EBASCO	WATERFORD	3	16RZFC1

Component/Piping System	Examiner/Level	Date
SURGE LINE	R BURLINGAME / II	2-22-82

Procedure	Iso/Drawing No.	VCR Supervisor
151-2.5 R.0	16RZFC1	Daniel L Jones

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
16-011	12	1.34"		16-014	4	1.28"	
	2	1.32"			6	1.34"	
	4	1.25"			8	1.25"	
	6	1.28"			10	1.26"	
	8	1.25"			2-12	1.23"	
	10	1.28"			2-2	1.25"	
	2-12	1.28"			2-4	1.20"	
	2-2	1.26"			2-6	1.22"	
	2-4	1.26"			2-8	1.23"	
	2-6	1.28"			2-10	1.17"	
	2-8	1.25"		16-015	5-12	1.48"	
	2-10	1.26"			5-2	1.46"	
16-014	5-12	1.25"			5-4	>1.5"	
	5-2	1.25"			5-6	>1.5"	
	5-4	1.25"			5-8	>1.5"	
	5-6	1.26			5-10	1.46"	
	5-8	1.25"					
	5-10	1.23					
	12	1.31					
	2	1.25					

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for D. Payne ANII 2/26/82

Thickness Measurement

Continuation Page 6 of 6

Customer	Plant	Unit	Loop/Zone
LP+L / EBASCO	WATERFORD	3	16 R2 FC1

Component/Piping System	Examiner/Level	Date
SURGE LINE	R BURLINGAME / II	2-22-82

Procedure	Iso/Drawing No.	VCP Supervisor
151-2.5 R.0	16 R2 FC1	Daniel F Jensen

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
16-015	12	1.25"			4		
	2	1.31"			6		
	4	1.23"			8		
	6	1.25"			10		
	8	1.23"			2-12		
	10	1.22"			2-2		
	2-12	1.25"			2-4		
	2-2	1.23"			2-6		
	2-4	1.25"			2-8		
	2-6	1.25"			2-10		
	2-8	1.25"			5-12		
	2-10	1.22"			5-2		
	5-12				5-4		
	5-2				5-6		
	5-4				5-8		
	5-6				5-10		
	5-8						
	5-10						
	12						
	2						

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Examination Report

Dan Payne ANII 2/26/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
L P+L	WATERFORD	3	16	16 R2 FC1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.7 Rev 0	O.D.	R BURLINGAME II	Daniel Payne	2-22-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type / Batch No
SURGE LINE	12 3/4"	BUTT	UT-23	SONOTRACE 40 / 8117

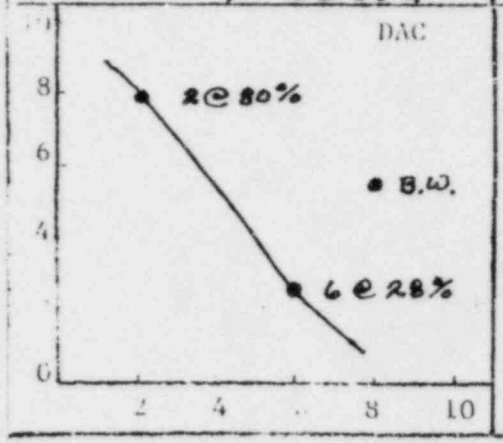
Continuation Sheet Attached: ✓ Yes ___ No

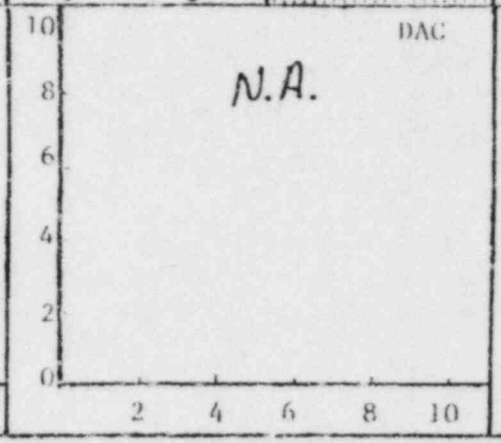
Field Changes: ___ Yes ✓ No If Yes, number NA

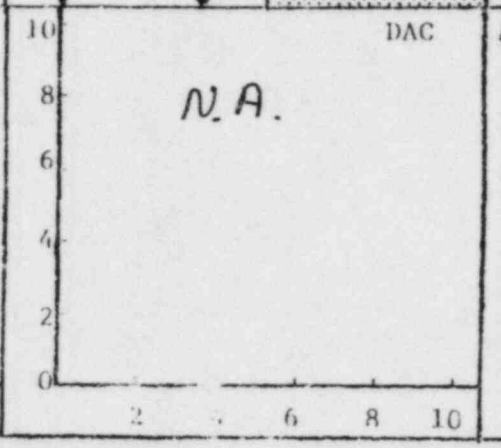
Transducer	0°	45°	60°
S/N	KB 8728	NA	NA
Size	1/2"		
Frequency	2.25		
Beam Angle	0		

Instrument			
Mfgr.	SONIC	Model	ETS MK1
S/N	03704E	RepRate	1000
Reject	OFF	Filter	OFF
Damp	MIN	Coax	6'
Freq.	2.25	Video	NORM

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
					Sound Entry Point To:					Sound Entry Point To:			0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC		Signal Amp.	Sweep	Scribe Line	50% DAC		In	Out	In	Out	In	Out
													0730	1135	NA	NA	NA	NA
1/4 T	80%	2	NA	NA	N.A.	NA	NA	N.A.	N.A.	N.A.	N.A.	NA	1300	1520				
1/2 T	—	—																
3/4 T	28%	6																
BACK WALL	55%	8																
Ref. dB	66 dbG																	







