

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

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

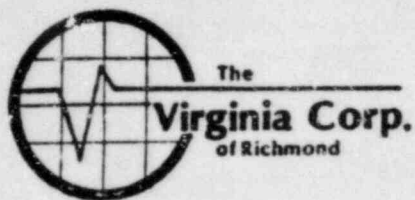
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The
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TITLE

Preservice Examination Data



Magnetic Particle
M.R. Martin, ANII 9-10-82
Examination Report

Customer LP+L		Plant Waterford		Unit 3	Loop/Zone NA / 1
Procedure ISI-4.2 Rev D FC-0		Examiner/Level Way A Lytton II		VOR Supervisor Daniel Jensen	Date 8-27-82
Component/Piping System Reactor Pressure Vessel			ISO Drawing No. Zone 1 Rev 2 FC-1	Surface Condition Clean	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent		Manufacturer Magnaflex Corp.	Type 14AM	Batch Number # 80E077	
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC		Machine Mfr. Franspect Corp.	Type/Model MH-6000	Serial No. # 811077	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 1700 Amps. 3 No. Turns	Prods NA NA Amps.	Spacing NA	Yoke *	Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-S-1		✓		✓	
01-S-2		✓		✓	
01-S-3		✓		✓	
01-S-4		✓		✓	
01-S-5	Damaged Threads at 11 1/2" from top, 1/4" length; 13" from top, 3/4" length	✓		✓	
01-S-6		✓		✓	
01-S-7		✓		✓	
* Examination for Axial indications was performed with Parker Research Contour Probe DA-200 S/N: 4604 Current-AC 6" Spacing					
Adequate Field was verified using MPFI SN:15					



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Magnetic Particle

W.R. Martin, ANSI 9-10-82
Examination Report

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone NA/1
Procedure ISI-4.2 Rev 0 FC-0	Examiner/Level <i>May A. Lytle II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date 8-30-82
Component/Piping System Reactor Pressure Vessel	ISO Drawing No. Zone 1 Rev 2 FC-1	Surface Condition Clean	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer * Magnaflex Corp.	Type * 14AM	Batch Number * # 806063
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. Econospect Corp.	Type/Model MH-6000	Serial No. # 811077
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 1700 Amps. 3 No. Turns	Prods NA Spacing NA Amps.	Yoke * Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-S-9		✓		✓	
01-S-10		✓		✓	
01-S-11	Scratch. 30" from top, 1" length; 42 1/2" from top, 1 1/4" length	✓		✓	
01-S-12		✓		✓	
01-S-13		✓		✓	
* Examination for Axial indications was performed with Parker Research Contour Probe DA-200 S/N: 4604 Current-AC 6" Spacing					
Adequate field was verified using MPFI SN:15					



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Magnetic Particle

M.R. Martin, ANII 9-10-82
Examination Report

Customer <i>LP+L</i>		Plant <i>WaterSard</i>		Unit <i>3</i>		Loop/Zone <i>NA / 1</i>	
Procedure <i>ISI-4.2 Rev.0 EC-0</i>		Examiner/Level <i>Harry A. Hoffman II</i>		VGR Supervisor <i>Daniel Jensen</i>		Date <i>8-30-82</i>	
Component/Piping System <i>Reactor Pressure Vessel</i>				ISO Drawing No. <i>Zone 1 Rev. 2 EC-1</i>		Surface Condition <i>Clean</i>	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent			Manufacturer <i>Magnatlux Corp</i>		Type <i>14AM</i>	Batch Number <i>* 80E077</i>	
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC		Machine Mfr. <i>Eccospect Corp.</i>		Type/Model <i>MH-6000</i>	Serial No. <i>* 811077</i>		
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual		Coil <i>1700</i> Amps. <i>3</i> No. Turns		Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <input checked="" type="checkbox"/> Spacing		

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>01-S-8</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

** Examination for Axial indications was performed with Parker Research Contact Probe DA-200 S/N: 4604
Current-AC 6" Spacing*

Adequate Field was verified using MPFI S/N:15



The
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Magnetic Particle
W.R. Martin, A4II, 9-10-82
Examination Report

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone NA/1
Procedure ISI-4.2 Rev 0 FC-0	Examiner/Level <i>Maryl. Lofredo II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date 8-31-82
Component/Piping System Reactor Pressure Vessel	ISO Drawing No. Zone 1 Rev: 2 FC-1	Surface Condition Clean	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer * Magnaflex Corp.	Type * 14AM	Batch Number * 806063
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. Econospect Corp.	Type/Model MH-6000	Serial No. # 811077

Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 1700 Amps. 3 No. Turns	Prods NA Spacing NA Amps.	Yoke <input checked="" type="checkbox"/> Spacing
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Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-S-14		✓		✓	
01-S-15	Damaged Threads 48 1/2" from top, 3 threads	✓		✓	
01-S-16	Damaged Threads 52" from top, 3 threads	✓		✓	
01-S-17	Scratch - 25 3/8" from top, 1" length	✓		✓	
01-S-18		✓		✓	
01-S-19		✓		✓	
* Examination for Axial indications was performed with Parker Research Contour Probe DA-200 S/N: 4604 Current - AC 6" Spacing					
Adequate Field was verified using MPEI SN: 15					



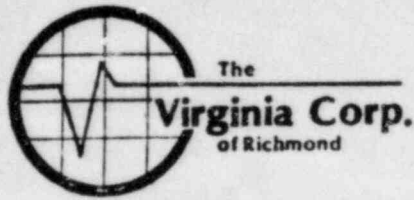
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Magnetic Particle

W.R. Martin, ANSI 9-10-82
Examination Report

Customer <i>L.P.H.</i>	Plant <i>Water Feed</i>	Unit <i>3</i>	Loop/Zone <i>NA / 1</i>
Procedure <i>ISI-4.2 Rev. D FC-0</i>	Examiner/Level <i>Mary A. Lofgren II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>9-2-82</i>
Component/Piping System <i>Reactor Pressure Vessel</i>		ISO Drawing No. <i>Zone 1 Rev. 2 FC-1</i>	Surface Condition <i>Clean</i>
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent		Manufacturer * <i>Magnaflux Corp.</i>	Type * <i>14AM</i>
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC		Machine Mfr. <i>Econospect Corp.</i>	Batch Number * <i>806063</i>
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual		Type/Model <i>MH-6000</i>	Serial No. <i>81077</i>
Coil <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	1700 Amps. 3 No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <input checked="" type="checkbox"/> Spacing

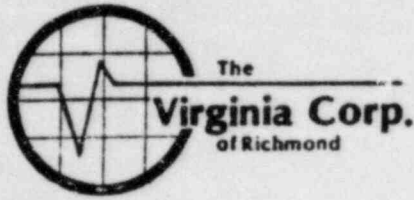
Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>01-S-23</i>		✓		✓	
<i>01-S-24</i>		✓		✓	
<i>01-S-27</i>	<i>Scratch - 26 7/8" from top, 1 1/4" length Damaged Threads - 46" from top, 8 threads</i>	✓		✓	
<i>01-S-28</i>		✓		✓	
<i>01-S-29</i>	<i>Scratch - 39 5/8" from top, 3/4" length</i>	✓		✓	
<i>01-S-30</i>		✓		✓	
* Examination for Axial indications was performed with Parker Research Contour Probe DA-200 S/N: 4604 Current-AC 6" Spacing					
Adequate Field was verified using MPFI SM:15					



Magnetic Particle Examination Report
W.R. Martin, ANSE 9-10-82

Customer <i>LD*6</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>NA/1</i>
Procedure <i>ISI-4.2 Rev.0 EC-0</i>	Examiner/Level <i>Mary A. Hoffmann</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>9-3-82</i>
Component/Piping System <i>Reactor Pressure Vessel</i>	ISO Drawing No. <i>Zone 1 Rev.2 EC-1</i>	Surface Condition <i>Clean</i>	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer <i>Magnaflex Corp.</i>	Type <i>14 AM</i>	Batch Number <i>*806063</i>
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. <i>Econaspect Corp.</i>	Type/Model <i>MH-6000</i>	Serial No. <i>*811077</i>
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <i>1700</i> Amps. <i>3</i> No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <input checked="" type="checkbox"/> Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>01-S-31</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-S-32</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-S-33</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-S-34</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-S-35</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<p><i>* Examination for Axial indications was performed with Parker Research Contour Probe DA-200 S/N: 4604 Current-AC 6" spacing</i></p>					
<p><i>Adequate Field was verified using MPEX S/N: 15</i></p>					



Magnetic Particle

W.R. Martin, ANII 9/10/82
Examination Report

Customer LP+L Plant WATERFORD Unit 3 Loop/Zone NA 1

Procedure ISE-4.2 REV-0 FC-0 Examiner/Level Robert W Anderson II VCR Supervisor Daniel Jensen Date 9-7-82

Component/Piping System REACTOR PRESSURE VESSEL ISO Drawing No. ZONE 1 REV-2 FC-1 Surface Condition CLEAN

Type of Particles Wet Dry Visible Fluorescent Manufacturer MAGNAFLUX Type 14AM Batch Number 806063

Current AC DC HWDC Machine Mfr. ECONOSPECT CORP. Type/Model MH-6000 Serial No. 811077

Magnetization Continuous Residual Coil 1700 Amps. 3 No. Turns Prods NA Spacing NA Amps. Yoke * Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<u>01-S-36</u>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<u>01-S-37</u>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<u>01-S-38</u>	<u>DAMAGED THREADS AT 47 1/2" FROM TOP</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	<u>3 THREADS</u>				
<u>01-S-39</u>	<u>SCRATCH 42 1/2" FROM TOP; 1 1/2" LONG</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
 <u>* EXAMINATION FOR AXIAL INDICATIONS</u> <u>WAS PERFORMED WITH PARKER RE-</u> <u>SEARCH CONTOUR PROBE DA-200</u> <u>S/N: 4604</u> <u>CURRENT: AC</u> <u>PROBE SPACING: 6"</u> <u>ADEQUATE FIELD WAS VERIFIED WITH</u> <u>MPEI # 15</u> 					



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Magnetic Particle

M.R. Martin, ANII 9/10/82
Examination Report

Customer <i>LP & L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>		Loop/Zone <i>NA 1</i>	
Procedure <i>ISI 4.2 REV-0 FC-0</i>		Examiner/Level <i>Robert W Adams II</i>		VCR Supervisor <i>Daniel Jensen</i>		Date <i>9-8-82</i>	
Component/Piping System <i>REACTOR PRESSURE VESSEL</i>				ISO Drawing No. <i>ZONE 1 REV-2 FC-1</i>		Surface Condition <i>CLEAN</i>	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent				Manufacturer <i>MAGNAFLUX</i>		Type <i>14AM</i>	Batch Number <i>80G063</i>
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC		Machine Mfr. * <i>ECONOSPECT CORP.</i>		Type/Model * <i>MH-6000</i>		Serial No. * <i>811077</i>	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual		Coil <i>1700</i> Amps. <i>1</i> No. Turns		Prods <i>NA</i> Spacing <i>NA</i> Amps.		Yoke <i>*</i> Spacing	

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>01-N-52</i>		✓		✓	
<i>01-N-40</i>		✓		✓	
<i>01-N-41</i>		✓		✓	
<i>01-N-43</i>		✓		✓	
<i>01-N-44</i>		✓		✓	
<i>01-N-45</i>		✓		✓	
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 S/N : 4604 CURRENT: AC SPACING: 4.5"					
ADEQUATE FIELD WAS VERIFIED WITH MPPI # 15					

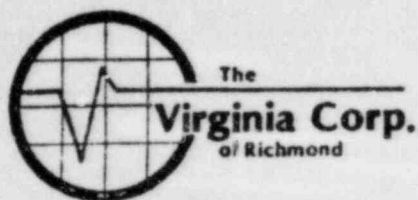


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Magnetic Particle

W.R. Martin, ANII 9-10-82
Examination Report

Customer	LP+L	Plant	WATERFORD	Unit	3	Loop/Zone	NA 1
Procedure	ISI-4.2 REV-0 FC-0	Examiner/Level	Robert W Anderson #	VCR Supervisor	Daniel Jensen	Date	9-8-82
Component/Piping System	REACTOR PRESSURE VESSEL	ISO Drawing No.	ZONE 1 REV-2 FC-1	Surface Condition	CLEAN		
Type of Particles	<input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Flourescent	Manufacturer	MAGNAFLUX	Type	14AM	Batch Number	806063
Current	* AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr.	ECONOSPECT CORP.	Type/Model	MH-6000	Serial No.	811077
Magnetization	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil	1700 Amps. 3 No. Turns	Prods	NA Spacing NA Amps.	Yoke	* Spacing
Weld / Item	Comments	MT Results		VT Results			
		NRI	RI	Sat	Unsat		
01-5-52		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
01-5-40	SCRATCH 34 1/8" FROM TOP; 1 1/8" LONG	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
01-5-41	SCRATCH 25 3/4" FROM TOP; 1 1/8" LONG	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
	SCRATCH 34 1/4" FROM TOP; 1" LONG						
01-5-43		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
01-5-44	SCRATCH 30 7/8" FROM TOP; 5/8" LONG	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
01-5-45	51" TO 52" 10 DAMAGED THREADS	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 S/N : 4604 CURRENT: AC SPACING: 6"							
ADEQUATE FIELD WAS VERIFIED WITH MPFI #15							

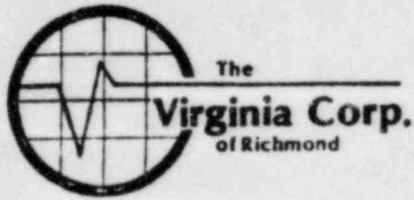


Magnetic Particle

M.R. Martin, AN II 9/10/82
Examination Report

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone NA 1
Procedure ISI 4.2 REV-0 FC-0	Examiner/Level Robert W Anderson II	VCR Supervisor <i>[Signature]</i>	Date 9-9-82
Component/Piping System REACTOR PRESSURE VESSEL		ISO Drawing No. ZONE 1 REV-2 FC-1	Surface Condition CLEAN
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer MAGNAFLUX	Type 14AM	Batch Number 82E088
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. ECONOSPECT CORP.	Type/Model MH-6000	Serial No. 811077
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 1700 Amps. 3 No. Turns	Prods NA Spacing NA Amps.	Yoke * Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-S-46	1 DAMAGED THREAD 4 7/2" FROM TOP. SCRATCH 2 9/8" FROM TOP, 1/2" LONG SCRATCH 2 9 7/8" FROM TOP; 1" LONG	✓		✓	
01-S-47		✓		✓	
01-S-48		✓		✓	
01-S-49		✓		✓	
01-S-50	SCRATCH 3 2 3/4" FROM TOP; 7/8" LONG	✓		✓	
01-S-51		✓		✓	
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 IN : 4604 CURRENT: AC SPACING: 6"					
ADEQUATE FIELD WAS VERIFIED WITH MPFI # 15					



Magnetic Particle
M.R. Martin, ANII 9-10-82
 Examination Report

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

Procedure ISE 4.2 REV-0 FC-0 Examiner/Level Blert W Anderson II VOR Supervisor Manuel Jensen Date 9-9-82

Component/Piping System REACTOR PRESSURE VESSEL ISO Drawing No. ZONE 1 REV-2 FC-1 Surface Condition CLEAN

Type of Particles Wet Dry Visible Fluorescent Manufacturer MAGNAFLUX Type 14 AM Batch Number 82E088

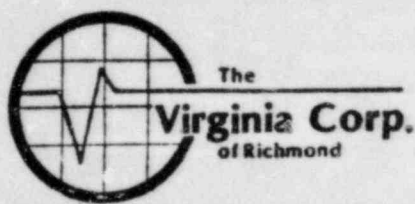
Current AC DC HWDC Machine Mfr. ECONOSPECT CORP Type/Model MH-6000 Serial No. 811077

Magnetization Continuous Residual Coil 1700 Amps. 1 No. Turns Prods NA Spacing NA Amps. Yoke * Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-N-46		✓		✓	
01-N-47		✓		✓	
01-N-48		✓		✓	
01-N-49		✓		✓	
01-N-50		✓		✓	
01-N-51		✓		✓	

* EXAMINATION FOR AXIAL INDICATIONS
 WAS PERFORMED WITH PARKER
 RESEARCH CONTOUR PROBE DA-200
 S/N : 4604
 CURRENT: AC
 SPACING : 4.5"

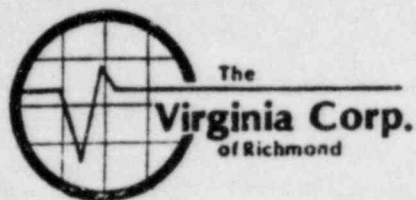
ADEQUATE FIELD WAS VERIFIED WITH
 MPFI # 15



Magnetic Particle
W.R. Martin, ANII 9-16-82
 Examination Report

Customer <i>LP+L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>NA 1</i>
Procedure <i>ISI 4.2 REV-0 FC-0</i>		Examiner/Level <i>Robert W Anderson II</i>	VCR Supervisor <i>Daniel Jensen</i>
Date <i>9-10-82</i>			
Component/Piping System <i>REACTOR PRESSURE VESSEL</i>		ISO Drawing No. <i>ZONE 1 REV-2 FC-1</i>	Surface Condition <i>CLEAN</i>
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Flourescent		Manufacturer <i>MAGNAFLUX</i>	Type <i>14 AM</i>
Batch Number <i>82E088</i>			
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. <i>ECONOSPECT CORP</i>	Type/Model <i>MH-6000</i>	Serial No. <i>811077</i>
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <i>1700</i> Amps. <i>1</i> No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <i>NA</i> Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>01-N-81</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-N-1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-N-2</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-N-3</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-N-52</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>01-N-54</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 <i>S/N : 4604</i> CURRENT: AC SPACING: 4.5"					
ADEQUATE FIELD WAS VERIFIED WITH MPFI # 15					



Magnetic Particle
M.R. Martin, ANII 9-16-82
Examination Report

Customer <i>LP&L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>	Loop / Zone <i>NA 1</i>
Procedure <i>ISI 4.2 REV-0 FC-0</i>		Examiner/Level <i>Robert W Anderson II</i>		VCR Supervisor <i>Daniel Jensen</i>	Date <i>9-10-82</i>
Component/Piping System <i>REACTOR PRESSURE VESSEL</i>			ISO Drawing No. <i>ZONE 1 REV-2 FC-1</i>		Surface Condition <i>CLEAN</i>
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent		Manufacturer <i>MAGNAFLUX</i>	Type <i>14AM</i>	Batch Number <i>82E088</i>	
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC		Machine Mfr. * <i>ECONOSPECT CORP.</i>	Type/Model * <i>MH-6000</i>	Serial No. * <i>811077</i>	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <i>1700</i> Amps. <i>3</i> No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <i>*</i> Spacing		

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>01-S-51</i>	<i>4 5/4" FROM TOP; 4 DAMAGED THREADS</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>01-S-52</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>01-S-54</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 S/N : 4604 CURRENT: AC SPACING: 6"					
ADEQUATE FIELD WAS VERIFIED WITH MPI #15					



The
Virginia Corp.
of Richmond

Magnetic Particle

W.R. Martin, ANSI 9-16-82
Examination Report

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

Procedure ISI 4.2 REV.0 FC-0 Examiner/Level Robert W Adams II VCR Supervisor Daniel Jensen Date 9-11-82

Component/Piping System REACTOR PRESSURE VESSEL ISO Drawing No. ZONE 1 REV.2 FC-1 Surface Condition CLEAN

Type of Particles Wet Dry Visible Flourescent Manufacturer MAGNAFLUX Type 14 AM Batch Number 806063

Current * AC DC HWDC Machine Mfr. * ECONOSPECT CORP. Type/Model * MH-6000 Serial No. * 811077

Magnetization Continuous Residual Coil 1700 Amps. 1 No. Turns Prods NA Spacing Amps. NA Yoke * NA Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-N-4		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-5		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-6		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-7		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-8		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-9		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-10		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-11		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-12		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-13		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-14		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-15		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-16		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-17		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
01-N-18		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 S/N : 4604 CURRENT: AC SPACING: 5" ADEQUATE FIELD WAS VERIFIED WITH MPFI # 15					

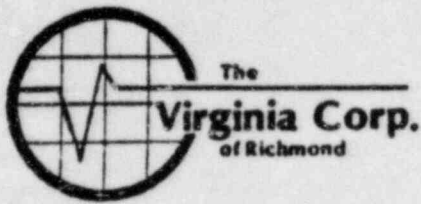


The
Virginia Corp.
of Richmond

Magnetic Particle
M. R. Martin, ANSI, 9-20-82
Examination Report

Customer LP46	Plant WATERFORD	Unit 3	Loop/Zone NA 1
Procedure ISE 4.2 REV-0 FC-0	Examiner/Level Blair W Anderson II	VCR Supervisor Donald Jensen	Date 9-12-82
Component/Piping System REACTOR PRESSURE VESSEL	ISO Drawing No. ZONE 1 REV-2 FC-1	Surface Condition CLEAN	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer MAGNAFLUX	Type 14AM	Batch Number 82E088
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. * ECONOSPECT CORP	Type/Model * MH-6000	Serial No. * 811077
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 1700 Amps. 1 No. Turns	Prods NA Spacing NA Amps.	Yoke * Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
01-N-19		✓		✓	
01-N-20	20 1/4" CLOCKWISE FROM ID NUMBER; TOP, NICK 16 1/4" CLOCKWISE FROM ID NUMBER; BOTTOM, NICK	✓		✓	
01-N-21		✓		✓	
01-N-22		✓		✓	
01-N-25		✓		✓	
01-N-26		✓		✓	
01-N-29	21" CLOCKWISE FROM ID NUMBER; TOP, NICK	✓		✓	
01-N-31	9 3/4" CLOCKWISE FROM ID NUMBER; TOP, NICK	✓		✓	
01-N-32		✓		✓	
01-N-34		✓		✓	
01-N-37		✓		✓	
01-N-38		✓		✓	
01-N-39		✓		✓	
* EXAMINATION FOR AXIAL INDICATIONS WAS PERFORMED WITH PARKER RESEARCH CONTOUR PROBE DA-200 S/N : 4604 CURRENT: AC SPACING: 5"					
ADEQUATE FIELD WAS VERIFIED WITH MPFI # 15					



M.R. Martin, ANII 12-14-82

Magnetic Particle

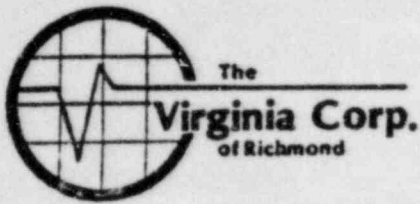
Examination Report

Customer <i>L.P.+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/zone <i>NA</i>
Procedure <i>ISI-4.2, R.O, FC, O</i>	Examiner/Level <i>Kevin White/II</i>	VCR Supervisor <i>Kevin White</i>	Date <i>11/11/82</i>
Component/Piping System <i>Reactor Closure Head Stud Spares</i>	ISO Drawing No. <i>NA</i>	Surface Condition <i>Clean</i>	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer <i>Magnaflox</i>	Type <i>14AM</i>	Batch Number <i>82E088</i>
Current <input type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. <i>ECONOSPECT Corp.</i>	Type/Model <i>MH-6000</i>	Serial No. <i>811077</i>
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <i>2000</i> Amps. <i>3</i> No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <i>7"</i> Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>11-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>22-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>26-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

* The examination for axial oriented Indications was performed with a parker research contour Probe - DA-200.
S/N: 4604, Current: AC

Adequate field was verified with MPFI # 15.



M.R. Martin, ANIF 12-14-82
Magnetic Particle

Examination Report

Customer *L.P.+L.* Plant *Waterford* Unit *3* Loop/Zone *NA*

Procedure *ISI-4.2, RD, FC. O* Examiner/Level *Kevin White II* VCR Supervisor *Kevin White* Date *11/12/82*

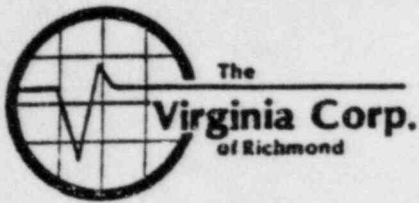
Component/Piping System *Reactor Closure Head Stud Spares* ISO Drawing No. *NA* Surface Condition *Clean*

Type of Particles Wet Dry Visible Fluorescent Manufacturer *Magnatlux* Type *14AM* Batch Number *82E088*

Current AC DC HWDC Machine Mfr. *ECONOSPECT CORP.* Type/Model *MTA-600* Serial No. *811077*

Magnetization Continuous Residual Coil *2,000* Amps. *3* No. Turns Prods *NA* Spacing *NA* Amps. Yoke 7" Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>2</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>3-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>4-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>13-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>14-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>15-S</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<p>* The examination for axial oriented Indications was performed with a Parker research contour probe - DA-200. S/N: 4604, Current: AC Adequate field was verified with MPFI #15.</p>					



M.R. Martin, ANSI 12-14-82

Magnetic Particle

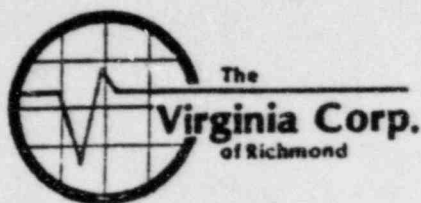
Examination Report

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone NA
Procedure ISI-4.2, R.O, FC.O	Examiner/Level Kevin White/II	VCR Supervisor Kevin White	Date 11/15/82
Component/Piping System Reactor Closure Head Stud Spares	ISO Drawing No. NA	Surface Condition Clean	
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer Magnaflux	Type 14AM	Batch Number 82E088
Current <input type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. Ecospect Corp.	Type/Model MH-6000	Serial No. 811077
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 2000 Amps. 3 No. Turns	Prods NA Spacing NA Amps.	Yoke * 7" Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
6-S		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
8-S		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
19-S		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
20-S		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

* The examination for axial oriented Indications was performed with a Parker Research Contour Probe - OA-200 S/N: 4604, Current: AC

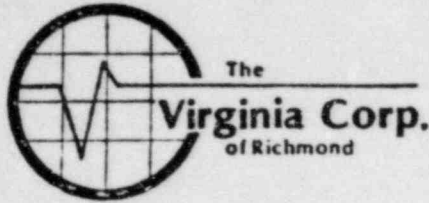
Adequate field was verified with MPFI # 15.



M.R. Martin, ANFF 12-14-82
Magnetic Particle
Examination Report

Customer <i>L.P.+L.</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>NA</i>
Procedure <i>ISI-4.2, R.O, F.O</i>	Examiner/Level <i>Kevin White/II</i>	VCR Supervisor <i>Kevin White</i>	Date <i>11/16/82</i>
Component/Piping System <i>Reactor Closure Head Stud Spares</i>		ISO Drawing No. <i>NA</i>	Surface Condition <i>Clean</i>
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent	Manufacturer <i>Magnaflex</i>	Type <i>14AM</i>	Batch Number <i>82F032</i>
Current <input type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. <i>Econospect Corp.</i>	Type/Model <i>MH-6000</i>	Serial No. <i>811077</i>
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <i>2000</i> Amps. <i>3</i> No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <i>* 7"</i> Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
1		✓		✓	
5-S		✓		✓	
7-S		✓		✓	
10-S		✓		✓	
12-S		✓		✓	
23-S		✓		✓	
24-S		✓		✓	
27-S		✓		✓	
<p>* <i>The examination for axial oriented Indications was performed with a Parker Research Contour Probe - DA-200. SW:4604, Current: AC</i></p> <p><i>Adequate field was verified with MPFI #15.</i></p>					



M.R. Martin, ANI 1-13-83
Magnetic Particle

Examination Report

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone N/A/N/A
Procedure ISI 4.2 R.O.F.C.O	Examiner/Level Robert J. Overstreet II	VCR Supervisor Daniel Jensen	Date 11-17-82
Component/Piping System Reactor Closure head Stud Spares	ISO Drawing No. N/A	Surface Condition Clean	
Type of Particles ✓ Wet ___ Dry ___ Visible ✓ Flourescent	Manufacturer Magnaflux	Type 14 am	Batch Number 825089
Current * AC ___ DC ✓ HWDC	Machine Mfr. * ECONOSPECT Corp.	Type/Model * MH-6000	Serial No. * 811077
Magnetization ✓ Continuous ___ Residual	Coil 2000 Amps. 3 No. Turns	Prods N/A Spacing N/A Amps.	Yoke * Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
95		✓		✓	
165		✓		✓	
175		✓		✓	
185		✓		✓	
215		✓		✓	
255		✓		✓	
*	Examination for axial indications was performed with Parker Research Contour probe DA-200 S/N 4604 Current: AC Probe Spacing: 6"				
	Adequate field was verified using MPFI #15.				

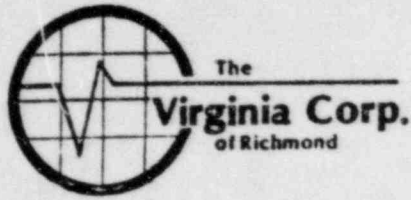


M.R. Martin, ANII 12-14-82
Magnetic Particle

Examination Report

Customer LP&L	Plant WATERFORD	Unit 3	Loop / Zone NA
Procedure ISI-4.2 REV-0 FC-0	Examiner/Level Robert W Adreese III	VCR Supervisor Kevin White	Date 11-19-82
Component/Piping System REACTOR CLOSURE HEAD NUT SPARES		ISO Drawing No. NA	Surface Condition CLEAN
Type of Particles <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Visible <input checked="" type="checkbox"/> Flourescent	Manufacturer MAGNAFLUX	Type 14 AM	Batch Number 82FO32
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input checked="" type="checkbox"/> HWDC	Machine Mfr. * ECONOSPECT CORP	Type/Model MH-6000	Serial No. * 811077
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil 2000 Amps. 1 No. Turns	Prods NA Spacing NA Amps.	Yoke 5" Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
S1		✓		✓	
S2		✓		✓	
S4		✓		✓	
S8		✓		✓	
S11		✓		✓	
S12		✓		✓	
S13		✓		✓	
S15		✓		✓	
S16		✓		✓	
S19		✓		✓	
S24		✓		✓	
S25		✓		✓	
S27		✓		✓	
* EXAMINATION FOR CIRCUMFERENTIALLY ORIENTED INDICATIONS WAS PERFORMED WITH A PARKER RESEARCH CONTOUR PROBE DA-200 S/N 4604 CURRENT: AC					
ADEQUATE FIELD WAS VERIFIED USING MPFL S/N 15					



W.R. Martin, ANII 12-14-82
Magnetic Particle
Examination Report

Customer LP&L Plant WATERFORD Unit 3 Loop/Zone N/A

Procedure ISI-4.2 REV.0 F.C.O Examiner/Level Kern White/H VCR Supervisor Kevin White Date 12-3-82

Component/Piping System REACTOR CLOSURE HEAD NUT SPARES ISO Drawing No. N/A Surface Condition CLEAN

Type of Particles Wet Dry Visible Fluorescent Manufacturer MAGNAFLUX Type 14AM Batch Number 82 FO32

Current AC DC HWDC Machine Mfr. ECONOSPECT CORP. Type/Model 27D Serial No. 6818

Magnetization Continuous Residual Coil 700 Amps. 2 No. Turns Prods N/A Spacing N/A Amps. Yoke *4-7" Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
35		✓		✓	
55		✓		✓	
75		✓		✓	
95		✓		✓	
65		✓		✓	
145		✓		✓	
175		✓		✓	
185		✓		✓	
205		✓		✓	
215		✓		✓	
225		✓		✓	

* THE EXAMINATION FOR CIRCUMFERENTIALLY ORIENTED INDICATIONS WAS PERFORMED WITH A PARKER RESEARCH CONTOUR PROBE DA-200 S/N 4604 CURRENT: AC

ADEQUATE FIELD WAS VERIFIED USING MPFI S/N 15



The
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of Richmond

Liquid Penetrant
D. Payne ANII 7/17/82
Examination Report

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

Procedure *ISI-3.1, Rev. 0, F.C. 2* Examiner/Level *David Z. Tokumitsu* Date *7-17-82*

Component/Piping System *CEDM Upper Housing Lower Weld* ISO Drawing No. *Zone 2, Rev. 2 F.C. 1* VCR Supervisor *Kenil Jones*

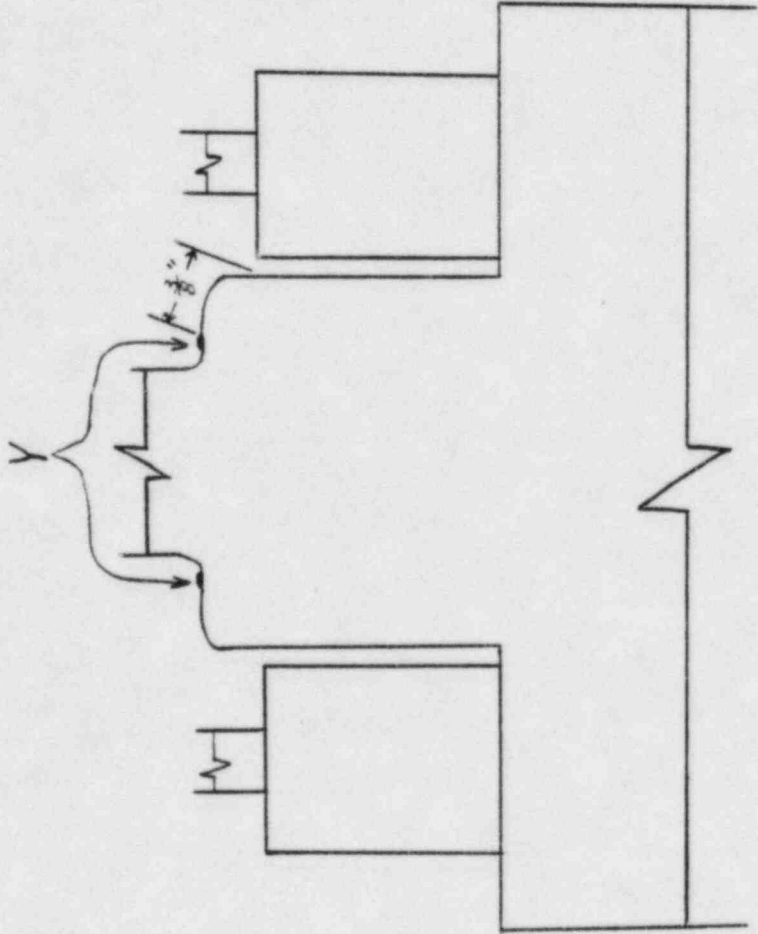
	Manufacturer	Type	Batch No.
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl - Check</i>	<i>47L-015</i>
Developer	<i>Sherwin Inc.</i>	<i>Dubl - Check</i>	<i>129 F6</i>
Remover	<i>Sherwin Inc.</i>	<i>Dubl - Check</i>	<i>225 B4</i>

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-Y-62</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-66</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-67</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-71</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-72</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-77</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-78</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-82</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-83</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-84</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-85</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-86</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-87</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-Y-89</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

** Partial examination due to reed switch. See pg. 2*



*Unable to examine required $\frac{1}{2}$ " of base metal
on lower side due to feed switch on each side
of weld Y.*





The
Virginia Corp.
of Richmond

Liquid Penetrant
D. Payne ANI 2 7/12/82
Examination Report

Customer <i>LP 4 L</i>	Plant <i>Waterford</i>	Unit <i>111</i>	Loop / Zone <i>N/H / 2 R 2 FC 1</i>
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Procedure <i>151 3-1 Rev O FC 2</i>	Examiner/Level <i>David W. Clements & L.V. II</i>	Date <i>July 9, 1982</i>
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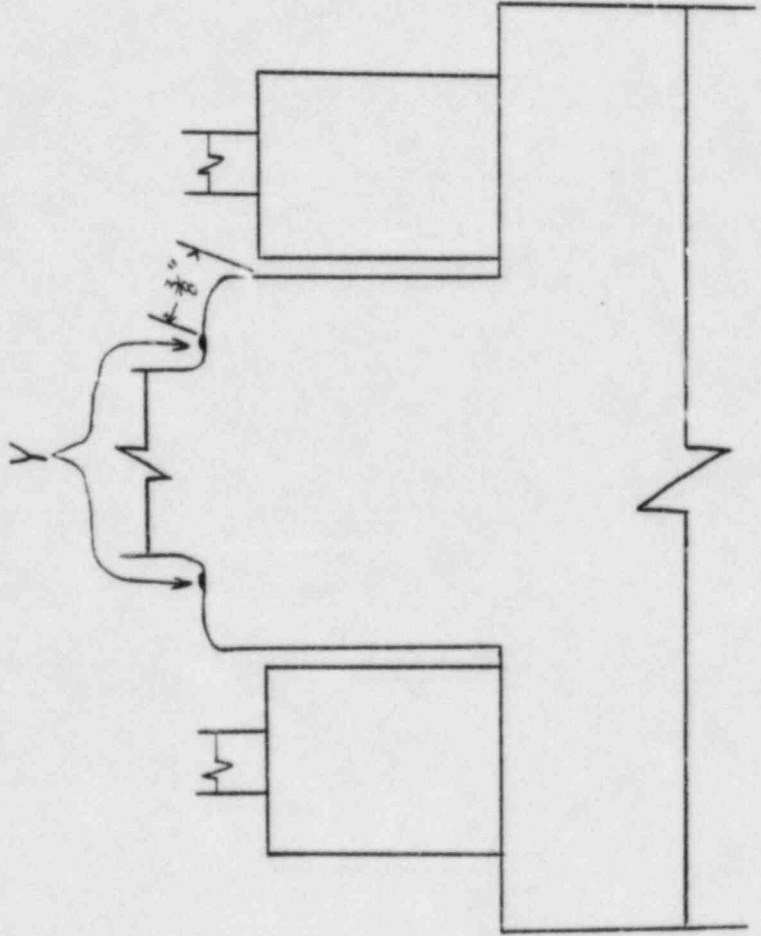
Component/Piping System <i>ESDM UPSAC Housing Tower Weld</i>	ISO Drawing No. <i>2802 2 Rev 2 FC 1</i>	VCR Supervisor <i>[Signature]</i>
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	Manufacturer	Type	Batch No.
Penetrant	<i>Sherwin</i>	<i>Dubcheck</i>	<i>474015</i>
Developer	<i>Sherwin</i>	<i>Dubcheck</i>	<i>129F6</i>
Remover	<i>Sherwin</i>	<i>Dubcheck</i>	<i>225B4</i>

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-Y-60</i>	<i>*</i>	✓		✓	
<i>02-Y-64</i>	<i>*</i>	✓		✓	
<i>02-Y-68</i>	<i>*</i>	✓		✓	
<i>02-Y-69</i>	<i>*</i>	✓		✓	
<i>02-Y-74</i>	<i>*</i>	✓		✓	
<i>02-Y-75</i>	<i>*</i>	✓		✓	
<i>02-Y-79</i>	<i>*</i>	✓		✓	
<i>02-Y-80</i>	<i>*</i>	✓		✓	
<i>02-Y-88</i>	<i>*</i>	✓		✓	
<i>02-Y-90</i>	<i>*</i>	✓		✓	
<i>* Partial Examination of Base metal only, due to Reed Switch Control</i>					



Unable to examine required $\frac{1}{2}$ " of base metal
on lower side due to reed switch on each side
of weld Y.





The
Virginia Corp.
of Richmond

Liquid Penetrant
D. Payne ANII 7/12/82
Examination Report

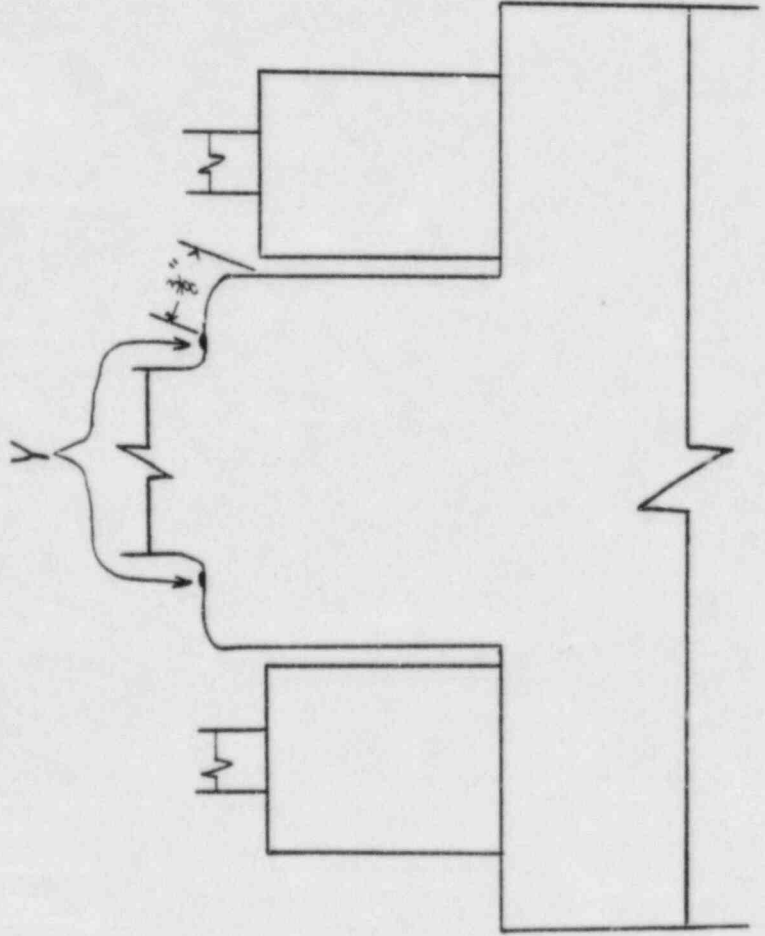
Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop / Zone <i>N/A / 2</i>
Procedure <i>ISI-3.1 Rev. D EC. 2</i>	Examiner/Level <i>Mary A. ...</i>	Date <i>7-9-82</i>	
Component/Piping System <i>CE DM Upper Housing Lower Weld</i>	ISO Drawing No. <i>Zone 2 Rev. 2 EC 1</i>	VCR Supervisor <i>[Signature]</i>	

	Manufacturer	Type	Batch No.	
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl-Chek</i>	<i>HT6-015</i>	
Developer	<i>Sherwin Inc.</i>	<i>Dubl-Chek</i>	<i>129 F6</i>	
Remover	<i>Sherwin Inc.</i>	<i>Dubl-Chek</i>	<i>225 B4</i>	

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-4-61</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-63</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-65</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-70</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-73</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-76</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-81</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-4-91</i>	<i>*</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>* Partial Examination due to feed switch. See Page 2</i>					



Unable to examine required $\frac{1}{2}$ " of base metal
on lower side due to reed switch on each side
of weld Y.





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Liquid Penetrant
D. Payne ANIZ 7/12/82
Examination Report

Customer <i>LP4K</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop / Zone <i>WA / 2</i>		
Procedure <i>ISI 31 Rev 0 F.G. 2</i>	Examiner/Level <i>Mary A. Safelina 672</i>	Date <i>7-9-82</i>			
Component/Piping System <i>CEDM Motor Housing Lower Weld</i>	ISO Drawing No. <i>Zone 2 Rev 2 F.G. 1</i>	VCR Supervisor <i>M. J. Jones</i>			
	Manufacturer	Type	Batch No.		
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>476-015</i>		
Developer	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>129 E6</i>		
Remover	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>225 B4</i>		
Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-W-60</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-64</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-67</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-68</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-72</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-74</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-75</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-79</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-82</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-83</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-84</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-87</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-88</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-90</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



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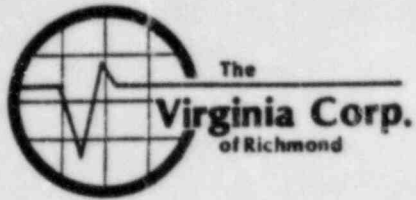
Liquid Penetrant

D. Payne ANZI 7/12/82
Examination Report

Customer <i>LPYL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop / Zone <i>NIA12</i>
Procedure <i>ISI-3.1 REV. 0 F. 6.2</i>	Examiner/Level <i>David T. Fokem II</i>	Date <i>7-9-82</i>	
Component/Piping System <i>CRAM Motor Housing Lower Web</i>	ISO Drawing No. <i>Zone 2 Rev. 2 F. 6.1</i>	VER Supervisor <i>[Signature]</i>	

	Manufacturer	Type	Batch No.
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl-Check</i>	<i>476-015</i>
Developer	<i>Sherwin Inc.</i>	<i>Dubl-Check</i>	<i>129 FG</i>
Remover	<i>Sherwin Inc.</i>	<i>Dubl-Check</i>	<i>225 B4</i>

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-W-61</i>	<i>NIA</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-62</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-65</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-69</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-70</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-71</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-76</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-80</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-81</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-85</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-89</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-91</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Liquid Penetrant
D. Payne ANI I 7/14/82
Examination Report

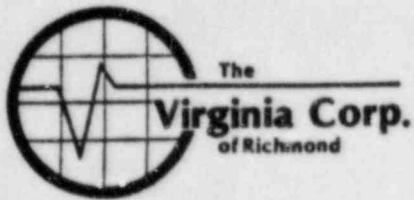
Customer <i>LD&L</i>	Plant <i>Waterford</i>	Unit <i>111</i>	Loop / Zone
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Procedure <i>ISI 31 Rev 0 FC 2</i>	Examiner/Level <i>David W. Clements Jr LV II</i>	Date <i>July 9, 1982</i>
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Component/Piping System <i>CFAM Motor Housing Lower Weld</i>	ISO Drawing No. <i>2012 2 Rev 2 FC 1</i>	VGR Supervisor <i>[Signature]</i>
---	---	--------------------------------------

	Manufacturer	Type	Batch No.	
Penetrant	<i>Sherwin</i>	<i>Subl check</i>	<i>472015</i>	
Developer	<i>Sherwin</i>	<i>Subl check</i>	<i>129FG</i>	
Remover	<i>Sherwin</i>	<i>Subl check</i>	<i>235B4</i>	

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-W-63</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-66</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-73</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-77</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-78</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-W-86</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Liquid Penetrant
D. Payne AND 7/21/82
Examination Report

Customer <i>L P+L</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop / Zone <i>NA / 2</i>	
Procedure <i>ISE-3.1 Rev. 0 FC-3</i>		Examiner/Level <i>Mary A. Hedges LKII</i>			Date <i>7-19-82</i>	
Component/Piping System <i>Reactor Closure Head</i>		ISO Drawing No. <i>Zone 2 Rev. 2 FC-1</i>		VCR Supervisor <i>[Signature]</i>		
	Manufacturer	Type	Batch No.			
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>476-015</i>			
Developer	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>129 F6</i>			
Remover	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>225 B4</i>			
Weld/Item Number	Comments	PT Results		VT Results		
		NRI	RI	SAT.	UNSAT.	
<i>02-X-69</i>		✓		✓		
<i>02-X-80</i>		✓		✓		
<i>02-X-81</i>		✓		✓		



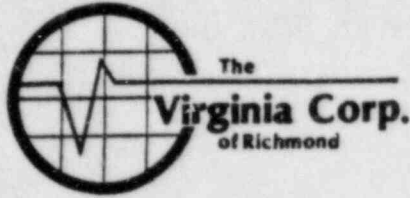
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Liquid Penetrant
D. Payne ANZI 7/27/82
Examination Report

Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop / Zone <i>NA</i>
Procedure <i>ISI-3.1 Rev.0 FC-3</i>	Examiner/Level <i>Mary A. Lofthouse VPI Edward W. Clombrich VPI</i>	Date <i>7-22-82</i>	
Component/Piping System <i>Reactor Closure Head</i>	ISO Drawing No. <i>Zone 2 Rev.2 FC-1</i>	VCR Supervisor <i>Daniel Dem...</i>	

	Manufacturer	Type	Batch No.
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl-Chek</i>	<i>47L-015</i>
Developer	<i>Sherwin Inc.</i>	<i>Dubl-Chek</i>	<i>129F6</i>
Remover	<i>Sherwin Inc.</i>	<i>Dubl-Chek</i>	<i>235 B4</i>

Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-X-63</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-64</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-72</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-73</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-74</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-82</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-83</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>02-X-90</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Liquid Penetrant
D. Payne ANII ^{7/27/82}
Examination Report

Customer <i>LP+1</i>		Plant <i>Waterford</i>	Unit <i>3</i>	Loop / Zone <i>NA / 2</i>	
Procedure <i>ISI-3.1 Rev 0 FC-3</i>		Examiner/Level <i>Maing A Lofthun VII</i>		Date <i>7-23-82</i>	
Component/Piping System <i>Reactor Closure Head</i>		ISO Drawing No. <i>Zone 2 Rev 2 FC-1</i>		VCR Supervisor <i>Daniel Jones</i>	
	Manufacturer	Type	Batch No.		
Penetrant	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>474-015</i>		
Developer	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>129 F6</i>		
Remover	<i>Sherwin Inc.</i>	<i>Dubl. Chek</i>	<i>225 B4</i>		
Weld/Item Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>02-X-61</i>	<i>Questionable weld bead</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>02-X-62</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>02-X-70</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>02-X-71</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>02-X-89</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



The
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M.R. Martin, ANIS 11-3-82
Magnetic Particle

Examination Report

Page 1 of 2

Customer <i>LP&L</i>		Plant <i>Waterford</i>	Unit # <i>3</i>	Loop/Zone <i>NA / 2</i>	
Procedure <i>ISI-4.3 Rev 0 FEL 1</i>		Examiner/Level <i>Michael E Smith Lv II</i>	VCR Supervisor <i>Daniel Jensen</i>		Date <i>10-26-82</i>
Component/Piping System <i>Reactor Closure Head</i>			ISO Drawing No. <i>ZONG 2 REV 2 FEL 2</i>	Surface Condition <i>SMOOTH</i>	
Type of Particles <input checked="" type="checkbox"/> Wet <input checked="" type="checkbox"/> Dry <input checked="" type="checkbox"/> Visible <input type="checkbox"/> Fluorescent		Manufacturer <i>MAGNAFLUX</i>	Type <i>3A Red</i>	Batch Number <i>215019</i>	
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> HWDC		Machine Mfr. <i>Parker Research</i>	Type/Model <i>Contour Probe</i>	Serial No. <i>4604</i>	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <i>N/A</i> Amps. <i>N/A</i> No. Turns	Prods <i>N/A</i> Spacing <i>N/A</i> Amps.	Yoke <i>6"</i> Spacing		
Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>02-018</i>	<i>See Attached Sheet</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	<i>Adequate Field was verified using MPFI # 15</i>				

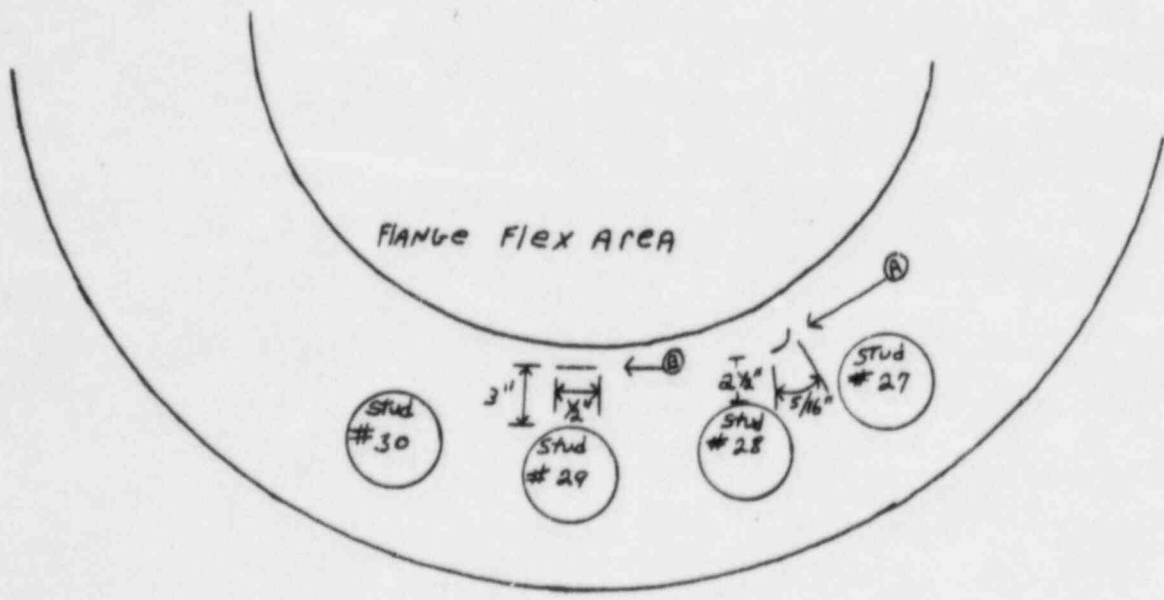


W.R. Martin, ANFI 11-3-82
Magnetic Particle

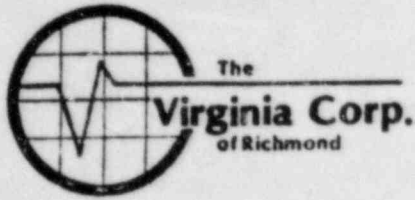
Weld Indication Record

Page 2 of 2

Customer LP+L	Plant Waterford	Unit # 3	Loop/Zone NA / 2
Procedure ISI 4.3 REV D FC.1	Examiner/Level Michael C Smith LV II	Date 10-26-82	
Component/ Piping System Reactor Closure Head		VCR Supervisor Daniel Jensen	
Weld No. 02-012 FLANGE Flex AREA	ISO/Drawing No. ZONE 2 REV. 2 FC. 2		



Comments: indication A: 5/16" linear indication located 5/16" from stud # 28
indication B: 3/8" linear indication located 3" from stud # 29



W.R. Martin, ANS I 12-21-82
Magnetic Particle

Examination Report

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone N/A/ 2
Procedure ISI-4.3 REV.0 F.C.1	Examiner/Level Franklin P. Buser II	VCR Supervisor David J. Foken	Date 12-17-82
Component/Piping System REACTOR CLOSURE HEAD		ISO Drawing No. ZONE 2 REV 2 F.C. 2	Surface Condition SMOOTH
Type of Particles Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent <input type="checkbox"/>	Manufacturer MAGNAFLUX	Type 8A RED	Batch Number 81J019
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> HWDC	Machine Mfr. PARKER RESEARCH	Type/Model CONTOUR PROBE	Serial No. 4604
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil N/A Amps. N/A No. Turns	Prods N/A Spacing N/A Amps.	Yoke 7" Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
02-018	ADEQUATE FIELD VERIFIED USING MPFI-5/4/12 REEXAMINED AFTER REPAIR AREA EXAMINED WAS IN IMMEDIATE VICINITY OF REPAIR	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



The Virginia Corp.
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M.R. Martin, ANIS 10-25-82
Magnetic Particle

Examination Report

Customer LP+L		Plant Waterford	Unit # 3	Loop/Zone 1/3
Procedure ISI-4.3 Rev.0 EC.1	Examiner/Level Michael E. Smith II	VCR Supervisor Daniel Jones	Date 10-17-82	
Component/Piping System Steam Generator 1	ISO Drawing No. ZONE 3 Rev. 2 EC. 2	Surface Condition GROUND		
Type of Particles Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent <input type="checkbox"/>	Manufacturer MAGNAFLUX	Type 8A Red	Batch Number 815019	
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> HWDC	Machine Mfr. Parker Research	Type/Model Contour Probe	Serial No. 4604	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <u>NA</u> Amps. <u>NA</u> No. Turns	Prods <u>NA</u> Spacing <u>NA</u> Amps.	Yoke <u>6"</u> Spacing	

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
03-001	Adequate field was verified using MPEI #15	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



M.R. Martin, ANII 10-25-82
Ultrasonic Data Sheet
 for
Thickness Measurement

Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/03</i>
Component/Piping System <i>S.G. weld designation</i>	Examiner/Level <i>Larry Longenecker II</i>	Date <i>10-19-82</i>	
Procedure <i>ISI-25 R.O. F.C. 1</i>	Iso/Drawing No. <i>ZONE 03 R.O. F.C. 2</i>	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached [] Yes [x] No

Equipment

Instrument	Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>KB-Aerotech</i>	Size <i>.5"</i>	Cal. Block <i>UT-44</i>
Model <i>Mark I</i>			Cal. Block <i>N/A</i>
S/N <i>05304E</i>	Freq. <i>5 MHz</i>		Range Cal. <i>2" @ 6.2</i>
Reject <i>Off</i>	Serial No. <i>F08945</i>		Calibration Checks <i>IN-2:19</i>
Damp. <i>MIN</i>	Coax. Cable <i>6' BNC to BNC</i>		<i>OUT-5:00</i>
Freq. <i>5 MHz</i>	Gain <i>42 db</i>		
Rep. Rate <i>3K</i>			
Filter <i>H1</i>			
Video <i>Normal</i>			
Couplant <i>SonoTrace 40 #8124</i>			

Examination Results

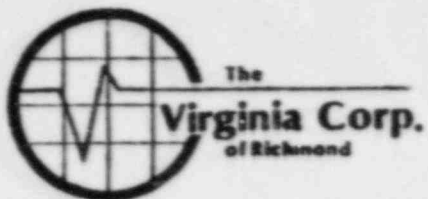
Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>03-035</i>	<i>12</i>	<i>*1</i>	<i>1.870</i>	<i>*2</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>03-035</i>	<i>2</i>		<i>1.870</i>						
<i>03-035</i>	<i>4</i>		<i>1.870</i>						
<i>03-035</i>	<i>6</i>		<i>1.870</i>						
<i>03-035</i>	<i>8</i>		<i>1.838</i>						
<i>03-035</i>	<i>10</i>	<i>↓</i>	<i>1.838</i>	<i>↓</i>					
<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>					

Sketch/Identification

- *1 UNPARALLEL O.D. CROWN*
- *2 TUBESHEET*

M.R. Martin, ANEF 10-25-82

Ultrasonic Examination Report



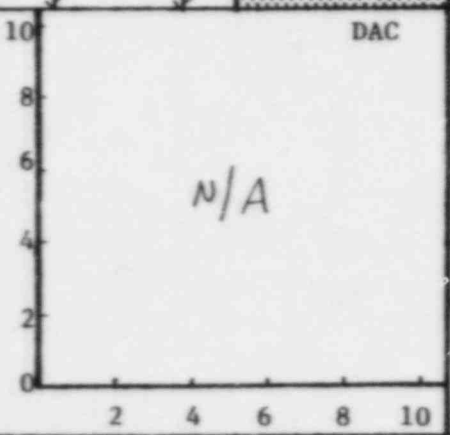
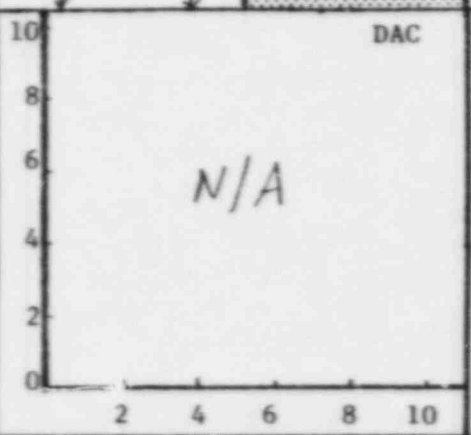
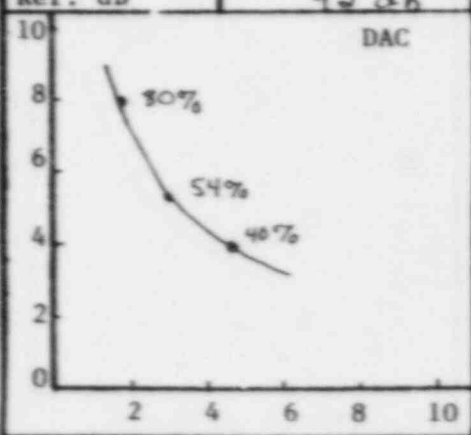
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/03	Iso/Drawing No. 20NC 03 R 2 F.C.2
Procedure ISI-26 R 2 F.C.1	Exam Surface I.D.	Examiner/Level Larry Longmacker II	VCR Supervisor Daniel Densen	Date 10-19-82
Component/Piping System S.G. Weld Designation	Pipe Size N/A	Weld Type Butt	Cal. Block UT-44	Couplant: Type 90 Batch No. 8124

Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N F08745	NA	NA	Mfr. SONIC	Model	Mark I	
	Size .5"			S/N 05304E	RepRate 3K		
	Frequency 5.0 MHz			Reject off	Filter HI		
Beam Angle	0°			Damp MIN	Coax	6' BACK TO BOX	
				Freq. 5 MHz	Video	Normal	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4T	80%	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	2:19	5:00	NA	NA	NA	NA
1/2T	54%	3.0															
3/4T	40%	4.5															
1T	N/A	6.2															
Ref. dB	42 dB																



Additional Comments/Sketch

M.R. Martin, ASEE 10-25-82

Ultrasonic Examination Report



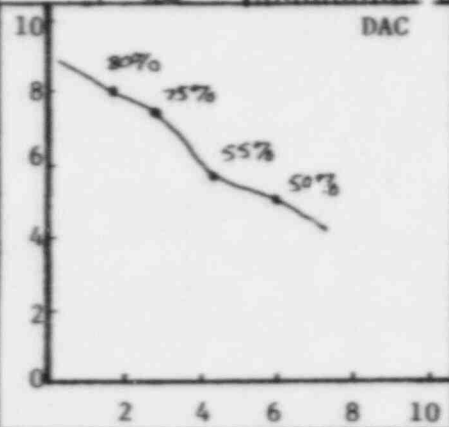
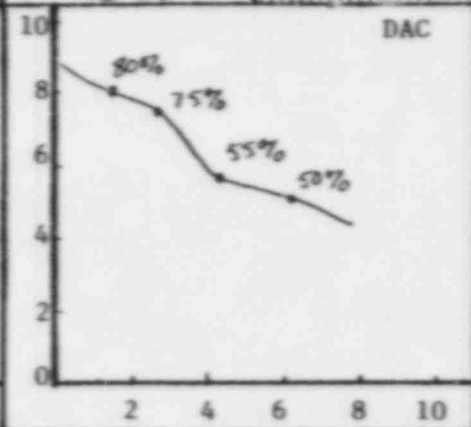
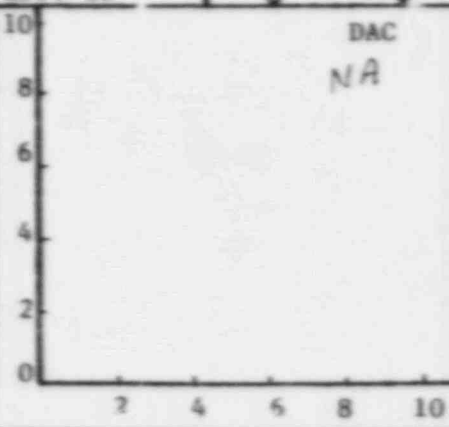
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/03	Iso/Drawing No. Zone 03 R.2 F.C.2
Procedure ISI-26 R2 FCI	Exam Surface I.D.	Examiner/Level N. Longenecker II	VCR Supervisor Daniel Jensen	Date 10-19-82
Component/Piping System S.G weld designation	Pl N/A	Weld Type Butt	Cal. Block UT-44	Couplant: Type 40 Batch No. 8124

Continuation Sheet Attached
 Yes No

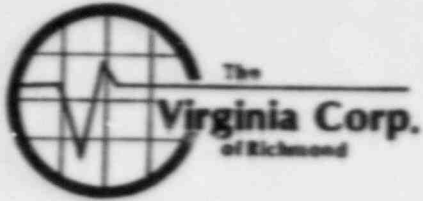
Field Changes:
 Yes No
 If Yes, Number F.C.1

Transducer	0°	45°	60°	Instrument			
S/N	NA	607152	NA	Mfr.	Sonic	Model	Mark I
Size		.5"		S/N	01930E	RepRate	3K
Frequency		2.25 MHz		Reject	off	Filter	M1
Beam Angle		45°		Damp	MIN	Coax	6' BNctand
				Freq.	2 MHz	Videa	Normal

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	1.5	.48	.35 .55	80%	1.5	.48	.34 .55	NA	NA	2:17	4:55	NA	NA
1/2 T			75%	3	.89	.8 1.0	75%	3	.89	.8 1.0						
3/4 T			55%	4.5	1.29	1.17 1.37	55%	4.5	1.29	1.17 1.37						
1 T			50%	6.2	N/A	N/A N/A	50%	6.2	N/A	N/A N/A						
Ref. dB					43 db				43 db							



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet Page of

Customer L P & L	Plant WATERFORD	Unit 3	Loop/ Zone 1 3	Iso/Drawing No. ZONE 3 R-2 FC.2
Procedure ISI. 26 R-2, FC.1	Exam Surface I.D.	Examiner/Level Gary Longenecker II	VCR Supervisor Daniel Jensen	Date 10-19-82
Component/Piping System S.G. WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-44	Couplant: Type & Batch # SONOTRACE 40 8124

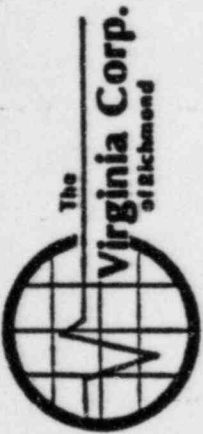
Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
03-035	NA	YES	YES	YES	PAR	APPROX. 5% LOSS OF CONTACT DUE TO I.D. CAP TO TUBESHEET CONFIGURATION	CLEAN	GROUND	RI	SAT.	*

* O.D. GEOMETRY NOTICED IN 5 SCAN (45°)
75% WRANGING FROM 1 1/2" @ 6.85w TO 1 5/8" @
B. 2w ON THE S SIDE 360°

M.R. Martin A.N.I.F 10-19-82

Ultrasonic Examination Report

Indication Record



Customer
LP&L

Plant
WATERFORD

Unit
3

Loop
i

Procedure
I.S.I. 2.6 R-2, F.C.1

Examiner/Level
Larry Bengelbeck II

VCR Supervisor
Ronald Jensen

Date
10-19-82

Component/Piping System
S.G. WELD DESIGNATION ZONE 3 R-2, F.C.2

ISO Drawing No.
UT-44

Cal. Standard No./Thickness
2.00"

Weld No.	Ind No.	Max. % DAC	Indication Length		Minimum Depth S.U. Pos.	Sweep Reading	Maximum Depth S.U. Pos.	Sweep Reading	Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
			From	To										
03-035	1	115%	5 3/4"	6 1/4"	5/16" (2)	5.5	1 1/8" (2)	5.5	0°	0°	1.870"	* 1	* 2	
03-035	2	115%	11 3/8"	11 3/4"	5/8" (2)	5.3	1 1/8" (2)	5.3	0°	0°	1.870"			
03-035	3	100%	38 13/16"	39 1/4"	2 1/4" (2)	2.8	2 3/4" (2)	2.8	0°	0°	1.870"			
03-035	4	75%	40 3/4"	40 7/8"	2 3/8" (2)	3.1	2 1/2" (2)	3.1	0°	0°	1.870"			
03-035	5	110%	42 3/4"	43 1/8"	1/2" (2)	5.2	5/8" (2)	5.2	0°	0°	1.870"			

* 1 UNPARALLEL O.D. CROWN

* 2 TUBESHEET

M.R. Martin, AN IF 10-25-82

Ultrasonic Examination Report



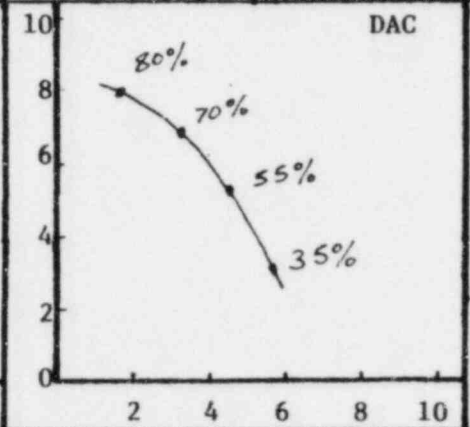
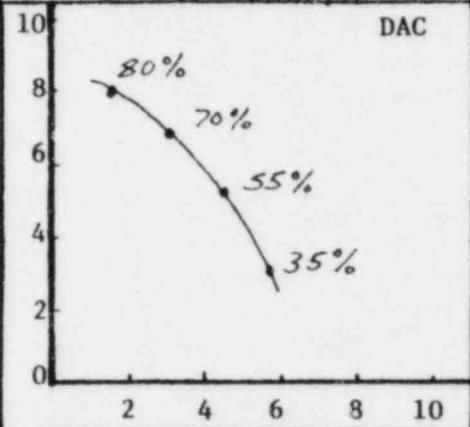
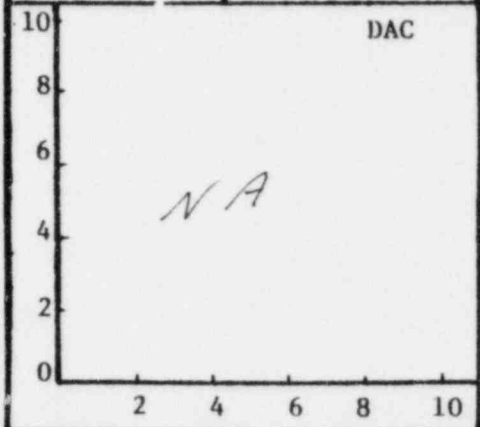
Customer <i>L P + L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1 03</i>	Iso/Drawing No. <i>Zone 03 R.2 F.C.2</i>
Procedure <i>ISI 2.6 R.2 F.C.1</i>	Exam Surface <i>IO</i>	Examiner/Level <i>James [Signature]</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-21-82</i>
Component/Piping System <i>S.G. Weld Designation</i>	Pipe Size <i>NA</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-44</i>	Couplant: <i>Sonocrace</i> Type <i>40</i> Batch No. <i>8/24</i>

Continuation Sheet Attached
 Yes No

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

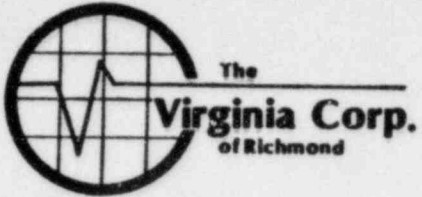
Transducer	0°	45°	60°	Instrument			
	S/N <i>NA</i>	<i>NA</i>	<i>011038</i>	Mfer. <i>Sonic</i>	Model <i>Mark 1</i>		
	Size <i>NA</i>		<i>.50"</i>	S/N <i>03704E</i>	RepRate <i>3K</i>		
	Frequency <i>NA</i>		<i>5.0 MHz</i>	Reject <i>off</i>	Filter <i>off</i>		
	Beam Angle <i>NA</i>		<i>61°</i>	Damp <i>Min.</i>	Coax <i>6' BNC-MQ</i>		
			Freq. <i>5.0 MHz</i>	Video <i>Norm</i>			