Additional Comments/Sketch

Don Payne ANII 3/9/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	16	16 - REV-2 FC 1

Procedure	Exam Surface	Examiner/Level	VCB Supervisor	Date
ISI- 2.7 RO	OD	BURLINGAME / II	Daniel [signature]	2-22-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
SURGE LINE	12 3/4"	BUTT	UT-23	SONOTRACE 40/ 8117

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
16-001		YES				YES		CLEAN	BUFFED	NI	NI	
16-002		YES				YES		CLEAN	GROUND	NI	NI	
16-003		YES				YES		CLEAN	GROUND	NI	NI	
16-004		YES				YES		CLEAN	GROUND	NI	NI	
16-005		YES				YES		CLEAN	GROUND	NI	NI	
16-006		YES				YES		CLEAN	BUFFED	NI	NI	
16-007		YES				YES		CLEAN	GROUND	NI	NI	
16-008		YES				YES		CLEAN	GROUND	NI	NI	
16-009		YES				YES		CLEAN	GROUND	NI	NI	
16-010		YES				YES		CLEAN	GROUND	NI	NI	
16-011		YES				YES		CLEAN	GROUND	RI	NI	SEE INDICATION SHEET
16-013		YES				YES		CLEAN	BUFFED	NI	NI	
16-014		YES				YES		CLEAN	GROUND	NI	NI	
16-015		YES				YES		CLEAN	GROUND	NI	NI	
16-016		YES				YES		CLEAN	BUFFED	NI	NI	
16-017		YES				YES		CLEAN	BUFFED	NI	NI	

Don Payne ANII 3/9/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report — Indication Record

Customer	Plant	Unit	Loop / ZONE
LP&L	WATERFORD	3	16-R2-FC1

Procedure	Examiner/Level	VCR Supervisor	Date
UT-151-2.7 RO WRAM DDJ	R Burlingame II	Daniel Johnson	2-22-82

Component/Piping System	ISO Drawing No.	Cal. Standard No./Thickness
SURGE LINE	16-REV 2-FC1	UT-23 1.25"/1.5"

Weld No.	Ind No.	Max.% DAC	Indication Length From	Indication Length To	Minimum Depth S.U. Pos.	Minimum Depth Sweep Reading	Maximum Depth S.U. Pos.	Maximum Depth Sweep Reading	Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
16-011	1	50%	SPOT	℄	℄	2.5	℄	2.5	0°	NA	1.25"	1.28"	1.45"	ALL REFLECTORS
16-011	2	50%	SPOT	℄	℄	1.6	℄	1.6	0°	NA	1.25"	1.28"	1.45"	~5½" FROM
16-011	3	25%	SPOT	℄	℄	3.6	℄	3.6	0°	NA	1.25"	1.28"	1.45"	TOP CENTER
														CC.D.

N. R. Martin, ANII 12-17-82

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1/16	ZONE 16 REV 2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.7 R.0 F.C.3	O.D.	BURLINGAME II	Kenneth Whit	6-17-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: SONOTRACE
SURGE LINE	12"	BUTT	UT-23	Type 90 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number 3

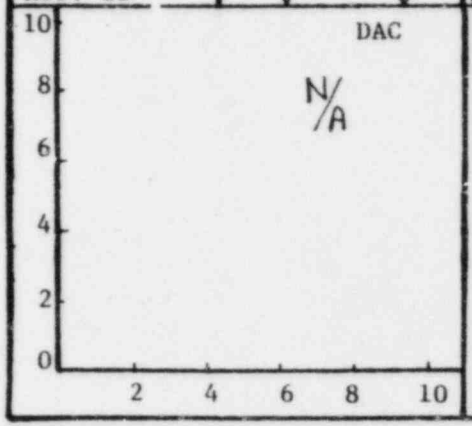
Transducer	0°	45°	60°
S/N	N/A	G07152	N/A
Size		1/2"	
Frequency		2.25 MHz	
Beam Angle		43° RL	

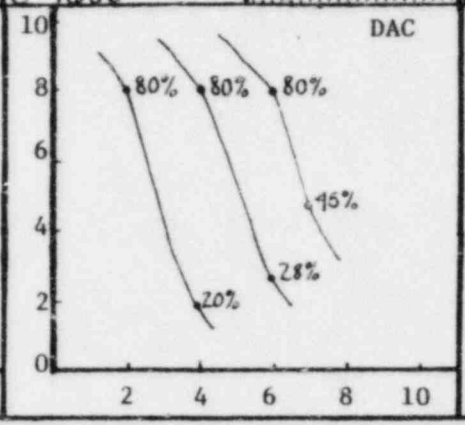
Instrument			
Mfgr.	SONIC	Model	FTS MARK I
S/N	01610E	RepRate	3000
Reject	OFF	Filter	Hi
Damp	4.5	Coax	12'
Freq.	2 MHz	Video	NORMAL