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>.750</i>	<i>.687 .875</i>	<i>80%</i>	<i>1.5</i>	<i>.750</i>	<i>.687 .875</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>7:32</i>	<i>9:55</i>
<i>1/2 T</i>			<i>70%</i>	<i>3.0</i>	<i>1.468</i>	<i>1.375 1.593</i>	<i>70%</i>	<i>3.0</i>	<i>1.468</i>	<i>1.375 1.593</i>						
<i>3/4 T</i>			<i>55%</i>	<i>4.5</i>	<i>2.156</i>	<i>1.937 2.187</i>	<i>55%</i>	<i>4.5</i>	<i>2.156</i>	<i>1.937 2.187</i>						
<i>1 T</i>			<i>35%</i>	<i>5.8</i>	<i>NA</i>	<i>NA NA</i>	<i>35%</i>	<i>5.8</i>	<i>NA</i>	<i>NA NA</i>						
Ref. dB			<i>57 db</i>				<i>57 db</i>									



Additional Comments/Sketch

M. R. Martin, ANEF 10-29-82



Ultrasonic Examination Report - Continuation Sheet

Page **1** of **2**

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>1 3</i>	Iso/Drawing No. <i>ZONE 3 RE12 FC2</i>
Procedure <i>ISI 2.6 REV2 FC1</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>James [Signature] LVII</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-29-82</i>
Component/Piping System <i>STEAM GENERATOR WELD DESIGNATION</i>	Pipe Size <i>NA</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-44</i>	Couplant: Type & Batch # <i>SONOTRACE 40 8124</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>03-035</i>	<i>NA</i>	<i>YES</i>	<i>YES</i>	<i>YES</i>	<i>NA</i>	<i>O.D. GEOMETRY 360° AROUND</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT</i>	
						<i>5 SCAN ON 5 SIDE 159% OF</i>					
						<i>DAC RANGING FROM 4 1/2"</i>					
						<i>AT 8.5 SWEEP TO 5 3/8" AT</i>					
						<i>9.8 SWEEP</i>					



M. R. Martin, AN II 11/9/82
Ultrasonic Data Sheet
 for
Thickness Measurement

Customer <i>L P & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1 03</i>
Component/Piping System <i>S.G. Weld Designation</i>	Examiner/Level <i>James Wright III</i>	Date <i>10-22-82</i>	
Procedure <i>ISI 2.5 R.O F.C. 1</i>	Iso/Drawing No. <i>Zone 03 R.2 F.C. 2</i>	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>K.B. Acrotech</i>	Size <i>.50" dia.</i>	Cal. Block <i>UT-3</i>	
Model <i>Mark 1</i>	Freq. <i>2.25 MHz</i>	Cal. Block		
S/N <i>01930E</i>	Serial No. <i>J02184</i>	Range Cal. <i>7" @ 6.2</i>		
Reject <i>off</i>	Coax. Cable <i>6' BNC-BNC</i>	Calibration Checks		
Damp. <i>Min.</i>	Gain <i>40 db</i>	<i>CAL IN 8:12</i>		
Freq. <i>2.0 MHz</i>	<i>CAL OUT 10:50</i>			
Rep. Rate <i>3K</i>				
Filter <i>off</i>				
Video <i>Norm</i>				
Couplant <i>Sonotrace 40 8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>03-032</i>	<i>12</i>	<i>6.496</i>	<i>NA</i>	<i>6.496</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>03-032</i>	<i>2</i>	<i>6.496</i>		<i>6.496</i>					
<i>03-032</i>	<i>4</i>	<i>6.496</i>		<i>6.496</i>					
<i>03-032</i>	<i>6</i>	<i>6.496</i>		<i>6.496</i>					
<i>03-032</i>	<i>8</i>	<i>6.496</i>		<i>6.496</i>					
<i>03-032</i>	<i>10</i>	<i>6.496</i>		<i>6.496</i>					

Sketch/Identification

NA for 2 side of 03 JE 03-032 which will be covered by 1" transducer

W.R. Martin, ANFI 11-1-82

Ultrasonic Examination Report



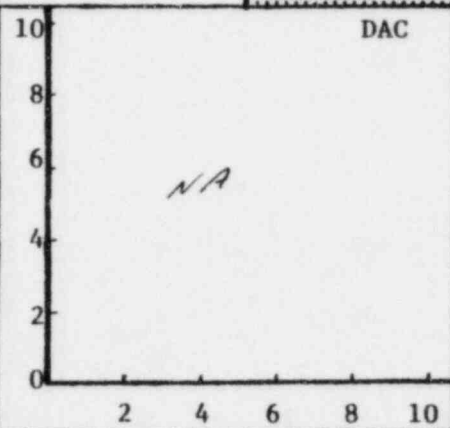
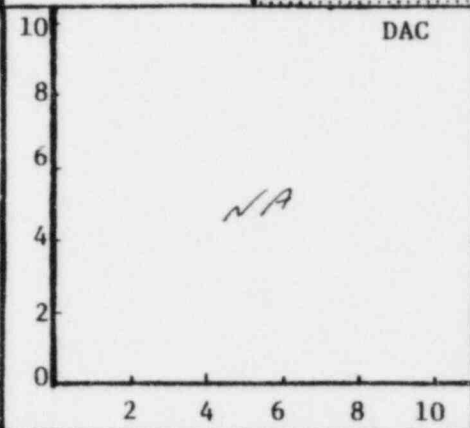
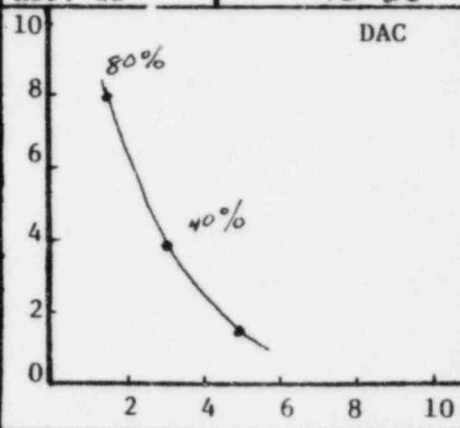
Customer <i>LP+L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1 03</i>	Iso/Drawing No. <i>Zone 03 A.2 F.C. 2</i>
Procedure <i>ISI 2.6 R2 FC.1</i>	Exam Surface <i>I.O.</i>	Examiner/Level <i>James W. W. W.</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-22-82</i>
Component/Piping System <i>S.G. Weld Designation</i>	Pipe Size <i>NA</i>	Weld Type <i>BUTT</i>	Cal. Block # <i>UT-3</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
Yes No

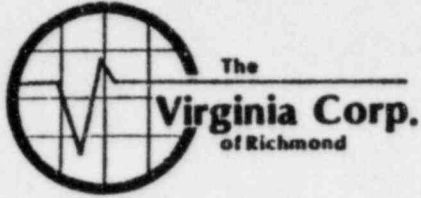
Field Changes:
Yes No
If Yes, Number *1*

Transducer	Instrument		
	0°	45°	60°
S/N	<i>J02184</i>	<i>NA</i>	<i>NA</i>
Size	<i>.50 in.</i>		
Frequency	<i>2.25</i>		
Beam Angle	<i>0°</i>		
Mfr.	<i>Sonic</i>	Model	<i>Mark I</i>
S/N	<i>01930E</i>	RepRate	<i>3K</i>
Reject	<i>off</i>	Filter	<i>off</i>
Damp	<i>Min</i>	Coax	<i>6' BNC-BNC</i>
Freq.	<i>2.0 MHz</i>	Video	<i>Norm</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>8:12</i>	<i>10:50</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>40%</i>	<i>3.0</i>															
<i>3/4 T</i>	<i>20%</i>	<i>4.5</i>															
<i>1 T</i>	<i>NA</i>	<i>6.2</i>															
Ref. dB	<i>40 dB</i>																



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet

Page of

Customer LP IL	Plant WATERFORD	Unit 3	Loop/ Zone Z11E 043	Iso/Drawing No. ZONE 03 REV 2 FCL
Procedure ISI 2.6 REV 2 FCL	Exam Surface I.D.	Examiner/Level James L. W. IV II	VCR Supervisor Daniel Jensen	Date 10-22-82
Component/Piping System S.G. WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-3	Couplant: Type & Batch # 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	
03-032	PAR	NA	NA	NA	PAR	DUE TO THE CURVATURE OF THE STAY CYLINDER 1/2" X DUCKER USED FOR 0° ON THE WELD ON THE BASEMETAL S SIDE. LOSS OF BACK REFLECTION ON THE BASEMETAL SCAN 2 1/2" FROM E OF WELD S SIDE, DUE TO THE GREATER THICKNESS OF THE STAY CYLINDER.	SMOOTH	GROUNDED	NI	SAT	

M.R. Martin, ANIS 11-82



Ultrasonic Examination Report

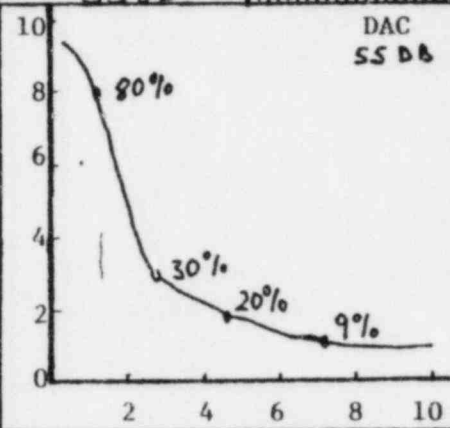
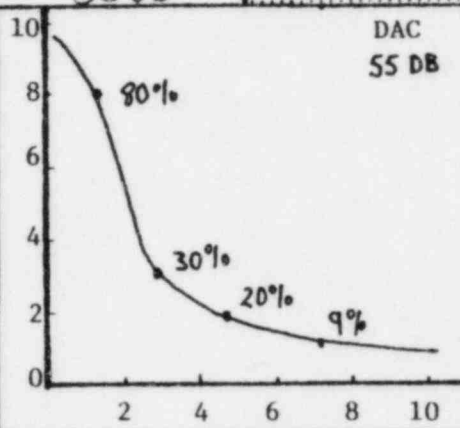
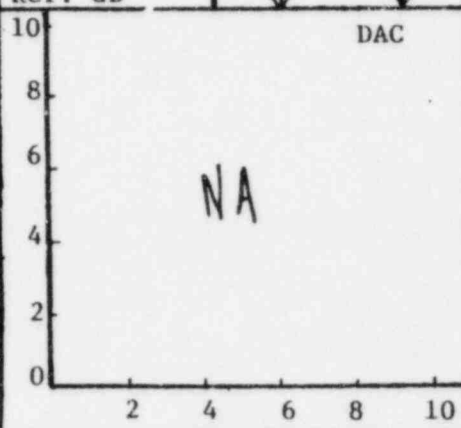
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1/03	Iso/Drawing No. ZONE 03 REV.2, F.C.2
Procedure ISI 2.6 REV.2 FC1	Exam Surface ID.	Examiner/Level Danna [Signature] SVT	VCR Supervisor Daniel [Signature]	Date 10-25-82
Component/Piping System STEAM GENERATOR WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-3	Couplant: SONOTRACE Type 40 Batch No B124

Continuation Sheet Attached
 Yes No

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

	Transducer	0°	45°	60°	Instrument			
	S/N	NA	M17155	NA	Mfr.	SONIC	Model	MARK I
	Size		.50"		S/N	05304E	RepRate	3K
	Frequency		1.0MHZ		Reject	OFF	Filter	OFF
	Beam Angle	↓	44°	↓	Damp	MIN	Coax	6BNC-MD
				Freq.	1.0MHZ	Video	Norm	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4	NA	NA	80%	1.5	1 11/16"	1 1/16" 1 1/8"	80%	1.5	1 11/16"	1 1/16" 1 1/8"	NA	NA	8:33	11:10	NA	NA
1/2			30%	3.0	2 15/16"	2 1/16" 3 3/8"	30%	3.0	2 15/16"	2 1/16" 3 3/8"						
3/4			20%	4.5	4.0"	3 3/8" 4 1/8"	20%	4.5	4.0"	3 3/8" 4 1/8"						
5/4			9%	7.2			9%	7.2								



Additional Comments/Sketch

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

Ultrasonic Examination Report - Continuation Sheet Page 1 of 2

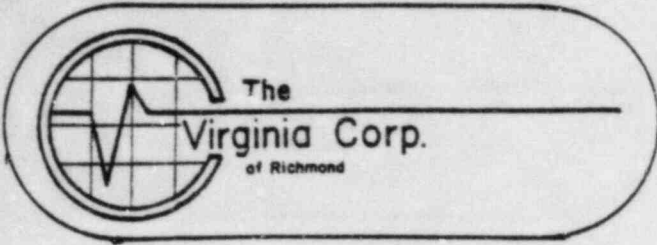


Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition			Examination Results	Remarks
		2	5	7 & 8		Base Metal	Weld	Visual		
03-032	NA	PAS	YES	PAS	SEE ATTACHED SHEET	SMOOTH	GROUND	NI	SAT	

Customer: L.P. IL Plant: WATERFORD Unit: 3 Loop/Zone: 03 ISO/Drawing No.: ZONE 03 REV 2 FC2

Procedure: ISI 2.6 REV 2 FC1 I.D. Examiner/Level: [Signature] L.I.I. VCR Supervisor: [Signature] Date: 10-35-82

Component/Piping System: STEAM GENERATOR WELD DESIGNATION: NA Weld Type: BUTT Cal. Block Couplant: Type & Batch # UT-5 SENCORAGE 40 8124



DATE 10-25-82

PAGE 2 OF 2

TO _____

SUBJECT INSPECTION LIMITATIONS AND
REMARKS

WELD # 03-032

AREAS MISSED BY $\frac{1}{2}$ " 44° TRANSDUCER SHALL BE COVERED BY 1.0" TRANSDUCER. THE 2, 5, 7 & 8 SCANS ONLY PERFORMED ON THE ^SIDE; 1.0" ON 2 SIDE

GEOMETRY 360° AROUND S SIDE 5 SCAN 224% OF DAC, $4\frac{3}{4}$ " FROM 4 S SIDE @ 5.4 SHEEP

DIVIDER PLATE NOTICED FOR WIDTH OF AREA EXAMINED IN 7 & 8 SCANS COMING UP @ 5.2 SHEEP; 100% OF DAC. IN 7 SCAN 15.0" FROM 0 DATUM AND 52 $\frac{1}{2}$ " FROM 0 DATUM IN 8 SCAN 20 $\frac{1}{2}$ " FROM 0 DATUM AND 57.0" FROM 0 DATUM

SIGNED James Wright

Ultrasonic Examination Report



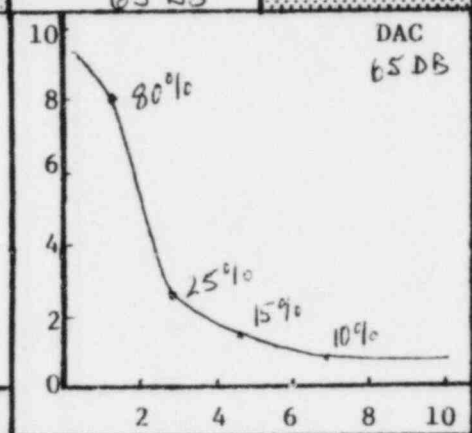
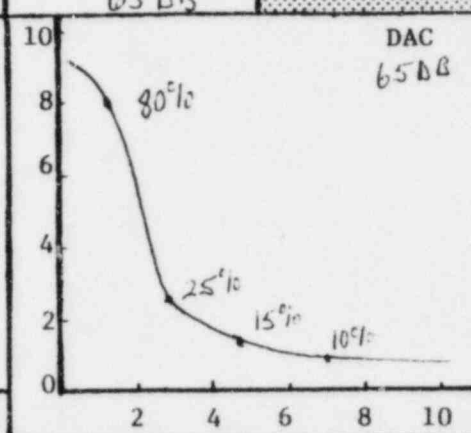
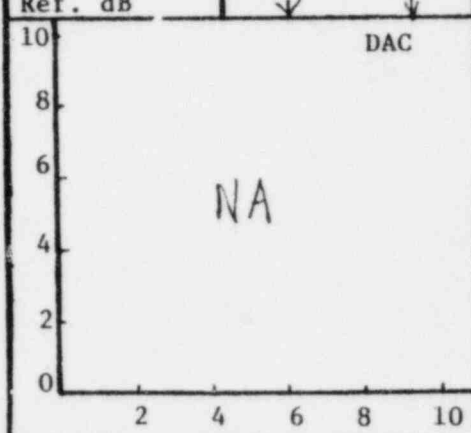
Customer LPIL	Plant WATERFORD	Unit 3	Loop/Zone 1 03	Iso/Drawing No. ZONE 03 REV 2 FC2
Procedure ISI 2.6 REV 2 FC1	Exam Surface I.O.	Examiner/Level James Huff LVI	VCR Supervisor Daniel Jensen	Date 10-26-82
Component/Piping System STEAM GENERATOR WGLD DESIGNATION	Pipe Size NA	Weld Type BJT	Cal. Block UT-3	Couplant: SON-TRACE Type 40 Batch No. 8124

Continuation Sheet Attached
 Yes No

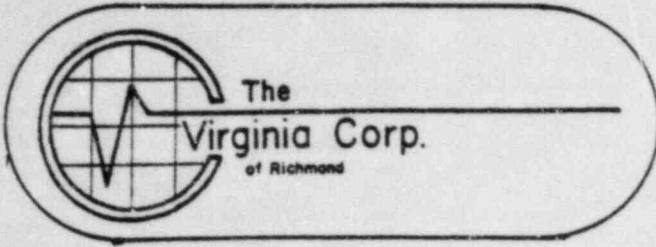
Field Changes:
 Yes No
 If Yes, Number **1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	NA	607150	Mfr.	SONIC	Model	MARK I
			.50"	S/N	01930E	RepRate	3K
			2.25 MHz	Reject	OFF	Filter	OFF
		60°	Damp	M.N	Coax	6' BNL-MD	
			Freq.	2.0 MHz	Video	NORM	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	NA	NA	80%	1.5	2 7/16"	2 3/16" 2 13/16"	80%	1.5	2 7/16"	2 3/16" 2 13/16"	NA	NA	NA	NA	4:50	1:47
1/2T			25%	3.0	5 3/16"	4 3/4" 6 1/8"	25%	3.0	5 3/16"	4 3/4" 6 1/8"						
3/4T			15%	4.5	7 3/4"	7 1/16" 9 1/32"	15%	4.5	7 3/4"	7 1/16" 9 1/32"						
5/4T			10%	7.4			10%	7.4								



Additional Comments/Sketch



DATE 10-26-82

PAGE 2 OF 2

TO _____

SUBJECT INSPECTION LIMITATIONS AND
REMARKS

WELD # 03-032

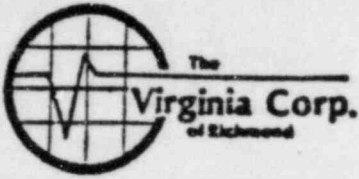
AREAS MISSED BY $\frac{1}{2}$ " 60° TRANSDUCER SHALL BE COVERED BY 1.0" TRANS-
DUCER. THE 2, 5, 7 & 8 SCANS ONLY PERFORMED ON THE 5 SIDE AND 1.0" ON THE
2 SIDE

GEOMETRY 360° AROUND 5 SIDE 5 SCAN 25 1/4% OF DAC 6 5/8" FROM
4 @ 5.5 SWEEP

DIVIDER PLATE NOTICED FOR WIDTH OF AREA EXAMINED IN 7 & 8 SCANS
COMING UP @ 44 SWEEP AND 80% OF DAC. IN 7 SCAN 14.0" FROM 0 DATUM AND 51.0
FROM 0 DATUM IN 8 SCAN 18 7/8" FROM 0 DATUM AND 55 1/2" FROM 0 DATUM

NRI NOTICED IN 7 & 8 SCANS 40% OF DAC, 1.0 SWEEP IN 7 SCAN 3/4'
FROM 4 ON 5 SIDE 22 7/8" FROM 0 DATUM. IN 8 SCAN 3/4" FROM 4 ON 5 SIDE
25 1/4" FROM 0 DATUM

SIGNED James Witt



M. R. Martin, ANSI 11-9-82
Ultrasonic Data Sheet
 for
Thickness Measurement

Customer <i>L.P. & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1 3</i>
Component/Piping System <i>S.G. WELD DESIGNATION</i>	Examiner/Level <i>Nary Longenecker II</i>	Date <i>10-23-82</i>	
Procedure <i>I.S.I. 2.5 RO, FC. 1</i>	Iso/Drawing No. <i>ZONE 3 R2, FC2</i>	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>K-B AEROTECH</i>	Size <i>1. " DIA.</i>	Cal. Block <i>UT-3</i>	
Model <i>MARK 1</i>	Freq. <i>5.0 MHZ.</i>	Serial No. <i>219737</i>	Cal. Block	
S/N <i>01930E</i>	Coax. Cable <i>12'</i>	Gain <i>75 db</i>	Range Cal. <i>7" @ 6.250</i>	
Reject <i>OFF</i>			Calibration Checks	
Damp. <i>MIN.</i>			<i>CAL. IN 10:25</i>	
Freq. <i>5. MHZ.</i>			<i>CAL. OUT 12:50</i>	
Rep. Rate <i>3K</i>				
Filter <i>H1</i>				
Video <i>NORM.</i>				
Couplant <i>SONOTRACE 40 812</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>03-032</i>	<i>12</i>	<i>6.548</i>	<i>6.548</i>	<i>* 1</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>03-032</i>	<i>2</i>	<i>6.548</i>	<i>6.548</i>						
<i>03-032</i>	<i>4</i>	<i>6.548</i>	<i>6.548</i>						
<i>03-032</i>	<i>6</i>	<i>6.435</i>	<i>6.435</i>						
<i>03-032</i>	<i>8</i>	<i>6.548</i>	<i>6.548</i>						
<i>03-032</i>	<i>10</i>	<i>6.548</i>	<i>6.548</i>						
<i>03-033</i>	<i>12</i>	<i>6.548</i>	<i>6.548</i>	<i>6.548</i>					
<i>03-033</i>	<i>2</i>	<i>6.548</i>	<i>6.548</i>	<i>6.548</i>					
<i>03-033</i>	<i>4</i>	<i>6.548</i>	<i>6.548</i>	<i>6.548</i>					
<i>03-033</i>	<i>6</i>	<i>6.548</i>	<i>6.548</i>	<i>6.548</i>					
<i>03-033</i>	<i>8</i>	<i>6.548</i>	<i>6.548</i>	<i>6.548</i>					
<i>03-033</i>	<i>10</i>	<i>6.548</i>	<i>6.548</i>	<i>6.548</i>					

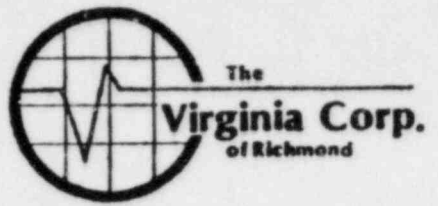
Sketch/Identification

** 1 5 SIDE SHALL BE COVERED BY 1/2" TRANSDUCER DUE TO RADIUS.*

N/A FOR THICKNESS ON 03-034 DUE TO TUBE-SHEET

M.R. Martin, ANII 1-9-82

Ultrasonic Examination Report



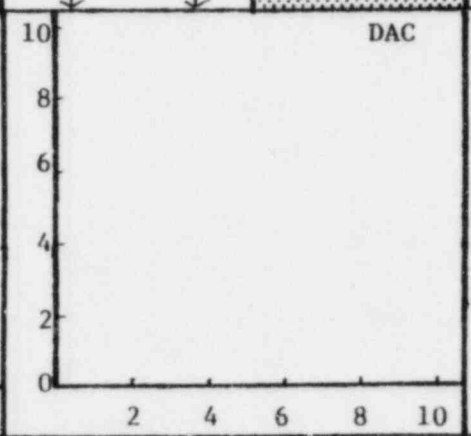
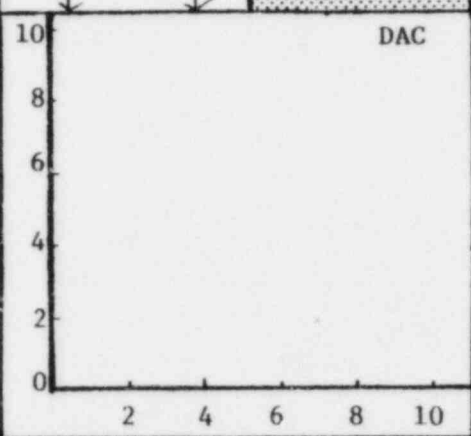
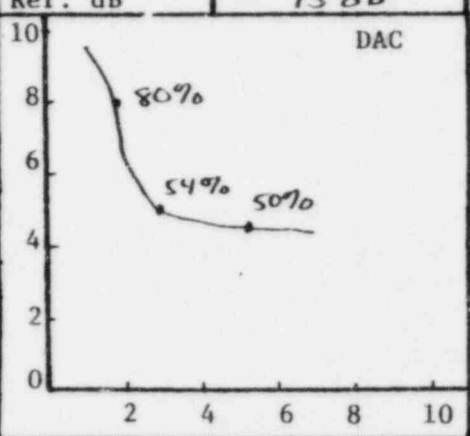
Customer LP&L		Plant Waterford		Unit 3	Loop/Zone 1/03	Iso/Drawing No. ZONE 03 R.2 F.C.2	
Procedure ISI-2.6 R.2 F.C.1	Exam Surface I.D.	Examiner/Level Ray Longmacker II		VCR Supervisor Daniel Jensen		Date 10-23-82	
Component/Piping System S.G Weld designation		Pipe Size N/A	Weld Type BUTT	Cal. Block UT-3	Couplant: <small>SONOTRAC</small> Type 40 Batch No. 8124		

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number 1

	Transducer	0°	45°	60°	Instrument			
	S/N	L19737	NA	NA	Mfr.	SONIC	Model	Mark I
	Size	1.0"			S/N	01930E	RepRate	3K
	Frequency	50 mhz			Reject	OFF	Filter	H1
	Beam Angle	0°			Damp	MIN.	Coax	6' Bkt to Bkt
					Freq.	5 mhz	Video	Normal

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
											10:25 ^{AC}	12:50 ^{AC}	NA	NA	NA	NA	
1/4T	80%	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	10:25 ^{AC}	12:50 ^{AC}	NA	NA	NA	NA
1/2T	54%	3															
3/4T	50%	4.5															
1T	N/A	6.2															



Additional Comments/Sketch



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

Customer <i>LP & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>1 3</i>	Iso/Drawing No. <i>ZONE 3 R-2, FC 2</i>
Procedure <i>I.S.I. 26 R-2, FC 1</i>	Exam Surface <i>I. D.</i>	Examiner/Level <i>Sary Longenecker II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-23-82</i>
Component/Piping System <i>S.G. WELD DESIGNATION</i>	Pipe Size <i>NA</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-3</i>	Couplant: Type & Batch # <i>SONOTRACE 40 B12A</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
03-032	NA	PAR	NA	NA	NA	PAR	*	CLEAN GROUND		NI	SAT.	
03-033	↓	YES	↓	↓	↓	YES		CLEAN GROUND		NI	SAT.	
03-034	↓	YES	↓	↓	↓	YES		CLEAN GROUND		NRI	SAT.	
						* PAR DUE TO RADIUS ON 5 SIDE OF WELD (0° HAZ. & BASE METAL 5 SIDE) TO BE EXAMINED WITH 1/2" TRANSDUCER.						

W.R. Martin, ANEI 11-9-82



Ultrasonic Examination Report

Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/03</i>	Iso/Drawing No. <i>ZONE 03 R.2 F.C.2</i>
Procedure <i>ISI-26 R2 F.C.1</i>	Exam Surface <i>1.0.</i>	Examiner/Level <i>Very Low penetr II</i>	VCR Supervisor <i>Nasir Jensen</i>	Date <i>10-25-82</i>
Component/Piping System <i>SG weld designation</i>	Pipe Size <i>N/A</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-3</i>	Couplant: <i>Sonograce</i> Type <i>40</i> Batch No. <i>8124</i>

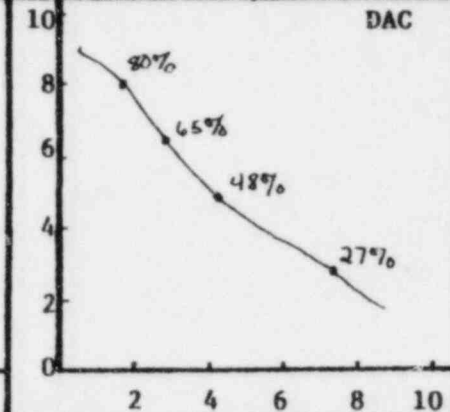
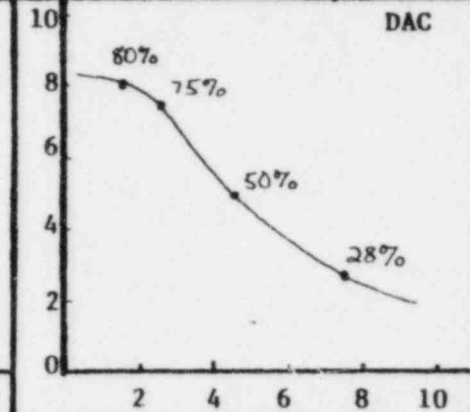
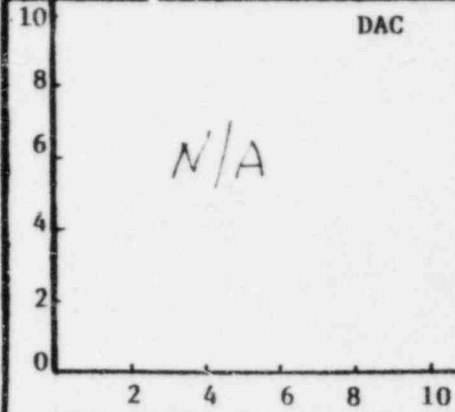
Continuation Sheet Attached
 Yes No

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

Transducer <i>0°</i>	<i>45°(215)</i>	<i>45°(718)</i>	Instrument			
S/N <i>NA</i>	<i>L1901</i>	<i>L19134</i>	Mfg. <i>SONIC</i>	Model <i>Mark I</i>	RepRate <i>3K</i>	Filter <i>H1</i>
Size <i>1.0 DIA</i>	<i>1.0 DIA</i>	<i>1.0 DIA</i>	Reject <i>off</i>	Coax <i>MIN.</i>	<i>12' Enc to Bk</i>	
Frequency <i>2.25 MHz</i>	<i>2.25 MHz</i>	<i>2.25 MHz</i>	Damp <i>MIN.</i>	Coax <i>MIN.</i>	<i>Normal</i>	
Beam Angle <i>45°</i>	<i>45°</i>	<i>45°</i>	Freq. <i>2 MHz</i>	Videa <i>MIN.</i>	<i>Normal</i>	

Calibration 0°			45° 2 & 5 Scan						45° 7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out			
<i>1/4T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>1 1/16</i>	<i>1 1/16</i>	<i>1 1/16</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>11:10</i>	<i>3:05</i>	<i>NA</i>	<i>NA</i>	
<i>1/2T</i>			<i>75%</i>	<i>3.0</i>	<i>3 3/16</i>	<i>2 3/8</i>	<i>3 1/8</i>	<i>65%</i>	<i>3</i>											
<i>3/4T</i>			<i>50%</i>	<i>4.5</i>	<i>4 7/8</i>	<i>4 3/8</i>	<i>5 3/8</i>	<i>48%</i>	<i>4.5</i>											
<i>1T</i>			<i>N/A</i>	<i>6.2</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>6.2</i>											
<i>5/4T</i>			<i>28%</i>	<i>7.5</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>27%</i>	<i>7.5</i>											

Ref. dB *64 db* *64 db*



Additional Comments/Sketch

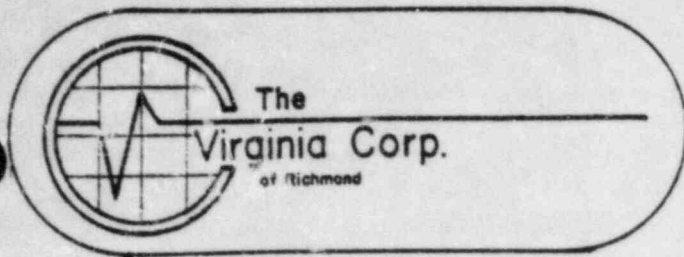
M.R. Martin, ANII 11-9-82

Ultrasound Examination Report - Continuation Sheet



Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition			Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual		
03-032	NA	Par	Par	Par	See attached sheet	Clean	Ground	N.I	Sat	See attached	
03-033	↓	Yes	Yes	Yes		Clean	Ground	NRI	Sat	See attached	
03-034	↓	Yes	Yes	Yes		Clean	Ground	NRI	Sat	See attached	

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/03	Iso/Drawing No. ZANG 03 R-2 F.C.T
Procedure ISI-2.6 R-2 F.C.1	Exam Surface I.D.	Examiner Ray Longenecker	VCR Supervisor Dennis Jensen	Date 10-25-82
Component/Piping System S G weld designation	Pipe Size N/A	Weld Type Butt	Cal. Block UT-3	Couplant: Type & Batch # SonoTrace 40 #8124



DATE 10-25-82

PAGE OF

TO _____

SUBJECT INSPECTION LIMITATIONS
& REMARKS
ZONE 3, 45°

WELD NO. 03-032 AREAS MISSED BY 1" TRANSDUCER
SHALL BE COVERED BY 1/2".

THE 2, 5, 7 & 8 SCANS ONLY PERFORMED
ON THE 2 SIDE TO 1" ON THE 5 SIDE.

DIVIDER PLATES NOTICED FOR WIDTH OF
AREA EXAMINED IN 7 & 8 SCANS COMING
UP AT 5.1 SW. AND 75% DAC. IN 7 SCAN
15" (?) & 52 3/8" AND IN 8 SCAN 20 7/8" (?)
& 57 3/4" (?).

WELD NO. 03-033 NRI'S NOTICED AT RANDOM

DIVIDER PLATES NOTICED FOR WIDTH OF
EXAMINATION AREA IN 7 & 8 SCANS COMING
UP AT 5.1 SW. AND 75% DAC. IN 7 SCAN
15" (?) & 52 3/8" (?) AND IN 8 SCAN 20 7/8" (?)
& 57 3/4" (?).

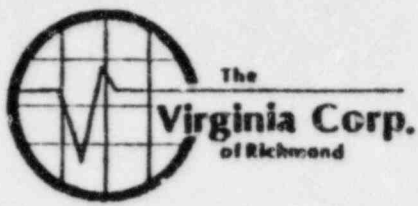
WELD NO. 03-034 O.D. GEOMETRY NOTICED IN 2 SCAN
COMING UP ~ 6.0 TO 6.4 SW. @ 100% DAC. ~ &
TO 1 1/4" (S) FOR 360° (EXCEPT WHERE DIVIDER
PLATES EXIST). CYLINDER TO TUBE HEET RADIUS.

TUBES IN TUBESHEET NOTICED IN 7 & 8
SCANS 150% DAC BEGINNING AT 5.5 SW.

NRI'S NOTICED AT RANDOM EXCEPT
FOLLOWING. OBSERVED IN 5 SCAN, INT. 360°
WITH DAC RANGING FROM 25% TO 38% DAC.
SWEEP POS. RANGING FROM .8 TO 1.5 AND LOCATION
RANGING FROM 2 1/2" TO 3 1/4" ON THE 5 SIDE

SIGNED Larry Longenecker

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



Ultrasonic Examination Report

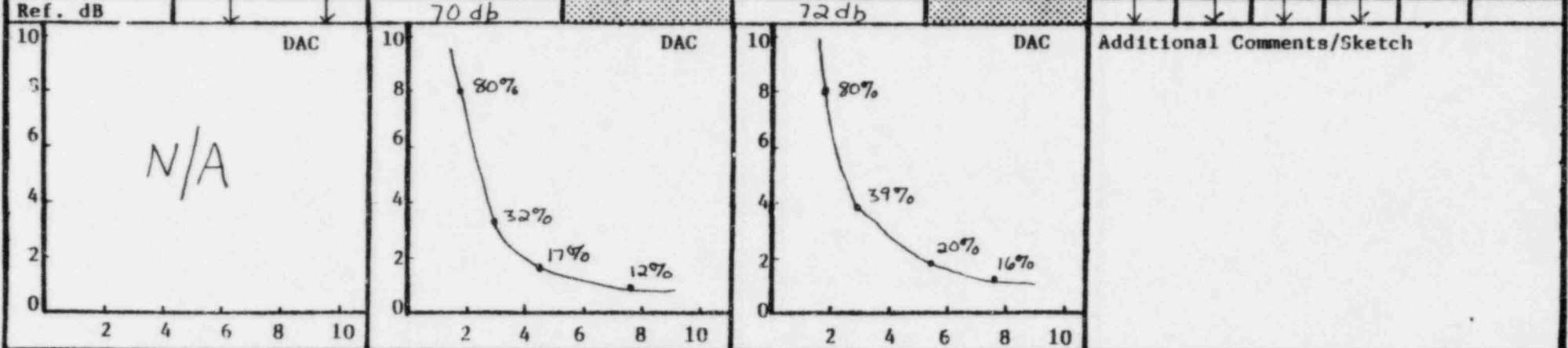
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1/03	Iso/Drawing No. Zone 03 R.2 F.C.2
Procedure ISI-2.6 R.2 FC 1	Exam Surface I.D.	Examiner/Level Ray Longenecker II	VCR Supervisor Daniel Jensen	Date 10-29-82
Component/Piping System S.G weld designation	Pipe Size N/A	Weld Type Butt	Cal. Block # UT-3	Couplant: Type <u>Sonotrace 40</u> Batch No. 8124

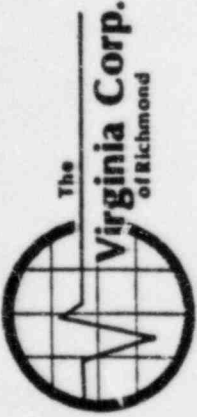
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number 1

Transducer	0°	60°(215)	60°(718)	Instrument				
	S/N	NA	L19801	L19134	Mfr.	SONIC	Model	Mark I
	Size		1.0"	1.0"	S/N	01930E	RepRate	3K
	Frequency		2.25 MHz	2.25 MHz	Reject	off	Filter	HI
Beam Angle		60°	60°	Damp	MIN	Coax	12' BNC to BNC	
				Freq.	2 MHz	Video	Normal	

Calibration 0°			60° 2 & 5 Scan						60° 7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4T	NA	NA	80%	1.5	3 1/4"	2 7/8	3 3/8	80%	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1/2T			32%	3.0	7"	6 1/16	7 1/16	39%	3.0											
3/4T			17%	4.5	11 1/16"	9 7/8	12 1/2	20%	4.5											
1T			N/A	6.2	N/A	N/A	N/A	N/A	6.2											
5/4T			12%	7.5	N/A	N/A	N/A	16%	7.5											





Ultrasonic Examination Report - Continuation Sheet

Page **1** of **3**

Customer LP&L	Plant Waterford	Unit 3	Loop/ Zone 1/03	Iso/Drawing No. Zone 03 R 2 F.C.2
Procedure ISI-2.6 R.2 F.C.1	Exam Surface I.D.	Examiner/Level Ray Longenecker II	VCR Supervisor Donald Jensen	Date 10-29-82
Component/Piping System S.G. Weld designation	Pipe Size N/A	Weld Type Butt	Cal. Block Couplant: Type & Batch # UT-3 SonoTrace 40 #R124	

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
03-032	NA ↓	Par	Par	Par	See attached sheet	Clean	Ground	NI	Sat	See attached
03-033	NA ↓	Yes	Yes	Yes		Clean	Ground	RI	Sat.	See attached
03-034	NA ↓	Yes	Yes	Yes		Clean	Ground	RI	Sat.	See attached

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

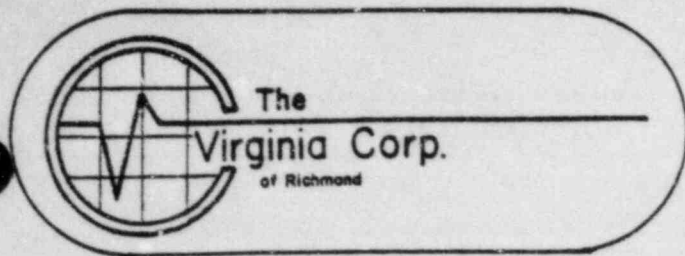
Ultrasonic Examination Report

Indication Record



Customer LPTL			Plant Waterford			Unit 3			Loop 1					
Procedure ISI-2.6 R.2 F.C.1			Examiner/Level Navy Longmeyer II			VCR Supervisor Daniel Jensen			Date 10-29-82					
Component/Piping System S.G weld designation			ISO Drawing No. Zone 03 R.2 F.C.2			Cal. Standard No./Thickness UT-3 / 7"								
Weld No.	Ind No.	Max. % DAC	Indication Length From To	Minimum Depth		S.U. Sweep Reading	S.U. Sweep Reading	Maximum Depth	Beam Angle	Beam Dir.	Base Metal Thickness	Weld Thick.	Base Metal Thickness	Remarks
				S.U. Pos.	Reading									
03-034	1	90%	23 5/8" 24"	2" (2)	1.9	3 1/4" (2)	2.2	2.2	60°	2	*	*	*	

* Unable to obtain thickness due to tubersheet.



The
Virginia Corp.
of Richmond

DATE 10-29-82

PAGE OF

TO _____

SUBJECT INSPECTION LIMITATIONS
1 REMARKS
ZONE 3, 60°

WELD NO. 03-032 AREAS MISSED BY 1" TRANSDUCER
SHALL BE COVERED BY 1/2".

THE 2, 5, 7 & 8 SCANS ONLY PERFORMED
ON THE 2 SIDE TO 1" ON THE 5 SIDE.

DIVIDER PLATES NOTICED FOR WIDTH OF
AREA EXAMINED IN 7 & 8 SCANS COMING UP
AT 3.6 SW. AND 100% DAC. IN 7 SCAN
13 3/4" (?) & 50 1/4" (?) AND IN 8 SCAN 23" (?)
& 60" (?)

WELD NO 03-033 NRI'S NOTICED AT RANDOM.

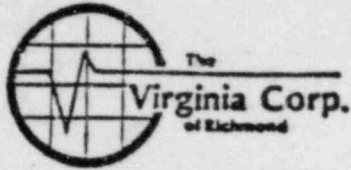
DIVIDER PLATES NOTICED FOR WIDTH OF
EXAMINATION AREA IN 7 & 8 SCANS COMING UP
AT 3.6 SW. AND 100% DAC. IN 7 SCAN 13 3/4" (?)
& 50 1/4" (?) AND IN 8 SCAN 23" (?) & 60" (?)

WELD NO. 03-034 O.D. GEOMETRY NOTICED IN 3 SCAN
COMING UP ~ 5.6 TO 6.1 SW. @ 80% DAC ~
6 1/2" (2) TO 8" (2) FOR 360° (EXCEPT WHERE DIVIDER
PLATES EXIST) CYLINDER TO TUBESHEET RADIUS.

TUBES IN TUBESHEET NOTICED IN 7 & 8 SCANS
150% DAC BEGINNING AT 4.1 SW.

NRI'S NOTICED AT RANDOM EXCEPT FOLLOWING
OBSERVED IN 5 SCAN, INT. 360° WITH DAC
RANGING FROM 25% TO 38%, SWEEP POS.
RANGING FROM 1.0 TO 1.9 AND LOCATION RANGING
FROM 4" TO 4 3/8" ON THE 5 SIDE

SIGNED Harry Longenecker



M.R. Martin, ANEF 10-25-82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 2/04
Component/Piping System S.G. weld designation	Examiner/Level <i>Larry Longenecker II</i>	Date 10-20-82	
Procedure ISI 2.5 R.O. F.C.1	Iso/Drawing No. ZONE 04-R-2 F.C.2	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfgr. SONIC	Mfgr. KB-Aerotech	Size .5"	Cal. Block UT-44
Model Mark I			Cal. Block N/A
S/N 05304E	Freq. 5 MHz		Range Cal. 2" @ 6.22
Reject OFF	Serial No. F08945		Calibration Checks IN-9:10 OUT-11:45
Damp. MIN	Coax. Cable 6' BNC to RNC		
Freq. 5 MHz			
Rep. Rate 3K	Gain 43 db		
Filter HI			
Video Normal			
Couplant SON: trace 40 #8124			

Examination Results

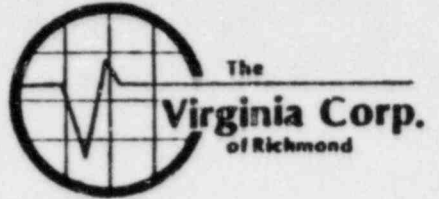
Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
04-035	12	*1	1.774	*2	NA	NA	NA	NA	NA
04-035	2		1.838						
04-035	4		1.838						
04-035	6		1.806						
04-035	8		1.741						
04-035	10		1.741						
NA	NA	NA	NA	NA					

Sketch/Identification

- *1 UNPARALLEL O.D. CROWN
- *2 TUBESHEET

W.R. Martin, ANEI 10-25-82

Ultrasonic Examination Report



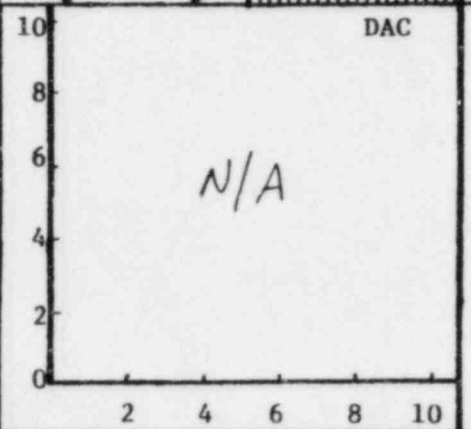
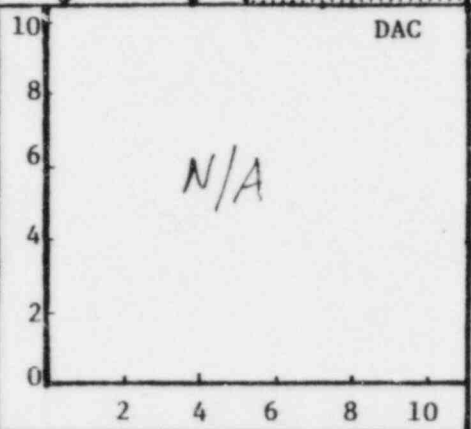
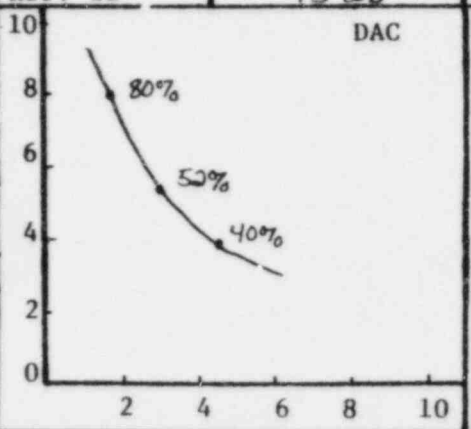
Customer LP+L		Plant Waterford		Unit 3	Loop/Zone 2/04	Iso/Drawing No. ZONC04 R.2 F.C.2	
Procedure ISI-2.6 R.2 F.C.1		Exam Surface I.D.	Examiner/Level <i>W.R. Martin</i> II		VCR Supervisor <i>Daniel Dene</i>		Date 10-20-82
Component/Piping System S.G. weld designation			Pipe Size N/A	Weld Type BUTT	Cal. Block # UT-44	Couplant: <i>Sonotrace</i> Type 40 Batch No. 8124	

Continuation Sheet Attached
 Yes No

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

	Transducer			Instrument			
	S/N E08945			Mfr.	SONIC	Model	Mark I
	Size .5"			S/N	05304E	RepRate	3K
	Frequency 5.0 MHz			Reject	off	Filter	H1
	Beam Angle 0°			Damp	MIN.	Coax	6' BNC to BNC
			Freq.	5 MHz	Video	Normal	

Calibration 0°			2 & 5 Scr				7 & 8 Scan				Calibration Checks								
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out	
1/4T	80%	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9:10	11:50	NA	NA	NA	NA
1/2T	50%	3																	
3/4T	40%	4.5																	
1T	N/A	6.2																	
Ref. dB 43 dB																			



Additional Comments/Sketch

W.R. Martin, ANFI 10-25-82

Ultrasonic Examination Report



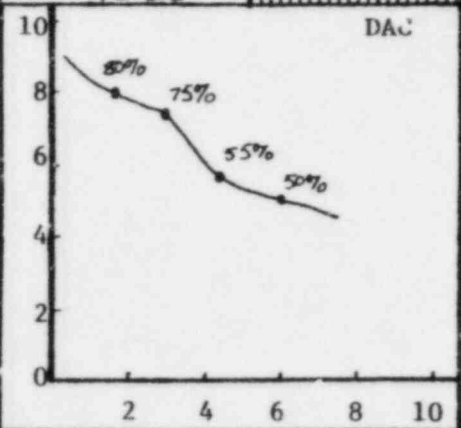
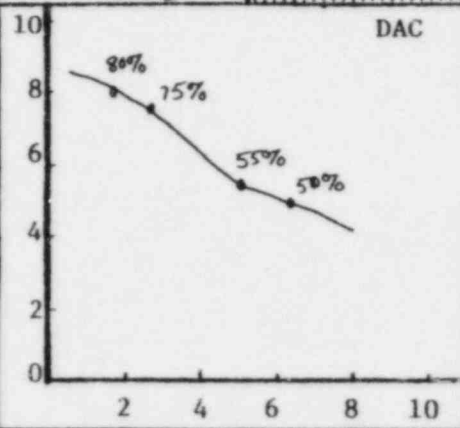
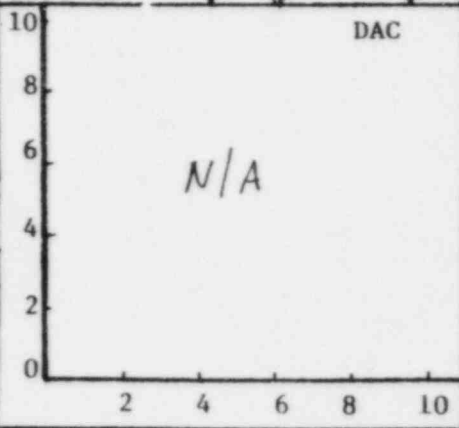
Customer <i>LP+L</i>		Plant <i>Waterford</i>		Unit <i>5</i>	Loop/Zone <i>2/04</i>	Iso/Drawing No. <i>ZONE 04 R-2 F.C.2</i>	
Procedure <i>ISI-26 R-2 F.C.1</i>	Exam Surface <i>L.D.</i>	Examiner/Level <i>Nary Langenacker II</i>		VCR Supervisor <i>Daniel Jensen</i>		Date <i>10-20-82</i>	
Component/Piping System <i>S.G. Weld Designation</i>		Pipe Size <i>N/A</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-44</i>	Couplant: <i>Sonotrace</i> Type <i>40</i>		Batch No. <i>824</i>

Continuation Sheet Attached
 Yes No

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

	Transducer	0°	45°	60°	Instrument			
	S/N	<i>NA</i>	<i>607.50</i>	<i>NA</i>	Mfr.	<i>SONIC</i>	Model	Mark I
	Size		<i>.5"</i>		S/N	<i>01930E</i>	RepRate	<i>3K</i>
	Frequency		<i>2.25 MHz</i>		Reject	<i>off</i>	Filter	<i>H1</i>
	Beam Angle		<i>45°</i>		Damp	<i>MIN.</i>	Coax	<i>6' Buck to MD</i>
				Freq.	<i>2 MHz</i>	Video	<i>Normal</i>	

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>.48</i>	<i>.34</i>	<i>.55</i>	<i>80%</i>	<i>1.5</i>	<i>.48</i>	<i>.34</i>	<i>.55</i>	<i>NA</i>	<i>NA</i>	<i>9:12</i>	<i>11:45</i>	<i>NA</i>	<i>NA</i>		
<i>1/2 T</i>			<i>75%</i>	<i>3</i>	<i>.89</i>	<i>.8</i>	<i>1.0</i>	<i>75%</i>	<i>3</i>	<i>.89</i>	<i>.8</i>	<i>1.0</i>								
<i>3/4 T</i>			<i>55%</i>	<i>4.5</i>	<i>1.29</i>	<i>1.17</i>	<i>1.37</i>	<i>55%</i>	<i>4.5</i>	<i>1.29</i>	<i>1.17</i>	<i>1.37</i>								
<i>1 T</i>			<i>50%</i>	<i>6.2</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>50%</i>	<i>6.2</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>								
Ref. dB																				



Additional Comments/Sketch

M.R. Martin, ANEF 10 5-PL



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Ultrasonic Examination Report - Continuation Sheet

Page of

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 2 4	Iso/Drawing No. ZONE 4 R-2 F.C.2
Procedure I.S.I. 2.6 R-2, FC.1	Exam Surface I. D.	Examiner/Level Navy homogeneous II	VCR Supervisor Daniel Jensen	Date 10-20-82
Component/Piping System S.G. WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-44	Couplant: Type & Batch # SONOTRACE 40 8129

Weld No.	Base Metal Scan	Scan Direction	Inspection Limitations	Surface Condition		Examination Results		Remarks	
				2	5	7 & 8	0		Base Metal
04-035	NA	YES	YES YES YES PAR	APPROX. 5% LOSS OF CONTACT DUE TO I.D. CAP TO TUBESHEET CONFIGURATION	CLEAN	GROUND	RI	SAT.	*
				* O.D. GEOMETRY NOTICED IN 5 SCAN 45° 80% DAC RANGING FROM 1 3/8" @ 6.8 SW. TO 1 3/16" @ 8.2 SW. ON THE 5 SIDE 360°					

M.R. Martin, ANET 10-25-82

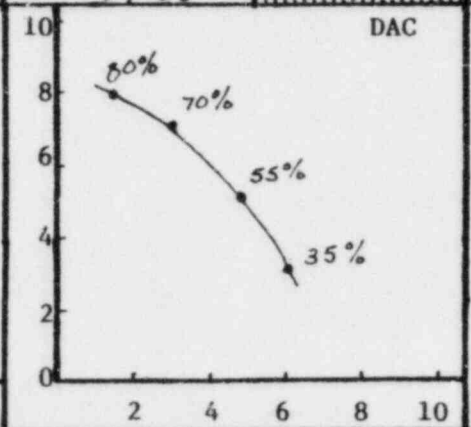
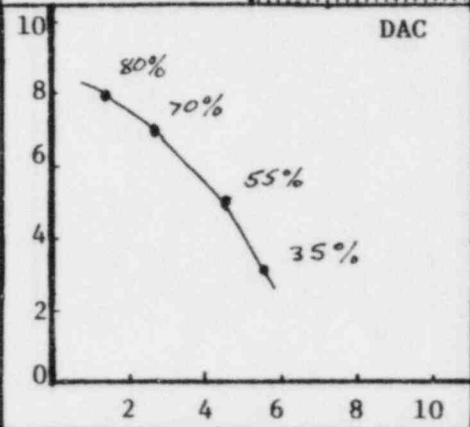
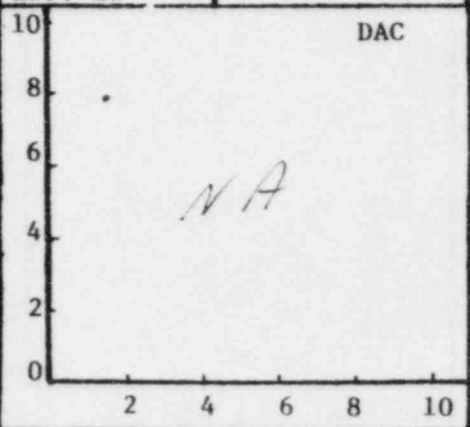
Ultrasonic Examination Report



Customer <i>LP+L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2 04</i>	Iso/Drawing No. <i>Zone 04 R.2 FC.2</i>
Procedure <i>ISI 2.6 R2 FC.1</i>	Exam Surface <i>I.O.</i>	Examiner/Level <i>James Wright LIII</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-21-82</i>
Component/Piping System <i>S.G. Weld Designation</i>	Pipe Size <i>NA</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-44</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Transducer	0°	45°	60°	Instrument			
		S/N <i>NA</i>	<i>NA</i>	<i>011038</i>	Mfer. <i>Sonic</i>	Model <i>Mark I</i>	RepRate <i>3K</i>	Filter <i>off</i>
Field Changes: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, Number <i>1</i>	Size	Frequency			Reject	Damp	Coax	6' DAC - MD
		Beam Angle			<i>5.0 MHz</i>	<i>off</i>	<i>Min</i>	<i>Norm</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>.750</i>	<i>.687 .875</i>	<i>80%</i>	<i>1.5</i>	<i>.750</i>	<i>.687 .875</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>7:32</i>	<i>9:55</i>
<i>1/2 T</i>			<i>70%</i>	<i>3.0</i>	<i>1.468</i>	<i>1.375 1.591</i>	<i>70%</i>	<i>3.0</i>	<i>1.468</i>	<i>1.375 1.591</i>						
<i>3/4 T</i>			<i>55%</i>	<i>4.5</i>	<i>2.156</i>	<i>1.937 2.187</i>	<i>55%</i>	<i>4.5</i>	<i>2.156</i>	<i>1.937 2.187</i>						
<i>1 T</i>			<i>35%</i>	<i>5.8</i>	<i>NA</i>	<i>NA NA</i>	<i>35%</i>	<i>5.8</i>	<i>NA</i>	<i>NA NA</i>						
Ref. dB			<i>57 db</i>													



Additional Comments/Sketch

M.R. Martin, ANFF 105-82

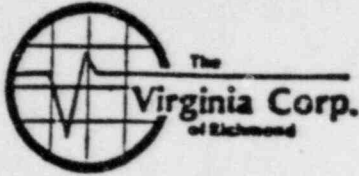


Ultrasonic Examination Report - Continuation Sheet

Page of

Customer LP#16	Plant WATERFORD	Unit 3	Loop/ Zone 2 4	Iso/Drawing No. ZONE 4 REV 2 FC2
Procedure ISI 2.6 REV 2 FC1	Exam Surface I.D.	Examiner/Level James G. [Signature]	VCR Supervisor Daniel Jensen	Date 10-21-82
Component/Piping System STEAM GENERATOR WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-44	Couplant: Type & Batch # 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	
04-035	NA	YES	YES	YES	NA	O.D. GEOMETRY 360° AROUND 5 SCAN ON 5 SIDE 159% OF DAC RANGING FROM 3 3/8" AT 8.1 SWEEP TO 4 7/16" AT 9.8 SWEEP	CLEAN	GROUND	*NRI	SAT	*NRI'S FOUND AT APPROX 40% OF DAC



M.R. Martin, ANEF 11-9-82
Ultrasonic Data Sheet
 for
Thickness Measurement

Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/04</i>
Component/Piping System <i>S.G weld designation</i>	Examiner/Level <i>Navy Longenecker II</i>	Date <i>10-22-82</i>	
Procedure <i>ISI-2.5 R.O.F.C.1</i>	Isoc/Drawing No. <i>ZONE 04 R2 F.C.2</i>	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached [] Yes [x] No

Equipment

Instrument	Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>KR-Aerotech</i>	Size <i>1.0"</i>	Cal. Block <i>UT-3</i>
Model <i>Mark I</i>			Cal. Block <i>N/A</i>
S/N <i>01058E</i>	Freq. <i>5.0 MHz</i>		Range Cal. <i>7" @ 62 div</i>
Reject <i>Off</i>	Serial No. <i>L19737</i>		Calibration Checks
Damp. <i>MIN.</i>	Coax. Cable <i>6' BNC to BNC</i>		<i>IN-8:00</i>
Freq. <i>5 MHz</i>	Gain <i>71 db</i>		<i>OUT-10:50</i>
Rep. Rate <i>3K</i>			
Filter <i>#1</i>			
Video <i>Normal</i>			
Couplant <i>Sonotrace 40 #8124</i>			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
04-032	12	6.548	6.548	N/A	NA	NA	NA	NA	NA
04-032	2	6.548	6.435						
04-032	4	6.548	6.435						
04-032	6	6.548	6.548						
04-032	8	6.548	6.548						
04-032	10	6.548	6.548						
04-033	12	6.548	6.435	6.548					
04-033	0	6.548	6.435	6.548					
04-033	4	6.435	6.548	6.548					
04-033	6	6.435	6.435	6.548					
04-033	8	6.548	6.435	6.548					
04-033	10	6.548	6.548	6.548					

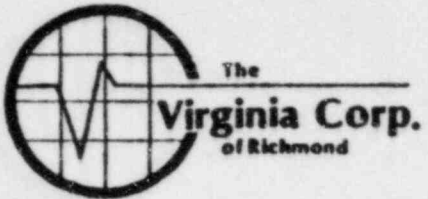
Sketch/Identification

N/A For 5 side of 04-032 Due to radius which shall be Covered with 1/2" transducer.

N/A For thickness on 04-034 Due to tubesheet.

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

Ultrasonic Examination Report



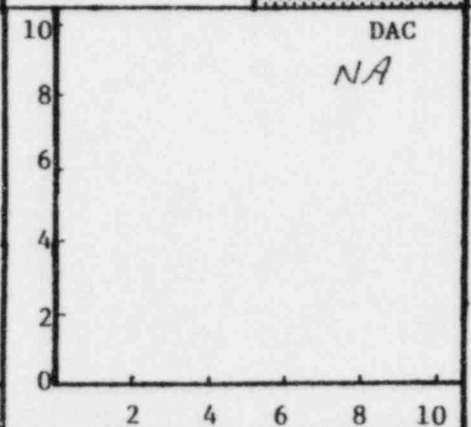
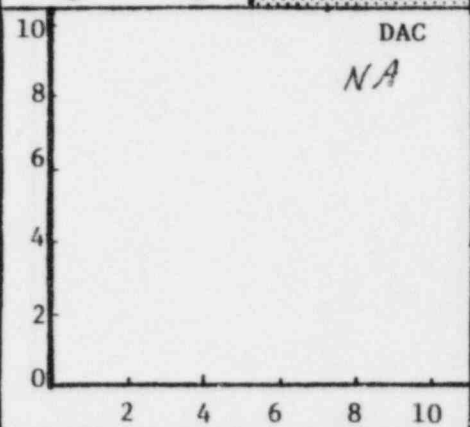
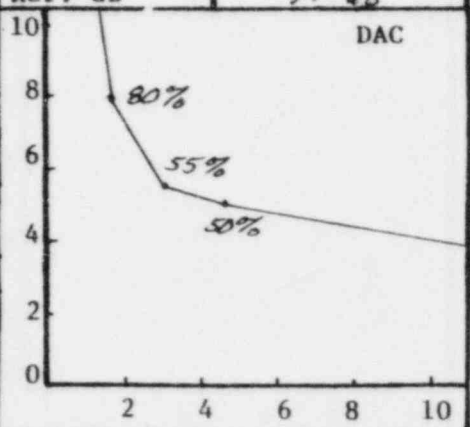
Customer <i>LP & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2 4</i>	ISO/Drawing No. <i>ZONE 4 R-2, F.C.2</i>
Procedure <i>ISI. 2.6 R2, FCI</i>	Exam Surface <i>I. D.</i>	Examiner/Level <i>Navy Ronanecles II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-22-82</i>
Component/Piping System <i>S.G. WELD DESIGNATION</i>	Pipe Size <i>N.A</i>	Weld Type <i>BUTT</i>	Cal. Block # <i>UT-3</i>	Couplant: <i>SONOTRACE</i> Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N <i>49737</i>	<i>NA</i>	<i>NA</i>	Mfr. <i>SONIC</i>	Model <i>MARK I</i>	RepRate <i>3K</i>	
	Size <i>1. DIA</i>			S/N <i>01058E</i>	Filter <i>H1</i>	Coax <i>12'</i>	
	Frequency <i>5. MHZ</i>			Reject <i>OFF</i>	Damp <i>MIN.</i>	Video <i>NORM</i>	
Beam Angle <i>0°</i>				Freq. <i>5. MHZ.</i>			

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>8:00</i>	<i>10:50</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>55%</i>	<i>3.0</i>															
<i>3/4 T</i>	<i>50%</i>	<i>4.5</i>															
<i>1 T</i>	<i>NA</i>	<i>6.2</i>															
Ref. dB	<i>71 db</i>																



Additional Comments/Sketch

M.R. Martin, ANEI 10-9-82



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Ultrasonic Examination Report - Continuation Sheet

Page **of**

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>2 4</i>	Iso/Drawing No. <i>ZONE 4 R-2, F.C. 2</i>
Procedure <i>ISI. 26 R-2, F.C. 1</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>Nary Longenecker II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-22-82</i>
Component/Piping System <i>S.G. WELD DESIGNATION</i>	Pipe Size <i>NA</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-3</i>	Couplant: Type & Batch # <i>SONOTRACE 40 8129</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>04-032</i>	<i>NA</i>	<i>PAR</i>	<i>NA</i>	<i>NA</i>	<i>PAR</i>	<i>* 1</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>N.I.</i>	<i>SAT.</i>	
<i>04-033</i>	<i>↓</i>	<i>PAR</i>	<i>↓</i>	<i>↓</i>	<i>YES</i>	<i>* 2</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>N.I.</i>	<i>SAT.</i>	
<i>04-034</i>	<i>↓</i>	<i>YES</i>	<i>↓</i>	<i>↓</i>	<i>PAR</i>	<i>* 3</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>R.I.</i>	<i>SAT.</i>	
						<i>* 1</i>					<i>PAR DUE TO RADIUS ON 5 SIDE OF WELD (0° HAZ. & BASE METAL) TO BE EXAMINED WITH 1/2" TRANSDUCER</i>
						<i>* 2</i>					<i>LOSS OF CONTACT ON BASE METAL 2 SIDE 13 1/2" TO 14" & FROM 50" TO 15" PAST DATUM. OBSTRUCTED BY I.D. BEVEL</i>
						<i>* 3</i>					<i>LOSS OF CONTACT ON 0° 2 SIDE 1 1/2" TO 2" & FROM 50" TO 15" PAST DATUM. OBSTRUCTED BY I.D. BEVEL</i>



The Virginia Corp.
of Richmond

Ultrasonic Examination Report

Indication Record

Customer LP & L	Plant WATERFORD	Unit 3	Loop 2
Procedure ISI. 2.6 R-2, F.C.1	Examiner/Level Nay Hongenecker II	VCR Supervisor Daniel Jensen	Date 10-22-82
Component/Piping System S.G. WELD DESIGNATION	ISO Drawing No. ZONE 4 R-2, F.C.2	Cal. Standard No./Thickness UT-3 7."	

Weld No.	Ind No.	Max. X DAC	Indication Length		Minimum Depth S.U. Sweep		Maximum Depth S.U. Sweep		Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
			From	To	Pos.	Reading	Pos.	Reading						
04034	1	135%	51 1/4"	51 1/2"	4" (5)	3.9	4 3/8" (5)	3.9	0°	0°	*	*	*	
04034	2	75%	66 1/4"	66 1/2"	4 3/16" (5)	2.7	5" (5)	2.7	0°	0°	*	*	*	
* UNABLE TO OBTAIN THICKNESS DUE TO TUBESHEET														

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



Ultrasonic Examination Report

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 2/04	Iso/Drawing No. ZONE 04 R2 F.C.2
Procedure ISI-2.6 R2 F.C.1	Exam Surface I.D.	Examiner/Level Gary Longenecker II	VCR Supervisor Daniel Dence	Date 10-26-82
Component/Piping System S G weld designation	Pipe Size N/A	Weld Type Butt	Cal. Block UT-3	Couplant: SONOTRACE Type 40 Batch No. 8124

Continuation Sheet Attached
Yes No

Field Changes:
Yes No
If Yes, Number FC.1

Transducer 0°	45°(215)	45°(718)	Instrument			
S/N NA	L19801	L19134	Mfr.	Sonic	Model	Mark I
Size	1.0" DIA	1.0" DIA	S/N	05304E	RepRate	5K
Frequency	225 MHz	225 MHz	Reject	off	Filter	H1
Beam Angle	45°	45°	Damp	MIN.	Coax	12' BNC TO BNC
			Freq.	2 MHz	Video	Normal

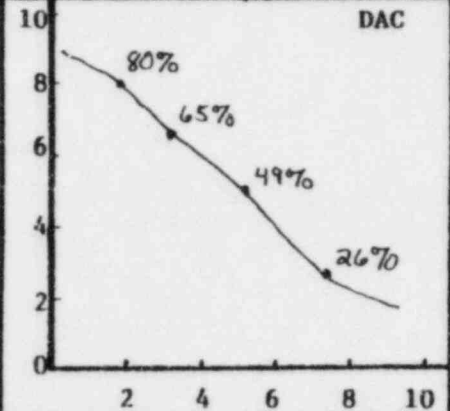
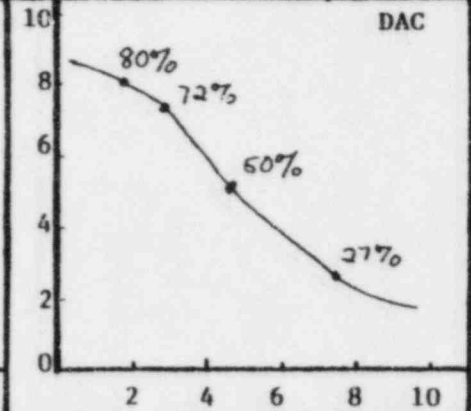
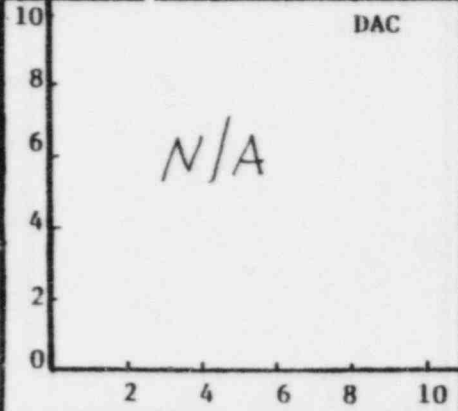
Calibration 0°

45° 2 & 5 Scan

45° 7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks								
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°				
											In	Out	In	Out	In	Out			
1/4T	NA	NA	80%	1.5	1 3/16	1 3/16	80%	1.5	NA	NA	NA								
1/2T			72%	3	3 7/16	3 3/8	65%	3											
3/4T			50%	4.5	4 1/16	4 3/8	49%	4.5											
5/4T			27%	7.5			26%	7.5											
1T			N/A	6.2			N/A	6.2											

Ref. dB 58 db 58 db



Additional Comments/Sketch

W.R. Martin, ANES 1/9/82

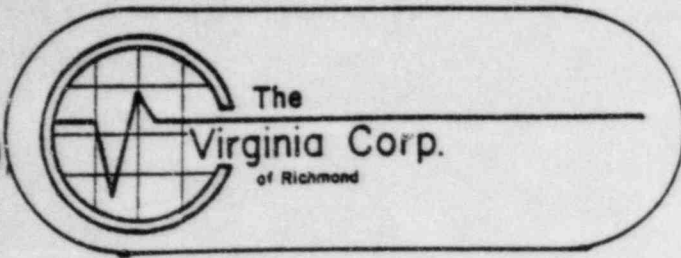


Ultrasonic Examination Report - Continuation Sheet

Page of

Customer LP+L	Plant Waterford	Unit 3	Loop/ Zone 2 / 04	Iso/Drawing No. ZONE 04 R.2 F.C.2
Procedure ISI-2.6 R.2 F.C.1	Exam Surface I.D.	Examiner/Level Gary Longenecker II	VCR Supervisor Daniel Jensen	Date 10-26-82
Component/Piping System S.G weld designation	Pipe Size N/A	Weld Type BUTT	Cal. Block UT-3	Couplant: Type & Batch # SONOTRAC 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	
04-032	NA	Par	Par	Par	NA	See attached sheet	Clean	Ground	NI	Sat.	See attached
04-033		Par	Par	Par		See attached sheet	Clean	Ground	NRI	Sat.	See attached
04-034	↓	Par	Par	Par	↓	See attached sheet	Clean	Ground	NRI	Sat.	See attached



DATE 10-26-82

PAGE ___ OF ___

TO _____

SUBJECT INSPECTION LIMITATIONS
& REMARKS
ZONE 4, 45°

WELD NO. 04-032 AREA'S MISSED BY 1" TRANSDUCER
SHALL BE COVERED BY 1/2"

THE 2, 5, 7 & 8 SCANS ONLY PERFORMED
ON THE 2 SIDE TO 1" ON 5 SIDE.