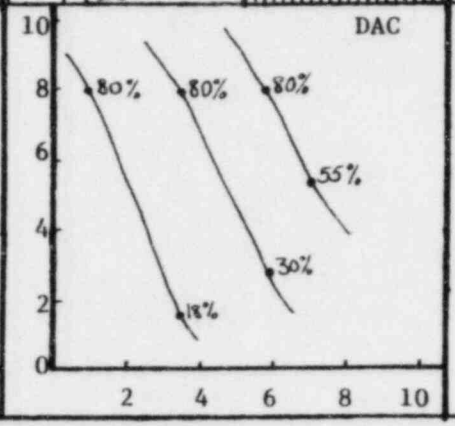
Calibration 0°			2 & 5 Scan					7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC		Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC	
1/4T A	N/A	N/A	80%	2	N/A	N/A	N/A	80%	1.2	N/A	N/A	N/A
1/2T ↓			20%	4				18%	3.6			
1/2T B			80%	4				80%	3.6			
3/4T ↓			28%	6				30%	6.0			
3/4T C			80%	6				80%	6.0			
7/8T ↓			45%	7				55%	7.2			
			A=60db B=69db C=76db					A=57db B=71db C=79db				
Ref. dB												

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
N/A	N/A	8:30	11:15	N/A	N/A







Additional Comments/Sketch

Form UT-101

2/82

W.R. Martin, ANII 12-17-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1/16	ZONE 16 REV. 2 F.C.1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-27 R.0 F.C.3	O.D.	BURLINGAME II	Kevin White	6-17-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
PRESSURIZER SURGE LINE	12"	BUTT	UT-23	SONOTRACE 40 # 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
16-001		N/A	PAR	PAR	PAR	N/A	(1)	CLEAN	GROUND	NI(2)	SAT	
16-002			PAR	PAR	PAR		(1)	CLEAN	GROUND	NI(2)	SAT	(3)
16-004			YES	YES	YES			CLEAN	GROUND	NI(2)	SAT	(3)
16-007			PAR	PAR	PAR		(1)	CLEAN	GROUND	NI(2)	SAT	(3)
16-008			PAR	PAR	PAR		(1)	CLEAN	GROUND	NI(2)	SAT	(3)
16-009			YES	YES	YES			CLEAN	GROUND	NI(2)	SAT	(3)
16-013			YES	YES	YES			CLEAN	GROUND	NI(2)	SAT	
16-014			YES	YES	YES			CLEAN	GROUND	NI(2)	SAT	(3)
16-015			YES	YES	YES			CLEAN	GROUND	NI(2)	SAT	(3)

(1) SEE ATTACHMENT

(2) DUE TO THE PRESENTS OF LARGE GEOMETRIC REFLECTORS AT THE WELD ROOT, THE CONDITION OF THE WELD IN THIS AREA CAN NOT BE RESOLVED WITH THE TECHNIQUE USED FOR THE EXAM'S.

SEE MEMO ON TOPIC.

(3) SEE ATTACHMENT

The Virginia Corp. of Richmond

Date 6-17-82

Page 3 of 4

To: _____

Subject EXAMINATIONS LIMITATIONS. ZONE 16.

16-001 SHRINKAGE AT TOE OF WELDMENT & WELD CROWN. ALL SCANS AFFECTED. GOOD ROOT AREA COVERAGE WAS OBTAINED.

16-002 SCAN 5 SIDE. SHRINKAGE AT INTERDOS. OF ELBOW. GOOD ROOT AREA COVERAGE WAS OBTAINED.

16-007 OD MISMATCH GOOD ROOT AREA COVERAGE WAS OBTAINED

16-008 OD MISMATCH GOOD ROOT AREA COVERAGE WAS OBTAINED.

Signed _____

The Virginia Corp. of Richmond

Date 6-17-82

Page 4 of 4

To:

Subject GEOMETRIC INDICATIONS

WELD NO'S
16-002
16-004
16-007
16-008
16-009
16-013
16-014

LARGE GEOMETRIC REFLECTORS WERE OBSERVED AT THE ROOT OF THE WELDS, WITH AMPLITUDES RANGING FROM 50% OF DAC TO AS HIGH AS 400% OF DAC. THERE IS A SINGLE REFLECTOR IN EACH WELD FOR 360° WITH FLUCTUATING AMPLITUDES. OTHER REFLECTORS COULD BE PRESENT, BECAUSE OF THE ONE MAJOR REFLECTOR FROM THE GEOMETRIC ROOT CONDITION, OTHER REFLECTORS COULD BE MISSED.

Signed

W.R. Martin, ANEE 12-17-82

Ultrasonic Examination Report

The Virginia Corp. of Richmond

Customer: LP&L	Plant: WATERFORD	Unit: 3	Loop/Zone: 16	Iso/Drawing No.: ZONE 16 REV. 2 F.C. 1	
Procedure: ISI-2.7 R.0 F.C.3	Exam Surface: O.D.	Examiner/Level: BURLINGAME II	VCR Supervisor: Ken Whit	Date: 6-19-82	
Component/Piping System: PRESSURIZER SURGE LINE	Pipe Size: 12"	Weld Type: BUTT	Cal. Block #: UT-23	Couplant: SONOTRACE Type 40 Batch No. 8124	

Continuation Sheet Attached: ✓ Yes ____ No

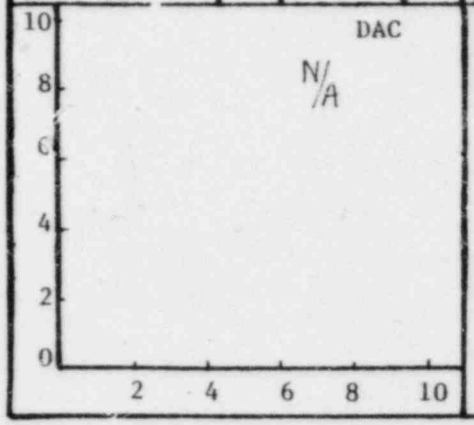
Field Changes: Yes ✓ No ____ If Yes, Number F.C. 3