DIVIDER PLATES NOTICED FOR WIDTH OF
AREA EXAMINED IN 7 & 8 SCANS COMING UP
AT 5.1 S.W. AND 75% DAC. IN 7 SCAN
15" (?) & 52 3/8" (?) AND IN 8 SCAN 20 7/8" (?)
& 57 3/4" (?).

WELD NO. 04-033 APPROX. 8% LOSS OF CONTACT DUE
TO WAVY I.D. WELD SURFACE IN 2, 5, 7 & 8 SCANS.

NRI'S NOTICED AT RANDOM.

DIVIDER PLATES NOTICED FOR WIDTH OF
EXAMINATION AREA IN 7 & 8 SCANS COMING
UP AT 5.1 SW. AND 75% DAC. IN 7 SCAN
15" (?) & 52 3/8" (?) AND IN 8 SCAN 20 7/8" (?)
& 57 3/4" (?).

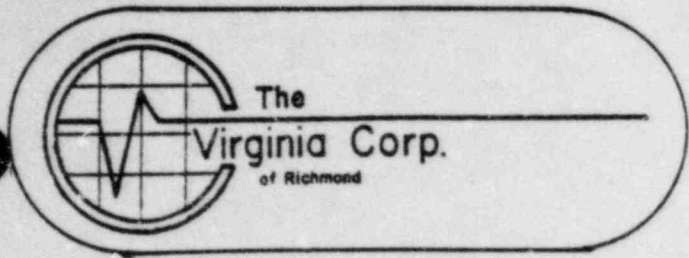
WELD NO. 04-034 PAR LOSS OF CONTACT IN 2, 5, 7 & 8 SCANS.
APPROX. 5% DUE TO WAVY I.D. WELD SURFACE.

PLUS I.D. BEVEL ON 2 SIDE 1 1/2" TO 2" &
FROM 50" TO 15" PAST DATUM. (? DIRECTION)

NRI'S NOTICED AT RANDOM.

O.D. GEOMETRY NOTICED IN 2 SCAN COMING
UP ~ 6.0 TO 6.9 SW. @ 100% DAC. ~ & TO
1 1/4" (?) FOR 360° (EXCEPT WHERE DIVIDER PLATES
EXIST). CYLINDER TO TUBESHEET RADIUS.

SIGNED *Harry Longenecker*



DATE 10-26-82

PAGE OF

TO _____

SUBJECT INSPECTION LIMITATIONS
REMARKS CONT.
ZONE 4, 45°

WELD NO 09-034 TUBES IN TUBESHEET NOTICED
IN 7 & 8 SCANS 150% DAC BEGINNING
AT 5.5 SW.

SIGNED Gary Longenecker

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



Ultrasonic Examination Report

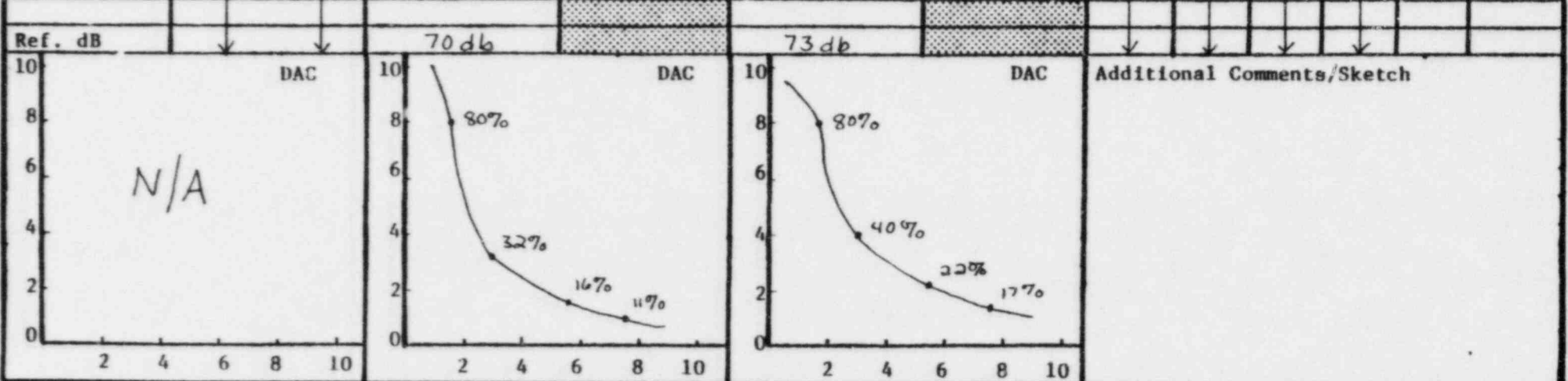
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 2/04	Is0/Drawing No. ZONE 04 R.2 F.C.2
Procedure ISI-2.6 R.2 F.C.1	Exam Surface I.D.	Examiner/Level Nary Longenecker II	VCR Supervisor Daniel Jensen	Date 11-2-82
Component/Piping System S.G weld designation		Pipe/Size N/A	Weld Type Butt	Cal. Block # UT-3
		Couplant: SONOTRACE		Batch No. 8124

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number /

Transducer	0°	60° (215)	60° (718)	Instrument			
S/N	NA	L19801	L19134	Mfgr.	SONIC	Model	Mark I
Size		1.0	1.0"	S/N	01930E	RepRate	3K
Frequency		2.25 MHz	2.25 MHz	Reject	off	Filter	H1
Beam Angle	↓	60°	60°	Damp	MIN	Coax	6 BNC to BNC
				Freq.	2 MHz	Video	Normal

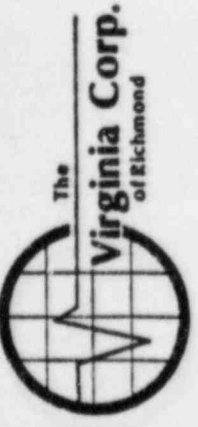
Calibration 0°			60° 2 & 5 Scan				60° 7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4T	NA	NA	80%	1.5	3 1/4	2 7/8	3 5/8	80%	1.5	NA	NA	NA	NA	NA	NA	NA	1:15	4:25
1/2T			32%	3.0	7	6 1/6	7 1/2	40%	3									
3/4T			16%	4.5	11 1/16	9 5/8	12 1/2	22%	4.5									
1T			NA	6.2	NA	NA	NA	NA	6.2									
5/4T			11%	7.5	NA	NA	NA	17%	7.5									



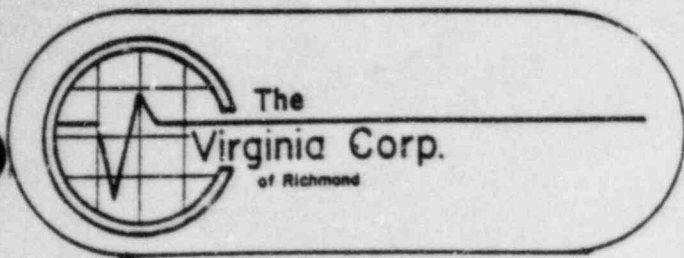
W.R. Martin, ANSF 11-9-82

Ultrasound Examination Report - Continuation Sheet Page _____ of _____

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 3/04	Iso/Drawing No. ZONE 04 R2 F.C.2
Procedure ISI-2.6 R2 F.C.1	Exam Surface I.D.	Examiner/Level Gary Longenecker II	VCR Supervisor Daniel Jensen	Date 11-3-82
Component/Piping System S.G weld designation	Pipe Size N/A	Weld Type Butt	Cal. Block Couplant: UT-3	Type & Batch # Sowotrace 40 #8124



Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
04-032	NA	Par	Par	Par	See attached sheet	Clean	Ground	NI	Sat.	See attached
04-033	NA	Par	Par	Par	See attached sheet	Clean	Ground	NI	Sat.	See attached
04-034	NA	Par	Par	Par	See attached sheet	Clean	Ground	NI	Sat.	See attached



DATE 11-2-82

PAGE OF

TO _____

SUBJECT INSPECTION LIMITATIONS
& REMARKS
ZONE 4, 60°

WELD NO. 04-032 AREAS MISSED BY 1." TRANSDUCER
SHALL BE COVERED BY 1/2".

THE 2,5,7&8 SCANS ONLY PERFORMED ON
THE 2 SIDE TO 1." ON THE 5 SIDE
DIVIDER PLATES NOTICED FOR WIDTH OF
AREA EXAMINED IN 7&8 SCANS COMING UP AT
3.6 SW. AND 100% DAC. IN 7 SCAN 13 3/4" (?) &
50 1/4" (?) AND IN 8 SCAN 23" (?) & 60" (?)

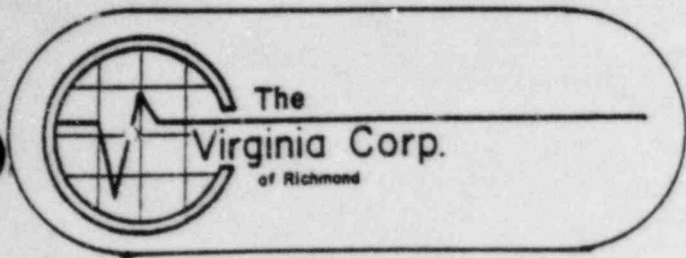
WELD NO. 04-033 APPROX. 8% LOSS OF CONTACT DUE TO
WAVY I.D. WELD SURFACE IN 2,5,7&8 SCANS.
ALSO IN 2 SCAN I.D. BEVEL ON 2 SIDE 13 1/2" TO 19"
& FROM 50" TO 15" PAST DATUM (7 DIRECTION)

DIVIDER PLATES NOTICED FOR WIDTH OF
EXAMINATION AREA IN 7&8 SCANS COMING UP AT
3.6 SW. AND 100% DAC. IN 7 SCAN 13 3/4" (?) &
50 1/4" (?) AND IN 8 SCAN 23" (?) & 60" (?)

WELD NO. 04-034 APPROX. 5% LOSS OF CONTACT DUE TO
WAVY I.D. WELD SURFACE IN 2,5,7&8 SCANS.
ALSO IN 2,5,7&8 SCANS LIFTOFF DUE TO I.D. BEVEL
ON 2 SIDE 1 1/2" TO 2" & FROM 50" TO 15" PAST
DATUM. (7 DIRECTION)

WHEN SITTING ON BEVEL, SIGNAL NOTICED
IN 5 SCAN AT 5.0 SW., 200% DAC. CAUSED
BY ANGLE BEING CHANGE TO ~ 85° LOOKING
AT TOP OF TUBESHEET

SIGNED Harry Longenecker



DATE 11-2-82

PAGE OF

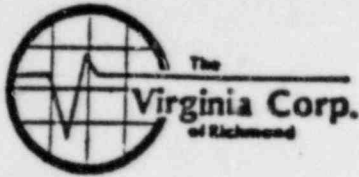
TO _____

SUBJECT INSPECTION LIMITATIONS
& REMARKS
ZONE 4, 60°

WELD NO. 04-034 O.D. GEOMETRY NOTICED IN 2 SCAN
COMING UP ~ 5.6 TO 6.1 SW. @ 80% DAC ~
6 1/2" (2) TO 8" (2) FOR 360° (EXCEPT WHERE
DIVIDER PLATES EXIST) CYLINDER TO TUBESHEET
RADIUS.

TUBES IN TUBESHEET NOTICED IN 7 & 8
SCANS 150% DAC BEGINNING AT 4.1 SW.

SIGNED Ray Longenecker



W.R. Martin, ANES 11-9-82
Ultrasonic Data Sheet
 for
Thickness Measurement

Customer <i>L P & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2 04</i>
Component/Piping System <i>S.G. Weld Designation</i>		Examiner/Level <i>James Wright III</i>	Date <i>10-22-82</i>
Procedure <i>ISI 2.5 R.O. FC.1</i>	Iso/Drawing No. <i>Zone 04 R2 FC.2</i>	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached [] Yes [x] No

Equipment

Instrument		Transducer		Calibration	
Mfgr. <i>Sonic</i>	Model <i>Mark 1</i>	Mfgr. <i>K-B Aerotech</i>	Size <i>.50" dia.</i>	Cal. Block <i>UT-3</i>	
S/N <i>01930E</i>		Freq. <i>2.25 MHz</i>		Cal. Block	
Reject <i>off</i>		Serial No. <i>JO2184</i>		Range Cal. <i>7" @ 6.2</i>	
Damp. <i>Min</i>		Coax. Cable <i>6' BNC-BNC</i>		Calibration Checks	
Freq. <i>2.0 MHz</i>		Gain <i>40 db</i>		<i>CAL IN 8:12</i>	
Rep. Rate <i>3K</i>				<i>CAL OUT 10:50</i>	
Filter <i>off</i>					
Video <i>Norm</i>					
Couplant <i>Sonotrace 40 8124</i>					

Examination Results

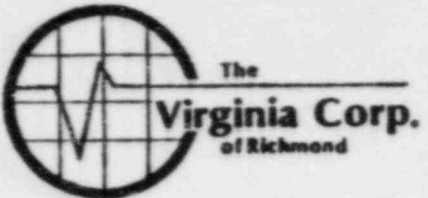
Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>04-032</i>	<i>12</i>	<i>6.496</i>	<i>NA</i>	<i>6.496</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>04-032</i>	<i>2</i>	<i>6.496</i>		<i>6.496</i>					
<i>04-032</i>	<i>4</i>	<i>6.496</i>		<i>6.496</i>					
<i>04-032</i>	<i>6</i>	<i>6.496</i>		<i>6.496</i>					
<i>04-032</i>	<i>8</i>	<i>6.496</i>		<i>6.496</i>					
<i>04-032</i>	<i>10</i>	<i>6.496</i>	<i>↓</i>	<i>6.496</i>					
			<i>N</i>						
			<i>A</i>						

Sketch/Identification

NA for 2 side of 04^{JK}-032 which will be covered by 1" transducer

W.R. Martin, ANSI 11-82

Ultrasonic Examination Report



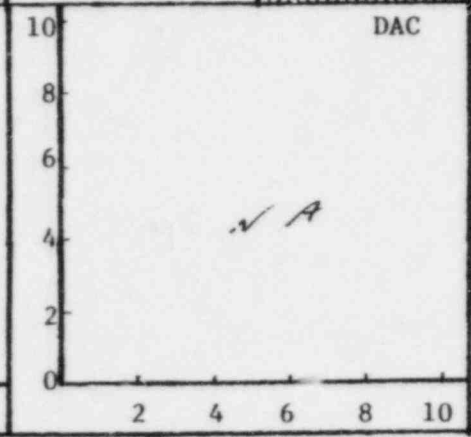
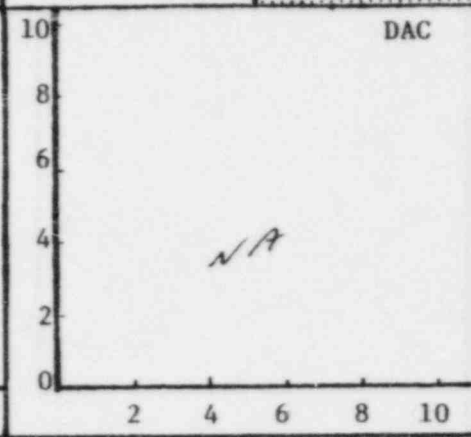
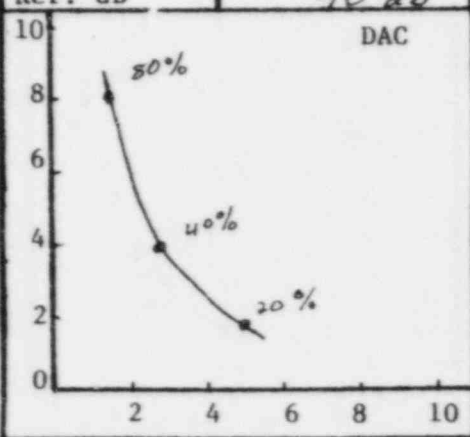
Customer <i>LPL</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2 04</i>	Iso/Drawing No. <i>Zone 04 A-2 FL-2</i>
Procedure <i>ISI 2.6A2 FL1</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>Annita W. H. L. H.</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-22-82</i>
Component/Piping System <i>S.G. Weld Designation</i>	Pipe Size <i>NA</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-3</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

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

Transducer	0°			45°			60°			Instrument				
	S/N	Size	Frequency	Beam Angle	Mfr.	S/N	Reject	Damp	Freq.	Video	Model	RepRate	Filter	
	<i>J02184</i>	<i>.50" dia.</i>	<i>2.25 MHz</i>	<i>0°</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>off</i>	<i>min</i>	<i>2.0 MHz</i>	<i>Norm</i>	<i>Mark I</i>	<i>3K</i>	<i>off</i>

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
<i>1/4 T</i>	<i>80%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>8:12</i>	<i>10:50</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	
<i>1/2 T</i>	<i>40%</i>	<i>3.0</i>																		
<i>3/4 T</i>	<i>20%</i>	<i>4.5</i>																		
<i>1 T</i>	<i>NA</i>	<i>6.2</i>																		



Additional Comments/Sketch

W.R. Martin ANES 11-9-82

Ultrasonic Examination Report - Continuation Sheet

Page of



Customer LPIL	Plant WATERFORD	Unit 3	Loop/Zone 2 04	ISO/Drawing No. ZONE 04 REV 2 FC 2
Procedure ISI 2.6 REV 2 FC 1	Exam Surface I.D.	Examiner/Level James White LIII	VCR Supervisor Daniel Jensen	Date 10-22-82
Component/Piping System S.G. WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-5	Couplant: Type & Batch # SONOTRAX 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	
04-037	PAR	NA	NA	NA	PAR	DUE TO THE CURVATURE OF THE STAY CYLINDER 1/2" REDUCER USED FOR 0° ON THE WELD ; ON THE BASEMETAL S SIDE. LOSS OF BACK REFLECTION ON THE BASEMETAL SCAN 2 1/2" FROM E OF WELD S SIDE, DUE TO THE GREATER THICKNESS OF THE STAY CYLINDER.	SMOOTH	GROUND	NI	SAT	



Ultrasonic Examination Report

Customer <i>L P & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>2 04</i>	Iso/Drawing No. <i>Zone 04 A2 FC.2</i>
Procedure <i>ISI 26 R2 FC.1</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>James [unclear] ANEI</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>10-25-82</i>
Component/Piping System <i>Steam Generator Weld Designation</i>	Pipe Size <i>NA</i>	Weld Type <i>Butt</i>	Cal. Block # <i>4T-3</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8124</i>

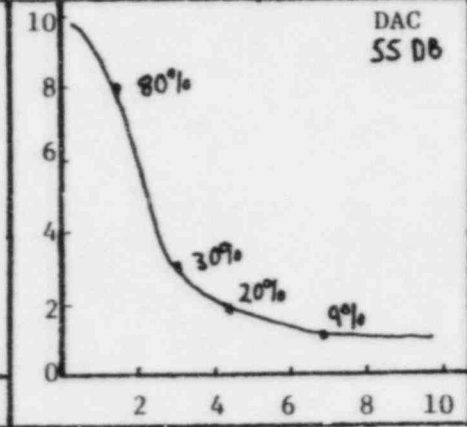
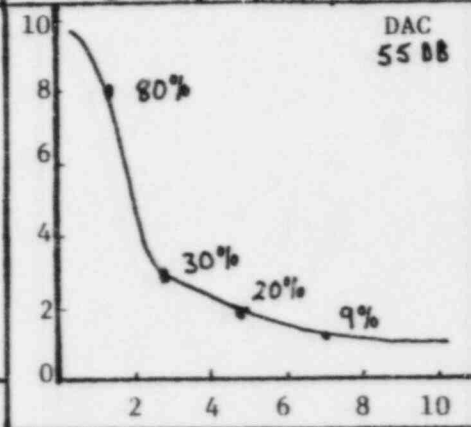
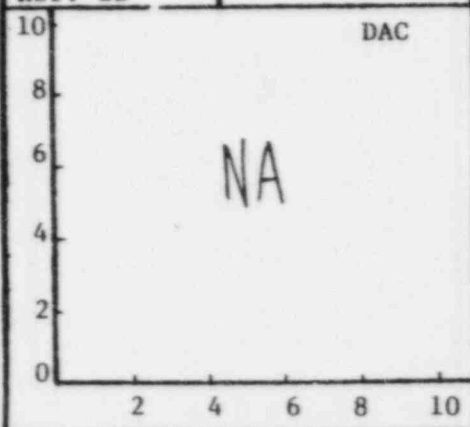
Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
S/N	<i>NA</i>	<i>M17L55</i>	<i>NA</i>	Mfr.	<i>SONIC</i>	Model	<i>Mark I</i>
Size		<i>.50"</i>		S/N	<i>05304E</i>	RepRate	<i>JK</i>
Frequency		<i>1.0 MHz</i>		Reject	<i>off</i>	Filter	<i>off</i>
Beam Angle		<i>44°</i>		Damp	<i>Min</i>	Coax	<i>6ANC-MO</i>
				Freq.	<i>1.0 MHz</i>	Video	<i>NORM</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan			
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:	
					Scribe Line	50% DAC			Scribe Line	50% DAC
<i>1/4</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>1.5</i>	<i>1 1/16"</i>	<i>1 1/16"</i>	<i>80%</i>	<i>1.5</i>	<i>1 1/16"</i>	<i>1 1/16"</i>
<i>1/2</i>			<i>30%</i>	<i>3.0</i>	<i>2 5/16"</i>	<i>2 1/8"</i>	<i>30%</i>	<i>3.0</i>	<i>2 5/16"</i>	<i>2 1/8"</i>
<i>3/4</i>			<i>20%</i>	<i>4.5</i>	<i>4"</i>	<i>2 3/8"</i>	<i>20%</i>	<i>4.5</i>	<i>4"</i>	<i>2 3/8"</i>
<i>5/4</i>			<i>9%</i>	<i>7.2</i>			<i>9%</i>	<i>7.2</i>		

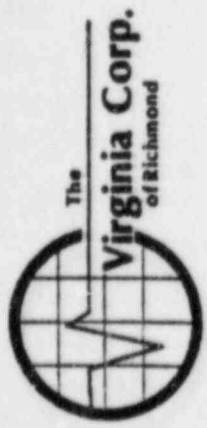
Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
<i>NA</i>	<i>NA</i>	<i>8.33</i>	<i>11.10</i>	<i>NA</i>	<i>NA</i>



Additional Comments/Sketch

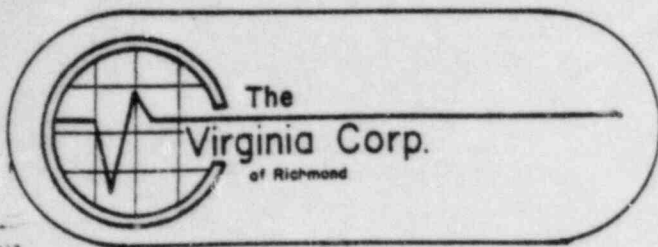
W.R. Martin, ANIE 11-9-82

Ultrasonic Examination Report - Continuation Sheet Page 1 of 2



Customer: LPIL Plant: WATERFOUR Unit: 3 Loop/Zone: 2 04 ISO/Drawing No. REV 2 F62
 Procedure: ISI 2.6 REV L FC I.D. Exam Surface: I.D. Examiner/Level: James Witt LVI VCR Supervisor: David Jensen Date: 10-25-82
 Component/Piping System: STEAM GENERATOR HELP DESIGNATION: NA Pipe Size: NA Weld Type: BUTT Cal. Block Couplant: Type & Batch # UT-3 SCACIRME 40 8124

Weld No.	Base Metal Scan	Scan Direction	Scan Direction		Inspection Limitations	Surface Condition		Examination Results		Remarks
			2	5		Base Metal	Weld	UT	Visual	
04-032	NA	PAR	YES	PAR	SEE ATTACHED SHEET	SMOOTH	GROUND	NI	SAT	



DATE 10-25-82

PAGE 2 OF 2

TO _____

SUBJECT INSPECTION LIMITATIONS
AND REMARKS

WELD # 04-032

AREAS MISSED BY 1/2" 44° TRANSDUCER SHALL BE COVERED BY 1.0" TRANSDUCER. THE 2, 5, 7 & 8 SCANS ONLY PERFORMED ON THE 5 SIDE AND 1.0" ON THE 2 SIDE

GEOMETRY 360° AROUND 5 SIDE 5 SCAN 224% OF DAC, 4 3/4" FROM & 5 SIDE @ 5.4 SWEEP.

DIVIDER PLATE NOTICED FOR WIDTH OF AREA EXAMINED IN 7 & 8 SCANS COMING UP @ 5.2 SWEEP AND 100% OF DAC IN 7 SCAN 15.0" FROM O DATUM AND 52 1/2" FROM O DATUM. IN 8 SCAN 20 1/2" FROM O DATUM AND 57 0" FROM O DATUM

SIGNED James Wright

Ultrasonic Examination Report



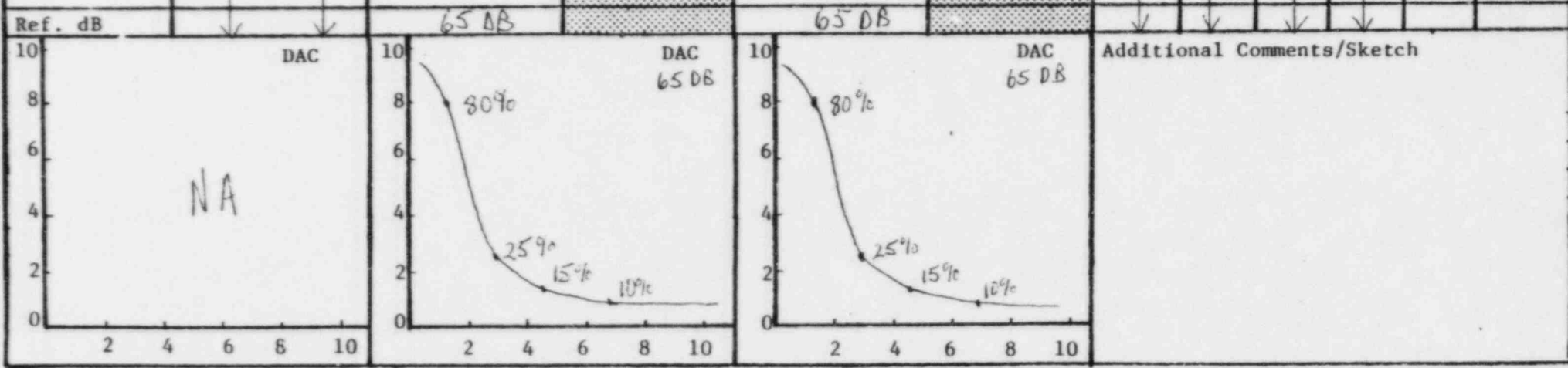
Customer LPCL	Plant WATERFORD	Unit 3	Loop/Zone 2 04	Iso/Drawing No. ZONE 04 REV2 FLC
Procedure ISI 2.6 REV2 FLC	Exam Surface I.D.	Examiner/Level James Wright LVI	VCR Supervisor Daniel Jensen	Date 10-26-82
Component/Piping System STEAM GENERATOR WELD DESIGNATION	Pipe Size NA	Weld Type BUTT	Cal. Block UT-3	Couplant: SON-TRACE Type 40 Batch No. 9124

Continuation Sheet Attached
 Yes No

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

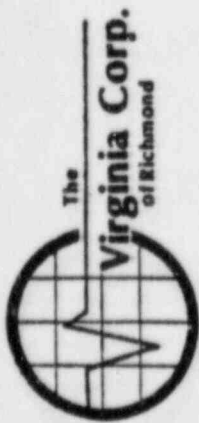
Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	NA	GOTISO	Mfr.	SONIC	Model	MARK I
			.50"	S/N	01930E	RepRate	3K
			2.25 MHz	Reject	OFF	Filter	OFF
			60°	Damp	Min	Coax	6' BNC-MO
			Freq.	2.0 MHz	Video	NCRM	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	NA	NA	80%	1.5	2 7/16	2 3/16	80%	1.5	2 7/16	2 3/16	NA	NA	NA	NA	9:50	1:47
1/2T			25%	3.0	5 3/16	4 3/4	25%	3.0	5 3/16	4 3/4						
3/4T			15%	4.5	7 3/4	7 1/8	15%	4.5	7 3/4	7 1/8						
5/4T			10%	7.4			10%	7.4								



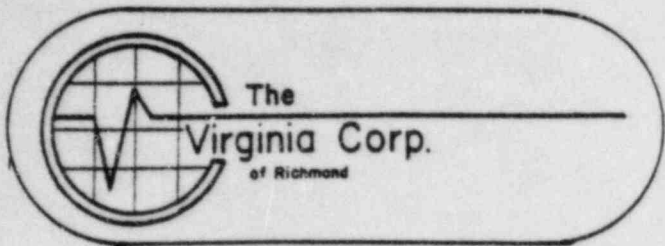
W. R. Martin ANET 11-9-82

Ultrasonic Examination Report - Continuation Sheet Page of



Customer	LP # 1	Plant	WATER FOR	Unit	3	Loop/Zone	2 04	Iso/Drawing No.	REV 2 FLZ
Procedure	151 26 REV 2 FC 1 T.D	Exam Surface	Examiner/Level	Inspector	Daniel J. Jensen	VCR Supervisor		Date	10-26-82
Component/Piping System	STEAM GENERATOR	Pipe Size	Weld Type	Weld Type	BOIT	Cal. Block	UT-3	Couplant: Type & Batch #	SANITRACE 40 8124

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
04-032	NA	PAR	YES	PAR	NA	SMOOTH	GROUND	N I	SAT	



DATE 10-26-82

PAGE 2 OF 2

TO _____

SUBJECT INSPECTION LIMITATIONS AND
REMARKS

WELD # 04-042032 JE

AREAS MISSED BY $\frac{1}{2}$ " 60° TRANSDUCER SHALL BE COVERED BY 1.0" TRANSDUCER. THE 2, 5, 7 & 8 SCANS ONLY PERFORMED ON THE S SIDE AND 1.0" ON THE R SIDE

GEOMETRY 360° AROUND S SIDE 5 SCAN 25 1/8" OF DAC 6 5/8" FROM $\frac{1}{2}$ " @ 5.5 SWEEP

DIVIDER PLATE NOTICED FOR WIDTH OF AREA EXAMINED IN 7 & 8 SCANS COMING UP @ 4.4 SWEEP AND 80% OF DAC. IN 7 SCAN 14 0" FROM O DATUM AND 51.0" FROM O DATUM. IN 8 SCAN 18 7/8" FROM O DATUM AND 55 1/2" FROM O DATUM

SIGNED James [Signature]



Liquid Penetrant
Dan Payne ANII 2/8/82
 Examination Report

Customer <i>LP 26</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>216</i>
Procedure <i>ISI-3.1 PO FC 2</i>	Examiner/Level <i>James W. [unclear] / Michael W. [unclear]</i>	Date <i>2-4-82</i> <i>2-5-82</i>	
Component/Piping System <i>Hot leg - Steam Gen to Reactor</i>	ISO Drawing No. <i>Zone 6 R2</i>	VCR Site Supervisor <i>Daniel [unclear]</i>	
Material Batch Nos. <i>476-015</i>	Manufacturer <i>Sherwin Inc.</i>	Type <i>Dubl-Chek</i>	
Penetrant <i>476-015</i>	Developer <i>1486</i>	Remover <i>162 C4</i>	

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	Sat.	Unsat
<i>6-010</i>	<i>See indication sheet</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>6-011</i>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

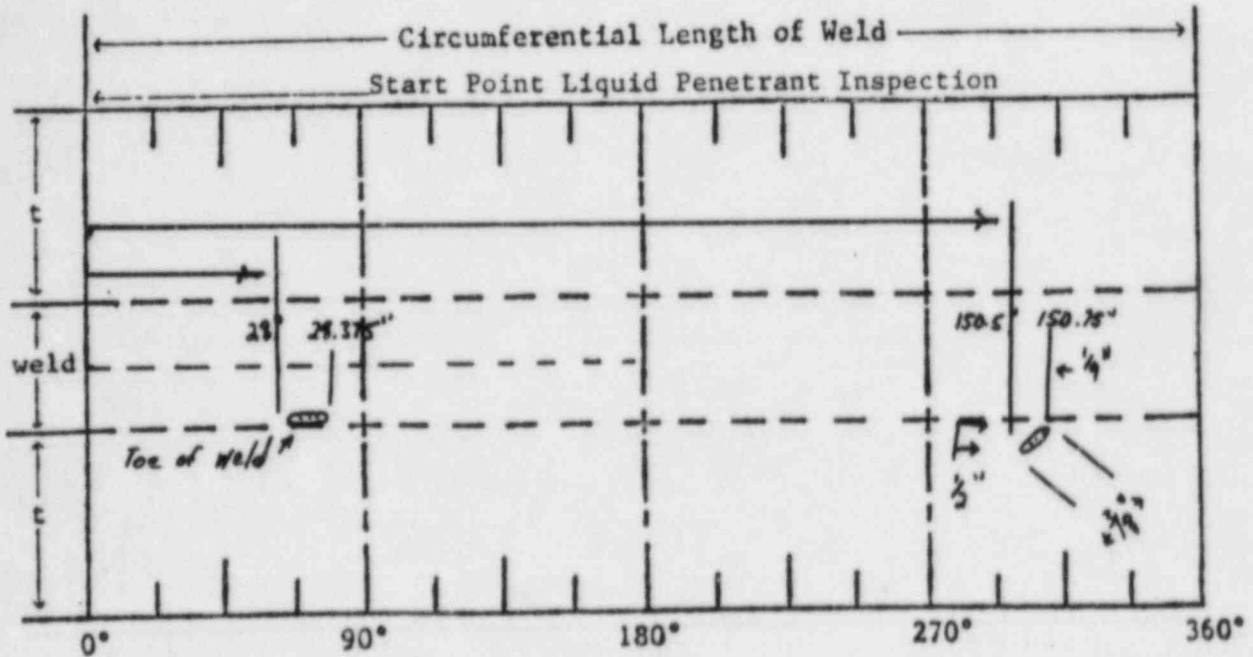


The
Virginia Corp.
of Richmond

Liquid Penetrant

Don Payne ANII 2/8/82
Indication Record

Customer <i>LPIL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/6</i>
Procedure <i>151-3.1 80 FC2</i>	Examiner/Level <i>James D. L... / Level 5</i>	Date <i>2-4-82</i> <i>2-5-82</i>	
Component/Piping System <i>Hot leg to Steam Generator #2 to Reactor Vessel</i>		VCR Site Supervisor <i>Walter Jones</i>	
Weld No. <i>6-011</i>	ISO/Drawing No. <i>2000 6 R2 100</i>		



Remarks

Cluster of small pinholes causing linear indications



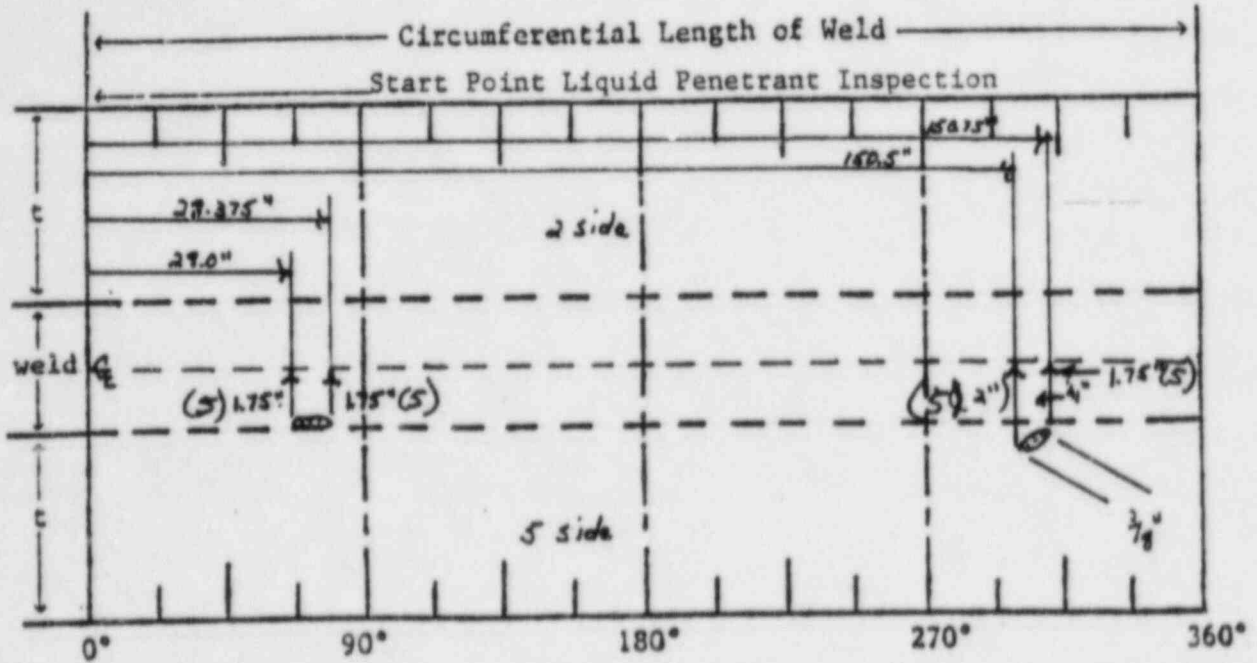
The
Virginia Corp.
of Richmond

Liquid Penetrant

Ron Payne ANIT 2/17/82

Indication Record

Customer <i>LPIL</i>	Plant <i>Hatesford</i>	Unit <i>3</i>	Loop / Zone <i>2/6</i>
Procedure <i>151-3.1</i>	Examiner/Level <i>James T. [unclear]</i>	Date <i>2-16-82</i>	
Component/Piping System <i>Hot leg to Steam Generator #2</i>		VCR Site Supervisor <i>Daniel [unclear]</i>	
Weld No. <i>6-011</i>	ISO/Drawing No. <i>2076 Rev 2 1519</i>		



Remarks

Cluster of small pinholes causing linear indications

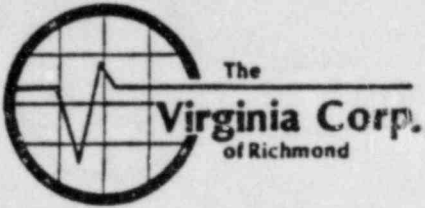


The Virginia Corp.
of Richmond

Magnetic Particle Examination Report
Don Payne ANII 2/24/82

Customer L P & L		Plant WATERFORD	Unit 3	Loop/Zone 2/6
Procedure 151-4.3 REV 0		Examiner <i>[Signature]</i> VCR Supervisor <i>[Signature]</i>		Date 2-24-82
Component/Piping System STEAM GENERATOR #2 TO REACTOR VESSEL ZONE 6 REV 2 FC-1		ISO Drawing No.	Surface Condition GROUND	
Type of Particles <input type="checkbox"/> Wet <input checked="" type="checkbox"/> Dry <input checked="" type="checkbox"/> Visible <input type="checkbox"/> Flourescent		Manufacturer MAGNAFLUX	Type BARCO	Batch Number 81M107
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> HWDC	Machine Mfr. PARKER RESEARCH	Type/Model DA-200	Serial No. 5801	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <u>N/A</u> Amps. <u>N/A</u> No. Turns	Prods <u>N/A</u> Spacing <u>N/A</u> Amps.	Yoke <u>8"</u> Spacing	

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
6-001	PARTIAL EXAMINATION. AREA NOT INSPECTED WAS 61° (7 DIRECTION) TO 99° (7 DIRECTION).	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
6-002		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Liquid Penetrant
R. Payne ANZE 4/26/82
 Examination Report

Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>3 / 6</i>
Procedure <i>ISI 3.1 RD F.C. 2</i>	Examiner/Level <i>Richard DeLoe II</i>	Date <i>4-24-82</i>	
Component/Piping System <i>Hot leg-S G. #2 To Reactor</i>	ISO Drawing No. <i>Zone 6 R 2 F.C. 1</i>	VCR Supervisor <i>Benji Jones</i>	

	Manufacturer	Type	Batch No.	
Penetrant	<i>Sherwin</i>	<i>Dubl-Chek</i>	<i>474015</i>	
Developer	<i>Sherwin</i>	<i>Dubl-Chek</i>	<i>129F6</i>	
Remover	<i>Sherwin</i>	<i>Dubl-Chek</i>	<i>112C4</i>	

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>06-001</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



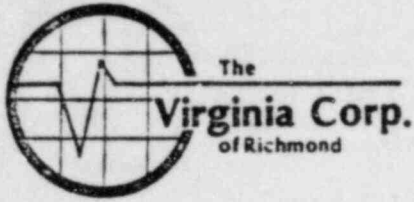
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of Richmond

Liquid Penetrant
D. Payne ANZI 4/27/82
Examination Report

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2 / 6</i>
Procedure <i>ISI 2.1 R.O.F.C. 2</i>	Examiner/Level <i>Richard DeWitt II Robert Chewhick</i>	Date <i>4-26-82</i>	
Component/Piping System <i>Hot Leg-5.G.#2 to Reactor</i>	ISO Drawing No. <i>zone 6 R 2 F.C. 1</i>	VOR Supervisor <i>Richard DeWitt II</i>	

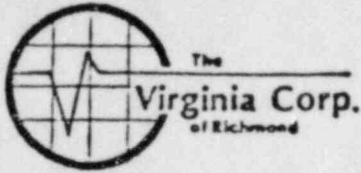
	Manufacturer	Type	Batch No.
Penetrant	<i>Sherwin</i>	<i>Dubl-Chek</i>	<i>47L 015</i>
Developer	<i>Sherwin</i>	<i>Dubl-Chek</i>	<i>129 F 6</i>
Remover	<i>Sherwin</i>	<i>Dubl-Chek</i>	<i>112 C 4</i>

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>06-006</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Liquid Penetrant
D. Payne ANII 6/16/82
Examination Report

Customer <i>LP#L</i>		Plant <i>Waterford</i>		Unit <i>3</i>		Loop/Zone <i>2/6</i>	
Procedure <i>ISI 3.1 P.O.F.C.2</i>		Examiner/Level <i>Robert Overstreet II</i>				Date <i>6-15-82</i>	
Component/Piping System <i>Hot leg SG.#2 to Reactor Vessel</i>		ISO Drawing No. <i>Zone 4 R.2 F.C.1</i>		VCR Supervisor <i>Manuel Jones</i>			
	Manufacturer	Type	Batch No.				
Penetrant	<i>Sherwin</i>	<i>Dubl-chek</i>	<i>476015</i>				
Developer	<i>Sherwin</i>	<i>Dubl-chek</i>	<i>129F6</i>				
Remover	<i>Sherwin</i>	<i>Dubl-chek</i>	<i>225134</i>				
Weld Number	Comments	PT Results		VT Results			
		NRI	RI	SAT.	UNSAT.		
<i>06-011</i>	<i>Examination areas were 26" from Datum to 30" from datum and from 145" from datum to 160" from datum to verify removal of linear indications.</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			



D. Payne ANEZ 5/4/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/6</i>
Component/Piping System <i>Hot Leg Steam Gen. #2 to Reactor Vessel</i>		Examiner/Level <i>30211154111</i>	Date <i>4-27-82</i>
Procedure <i>ISI-2.5 Rev 0, F.C. 0</i>	Iso/Drawing No. <i>Zone 6, Rev 2, F.C. 1</i>	VCR Supervisor <i>Donal Jensen</i>	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>KB Aerotech</i>	Size <i>1/2"</i>	Cal. Block <i>UT-4</i>
Model <i>FTS Mark 1</i>			Cal. Block <i>---</i>
S/N <i>01610E</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>10 Div : 9.40"</i>
Refect <i>Min</i>			Calibration Checks
Damp. <i>Min</i>	Serial No. <i>KB2728</i>		<i>0740-1140</i>
Freq. <i>2. MHz</i>			
Rep. Rate <i>200</i>	Coax. Cable <i>6' twin Coax</i>		
Filter <i>Hi</i>			
Video <i>Norm</i>	Gain <i>76 db</i>		
Couplant <i>Sonotrace 40 Batch 8119</i>			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>04-001</i>	<i>12</i>	<i>3.95"</i>	<i>3.95"</i>	<i>4.04"</i>	<i>06-003LB</i>	<i>0"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.04"</i>
	<i>2</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.14"</i>		<i>12"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.04"</i>
	<i>4</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.14"</i>		<i>24"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.14"</i>
	<i>6</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.14"</i>		<i>36"</i>	<i>4.04"</i>	<i>4.14"</i>	<i>4.14"</i>
	<i>8</i>	<i>3.95"</i>	<i>3.95"</i>	<i>4.04"</i>		<i>48"</i>	<i>4.04"</i>	<i>4.04"</i>	<i>4.14"</i>
<i>06-002</i>	<i>10</i>	<i>3.95"</i>	<i>3.95"</i>	<i>4.04"</i>	<i>60"</i>	<i>4.04"</i>	<i>4.14"</i>	<i>4.14"</i>	
	<i>12</i>	<i>4.04"</i>	<i>3.95"</i>	<i>3.95"</i>	<i>72"</i>	<i>4.04"</i>	<i>4.14"</i>	<i>4.14"</i>	
	<i>2</i>	<i>4.14"</i>	<i>4.04"</i>	<i>4.14"</i>	<i>84"</i>	<i>4.04"</i>	<i>4.14"</i>	<i>4.14"</i>	
	<i>4</i>	<i>4.23"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>96"</i>	<i>4.14"</i>	<i>4.04"</i>	<i>4.14"</i>	
	<i>6</i>	<i>4.23"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>108"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.14"</i>	
	<i>8</i>	<i>3.95"</i>	<i>3.95"</i>	<i>3.95"</i>	<i>120"</i>	<i>4.14"</i>	<i>4.14"</i>	<i>4.14"</i>	
	<i>10</i>	<i>3.95"</i>	<i>3.85"</i>	<i>3.95"</i>	<i>132"</i>	<i>4.04"</i>	<i>3.95"</i>	<i>4.04"</i>	

Sketch/Identification



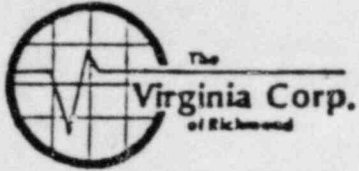
Ultrasonic Data Sheet
 for *D. Payne ANEE 5/4/82*
 Thickness Measurement
 Continuation Page 2 of 3

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 2/6
Component/Piping System Hol Leg Steam Gen #2 to Reactor Vessel		Examiner/Level <i>BURTON</i>	Date 4-27-82
Procedure ISI-2.5, Rev. 0, F.C.O		Iso/Drawing No. Zone 6, Rev 2, F.C. 1	VCR Supervisor <i>Daniel Jensen</i>

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	
06-004 LA	0"	4.04"	4.14"	4.14"	06-007	4	4.51"	4.70"	4.04"	
	12"	4.04"	4.14"	4.04"		6	4.23"	4.61"	4.23"	
	24"	4.04"	4.04"	4.14"		8	4.32"	4.70"	4.14"	
	36"	4.04"	4.14"	4.14"		10	4.42"	4.70"	3.95"	
	48"	4.04"	4.14"	4.04"		06-008 LA	0"	4.61"	4.61"	4.61"
	60"	4.14"	4.04"	4.04"			12"	4.61"	4.61"	4.61"
	72"	3.95"	4.04"	4.14"			24"	4.61"	4.70"	4.61"
	84"	4.14"	4.14"	4.04"			06-007 LB	0"	4.70"	4.70"
	96"	4.04"	4.14"	4.14"		12"		4.70"	4.61"	4.51"
	108"	4.14"	4.14"	4.14"		24"		4.70"	4.51"	4.61"
120"	4.04"	4.04"	4.14"	36"	4.70"	4.61"		4.61"		
132"	4.04"	4.04"	4.14"	48"	4.70"	4.61"		4.70"		
06-005	12	4.79"	4.79"	4.14"	06-010	12	4.70"	4.61"	4.70"	
	2	4.02"	4.89"	4.14"		2	4.70"	4.61"	4.61"	
	4	4.70"	4.79"	4.14"		4	4.70"	4.70"	4.70"	
	6	4.51"	4.79"	4.32"		6	4.70"	4.70"	4.70"	
	8	4.23"	4.14"	4.89"		8	4.61"	4.70"	4.61"	
06-007	10	4.61"	4.14"	4.79"	10	4.61"	4.70"	4.70"		
	12	4.04"	4.51"	3.95"	06-011	12	4.61"	5.26"	4.61"	
2	4.51"	4.70"	4.14"	2		4.61"	5.26"	4.51"		

Sketch/Identification



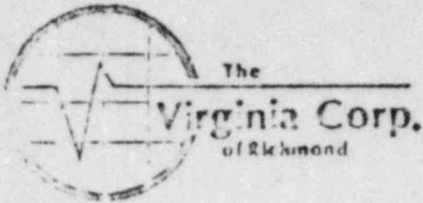
Ultrasonic Data Sheet
for *D. Payne* ANIE *5/4/82*
Thickness Measurement
Continuation Page *3* of *3*

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/6</i>
Component/Piping System <i>Hot Leg Steam Gen. #2 to Reactor Vessel</i>	Examiner/Level <i>RLEUVENHUE</i>	Date <i>4-27-82</i>	
Procedure <i>ISI-2.5 Rev. F.C.O</i>	Iso/Drawing No. <i>Zone 6, Rev. 2, FCI</i>	VGR Supervisor <i>Daniel Jensen</i>	

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>06-011</i>	<i>4</i>	<i>4.61"</i>	<i>4.87"</i>	<i>4.61"</i>					
	<i>6</i>	<i>4.61"</i>	<i>5.26"</i>	<i>4.70"</i>					
	<i>8</i>	<i>4.61"</i>	<i>5.08"</i>	<i>4.70"</i>					
	<i>10</i>	<i>4.61"</i>	<i>5.26"</i>	<i>4.70"</i>					

Sketch/Identification



Ultrasonic Examination Report

3-1-11

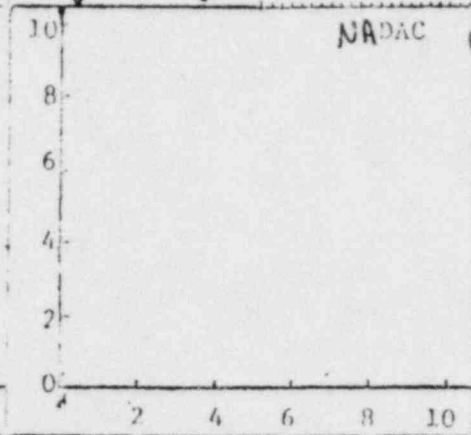
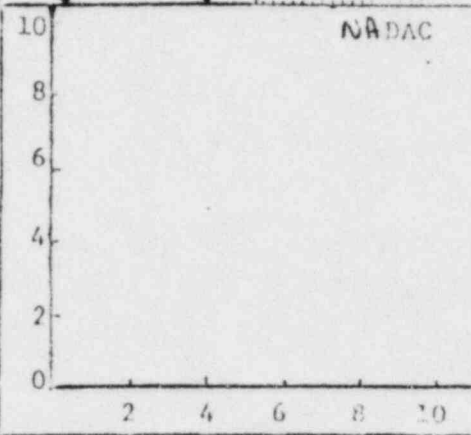
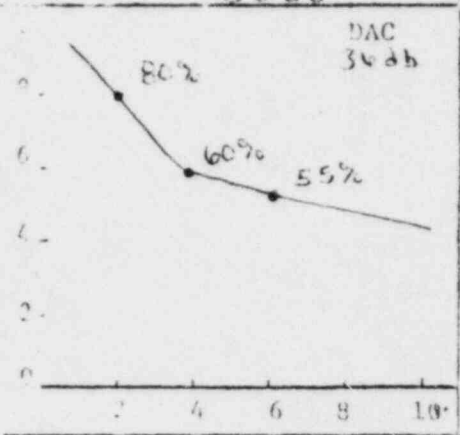
Customer LPEL	Plant Waterford	Unit 3	Loop/Zone 2/6	Isq/Drawing No. Zone 6, Rev 2, FC-1
Procedure 2.3 mm ISI-27 Rev 0 FC-1	Exam Surface O.D.	Examiner/Level BEELING, AME T-3	Supervisor David Jena	Date 4-27-82
Component/Piping System Hot Leg Steam Cond #2 to Reactor Vessel		Pipe Size 40" ID	Weld Type Butt	Cal. Block / Couplant: Sumitrace Type 40 Patch No. 5119

Continuation Sheet Attached
 Yes No

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

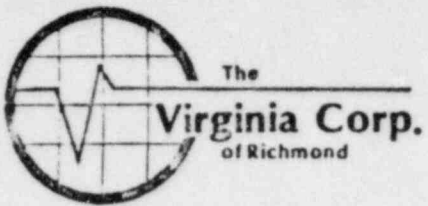
Transducer	0°	45°	60°	Instrument			
	S/N 48808	NA	NA	Mfg. Scov	Model 05304E	Repl None	ETS Mark 200
	Size 1.0"			Refect M.W	Filter None	Coax 12"	
	Frequency 2.25MHz			Temp M.W	Video 2MHz	View Norm	
Beam Angle 0°	↓	↓					

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	0750	1140	NA	NA	NA	NA
1/2 T	60%	4.0														
3/4 T	55%	6.0														
T	>100%	8.2														



Additional Comments/Sketch

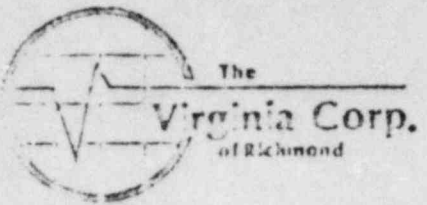
D. Payne ANEL 1/4/82



Ultrasonic Examination Report - Continuation Sheet Page 4 of 11

Customer <i>LP/L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>3 / 6</i>	Iso/Drawing No. <i>Zone 6, IEC 3, FC-1</i>
Procedure <i>FC-1</i>	Exam Surface <i>CD</i>	Examiner/Level <i>BURLINGAME II</i>	VCR Supervisor <i>Donald Jones</i>	Date <i>4-27-82</i>
Component/Piping System <i>REACTOR COOLANT</i>		Pipe Size <i>42" I.D.</i>	Weld Type <i>BUTT</i>	Cal. Block Couplant: Type & Batch # <i>UT-4 476" SURFACE # 219</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
CG-001	PAR	NA	NA	NA	PAR	C.D. NOZZLE SHAPE *	CLEAN	GROUND	NI	SAT	
CG-002	PAR				PAR	C.D. MISMATCH *	CLEAN	GROUND	NI	SAT	
CG-002AB	YES				YES		CLEAN	GROUND	NI	SAT	
CG-004A	YES				YES		CLEAN	GROUND	NI	SAT	
CG-005	PAR				PAR	C.D. NOZZLE RADIUS	CLEAN	GROUND	NI	SAT	
CG-007	PAR				PAR	C.D. MISMATCH *	CLEAN	GROUND	NI	SAT	
CG-008A	YES				YES		CLEAN	GROUND	NI	SAT	
CG-009B	YES	V	V	V	YES		CLEAN	GROUND	NI	SAT	



Ultrasonic Examination Report *D. Payne ANEL 5/4/82*

Customer L P&L	Plant Waterford	Unit 3	Loop/Zone/Isr/Drawing No. 2/6 Zone 6, Rev 2, F.C. 1
Procedure ISI-2.3 Rev 0, F.C. 1	Exam Surface O.D.	Examiner/Level BURLEIGH	Ver. Supervisor Daniel Jensen
Component/Piping System Reactor Coolant	Pipe Size 42" ID	Weld Type Butt	Date 4-27-82
Cal. Block		Couplant: Sonotrace	Match No S119

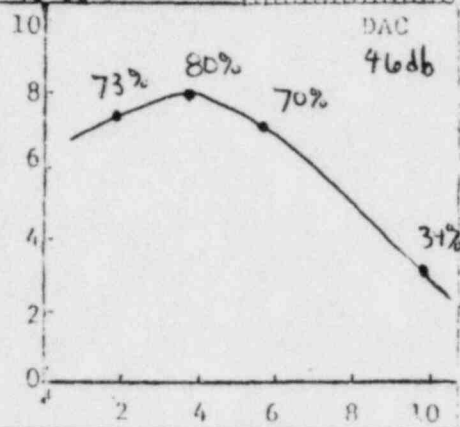
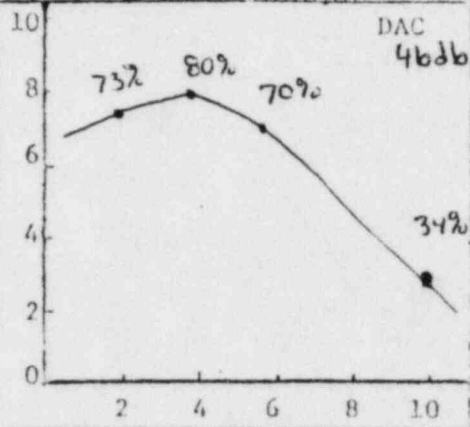
Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument				
	S/N	NA	L19134	NA	Mfr.	Sonic	Model	FTS Mark I
	Size		1.0"		S/N	780836	Refrate	1000
	Frequency		2.25 MHz		Select	OFF	Filter	OFF
	Beam Angle		45°		Damp	Min	Conx	12'
				Freq.	2 MHz	Video	Norm	

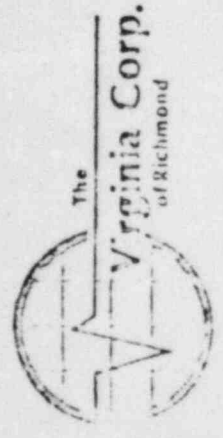
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	NA	NA	73%	2.0	2 9/32	5/8 1 1/2	73%	2.0	2 9/32	5/8 1 1/2	NA	NA	0745	1135	NA	NA
1/2T			80%	4.0	2 9/32	2 3/8 2 1/2	80%	4.0	2 9/32	2 3/8 2 1/2			1300	1540		
3/4T			70%	6.0	3 23/32	3 5/8 3 13/16	70%	6.0	3 23/32	3 5/8 3 13/16						
5/4T			34%	10.0			34%	10.0								

NA DAC



Additional Comments/Sketch

Ultrasonic Examination Report - Continuation Sheet Page 6 of 11



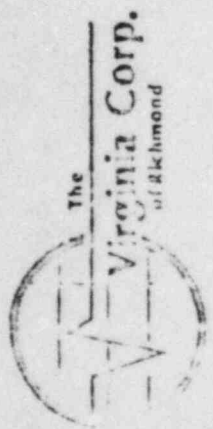
Customer LP&L	Plant Wabefeld	Date 3	Loop/Zone 2/6	Iso/Drawing No. Zone 6, Rev 2, FC-1
Procedure ISI-2.3, Rev. FC-1	Exam Surface O.D.	Examiner/Level B. J. B. / G. AME	VR Supervisor Daniel Gens	Date 4-27-82
Component/Piping System Reactor Coolant	Pipe Size 42" I.D.	Weld Type Butt	Cal. Block UT-4, 4.70"	Coilant: Type & Batch # See face 40, Batch 8119

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
04-001	NA	PAR	PAR	PAR	O.D. NEZZLE SLOPE *	Clean	Ground	NI	SAT	
06-002		PAR	PAR	PAR	O.D. Mismatch	Clean	Ground	NI	SAT	
04-003LB		YES	YES	YES		Clean	Ground	NI	SAT	
06-004LA		YES	YES	YES		Clean	Ground	NI	SAT	
06-007		PAR	PAR	PAR	O.D. Mismatch *	Clean	Ground	NI	SAT	
06-008LA		YES	YES	YES		Clean	Ground	NI	SAT	
06-009LB	Y	YES	YES	YES		Clean	Ground	NI	SAT	
					* SEE ATTACHMENT					

D. Payne ANE 574/82

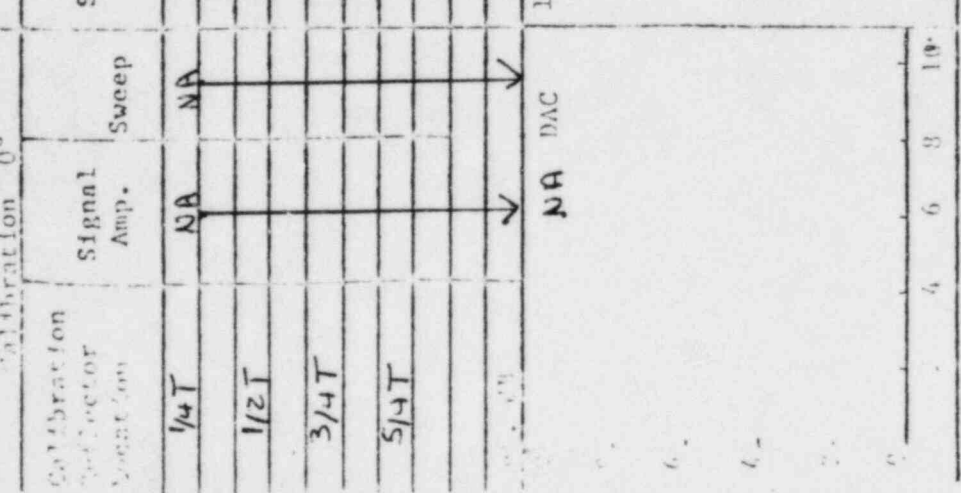
Ultrasonic Examination Report

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Customer LP&L	Plant Waterford	Unit 3	Group/Zone/Use/Drawing No. 2/6 Zone 6, Rev. 2, F.C. 1
Procedure ISI-2.3 Rev. F.C. 1	Exam Surface O.D.	Examiner/Level Bernard, H. III	Your Superintendent Daniel Gino
Component/Piping System Reactor Coolant	Pipe Size Weld Type 42" ID Butt	Cal. Block UT-4, 4.70"	Date 4-27-82
Transducer S/N Size Frequency Beam Angle	0° NA ↓ ↓ ↓	Instrument Model Rep Part Filter Conv V.D. Len	Soundface Type Patch No.
2 & 5 Scan	7 & 8 Scan	0° 45° 60°	60°
Signal Amp.	Signal Amp.	In	Out
80%	80%	NA	NA
50%	50%	NA	NA
27%	27%	NA	NA
6%	6%	NA	NA
60dB G	60dB G	NA	NA

Documentation Sheet Attached
 Yes No
 File Changes:
 Yes No
 File Number **FC. 1**

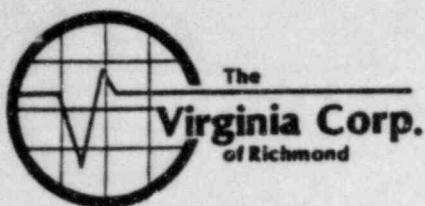


Ultrasonic Examination Report - Continuation Sheet



Customer LPCL	Plant Waterford	Unit 3	Loop/ Zone 2/6	ISO/Drawing No. Zone 6, Rev 2, FC 1
Procedure ISI-2.3, Rev 0, FC 1	Exam Surface O.D.	Examiner/Level BURKINGAME II	VCR Supervisor Daniel Jensen	Date 4-27-82
Component/Piping System Reactor Coolant	Pipe Size 42" ID.	Weld Type BxH	Cal. Block UT4-4.70"	Coilplant: Type & Batch # Sandstone 40, Batch 8119

Sld No.	Type Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
06-001	NA	PAR	PAR	PAR	NA	O.D. NOZZLE SLOPE *	Clean	Ground	NI	SAT	
06-002		PAR	PAR	PAR		O.D. MISMATCH *	Clean	Ground	NI	SAT	
06-003LB		YES	YES	YES			Clean	Ground	NI	SAT	
06-004LA		YES	YES	YES			Clean	Ground	NI	SAT	
06-007		PAR	PAR	PAR		O.D. MISMATCH *	Clean	Ground	NI	SAT	
06-008LA		YES	YES	YES			Clean	Ground	NI	SAT	
06-009LB	↓	YES	YES	YES	↓		Clean	Ground	NI	SAT	
						* SEE ATTACHMENT					The centerline of the 60° Beam does not intersect the I.D. of the test part for any scans that are circumferential to the pipe axis. These areas will be retested at a 30° angle



Date _____

Page 9 of 11

To: _____

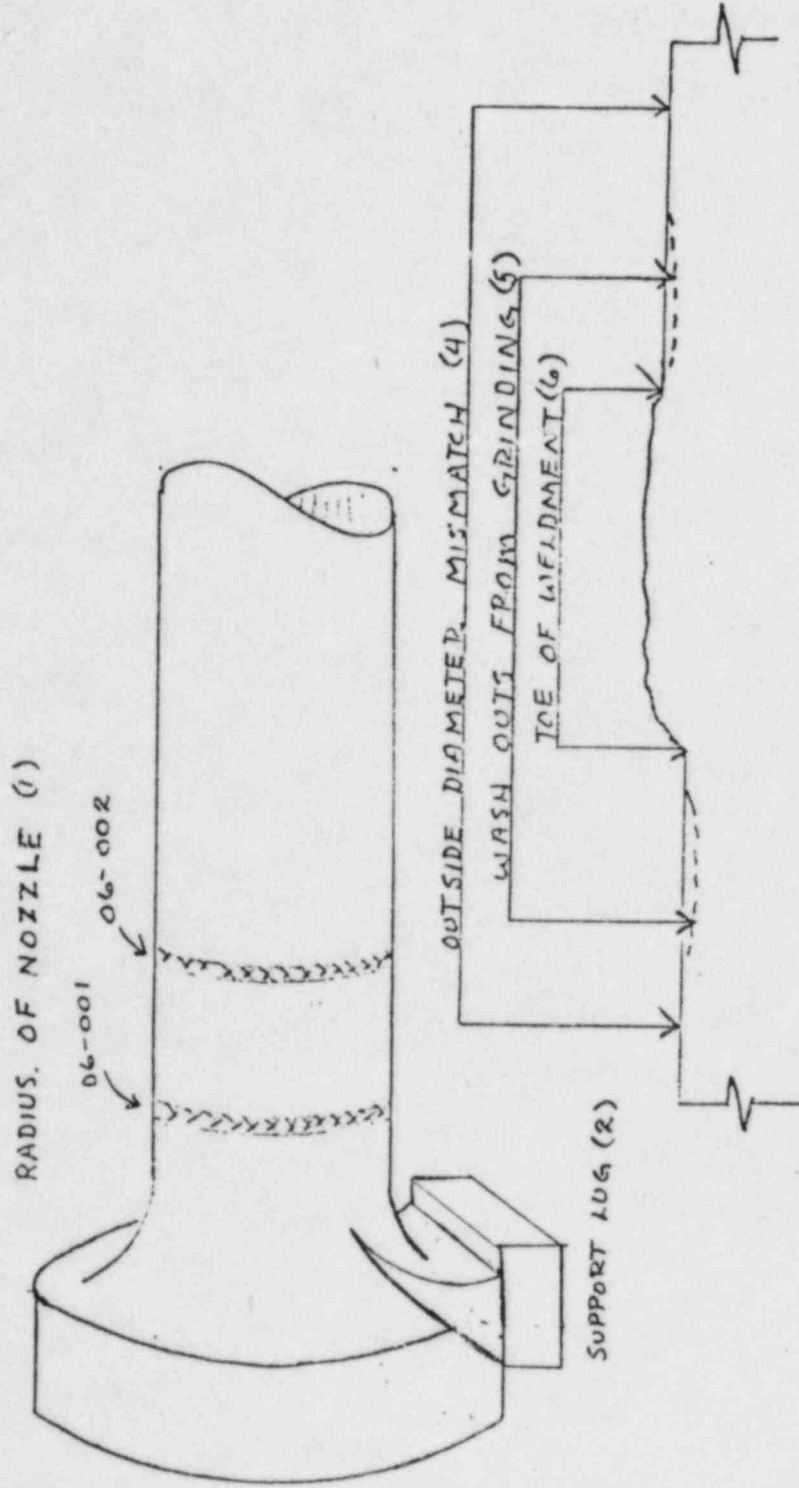
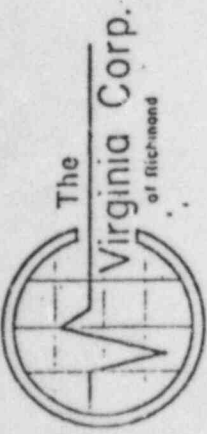
Subject EXAMINATION
LIMITATIONS
ZONE 6 RBV. 2 FC-1

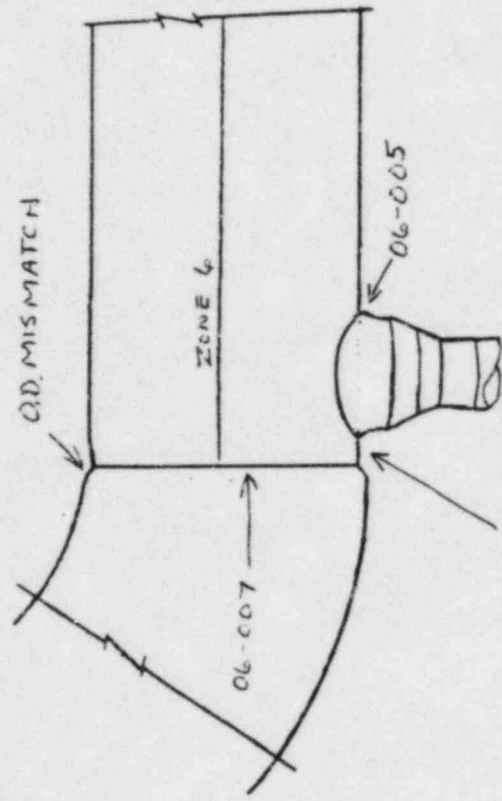
6-001 WAS LIMITED BY CONDITIONS 1 AND 2 FOR
SCANS 5, 7 & 8 AND BY CONDITION 4 AT WELD
6-002 IN THE SCAN 2 DIRECTION. SEE SKETCH.
GOOD ROOT AREA COVERAGE WAS NOT OBTAINED
WITH SCAN 5 @ 45° AND 60°. SCAN 5
SHOULD BE RETESTED AT N 30°
WITH THE 60° TRANSDUCER, ALL SCANS WITH
THE TRANSDUCER POINTED IN A CIRCUMFERENTIAL
DIRECTION, THE BEAM DOES NOT INTERSECT
THE ID OF THE TEST PART.