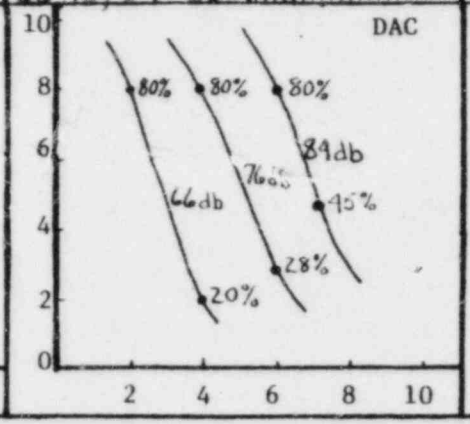
Transducer	0°	45°	60°
S/N	N/A	G07152	N/A
Size		1/2"	
Frequency		2.25 MHz	
Beam Angle	↓	43°	↓

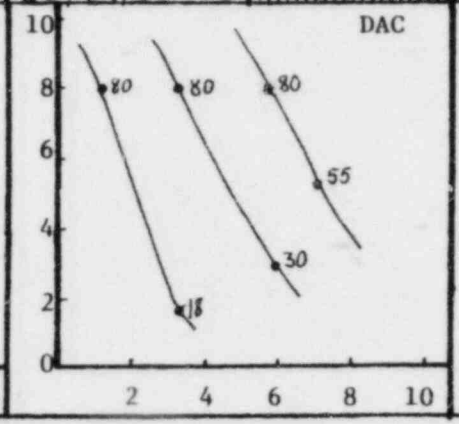
Instrument

Mfgr.	SONIC	Model	FTS MKI
S/N	780836	RepRate	3000
Reject	1.5	Filter	Hi
Damp	4.0	Coax	6'
Freq.	2 MHz	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
					Sound Entry Point To:				Sound Entry Point To:		0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC	Signal Amp.	Sweep	Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4	N/A	N/A	80%	2.0	N/A	N/A	80%	1.2	N/A	N/A	N/A	N/A	11:00	12:35	N/A	N/A
1/2			20%	4.0			18%	3.6								
1/2			80%	4.0			80%	3.6								
3/4			28%	6.0			30%	6.0								
3/4			80%	6.0			80%	6.0								
7/8			45%	7.0			55%	7.2								
Ref. dB			66 76 84 db				63 79 83 db									







Additional Comments/Sketch

Form UT-101

2/82

W.R. Martin, ANII 12-17-82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	WATERFORD	3	1 / 16	ZONE 16 REV. 2 F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.7 R.0 F.C.3	O.D.	BURLINGAME II		6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
PRESSURIZER SURGE LINE	12"	BUTT	UT-23	SONOTRACE 40 #8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
16-003		N/A	PAR	PAR	PAR	N/A	(1)	CLEAN	GROUND	NI (2)	SAT	(3)
16-005			YES	YES	YES			CLEAN	GROUND	NI (2)	SAT	(3)
16-006			PAR	PAR	PAR		(1)	CLEAN	GROUND	NI (2)	SAT	(3)
16-010			YES	YES	YES			CLEAN	GROUND	NI (2)	SAT	(3)
16-011			PAR	PAR	PAR		(1)	CLEAN	GROUND	NI (2)	SAT	(3)
16-016			PAR	PAR	PAR		(1)	CLEAN	GROUND	NI (2)	SAT	(3)
												(3) SEE ATTACHMENT

(1) SEE ATTACHMENT

(2) DUE TO THE PRESANTS OF LARGE GEOMETRIC REFLECTORS AT THE WELD ROOT, THE CONDITION OF THE WELD IN THIS AREA CAN NOT BE RESOLVED WITH THE TECHNIQUE USED FOR THE EXAMS.

SEE MEMO ON TOPIC.

The Virginia Corp. of Richmond

Date 6-19-82

Page 3 of 4

To: _____

Subject EXAMINATION LIMITATIONS

16-003 O.D. MISMATCH AT EXTRADOSE OF ELBOW
GOOD ROOT AREA COVERAGE WAS OBTAINED

16-006 O.D. MISMATCH AT EXTRADOSE OF ELBOW
GOOD ROOT AREA COVERAGE WAS OBTAINED

16-011 O.D. SHRINKAGE AT TOE OF WELD TYP.
360°, SCANS 2 & 5
GOOD ROOT AREA COVERAGE WAS OBTAINED

16-016 O.D. SHRINKAGE AT TOE OF WELD TYP.
360°, SCAN 2 SIDE
GOOD ROOT AREA COVERAGE WAS OBTAINED

Signed GB

The Virginia Corp. of Richmond

Date 6-19-82

Page 4 of 4

To:

Subject INDICATIONS (WELD BACKING RINGS)

16-003 SCAN 2, ROOT GEOMETRIC REFLECTOR. FROM 0 TO 120° & 210° TO 360° 300% TO 400% DAC.

16-005 SCAN 5, ROOT GEOMETRIC REFLECTOR 50% TO 250% DAC. TYP. 360%.

16-006 SCAN 2 ROOT GEOMETRIC REFLECTOR 100% TO 300% DAC. TYP. 360%

16-010 SCAN 2 ROOT GEOMETRIC REFLECTOR INTERMITANT TO 140% DAC TYP. 360%

16-011 SCAN 2 ROOT GEOMETRIC REFLECTOR INTERMITANT TO 200% DAC TYP. 360%

16-016 SCAN 5, 180° FROM DATUM, 5" LONG TRANSDUCER INDEX AT CENTER LINE OF WELD. 200% DAC.