6-002 ALL SCANS WERE LIMITED BY CONDITION 4
(SEE SKETCH) 60° COVERAGE AT THE ID
IS THE SAME AS 6-001

6-007 ALL SCANS WERE LIMITED BY CONDITION 4
(SEE SKETCH) AND NOZZLE BRANCH CONNECTION,
SEE SKETCH OF ELBOW PIPE AND BRANCH.
60° COVERAGE AT THE ID IS THE SAME AS
6-001

Signed _____





SCAN LIMITATION
ON WELD 06-007
FROM NOZZLE BRANCH
AND SCAN LIMITATION
ON WELD 06-005 FROM
MISMATCH BETWEEN
PIPE AND ELBOW
AT WELD 06-007

D. Payne ANE 5/4/82

Ultrasonic Examination Report 1 of 6

Customer: LP&L
 Procedure: FC-1
 Exam Surface: OD
 Component/Piping System: REACTOR COOLANT

Plant: WATERFORD
 Unit: 3
 Examiner/Level: [Signature]
 Pipe Size: 42" ID
 Weld Type: BUTT

Loop/Zone: 2/6
 Disc/Drawing No.: ZONE 6, REV. 2, F.C.-1
 Date: 5/1/82
 VPR Supervisor: [Signature]
 Cal. Block Couplant: SONOTRADE
 Type: 40
 Batch No: 8119

Transducer: S/N [blank], Size [blank], Frequency [blank], Beam Angle [blank]
 S/N: J22935
 Size: 1/2"
 Frequency: 2.25 MHz
 Beam Angle: 46°

Transducer: S/N [blank], Size [blank], Frequency [blank], Beam Angle [blank]
 S/N: [blank]
 Size: [blank]
 Frequency: [blank]
 Beam Angle: [blank]

Transducer: S/N [blank], Size [blank], Frequency [blank], Beam Angle [blank]
 S/N: [blank]
 Size: [blank]
 Frequency: [blank]
 Beam Angle: [blank]

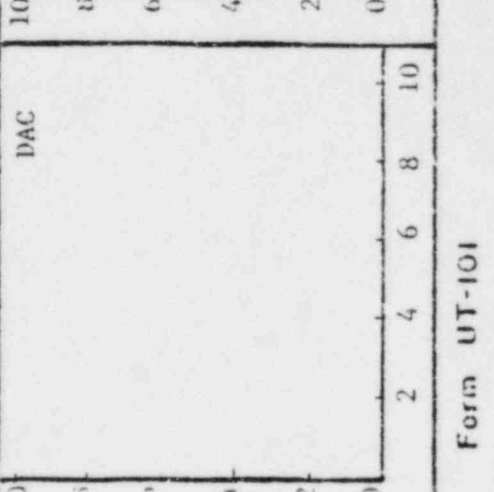
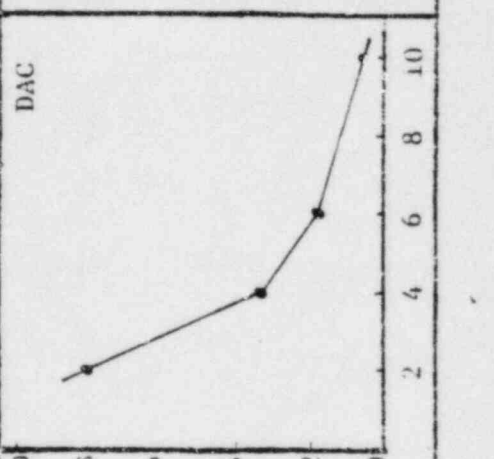
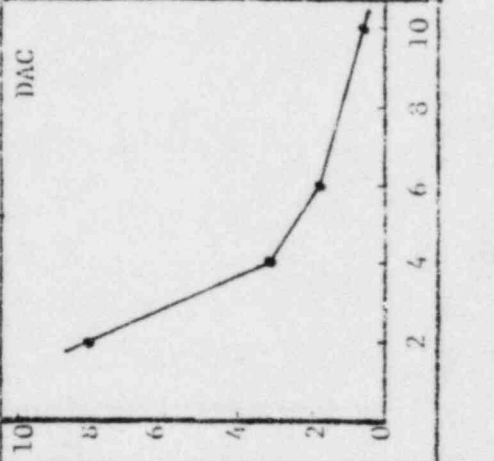
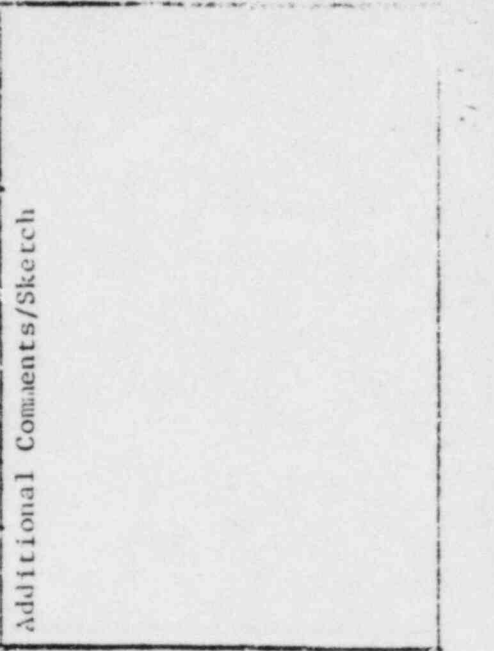
Continuation Sheet Attached: Yes [checked] No []
 Field Clamps: Yes [checked] No []
 IF Yes, Number: F.C.-1

Mfg.	S/N	Reject	Damp	Freq.	Model	RepRate	Filter	Gain	Video
SONIC	01610E	OFF	MIN.	2MHz	FTS MARK I	3K	HI	12'	NORM.

2 & 5 Scan		7 & 8 Scan	
Signal Amp.	Sweep	Signal Amp.	Sweep
80%	2.0	80%	2.0
30%	4.0	30%	4.0
18%	6.0	18%	6.0
5%	10.0	5%	10.0

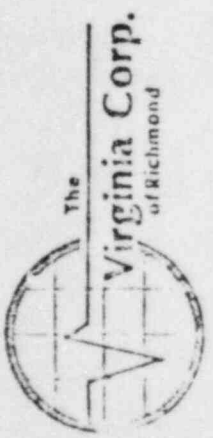
2 & 5 Scan		7 & 8 Scan	
Sound Entry Point To:	Scribe Line	Sound Entry Point To:	Scribe Line
50% DAC	3 1/32 1 3/8	50% DAC	3 1/32 1 3/8
50% DAC	2 2 3/8	50% DAC	2 2 3/8
50% DAC	3 3/8 3 3/8	50% DAC	3 3/8 3 3/8

Calibration 0°		Calibration 45°		Calibration 60°	
Ref. dB	Signal Amp.	Ref. dB	Signal Amp.	Ref. dB	Signal Amp.
10	N/A	10	N/A	10	N/A
5	N/A	5	N/A	5	N/A
0	N/A	0	N/A	0	N/A



D. Payne ANZ 5/4/92

Ultrasonic Examination Report - Continuation Sheet Page 2 of 6



Customer CP&L	Plant WATERFORD	Unit 3	Loop/ Zone 2/6	Iso/Drawing No. ZONE 6, REV. 2, F.C.-1
Procedure ISI-23 REV. 0 F.C.-1	Exam Surface O.D.	Examiner/Level ILB	VCR Supervisor Daniel Deros	Date 5/1/92
Component/Piping System REACTOR COOLANT	Pipe Size 42" I.D.	Weld Type BUTT	Cal. Block UT-4 4.9"	Supplant: Type & Batch # SONOTRACE 40 8119

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
06005	N/A	NO	PAR	PAR	O.D. SLOPE OF NOZZLE *	CLEAN	GROUND	NI	SAT	
					* SEE ATTACHMENT					

D. Payne ANE 2/82

Ultrasonic Examination Report

3 of 6

Loop/Zone/Use/Drawing No. 216 Zone 6, Rev 2, FC.1
 VPR Supervisor Date 5-1-82
 Couplant: Sonolace
 Type 40 Batch No. 8119

Unit 3
 Examiner/Level Welford
 BURNINGAME II B
 Pipe Size Weld Type 42" ID. B u H
 ID. B u H

Customer LP&L
 Exam Surface O.D.
 Procedure 151-23, Rev 0, FC.1
 Component/Piping System Reactor Coolant

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

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

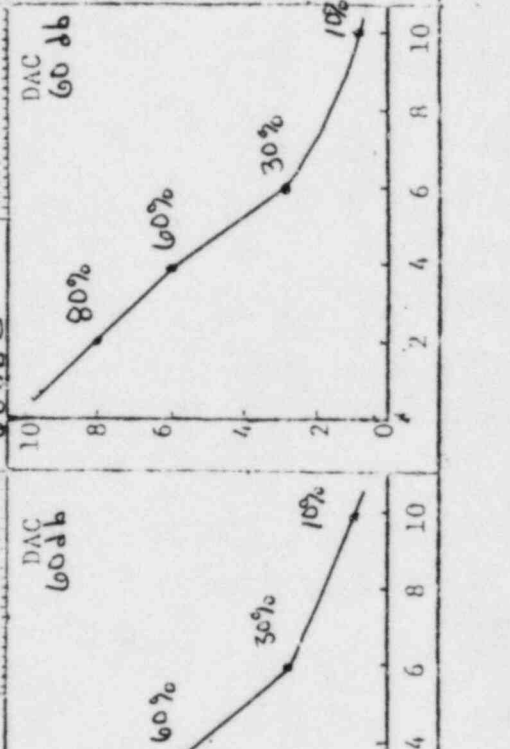
Continuation Sheet Attached Yes No
 Field Changes: Yes No
 Yes, Number F.C.1

Instrument	
Mfg. Model	Sonic FTS Mark I
S/N	05304E
RepRate	3000
Filter	Hi
Coax	12"
Video	Diff

7 & 8 Scan	
Sound Entry Point To:	0°
Scribe Line	2 7/32
Sweep	2.0
Signal Amp.	80%
50% DAC	1 7/8
10% DAC	4 5/8
30% DAC	6 7/8
60% DAC	10.0

2 & 5 Scan	
Sound Entry Point To:	0°
Scribe Line	2 7/32
Sweep	2.0
Signal Amp.	80%
50% DAC	1 7/8
10% DAC	4 5/8
30% DAC	6 7/8
60% DAC	10.0

Calibration Checks	
0°	60°
In Out	In Out
NA NA	NA 0835
NA NA	1200

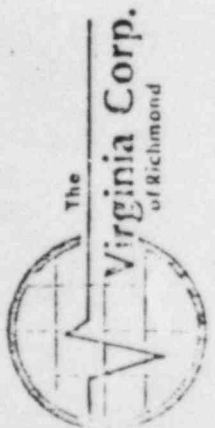


Additional Comments/Sketch	
NA DAC	60 dB



D. Payne ANIE 1/12

Ultrasonic Examination Report - Continuation Sheet Page 4 of 6



Customer: **LP&L** Plant: **Waterford** Unit: **3** Iso/Drawing No.: **Zone 6 Rev. FCI**

Procedure: **ASME Section V, Part 5, FC-1** Examiner/Level: **BURLINGAME IB** VCR Supervisor: **Daniel J. Payne** Date: **5-1-82**

Component/Piping System: **Feedwater Coolant** Pipe Size: **42" ID** Weld Type: **Butt** Cont. Block Diagram: **Type & Batch # UT-4, 4.76 Sonotrode 40 Batch 8119**

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8		Base Metal	Weld	UT	Visual		
06-005	NA	NO	PAR	PAR	0	NA	O.A. Slope of Nozzle *	Clean	Ground	NI	SAT
							* SEE ATTACHMENT				



The
Virginia Corp.
of Richmond

Date _____

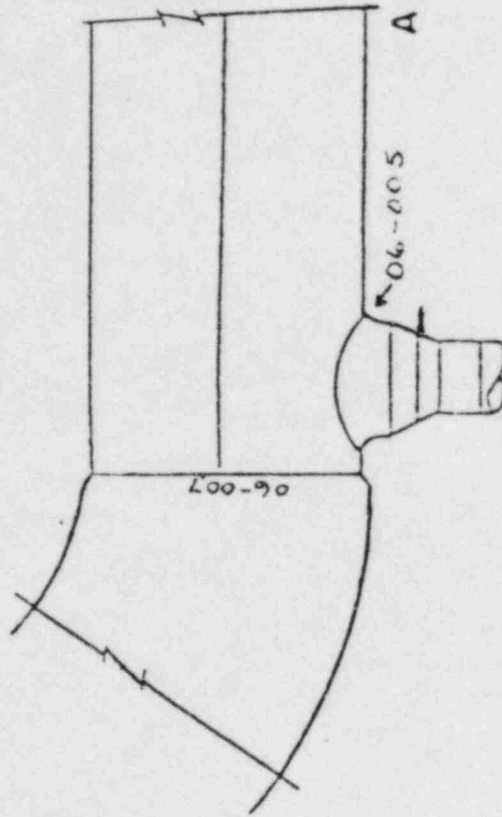
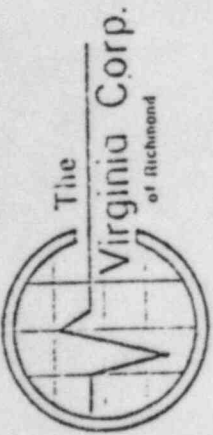
Page _____ of _____

To: _____

Subject EXAMINATION
LIMITATIONS

CG-005 IS THE WELD AT A BRANCH CONNECTION
ON THE REACTOR COOLANT PIPE. SCANS 5, 7 & 8
ARE LIMITED BY THE RADIUS OF THE WELD CROWN
THAT FORMS THE TRANSITION FROM THE PIPE
TO THE NOZZLE. SCANS ARE ALSO LIMITED BY
MISMATCH BETWEEN THE PIPE AND ELBOW. SCAN 2
WAS NOT PERFORMED BECAUSE THE BEAM WOULD
BE DIRECTED AWAY FROM THE ROOT AREA. THE 45°
SCAN 5 GAVE GOOD ROOT AREA COVERAGE. THE 60°
SCAN 5 BEAM DID NOT INTERSECT THE I.D SURFACE
WHEN THE BEAM WAS DIRECTED CIRCUMFERENTIALLY
IN RELATION TO THE REACTOR COOLANT PIPE. THE
SAME APPLIES FOR SCANS 7 & 8. SEE FIG 1

Signed _____





Ultrasonic Examination Report *D. Payne ANII 7/4/82*

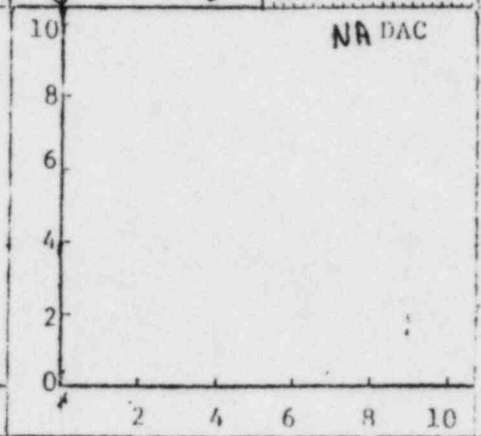
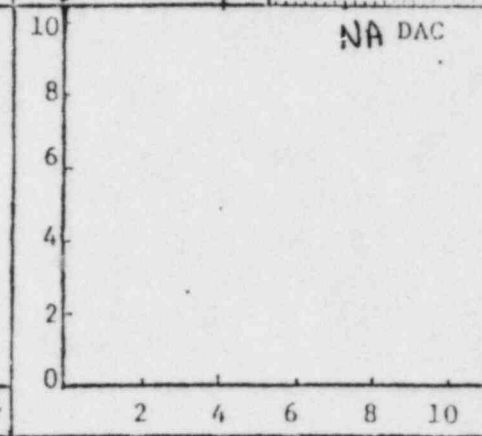
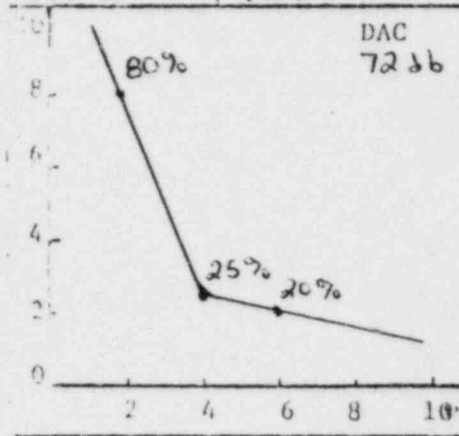
Customer LPCL	Plant Waterford	Unit 3	Loop/Zone 2/6	Iso/Drawing No. Zone 6, Res 2, F.C. 1
Procedure ISI-23 Rev 0 F.C. 1	Exam Surface O.D.	Examiner/Level BURLINGAME II		VAR Supervisor Daniel Jensen
Component/Piping System Hot Leg from Gen #2 to Reactor Vessel		Pipe Size 40" 42"	Weld Type Butt	Date 4-29-82
		Cal. Block UT-4,470	Couplant: Sonotrace Type 40	Batch No. 8119

Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N KB2728	NA	NA	Mfr.	Serial	Model	FIS Mark I
	Size 1/2"			S/N	0101E	RepRate	200
	Frequency 2.25 MHz			Reject	OFF	Filter	H
	Beam Angle 0°	↓	↓	Gain	OFF	Conn	10' twin Coax
				Freq.	2 MHz	Video	Adm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0755	1015	NA	NA	NA	NA
1/2 T	25%	4.0															
3/4 T	20%	6.0															
T	60%	8.2															
Ref. dB	72 db																

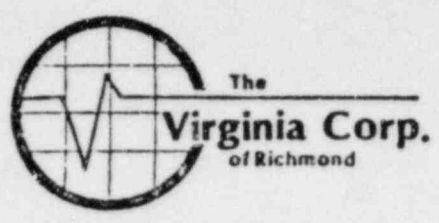


Additional Comments/Sketch

D. Payne ANII 5/4/82

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 11



Customer LPFL	Plant Waterford	Unit 3	Loop/ Zone 2/6	Iso/Drawing No. Zone 6, Rev 2, F.C. 1
Procedure ISI-2.3 Rev 0, F.C. 1	Exam Surface O.D	Examiner/Level BURLINGAME II		VCR Supervisor Donald Jones
Component/Piping System Hot Leg Steam Gen. #2 to Reactor Vessel		Pipe Size 40" 1/2" ID	Weld Type Butt	Date 4-29-82
		Cal. Block UT-4.470"	Couplant: Type & Batch # ScotchBrite 40 Batch # 819	

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
06-005	PAR	NA	NA	NA	PAR	NOZZLE BRANCH	* CLEAN	GROUND	NI	SAT	
						* SEE ATTACHMENT					



The
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Ultrasonic Examination Report

D. Payne ANIE 5/26/82

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 2, 6	Iso/Drawing No. ZONE 6 REV. 2 F.C.-1
Procedure ISI-23 REV. 0, FC-1	Exam Surface O.D.	Examiner/Level BURLINGAME J.R.	VCR Supervisor <i>[Signature]</i>	Date 5-7-82
Component/Piping System REACTOR COOLANT		Pipe Size 42" I.D.	Weld Type BUTT	Cal. Block # UT-4 49000
		Couplant: SONOTRACE		Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

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

Transducer	30°	45°	60°	Instrument		
	S/N L19801	N/A	N/A	Mfr. SONIC	Model FTS-MARK I	
	Size 1.0"			S/N 05304E	RepRate 1K	
	Frequency 2.25MHz			Reject OFF	Filter OFF	
Beam Angle 31°			Damp MIN.	Coax 12'		
			Freq. 2. MHz	Video NORMAL		

Calibration 0°

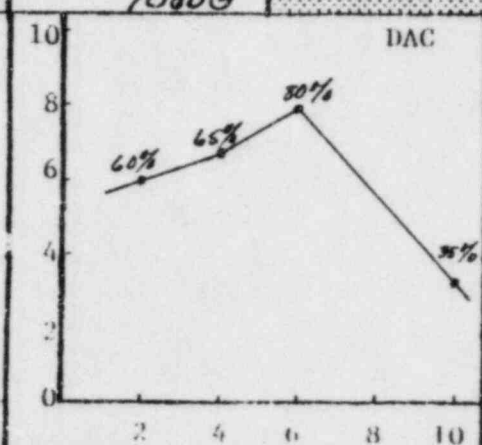
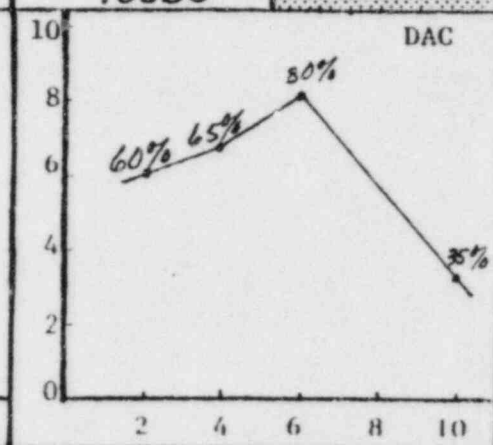
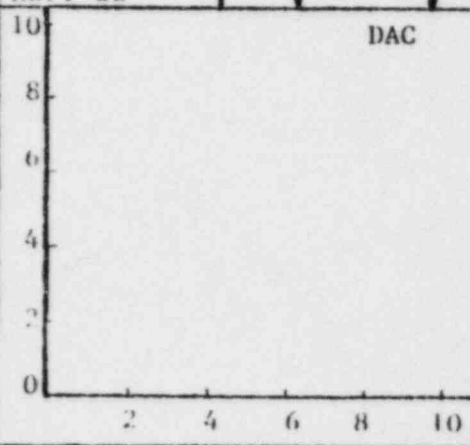
2 & 5 Scan

7 & 8 Scan

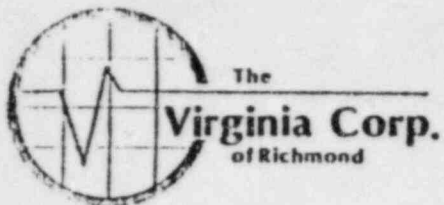
Calibration Checks

Calibration Reflector Location	Signal Amp.	Sweep	Signal			Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
			Amp.	Sweep	50% DAC	Scribe Line	50% DAC	Scribe Line			50% DAC	30°		45°		60°			
												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	0910	11:30	N/A	N/A	N/A	N/A	
1/2T			65%	4.0	1 3/8	1.0	1 7/8	65%	4.0	1 3/8	1.0	1 7/8							
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**



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet

D. Payne ANIE 5/26/82

Customer LP ₃ L	Plant WATERFORD	Unit 3	Loop/ Zone 2, 6	Iso/Drawing No. ZONE 6, REV. 2, FC-1
Procedure ISI R3, REV. C, FC1	Exam Surface OD	Examiner/Level BURLINGAME	VCR Supervisor Daniel Dima	Date 5-7-82
Component/Piping System REACTOR COOLANT	Pipe Size 42" ID	Weld Type Bolt	Cal. Block Couplant: Type & Batch # UT-4, 45095 SONOTRAKE 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	
06-001	NA	NA	PAR	YES	NA	OD SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
06-002	NA	NA	PAR	PAR	NA	O.D. MISMATCH.	CLEAN	GROUND	NI	SAT	
06-003LB	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
06-004LB	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
06-005	NA	NO	PAR	PAR	NA	BRANCH CONNECTION	CLEAN	GROUND	NI	SAT	
06-007	NA	NA	NA	PAR	NA	O.D. MISMATCH.	CLEAN	GROUND	NI	SAT	
06-008LA	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
06-009LB	NA	YES	YES	NA	NA		CLEAN	GROUND	NI	SAT	
						SEE ATTACHMENT					



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Date 5-7-82

Page _____ of _____

To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 6, REV. 2, FC-1

06-001 SCAN 2 WAS NOT PERFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45° $\frac{1}{2}$ 60° ANGLES. SCAN 5 WAS RESTRICTED BY THE O.D. SLOPE OF THE NOZZLE. ALLOWING FOR BEAM SPREAD, GOOD ROOT AREA COVERAGE WAS OBTAINED. SCANS 7 $\frac{1}{2}$ 8 WERE RESTRICTED BY THE O.D. SLOPE OF THE NOZZLE TO A SMALL DEGREE, ROOT AREA COVERAGE WAS GOOD.

06-002 SCAN 2 WAS NOT PERFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45° $\frac{1}{2}$ 60° ANGLES. SCAN 5 WAS RESTRICTED BY THE O.D. MISMATCH BETWEEN THE NOZZLE AND PIPE, GOOD ROOT AREA COVERAGE WAS OBTAINED. SCANS 7 $\frac{1}{2}$ 8 WERE ALSO RESTRICTED BY THE OD MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS GOOD.

06-005 SCAN 2 WAS NOT PERFORMED BECAUSE THE ULTRASONIC BEAM WOULD BE DIRECTED AWAY FROM THE ROOT AREA. SCAN 5 WAS RESTRICTED BY THE RADIUS OF THE WELD CROWN BETWEEN THE MAIN RC PIPE AND BRANCH NOZZLE. ROOT AREA COVERAGE WITH THE 5 SCAN WAS GOOD. SCANS 7 $\frac{1}{2}$ 8 WERE ALSO LIMITED BY THE WELD CROWN RADIUS ALSO.

06-007 SCANS 2 $\frac{1}{2}$ 5 WERE NOT PERFORMED BECAUSE ADEQUATE COVERAGE WAS OBTAINED WITH THE 45° $\frac{1}{2}$ 60° ANGLES. SCANS 7 $\frac{1}{2}$ 8 WERE LIMITED BY O.D. MISMATCH. GOOD ROOT AREA COVERAGE WAS OBTAINED WITH SCANS 7 $\frac{1}{2}$ 8 AT 30° .

Signed _____



The Virginia Corp.
of Rich. and

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

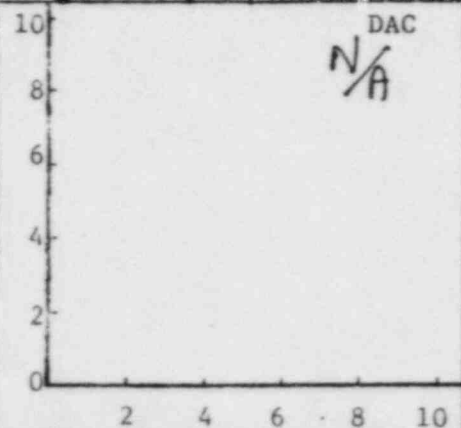
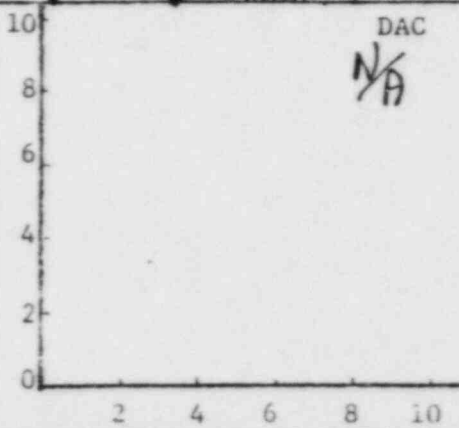
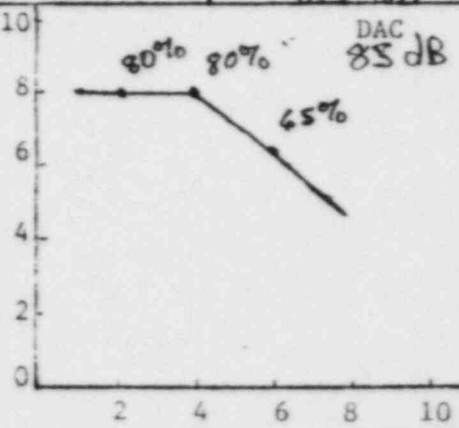
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 2/6	Iso/Drawing No. Zone 6, Rev. 2, F.C. 1
Procedure ISI 2.3 F.C. 1	Exam Surface I.D.	Examiner Richard DeLoe II	VCR Supervisor Daniel Dims	Date 5-8-82
Component/Piping System Hot leg - Steam Gen 2 to R.V.	Pipe Size 42"	Weld Type Butt	Cal. Block # UT-4	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
Yes No

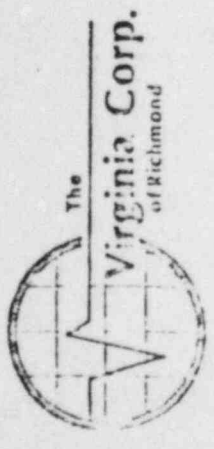
Field Changes:
Yes No
If Yes, Number **1**

Transducer	0°	45°	60°	Instrument			
S/N	48807	NA	NA	Mfr.	Sonic	Model	FTS Mark I
Size	1"			S/N	740836 740836	RepRate	1K
Frequency	2.25MHz			Reject	off	Filter	High
Beam Angle	0°	↓	↓	Damp	Min'	Coax	12'
				Freq.	2 Mhz	Video	Norm

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0900	1130	NA	NA	NA	NA		
1/2 T	80%	4.0																		
3/4 T	65%	6.0																		
1 T	>100%	8.0																		
Ref. dB	85 dB																			



Additional Comments/Sketch



Customer L P & L	Plant Waterford	Unit 3	Loop/Zone 2/6	Iso/Drawing No. Zone 6, Rev. 2, E.C. 1
Procedure Rev. 0	Exam Surface I. D.	Examiner Level Richard D. O'Brien	VCR Supervisor Daniel Jones	Date 5-8-82
Component/Piping System Hot leg - Steam Gen. 2 to R.V.	Pipe Size 42"	Weld Type Butt	Cal. Block UT-4	Coilant: Type & Batch # Sonotrax 40 #8115

Weld No.	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks	
	Base Metal Scan	2	5		7 & 8	0	UT	Visual		
06-001	Yes	NA	NA	NA	Yes	clean	Ground	NI	Sat	
06-002	Yes	NA	NA	NA	Yes	clean	Ground	NI	Sat	



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

Customer <i>LPiL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/6</i>	Iso/Drawing No. <i>Zone 6, Rev 2, F.C. 1</i>
Procedure <i>NR-103</i> <i>ISI-2.3, Rev 0, FCT</i>	Exam Surface <i>I.D.</i>	Examiner/Level <i>R. Burlingame JT</i>	VCR Supervisor <i>Daniel D. ...</i>	Date <i>5-15-82</i>
Component/Piping System <i>Reactor Coolant</i>		Pipe Size <i>42"</i>	Weld Type <i>Bull</i>	Cal. Block # <i>UT-4, #38</i>
			Couplant: <i>Sonotrace</i>	Batch No. <i>8119</i>

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
Yes, Number *NR-2*
F.C. X-109

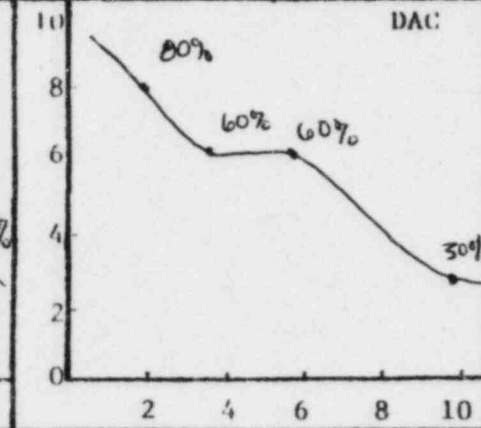
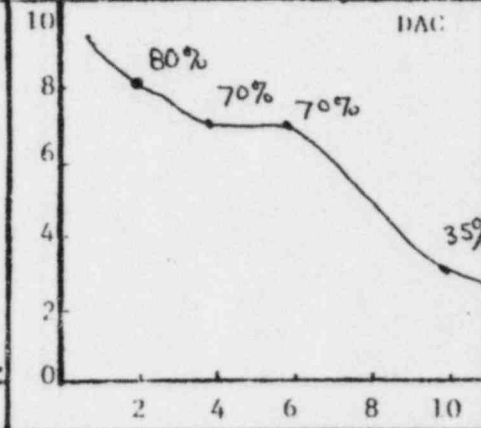
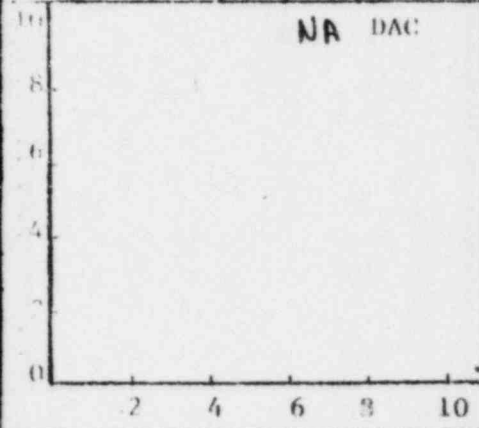
Transducer	Instrument		
	S/N	Model	FIS Mark I
<i>0°</i>	<i>NA</i>	<i>Sonic</i>	<i>1000</i>
<i>45°</i>	<i>L19134</i>	<i>05304E</i>	<i>1000</i>
<i>60°</i>	<i>NA</i>	<i>OFF</i>	<i>Hi</i>
Size	<i>1.0"</i>	Reject	Filter
Frequency	<i>2.25 MHz</i>	Damp	Coax
Beam Angle	<i>45°</i>	Freq.	Video
		<i>2 MHz</i>	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

Calibration *0°*

2 & 5 Scan

7 & 8 Scan

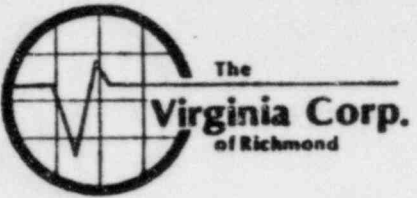
Calibration Reflector Location	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
			Scribe Line	50% DAC				Scribe Line	50% DAC		0°		45°		60°	
				In	Out				In	Out	In	Out				
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>3 1/32</i>	<i>2 3/32</i>	<i>1 3/16</i>	<i>80%</i>	<i>2.0</i>	<i>3 1/32</i>	<i>5/16</i>	<i>1 1/16</i>	<i>NA</i>	<i>NA</i>	<i>0800</i>	<i>1015</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>2 1/32</i>	<i>2 1/16</i>	<i>2 1/8</i>	<i>70%</i>	<i>4.0</i>	<i>2 1/32</i>	<i>1 3/32</i>	<i>2 1/32</i>						
<i>3/4 T</i>			<i>3 5/8</i>	<i>3 1/2</i>	<i>3 1/4</i>	<i>70%</i>	<i>6.0</i>	<i>3 5/8</i>	<i>3 3/4</i>	<i>4 1/8</i>						
<i>5/4 T</i>						<i>35%</i>	<i>9.8</i>									
Ref. dB	<i>NA</i>	<i>NA</i>				<i>66 dBG</i>					<i>63 dBG</i>					



Additional Comments/Sketch

W.R. Martin, ANEF 12-5-82

Ultrasonic Examination Report



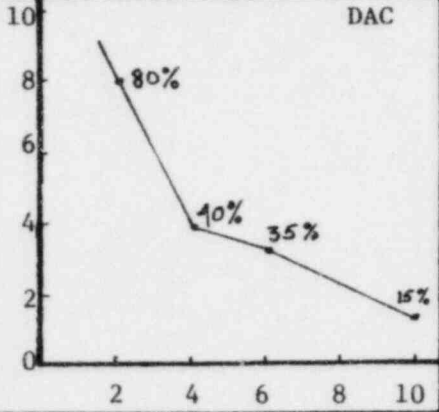
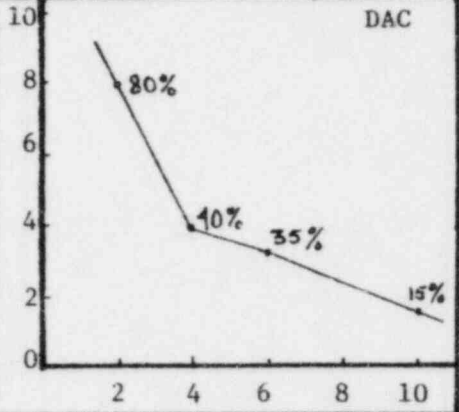
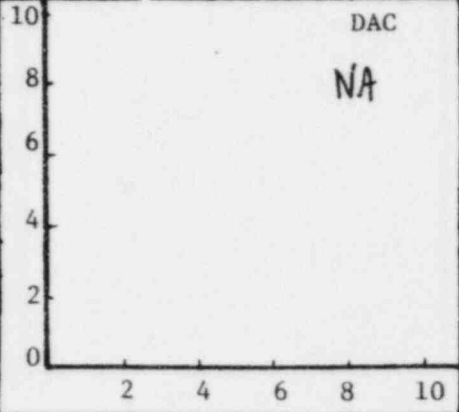
Customer LP & L	Plant Waterford	Unit 3	Loop/Zone 2-6	Iso/Drawing No. Zone 6, Rev 2, F.C. 1
Procedure ISI 2.3 Rev 0 F.C. 2	Exam Surface I.D.	Examiner/Level BURKINS/ME/IT	VCR Supervisor Terra White	Date 15-15-82
Component/Piping System Hot Leg - SG #2 to R.V.	Pipe Size 42"	Weld Type Butt	Cal. Block # UT-4 4.70"	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

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

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	NA	L19801	Mfr.	Sonic	Model	MARK I
			1"	S/N	03704E	RepRate	1K
			2.25 MHz	Reject	off	Filter	off
	↓	↓	61°	Damp	min.	Coax	12'

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	2 7/32	1 7/8 2 1/2	80%	2.1	2 7/32	1 7/8 2 1/2	NA	NA	NA	NA	8:00	10:15
1/2 T			40%	4.0	4 5/8	4 5/8 4 3/4	40%	4.1	4 5/8	4 5/8 4 3/4						
3/4 T			35%	6.0	6 7/8	6 1/2 7 1/16	35%	6.1	6 7/8	6 1/2 7 1/16						
5/4 T			15%	10.0			15%	10.0								
Ref. dB	↓	↓	74 db				76 db				↓	↓	↓	↓		



Additional Comments/Sketch

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

Ultrasonic Examination Report - Continuation Sheet

Page **of**



Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 2-6	Iso/Drawing No. Zone 6 Rev. 2 F.C. 1
Procedure ISI-2.3 Rev. 0, F.C. 2	Exam Surface I.D.	Examiner/Level BURLINGAME / II	VCR Supervisor Kevin White	Date 5-15-82
Component/Piping System Hot Leg-SG #2 to R.V.	Pipe Size 42"	Weld Type Butt	Cal. Block UT-4 4.70	Couplant: Type & Batch # Sonotrace 40 811?

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
06-001	NA	Yes	Yes	Yes	NA		Clean	Ground	NI	Sat	
06-002	NA	Yes	Yes	Yes	NA		Clean	Ground	NI	Sat	



Ultrasonic Data Sheet

for *D. Payne ANEE 6/24/82*

Thickness Measurement

Customer <i>LP & L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/6</i>
Component/Piping System <i>Hot leg - Steam Gen #2 to R.V.</i>		Examiner/Level <i>David J. Zolner III</i>	Date <i>6-15-82</i>
Procedure <i>ISI 2.5 Rev. 0</i>	Iso/Drawing No. <i>Zone 6 Rev. 2</i>	VCR Supervisor <i>Wendell Jones</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Parameetrics</i>	Size <i>.50"</i>	Cal. Block <i>UT-16</i>	
Model <i>FIS Mark I</i>	Size <i>.50"</i>		Cal. Block <i>NA</i>	
S/N <i>01610E</i>	Freq. <i>3.5 Mhz</i>		Range Cal. <i>2.2"</i>	
Reject <i>off</i>	Serial No. <i>41874</i>		Calibration Checks	
Damp. <i>Min</i>	Coax. Cable <i>6' Dual</i>		Initial - <i>1:20 PM</i>	
Freq. <i>2 Mhz</i>	Gain <i>50 dB</i>		Final - <i>2:40 PM</i>	
Rep. Rate <i>1K</i>				
Filter <i>off</i>				
Video <i>Norm</i>				
Couplant <i>Sonotrace 40, B # 8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>06-006</i>	<i>12</i>	<i>N/A</i>	<i>N/A</i>	<i>1.38"</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>06-006</i>	<i>2</i>			<i>1.42"</i>					
<i>06-006</i>	<i>4</i>			<i>1.42"</i>					
<i>06-006</i>	<i>6</i>			<i>1.42"</i>					
<i>06-006</i>	<i>8</i>			<i>1.40"</i>					
<i>06-006</i>	<i>10</i>			<i>1.42"</i>					

Sketch/Identification



The
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Ultrasonic Examination Report

R. Payne ANTI 6/24/82

Customer <i>LP & L</i>	Plant <i>Waterford</i>	Unit <i>#3</i>	Loop/Zone <i>216</i>	Iso/Drawing No. <i>Zone 6 Rev. 2 F.C. 7</i>
Procedure <i>F.C. 1</i> <i>ISI 2.8 Rev. 1</i>	Exam Surface <i>OD</i>	Examiner/Level <i>David J. Tokem</i>	VER Supervisor <i>Manuel Jensen</i>	Date <i>6/15/82</i>
Component/Piping System <i>Hot leg - Steam Gen. 2 to Reactor</i>	Pipe Size <i>14"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-16</i>	Couplant: Type <i>Sonic 40</i> Batch No. <i>8124</i>

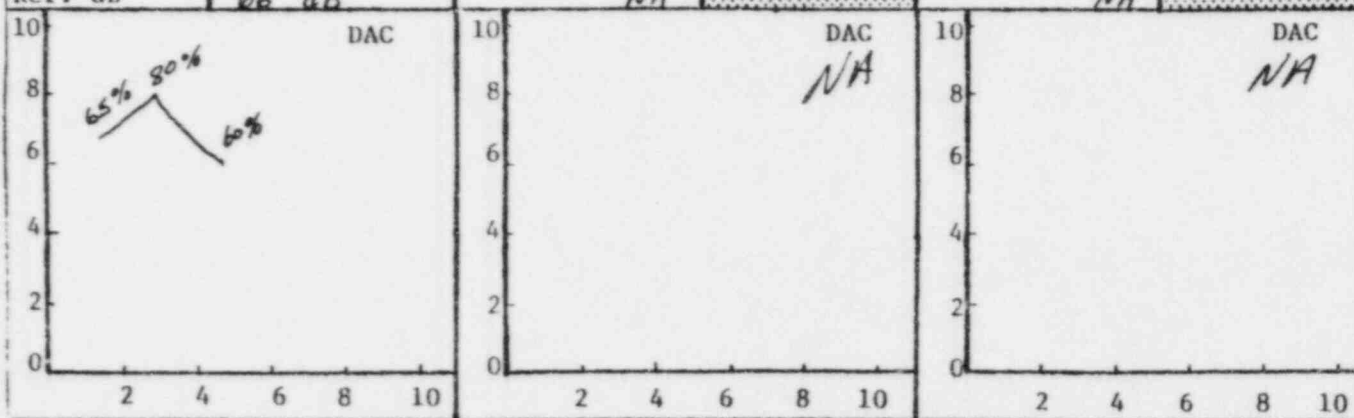
Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
S/N	<i>HB2728</i>	<i>NA</i>	<i>NA</i>	Mfr.	<i>SONIC</i>	Model	<i>MAK I</i>
Size	<i>1/2"</i>			S/N	<i>05473 E</i>	RepRate	<i>1K</i>
Frequency	<i>2.25 mhz</i>			Reject	<i>off</i>	Filter	<i>off</i>
Beam Angle	<i>0°</i>			Damp	<i>Mid.</i>	Coax	<i>6'Dual</i>
				Freq.	<i>2.0 mhz</i>	Video	<i>Norm.</i>

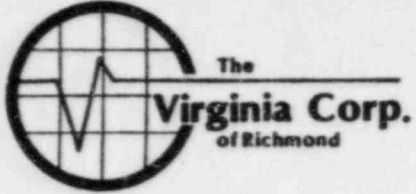
Calibration 0°			2 & 5 Scan				7 & 8 Scan				
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:	
					Scribe Line	50% DAC	NA			Scribe Line	50% DAC
<i>1/4 T</i>	<i>65%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>	<i>80%</i>	<i>3.0</i>									
<i>3/4 T</i>	<i>60%</i>	<i>4.5</i>									

Calibration Checks					
0°		45°		60°	
In	Out	In	Out	In	Out
<i>9:12 am</i>	<i>11:30 am</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>



Additional Comments/Sketch
Cal. for carbon steel side only

R. Payne ANII 6/24/82



Ultrasonic Examination Report - Continuation Sheet

Page 2 of 2

Customer LP+L	Plant Waterford	Unit # 3	Loop/ Zone 2 / 10	Iso/Drawing No. Zone 6 Red 2 EC & dlf 2
Procedure ISI 2.8 Rev. 1	Exam Surface CO	Examiner/Level David J. ...	VCR Supervisor ... Jensen	Date 6-15-82
Component/Piping System Hot leg - Steam from 7 to Reactor	Pipe Size 14"	Weld Type BUTT	Cal. Block UT-16	Couplant: Type & Batch # Sonotrace 40 Batch 129

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
06-006	Yes	N/A	N/A	N/A	Yes	N/A	Smooth	Ground	N/A	Sat	Inspection of carbon steel side only



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

Customer LP & L	Plant WATERFORD	Unit III	Loop/Zone 216
Component/Piping System HOT LEG - STEAM GR. #2 TO REACTOR V	Examiner/Level David J. Payne, III	Date 6/19/82	
Procedure ISI 25 REV 0	Iso/Drawing No. <i>dl</i> ZONE G / REV. 2 FC 12	VGR Supervisor <i>N. J. Payne</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

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

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
06-006	12	1.31"	1.31"	N/A	N/A	N/A	N/A	N/A	N/A
06-006	2	1.28"	1.30"						N/A
06-006	4	1.26"	1.26"						
06-006	6	1.28"	1.28"						
06-006	8	1.24"	1.28"						
06-006	10	1.26"	1.30"						

Sketch/Identification



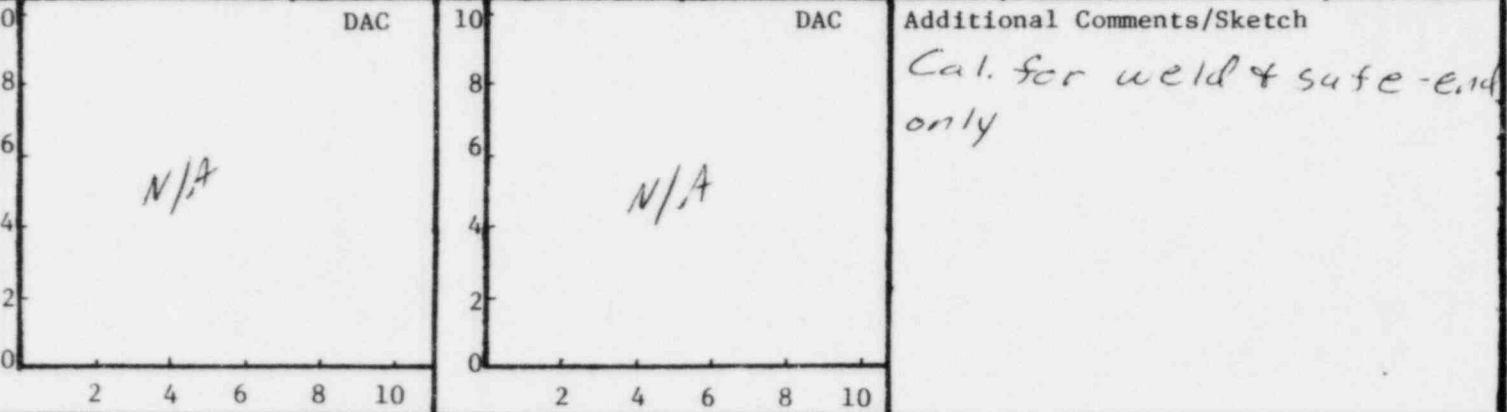
Ultrasonic Examination Report

R. Payne ANEL 6/24/82

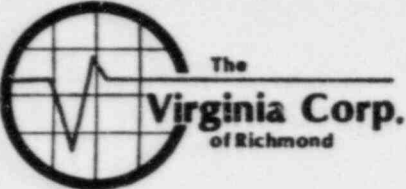
Customer LP & L		Plant WATERFORD		Unit III	Loop/Zone 2 16	Iso/Brawing No. ZWEG / REV 2 FC. 2 off	
Procedure ISI 2.8 REV. 1 FC. 1 O.D.		Exam Surface	Examiner/Level <i>David J. Fokun III</i>		VGR Supervisor <i>Daniel J. Jones</i>		Date 6/19/82
Component/Piping System HOTLEG-STEAM Gen #2 TO REACTOR V.			Pipe Size 14"	Weld Type Butt	Cal. Block # UT-16	Couplant: Type 40 Batch No 8124	

Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transducer			Instrument			
	S/N	44652		Mfr.	SONIC	Model	MARK I
Field Changes: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, Number <u>1</u>	Size	.50"		S/N	01610E	RepRate	1K
	Frequency	2.25 mhz		Reject	OFF	Filter	High
	Beam Angle	0°		Damp	Min	Coax	6' BACTO BN

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



D. Payne AMIT 6/24/82

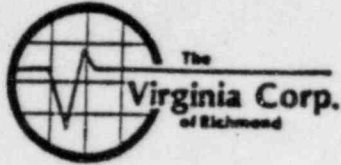


Ultrasonic Examination Report - Continuation Sheet

Page 2 of 2

Customer LP & L	Plant WATER FORD	Unit III	Loop/ Zone 2/6	Iso/Drawing No. 2 ZNEG/REV.2 FLX dlf
Procedure ISI 2.8 REV.1 FL.1	Exam Surface O.D.	Examiner/Level David Toland III	VCR Supervisor Neniel Jensen	Date 6/19/82
Component/Piping System HOT LEG-STEAM Gen. #2 TO REACTOR V.	Pipe Size 14"	Weld Type Butt	Cal. Block UT-16	Couplant: Type & Batch # 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	
06-006	Yes	N/A	N/A	N/A	Yes	N/A	Smooth	GRADED	NI	Sut	Inspection of weld safe end only



D. Payne ANII 6/21/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>L.P.E.L.</i>	Plant <i>Waterford</i>	Unit # <i>3</i>	Loop/Zone <i>2/6</i>
Component/Piping System <i>Hot Leg Steam Generator to R.V.</i>		Examiner/Level <i>David J. Fokun III</i>	Date <i>6/18/82</i>
Procedure <i>ISI-2.5, Rev. 0, 2/82</i>	Iso/Drawing No. <i>Zone 6, Rev. 2, F.C. 1</i>	VCS Supervisor <i>M. J. ...</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Panametric</i>	Size <i>1.0"</i>	Cal. Block <i>U.T. - 4</i>
Model <i>Mark I</i>			Cal. Block <i>NA</i>
S/N <i>780836</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>8.2"</i>
Reject <i>Off</i>	Serial No. <i>48808</i>		Calibration Checks <i>In - 1125</i> <i>Out - 1320</i>
Damp. <i>Min.</i>	Coax. Cable <i>12' BNC to BNC</i>		
Freq. <i>Broad Band</i>	Gain <i>25 db</i>		
Rep. Rate <i>1K</i>			
Filter <i>Off</i>			
Video <i>Norm</i>			
Couplants <i>Sonotrace 40 Batch # 8/24</i>			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>06-011</i>	<i>12</i>	<i>4.66</i>	<i>4.90</i>	<i>4.66</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>06-011</i>	<i>2</i>	<i>4.66</i>	<i>4.90</i>	<i>4.57</i>					
<i>06-011</i>	<i>4</i>	<i>4.66</i>	<i>4.98</i>	<i>4.66</i>					
<i>06-011</i>	<i>6</i>	<i>4.66</i>	<i>4.90</i>	<i>4.66</i>					
<i>06-011</i>	<i>8</i>	<i>4.66</i>	<i>4.98</i>	<i>4.66</i>					
<i>06-011</i>	<i>10</i>	<i>4.57</i>	<i>4.90</i>	<i>4.57</i>					

Sketch/Identification



The Virginia Corp.
of Richmond

Ultrasonic Examination Report

D. Payne ANII 6/24/82

Customer L P & L	Plant Waterford	Unit 3	Loop/Zone 2/6	Job/Drawing No. Zone 6 Rev. 2 P.C.1
Procedure 1512.3 Rev. 04	Exam Surface O.P.	Examiner/Level David Z. Fagan III	VGR Supervisor Donna	Date 6/18/82
Component/Piping System Hot leg - Steam Gen. to Reactor V.	Pipe Size 42"	Weld Type Butt	Cal. Block UT-4	Couplant: Type 40 Batch No. 8124

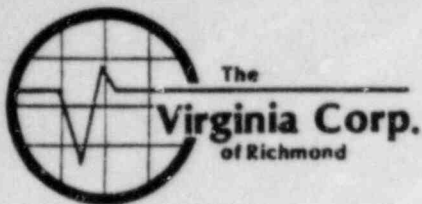
Continuation Sheet Attached
Yes No

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

Transducer	0°	45°	60°	Instrument			
S/N	48808	NIA	NIA	Mfr.	Senic	Model	Mack I
Size	1.0"			S/N	780836	RepRate	1K
Frequency	2.25MHz			Reject	OFF	Filter	OFF
Beam Angle	0°			Damp	MIA.	Coax	12'ANC-ANC
				Freq.	Broad Band	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks								
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out	
1/4T	80%	1.5	NIA	NIA	NIA	NIA	NIA	NIA	NIA	NIA	NIA	NIA	NIA	11:25	13:20	NIA	NIA	NIA	NIA
1/2T	65%	3.0																	
3/4T	55%	4.5																	

Ref. dB 32	NIA	NIA	NIA
			Additional Comments/Sketch



Date 6/18/82

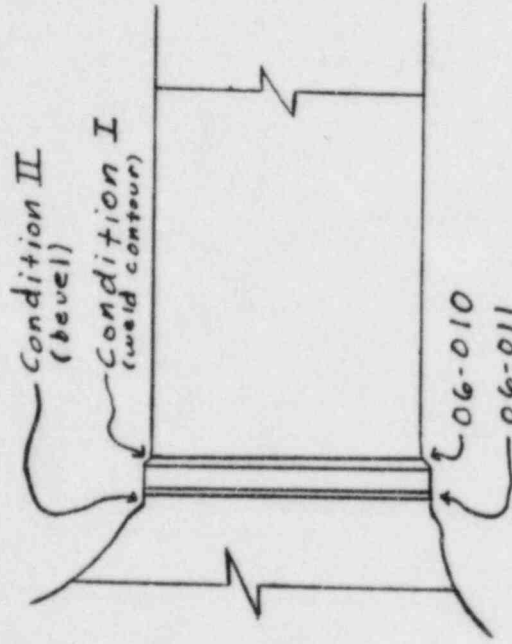
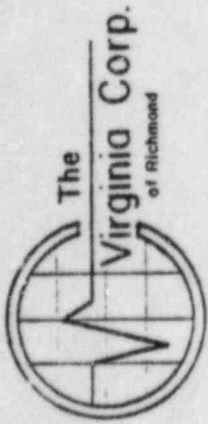
Page 2 of 4

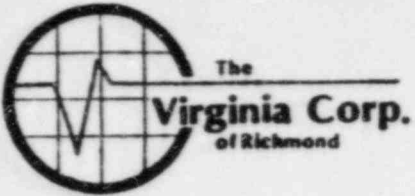
To: _____

Subject Inspection limitations

Weld #	Scan	Explanation
06-010	Base metal	Due to condition I existing in approx. 30% of the circumference, base metal scan was unable to be performed on approx. 10% of required area.
06-010	0°	Due to condition I, 0° scan was limited by approx. 5% of required scan area.
06-011	Base metal	Due to conditions I & II, base metal scan was unable to be performed on approx. 20% of the required scan area.
06-011	0°	Due to condition II, 0° scan was unable to be performed on approx. 10% of required 0° scan area.

Signed David T. Fokem III



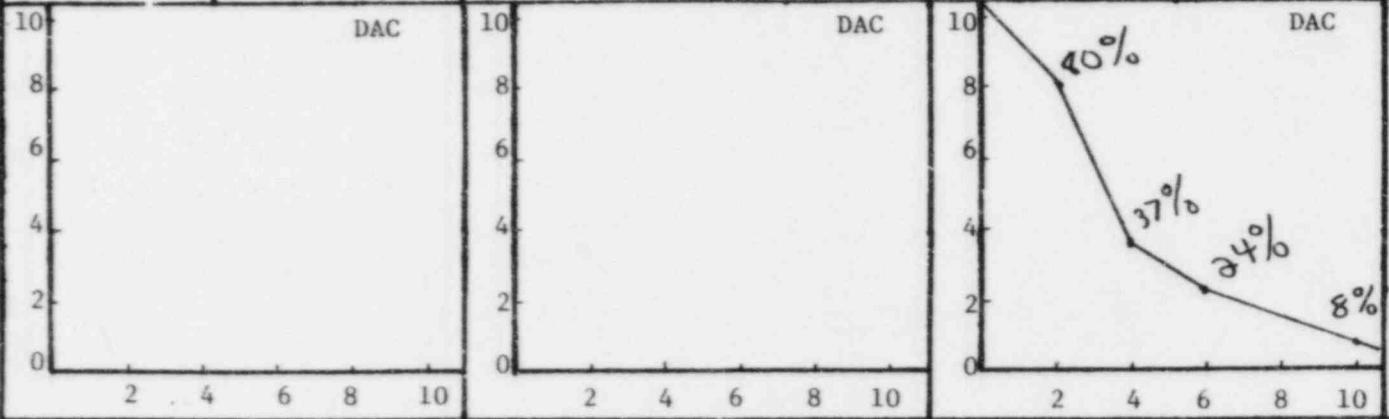


Ultrasonic Examination Report D. Payne ANII 6/21/82

Customer L. P. & L.	Plant Waterford	Unit 3	Loop/Zone 2/6	Iso/Drawing No. zone 6 - R2 - 5C.1
Procedure RC 6L F.C. +2 ISI - 2.3	Exam Surface O.D.	Examiner/Level Harry Longenecker II	VCR Supervisor Nenil Jones	Date 6/18/82
Component/Piping System Hot Leg S.G. #2 to R.V.	Pipe Size 42"	Weld Type Butt	Cal. Block UT-4	Couplant: Sonic Trace Type 40 Batch No. 8121

Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transducer	30°	45°	60°	Instrument			
	S/N	m04140	NA	NA	Mfr.	Sonic	Model	MK I
Field Changes: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, Number 4 2 6L.	Size	.5"	I	I	S/N	05473E	RepRate	2K
	Frequency	2.25 mhz	I	I	Reject	OFF	Filter	High
	Beam Angle	30°	I	I	Damp	Min.	Coax	6'

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		30°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	NA	NA	NA	NA	40%	2.0	5/8	1 1/2 3/4	2:30	2:35	NA	NA	NA	NA
1/2 T							37%	4.0	1/4	1 1/6 1 1/2						
3/4 T							24%	6.0	2.0	1 1/8 2 1/16						
5/4 T							8%	100	NA	NA NA						
Ref. dB							57 DB									



Additional Comments/Sketch

D. Payne ANII 6/21/82

Ultrasonic Examination Report - Continuation Sheet



The Virginia Corp. of Richmond

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>2 6</i>	Iso/Drawing No. <i>ZONE 6 R-2, F.C. 1</i>
Procedure <i>ISI. 2.3 RB, RCH</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Mary Longenecker II</i>	VCR Supervisor <i>[Signature]</i>	Date <i>6-18-82</i>
Component/Piping System <i>HOT LEG S.G. * 2 TO R.V.</i>	Pipe Size <i>42"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-4</i>	Couplant: Type & Batch # <i>SONOTRACE 40 8129</i>

Weld No.	Base Metal Scan	Scan Direction	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
			2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>06-010</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>PAR</i>	<i>NA</i>	<i>*</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>06-011</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>YES</i>	<i>NA</i>		<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>* 7 & 8 SCANS HAD A PARTIAL LOSS OF APPROX. 7% COVERAGE DUE TO O.D. WELD GEO.</i>												

Ultrasonic Examination Report *D. Payne ANII 6/21/82*



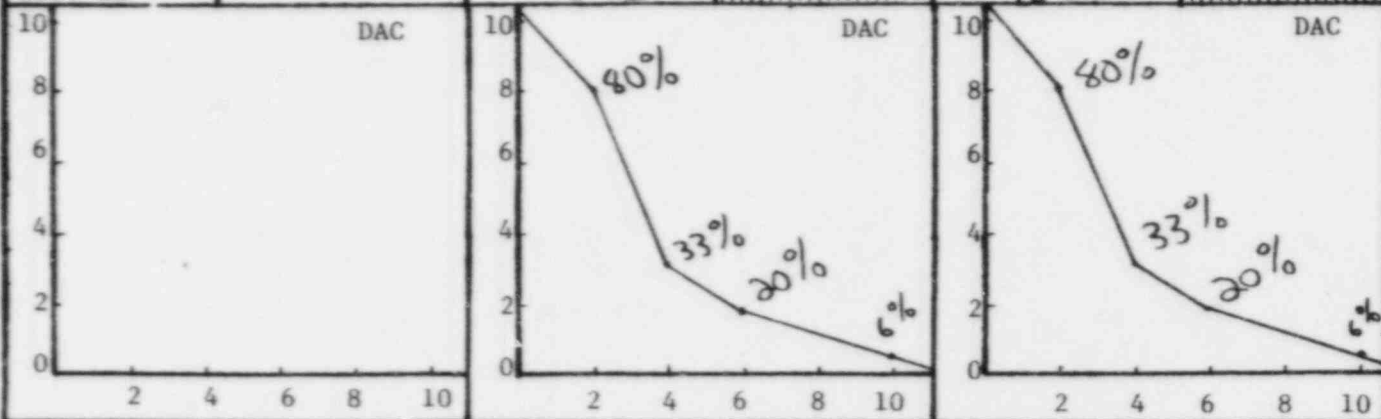
Customer L.P. & L	Plant Waterford	Unit 3	Loop/Zone 2/6	Iso/Drawing No. zone 6 - R.2 - S.C. 1
Procedure R.O. 44 ISI-2.3	Exam Surface O.D.	Examiner/Level Larry Longenecker II	VOR Supervisor Michael [unclear]	Date 6/18/82
Component/Piping System Hot Leg S.G. #2 to RV.	Pipe Size 42"	Weld Type Butt	Cal. Block UT-4	Couplant Sonotrace Type 40 Batch No. 8124

Continuation Sheet Attached
 Yes No

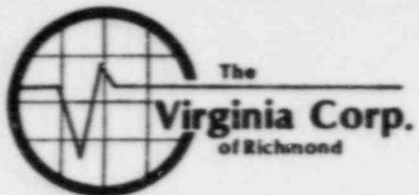
Field Changes:
 Yes No
 If Yes, Number **4** **2 62**

Transducer	0°	45°	60°	Instrument				
	S/N	NA	D22063	NA	Mfer.	Sonic	Model	MK 2
	Size	I	.5"	I	S/N	03704E	RepRate	1K
	Frequency	I	2.25mhz	I	Reject	off	Filter	High
Beam Angle	I	45°	I	Damp	Min.	Coax	6	
				Freq.	2mhz	Video	Norm	

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1 3/16	1 3/16	80%	2.0	1 3/16	1 3/16	NA	NA	12:20	2:30	NA	NA
1/2 T			33%	4.0	2 3/8	2 3/8	33%	4.0	2 3/8	2 3/8						
3/4 T			20%	6.0	3 5/8	3 3/4	20%	6.0	3 5/8	3 3/4						
5/4 T			6%	10.0	NA	NA	6%	10.0	NA	NA						
Ref. dB			46 DB				46 DB									



Additional Comments/Sketch

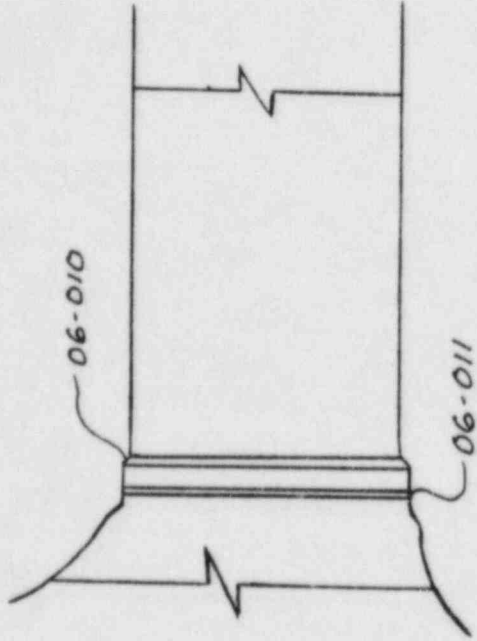
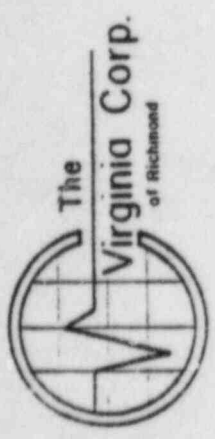


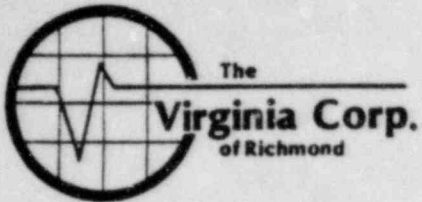
Ultrasonic Examination Report - Continuation Sheet

D. Payne ANII 6/24/82

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 2 6	Iso/Drawing No. ZONE 6 R-2, F.C.1
Procedure ISI 23 R.2, F.C.1	Exam Surface O.D.	Examiner/Level Sony Langenecker III	VCR Supervisor Daniel J. Jones	Date 6-18-82
Component/Piping System HOT LEG S.G. # 2 TO R.V.	Pipe Size 42"	Weld Type BUTT	Cal. Block UT-4	Couplant: Type & Batch # SONOTRACE 40 8129

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
06-010	NA	PAR	PAR	PAR	NA	SEE ATTACHED SHEET	CLEAN	GROUND	NI	SAT.	
06-011	NA	YES	PAR	YES	NA	SEE ATTACHED SHEET	CLEAN	GROUND	NI	SAT.	





Date 6-18-82

Page 4 of 4

To: _____

Subject INSPECTION LIMITATIONS
ZONE 6

WELD NO. 06-010 2 SCAN HAD A LOSS OF APPROX.
7% COVERAGE DUE TO O.D. WELD
GEOMETRY.
5 SCAN HAD A LOSS OF APPROX.
10% COVERAGE DUE TO O.D. WELD
GEOMETRY.
7 & 8 SCANS HAD A PARTIAL LOSS
OF APPROX. 7% ^{GL.}

WELD NO. 06-011 2 SCAN HAD A LOSS OF APPROX.
5% COVERAGE DUE TO O.D. WELD
GEOMETRY.
5 SCAN HAD A LOSS OF APPROX.
7% COVERAGE DUE TO O.D. WELD
GEOMETRY.

Signed Nary Longenecker



Ultrasonic Examination Report

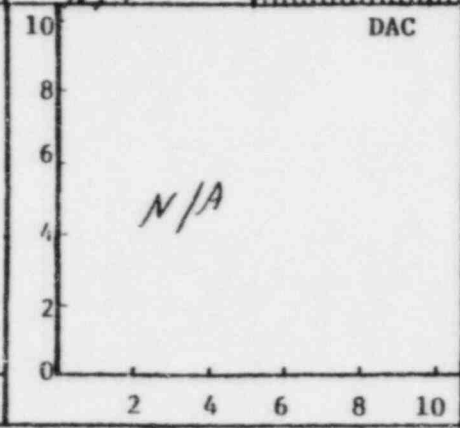
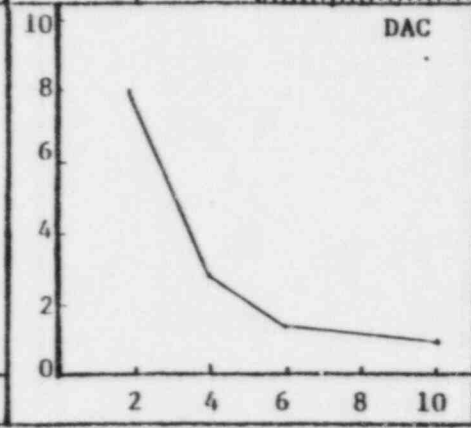
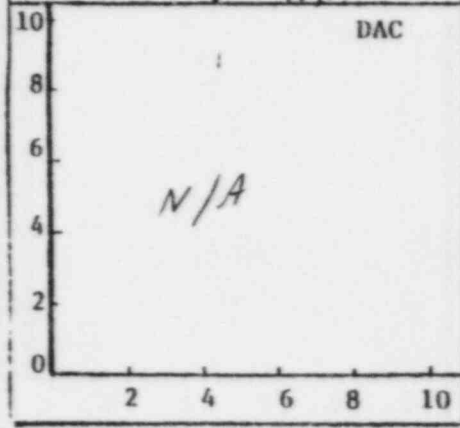
Customer LP & L	Plant WATERFORD	Unit III	Loop/Zone 2/6	Iso/Drawing No. ZONE 6 REV. 2. F.C. 1
Procedure F.C.Y. 1512.3 REV. 0 2nd	Exam Surface O.D.	Examiner/Level David J. Tolson	VCR Supervisor David J. Tolson	Date 6/18/82
Component/Piping System HOT LEG - STEAM GEN TO REACTOR V.	Pipe Size 42"	Weld Type Butt	Cal. Block # UT-4	Couplant: SAVOIRACE Type 40 Batch No 8124

Continuation Sheet Attached
 Yes No

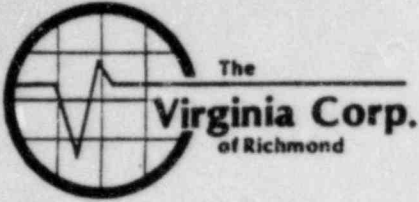
Field Changes:
 Yes No
 If Yes, Number **2 of 2**

	Transducer			Instrument			
		0°	45°	60°	Mfr.	Model	Mark I
				M17155	Sonic		
					S/N	01610E	RepRate 1K
				Frequency	1mhz	Filter OFF	
				Beam Angle	60°	Coax 6' BNC-M.D.	
				Damp	Min	Video Norm	
				Freq.	1Mhz		

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	N/A	N/A	80%	2.0	1 15/16	1 1/4 2 5/8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1135	1323
1/2 T			30%	4.0	3 5/8	3 1/8 4 1/16										
3/4 T			15%	6.0	5 1/16	5 1/16 7 1/2										
5/4 T			10%	10.0	N/A	N/A N/A										
Ref. dB	N/A		59				N/A									



Additional Comments/Sketch



Date 6/18/82

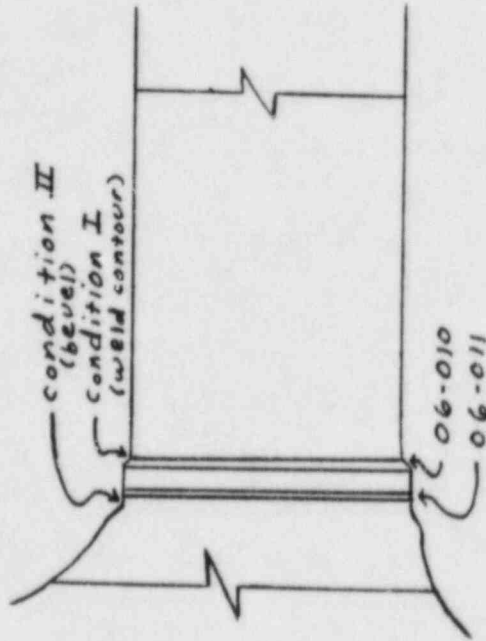
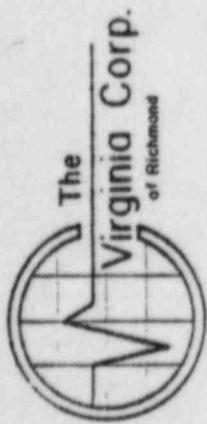
Page 3 of 4

To: _____

Subject Inspection Limitations

Weld #	Scan	Explanation
06-010	2	Due to conditions I & II approx. 15% of required scan area was unable to be examined.
06-010	5	Due to condition I approx. 5% of required scan area was unable to be examined.
06-010	7+8	Due to curvature & thickness of piping, 7+8 scans are impractical with 60° search units.
06-011	2	Due to condition II approx. 40% of required scan area was unable to be examined.
06-011	5	Due to conditions I & II approx. 25% of required scan area was unable to be examined.
06-011	7+8	Same as 06-010 7+8 scans.

Signed David L. Johnson





Ultrasonic Examination Report *D. Payne ANIT 6/24/82*

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>2/1</i>	Iso/Drawing No. <i>Zone 6, Rev 2 FC + 205</i>
Procedure <i>ISI-2.8, P. 01, FC. 1</i>	Exam Surface <i>OD</i>	Examiner/Level <i>BURLINGAME</i>	VOR Supervisor <i>Denise Jones</i>	Date <i>6-19-82</i>
Component/Piping System <i>H. 1 Leg - Stages 6, #3 to Reactor Vessel</i>	Pipe Size <i>+2" 14" 30#</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-16</i>	Couplant: Sonotact Type <i>10</i> Batch No. <i>S129</i>

Continuation Sheet Attached
 Yes No

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

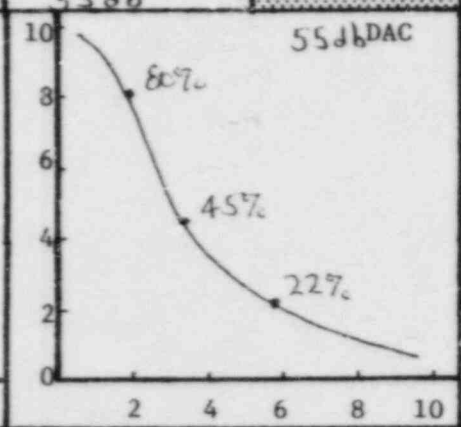
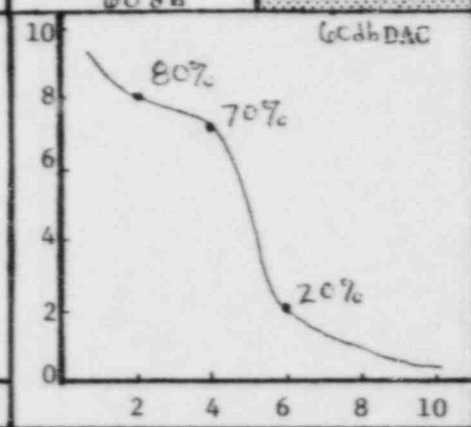
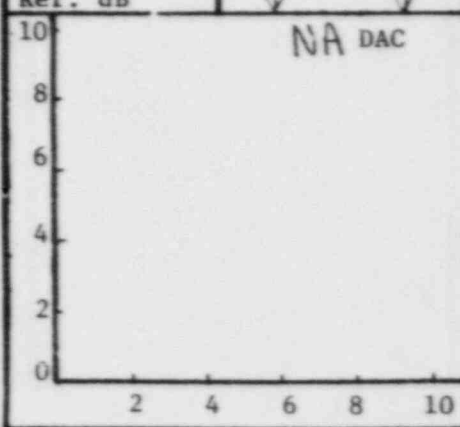
Transducer	Instrument		
	0°	45° RL	60°
	S/N <i>NA</i>	G.C.7152	NA
	Size <i>1/2"</i>		
Frequency	2.25 MHz	Reject	Model <i>FTS Mock</i>
	Beam Angle <i>43°</i>	Damp <i>M/W</i>	RepRate <i>3000</i>
		Freq. <i>2 MHz</i>	Filter <i>H</i>
		Video <i>Norm</i>	Coax <i>6'</i>

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
<i>1/4</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>			<i>80%</i>	<i>1.8</i>			<i>NA</i>	<i>NA</i>	<i>CE30</i>	<i>1000</i>	<i>NA</i>	<i>NA</i>
<i>1/2</i>			<i>70%</i>	<i>4.0</i>			<i>45%</i>	<i>3.8</i>								
<i>3/4</i>			<i>20%</i>	<i>6.0</i>			<i>22%</i>	<i>5.8</i>								
Ref. dB	<i>NA</i>	<i>NA</i>	<i>60db</i>				<i>55db</i>				<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>



Additional Comments/Sketch
Carbon Steel



The
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Ultrasonic Examination Report

R. Payne ANIT 6/24/82

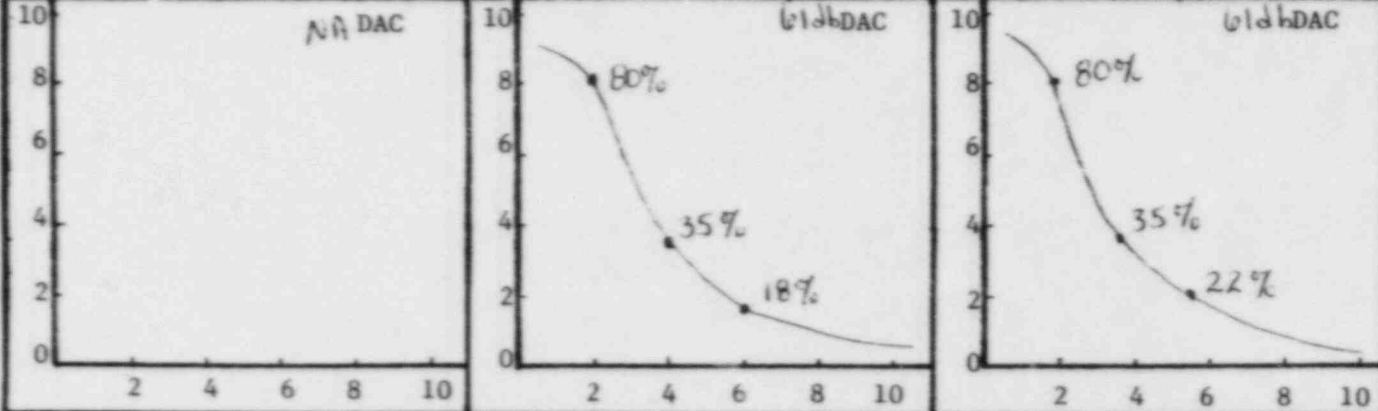
Customer <i>LPFL</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>2/6</i>	Iso/Drawing No. <i>Zone 6, Rev 2, FC+2</i>	
Procedure <i>ISI-28, Rev 1, FC1</i>		Exam Surface <i>D.D.</i>	Examiner/Level <i>BURLINGAME</i>		VOR Supervisor <i>Manuel Benner</i>		Date <i>6-19-82</i>
Component/Piping System <i>Holley Steam Gen #2 to Reactor Vessel</i>			Pipe Size <i>12" x 14"</i>	Weld Type <i>BuH</i>	Cal. Block <i>UT-16</i>	Couplant: <i>Sonotrac</i> Type <i>40</i> Batch No. <i>F129</i>	

Continuation Sheet Attached
 Yes No

Transducer S/N Size Frequency Beam Angle	0°	45°RL	60°	Instrument			
	NA	607152	NA	Mfr.	<i>Sonic</i>	Model	<i>FTS Mk1</i>
		<i>1/2"</i>		S/N	<i>780836</i>	RepRate	<i>3000</i>
		<i>2.25 MHz</i>		Reject	<i>1</i>	Filter	<i>H:</i>
	<i>43°</i>			Damp	<i>M/W</i>	Coax	<i>6'</i>
				Freq.	<i>2 MHz</i>	Video	<i>Norm</i>

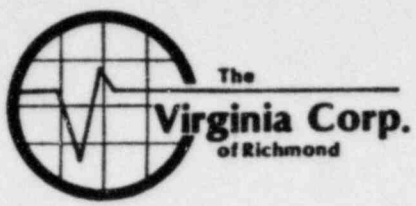
Field Changes:
Yes No
If Yes, Number *FC1*

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>			<i>80%</i>	<i>1.8</i>			<i>NA</i>	<i>NA</i>	<i>830</i>	<i>1000</i>	<i>NA</i>	<i>NA</i>
<i>1/2</i>			<i>35%</i>	<i>4.0</i>			<i>35%</i>	<i>3.8</i>								
<i>3/4</i>			<i>18%</i>	<i>6.0</i>			<i>22%</i>	<i>5.6</i>								
Ref. dB	<i>NA</i>	<i>NA</i>	<i>61db</i>				<i>61db</i>	<i>61db</i>			<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>



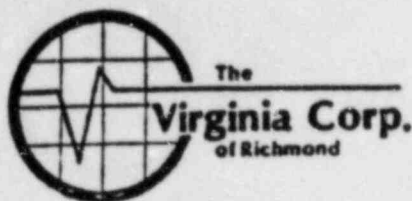
Additional Comments/Sketch
Austenitic

D. Payne ANIL 6/24/82



Ultrasonic Examination Report - Continuation Sheet					Page	of
Customer LPEL	Plant Waterford	Unit 3	Loop/ Zone 2/6	Iso/Drawing No. <i>NEM</i> Zone 6, Rev 2, FC+2019		
Procedure ISI-2.8 Rev 1 FC1	Exam Surface OD.	Examiner/Level BURLINGAME II-3	VCA Supervisor <i>Donald Jensen</i>	Date 6-19-82		
Component/Piping System Hot Leg - St. Gwn #2 to Reactor Vessel		Pipe Size 12" - 14"	Weld Type Butt	Cal. Block UT-10	Couplant: Type & Batch # Sondrauc 40, Batch 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		
06-	006	NA	PAR	PAR	PAR	NA	SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
							SCAN 5 SIDE					
							AND A SMALL AMOUNT					
							OF SHRINKAGE ON					
							TAB SCAN 2 SIDE					
							TYP. 360° GOOD					
							ROOT AREA COVERAGE					
							WAS OBTAINED.					



Magnetic Particle

Don Payne 3/3/82
Examination Report

Customer L P & L Plant WATERFORD Unit 3 Loop/Zone 1/7

Procedure 151-4.3 REV 0 ~~Examination~~ Fluorescent Supervisor Michael W. Blum Date 3-1-82

Component/Piping System STEAM GENERATOR # 1 TO RCAMP ^{IA} ISO Drawing No. ZONE 7 REV 2 FC-1 Surface Condition GROUND

Type of Particles Wet Dry Visible Flourescent Manufacturer MAGNAFLUX Type BA-RID Batch Number 81M107

Current AC DC HWDC Machine Mfr. PARKER RESEARCH Type/Model CONTOUR 10A-200 Serial No. 5801

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

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
07-004 LB		✓		✓	
07-005		✓		✓	
07-006 LA	PARTIAL EXAMINATION. AREAS NOT INSPECTED WERE FROM 64" (7 DIRECTION) TO 72" (7 DIRECTION) AND FROM 98" (7 DIRECTION) TO 102" (7 DIRECTION)	✓		✓	
07-007 LB		✓		✓	
07-010	PARTIAL EXAMINATION. AREA NOT INSPECTED IS FROM 16" (7 DIRECTION) TO 36" (7 DIRECTION)	✓		✓	
07-011 LB		✓		✓	
07-013	PARTIAL EXAMINATION. AREA NOT INSPECTED IS FROM 78" (7 DIRECTION) TO 94" (7 DIRECTION)	✓		✓	

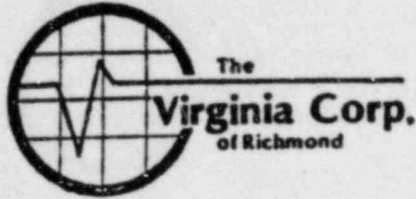


Magnetic Particle

Don Payne ANZI 3/9/82
Examination Report

Customer <i>LP & L</i>		Plant <i>WATERFRONT</i>		Unit <i>3</i>		Loop/Zone <i>1A / 07</i>	
Procedure <i>ISI-4.3</i>		Examiner <i>Michael W. Blum II</i>		VPR Supervisor <i>Daniel Jensen</i>		Date <i>3-9-82</i>	
Component/Piping System <i>Cold Leg SIG # 1 TO RCP 1A</i>				ISO Drawing No. <i>ZONE 07-REV 3-FC 2</i>		Surface Condition <i>GROUND</i>	
Type of Particles Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Visible <input checked="" type="checkbox"/> Fluorescent <input type="checkbox"/>				Manufacturer <i>MAGNAFLUX</i>		Type <i>BA-2ED</i>	Batch Number <i>81M107</i>
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> HWDC		Machine Mfr. <i>PARKER RESEARCH</i>		Type/Model <i>COUTOUR/DA-200</i>		Serial No. <i>4604</i>	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual		Coil <i>NA</i> Amps. <i>NA</i> No. Turns	Prods <i>NA</i> Spacing <i>NA</i> Amps.	Yoke <i>8"</i> Spacing			

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
<i>07-003 LA</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>07-012 LA</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Magnetic Particle Examination Report

Don Payne ANZI 3/25/82

Customer LP AND L	Plant WATERFORD	Unit 3	Loop/Zone 1A/7
Procedure ISI 4.3 REVO	Examiner/Level CR Stumpf #	VPR Supervisor <i>[Signature]</i>	Date 3-24-82
Component/Piping System COLD LEG-RCP 1A TO STEAM GEN #1	ISO Drawing No. ZINET REV 2 FC 2	Surface Condition GROUND	
Type of Particles <u>Wet</u> <u>✓</u> <u>Dry</u> <u>✓</u> <u>Visible</u> <u> </u> <u>Flourescent</u> <u> </u>	Manufacturer MASNA-FLUX	Type 8 A RED	Batch Number 81M107
Current <u>✓</u> <u>AC</u> <u> </u> <u>DC</u> <u> </u> <u>HWDC</u> <u> </u>	Machine Mfr. PARKER RESEARCH	Type/Model CONTOUR DA-200	Serial No. 5801
Magnetization <u>✓</u> <u>Continuous</u> <u> </u> <u>Residual</u>	Coil <u>NA</u> Amps. <u>NA</u> No. Turns	Prods <u>NA</u> Spacing <u>NA</u> Amps.	Yoke <u>8"</u> Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
07-017	NOTE: ADEQUATE FIELD WAS	✓		✓	
07-016	ACHIEVED USING FIELD INDICATOR	✓		✓	
07-018	SM/16.	✓		✓	
07-019LA		✓		✓	
07-020LB		✓		✓	
07-015LA		✓		✓	
07-014LB		✓		✓	



The
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of Richmond

Liquid Penetrant

Don Payne ANII 4/7/82
Examination Report

Customer *LP&L* Plant *WATERFORD* Unit *3* Loop/Zone *1A/7*

Procedure *ISI- 3.1 R.O F.C.2* Examiner/Level *Richard D. [Signature] II Robert [Signature]* Date *4-6-82*

Component/Piping System *Cold leg - SG#1 to RCP 1A* ISO Drawing No. *ZONE 7 REV 2 FC 2* VCR Supervisor *Daniel Jensen*

	Manufacturer	Type	Batch No.	
Penetrant	Sherwin	DUBL-CHEK	47L 015	
Developer	Sherwin	DUBL-CHEK	129F6	
Remover	Sherwin	DUBL-CHEK	112CA	

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
07-001		✓		✓	
07-002		✓		✓	



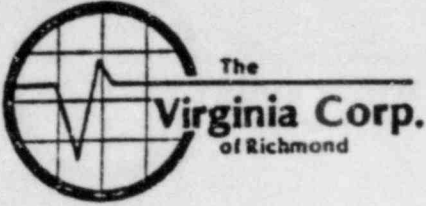
The Virginia Corp.
of Richmond

Liquid Penetrant
D. Payne ANII 4/26/82
Examination Report

Customer LP+L	Plant Waterford	Unit S	Loop/Zone 1 / 7
Procedure ISI 3.1 R.O. F.C. 2	Examiner/Level Robert J. Chesnut I	Date 4-24-82	
Component/Piping System Cold leg - S.G. # 1 to R.C.P. 1A	ISO Drawing No. Zone 7 R. 2 F.C. 2	VCR Supervisor Denil Jensen	

	Manufacturer	Type	Batch No.
Penetrant	Sherwin	Dubl-check	472015
Developer	Sherwin	Dubl-check	129F6
Remover	Sherwin	Dubl-Check	11204

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
07-009		✓		✓	



Magnetic Particle
D. Payne ANII 5/3/82
 Examination Report

Customer LPL	Plant Waterford	Unit III	Loop/Zone 1/7
Procedure I.S.I. 4.3-R-0	Examiner/Level <i>Benny Acuff L II</i>	VCR Supervisor <i>Daniel Jones</i>	Date 4-30-82
Component/Piping System Cold Leg S.G. #1 to pump #1A		ISO Drawing No. ZONE 7-R2-FC-2	Surface Condition GROUND
Type of Particles Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Visible <input checked="" type="checkbox"/> Flourescent <input type="checkbox"/>		Manufacturer MAGNA-FLUX	Type BA-RED
Current <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> HWDC		Machine Mfr. Parker Research	Type/Model Contour PROBE
		Serial No. 4604	
Magnetization <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual	Coil <u>NA</u> Amps. <u>NA</u> No. Turns	Prods <u>NA</u> Spacing <u>NA</u> Amps.	Yoke 4" Spacing

Weld / Item	Comments	MT Results		VT Results	
		NRI	RI	Sat	Unsat
07-008	Adequate Field was verified using M.P.F.I. scale # 17	✓		✓	



Don Payne ANIZ 3/16/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1/7
Component/Piping System St. Generator I to RC. Pump IA	Examiner/Level David J. Folan III Stephen S. Morris I	Date 3-9-82	
Procedure ISI-2.5 Rev. 0	Iso/Drawing No. Zone 7 Rev. 2 EC. 2	VCR Supervisor Daniel Folan	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration	
Mfgr. Sonic	Model Mark I	Mfgr. KB-Aerotech	Size .5"	Cal. Block UT-85	Cal. Block N/A
S/N 01610E	Reject off	Freq. 2.25 MHz		Range Cal. 5"	
Damp. Min	Freq. 2.0 mhz	Serial No. J02172		Calibration Checks	
Rep. Rate 1K	Filter off	Coax. Cable 12' BNC to BNC		INIT 7:35	FIN 9:03
Video Norm	Couplant Sonotrace 40 B# 8117	Gain 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
07-010	12	3.22"	3.40"	2.88"	07-012LA	7'	3.52"	3.52"	3.46"
07-010	2	3.22"	3.52"	2.88"	07-012LA	8'	3.52"	3.52"	3.52"
07-010	4	3.22"	3.52"	2.88"					
07-010	6	3.34"	3.58"	2.88"					
07-010	8	3.28"	3.58"	2.88"					
07-010	10	3.16"	3.52"	2.88"					
07-012LA	1'	3.46"	3.46"	3.46"					
07-012LA	2'	3.46"	3.40"	3.46"					
07-012LA	3'	3.52"	3.46"	3.46"					
07-012LA	4'	3.58"	3.46"	3.46"					
07-012LA	5'	3.52"	3.46"	3.46"					
07-012LA	6'	3.52"	3.46"	3.46"					

Sketch/Identification



Ultrasonic Examination Report *Don Payne ANII 3/16/82*

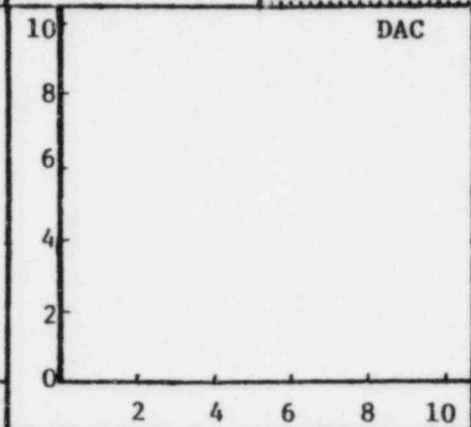
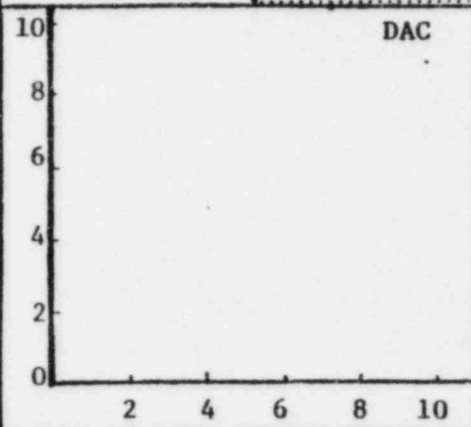
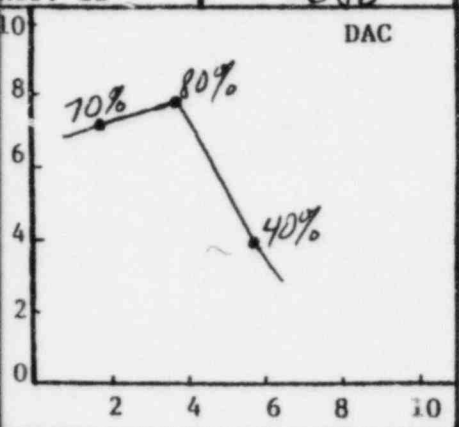
Customer <i>LP+L</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>117</i>	Iso/Drawing No. <i>Zone 7 REV. 2 F.C. 2</i>	
Procedure <i>ISI 2.3 Rev. 0</i>		Exam Surface <i>O.D.</i>	Examiner/Level <i>David L. Fokem II</i>		VCR Supervisor <i>Daniel F. Jones</i>		Date <i>3-10-82</i>
Component/Piping System <i>Steam Generator R/L to R/L Pump 1A</i>			Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-6</i>	Couplant: <small>Same as Calc.</small> Type <i>4</i> Batch No. <i>8117</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

	Transducer			Instrument			
	S/N	<i>48807</i>	<i>N/A</i>	<i>0°</i>	<i>45°</i>	<i>60°</i>	Mfr. <i>Sonic</i> Model <i>Mark I</i>
	Size	<i>1"</i>	<i>(</i>	<i>(</i>	<i>(</i>	<i>(</i>	S/N <i>05303E</i> RepRate <i>1K</i>
	Frequency	<i>2.25MHz</i>	<i>(</i>	<i>(</i>	<i>(</i>	<i>(</i>	Reject <i>OFF</i> Filter <i>OFF</i>
	Beam Angle	<i>0°</i>	<i>(</i>	<i>(</i>	<i>(</i>	<i>(</i>	Damp <i>Min.</i> Coax <i>12' BNC-BNC</i>
							Freq. <i>3.0MAz</i> Video <i>Norm.</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4T</i>	<i>70%</i>	<i>2.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>8:30</i>	<i>9:40</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>1/2T</i>	<i>80%</i>	<i>4.0</i>															
<i>3/4T</i>	<i>40%</i>	<i>6.0</i>															
<i>1T</i>	<i>N/A</i>	<i>8.3</i>															
Ref. dB	<i>36dB</i>																



Additional Comments/Sketch

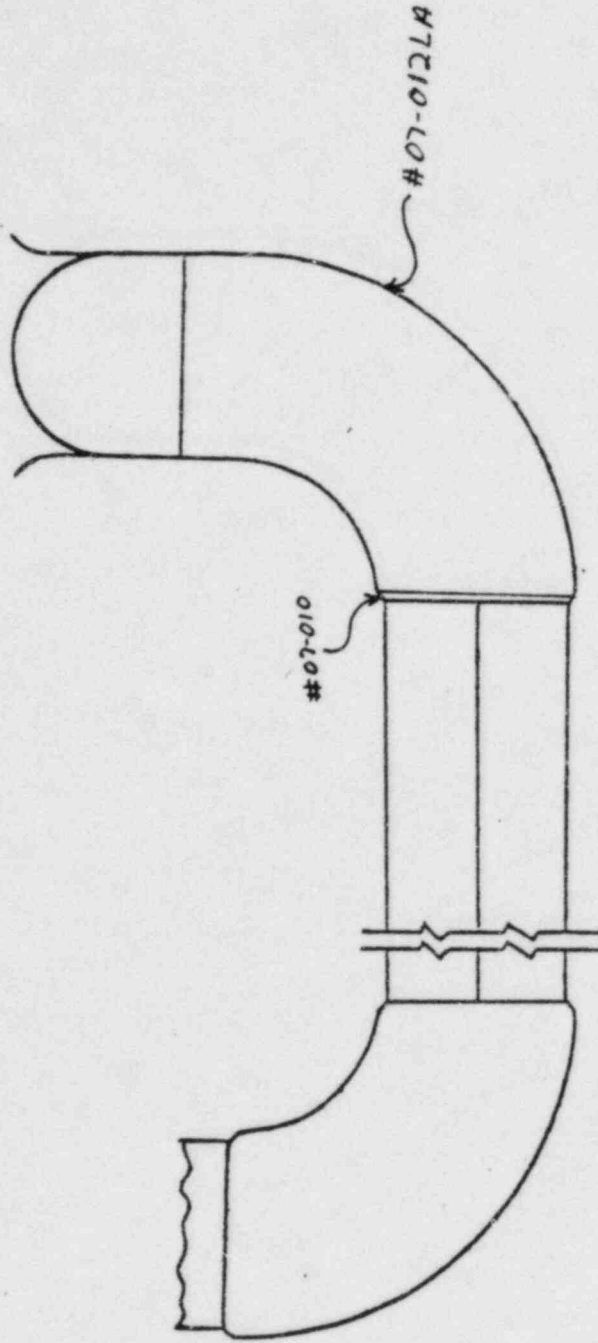
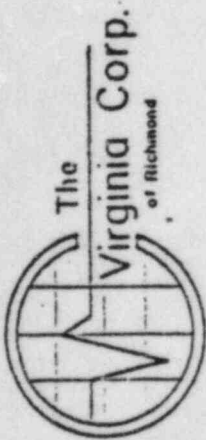


Don Payne ANZI 3/16/82

Ultrasonic Examination Report - Continuation Sheet

Customer LP&L	Plant Waterford	Unit 3	Loop/ Zone 1 / 7	Iso/Drawing No. Zone 7 Rev. 2 EC. 2
Procedure ISI-2.3 Rev. 0	Exam Surface O.D.	Examiner/Level David L. Fokem III	VCR Supervisor Daniel J. Jones	Date 3-10-82
Component/Piping System Cold leg - St. Generator #1 to pump 1A	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Type & Batch # Sonotrace 40 8117

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-010	Par	N/A	N/A	N/A	Par	O.D. Geometry	clean	Ground	NI	Sat	See Attached
07-022A	Par	I	I	I	Yes	O.D. Geometry	clean	Ground	NI	Sat	See Attached



Unable to maintain back reflection due to unparallel surfaces on weld #07-010.



Ultrasonic Examination Report *Day Payne ANII 3/16/82*

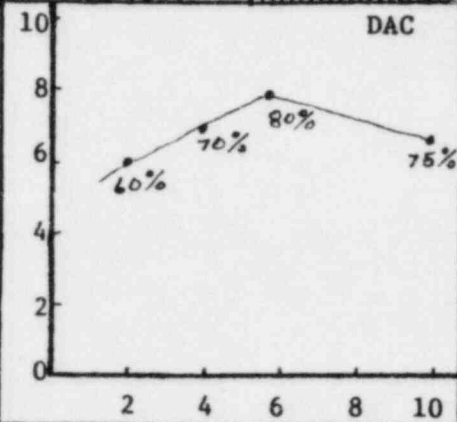
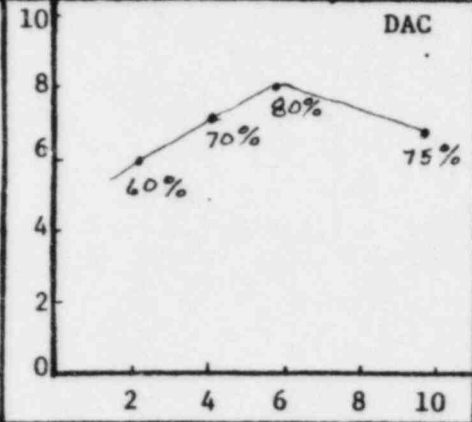
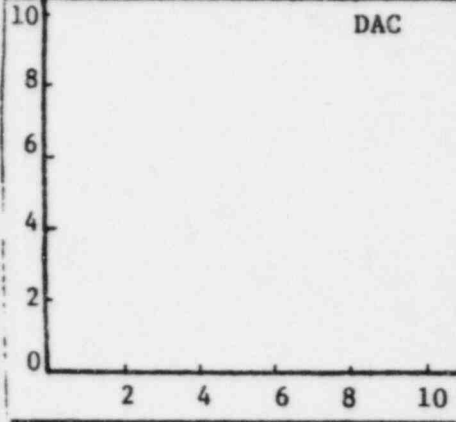
Customer <i>LP 3 L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>		Loop/Zone <i>1 / 7</i>		Iso/Drawing No. <i>ZONE 7 - REV 2 - FC-2</i>	
Procedure <i>ISI 2.3 REV. 0</i>		Exam Surface <i>OD</i>		Examiner/Level <i>BURLINGAME II</i>		VCR Supervisor <i>Daniel Payne</i>		Date <i>3-11-82</i>	
Component/Piping System <i>REACTOR COOLANT</i>				Pipe Size <i>36"</i>		Weld Type <i>BUTT</i>		Cal. Block & Couplant: <i>UT-6 3 1/2" Type 40</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

	Transducer			Instrument		
	S/N	<i>419134</i>	Mfr.	<i>SONIC</i>	Model	<i>ETS-MK1</i>
	Size	<i>1.0"</i>	S/N	<i>780836</i>	RepRate	<i>1000</i>
	Frequency	<i>2.25m</i>	Reject	<i>OFF</i>	Filter	<i>OFF</i>
Beam Angle	<i>45°</i>	Damp	<i>MIN.</i>	Coax	<i>12'</i>	

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4T</i>			<i>60%</i>	<i>2.0</i>	<i>3/4</i>	<i>3/8</i>	<i>1 1/16</i>	<i>60%</i>	<i>2.0</i>	<i>3/4</i>	<i>3/8</i>	<i>1 1/16</i>						
<i>1/2T</i>			<i>70%</i>	<i>4.0</i>	<i>1 1/16</i>	<i>1 3/8</i>	<i>2.0</i>	<i>70%</i>	<i>4.0</i>	<i>1 1/16</i>	<i>1 3/8</i>	<i>2.0</i>			<i>1315</i>	<i>1530</i>		
<i>3/4T</i>			<i>80%</i>	<i>6.0</i>	<i>2 5/8</i>	<i>2 3/4</i>	<i>2 7/8</i>	<i>80%</i>	<i>6.0</i>	<i>2 5/8</i>	<i>2 3/4</i>	<i>2 7/8</i>						
<i>5/4T</i>			<i>75%</i>	<i>10.0</i>				<i>75%</i>	<i>10.0</i>									
Ref. dB																		



Additional Comments/Sketch

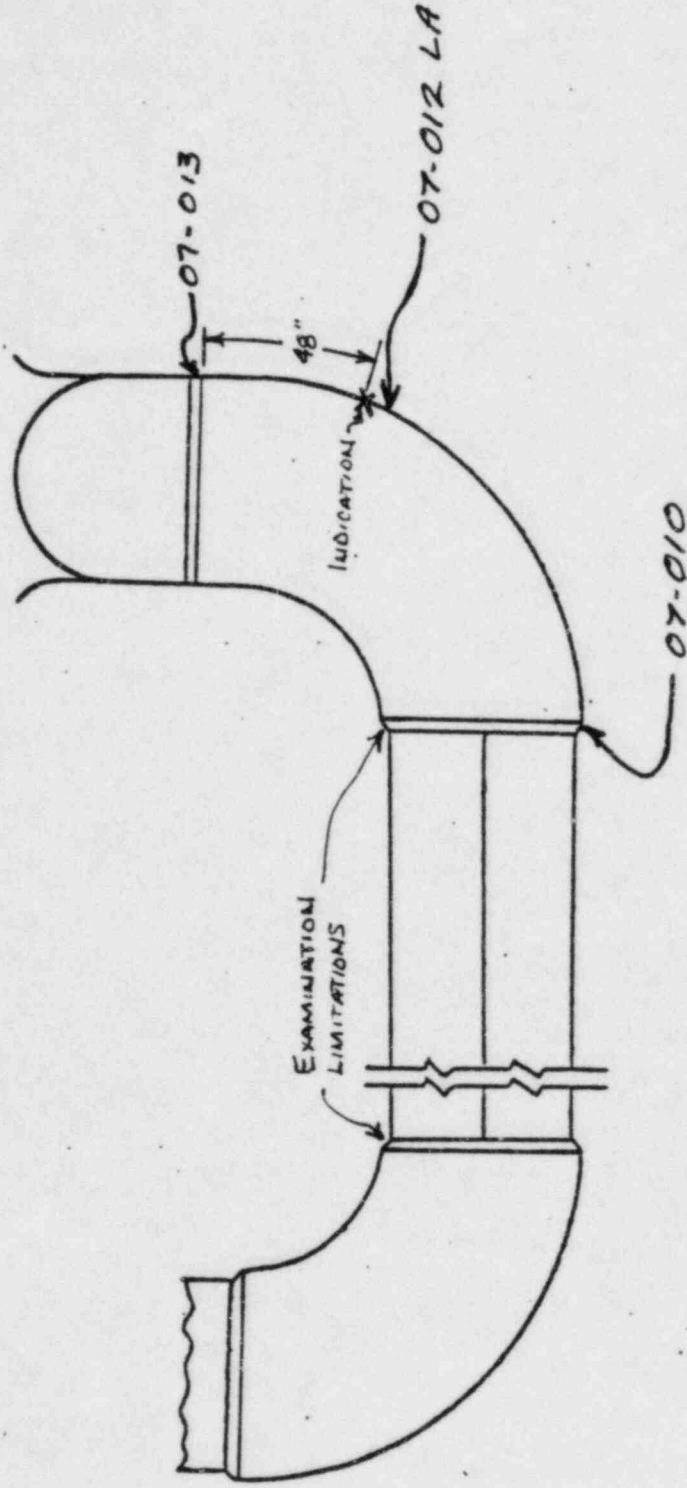
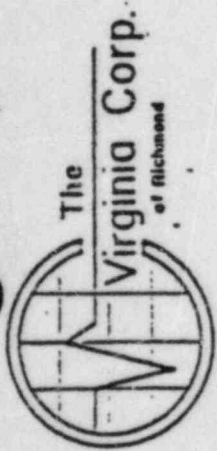
Don Ryan ANIL 3/14/82 3 of 9

Ultrasonic Examination Report

Indication Record



Customer		Plant		Unit		Loop / zone							
LP 3 L		WATERFORD		3		1 / 7							
Procedure		Examiner / Level		VCR Supervisor		Date							
151-2.3 REV. 0		BURLINGAME II		Daniel Dano		3-14-82							
Component/Piping System		ISO Drawing No.		Cal. Standard No./Thickness									
REACTOR COOLANT		ZONE 07 - REV. 2 - FC 2		UT-6		3 1/2"							
Weld No.	Ind No.	Max. % DAC	Indication Length From To	Minimum Depth S.U. Pos.	Sweep Reading	Maximum Depth S.U. Pos.	Sweep Reading	Beam Angle	Beam Dir.	Beam Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
67-013	1	55%	47" 49"	4 1/8	4.52"	5.0"	5.16"	45°	5 SCAN	3.65"	3.55"	3.65"	SEE ATTACHMENT





To: _____

Subject REPORT ON EXAMINATION
LIMITATIONS AND INDICATIONS

WELD NO. 07-010 : SCANS 2, 5, 7 & 8 WERE RESTRICTED BY
A TAPER ON THE WELD BETWEEN
THE PIPE AND ELBOW. THE LENGTH OF
TAPER IS APPROX. 2" WITH ABOUT
A 16° SLOPE. THE NON-CONTACT AREA
IS APPROX 2 1/8" LONG. THIS CONDITION
IS TYP. 360°

SCAN 2 APPROX. LOSS IN WELD 10%
SCAN 5 APPROX. LOSS IN WELD 60%
SCANS 7 & 8 APPROX. LOSS IN WELD AREA 20%

WELD NO. 07-012 LA : USING A NORMAL CALIBRATION ON
CALIBRATION BLOCK UT-6 AS PER PRECEDURE
151 2.3 A INDICATION WAS OBSERVED
IN THE ELBOW LONG SEAM. THE REFLECTOR
PEAKED AT 55% OF DAC. THE INDICATION
WAS OBSERVED IN THE 2 SCAN DIRECTION
AND LOCATED 48" DOWN FROM THE CENTER
LINE OF WELD NO. 07-013 (SEE PAGE 4).
A PLOT OF THE REFLECTOR IS SHOWN ON
PAGE 8, AS PER SECTION II. IT IS
FELT BY THE EXAMINER THAT THE
SECTION II REPRESENTATION OF THE
INDICATION IS VERY POOR AND IN NO
WAY DESCRIBES THE TRUE NATURE OF
THE INDICATION.

Signed _____



To: _____

Subject REPORT ON EXAMINATION
LIMITATIONS AND INDICATIONS.

AN ADDITIONAL PLOT OF THE INDICATION IS INCLUDED IN THIS REPORT ON PAGE 9. THIS PLOT IS: AS PER BRITISH STANDARD 3229, AND HAS PROVED TO THE EXAMINER AS BEING AN EXCEPTABLE PRESENTATION OF THE TRUE NATURE OF THE REFLECTOR.

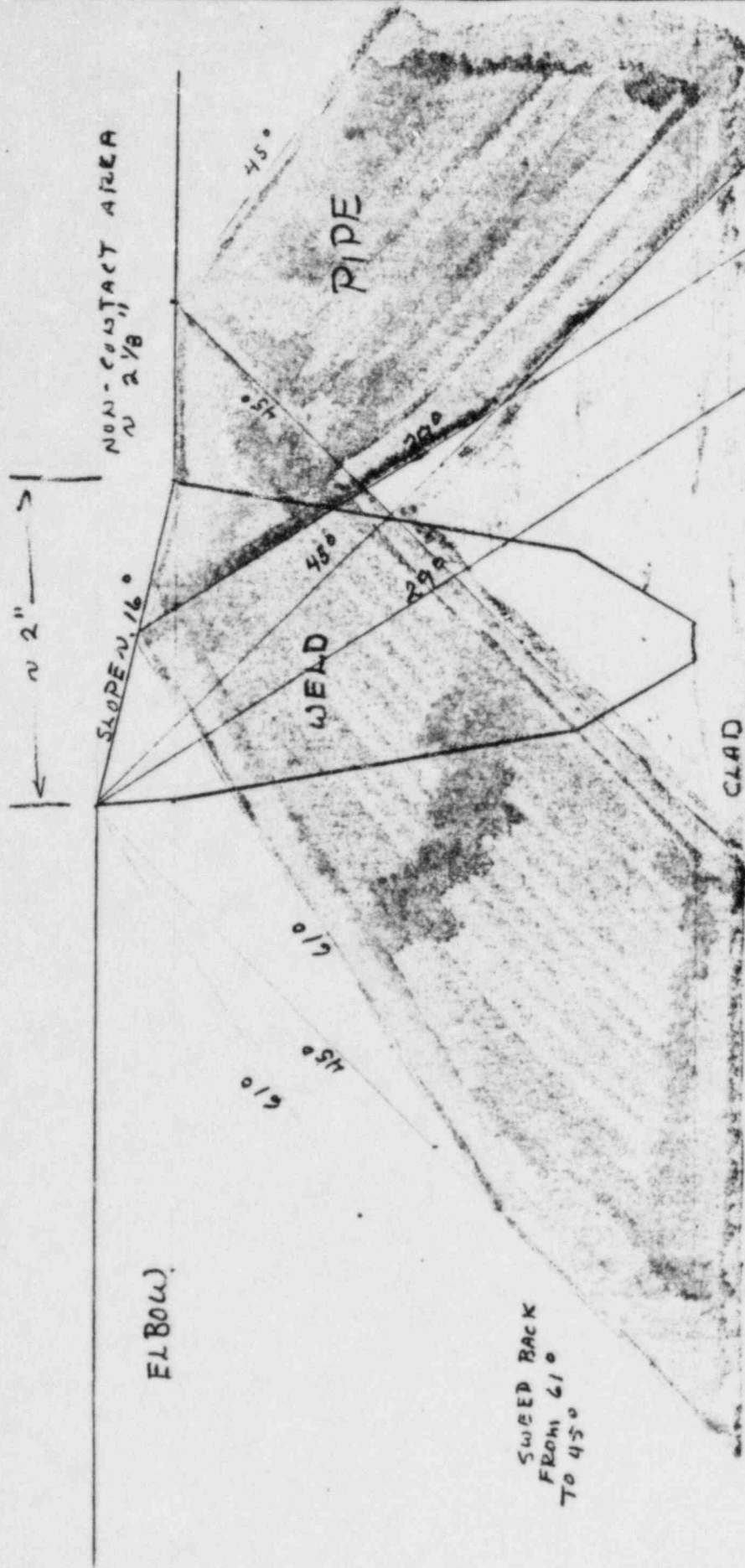
IT SHOULD BE POINTED OUT THAT THIS REPORT IS GENERAL IN NATURE. THERE ARE VARIABLES THAT HAVE NOT BEEN CALCULATED; EFFECT OF ELBOW RADIUS, INTERNAL WELD PREP ect.

IT SHOULD ALSO BE NOTED THAT, ALTHOUGH A TRANSFER CHECK IS NO LONGER REQUIRED, ONE WAS PERFORMED IN THE COARSE OF THE INVESTAGATION. ~~OF THE INDICATION.~~ THE TRANSFER SHOWED A 9db DIFFERANCE BETWEEN THE ELBOW AND CAL. STANDARD, UT-6. ALLOWING FOR THE db DIFFARENCE THE REFLECTOR WOULD PRAX AT 165% OF DAC RATHER THAN 55% OF DAC.

THE CALIBRATION USED FOR PLOTTING THE INDICATION AS PER THE BRITISH STANDARD METHOD WAS NOT THE SAME AS THAT USED FOR THE INITAL EXAMINATION. SEE PAGE 9.

Signed _____

RED SHADED AREA
INDICATES NON-
COVERAGE ZONES
OF EXAMINATION
VOLUME.



SWEEP BACK FROM
29° TO 45°

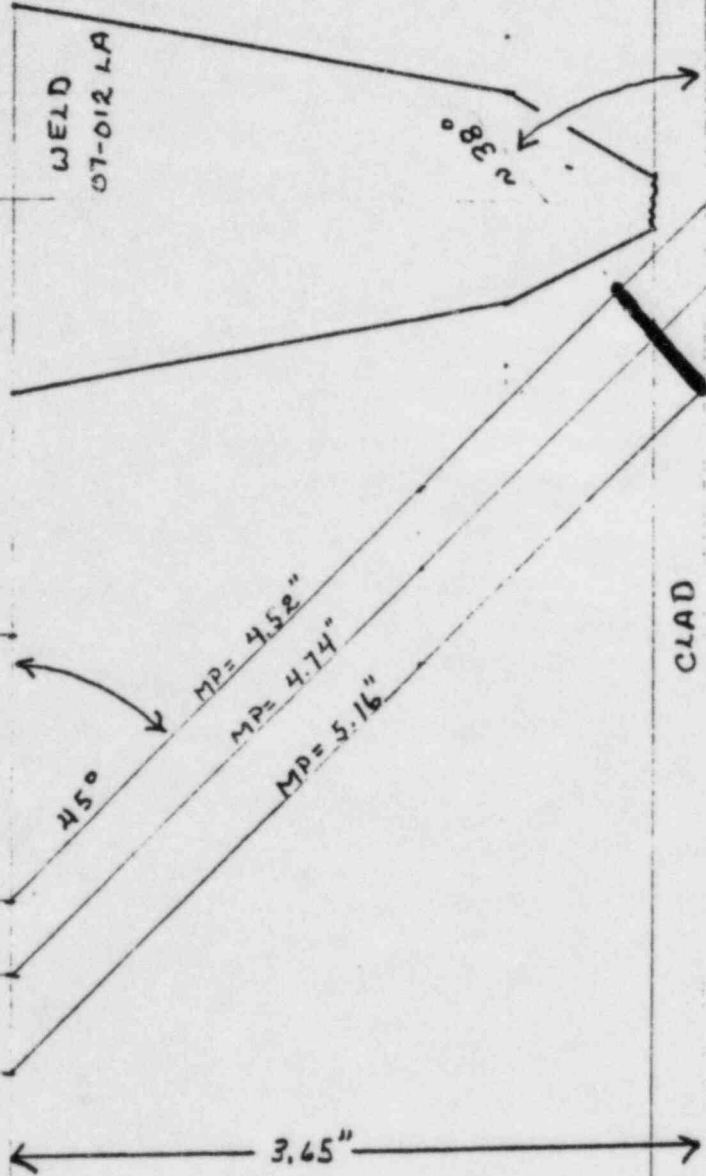
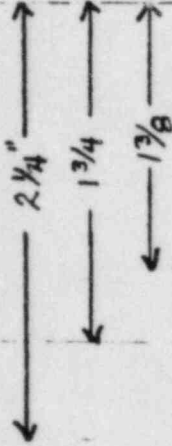
GREEN SHADED AREA
INDICATES 45° COVERAGE
OF WELD FROM BOTH
2 & 5 SCANS.

SWEEP BACK
FROM 61°
TO 45°

ULTRASONIC SUPPLEMENTAL DATA SHEET

SECTION XI

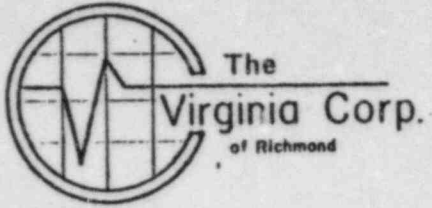
4 1/2"



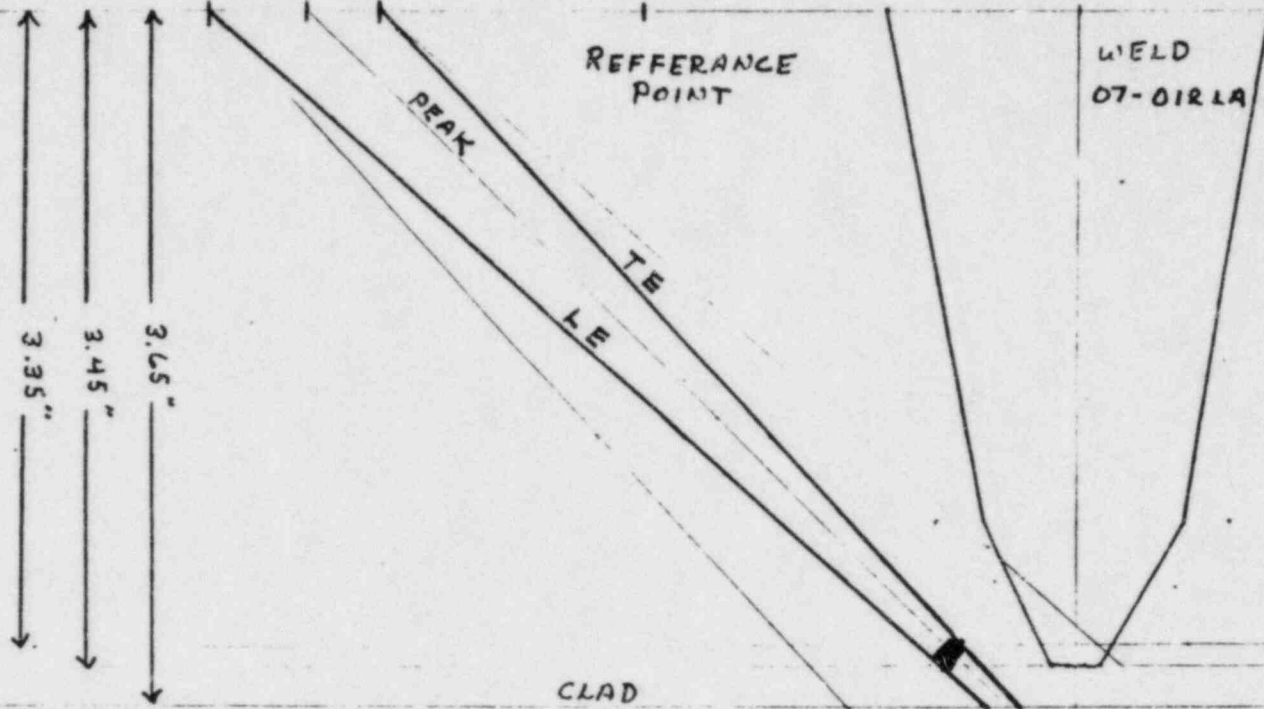
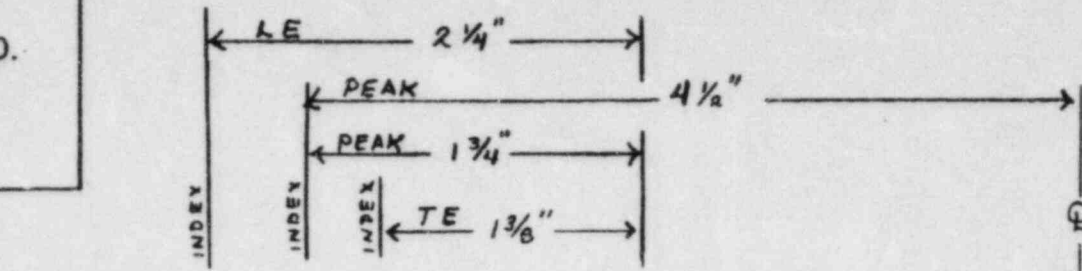
"INDICATION"

- ~ 38° TO INNER SURFACE
- ~ 7/16" DEEP
- ~ 5/8" WIDE
- ~ 2" LONG





SONIC FTS, MK. I
S.N. 780836
AEROTECH
1/2" DIA., 5 MHz.
S.N. D11038
CAL. STANDARDS
110 BLOCK 3
UT-4



METAL PATH
PEAK = 4.74"
TE = 4.52"
LE = 5.16"

"INDICATION"
~ 35° TO INNER SURFACE
~ .200" WIDE AND ~ .120" DEEP.
LENGTH = ~ 1 3/8"

3-14-82



Don Payne ANIZ 3/15/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1 / Zone 7
Component/Piping System Cdd leg - RCP 1A to St. Gen. #1	Examiner/Level David L. Johnson II / Stephen J. Morris I	Date 3-9-82	
Procedure ISE-2.5 Rev. 0	Iso/Drawing No. ZONE 7 Rev. 2 F.C. 2	VCR Supervisor Nanah D. Dineen	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfgr. SONIC	Mfgr. KB-Aerotech	Size .5"	Cal. Block UT-5
Model Mark I			Cal. Block -
S/N 05303E	Freq. 2.25MHZ	Range Cal. 2" - 6"	
Reject off	Serial No. J02172	Calibration Checks INIT. 1247 p.m. Final 2:52 p.m.	
Damp. Min.	Coax. Cable 12' BNC to BNC		
Freq. 2 MHZ	Gain 33dB		
Rep. Rate 1K			
Filter off			
Video Norm			
Couplant Sonotrace 40 B. 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
07-003LA	1'	3.54"	3.48"	3.42"	07-004LB	36"	3.48"	3.42"	3.48"
07-003LA	2'	3.54"	3.42"	3.42"	07-005	12	3.24"	2.82"	3.48"
07-003LA	3'	3.54"	3.42"	3.42"	07-005	2	3.30"	2.88"	3.48"
07-003LA	4'	3.54"	3.42"	3.48"	07-005	4	3.24"	2.82"	3.54"
07-003LA	5'	3.54"	3.42"	3.48"	07-005	6	3.36"	2.82"	3.66"
07-003LA	6'	3.54"	3.42"	3.48"	07-005	8	3.54"	2.76"	3.60"
07-003LA	7'	3.54"	3.48"	3.42"	07-005	10	3.30"	2.88"	3.48"
07-004LB	6"	3.48"	3.42"	3.48"					
07-004LB	12"	3.48"	3.54"	3.48"					
07-004LB	18"	3.42"	3.48"	3.48"					
07-004LB	24"	3.48"	3.54"	3.48"					
07-004LB	30"	3.48"	3.48"	3.48"					

Sketch/Identification Measurements were taken beginning at Q stamp.



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *Don Payne ANII 3/15/82*

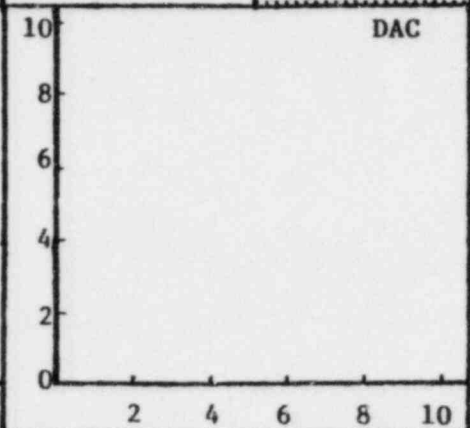
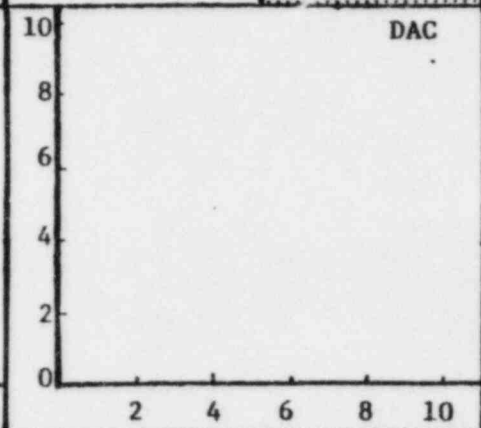
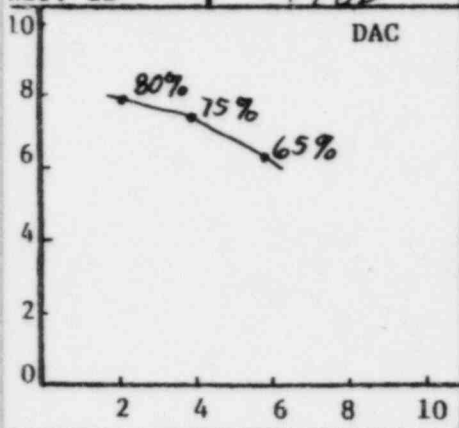
Customer <i>LP&L</i>		Plant <i>Waterford</i>		Unit <i>3</i>		Loop/Zone <i>117</i>		Iso/Drawing No. <i>Zone 7 Rev. 2 F.C. 2</i>	
Procedure <i>ISI 2.3 Rev. 0</i>		Exam Surface <i>O.D.</i>		Examiner/Level <i>David L. Fokan II</i>		VCR Supervisor <i>Daniel Jones</i>		Date <i>March 9, 1982</i>	
Component/Piping System <i>Steam Generator 1 to R.L. Pump IA</i>				Pipe Size <i>36"</i>		Weld Type <i>Butt</i>		Cal. Block <i>UT-6</i>	
						Couplant: <i>Sonotrac</i>		Type <i>40</i> Batch No. <i>8117</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number

	Transducer			Instrument				
	S/N	<i>33586</i>	<i>N/A</i>	<i>N/A</i>	Mfr.	<i>Sonic</i>	Model	<i>MARK I</i>
	Size	<i>1.0"</i>			S/N	<i>01610E</i>	RepRate	<i>1K</i>
	Frequency	<i>2.25MHz</i>			Reject	<i>OFF</i>	Filter	<i>OFF</i>
	Beam Angle	<i>0°</i>			Damp	<i>Min.</i>	Coax	<i>12' BK-BNC</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4T</i>	<i>80%</i>	<i>2.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>10:20</i>	<i>12:45</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>1/2T</i>	<i>75%</i>	<i>4.0</i>															
<i>3/4T</i>	<i>65%</i>	<i>6.0</i>															
<i>1T</i>	<i>N/A</i>	<i>8.3</i>															
Ref. dB	<i>47dB</i>																



Additional Comments/Sketch

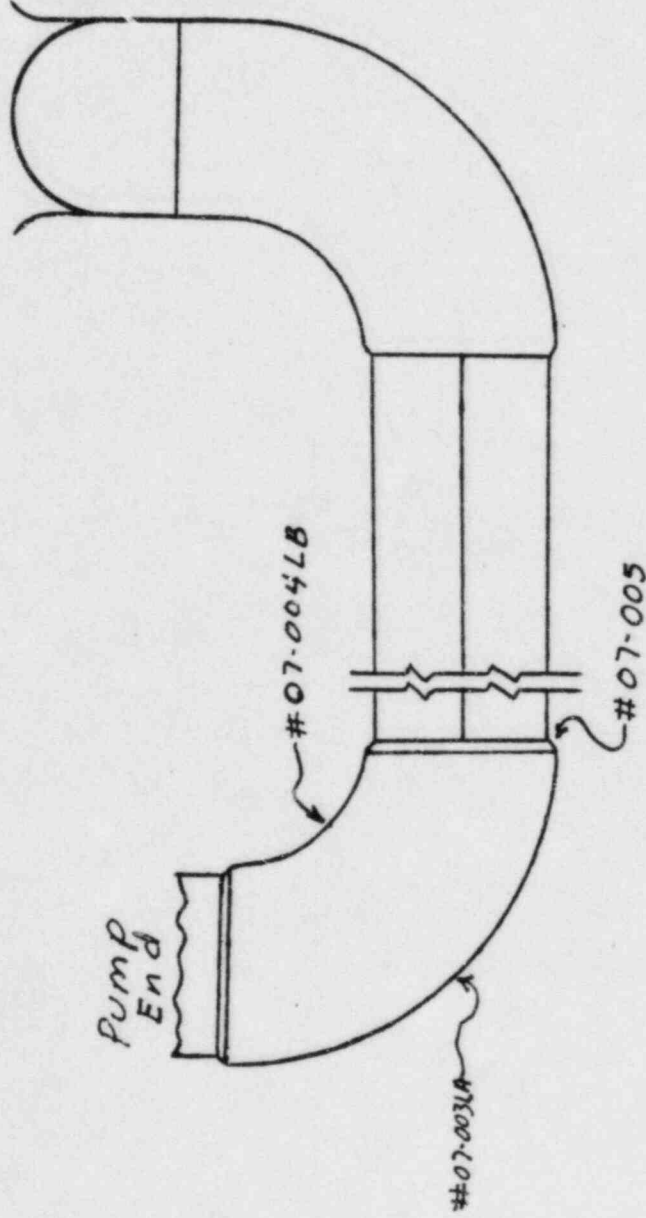
Don Payne ANEX 3/15/82



Ultrasonic Examination Report - Continuation Sheet

Customer <i>LP4L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop <i>1</i>	Iso/drawing No. <i>Zone 7 Rev. 2 E.C. 2</i>
Procedure <i>1512.3 Rev. 0</i>	Exam Surface <i>O.C.</i>	Examiner/Level <i>David T. Fokent II</i>	VCR Supervisor <i>Donal J. Jones</i>	Date <i>March 9, 1982</i>
Component/Piping System <i>Steam Generator to Pump 1A</i>	Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-6</i>	Couplant: Type & Batch # <i>Sonotrace 40 # 8117</i>

Weld No.	Xfer Check	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
			2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>07-0034</i>	<i>N/A</i>	<i>Par</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>Yes</i>	<i>See attached sheet</i>	<i>Smooth</i>	<i>Ground Flush</i>	<i>NI</i>	<i>Sat.</i>	<i>N/A</i>
<i>07-0048</i>	<i>N/A</i>	<i>Par</i>	<i>⊥</i>	<i>⊥</i>	<i>⊥</i>	<i>Yes</i>	<i>See attached sheet</i>	<i>Smooth</i>	<i>Ground Flush</i>	<i>NI</i>	<i>Sat.</i>	<i>N/A</i>
<i>07-005</i>	<i>N/A</i>	<i>Par</i>	<i>⊥</i>	<i>⊥</i>	<i>⊥</i>	<i>Par</i>	<i>see attached sheet</i>	<i>Smooth</i>	<i>Ground</i>	<i>NI</i>	<i>Sat.</i>	<i>N/A</i>



Unable to maintain back reflection
due to weld taper of #07-005.



Ultrasonic Examination Report *Don Payne ANII 3/15/82*

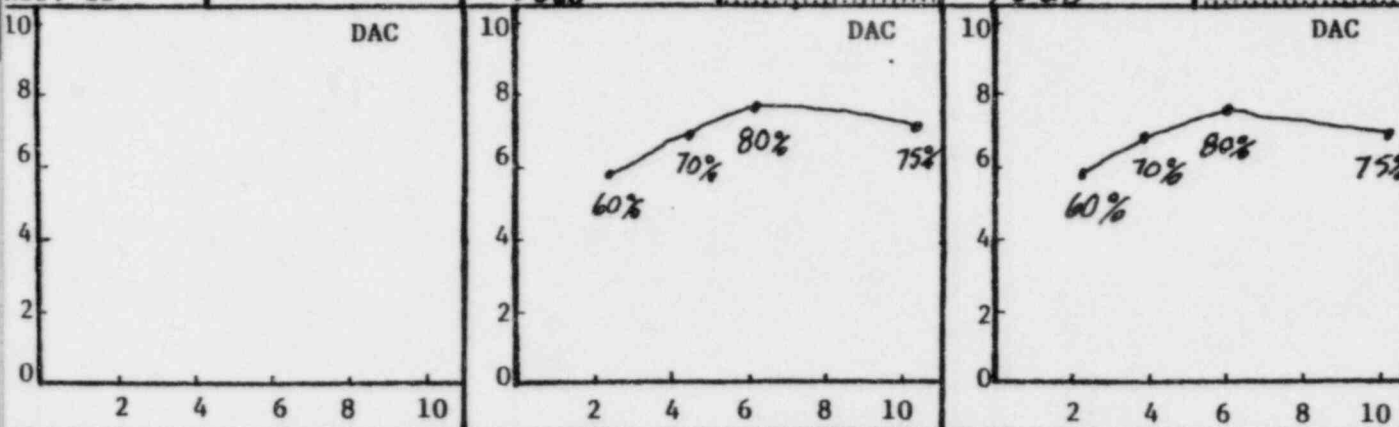
Customer LP&L		Plant Waterford		Unit 3		Loop/Zone 1/7		Iso/Drawing No. ZONE 7 R2 FC2	
Procedure ISI-2.3-RO		Exam Surface OD		Examiner/Level <i>Jennie R. Perkins III</i>		VOR Supervisor <i>Daniel Jones</i>		Date 3-9-82	
Component/Piping System Reactor Coolant				Pipe Size 36"		Weld Type Butt		Cal. Block & Couplant: UT-6 3.5" SanoTrace Type 40	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

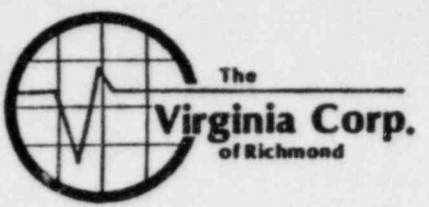
	Transducer			Instrument				
	S/N	0°	45°	60°	Mfgr.	SONIC	Model	FTS-MK1
	Size		L19134		S/N	780836	RepRate	1K
	Frequency	✓	225mhz	✓	Reject	OFF	Filter	OFF
	Beam Angle		45°		Damp	Min	Coax	12'

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	↓	↓	60%	2.0	3/4	3/8 1 1/16	60%	2.0	3/4	3/8 1 1/16	↓	↓	↓	↓	↓	↓
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 3/4 2 3/8	80%	6.0	2 5/8	2 3/4 2 3/8	↓	↓	↓	↓	↓	↓
5/4 T	↓	↓	75%	10.0			75%	10.0			↓	↓	↓	↓	↓	↓
Ref. dB			56dB				56dB				↓	↓	↓	↓	↓	↓



Additional Comments/Sketch

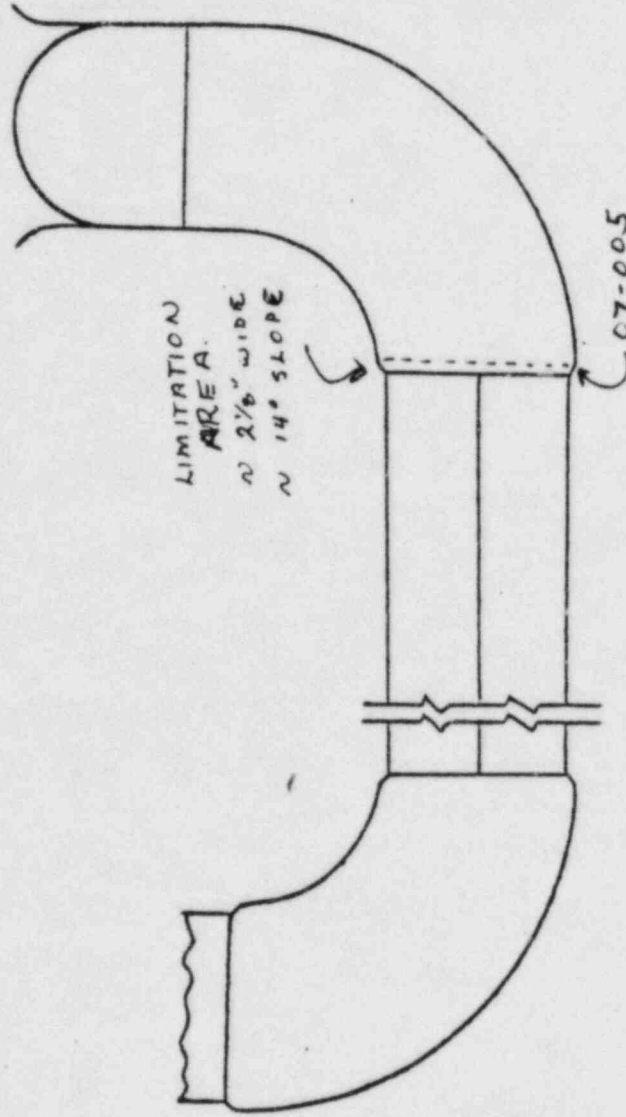
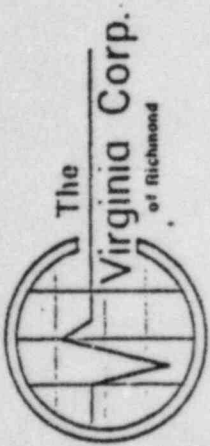
Don Payne ANII 3/15/82

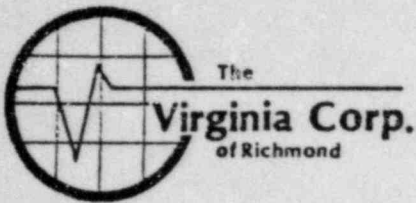


Ultrasonic Examination Report - Continuation Sheet Page 2 of 5

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1A/7	Iso/Drawing No. Zone 7 R.2 FCZ
Procedure ISI 2.3 R.O	Exam Surface O.D.	Examiner/Level <i>Albuquerque</i>		VCR Supervisor <i>Daniel Dena</i>
Component/Piping System REACTOR COOLANT	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Date 3-9-82
			Couplant: Type & Batch # SONOTRAK 40 / 8117	

Weld	Xfer Check	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
			2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-003LA	NA	NA	YES	YES	YES	NA		CLEAN	GROUND	NI	SAT.	
07-005	+	+	PAR	PAR	PAR	+	SEE ATTACHED SHEET	CLEAN	GROUND	NRI	SAT.	