Signed

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/24/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	-/16	Zone 16, Rev 2, FC 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
1S1-2.8 Rev 1, F.C. 1	O.D.	BURNGAME II	[signature]	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Sonotrace
Pressurizer Surge Line	12"	Butt	UT-16	Type 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

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

Transducer	0°	45° RL	60°
S/N	NA	G07152	NA
Size	↓	½"	↓
Frequency	↓	2.25 MHz	↓
Beam Angle	↓	45°	↓

Instrument			
Mfgr.	Sonic	Model	ETS Mark 1
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min.	Coax	6'
Freq.	2 MHz	Video	Norm

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
¼	NA	NA
½	↓	↓
¾	↓	↓
Ref. dB	↓	↓

2 & 5 Scan

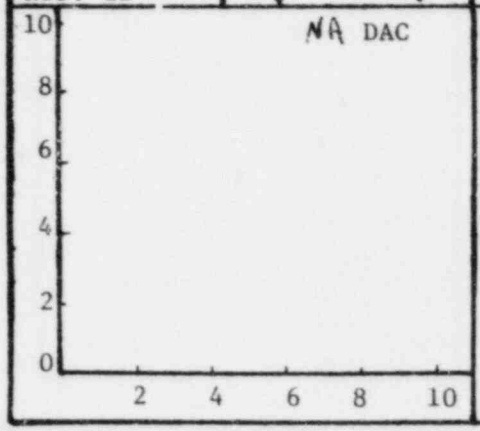
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	2.0		
70%	4.0		
20%	6.0		
60 db			

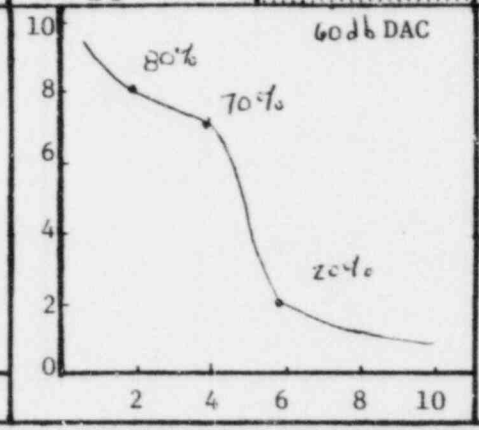
7 & 8 Scan

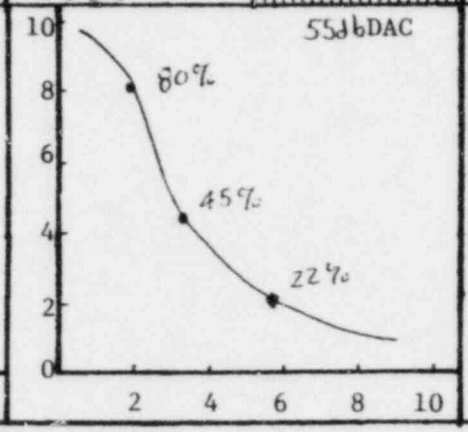
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
80%	1.8		
45%	3.8		
22%	5.8		
55 db			

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
NA	NA	830	1000	NA	NA
↓	↓			↓	↓







Additional Comments/Sketch
Carbon Steel

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/24/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	Waterford	3	-116	Zone 16, Rev2, FC1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8, Rev1, F.C.1	O.D.	BURLINGAME II	Daniel E. Jensen	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Sonotrace
Pressurizer Surge Line	12"	Butt	UT-116	Type 40 Batch No. 8124

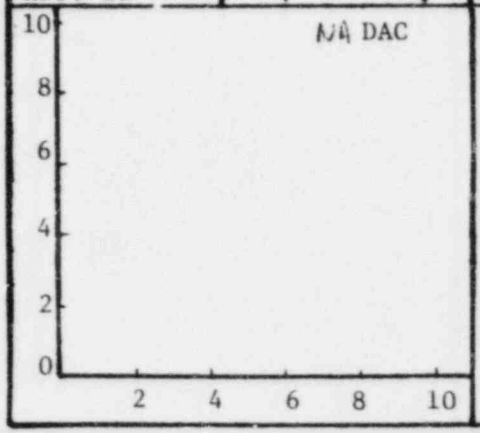
Continuation Sheet Attached: ✓ Yes ___ No

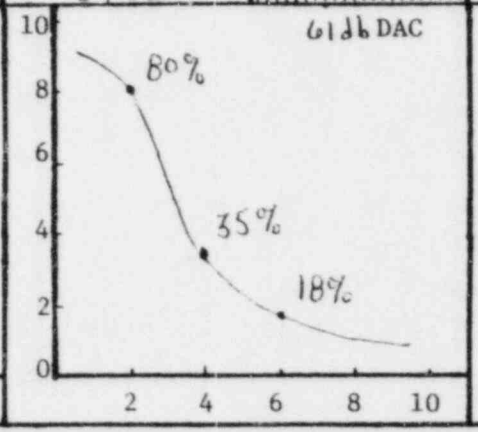
Field Changes: Yes ✓ No ___ If Yes, Number FC1

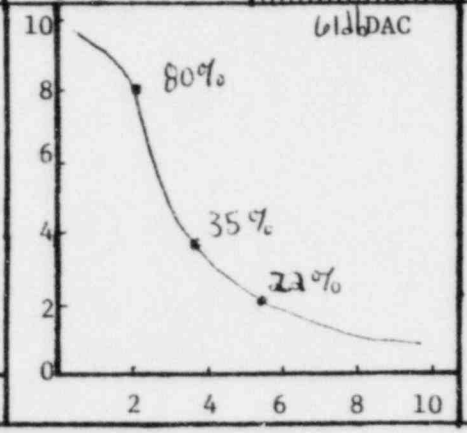
Transducer	0°	45° RL	60°
S/N	NA	GD7152	NA
Size		½"	
Frequency		2.25 MHz	
Beam Angle	↓	43°	↓

Instrument			
Mfgr.	Sonic	Model	ETS Mk 1
S/N	780836	RepRate	3000
Reject	1	Filter	Hi
Damp	Min	Coax	Co
Freq.	2 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
					Sound Entry Point To:				Sound Entry Point To:		0°		45°		60°	
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Scribe Line	50% DAC	Signal Amp.	Sweep	Scribe Line	50% DAC	In	Out	In	Out	In	Out
											NA	NA	0830	1000	NA	NA
¼	NA	NA	80%	2.0			80%	1.8								
½			35%	4.0			35%	3.8								
¾			18%	6.0			23%	5.6								
Ref. dB	↓	↓	61 db				61 db				↓	↓			↓	↓







Additional Comments/Sketch
Austenitic

Form UT-101

2/82

D. Payne ANII 6/24/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet Page of

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
LP&L	Waterford	3	- /16	Zone 16, Rev 2, F.C. 1

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI-2.8, Rev 1, FC 1	O.D.	BURLINGAME II	[signature]	6-19-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Pressurizer Surge Line	12"	BuH	UT-16	Sonotrace 40, Batch 8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
16-	017	NA	PAR	PAR	YES	NA	A SMALL AMOUNT OF SHRINKAGE TYP. 360° AT TOE OF WELD. GOOD ROOT AREA COVERAGE WAS OBTAINED.	CLEAN	GROUND	NI	SAT	

Form UT-101a 2/82

The Virginia Corp. of Richmond

D. Payne ANII 7/12/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP&L	Waterford	3	N/A / 16

Component/Piping System	Examiner/Level	Date
Pressurizer Surge Line	Gary Longuemare II	7-8-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
ISI 2.5, Rev. 0	Zone 16, Rev. 2 E.C. 2	Daniel Jensen	[X] Yes [ ] No

Equipment

Instrument	Transducer		Calibration
Mfgr. Sonic	Mfgr. K-B AEROTECH	Size .50"	Cal. Block UT-23
Model FTS Mark I			Cal. Block N/A
S/N 05473E	Freq. 1 Mhz		Range Cal. 7 div. = 1.51"
Reject off			Calibration Checks
Damp. Min	Serial No. M15838		
Freq. 1 Mhz			IN - 2:00 PM
Rep. Rate 3K	Coax. Cable 6' ea.		OUT - 3:15 PM
Filter Hi ea.			
Video Norm	Gain 62 dB		
Couplant Sonotrace 40, B. # 8124 ea.			

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
16-001	12	1.251"	1.230"	1.294"	16-010	12	1.208"	1.424"	1.186"
	2	1.122"	1.230"	1.316"		2	1.424"	1.553"	1.186"
	4	1.014"	1.186"	1.294"		4	1.208"	1.510"	1.208"
	6	1.079"	1.278"	1.278"		6	1.208"	1.402"	1.186"
	8	1.079"	1.208"	1.294"		8	1.208"	1.467"	1.208"
↓	10	1.122"	1.208"	1.294"	↓	10	1.165"	1.381"	1.165"
16-006	12	1.251"	1.424"	1.165"	16-013	12	1.186"	1.165"	1.186"
	2	1.251"	1.402"	1.208"		2	1.186"	1.186"	1.208"
	4	1.186"	1.359"	1.186"		4	1.186"	1.208"	1.165"
	6	1.143"	1.424"	1.165"		6	1.186"	1.186"	1.186"
	8	1.165"	1.596"	1.186"		8	1.186"	1.186"	1.186"
↓	10	1.230"	1.639"	1.208"	↓	10	1.186"	1.186"	1.186"

Sketch/Identification

The Virginia Corp. of Richmond

Ultrasonic Data Sheet for Thickness Measurement

D. Payne ANII 7/12/82

Continuation Page 2 of 2

Customer	Plant	Unit	Loop/Zone
LP & L	Waterford	3	N/A / 16

Component/Piping System	Examiner/Level	Date
Pressurizer Surge Line	Gary Longenecker II	7-8-82

Procedure	Iso/Drawing No.	VCR Supervisor
ISI 2.5, Rev. 0	Zone 16, Rev. 2, Fc. 2	Daniel Jenn[illegible]

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
16-016	12	1.208"	1.424"	1.186"	N/A	N/A	N/A	N/A	N/A
	2	1.186"	1.424"	1.165"					
	4	1.186"	1.424"	1.122"					
	6	1.251"	1.445"	1.143"					
	8	1.251"	1.424"	1.143"					
	10	1.251"	1.424"	1.143"					