Date 3-9-82

Page 4 of 5

To: _____

Subject EXAMINATION
LIMITATIONS
ISO 7 REV. 2 ~~FC~~ FC-2

WELD NO. 07-005 : SCANS 2, 5, 7 & 8 WERE RESTRICTED
BY A TAPER ON THE WELD BETWEEN
THE PIPE AND ELBOW. THE LENGTH
OF TAPER WAS ABOUT 2 1/8" AVERAGE
WITH APPROX AN 14° SLOPE.
THE NON-CONTACT AREA WAS ABOUT
2 1/8" LONG.

SEE SKETCH ON PAGE- 5

WELD METAL COVERAGE

SCAN 2 APPROX. LOSS = 55%

SCAN 5 APPROX LOSS = 10%

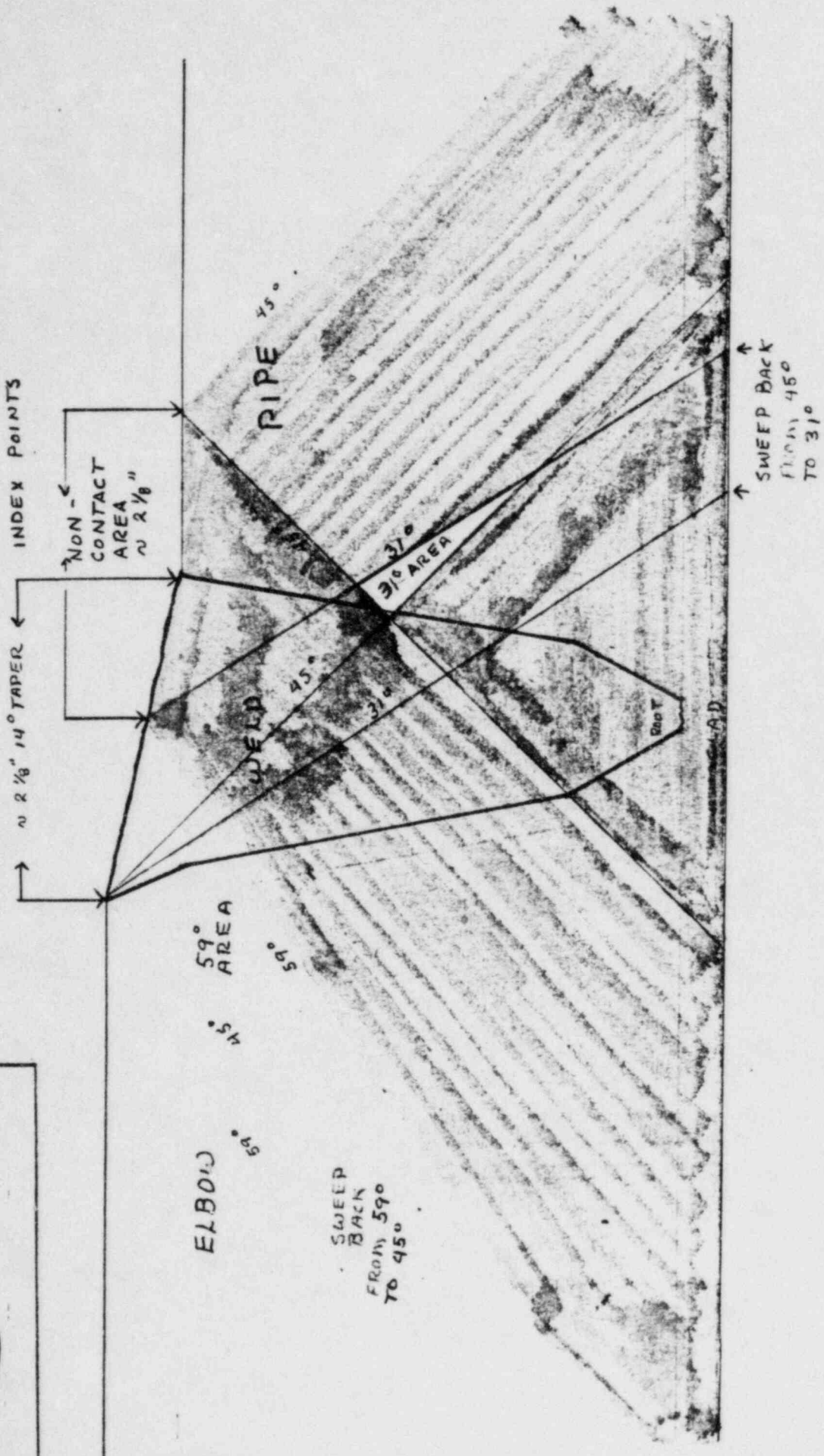
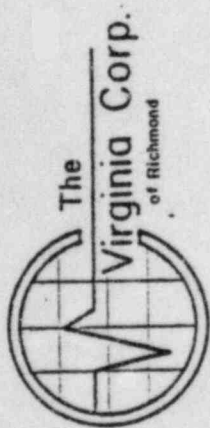
SCANS 7 & 8 APPROX LOSS = 10%

Signed

R. Burlingame

ULTRASONIC SUPPLEMENTAL DATA SHEET

WELD NO. 07-005



Ultrasonic Examination Report *Don Payne ANZI 7/6/82*



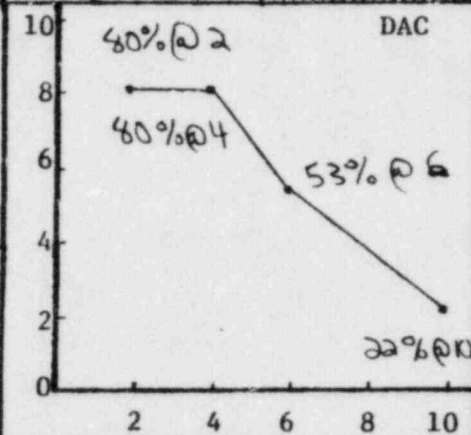
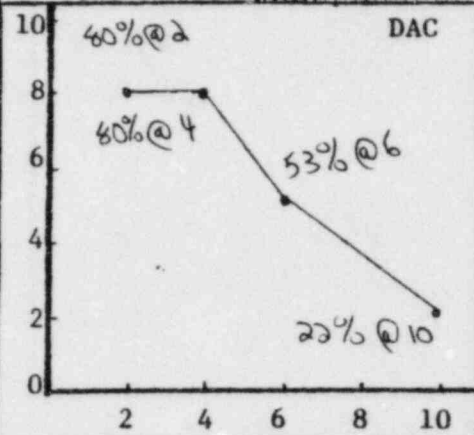
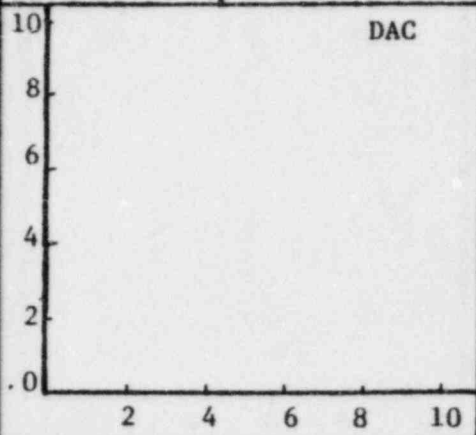
Customer <i>L.P. & L</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>1-7</i>	Iso/Drawing No. <i>Zone 7 - R.2 - F.C.2</i>	
Procedure <i>151-2.3-2.0</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Harry Longenecker II</i>		VOR Supervisor <i>Don Payne</i>		Date <i>3-10-82</i>	
Component/Piping System <i>Coldleg - S.G. #1 to Pump 1B</i>		Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block # <i>UT-6</i>	Couplant: <i>Sonotrack</i> Type <i>40</i> Batch No. <i>8112</i>		

Continuation Sheet Attached
 Yes No

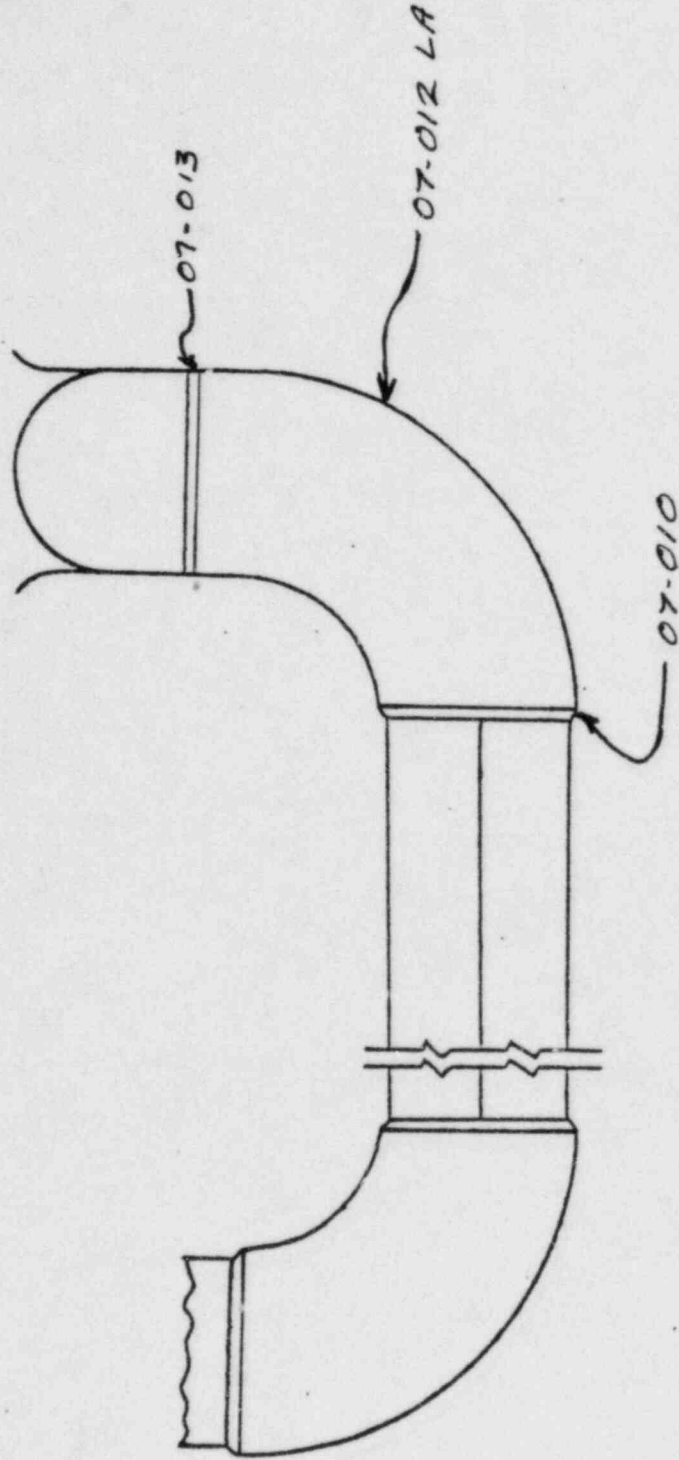
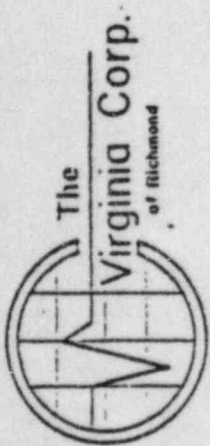
Field Changes:
 Yes No
 IF Yes, Number

	Transducer	<i>0°</i>	<i>45°</i>	<i>60°</i>	Instrument			
	S/N	<i>N.A.</i>	<i>N.A.</i>	<i>119401</i>	Mfg.	<i>Sonic</i>	Model	<i>STS-MK1</i>
	Size	<i>I</i>	<i>I</i>	<i>1" dia</i>	S/N	<i>05304E</i>	RepRate	<i>1K</i>
	Frequency	<i>I</i>	<i>I</i>	<i>2.25 mhz</i>	Reject	<i>OFF</i>	Filter	<i>OFF</i>
	Beam Angle	<i>I</i>	<i>I</i>	<i>62°</i>	Damp	<i>Min.</i>	Coax	<i>12'</i>

Calibration 0°			2 & 5 Scan			7 & 8 Scan			Calibration Checks									
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC				Scribe Line	50% DAC	In	Out	In	Out	In	Out	
<i>1/4 T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>2</i>	<i>1 5/8</i>	<i>1 3/16</i>	<i>1 1/4</i>	<i>80%</i>	<i>2</i>	<i>1 5/8</i>	<i>1 3/16</i>	<i>1 1/4</i>						
<i>1/2 T</i>	<i>I</i>	<i>I</i>	<i>80%</i>	<i>4</i>	<i>3 1/4</i>	<i>2 7/8</i>	<i>3 1/8</i>	<i>80%</i>	<i>4</i>	<i>3 1/4</i>	<i>2 7/8</i>	<i>3 1/8</i>						
<i>3/4 T</i>	<i>I</i>	<i>I</i>	<i>53%</i>	<i>6</i>	<i>4 13/16</i>	<i>4 9/16</i>	<i>5 1/16</i>	<i>53%</i>	<i>6</i>	<i>4 13/16</i>	<i>4 9/16</i>	<i>5 1/16</i>						
<i>5/4 T</i>	<i>I</i>	<i>I</i>	<i>22%</i>	<i>10</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>22%</i>	<i>10</i>	<i>N/A</i>	<i>NA</i>	<i>N/A</i>						
Ref. dB			<i>62 db</i>			<i>62 db</i>												



Additional Comments/Sketch





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Virginia Corp.
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Date 3-10-82

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To: _____

Subject INSPECTION LIMITATIONS
ISO. 7 R-2 F.C. 2

WELD NO. 07-010 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%

Signed Larry Longenecker



Ultrasonic Examination Report *Don Payne ANII 3/15/82*

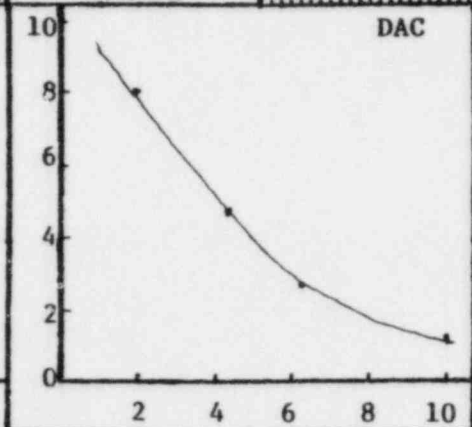
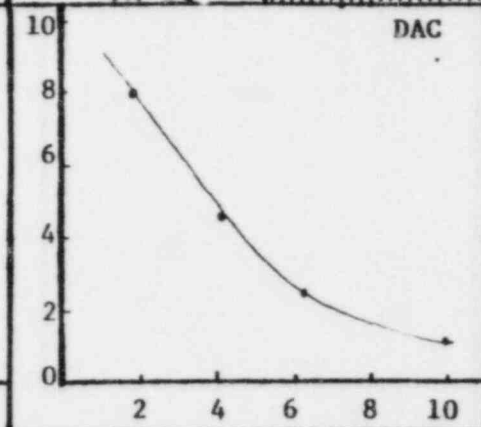
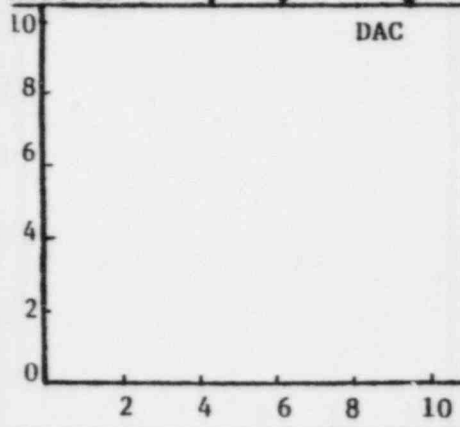
Customer <i>LP3L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>	Loop/Zone <i>7</i>	Iso/Drawing No. <i>150 07-R2-FC-2</i>	
Procedure <i>151-2.3 R.O</i>	Exam Surface <i>OD</i>	Examiner/Level <i>R BURLINGAME II</i>		VCR Supervisor <i>Don Payne</i>		Date <i>3-11-82</i>	
Component/Piping System <i>REACTOR COOLANT</i>		Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-6</i>	Couplant: <i>SONOTRAKE</i>	Type <i>40</i> Batch No <i>8119</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

	Transducer			Instrument				
	S/N	0°	45°	60°	Mfg.	SONIC		
	Size	607152	1/2"	S/N	780836	Model	MK I	
	Frequency	2.25 m	Reject	OFF	RepRate	1000	Filter	OFF
	Beam Angle	↓	45°	↓	Damp	MIN.	Coax	6'
Freq.	2.25 MHz	Video	NORM					

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T			80%	2	25/32	2 1/8 1.0	80%	2	25/32	2 1/8 1.0			1415	1610		
1/2 T			45%	4	1 23/32	1 1/2 2 1/4	45%	4	1 23/32	1 3/8 2 1/4						
3/4 T			30%	6	2 1/2	2 5/8 3 1/4	30%	6	2 1/2	2 5/8 3 1/4						
5/4 T			15%	10			15%	10								
Ref. dB	↓	↓	42 db				42 db				↓	↓			↓	↓



Additional Comments/Sketch

A AVERAGE 20% CLAD ROLL REQUIRED + 20db.

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



Ultrasonic Examination Report *Don Payne ANFI 3/15/82*

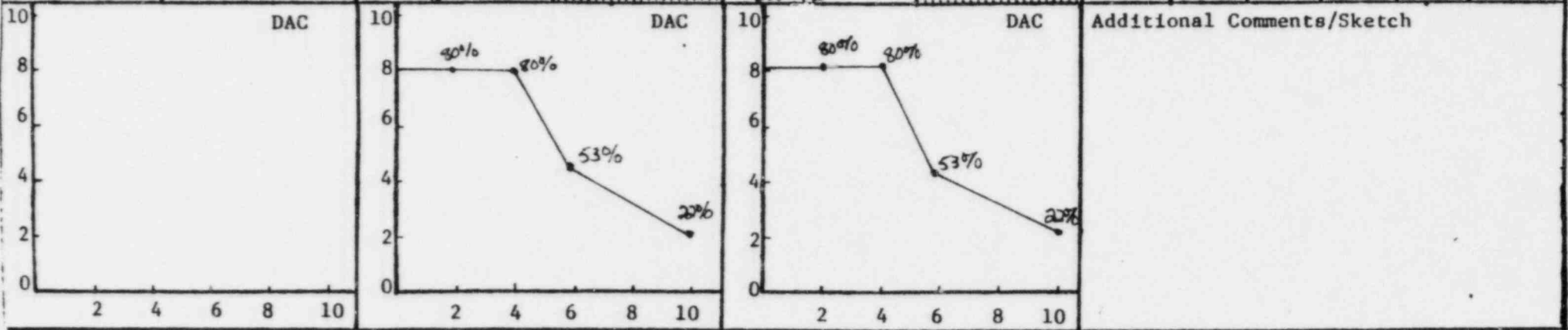
Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1 7</i>	Iso/Drawing No. <i>ZONE 7 REV. 2 F.C. 2</i>
Procedure <i>ISI 2.3 R0</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Mary Longenecker III</i>	VCR Supervisor <i>Donal Dins</i>	Date <i>3-9-82</i>
Component/Piping System <i>Cold leg S.G. #1 to R.C.P. 1A</i>	Pipe Size <i>36"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-6</i>	Couplant: <i>50wt% grease</i> Type <i>40</i> Batch No <i>8117</i>

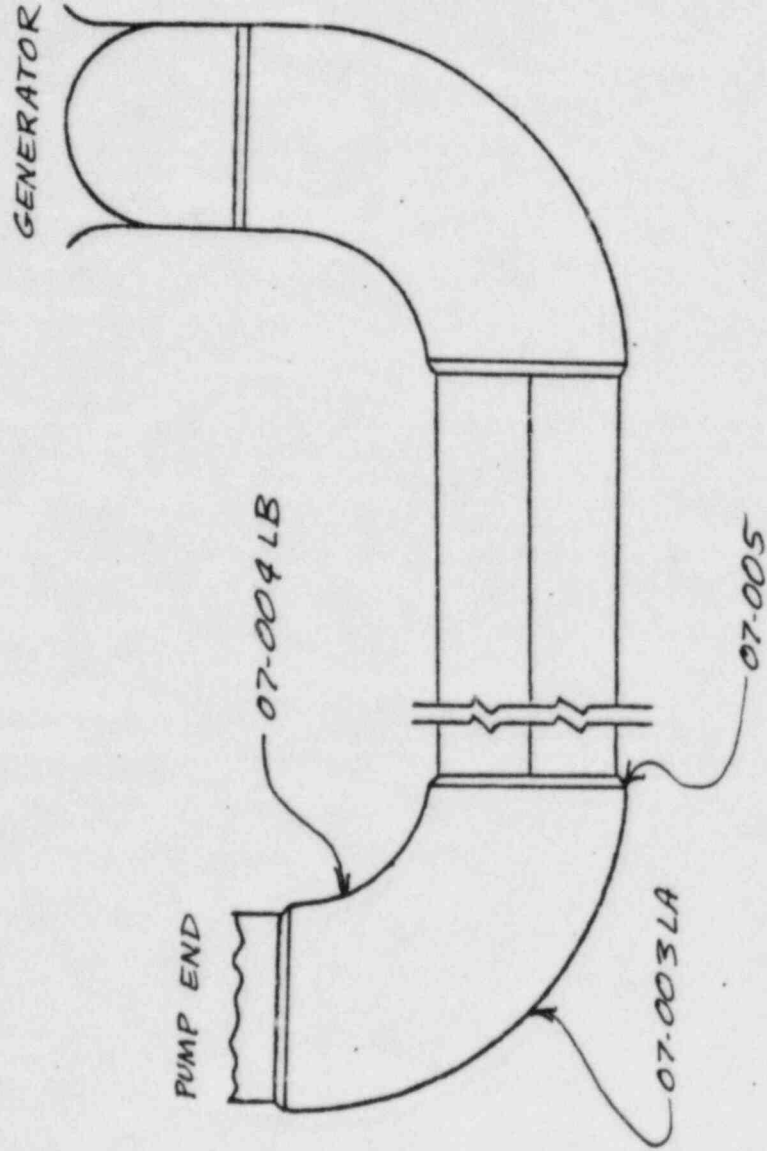
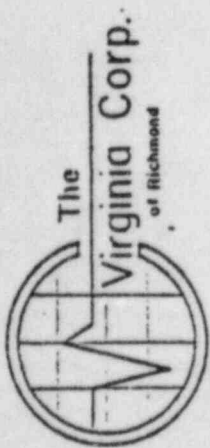
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
	S/N <i>N/A</i>	<i>N/A</i>	<i>L19801</i>	Mfer. <i>SONIC</i>	Model	Mark I	
	Size		<i>1" Diam.</i>	S/N <i>053046</i>	RepRate	<i>1/5</i>	
	Frequency		<i>2.25 mhz</i>	Reject	<i>OFF</i>	Filter	<i>OFF</i>
Beam Angle			<i>60°</i>	Damp	<i>MIN.</i>	Coax	<i>12'</i>
				Freq.	<i>2 mhz</i>	Video	<i>Norm.</i>

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
<i>1/4 T</i>	<i>N/A</i>	<i>N/A</i>	<i>80%</i>	<i>2.0</i>	<i>1 3/8</i>	<i>1 7/8</i>	<i>1 11/16</i>	<i>80%</i>	<i>2.0</i>	<i>1 3/8</i>	<i>1 7/8</i>	<i>1 11/16</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2:00</i>	<i>4:00</i>		
<i>1/2 T</i>			<i>80%</i>	<i>4.0</i>	<i>3 1/4</i>	<i>2 3/8</i>	<i>3 5/8</i>	<i>80%</i>	<i>4.0</i>	<i>3 1/4</i>	<i>2 3/8</i>	<i>3 5/8</i>								
<i>3/4 T</i>			<i>53%</i>	<i>6.0</i>	<i>4 7/8</i>	<i>4 7/8</i>	<i>5 1/4</i>	<i>53%</i>	<i>6.0</i>	<i>4 7/8</i>	<i>4 7/8</i>	<i>5 1/4</i>								
<i>5/4 T</i>			<i>22%</i>	<i>10.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>22%</i>	<i>10.0</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>								







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 of Richmond

Date 3-9-82

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To: _____

Subject INSPECTION LIMITATIONS
ISO 7 R-2 F.C.-2

WELD NO. 07-004LB HAD INTERMITENT LOSS OF CONTACT WITH
THE SURFACE AS A RESULT OF ELBOW
INTRADOSE.

SCANS 7&8 LOSS OF APPROX. 15%

WELD NO. 07-005 HAD INTERMITENT LOSS OF CONTACT WITH
THE SURFACE AS A RESULT OF WELD
GEOMETRY SHOWN ON PAGE 3 OF THIS
REPORT.

SCAN 2 LOSS OF APPROX. 60%

SCAN 5 LOSS OF APPROX. 10%

SCANS 7&8 LOSS OF APPROX. 20%

Signed Larry Longenecker

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

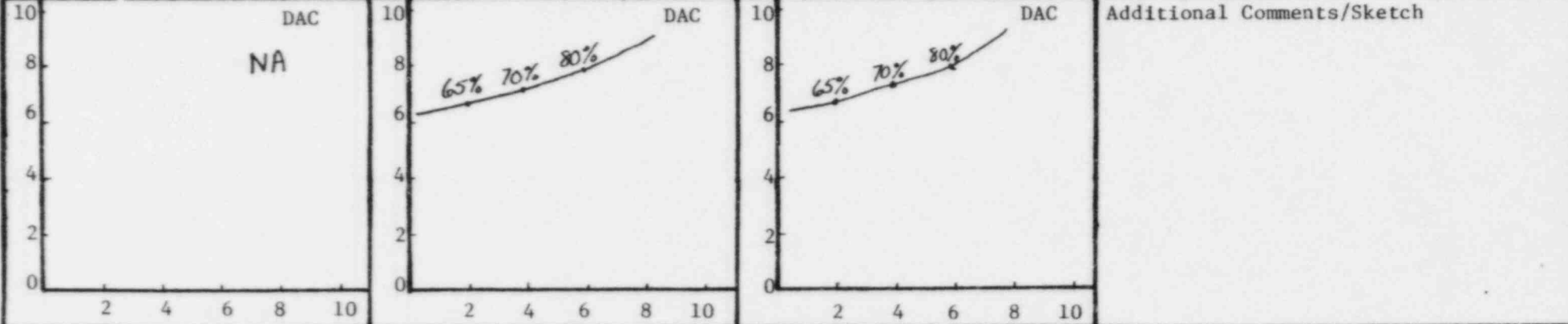


Ultrasonic Examination Report Page 1 of 15

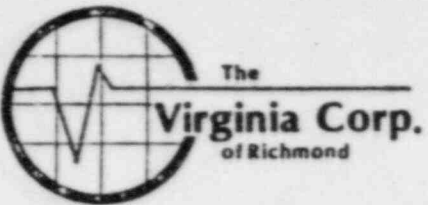
Customer LP&L	Plant Waterford	Unit 3	Loop/Zone IA-7	Iso/Drawing No. Zone 7 Rev. 2 FC-2
Procedure ISI-2.3 Rev. 0	Exam Surface O.D.	Examiner/Level BURLINGAME / II	VCR Supervisor Kevin White	Date 3-24-82
Component/Piping System Reactor Coolant		Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6
			Couplant: Sonotrace	Batch No. 8119

Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transducer	0°	45°	60°	Instrument			
	S/N	NA	L19134	NA	Mfr.	Sonic	Model	ETS Mark I
Field Changes: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, Number	Size		1.0"		S/N	780836	RepRate	1K
	Frequency		2.25 MHz		Reject	off	Filter	off
	Beam Angle		45°		Damp	min	Coax	12'

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4T	NA	NA	65%	2	1/16	7/16	13/16	65%	2	1/16	7/16	13/16	NA	NA	1330	1630	NA	NA
1/2T			70%	4	1/16	17/16	17/8	70%	4	1/16	17/16	17/8						
3/4T			80%	6	25/16	27/16	23/4	80%	6	25/16	27/16	23/4						
5/4T			70%	10				70%	10									



Don DANLANIE 4/2/82

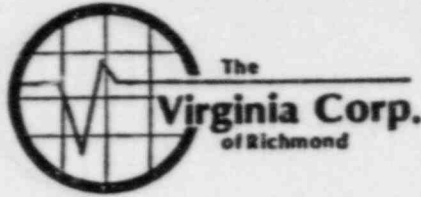


Ultrasonic Examination Report - Continuation Sheet Page 2 of 15

Customer LP L	Plant WATERFORD	Unit 3	Loop 1A	Iso/drawing No. ZONE 7, REV. 2, FC-12009
Procedure ISI-2.3 REV D	Exam Surface OD	Examiner/Level BURLINAME II	VCR Supervisor Daniel J. Dineen	Date 3-24-82
Component/Piping System REACTOR COOLANT	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6 35"	Couplant: Type & Batch # SONOTRACE 40 # B119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-006	LA	NA	YES	YES	YES	NA	CLEAN	GROUND	NI	SAT	
07-007	LB		YES	YES	YES		CLEAN	GROUND	NI	SAT	
07-013			YES	YES	YES		CLEAN	GROUND	RI	SAT	
07-014	LB		YES	YES	YES		CLEAN	GROUND	NRI	SAT	
07-015	LA		YES	YES	YES		CLEAN	GROUND	NRI	SAT	
07-016			PAR	PAR*	PAR	SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
07-017			PAR	PAR	PAR	SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
07-018			PAR*	PAR	PAR	SEE ATTACHMENT	CLEAN	GROUND	NRI	SAT	
07-019	LA		PAR	PAR	NO*	↓ SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	
07-020	LB	↓	PAR	PAR	NO*	↓ SEE ATTACHMENT	CLEAN	GROUND	NI	SAT	

* SEE ATTACHED REPORT USING SMALLER TRANSDUCER.

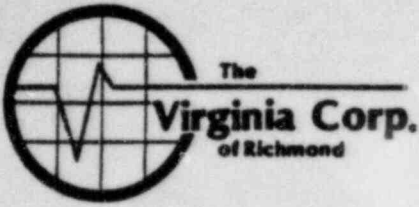


Ultrasonic Examination Report

Indication Record

Customer LP #L		Plant WATERFORD	Unit 3	Loop 1A
Procedure 151-2.3, REV. 0		Examiner/Level BURLINGAME II	VCR Supervisor Daniel Dine	Date 3-26-82
Component/Piping System REACTOR COOLANT		ISO Drawing No. ZONE 7 REV. 2, FC 2	Cal. Standard No./Thickness UT-6, 3.5"	

Weld No.	Ind No.	Max. % DAC	Indication Length		Minimum Depth		Maximum Depth		Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
			From	To	S.U. Pos.	Sweep Reading	S.U. Pos.	Sweep Reading						
07-013	1	65%	56.6"	59.25"	2 7/8"	7.7	3 7/8"	8.6	45°	SCAN	3.55"	3.6"	3.4"	



The

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of Richmond

Date _____

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To: _____

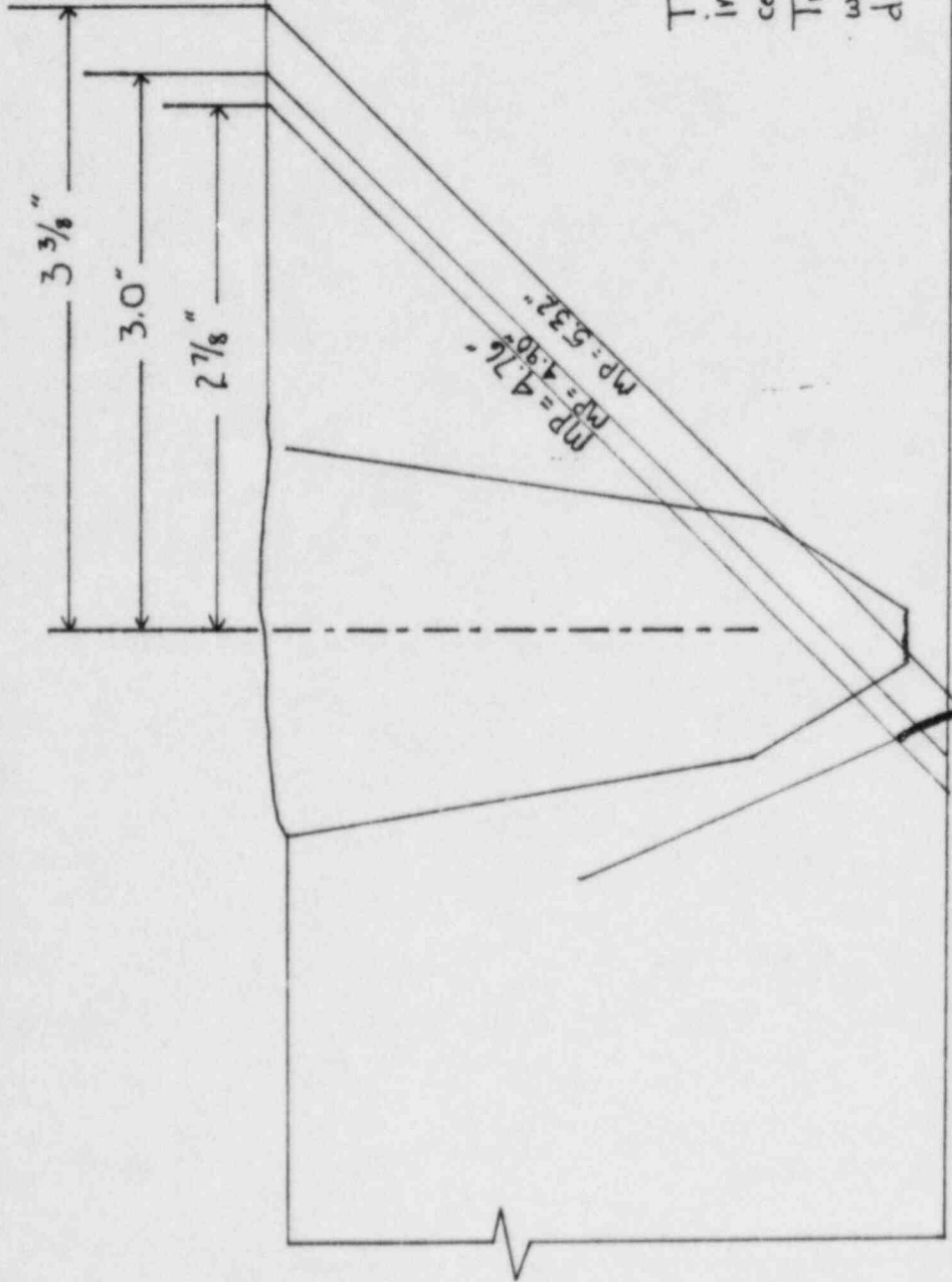
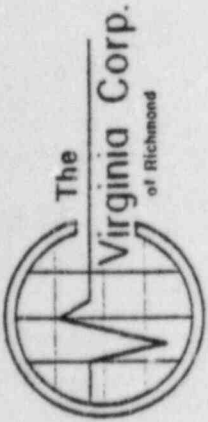
Subject Description of
indication
Weld # 07-013

The indication is located Near the root of weld # 07-013, ~180° From the reference mark and at the junction of weld # 07-015 LA. Its length is approximately 2 1/2" long. Pages 3 & 5 give a description of the indication as per Section XI. It is felt that the Section XI description and plot are not good indicators of the true nature of the indication. A plot of the indication as per British Standard 3923 is given on page 6 and some additional data as to peak reflector conditions along the length of the indication on page 7. It should be noted that this is a complex reflector and that enough data has not been collected to give more than a general description. The plot on page 6 describes the indication as having a concave face approximately .090" wide. It is laying at about a 30° angle to the ID surface at the fusion zone between the clad and carbon steel. It should be pointed out that for a concave reflector, the focal point of L.E. & T.E. would normally be in front of the reflector. (not enough data). The peak reflector data on page 7 could also indicate a concave reflector. The indication has a changing orientation throughout its length and also varies in depth.

Signed _____

ULTRASONIC SUPPLEMENTAL DATA SHEET

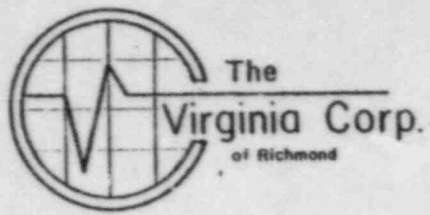
As Per Section XI
Plot of Indication in
Weld No. 07-013



" Note "

The indication is plotted
in relation to a presumed
centerline of the weld.
True centerline of the
weld root may be
different.

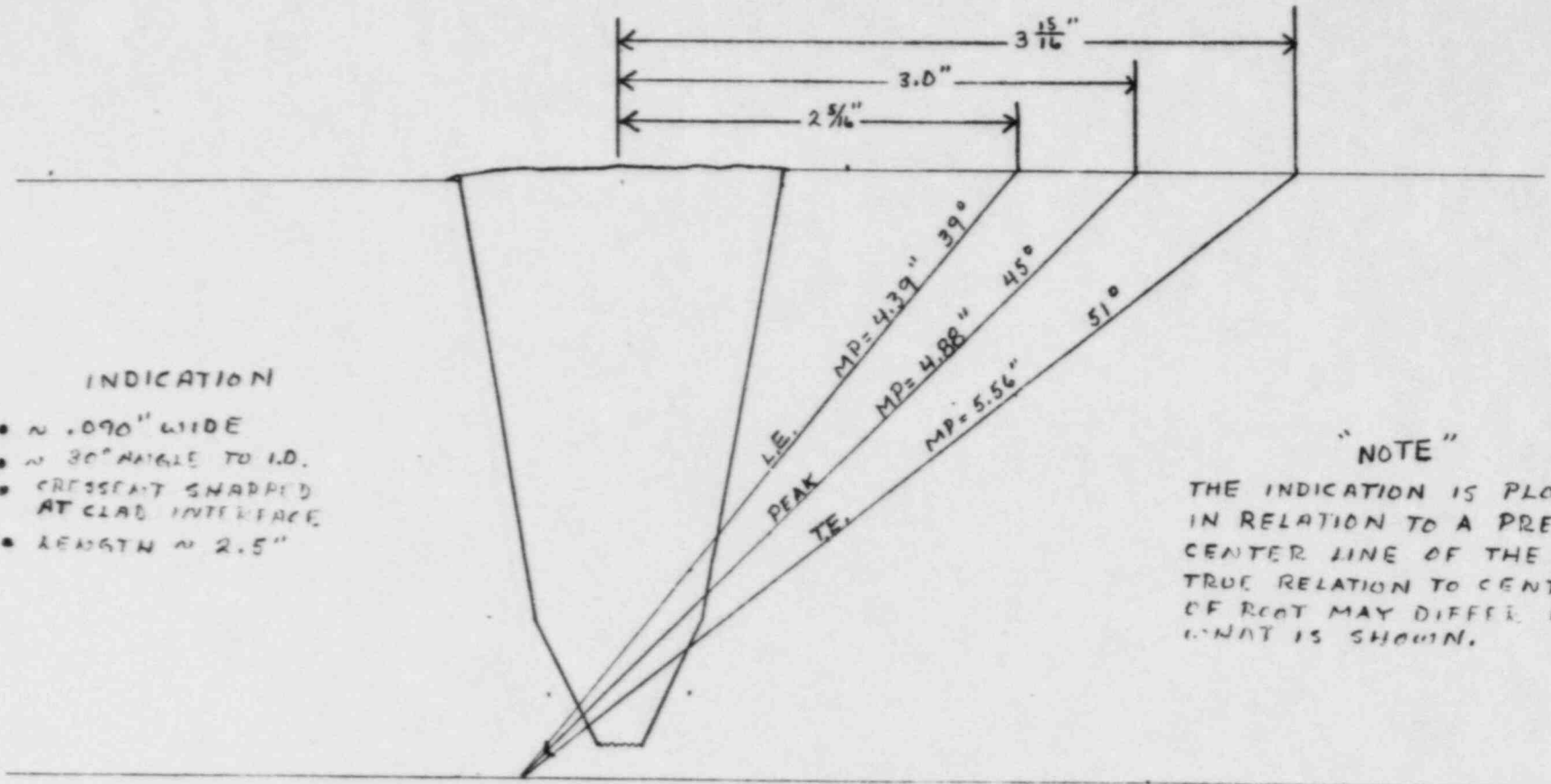
Depth = $\approx 3/8$ "
Angle = $\approx 23^\circ$
Length = $\approx 2 5/8$ "
Min. Wall = $\approx 3 5/16$ "



ULTRASONIC SUPPLEMENTAL DATA SHEET

AS PER BRITISH STANDARD
3923

PLOT OF INDICATION IN
WELD NO 07-013



INDICATION

- ~ .090" WIDE
- ~ 30° ANGLE TO I.D.
- CRESSENT SHAPED AT CLAD INTERFACE
- LENGTH ~ 2.5"

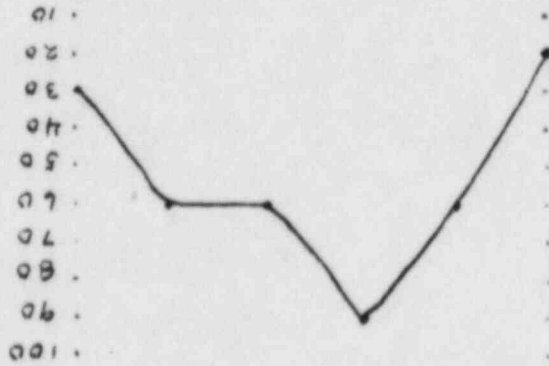
"NOTE"

THE INDICATION IS PLOTTED IN RELATION TO A PRESUMED CENTER LINE OF THE WELD. TRUE RELATION TO CENTER LINE OF ROOT MAY DIFFER FROM WHAT IS SHOWN.

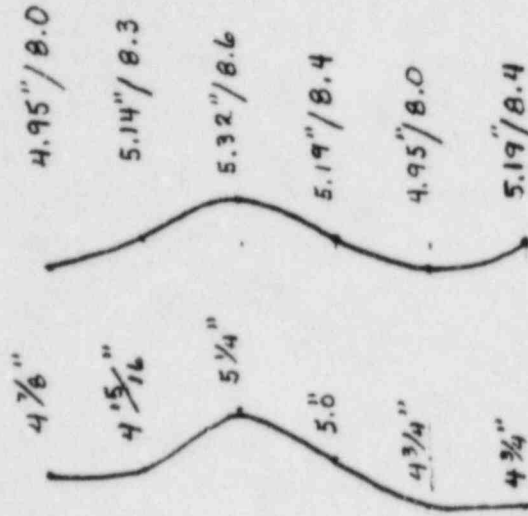
3



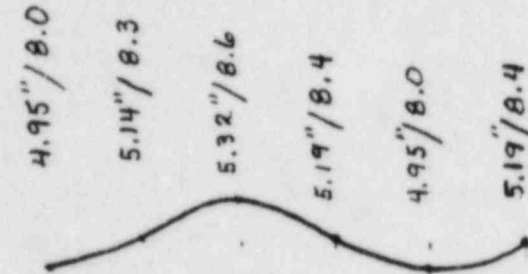
PEAK SIGNAL PROFILE
OF REFLECTOR

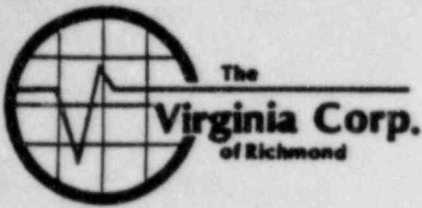


SURFACE DISTANCE
MEASUREMENTS ARE
FROM REFERENCE LINE
NOT CENTER LINE



METAL PAIN PROFILE
OF REFLECTOR





Date _____

Page 8 of 15

To: _____

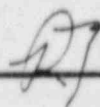
Subject Inspection
Limitation

07-016 All scans were limited by O.D. geometry. See pages 9, 10 + 11. The root area was missed completely with Scan 5 using the 1" diameter transducer and wedge. A root area scan was obtained by using a minimum 1/2" diameter transducer and wedge. See page 15

07-017 Scans 2 + 5 were limited by O.D. surface geometry. See page 12. The root area of this weld was not examined. Special transducers and calibration procedures would be required to obtain a good test of the root area.

07-018 All scans were limited by O.D. surface geometry. See pages 9, 10 + 11. The root area was missed completely with Scan 2 using the 1" diameter transducer and wedge. A root area scan was obtained by using a minimum 1/2" diameter transducer and wedge. See page 15

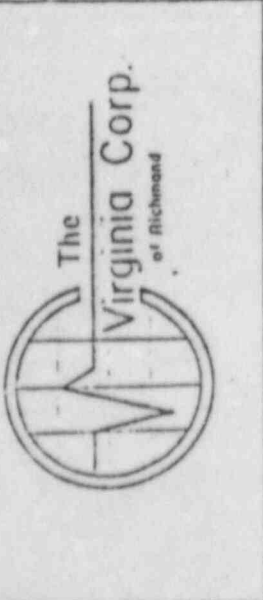
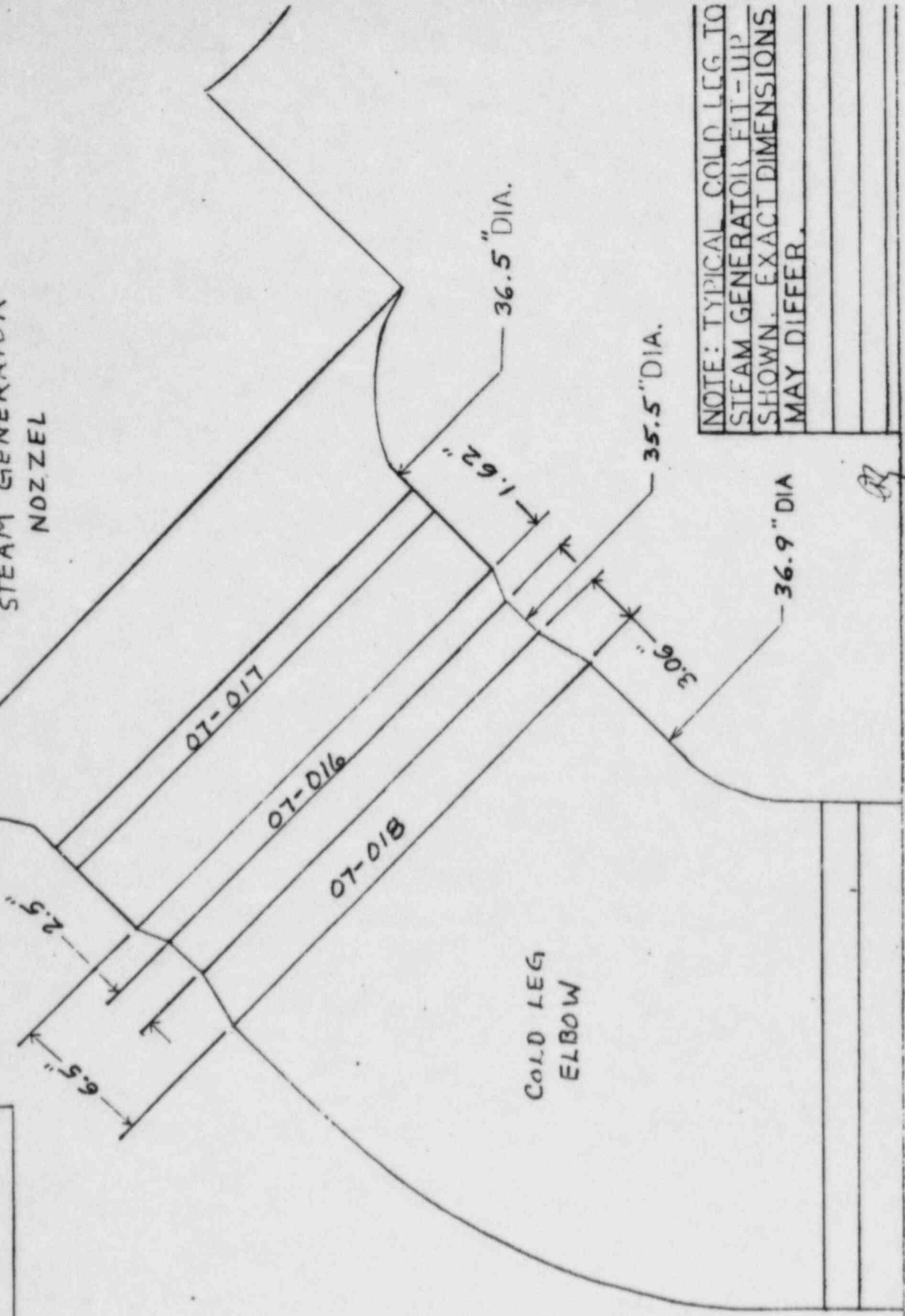
07-019 + 07-020 are short seams between weld nos. 07-017 and 07-018. Scans 7 + 8 could not be performed because of the O.D. surface geometry. A partial 2 + 5 scan could be obtained and a partial 7 + 8 scan with a minimum 1/2" transducer and wedge. It is felt that 90% of the root area of the two welds was covered by examination. See pages 13 + 14.

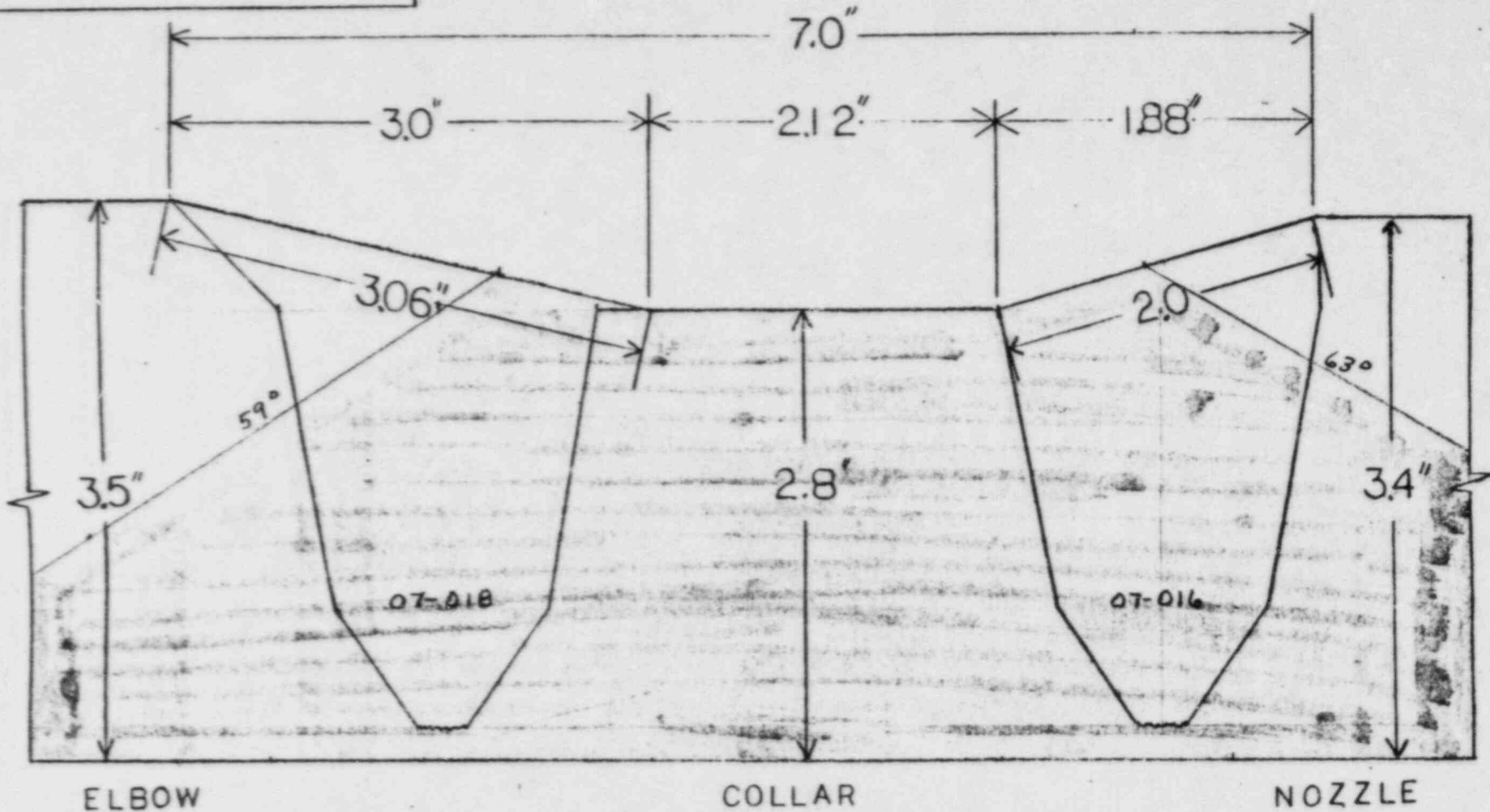
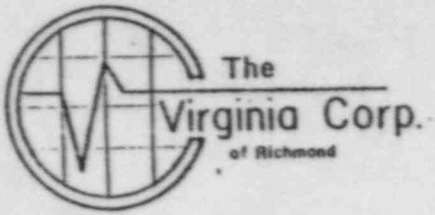
Signed _____ 

ZONIE 07

STEAM GENERATOR
NOZZEL

COLD LEG
ELBOW

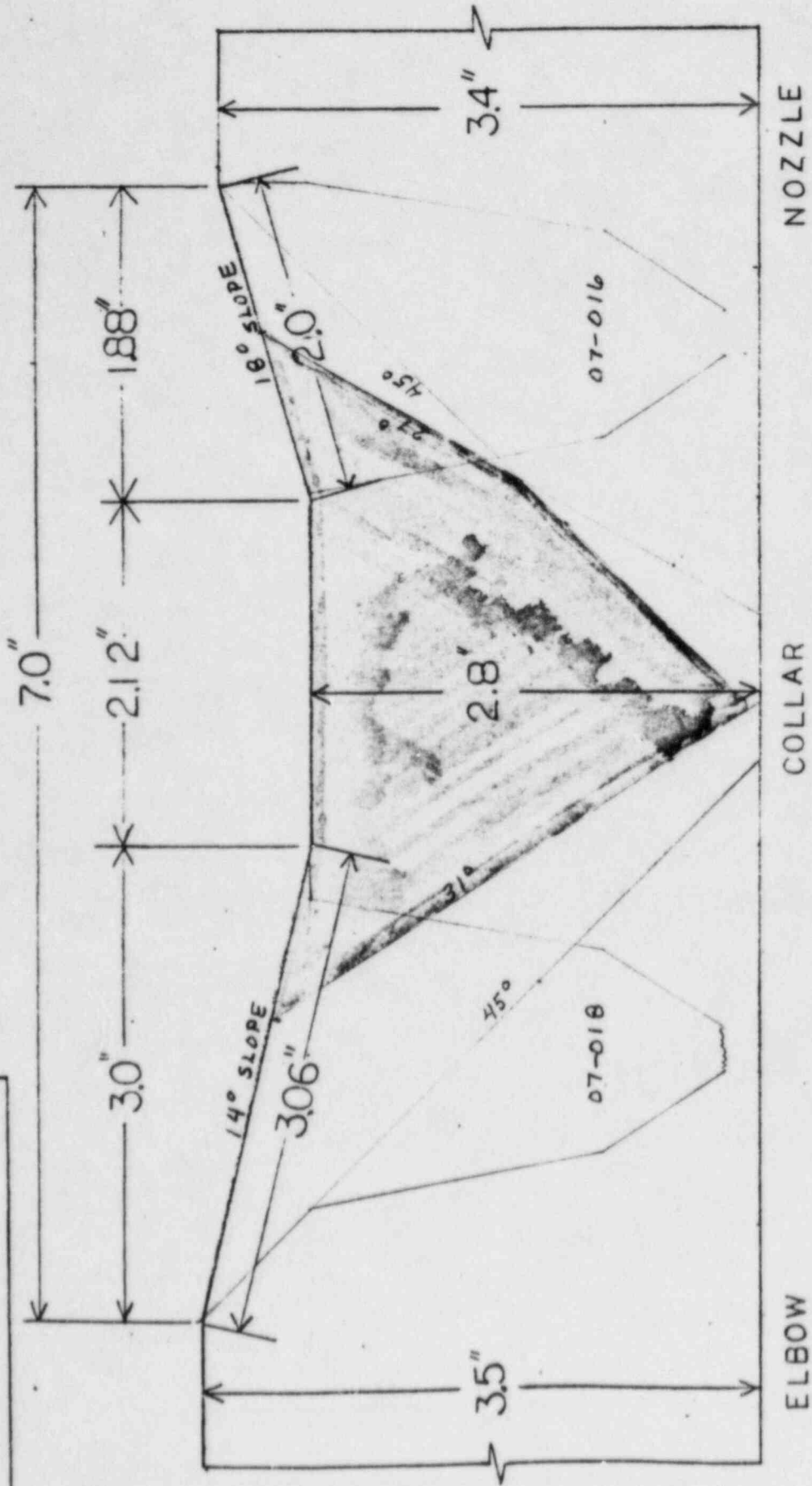




RED SHADED AREA SHOWS AREA NOT COVERED FOR THE 5 SCAN ON WELD 07-016 AND SCAN 2. ON WELD 07-018, USING 1" DIA TRANSDUCER. (45° SW)

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

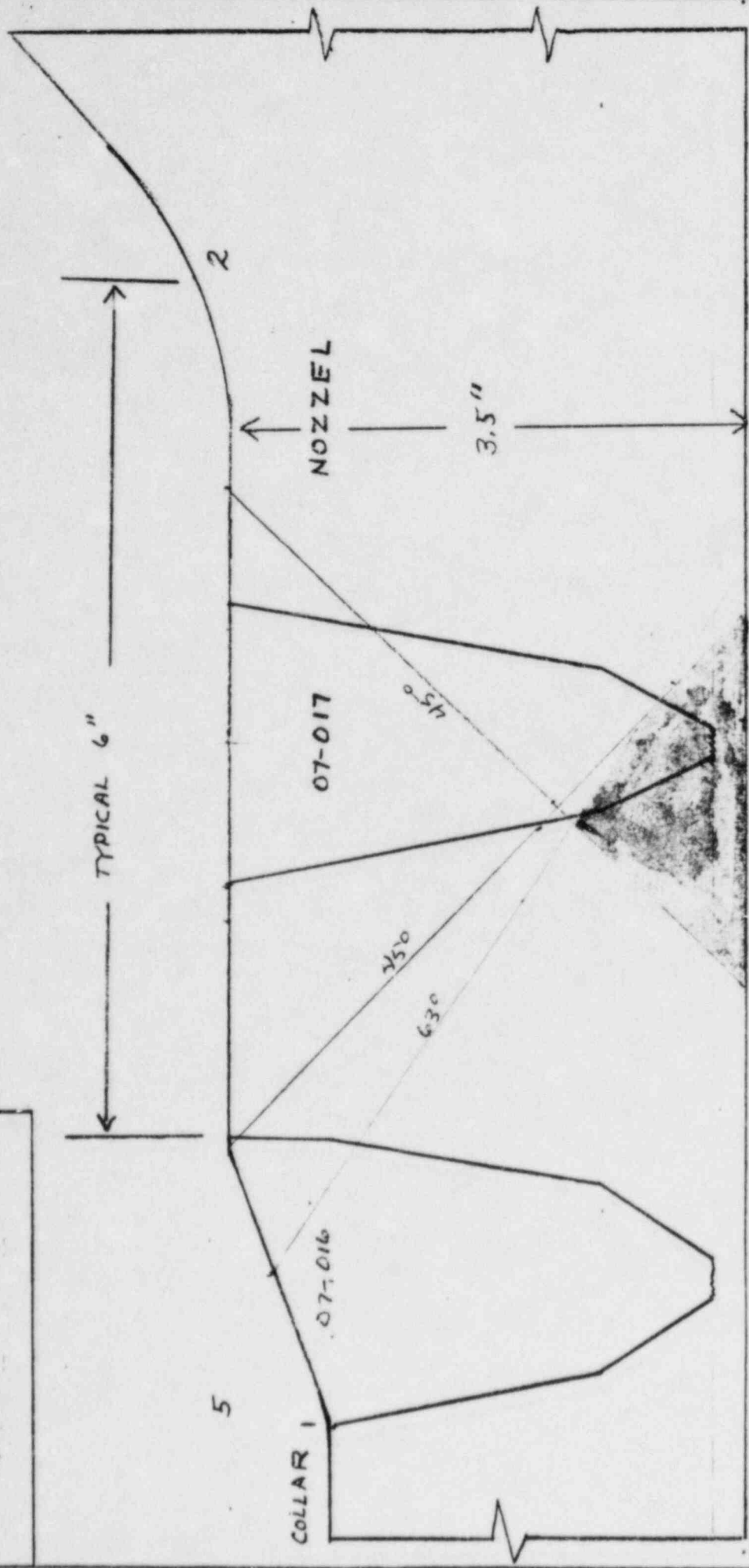
RB



RED SHADED AREA SHOWS AREAS NOT COVERED FOR THE 2 SCANS ON WELD 07-016 AND SCAN 5 ON WELD 07-018, USING 1" DIA TRANSDUCER. (45° SLOPE)

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

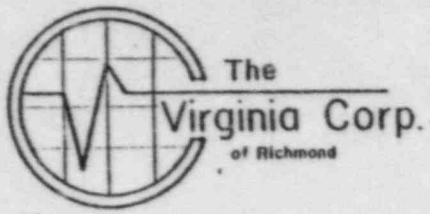
BY



RED SHADED AREA SHOWS AREA NOT COVERED BY 45° ANGLE BEAM SCANS (SCANS 2, 3, 5) OF WELD NO. 07-017

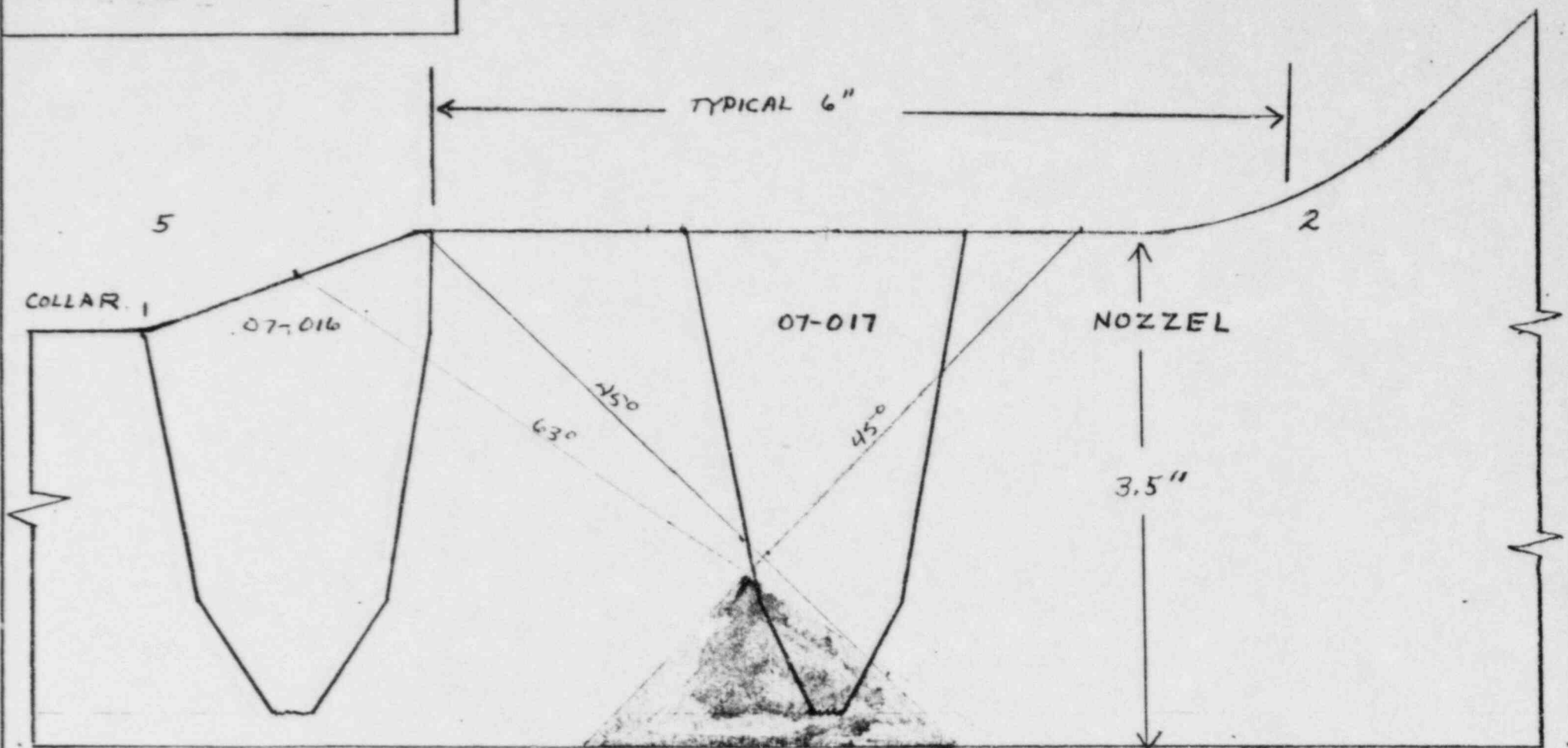
NOTE: TYPICAL NOZZEL TO ELBOW FIT-UP ON STEAM GENERATORS SHOWN. EXACT DIMENSIONS MAY DIFFER

RB



NOZZEL CROSS SECTION

ZONE 07



RED SHADED AREA SHOWS AREA NOT COVERED BY 45° ANGLE BEAM SCAN, (SCANS 2 & 3) OF WELD NO CT-017

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

RB



Ultrasonic Examination Report

PAGE 13 OF 15

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone IA/7	Iso/Drawing No. Zone 7 Rev 2 FC-2
Procedure ISI-2.3 Rev 0	Exam Surface OD	Examiner/Level R. Burlingame II	VUT Supervisor Don Payne	Date 3-26-82
Component/Piping System Reactor Coolant	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
	S/N NA	607152	NA	Mfr. Sonic	Model 786836	RepRate 1K	ETS mark 1
	Size	.50"		Reject Min	Filter off	Coax 6'	
	Frequency Beam Angle	2.25 MHz		Damp Min	Video Norm		

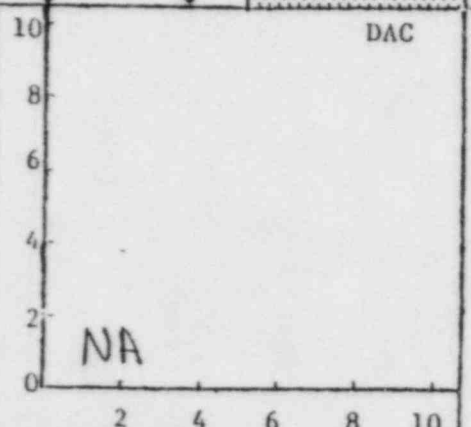
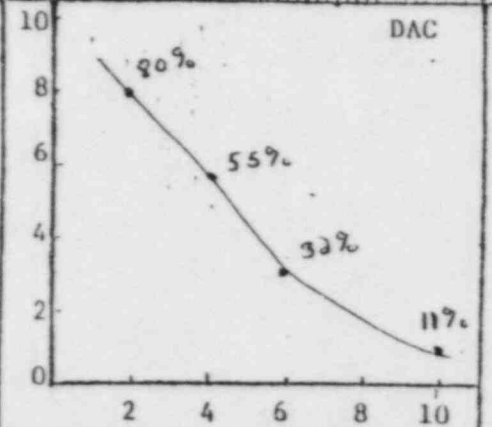
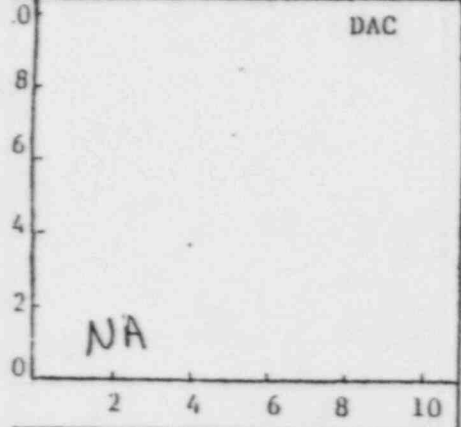
Calibration 0°

2 & 5 Scan

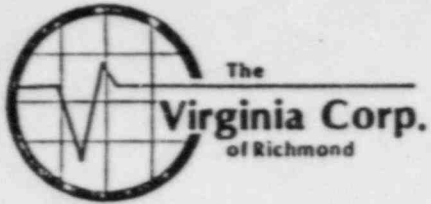
7 & 8 Scan

Calibration Checks

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
					Scribe Line	50% DAC				Scribe Line	50% DAC		0°		45°		60°	
													In	Out	In	Out	In	Out
1/4T	NA	NA	80%	2	27/32	3/4	1	NA	NA	NA	NA	NA	NA	NA	1130	1560	NA	NA
1/2T			55%	4	1 13/16	1 1/8	2 1/2											
3/4T			32%	5.95	2 5/8	2 7/16	2 15/16											
5/4T			11%	10														
ref. JB			44 db															