Sketch/Identification

Form UT-105a 2/82

The Virginia Corp. of Richmond

D. Payne ANII 7/12/82

Ultrasonic Data Sheet for Thickness Measurement

Customer: LP & L	Plant: WATERFORD	Unit: 3	Loop/Zone: NA 16
Component/Piping System: PRESSURIZER SURGE LINE	Examiner/Level: Gary Longenecker II		Date: 7-8-82
Procedure: I.S.I. 2.5 R-0	Iso/Drawing No.: ZONE 16 R-2, F.C.2	VCR Supervisor: [signature]	Continuation Sheet Attached: [ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration
Mfgr.	SONIC	Mfgr. K-B AEROTECH	Size .5" DIA.	Cal. Block UT-16
Model	MARK I			Cal. Block
S/N	05473E	Freq. 2.25 MHZ.		Range Cal. 1.075" @ 60
Reject	OFF			Calibration Checks
Damp.	MIN.	Serial No. KB 2728		
Freq.	2 MHZ.			CAL. IN 16:40
Rep. Rate	3K	Coax. Cable 6'		CAL. OUT 17:05
Filter	HI			
Video	NORM	Gain 68 db		
Couplant	SONOTRACE 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
16-017	12	1.595	NA	1.469	NA	NA	NA	NA	NA
16-017	2	1.577		1.451					
16-017	4	1.591		1.433					
16-017	6	1.541		1.451					
16-017	8	1.577		1.433					
16-017	10	1.613		1.433					
			↓		↓	↓	↓	↓	↓

Sketch/Identification

CAST S.S. SIDE & WELD

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne, ANII 7/13/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP & L	WATERFORD	3	NA 16	ZONE 16 R-2, F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI. 2.8 RO, F.C. 1	O.D.	Gary Longenecker II	Dana Byrd	7-8-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant: Type SONOTRACE 30 Batch No. 8124
PRESSURIZER SURGE LINE	12"	BUTT	UT-16	

Continuation Sheet Attached: ✓ Yes ___ No

Field Changes: Yes ✓ No ___ If Yes, Number 1

Transducer	0°	45°	60°
S/N	KB2728	NA	NA
Size	.5" DIA	↓	↓
Frequency	2.25 MHz	↓	↓
Beam Angle	0°	↓	↓

Instrument			
Mfgr.	SONIC	Model	MARK I
S/N	05473E	RepRate	3K
Reject	OFF	Filter	HI
Damp	MIN.	Coax	6'
Freq.	2. MHz.	Video	NORM

Calibration 0°

Calibration Reflector Location	Signal Amp.	Sweep
1/4 T	80%	1.2
1/2 T	40%	3.4
3/4 T	30%	4.1
1 T	NA	6.0
Ref. dB	68 db	

2 & 5 Scan

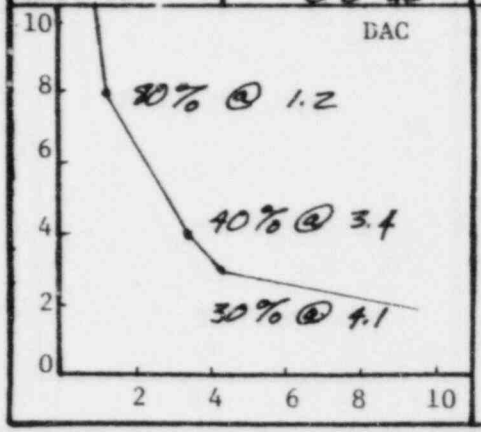
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
NA	NA	NA	NA NA

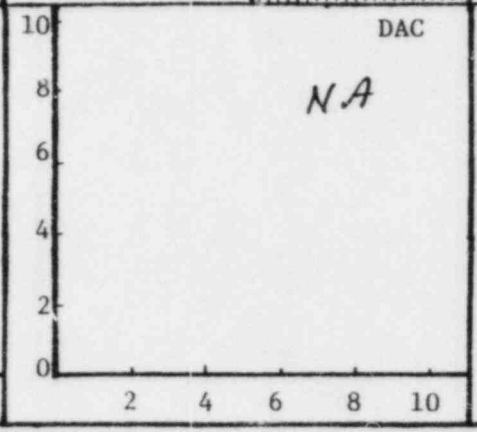
7 & 8 Scan

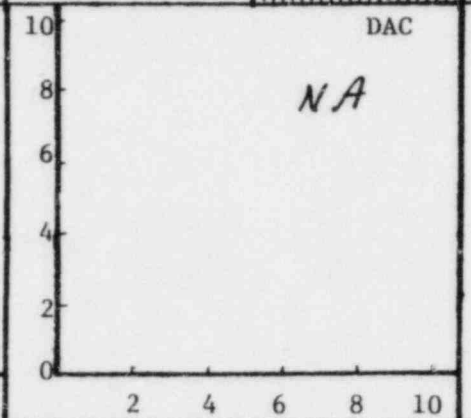
Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	50% DAC
NA	NA	NA	NA NA

Calibration Checks

0° In	0° Out	45° In	45° Out	60° In	60° Out
16:40	17:05	NA	NA	NA	NA







Additional Comments/Sketch

CAST S.S SIDE & WELD

D. Payne ANII 7/12/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer	Plant	Unit	Loop/ Zone	Iso/Drawing No.
L P & L	WATERFORD	3	NA 16	ZONE 16 R-2, FC2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
I.S.I. 2.8 R-0, F.C.1	O.D.	Gary Longenecker II	Ronald Lyons	7-8-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
PRESSURIZER SURGE LINE	12"	BUTT	UT-16	SONOTRACE 40 #8124

Weld No.		Base Metal Scan	Scan Direction 2	5	7 & 8	0	Inspection Limitations	Surface Condition Base Metal	Weld	Examination Results UT	Visual	Remarks
16-017	NA	PAR	NA	NA	NA	PAR	*	SMOOTH	GROUND	NI	SAT.	NA

* BASE METAL WAS PERFORMED ON 5 SIDE ONLY (CAST S.S.), THERE WAS APPROX. 10% LOSS OF CONTACT WITH THE SURFACE DUE TO O.D. WELD GEO. OF WELD 16-016
0° SCAN HAD APPROX. 10% LOSS OF CONTACT WITH THE SURFACE DUE TO O.D. WELD GEO. OF WELD 16-017

The Virginia Corp. of Richmond

D. Payne ANII 7/12/82

Ultrasonic Data Sheet for Thickness Measurement

Customer	Plant	Unit	Loop/Zone
LP & L	WATERFORD	3	NA 16

Component/Piping System	Examiner/Level	Date
PRESSURIZER SURGE LINE	Gary Longenecker II	7-9-82

Procedure	Iso/Drawing No.	VCR Supervisor	Continuation Sheet Attached
I.S.I. 2.5 R-0	ZONE 16 R-2, FC2	[signature]	[ ] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr. K-B AEROTECH	Size .5" DIA.	Cal. Block	UT-16
Model	MARK I			Cal. Block	
S/N	05473E	Freq.	2.25 MHZ.	Range Cal.	1.075" @ 60
Reject	OFF			Calibration Checks	
Damp.	MIN.	Serial No.	KB2728		
Freq.	2 MHZ.			CAL. IN	8:10
Rep. Rate	3K	Coax. Cable	6'	CAL. OUT	8:30
Filter	HI				
Video	NORM	Gain	62 db		
Couplant	SONOTRACE 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
16-017	12	NA	1.398	NA	NA	NA	NA	NA	NA
16-017	2		1.415						
16-017	4		1.415						
16-017	6		1.451						
16-017	8		1.415						
16-017	10		1.398						
		↓		↓	↓	↓	↓	↓	↓

Sketch/Identification

CARBON STEEL SIDE ONLY

The Virginia Corp. of Richmond

Ultrasonic Examination Report

D. Payne ANII 7/12/82

Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LP&L	WATERFORD	3	NA 16	ZONE 16 R-2, F.C. 2

Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
ISI. 2.8 ~~R-0~~ R-1 G.L., F.C.1	O.D.	Gary Longenecker II	Daniel R. Jimo	7-9-82

Component/Piping System	Pipe Size	Weld Type	Cal. Block #	Couplant:
PRESSURIZER SURGE LINE	12"	BUTT	UT-16	Type SONOTRACE 40 Batch No. 8124

Continuation Sheet Attached: ✓ Yes ___ No

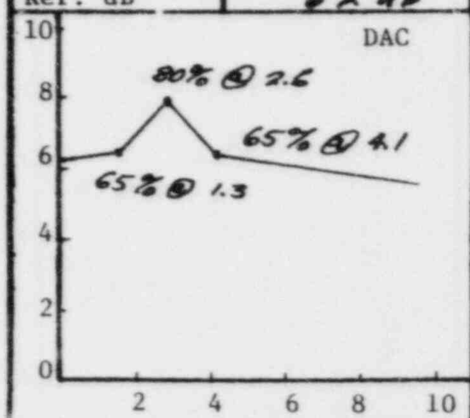
Field Changes: Yes ✓ No ___
If Yes, Number 1

Transducer	0°	45°	60°
S/N	KB2728	NA	NA
Size	.5" DIA.		
Frequency	2.25 MHZ		
Beam Angle	0°		

Instrument			
Mfgr.	SONIC	Model	MARK 1
S/N	05473E	RepRate	3K
Reject	OFF	Filter	HI
Damp	MIN.	Coax	6'
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: Scribe Line	Sound Entry Point To: 50% DAC	Signal Amp.	Sweep	Sound Entry Point To: Scribe Line	Sound Entry Point To: 50% DAC
1/4 T	65%	1.3	NA	NA	NA	NA NA	NA	NA	NA	NA NA
1/2 T	80%	2.6								
3/4 T	65%	4.1								
1 T	NA	6.0								
Ref. dB	62 db									

Calibration Checks					
0° In	0° Out	45° In	45° Out	60° In	60° Out
8:10	8:30	NA	NA	NA	NA



DAC (2 & 5 Scan): NA

DAC (7 & 8 Scan): NA

Additional Comments/Sketch

CARBON SIDE ONLY

Form UT-101

2/82

D. Payne ANII 7/12/82

The Virginia Corp. of Richmond

Ultrasonic Examination Report - Continuation Sheet

Customer: LP&L	Plant: WATERFORD	Unit: 3	Loop/Zone: NA 16	Iso/Drawing No.: ZONE 16 R-2, F.C. 2	
Procedure: I.S.I. 2.8 R-1 R0 (crossed out), F.C.1 &L.	Exam Surface: O.D.	Examiner/Level: Gary Longenecker II	VCR Supervisor: Daniel Dyer	Date: 7-9-82	
Component/Piping System: PRESSURIZER SURGE LINE	Pipe Size: 12"	Weld Type: BUTT	Cal. Block: UT-16	Couplant: Type & Batch #: SONOTRACE 40 8124	

Weld No.		Base Metal Scan	Scan Direction 2	Scan Direction 5	Scan Direction 7 & 8	Scan Direction 0	Inspection Limitations	Surface Condition Base Metal	Surface Condition Weld	Examination Results UT	Examination Results Visual	Remarks
16-017	NA	YES	NA	NA	NA	YES	NA	SMOOTH	GROUND	NI	SAT	*

* EXAMINED CARBON STEEL (5 SIDE ONLY)

Form UT-101a

2/82