Additional Comments/Sketch



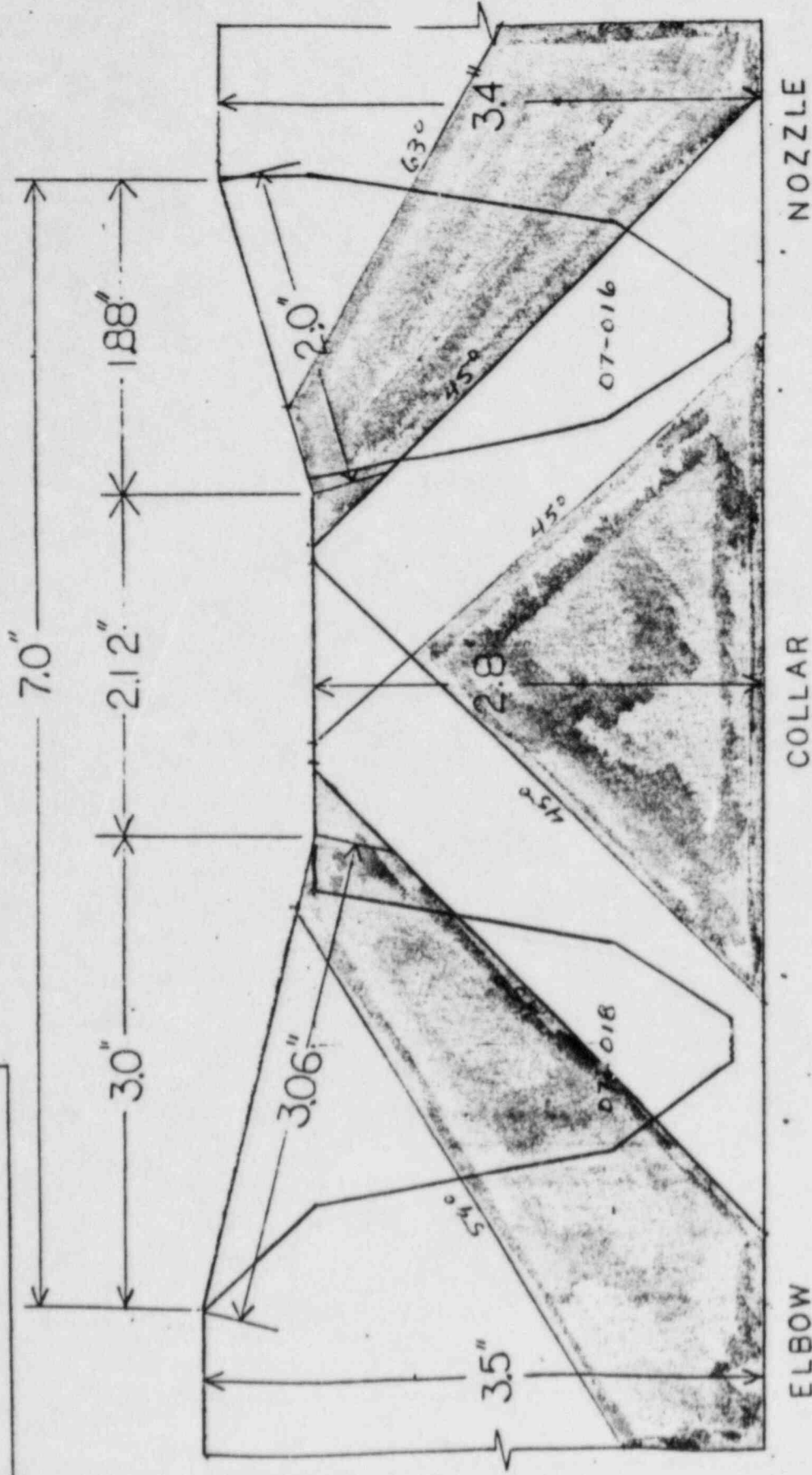
Ultrasonic Examination Report - Continuation Sheet

Page 14 of 15

Don Payne ANEI 4/82

Customer LP 3L	Plant WATERFORD	Unit 3	Loop 1A	Iso/drawing No. ZONE 7, REV. 2, FC-2
Procedure ISI- 2.3. REV. 0	Exam Surface OD	Examiner BURLINGAME	VCR Supervisor Daniel Jene	Date 3-26-82
Component/Piping System REACTOR COOLANT	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6 35"	Couplant: Type & Batch # SONOTRACE 40, # 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-016	NA	NA	PAR	NA	NA		CLEAN	GROUND	NI	SAT	
07-018	↓	PAR	NA	NA	NA		CLEAN	GROUND	NI	SAT	
07-019 LA		NA	NA	PAR	NA		CLEAN	GROUND	NI	SAT	
07-020 LB	↓	NA	NA	PAR	NA		CLEAN	GROUND	NI	SAT	
SUPPLEMENTAL EXAM											
RESULTS OF COVERAGE											
ON PAGE 15											



NOZZLE

COLLAR

ELBOW

RED SHADED AREA SHOWS AREAS NOT
 COVERED FOR THE 5 SCAN ON WELD
 07-016 AND THE 2 SCAN ON WELD
 07-018, USING A 1/2" DIA. MINI
 TRANSDUCER. (45°)

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



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report *Don Payne ANII 4/2/82*

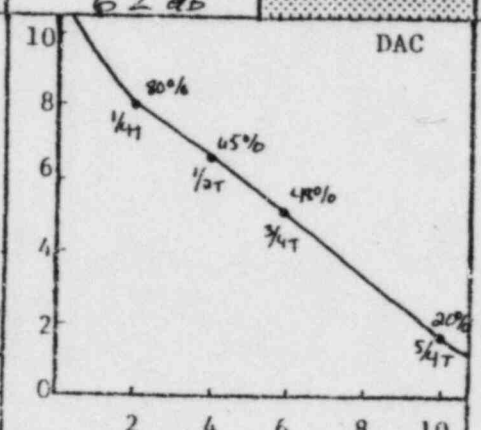
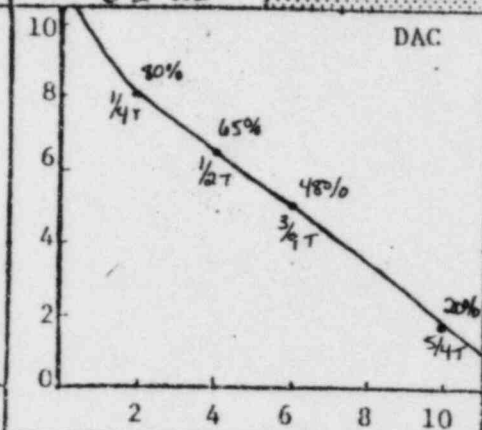
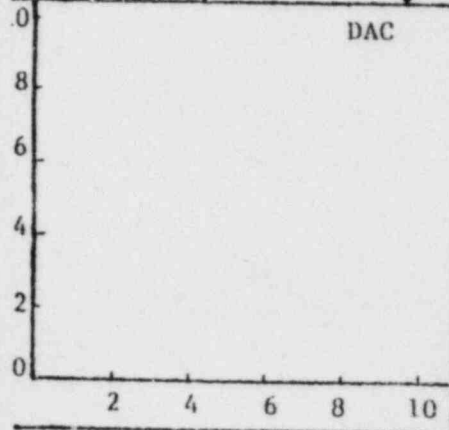
Customer LP+L		Plant Waterford		Unit 3		Loop/Zone 1/7		Iso/Drawing No. zone 7 R.2 F.C.2	
Procedure ISI 2.3 R.O		Exam Surface O.D.		Examiner/Level Nary Longnecker II		VCR Supervisor Don Payne		Date 3-24-82	
Component/Piping System Cold leg - S.G. #1 to R.C. Pump 1A				Pipe Size 36"		Weld Type Butt		Cal. Block UT-6	
						Couplant: Sonotrace		Type 40 Batch No. 8119	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

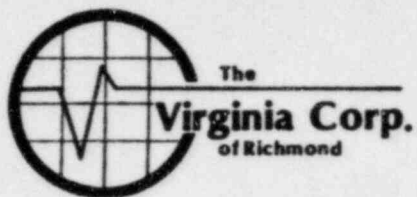
Transducer			0°		45°		60°		Instrument				
S/N			N/A		N/A		L19801		Mfr. SONIC		Model		Mark I
Size							1"		S/N 03704E		RepRate		1K
Frequency							2.25 MHz		Reject OFF		Filter		OFF
Beam Angle							62°		Damp MIN.		Coax		12'
									Freq. 2		Video		Normal

Calibration 0°			2 & 5 Scan					7 & 8 Scan					Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°			
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out		
1/4 T	N/A	N/A	80%	2	1 5/8	1 1/4 2"	80%	2	1 5/8	1 1/4 2"	N/A	N/A	N/A	N/A	2:05	5:15		
1/2 T			65%	4	3 1/2	3" 3 1/16	65%	4	3 1/2	3" 3 1/16								
3/4 T			48%	6	5"	4 1/2 5 5/8	48%	6	5"	4 1/2 5 5/8								
5/4 T			20%	10	N/A	N/A N/A	20%	10	N/A	N/A N/A								



Additional Comments/Sketch

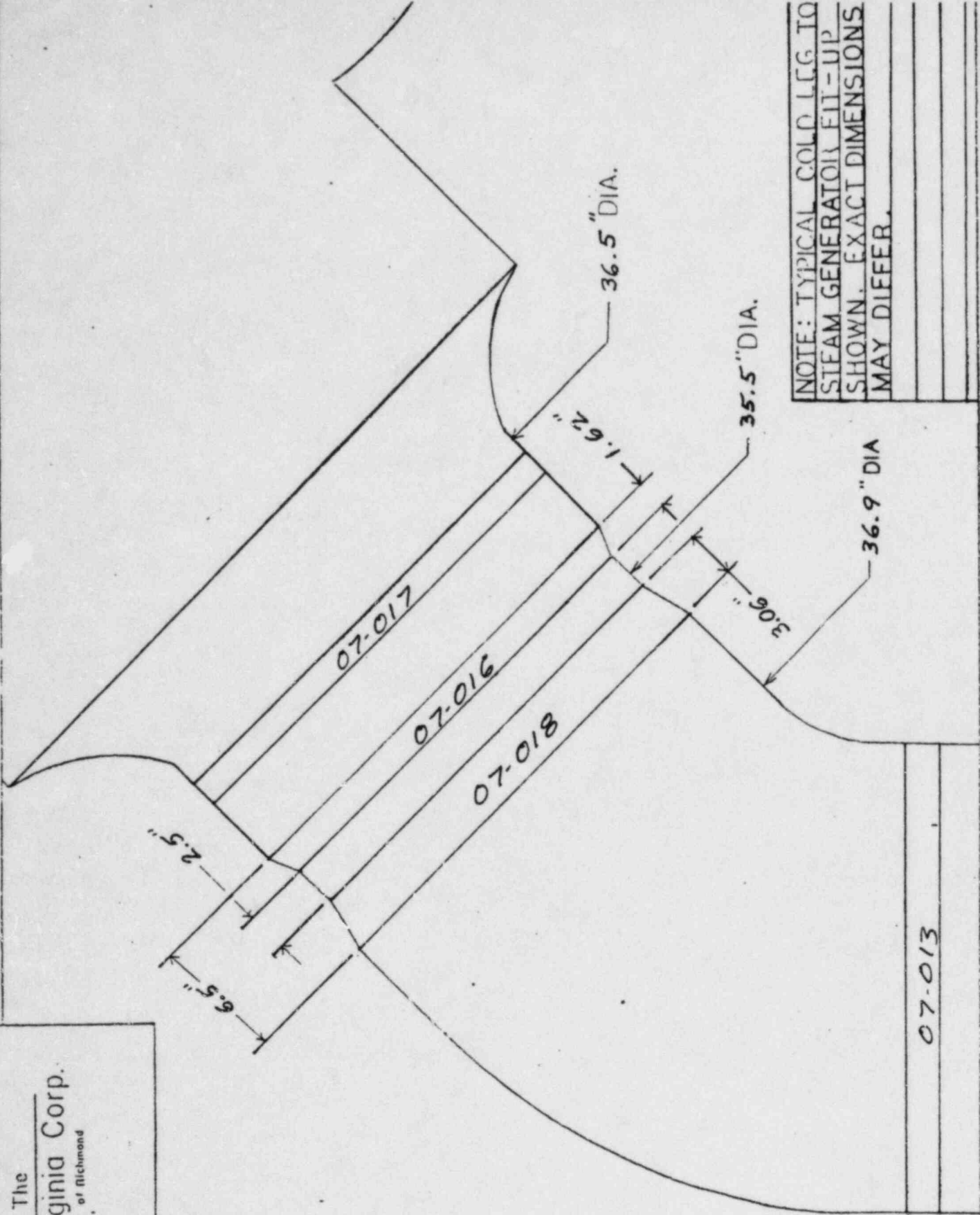
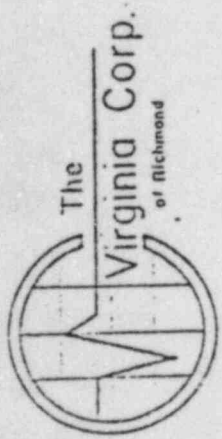
D. Payne ANII 4/2/82



Ultrasonic Examination Report - Continuation Sheet

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>1 7</i>	Iso/Drawing No. <i>ZONE 7 R-2, F.C. 2</i>
Procedure <i>ISI. 2.3 A.O</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Nary Longenecker II</i>	VCR Supervisor <i>Daniel Jones</i>	Date <i>3-24-82</i>
Component/Piping System <i>COLD LEG S.G. *1 TO R.C.P. 1A</i>	Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-6</i>	Couplant: Type & Batch # <i>SONOTRACE 40 8.19</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
07-0061A	NA	NA	YES	YES	PAR	NA	SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-0071B			YES	YES	PAR		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-013			PAR	PAR	PAR		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-0151A			YES	YES	PAR		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-016			PAR	PAR*	PAR		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-017			PAR	PAR	PAR		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-018			PAR*	PAR	PAR		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-0191A			PAR	PAR	PAR*		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
07-0201B			PAR	PAR	PAR*		SEE ATTACHED SHEET	CLEAN	GROUND	N/	SAT.	
							* SUPPLEMENTAL EXAM TO BE PERFORMED USING .5" DIA. TRANSDUCER.					



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

07-013



The
Virginia Corp.
 of Richmond

Date 3-24-82

Page 4 of 5

To: _____

Subject INSPECTION LIMITATIONS
ZONE 7 R.2 F.C. 2

WELD NO. 07-0064A HAD PARTIAL LOSS OF COVERAGE AT THE ENDS OF THE LONG SEAM WELD DUE TO O.D. WELD GEOMETRY OF WELDS 07-005 AND 07-010.

WELD NO. 07-0076B HAD PARTIAL LOSS OF COVERAGE AT THE ENDS OF THE LONG SEAM WELD DUE TO O.D. WELD GEOMETRY OF WELDS 07-005 AND 07-010.

WELD NO. 07-013 HAD INTERMITTENT LOSS OF COVERAGE DUE TO O.D. WELD GEOMETRY.
 SCAN 2 FOR A LOSS OF APPROX. 15%
 SCAN 5 FOR A LOSS OF APPROX. 15%
 SCANS 7 & 8 FOR A LOSS OF APPROX. 15%

WELD NO. 07-0151A HAD PARTIAL LOSS OF COVERAGE AT THE END OF THE LONG SEAM WELD DUE TO O.D. WELD GEOMETRY OF WELD 07-018.

WELD NO. 07-016 HAD INTERMITTENT LOSS OF COVERAGE DUE TO O.D. WELD GEOMETRY OF WELDS 07-016 AND 07-018.

SCAN 2 FOR A LOSS OF APPROX. 30%
 SCAN 5 FOR A LOSS OF APPROX. 90%
 SCANS 7 & 8 FOR A LOSS OF APPROX. 15%

WELD NO. 07-017 HAD INTERMITTENT LOSS OF COVERAGE DUE TO O.D. WELD GEOMETRY OF WELD 07-016 AND NOZZLE RADIUS.

SCAN 2 FOR A LOSS OF APPROX. 70%
 SCAN 5 FOR A LOSS OF APPROX. 50%
 SCANS 7 & 8 FOR A LOSS OF APPROX. 10%

Signed Gary Longenecker



The
Virginia Corp.
 of Richmond

Date 3-24-82

Page 5 of 5

To: _____

Subject INSPECTION LIMITATIONS
ZONE 7 R.2 F.C. 2

WELD NO. 07-018 HAD INTERMITTENT LOSS OF COVERAGE DUE
TO O.D. WELD GEOMETRY OF WELDS 07-016
AND 07-018.

SCAN 2 FOR A LOSS OF APPROX. 85%

SCAN 5 FOR A LOSS OF APPROX. 10%

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

WELD NO. 07-019LA HAD INTERMITTENT LOSS OF COVERAGE DUE
TO O.D. WELD GEOMETRY OF WELDS 07-016
AND 07-018.

SCAN 2 FOR A LOSS OF APPROX. 22%

SCAN 5 FOR A LOSS OF APPROX. 22%

SCAN 7 FOR A LOSS OF APPROX. 60%

SCAN 8 FOR A LOSS OF APPROX. 45%

WELD NO. 07-020LB HAD INTERMITTENT LOSS OF COVERAGE
DUE TO O.D. WELD GEOMETRY OF WELDS
07-016 AND 07-018.

SCAN 2 FOR A LOSS OF APPROX. 22%

SCAN 5 FOR A LOSS OF APPROX. 22%

SCAN 7 FOR A LOSS OF APPROX. 60%

SCAN 8 FOR A LOSS OF APPROX. 45%

Signed Harry Longenecker

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

Ultrasonic Examination Report



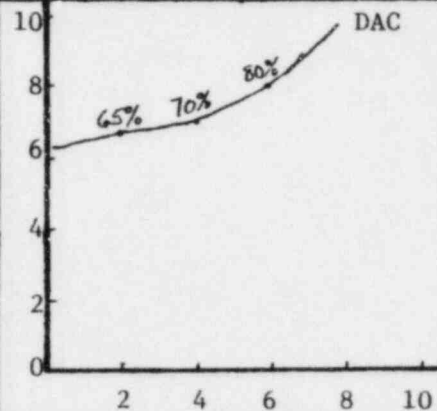
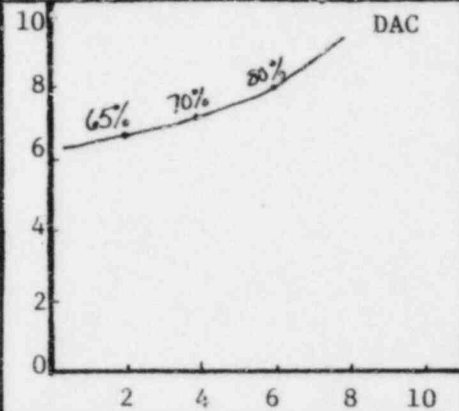
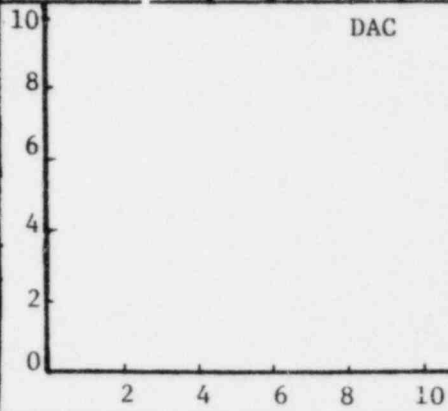
Customer LP & L	Plant Waterford	Unit 3	Loop/Zone IA-7	Iso/Drawing No. Zone 7 Rev. 2 F.C. 2
Procedure 151-2.3 Rev. 0	Exam Surface O.D.	Examiner/Level BURKINBAE/IT	VCR Supervisor Kenn White	Date 3-25-82
Component/Piping System Reactor Coolant	Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

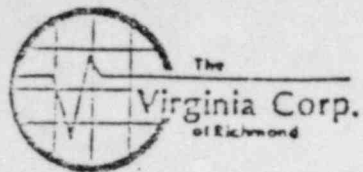
Field Changes:
 Yes No
 If Yes, Number

Transducer	0°	45°	60°	Instrument			
S/N	NA	L19134	NA	Mfgr.	Sonic	Model	FTS Mark I
Size		1.0"		S/N	780836	RepRate	1K
Frequency		2.25MHz		Reject	off	Filter	off
Beam Angle	↓	45°	↓	Damp	min.	Coax	12'
				Freq.	2. MHz	Video	Norm.

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



Additional Comments/Sketch



Don Payne ANZI 4/2/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1A/7</i>
Component/Piping System <i>Cold Leg 46" to RCP2A</i>	Examiner/Level <i>Michael W. Blew II</i>	Date <i>3-25-82</i>	
Procedure <i>ISI 2.5 Rev 0</i>	Iso/Drawing No. <i>Zone 7 Rev 2 FC-2</i>	VCR Supervisor <i>Daniel Jones</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

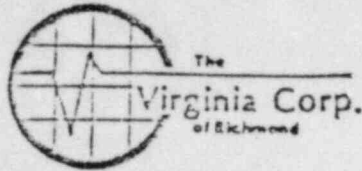
Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Aerotech</i>	Size <i>.50"</i>	Cal. Block <i>Ut-4</i>	
Model <i>Mark 1</i>	Freq. <i>1 MHz</i>		Cal. Block <i>Ut-6</i>	
S/N <i>05303E</i>	Serial No. <i>M15838</i>		Range Cal. <i>5"</i>	
Reject <i>053</i>	Coax. Cable <i>12' BNC to BNC</i>		Calibration Checks	
Damp. <i>6</i>	Gain <i>43 DB</i>		<i>12:45 in</i>	
Freq. <i>1</i>			<i>2:45 check</i>	
Rep. Rate <i>3k</i>			<i>4:30 out</i>	
Filter <i>high</i>				
Video <i>norm</i>				
Couplant <i>Sonotrace 40 3/4 8119</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>07-011LB</i>	<i>6"</i>	<i>3.50"</i>	<i>3.60"</i>	<i>3.50"</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>07-011LB</i>	<i>12"</i>	<i>3.40"</i>	<i>3.60"</i>	<i>3.50"</i>					
<i>07-011LB</i>	<i>18"</i>	<i>3.50"</i>	<i>3.60"</i>	<i>3.40"</i>					
<i>07-011LB</i>	<i>24"</i>	<i>3.40"</i>	<i>3.60"</i>	<i>3.45"</i>					
<i>07-011LB</i>	<i>30"</i>	<i>3.45"</i>	<i>3.55"</i>	<i>3.50"</i>					
<i>07-011LB</i>	<i>36"</i>	<i>3.45"</i>	<i>3.55"</i>	<i>3.60"</i>					
<i>07-011LB</i>	<i>42"</i>	<i>3.45"</i>	<i>3.55"</i>	<i>3.55"</i>					

Sketch/Identification



Don Payne ANFI 4/2/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1A/7</i>
Component/Piping System <i>Cold LEG 5/6 #1 TO RCP 1A</i>		Examiner/Level <i>Michael W. Blaw II</i>	Date <i>3-24-82</i>
Procedure <i>ISI-2.5 REV 0</i>	Iso/Drawing No. <i>ZONE 7 REV 2 RC-2</i>	VCR Supervisor <i>Daniel Jena</i>	Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration	
Mfgr. <i>SONIC</i>	Mfgr. <i>AEROTECH</i>	Size <i>.50"</i>	Cal. Block <i>UT-4</i>		
Model <i>MARK I</i>			Cal. Block <i>UT-6</i>		
S/N <i>05303E</i>	Freq. <i>1 MHz</i>		Range Cal. <i>5"</i>		
Reflect <i>OFF</i>			Calibration Checks		
Damp. <i>6</i>	Serial No. <i>M15838</i>		<i>10:00</i>	<i>IN</i>	
Freq. <i>1</i>			<i>11:40</i>	<i>OUT</i>	
Rep. Rate <i>3K</i>	Coax. Cable <i>12' BVC TO BVC</i>		<i>1:00</i>	<i>IN</i>	
Filter <i>H1</i>			<i>4:30</i>	<i>OUT</i>	
Video <i>NORM</i>	Gain <i>43 db</i>				
Couplant <i>Sonotrace 70 5/N 8119</i>					

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>07-006LA</i>	<i>1'</i>	<i>2.85"</i>	<i>2.90"</i>	<i>2.80"</i>	<i>07-007LB</i>	<i>5'</i>	<i>2.80"</i>	<i>2.85"</i>	<i>2.85"</i>
<i>07-006LA</i>	<i>2'</i>	<i>2.90"</i>	<i>2.80"</i>	<i>2.80"</i>	<i>07-007LB</i>	<i>6'</i>	<i>2.85"</i>	<i>2.85"</i>	<i>2.90"</i>
<i>07-006LA</i>	<i>3'</i>	<i>2.85"</i>	<i>2.80"</i>	<i>2.80"</i>	<i>07-007LB</i>	<i>7'</i>	<i>2.85"</i>	<i>2.90"</i>	<i>2.85"</i>
<i>07-006LA</i>	<i>4'</i>	<i>2.90"</i>	<i>2.80"</i>	<i>2.80"</i>	<i>07-007LB</i>	<i>8'</i>	<i>2.90"</i>	<i>2.85"</i>	<i>2.90"</i>
<i>07-006LA</i>	<i>5'</i>	<i>2.90"</i>	<i>2.90"</i>	<i>2.85"</i>	<i>07-013</i>	<i>12</i>	<i>3.70"</i>	<i>3.60"</i>	<i>3.60"</i>
<i>07-006LA</i>	<i>6'</i>	<i>2.80"</i>	<i>2.90"</i>	<i>2.80"</i>	<i>07-013</i>	<i>2</i>	<i>3.80"</i>	<i>3.55"</i>	<i>3.65"</i>
<i>07-006LA</i>	<i>7'</i>	<i>2.85"</i>	<i>2.90"</i>	<i>2.90"</i>	<i>07-013</i>	<i>4</i>	<i>3.70"</i>	<i>3.65"</i>	<i>3.65"</i>
<i>07-006LA</i>	<i>8'</i>	<i>2.90"</i>	<i>2.85"</i>	<i>2.80"</i>	<i>07-013</i>	<i>6</i>	<i>3.70"</i>	<i>3.60"</i>	<i>3.50"</i>
<i>07-007LB</i>	<i>1"</i>	<i>2.90"</i>	<i>2.80"</i>	<i>2.90"</i>	<i>07-013</i>	<i>8</i>	<i>3.70"</i>	<i>3.70"</i>	<i>3.60"</i>
<i>07-007LB</i>	<i>2"</i>	<i>2.85"</i>	<i>2.85"</i>	<i>2.90"</i>	<i>07-013</i>	<i>10</i>	<i>3.70"</i>	<i>3.60"</i>	<i>3.70"</i>
<i>07-007LB</i>	<i>3"</i>	<i>2.85"</i>	<i>2.85"</i>	<i>2.85"</i>	<i>07-014LB</i>	<i>3"</i>	<i>3.40"</i>	<i>3.45"</i>	<i>3.40"</i>
<i>07-007LB</i>	<i>4"</i>	<i>2.80"</i>	<i>2.90"</i>	<i>2.90"</i>	<i>07-014LB</i>	<i>6"</i>	<i>3.50"</i>	<i>3.45"</i>	<i>3.40"</i>

Sketch/Identification



Ultrasonic Data Sheet
 for *D. Payne ANET*
 Thickness Measurement *4/8/82*
 Continuation Page 2 of 2

Customer <i>L P & L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1A / 7</i>
Component/Piping System <i>Cold Leg 5/62 TO RCP 1A</i>	Examiner/Level <i>Michael W. Blum II</i>	Date <i>3-24-82</i>	
Procedure <i>ISI-2.5 REV 0</i>	Iso/Drawing No. <i>ZONE 7 REV 2 FC-2</i>	VGR Supervisor <i>Daniel Jensen</i>	

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
07-014LB	9"	3.45"	3.45"	3.40"	07-017	12	3.30"	3.30"	3.20"
07-014LB	12"	3.40"	3.55"	3.40"	07-017	2	3.25"	3.30"	3.20"
07-014LB	15"	3.45"	3.60"	3.40"	07-017	4	3.40"	3.40"	3.25"
07-014LB	18"	3.50"	3.50"	3.40"	07-017	6	3.25"	3.40"	3.20"
07-014LB	21"	3.15"	3.30"	3.20"	07-017	8	3.40"	3.40"	3.40"
07-015LA	6"	3.50"	3.50"	3.50"	07-017	10	3.30"	3.30"	3.25"
07-015LA	12"	3.50"	3.40"	3.45"	07-018	12	3.20"	2.80"	3.60"
07-015LA	18"	3.50"	3.45"	3.40"	07-018	2	3.40"	2.80"	3.65"
07-015LA	24"	3.50"	3.40"	3.45"	07-018	4	3.15"	2.80"	3.55"
07-015LA	30"	3.50"	3.40"	3.40"	07-018	6	3.40"	2.95"	3.45"
07-015LA	36"	3.60"	3.50"	3.50"	07-018	8	3.40"	2.85"	3.55"
07-015LA	42"	3.60"	3.55"	3.50"	07-018	10	3.20"	2.80"	3.65"
07-015LA	48"	3.50"	3.55"	3.50"	07-020LB		2.80"	2.80"	2.80"
07-016	12	3.00"	3.20"	2.80"	07-019LA		2.80"	2.80"	2.80"
07-016	2	3.05"	3.20"	2.80"					
07-016	4	3.05"	3.25"	2.80"					
07-016	6	3.15"	3.20"	2.95"					
07-016	8	3.15"	3.40"	2.85"					
07-016	10	3.05"	3.25"	2.80"					

Sketch/Identification



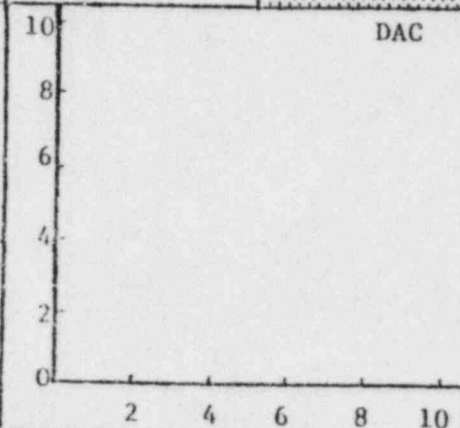
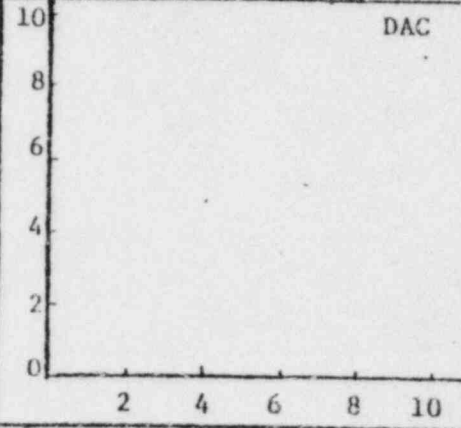
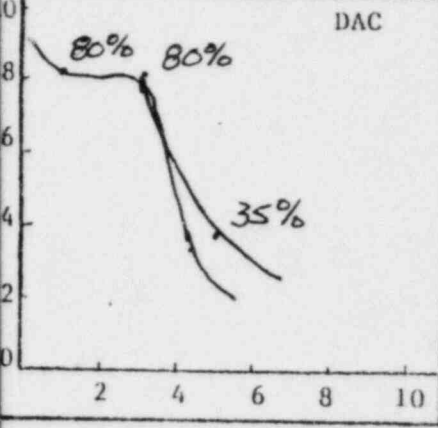
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Ultrasonic Examination Report *Don Payne ANES 4/2/82*

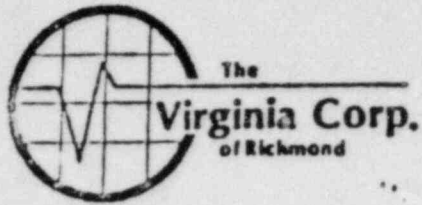
Customer LP AND L	Plant WATERFORD	Unit 3	Loop/Zone Iso/Drawing No. 1A/7 ZONE 7 REV 2 F.C. 2
Procedure ISI 2.3 REV 0	Exam Surface O.D.	Examiner/Level CR Stank II	VCR Supervisor <i>Demetrius</i>
Component/Piping System COLD LEG-RCP 1A TO STEAM GEN #1		Pipe Size 36"	Weld Type BUTT
Continuation Sheet Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cal. Block UT-6	Date 3-24-82
Field Changes: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, Number _____		Couplant: SONATRAC Type 40 Batch No 819	

Transducer		0°	45°	60°	Instrument			
		S/N	48808	NA	NA	Mfr.	SONIC	Model
Size		1"			S/N	01610E <th>RepRate</th> <td>1K</td>	RepRate	1K
Frequency		2.25 MHz			Reject	OFF <th>Filter</th> <td>HIGH</td>	Filter	HIGH
Beam Angle		0°			Damp	MIM <th>Coax</th> <td>12' BNC</td>	Coax	12' BNC
					Freq.	2 <th>Video</th> <td>NORM</td>	Video	NORM

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	80%	1.5	NA	NA			NA	NA			1037	1145	NA	NA	NA	NA
1/2 T	80%	3.0									1245	1533	NA	NA	NA	NA
3/4 T	35%	4.5														
1 T	JAT	6.15														
Ref. dB		32														



Additional Comments/Sketch



Ultrasonic Examination Report *Don Payne ANII 4/2/82*

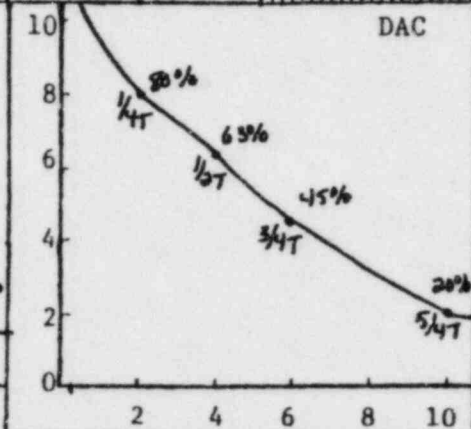
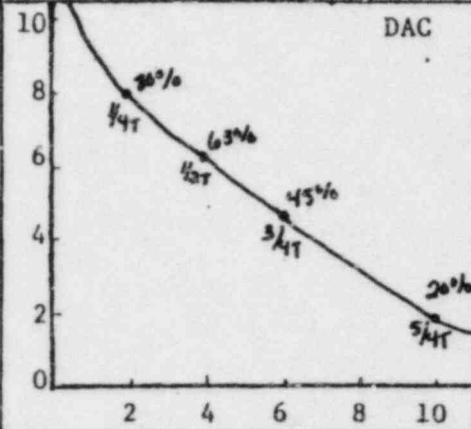
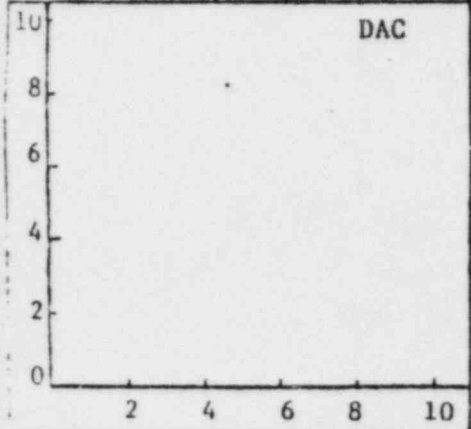
Customer LP+L		Plant Waterford		Unit 3	Loop/Zone 1/7	Iso/Drawing No. Zone 7 R2 F.C.2	
Procedure 15123 R.O		Exam Surface O. D.		Examiner/Level <i>Nary Longenecker II</i>		VCR Supervisor <i>Daniel Jensen</i>	
Component/Piping System Cold leg - S.C. #1 to pump 1A		Pipe Size 36"		Weld Type Butt		Date 3-25-82	
				Cal. Block UT-6		Couplant: Type 40 Batch No 8119	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number

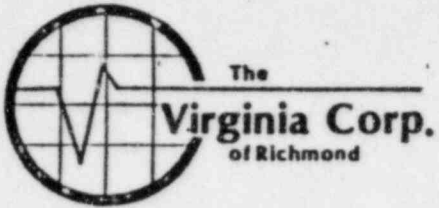
	Transducer			Instrument				
	S/N	0°	45°	60°	Mfr.	Sonic	Model	Mark 1
	Size	N/A	N/A	1"	S/N	03704E	RepRate	1K
	Frequency			2.25 MHz	Reject	off	Filter	off
	Beam Angle			62°	Damp	Minimum	Coax	12'

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



Additional Comments/Sketch

Don Payne ANII 4/2/82



Ultrasonic Examination Report - Continuation Sheet

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop <i>1</i>	Iso/drawing No. <i>ZONE 7 R.2 F.C.'2</i>	
Procedure <i>I.S.I. 2.3 R.O</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Sary Longenecker II</i>		VCR Supervisor <i>Daniel Jensen</i>	Date <i>3-25-82</i>
Component/Piping System <i>COLD LEG S.G.#1 TO R.C.P. 1A</i>		Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-6</i>	Couplant: Type & Batch # <i>SONOTRACE 40 8119</i>

Weld No.		Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
			2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>07.011LB</i>	<i>NA</i>	<i>NA</i>	<i>YES</i>	<i>YES</i>	<i>PAR</i>	<i>NA</i>	<i>SEE ATTACHED SHEET</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT</i>	<i>NA</i>
<i>07.019LB</i>	<i>NA</i>	<i>NA</i>	<i>YES</i>	<i>YES</i>	<i>PAR</i>	<i>NA</i>	<i>SEE ATTACHED SHEET</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT</i>	<i>NA</i>



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Date 3-25-82

Page 3 of 3

To: _____

Subject INSPECTION LIMITATION
ZONE 2 R-2 F.C. 2

WELD NO 07-011LB HAD PARTIAL LOSS OF COVERAGE WITH
LONG SEAM WELD DUE TO O.D. GEOMETRY
OF WELD 07-010

WELD NO 07-014LB HAD PARTIAL LOSS OF COVERAGE WITH
LONG SEAM WELD DUE TO O.D. GEOMETRY
OF WELDS 07-013 AND 07-018

Signed Gary Longenecker



The Virginia Corp.
of Richmond

Ultrasonic Examination Report: *Don Payne ANII 4/82*

Customer LP AND L		Plant WATERFORD		Unit 3	Loop/Zone 1A/7	Iso/Drawing No. ZONE 7, REV 2, F.C. 2	
Procedure ISIZ.3 REVO		Exam Surface O.D.		Examiner/Level CR [Signature]		VCR Supervisor [Signature]	
Component/Piping System COLD LEG - RCPIA TO STEAM GEN #1		Pipe Size 36"		Weld Type BUTT		Date 3-25-82	
				Cal. Block UT-6		Couplant: SONOTRACE Type 40 Batch No 8117	

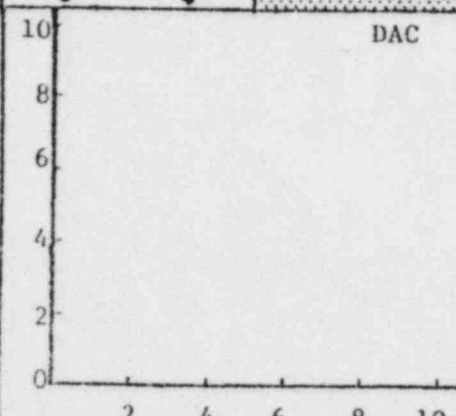
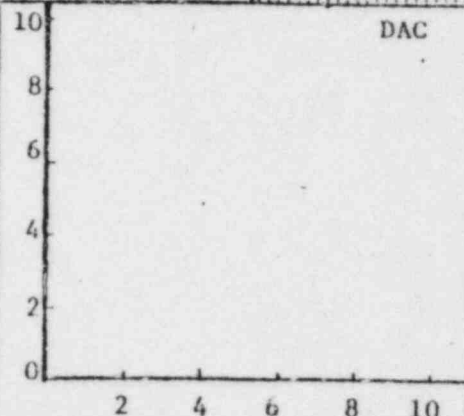
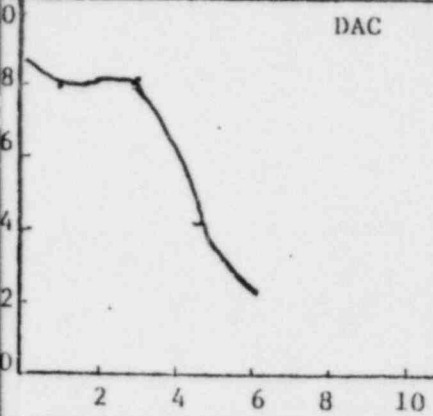
Continuation Sheet Attached
 Yes No

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

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

Field Changes:
Yes No
If Yes, Number

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	807.	1.5	NA	NA			NA	NA			845	1147	NA	NA	NA	NA
1/2 T	807.	3.0	↓	↓			↓	↓								
3/4 T	427.	4.5	↓	↓			↓	↓								
1 T	3AT	6.0	↓	↓			↓	↓								
Ref. dB		31	↓	↓			↓	↓								



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet

Don Payne AMI 4/2/82

Customer LP AND L	Plant WATERFORD	Unit 3	Loop 1A/7	Iso/drawing No. ZONE 7, REV 2, F.C. 2
Procedure ISI 2.3 REV 0	Exam Surface O.D.	Examiner/Level CR Stauf II	VCR Supervisor Daniel Jensen	Date 3-25-82
Component/Piping System COLD LRG RCP IA STEAM GEN #1	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch # SONOTRACE 40 8/17

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-011LB	YES	NA	NA	NA	YES		CLEAN	SMOOTH	NI	SAT	



Ultrasonic Examination Report *Don Payne ANZI 4/2/82*

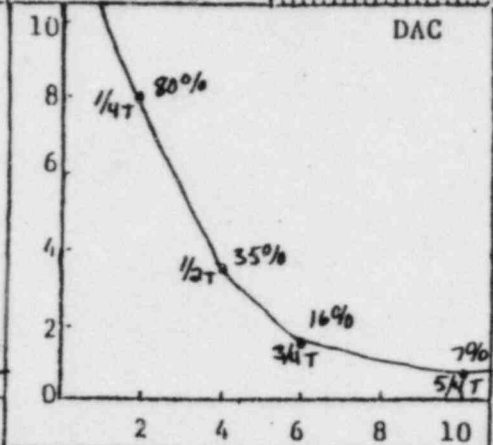
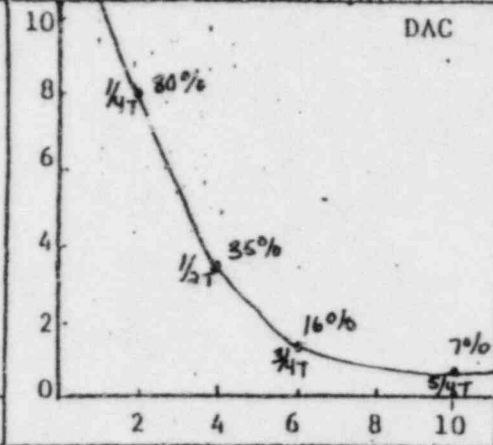
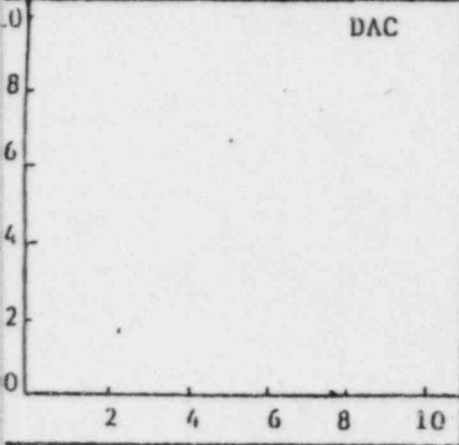
Customer <i>LD&L</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>1/7</i>	Iso/Drawing No. <i>ZONE 7 R-2 F.C.2</i>	
Procedure <i>15123 R.O</i>		Exam Surface <i>O.D.</i>		Examiner/Level <i>Sary Longenecker III</i>		VCR Supervisor <i>Don Payne</i>	
Date <i>3-30-82</i>		Component/Piping System <i>Colo leg-S.C. #1 to pump 1A</i>		Pipe/Size <i>36"</i>	Weld Type <i>Butt</i>	Cal: Block <i>UT-6</i>	
						Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No <i>8119</i>	

Continuation Sheet Attached
 Yes No

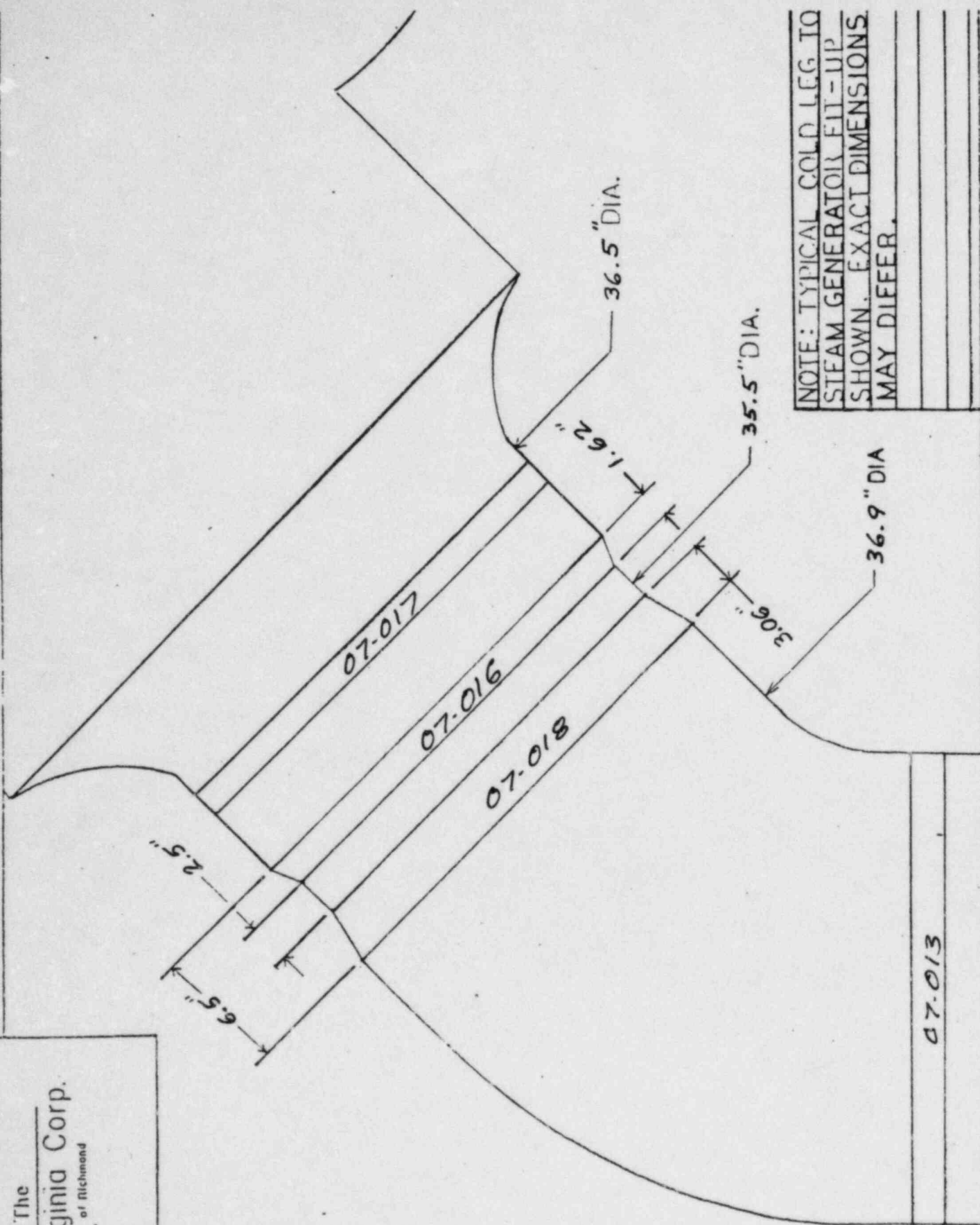
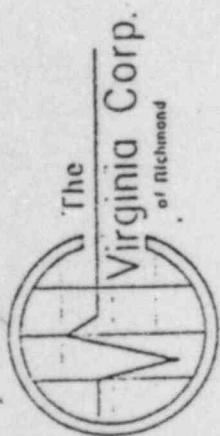
Field Changes:
 Yes No
 If Yes, Number

	Transducer			Instrument		
	S/N	<i>0°</i>	<i>45°</i>	<i>60°</i>	Mfer. <i>Sonic</i>	
	Size	<i>N/A</i>	<i>N/A</i>	<i>F18164</i>	S/N <i>03704E</i>	
	Frequency			<i>.5"</i>	Model	
Beam Angle			<i>2.25 MHz</i>	RepRate: <i>1K</i>	Reject <i>off</i>	Filter <i>off</i>
			<i>60°</i>	Damp <i>MINIMUM</i>	Conx <i>6'</i>	Video <i>Normal</i>

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



Additional Comments/Sketch



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

07-013



The
Virginia Corp.
 of Richmond

Date 3-30-82

Page 4 of 4

To: _____

Subject INSPECTION LIMITATIONS
ZONE 7 R-2 F.C. 2

WELD NO. 07-016 COVERAGE WAS INCREASED BY USING
 .5" DIA. TRANSDUCER.

SCAN 5 THE LOSS OF COVERAGE WAS
 DECREASED TO APPROX. 75%.

WELD NO. 07-018 COVERAGE WAS INCREASED BY USING
 .5" DIA. TRANSDUCER.

SCAN 2 THE LOSS OF COVERAGE WAS
 DECREASED TO APPROX. 60%.

WELD NO. 07-019LA COVERAGE WAS INCREASED BY USING
 .5" DIA. TRANSDUCER.

SCAN 7 THE LOSS OF COVERAGE WAS
 DECREASED TO APPROX. 45%

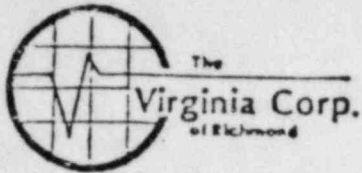
SCAN 8 THE LOSS OF COVERAGE WAS
 DECREASED TO APPROX. 30%

WELD NO. 07-020LB COVERAGE WAS INCREASED BY USING
 .5" DIA. TRANSDUCER

SCAN 7 THE LOSS OF COVERAGE WAS
 DECREASED TO APPROX. 45%

SCAN 8 THE LOSS OF COVERAGE WAS
 DECREASED TO APPROX. 30%

Signed Larry Longenecker



D. Payne ANII 7/4/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement *1 of 5*

Customer <i>LP 3 L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1A / 7</i>
Component/Piping System <i>REACTOR COOLANT</i>	Examiner/Level <i>BURLINGAME II</i>	Date <i>5-1-82</i>	
Procedure <i>ISI 2.5 REV. 0</i>	Iso/Drawing No. <i>ZONET, REV. 2, RC-2</i>	VCR Supervisor <i>Daniel Jensen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>KBI</i>	Size <i>1/2"</i>	Cal. Block <i>UT-6, 35"</i>	
Model <i>FTS-MK 1</i>			Cal. Block	
S/N <i>280836</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>3.5" = 8 DIV.</i>	
Reject <i>OFF</i>	Serial No. <i>KB 2728</i>		Calibration Checks	
Damp. <i>MIN.</i>			<i>1535</i>	
Freq. <i>2.0 MHz</i>	Coax. Cable <i>6' TWIN COAX</i>		<i>1655</i>	
Rep. Rate <i>1000</i>	Gain <i>71 dB G</i>			
Filter <i>OFF</i>				
Video <i>NORMAL</i>				
Couplant <i>SCOTBASE 40 #8119</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>07-008</i>	<i>12</i>	<i>NA</i>	<i>NA</i>	<i>2.98"</i>					
	<i>2</i>			<i>2.98"</i>					
	<i>4</i>			<i>2.98"</i>					
	<i>6</i>			<i>2.93"</i>					
	<i>8</i>			<i>2.89"</i>					
	<i>10</i>	<i>∇</i>	<i>∇</i>	<i>2.93"</i>					

Sketch/Identification

D. Payne ANEI



Ultrasonic Examination Report

2 of 3

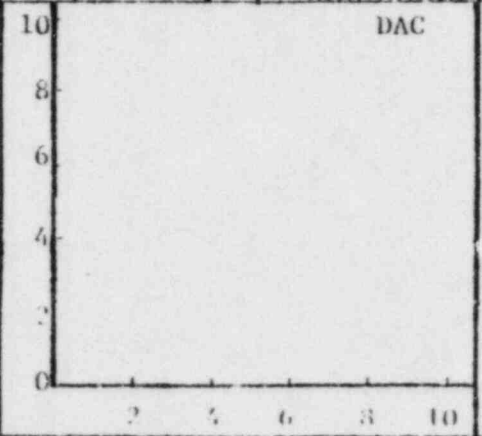
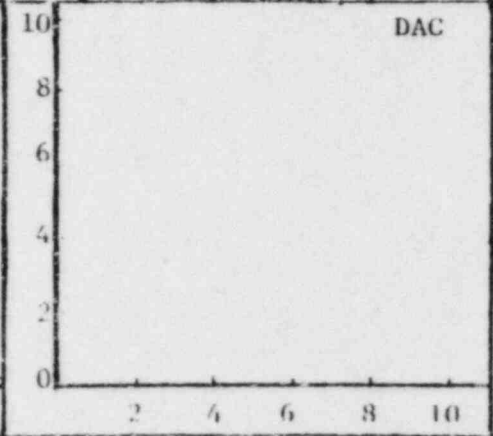
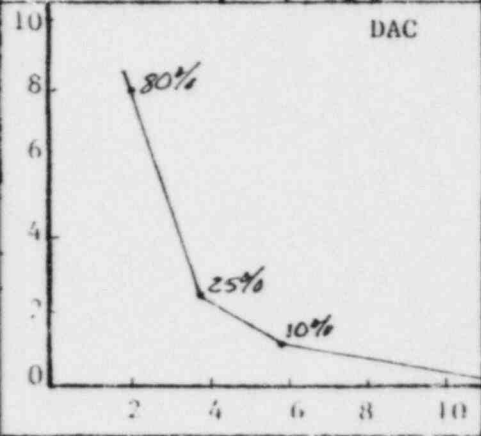
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1A/7	Iso/Drawing No. ZONE 7, REV. 2, F.C. + 2 1982
Procedure ISI-2.3 REV. 0 F.C.-1	Exam Surface O.D	Examiner/Level BURLINGAME II	VER Supervisor Daniel Jones	Date 5/1/82
Component/Piping System REACTOR COOLANT	Pipe Size 36" I.D.	Weld Type BUTT	Cal. Block UT-6 3.50"	Couplant: SONOTRACE Type 40 Batch No 81A

Continuation Sheet Attached
 Yes No

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

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

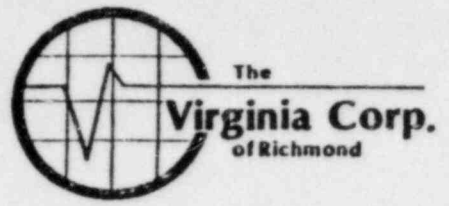
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks							
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	80%	1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1530	1700	N/A	N/A	N/A	N/A
1/2 T	25%	3.8																
3/4 T	10%	5.8																
BACK IT	80%-4dB	8.0																
Ref. dB	71 dBG																	



Additional Comments/Sketch

D. Payne ANII 5/4/82

Ultrasonic Examination Report - Continuation Sheet



Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1A/7	Iso/Drawing No. ZONE 7, REV. 2, F.C. + 2009
Procedure ISI-2.3 REVO F.C.1	Exam Surface O.D.	Examiner/Level BURLINGAME	VCR Supervisor Daniel Payne	Date 5/1/82
Component/Piping System REACTOR COOLANT		Pipe Size 36" I.D.	Weld Type BUTT	Cal. Block CF6 350"
Couplant: Type & Batch # SONOTRACE 40 8119				

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
07-	008	PAR	N/A	N/A	N/A	PAR	O.D. SLOPE OF NOZZLE*	CLEAN	GROUNDED	NI	SAT	
							* SEE ATTACHMENT					

R. Payne ANI 5/4/80



Ultrasonic Examination Report

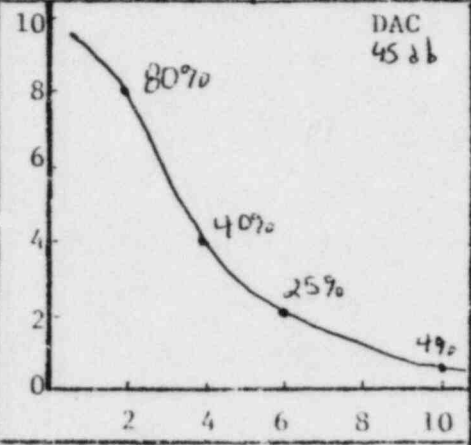
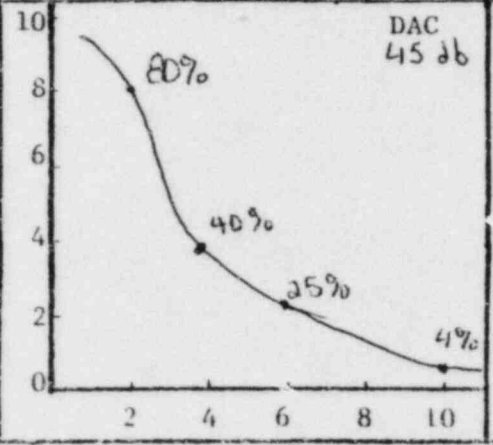
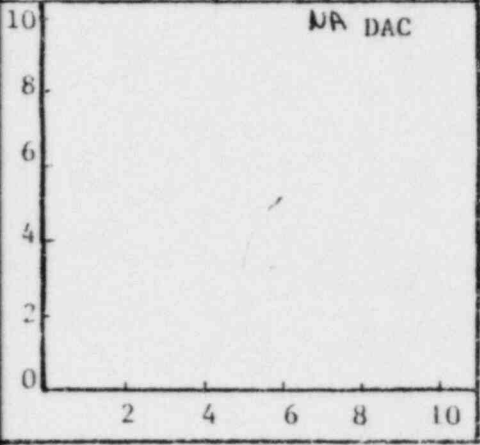
Customer LPOL	Plant Waterford	Unit 3	Loop/Zone 1A/7	Iso/Drawing No. Zone 7, Rev 2, FC+2092
Procedure ISI-2.3 Rev 0 FC1	Exam Surface O.D.	Examiner/Level BURLINGAME II	VCR Supervisor Daniel J. Jones	Date 5-1-82
Component/Piping System Rustal Coolant		Pipe Size 36" ID	Weld Type B.H	Cal. Block UT-U, 3.50"
			Couplant: Type 40	Sonotrace Batch No. 8119

Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N NA	J22935	NA	Mfr.	Serial	Model	FTS Mark 1
	Size	1/2"		S/N	01610E	Rep. No.	3000
	Frequency	2.25 MHz		Reject	OFF	Filter	Hi
Beam Angle	↓	45°	↓	Damp	Min	Coax	6'
				Freq.	2 MHz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4T	NA	NA	80%	2.0	7/8	2 3/32 3 1/32	80%	2.0	7/8	2 3/32 3 1/32	NA	NA	1530	1700	NA	NA
1/2T			40%	4.0	1 25/32	1 3/32 2	40%	4.0	1 25/32	1 3/32 2						
3/4T			25%	6.0	2 5/8	2 3/8 2 7/8	25%	6.0	2 5/8	2 3/8 2 7/8						
5/4T			4%	10.0	NA	NA NA	4%	10.0	NA	NA NA						
Ref. dB	↓	↓	45 db G				45 db G				↓	↓			↓	↓



Additional Comments/Sketch

2/4/82
D. Payne ANII

Ultrasonic Examination Report - Continuation Sheet Page 5 of 8



Customer: L P O I
Plant: Waterford
Exam Surface: Exam Surface
Pipe Size: 36" ID
Weld Type: Butt
Examiner/Level: BURLINGAME III
Date: 5-1-82
Loop/Zone: 1A/7
Inspector: David Jones
Cal. Block: WT-6, 3.50" Spacing 40
Type: Batch # 819
Date: 5-1-82

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8		Base Metal	Weld	UT	Visual	
07-	CCB N/A	NO	PAR	PAR	0 N/A O.D. slope of nozzle	clean	Good	N1	SAT	
					SEE ATTACHMENT					

D. Payne ANIE 5/18



Ultrasonic Examination Report

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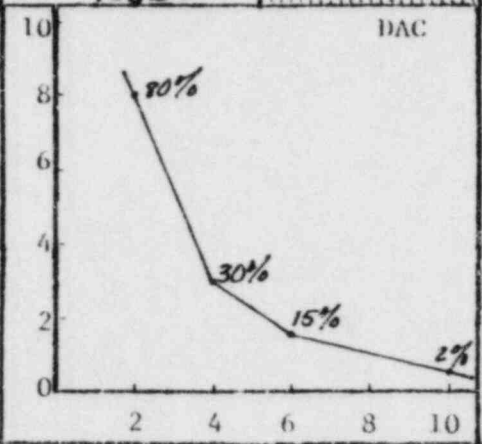
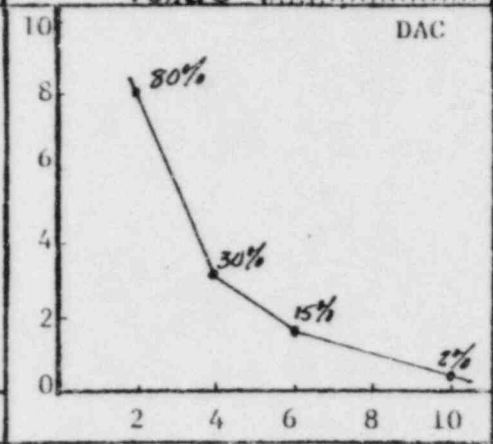
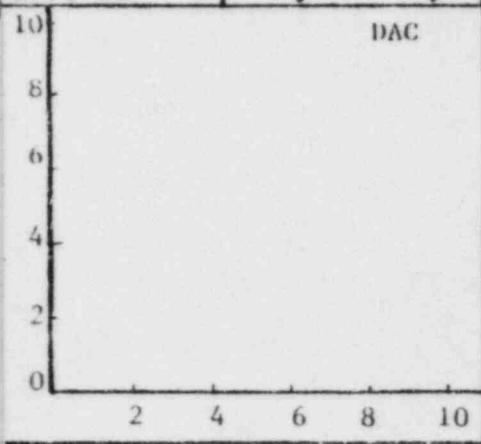
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1A/7	Iso/Drawing No. ZONE 7, REV. 2, F.C.+200
Procedure ISI 2.3 REV. 0 F.C.-1	Exam Surface O.D.	Examiner/Level BURLINGAME	VER Supervisor Daniel Jones	Date 5/1/82
Component/Piping System REACTOR COOLANT		Pipe Size 36" ID	Weld Type BUTT	Cal. Block UTG 3.50"
		Couplant: SONOTRACE		Type 40 Batch No 8119

Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N	N/A	N/A	Mfg.	SONIC	Model	MARK I
	Size			S/N	05304E	RepRate	1K
	Frequency			Reject	OFF	Filter	OFF
	Beam Angle			Damp	MIN.	Coax	6'
				Freq.	2.25MHz	Video	NORMAL

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4 T	N/A	N/A	80%	2	1 ¹³ / ₃₂	1 ¹³ / ₃₂	1 ¹³ / ₃₂	80%	2	1 ¹³ / ₃₂	1 ¹³ / ₃₂	1 ¹³ / ₃₂	N/A	N/A	N/A	N/A	1530	1700		
1/2 T			30%	4	3.0	2 ²¹ / ₃₂	3 ¹ / ₂	30%	4	3.0	2 ²¹ / ₃₂	3 ¹ / ₂								
3/4 T			15%	6	4 ²¹ / ₃₂	4 ¹³ / ₃₂	5 ¹ / ₁₆	15%	6	4 ²¹ / ₃₂	4 ¹³ / ₃₂	5 ¹ / ₁₆								
5/4 T			2%	10	N/A	N/A	N/A	2%	10	N/A	N/A	N/A								
Ref. dB					45dBG						45dBG									



Additional Comments/Sketch

D. Payne, ANII 11/82



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Ultrasonic Examination Report - Continuation Sheet

Page **7** of **8**

Customer L P&L	Plant Waterford	Unit 3	Loop/Zone 1A/7	Iso/Drawing No. Zone 7, Rev 2, EC + 202
Procedure SI-2.3 Rev 0, FC1	Exam Surface OD	Examiner/Level BURLINGAME II	VCR Supervisor Daniel Jones	Date 5-1-82
Component/Piping System Reactor Coolant	Pipe Size 36" ID	Weld Type B.H	Cal. Block UT-6, 3.50"	Couplant: Type & Batch # Sampbase 40, Batch 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		
07 -	008	NA	No	PAR	PAR	NA	OD Slope of Nozzle *	Clean	Ground	NI	SAT	
							* SEE ATTACHMENT					



The

Virginia Corp.
of Richmond

Date _____

Page 8 of 8

To: _____

Subject Examination

Limitations

07-008 is a 3" branch connection, the radius between the branch and reactor coolant pipe is formed by the weld crown. All scans are affected by the weld radius. Scan 2 was not performed. The ultrasonic beam is directed away from the weld root area. The 45° Scan 5 gave good coverage of the weld root area. The 60° Scan 5 gave good coverage of the root area when the beam was directed axially with respect to the reactor coolant pipe. With the ultrasonic beam directed circumferentially with respect to the reactor coolant pipe the beam does not intersect the I.D. The same applies to the 7+8 Scans. The 7+8 scans could only be performed on the Scan 5 base metal side of the weld.

Signed _____



Ultrasonic Examination Report

Loop/Zone: **1A, 7** Zone 7, REV. 2, FC-2
 VCR Supervisor: **David D. Dena** 5-5-82
 Cal. Block # **10** Compliant: **SOMOTRACE**
 UT 6, 3.50" Type 40 Batch # **8117**

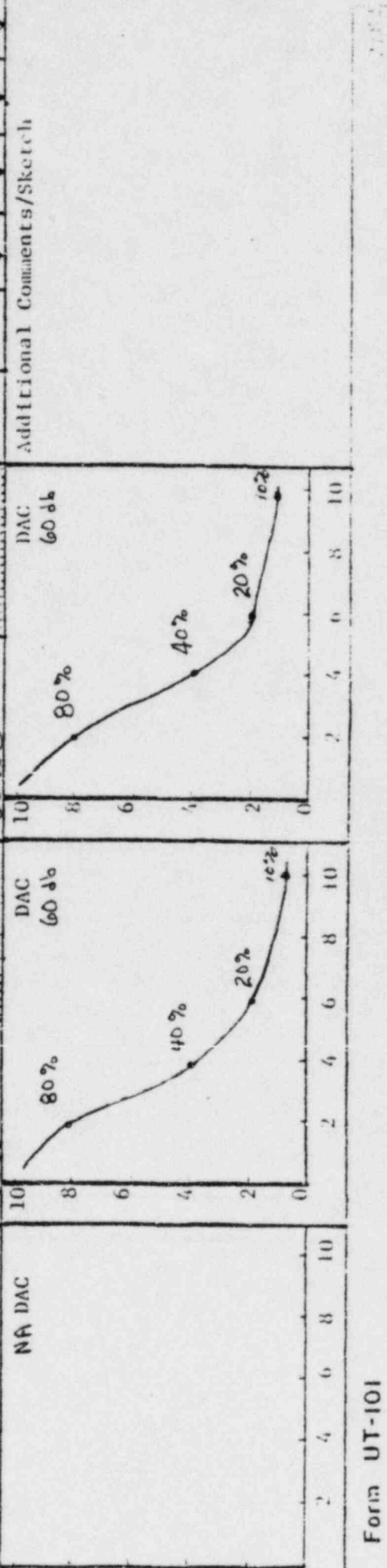
Customer: **LP&L**
 Plant: **WATERFORD**
 Unit: **3**
 Exam Surface: **Water Surface**
 Examiner/Level: **BERLINGAME II**

Procedure: **ISI-2.3 REV. 0, FC1**
 Component/Piping System: **O.D. Pipe Size**
 Weld Type: **36" ID**
 Reactor Coolant: **BOFT**

Transducer: **30°**
 S/N: **J22935**
 Size: **1/2"**
 Frequency: **2.25 MHz**
 Beam Amp: **30°**

Calibration: **0°**
 Field Changes: **FC 1**
 If Yes, Number: **FC 1**

Calibration Reflector Location	Signal Amp.	Sweep	Sound Entry Point To:		Sweep	Signal Amp.	Scribe Line	50% DAC	7 & 8 Scan	Scribe Line	50% DAC	Additional Comments/Sketch
			2 & 5 Scan	7 & 8 Scan								
1/4T	NA	NA	17/32	17/32	2.0	80%	17/32	17/32	2.0	17/32	17/32	60 dB G
1/2T	40%	4.0	1 1/16	1 1/16	4.0	40%	1 1/16	1 1/16	4.0	1 1/16	1 1/16	60 dB G
3/4T	20%	6.0	1 7/16	1 7/16	6.0	20%	1 7/16	1 7/16	6.0	1 7/16	1 7/16	60 dB G
1T	80%	8.6	-	-	8.6	80%	-	-	8.6	-	-	60 dB G
5/4T	10%	1.0	-	-	1.0	10%	-	-	1.0	-	-	60 dB G



Dr. Payne ANEE 5/20/82

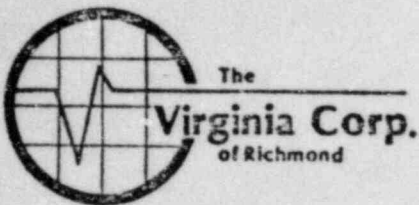


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Ultrasonic Examination Report - Continuation Sheet

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1A 7	Iso/Drawing No. ZONE 7, REV. 2, FC-2
Procedure ISI-2.3, REV. FC1	Exam Surface O.D.	Examiner/Level BURLINGAME II	VCR Supervisor Daniel Jones	Date 5-5-82
Component/Piping System REACTOR COOLANT	Pipe Size 36" ID	Weld Type Butt	Cal. Block UT6, 3.50"	Couplant: Type & Batch # Sonotrace 40, BATCH 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	
07-016	NA	PAR	NA	YES	NA	SLOPE OF NOZZLE	CLEAN	GROUND	NI	SAT	
07-017	NA	NA	PAR	PAR	NA	OD. MISMATCH	CLEAN	GROUND	NI	SAT	
07-018	NA	PAR	NA	PAR	NA	OD. MISMATCH	CLEAN	GROUND	NI	SAT	
07-019A	NA	PAR	PAR	PAR	NA	OD. MISMATCH	CLEAN	GROUND	NI	SAT	
07-020B	NA	PAR	PAR	PAR	NA	OD. MISMATCH	CLEAN	GROUND	NI	SAT	



Date 5-5-82

Page 3 of 3

To: _____

Subject EXAMINATION
LIMITATIONS
ZONE 7, REV. 2, FC-2

07-016 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 2 WAS RESTRICTED BY THE 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.

07-017 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 5, 7 & 8 WERE RESTRICTED BY GROSS O.D. MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED WITH THE 30° ANGLE.

07-018 SCAN 5 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCANS 2, 7 & 8 WERE RESTRICTED BY GROSS O.D. MISMATCH. ALLOWING FOR BEAM SPREAD, ROOT AREA COVERAGE WAS OBTAINED WITH THE 30° ANGLE.

07-019LA & 07-020LB ARE SHORT (APPROX 2") SCAMS. ALL SCANS WERE RESTRICTED BY GROSS O.D. MISMATCH. THE 30° ANGLE IN CONJUNCTION WITH THE 45° & 60° ANGLES, DID GIVE ADEQUATE COVERAGE OF THE ROOT AREAS.

Signed _____



Ultrasonic Examination Report

D. Payne ANZI 5/26/82

Customer LPOL		Plant WATERFORD		Unit 3	Loop/Zone 1 7	Iso/Drawing No. ZONE 7 REV-2 F.C. 2	
Procedure ^{AL 2} ISE 2.3 REV-0K-1		Exam Surface O.D.	Examiner/Level <i>Larry Longenecker II</i>		VCR Supervisor <i>Daniel Jones</i>		Date ^{AL} 5-13-82
Component/Piping System COLG S.G. #1 TO RCP 1A			Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. 8119	

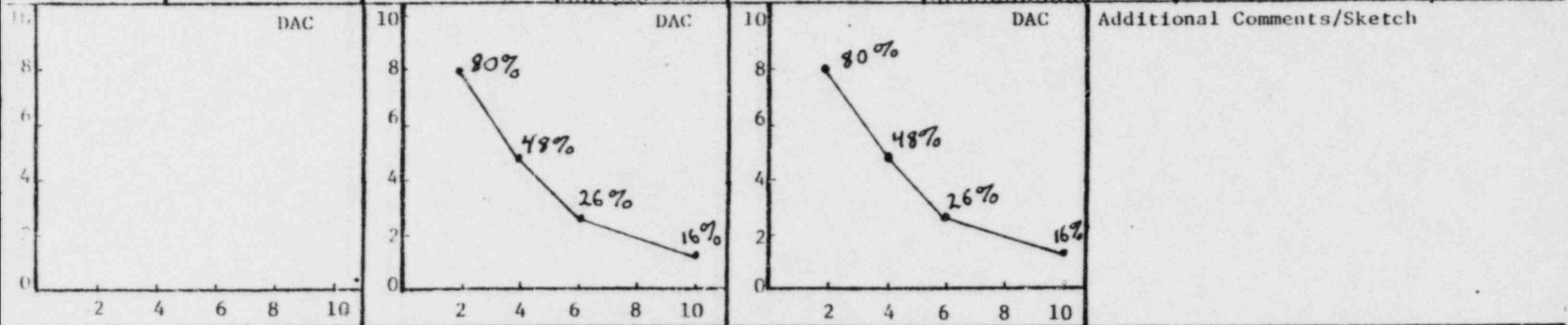
Continuation Sheet Attached
 Yes No

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

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

Calibration 0° 2 & 5 Scan 7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks						
					Scribe Line	50% DAC				Scribe Line	50% DAC		30°		45°		60°		
						In	Out				In	Out	In	Out					
1/4 T	NA	NA	80%	2.0	1/2"	1 3/32"	1 1/32"	80%	2.0	1/2"	1 3/32"	1 1/32"	1 1/32"	10:00	11:40	NA	NA	NA	NA
1/2 T			48%	4.0	1 3/32"	2 3/32"	1 9/32"	48%	4.0	1 3/32"	2 3/32"	1 9/32"							
3/4 T			26%	6.0	1 7/32"	1 3/32"	1 27/32"	26%	6.0	1 7/32"	1 3/32"	1 27/32"							
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA							



D. Payal ANEZ 5/20/82



Ultrasonic Examination Report - Continuation Sheet Page 2 of 2

Customer LP & L	Plant WATERFORD	Unit 3	Loop/ Zone 1 7	Iso/Drawing No. ZONE 7 R-2, F.C. 2
Procedure ISI, 2.3 R₀, F.C. 2	Exam Surface O.D.	Examiner/Level Harry Longenecker II	VCR Supervisor Daniel Dina	Date 5-15-82
Component/Piping System COLD LEG S.G.#1 TO R.C.P. 1A	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch SONOTRACE 40 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-010	NA	NA	NA	PAR	NA	*	CLEAN	GROUND	NI	SAT.	
07-013		NA	NA	YES			CLEAN	GROUND	NI	SAT.	
07-014LB		YES	YES	NA			CLEAN	GROUND	NRI	SAT.	
07-015LA		YES	YES	NA			CLEAN	GROUND	NRI	SAT.	
* HAD 10% LOSS OF COVERAGE DUE TO PIPE TO ELBOW O.D. WELD GEOMETRY											



Ultrasonic Examination Report

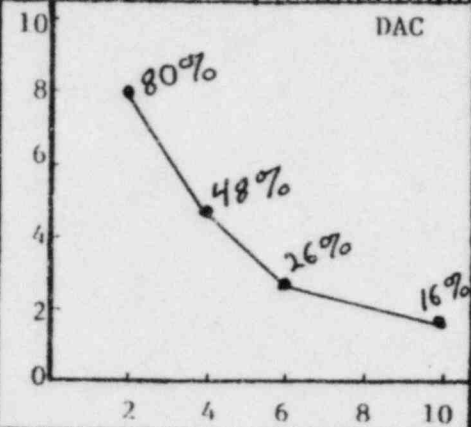
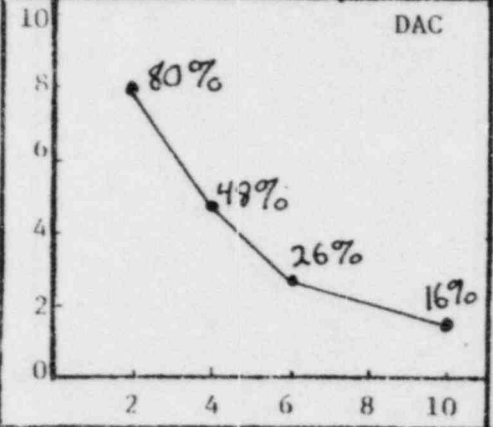
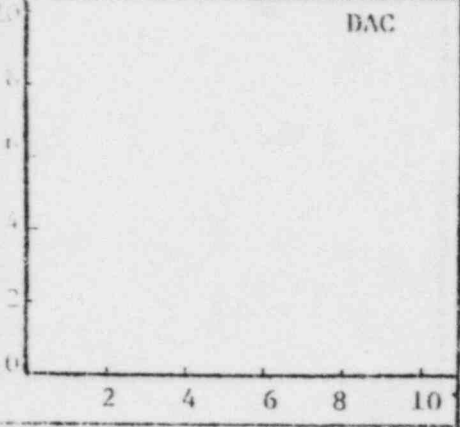
Customer LP&L		Plant WATERFORD		Unit 3	Loop/Zone 1 7	Iso/Drawing No. ZONE 7 REV-2 FC-2	
Procedure ISI 2.3 REV-0 FC-2		Exam Surface OD	Examiner/Level Rory Longenecker II		VGR Supervisor Daniel Jones		Date 5-17-82
Component/Piping System COLD LEG-RCP 1A TO S.G. #1			Pipe Size 36"	Weld Type BUTT	Cal. Block # UT-6	Couplant: SONOTRACE Type 40 Batch No 8119	

Continuation Sheet Attached
 Yes No

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

Transducer			Instrument				
	30°	45°	60°	Mfr.	SONIC	Model	MARK I
S/N	J22935	NA	NA	S/N	01610E	RepRate	1K
Size	.5"			Reject	OFF	Filter	H1
Frequency	2.25 MHZ			Damp	MIN	Coax	12'
Beam Angle	30°			Freq.	2	Video	NORM

Calibration 0°			2 & 5 Scan			7 & 8 Scan			Calibration Checks									
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1/2	1 1/32	1 1/32	80%	2.0	1/2	1 1/32	1 1/32	9:50	1:40	NA	NA	NA	NA
1/2 T			48%	4.0	1 1/32	2 1/32	1 1/32	48%	4.0	1 1/32	2 1/32	1 1/32						
3/4 T			26%	6.0	1 1/32	1 1/32	1 1/32	26%	6.0	1 1/32	1 1/32	1 1/32						
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA						
			61 DB						61 DB									



Additional Comments/Sketch



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Ultrasonic Examination Report - Continuation Sheet

D. Payne ANII 5/26/82

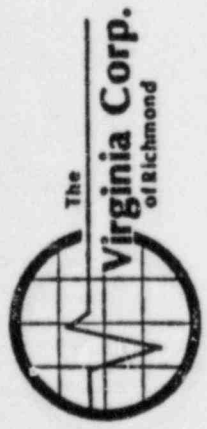
Customer LP & L	Plant WATERFORD	Unit 3	Loop/ Zone 1 7	Iso/Drawing No. ZONE 7 R-2 F.C. 2
Procedure I.S.I. 2.3 R.O.F.C.A	Exam Surface O.D.	Examiner/Level <i>Nary Longenecker IF</i>	VCR Supervisor <i>Daniel Payne</i>	Date 5-17-82
Component/Piping System COLD LEG SG. #1 TO R.C.P. 1A	Pipe/Size 36"	Weld Type BUTT	Cal. Block UT-6	Complant: Type & Batch # SONOTRACE 40 # 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-0061A	NA	NA	YES	YES	NA	NA	CLEAN	GROUND	RI	SAT.	
07-0071B	↓	↓	YES	YES	↓	↓	CLEAN	GROUND	NI	SAT.	
07-0111B	↓	↓	YES	YES	↓	↓	CLEAN	GROUND	RI	SAT.	
07-0121A	↓	↓	YES	YES	↓	↓	CLEAN	GROUND	NRI	SAT.	

A. Payal ANIL 5/16/82

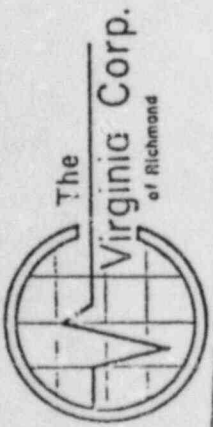
Ultrasonic Examination Report PAGE 3 OF 10 Indication Record

Customer: LP & L Plant: WATERFORD Unit: 3 Loop: 1
 Procedure: 6L 2 Examiner/Level: VCR Supervisor: Date: 5-17-82
 I.S.I. 2.3 RO₂ F.C.T. Dave Longenecker Daniel J. Gens
 Component/Piping System: 1A1 ISO Drawing No.: CALV Standard No./Thickness: UT-6 3.5"
 COLD LEG S.G. # 1 TO R.C.P. ZONE 7 R-2, F.C. 2

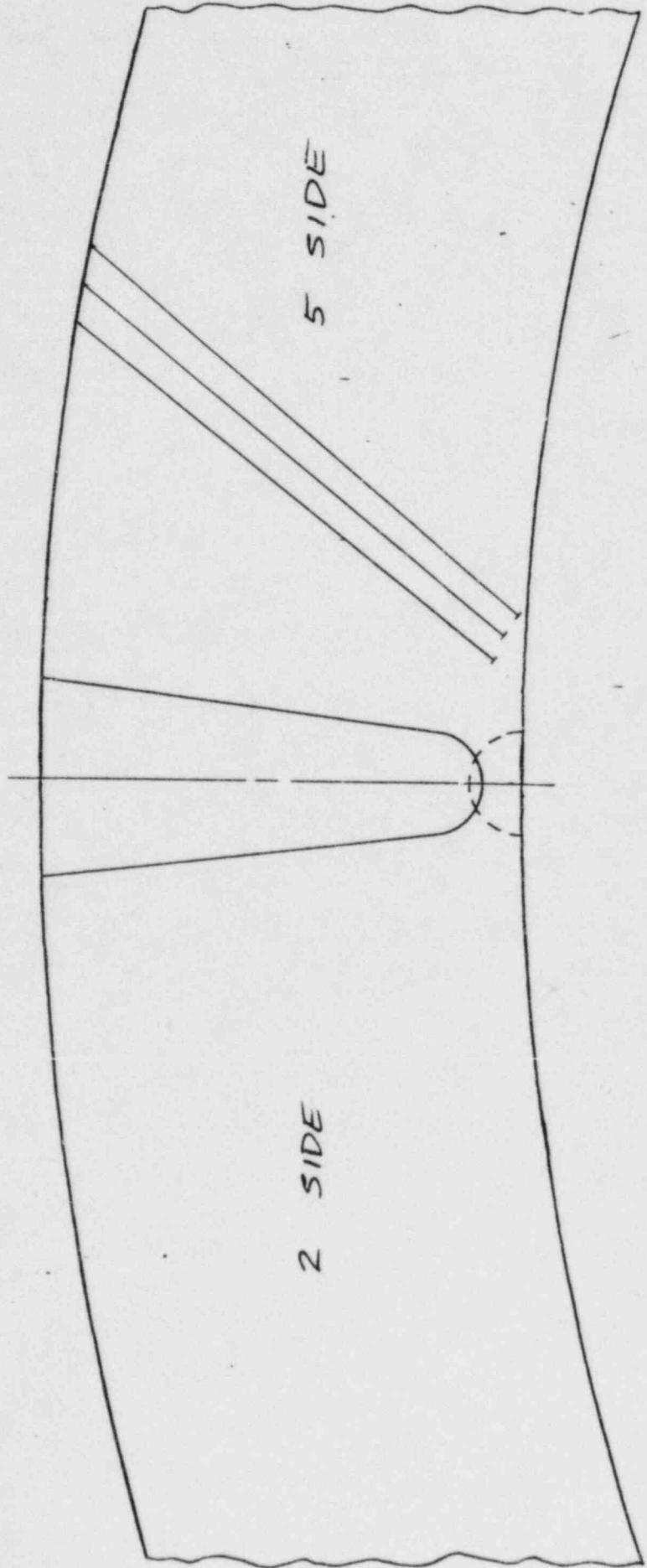


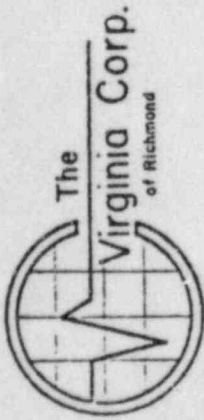
Weld No.	Ind No.	Max. % DAC	Indication Length		Minimum Depth S.U. Pos.	Sweep Reading	Maximum Depth S.U. Pos.	Beam Angle	Beam Dir.	Base Metal Thickness 2 Side	Weld Thick.	Base Metal Thickness 5 Side	Remarks
			From	To									
07-0061A	1	123%	*	*	2 3/8" (5)	7.0	3 3/8" (5)	30°	5	2.90	2.85	2.80	PEAK 3 3/8" (5) 7.2
07-0061A	2	87%	62 3/4"	63 1/2"	1 1/8" (5)	6.8	2 3/8" (5)	30°	5	2.90	2.90	2.85	PEAK 2 1/8" (5) 7.1
07-0061A	3	81%	65"	66 1/4"	1 1/2" (5)	7.1	2 3/8" (5)	30°	5	2.90	2.90	2.85	PEAK 2 1/8" (5) 7.8
07-0061A	4	120%	81 7/8"	82 1/4"	2 3/8" (5)	7.3	2 3/8" (5)	30°	5	2.90	2.85	2.90	PEAK 2 1/8" (5) 7.8
07-0118	1	70%	2 3/8"	3"	3 3/8" (5)	8.4	4 1/4" (5)	30°	5	3.60	3.50	3.50	PEAK 3 3/8" (5) 8.6
07-0118	2	58%	15 5/8"	16"	3 3/2" (5)	8.5	4 1/2" (5)	30°	5	3.60	3.50	3.40	PEAK 3 3/8" (5) 8.8
07-0118	3	69%	14"	14 1/2"	1 3/2" (2)	5.9	1 5/8" (2)	30°	2	3.60	3.40	3.50	PEAK 1 3/2" (2) 6.2

* SIGNAL PEAKED WHEN AGAINST WELD O.D. GEOMETRY OF 07-005 FROM 1 3/8" AND TO 1 3/2" IN 7 DIRECTION

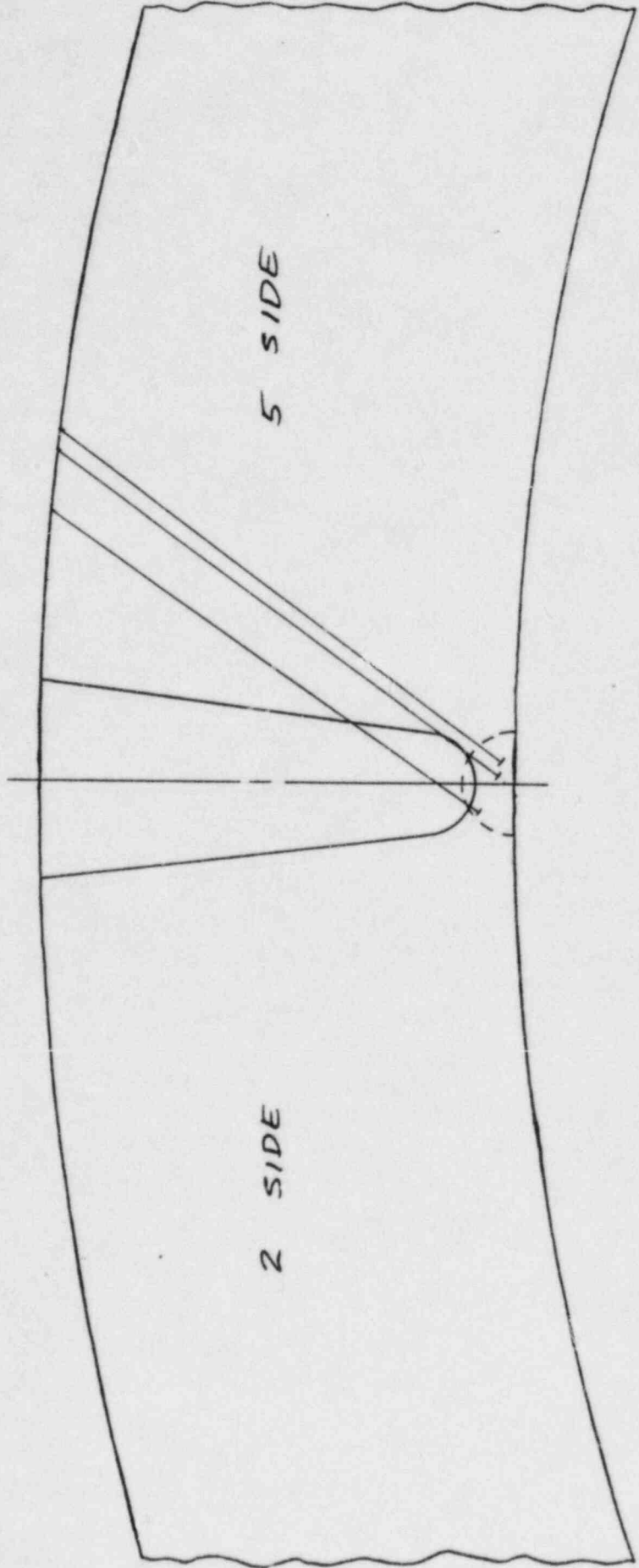


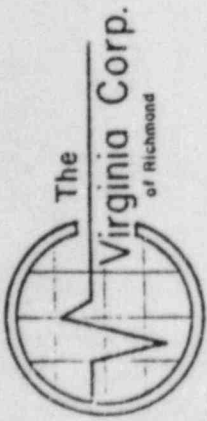
INDICATION NO. 1 WELD NO. 07-006LA



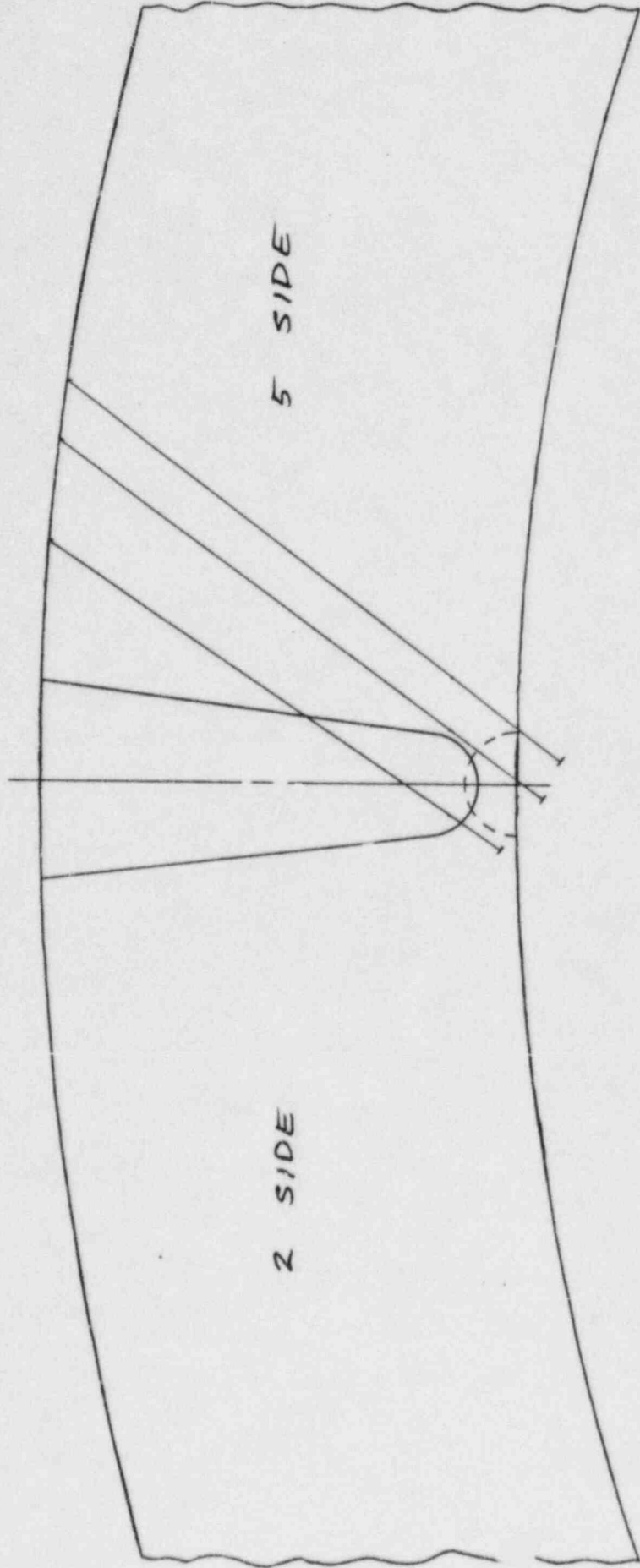


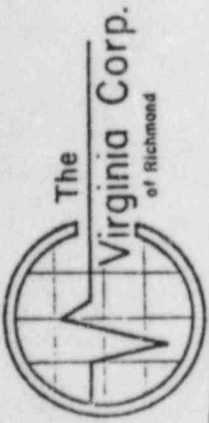
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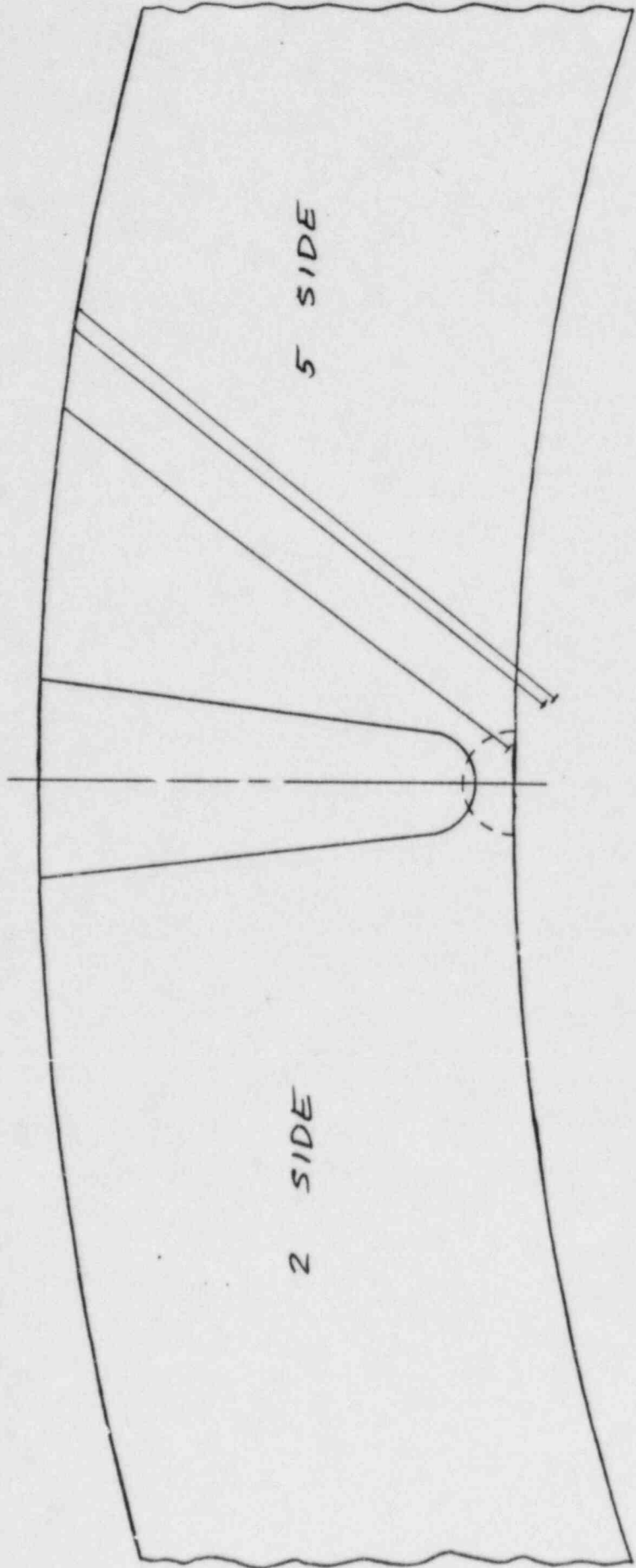


INDICATION NO. 3 WELD NO. 07-0066LA



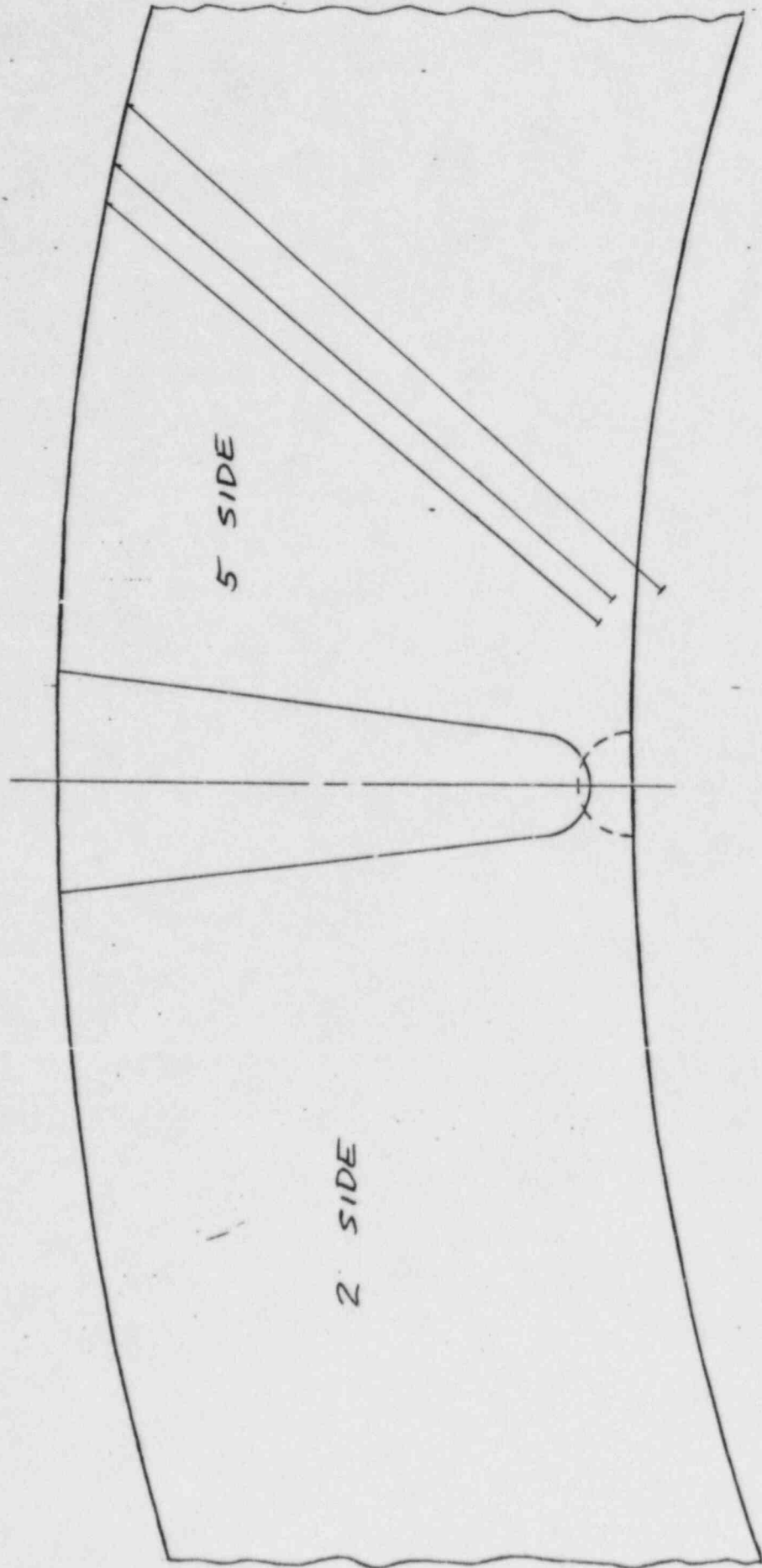


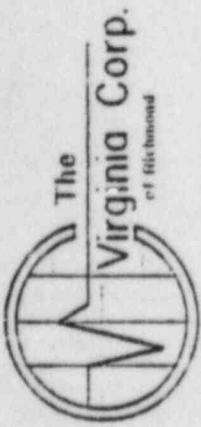
INDICATION NO. 4 WELD NO. 07-006LA



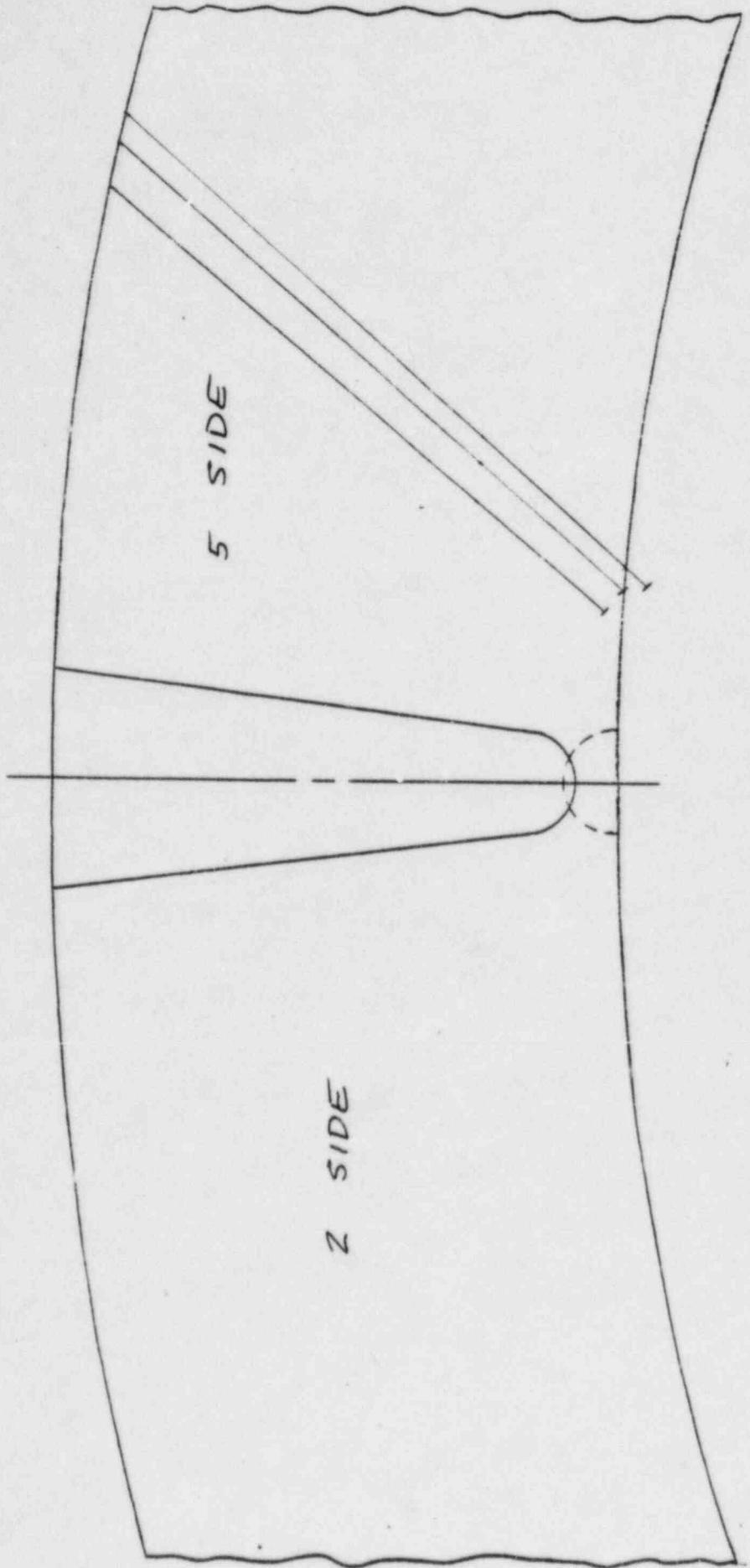


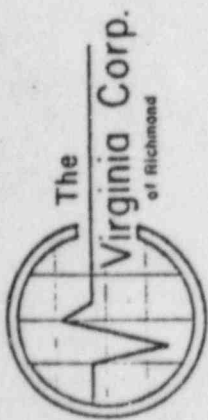
INDICATION NO. 1 WELD NO. 07-011LB



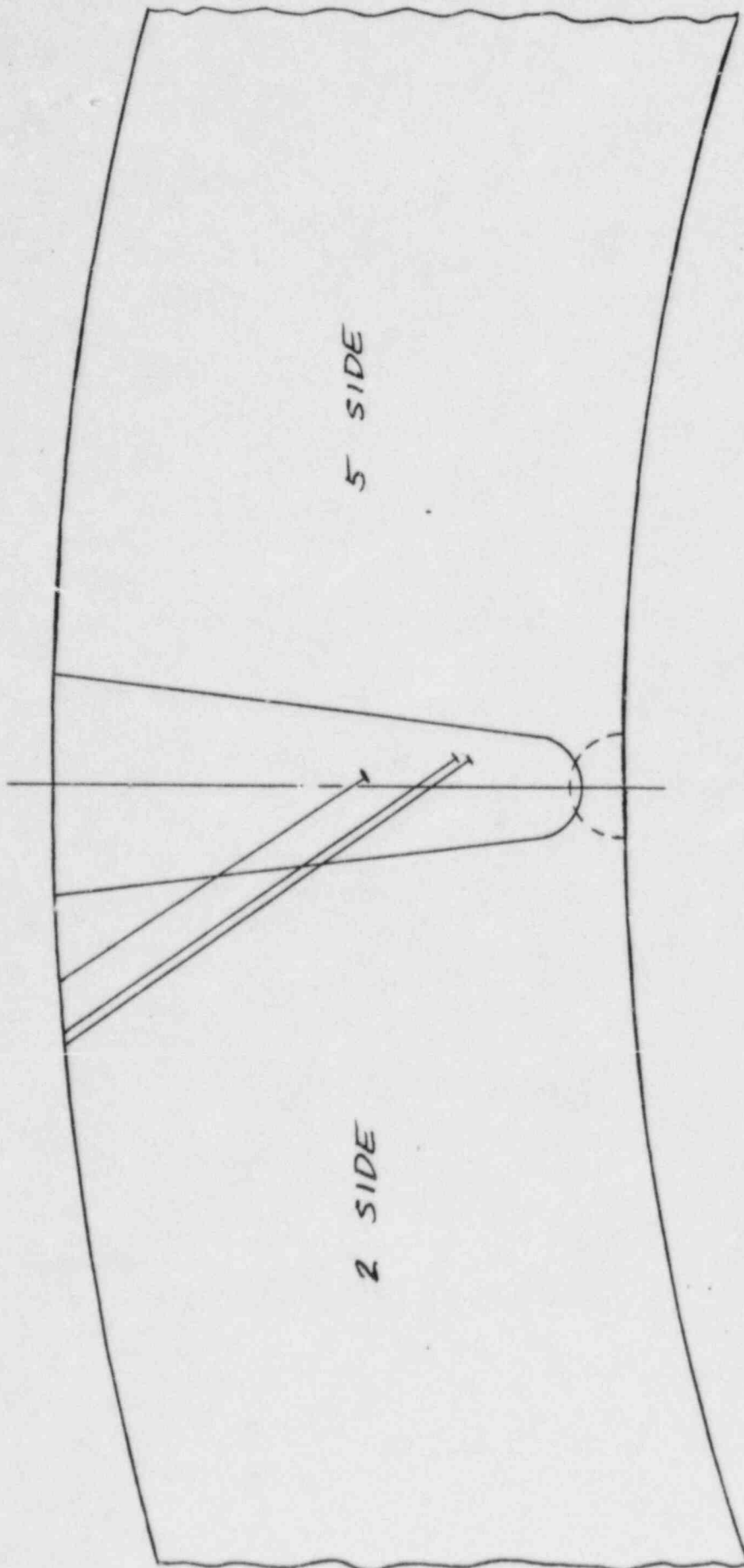


INDICATION NO. 2 WELD NO. 07-0111LB





INDICATION NO. 3 WELD NO. 07-01, LB





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

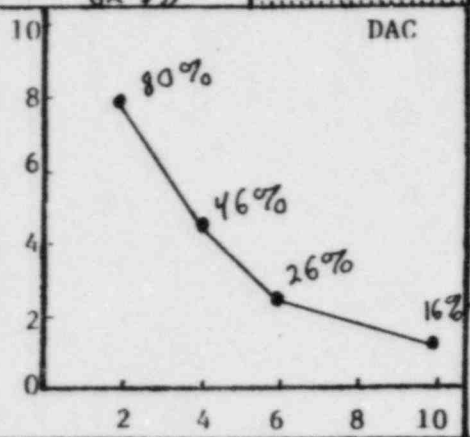
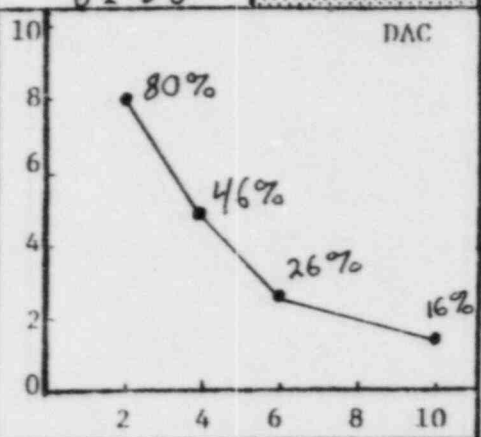
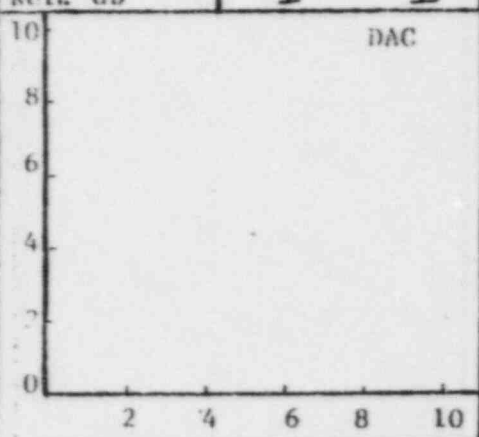
Customer <i>LP+L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>		Loop/Zone <i>1 7</i>		Iso/Drawing No. <i>ZONE 7 REV-2 FC:2</i>	
Procedure <i>ISI 2.3 REVO FC+^{GL-2}</i>		Exam Surface <i>O.D.</i>		Examiner/Level <i>Nary Longenecker II</i>		VCR Supervisor <i>Daniel Jones</i>		Date <i>5-18-82</i>	
Component/Piping System <i>COLD LEG - RCP 1A TO STEAM GEN.</i>				Pipe Size <i>36"</i>		Weld Type <i>BUTT</i>		Cal. Block <i>UT-6</i>	
						Couplant: <i>SONOTRACE</i>		Type <i>40</i> Batch No <i>8119</i>	

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 Yes, Number *FC+2^{GL}*

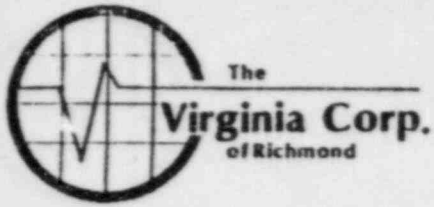
	Transducer			Instrument			
	S/N	<i>J22935</i>	<i>NA</i>	Mfr.	<i>SONIC</i>	Model	<i>MARK I</i>
	Size	<i>.5"</i>		S/N	<i>01610E</i>	RepRate	<i>1K</i>
	Frequency	<i>2.25MHZ</i>		Pelect	<i>OFF</i>	Filter	<i>HI</i>
	Beam Angle	<i>30°</i>		Damp	<i>MIN</i>	Coax	<i>12'</i>
			Freq.	<i>2</i>	Video	<i>NORM</i>	

Calibration 0°			2 & 5 Scan			7 & 8 Scan			Calibration Checks									
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°	
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>	<i>1/2</i>	<i>1 1/32</i>	<i>1 1/2</i>	<i>80%</i>	<i>2.0</i>	<i>1/2</i>	<i>1 1/32</i>	<i>1 1/2</i>	<i>8:30</i>	<i>11:40</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>46%</i>	<i>4.0</i>	<i>1 3/32</i>	<i>2 1/32</i>	<i>1 3/16</i>	<i>46%</i>	<i>4.0</i>	<i>1 3/32</i>	<i>2 1/32</i>	<i>1 3/16</i>						
<i>3/4 T</i>			<i>26%</i>	<i>6.0</i>	<i>1 1/32</i>	<i>1 1/32</i>	<i>1 1/16</i>	<i>26%</i>	<i>6.0</i>	<i>1 1/32</i>	<i>1 1/32</i>	<i>1 1/16</i>						
<i>5/4 T</i>			<i>16%</i>	<i>10.0</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>16%</i>	<i>10.0</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>						
Ref. dB			<i>62 DB</i>					<i>62 DB</i>										



Additional Comments/Sketch

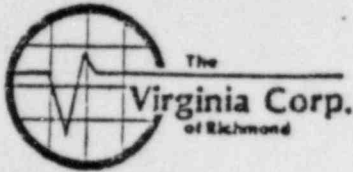
A. Payne ANII 5/20/82



Ultrasonic Examination Report - Continuation Sheet

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1 7	Iso/Drawing No. ZONE 7 R-2, F.C. 2
Procedure IS.I. 2.3 R3.F.C.7	Exam Surface O.D.	Examiner/Level Nay Longenecker II	VCR Supervisor Daniel Jones	Date 5-18-82
Component/Piping System COLD LEG S.G. #1 TO R.C.P. 1A	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch # SONOTRACE 40™ B14

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-003LA	NA	NA	YES	YES	NA	NA	CLEAN	GROUND	NI	SAT.	
07-004LB			YES	YES	NA		CLEAN	GROUND	NI	SAT.	
07-005			NA	NA	PAR	* 1	CLEAN	GROUND	NI	SAT.	
07-008			NA	PAR	PAR	* 2	CLEAN	GROUND	NI	SAT.	
* 1 LOSS OF APPROX. 15% COVERAGE DUE TO PIPE TO ELBOW O.D. WELD GEOMETRY.											
* 2 BRANCH CONNECTION AND IT'S RADIUS											



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

Customer <i>LP 31</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1, 7</i>
Component/Piping System <i>REACTOR COOLANT</i>	Examiner/Level <i>BURLINGAME II</i>		Date <i>5-22-82</i>
Procedure <i>ISI 215, REV. C</i>	Iso/Drawing No. <i>ZONE 7, REV. 2, FC 2</i>	VCR Supervisor <i>Daniel Jones</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument	Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>AEROTECH</i>	Size <i>1.0"</i>	Cal. Block <i>UT-15</i>
Model <i>ETS-MK I</i>			Cal. Block
S/N <i>780836</i>	Freq. <i>1 MHz.</i>		Range Cal. $3/8" = 8 \text{ D.I.O.}$
Reject <i>OFF</i>	Serial No. <i>219514</i>		Calibration Checks <i>0.800</i>
Damp. <i>MIN</i>			<i>10.95"</i>
Freq. <i>1 MHz.</i>	Coax. Cable <i>12'</i>		
Rep. Rate <i>1000</i>	Gain <i>68dB</i>		
Filter <i>OFF</i>			
Video <i>NORMAL</i>			
Couplant <i>SONTRACE 40, # 5119</i>			

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>07-001</i>	<i>12</i>	<i>3.43</i>	<i>3.04</i>	<i>4.06</i>					
	<i>2</i>	<i>3.32</i>	<i>3.04</i>	<i>4.06</i>					
	<i>4</i>	<i>3.28</i>	<i>3.12</i>	<i>4.06</i>					
	<i>6</i>	<i>3.32</i>	<i>3.12</i>	<i>4.06</i>					
	<i>8</i>	<i>3.32</i>	<i>3.12</i>	<i>4.06</i>					
<i>07-002</i>	<i>10</i>	<i>3.32</i>	<i>3.12</i>	<i>4.06</i>					
	<i>12</i>	<i>3.20</i>	<i>3.20</i>	<i>3.04</i>					
	<i>2</i>	<i>3.28</i>	<i>3.20</i>	<i>3.04</i>					
	<i>4</i>	<i>3.24</i>	<i>3.16</i>	<i>3.12</i>					
	<i>6</i>	<i>3.28</i>	<i>3.24</i>	<i>3.12</i>					
	<i>8</i>	<i>3.12</i>	<i>3.20</i>	<i>3.12</i>					
	<i>10</i>	<i>3.28</i>	<i>3.12</i>	<i>3.12</i>					

Sketch/Identification



The
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D. Payne ANEI 6/12

Ultrasonic Examination Report

2 of 7

Customer L.P.+L		Plant Waterford	Unit # 3	Loop/Zone 1/7	Iso/Drawing No. Zone 7, Rev. 2 FC. 2
Procedure ISI-2.8 Rev. 1009 FC1	Exam Surface 0 D	Examiner/Level BURLINGAME II R3		VCR Supervisor Daniel Jones	Date 5-22-82
Component/Piping System REACTOR COOLANT		Pipe Size 30" 3/4	Weld Type BUTT	Cal. Block UT-15	Couplant: Type SA-200 Batch No. 8119

Continuation Sheet Attached
Yes No

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

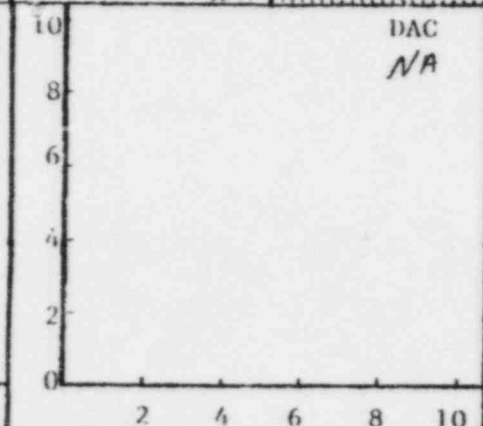
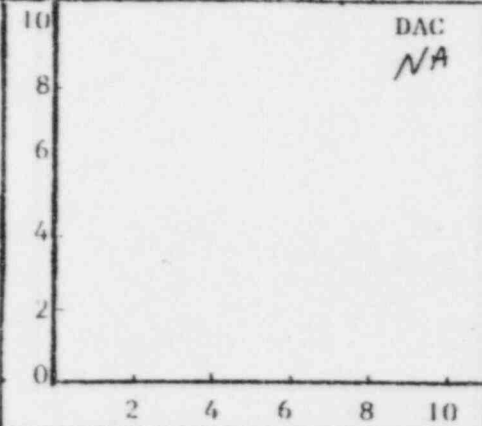
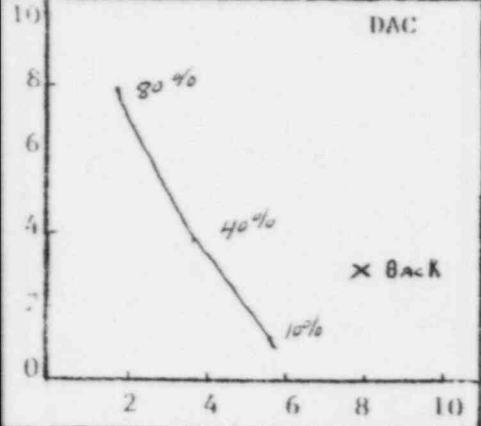
	Transducer	0°	45°	60°	Instrument			
	S/N	L19814	NA	NA	Mfr.	Sonik	Model	MARK I
	Size	1"			S/N	780236	RepRate	1K
	Frequency	1 MHz			Reject	off	Filter	off
	Beam Angle	0°			Damp	Mid	Coax	6'
				Freq.	10khz	Video	NA/M	

Calibration 0°

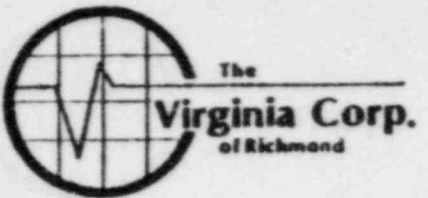
2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	80%	1.8	NA	NA	NA		NA	NA	NA		0.805	1.050	NA	NA	NA	NA
1/2 T	40%	3.8									1.250	1.630				
3/4 T	10%	5.8														
Back	35%	8.0														
Ref. dB	68 dB		NA				NA									



Additional Comments/Sketch



Ultrasonic Examination Report

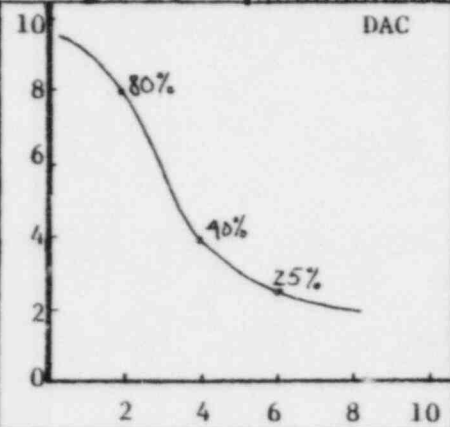
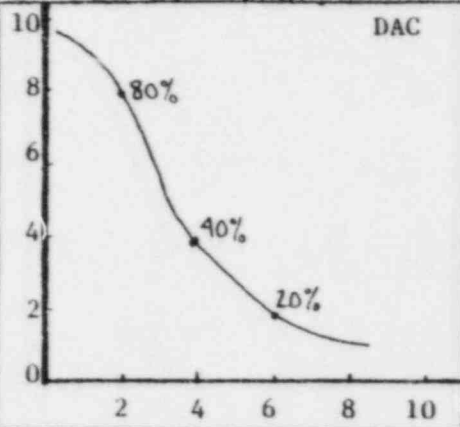
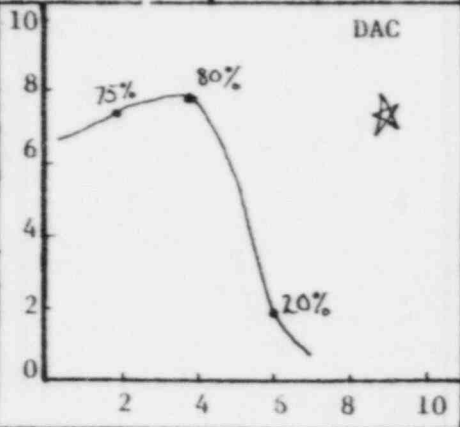
Customer LP & L	Plant Waterford	Unit 3	Loop/Zone 1-7	Iso/Drawing No. Zone 7 Rev: 2 F.C.-2
Procedure ISI-28 Rev. 10/82 F.C.-1	Exam Surface O.D.	Examiner/Level BURLINGAME / II	VCR Supervisor Kevin White	Date 5-22-82
Component/Piping System Reactor Coolant		Pipe Size 30" I.D.	Weld Type Butt	Cal. Block UT-15 3 1/2
			Couplant: Sonotrace	Batch No. 8119

Continuation Sheet Attached
 Yes No

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

Transducer Z45 (C.S.)	Z45 (S.S.)	7 & 8	Instrument			
S/N T8468	T8468	V3035	Mfr. Sonic	Model 01610E	RepRate 1000	FTS MARK I
Size 1"	1"	1"	S/N 3	Filter off	Coax 6'	
Frequency 1 MHz	1 MHz	1 MHz	Damp 4.5	Coax 6'		
Beam Angle 45°L	45°L	45°L	Freq. 11 MHz/BB	Videa Norm.		

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



Additional Comments/Sketch

★ The shape of the D.A.C. curve is due to the ratio of the carbon steel metal path to the stainless steel metal path. (or incore)

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

D. Payne ANIE 6/2/82

Ultrasonic Examination Report - Continuation Sheet

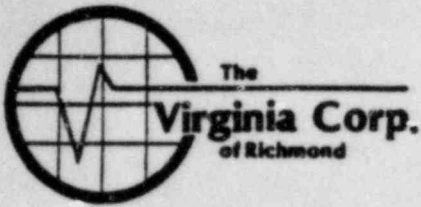
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The Virginia Corp. of Richmond

Customer LP 3L	Plant WATERFORD	Unit 3	Loop/Zone 1, 7	Iso/Drawing No. ZONE 7, REV. 2, FC-2
Procedure FC-1 ISI 3E, REV. 41	Exam Surface 1048 OD	Examiner/Level BURLINGAME II	VCR Supervisor Donald Jones	Date 5-22-82
Component/Piping System 45 REACTOR COOLANT	Pipe Size 30" I.D.	Weld Type BUTT	Cal. Block UT-15	Couplant: Type & Batch # SONOTRACK 401 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		
07	CC1	NA	PAR	PAR	PAR	NA	CD. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETRY
07	CO2	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETRY
							SEE ATTACHMENT.					SEE ATTACHMENT FIG-1



Date _____

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To: _____

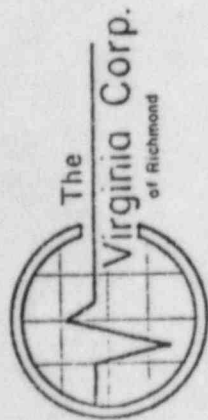
Subject Examination
Limitations

Zone 7 Rev. 2. F.C. 2

07-001 All scans were restricted by O.D. mismatch by the pump to safe-end weld and safe-end to pipe weld. Scan 5 was also restricted by a 1" line coming off of the pump nozzle. Good root area coverage was obtained with the 2 and 5 direction scans. Scans 7 and 8 were limited by about 15% for the coverage area.

07-002 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 and 8 were limited by about 15% for the coverage area.

Signed _____



TYR. PUMP TO SAFE END TO P-PE
CONFIGURATION

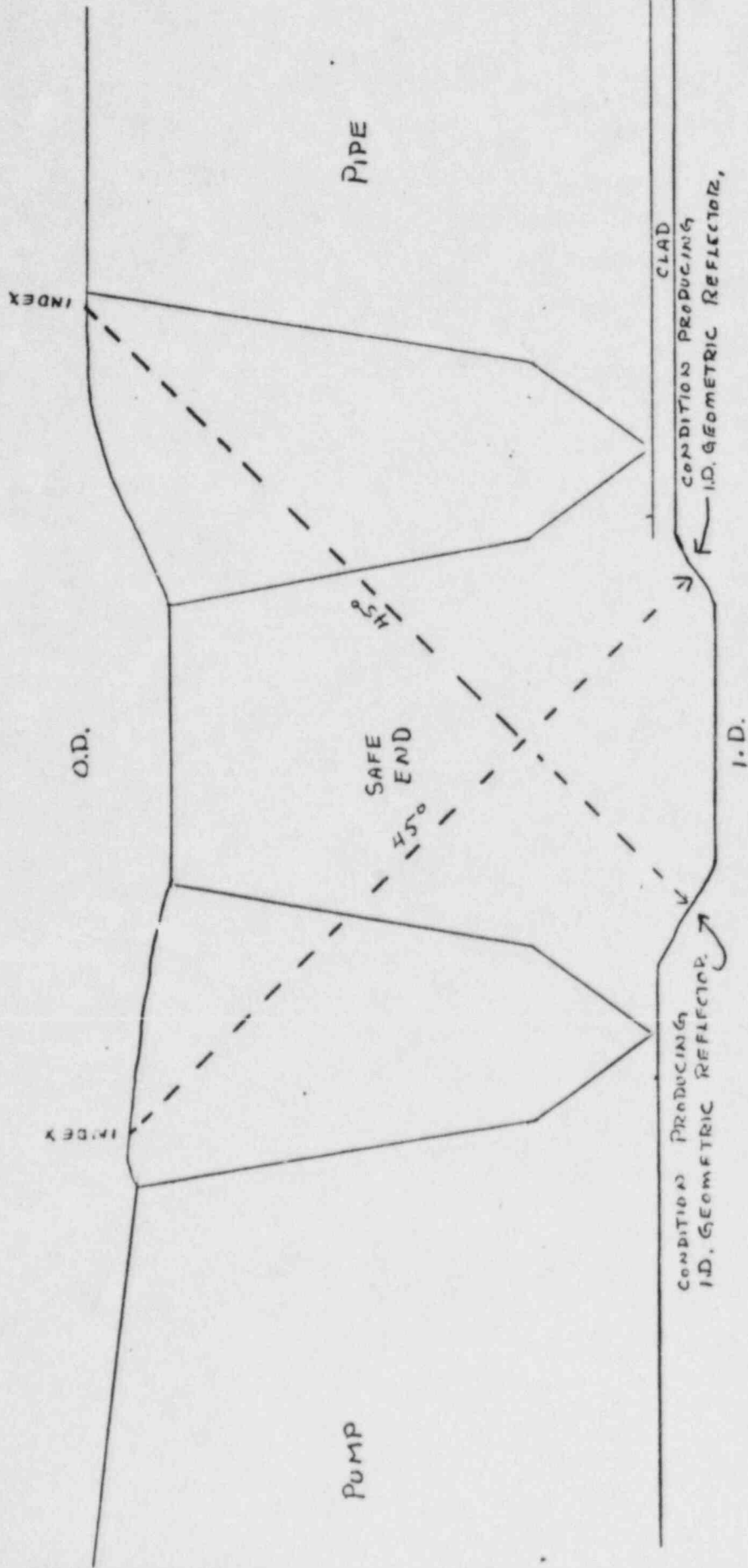
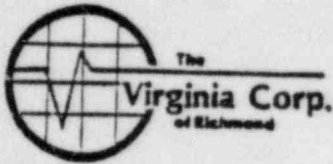


FIG. 1

5-25-82



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

Customer <i>L.P. & L.</i>	Plant <i>Waterford</i>	Unit <i>#3</i>	Loop/Zone <i>14/07</i>
Component/Piping System <i>Cold Leg - RCP 1A to 5/6 1</i>	Examiner/Level <i>Michael W. Blaw</i>	Date <i>7-10-82</i>	
Procedure <i>ISI-25 Rev. 0, F.C. 0</i>	Iso/Drawing No. <i>Zone 7, Rev. 2, F.C. 2</i>	VCR Supervisor <i>Michael W. Blaw</i>	Continuation Sheet Attached [] Yes [X] No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Panometrics</i>	Size <i>.5"</i>	Cal. Block <i>UT-18</i>	
Model <i>Mack I</i>	Size		Cal. Block <i>NA</i>	
S/N <i>01058E</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>2.135"</i>	
Reflect <i>044</i>	Serial No. <i>44651</i>		Calibration Checks	
Damp. <i>Min.</i>	Coax. Cable <i>6' Duol</i>		<i>In 8:35</i>	
Freq. <i>2.0 MHz</i>	Gain <i>47 db</i>		<i>Out 11:45</i>	
Rep. Rate <i>1K</i>				
Filter <i>Hi</i>				
Video <i>Norm.</i>				
Couplant <i>Sandtrac 40 5/8 8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>07-009</i>	<i>12</i>	<i>1.217"</i>	<i>.897"</i>	<i>1.537"</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>07-009</i>	<i>2</i>	<i>1.153"</i>	<i>.854"</i>	<i>1.537"</i>					
<i>07-009</i>	<i>4</i>	<i>1.048"</i>	<i>.897"</i>	<i>1.495"</i>					
<i>07-009</i>	<i>6</i>	<i>1.153"</i>	<i>.854"</i>	<i>1.580"</i>					
<i>07-009</i>	<i>8</i>	<i>1.110"</i>	<i>.939"</i>	<i>1.537"</i>					
<i>07-009</i>	<i>10</i>	<i>1.238"</i>	<i>.897"</i>	<i>1.559"</i>					

Sketch/Identification



Ultrasonic Examination Report *R. Payne ANIZ 7/19/82*

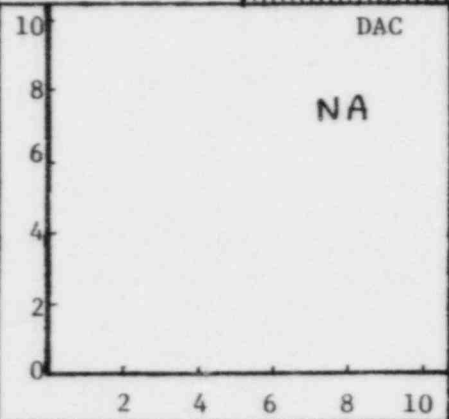
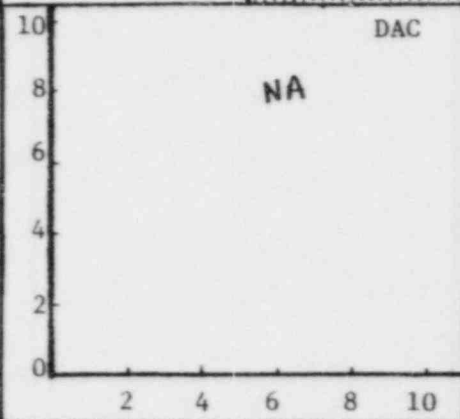
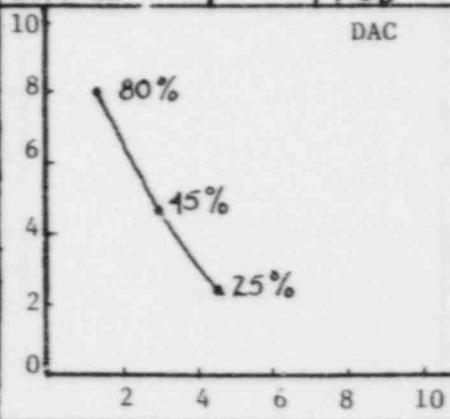
Customer LP & L		Plant Waterford		Unit 3		Loop/Zone IA-7		Iso/Drawing No. Zone 7 Rev 2 F.C.3	
Procedure ISI 2.8 Rev 1 F.C.1		Exam Surface O.D.		Examiner/Level Michael W. Blaz		VCR Supervisor Daniel Jones		Date 7-10-82	
Component/Piping System Cold Leg - RCP IA to Steam Generator 1				Pipe Size 3.5"		Weld Type Butt		Cal. Block # UT-18	
						Couplant: Type 36		Batch No. 8124	

Continuation Sheet Attached
 Yes No

Transducer				Instrument			
	0°	45°	60°	Mfg.	Sonic	Model	MARK I
S/N	44651	NA	NA	S/N	01058 E	RepRate	1K
Size	.5"			Reject	off	Filter	Hi
Frequency	2.25 MHz			Damp	min.	Coax	6' Dual
Beam Angle	0°			Freq.	2.0 MHz	Video	Norm.

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

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
			NA	NA	NA	NA	NA	NA	NA	NA	NA	8:35	11:45	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																



Additional Comments/Sketch

A. Payne ANII 7/9/82



The Virginia Corp.
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Ultrasonic Examination Report - Continuation Sheet

Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/ Zone <i>IA - 7</i>	Iso/Drawing No. <i>Zone 7 Rev. 2 F.C. 3</i>
Procedure <i>ISI 2.8 Rev 1 F.C.1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Michael W. Clew II</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>7-10-82</i>
Component/Piping System <i>Cold Leg - 3/8" #1 to RCP 1A</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: Type & Batch # <i>Sonotrace 40 1/2" 8124</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
07-009	Yes	NA	NA	NA	Yes	NA	Smooth	GROUND SMOOTH	NI	NI	NA



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Virginia Corp.
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Ultrasonic Examination Report

D. Payne ANII 7/19/82

Customer <i>1 P&I</i>	Plant <i>Watersford</i>	Unit <i>3</i>	Loop/Zone <i>1/7</i>	ISO/Drawing No. <i>Zone 7 Rev 2 FC 8</i>
Procedure <i>FC 2</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>David T. Johnson</i>	VGR Supervisor <i>Norm Jensen</i>	Date <i>7/15/82</i>
Component/Piping System <i>St. Gen. 1 to RCP 1A</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: <i>Type 40</i>
			Batch No. <i>3124</i>	

Continuation Sheet Attached

Yes No

Field Changes:

Yes No
If Yes, Number *2*

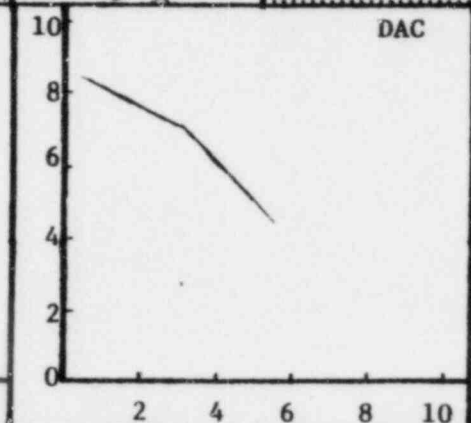
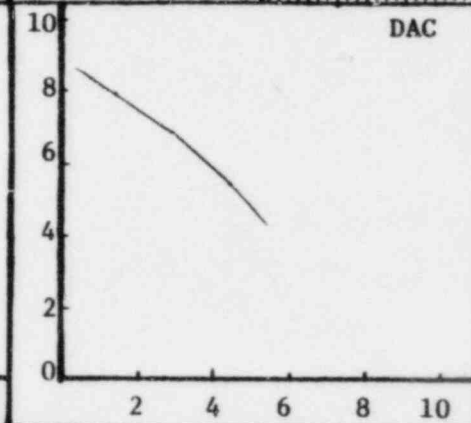
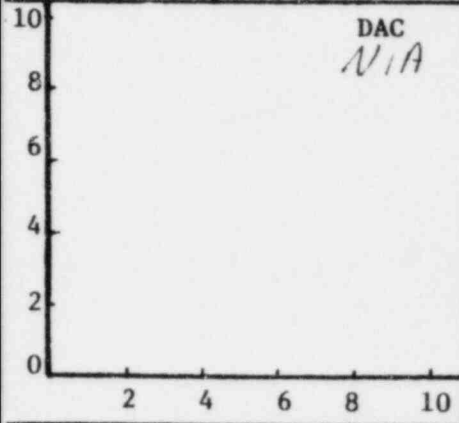
Transducer	30°	45°	60°	Instrument			
	S/N <i>607150</i>	<i>N/A</i>	<i>N/A</i>	Mfr. <i>Sonic</i>	Model <i>MuckT</i>	RepRate <i>1K</i>	
	Size <i>.50"</i>			S/N <i>05473F</i>	Filter <i>Hi</i>		
	Frequency <i>2.25MHz</i>			Damp <i>Min</i>	Coax <i>CAVU-MD</i>		
	Beam Angle <i>30°</i>			Freq. <i>2.0MHz</i>	Video <i>Norm</i>		

Calibration 0°

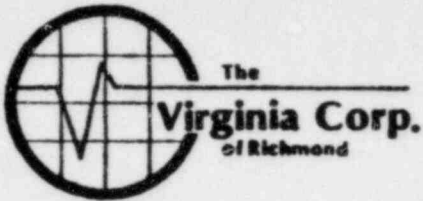
2 & 5 Scan

7 & 8 Scan

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



Additional Comments/Sketch
Calibration for carbon steel side



Ultrasonic Examination Report

D. Payne ANII 7/19/82

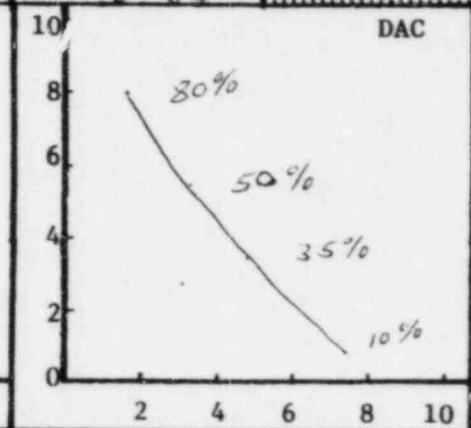
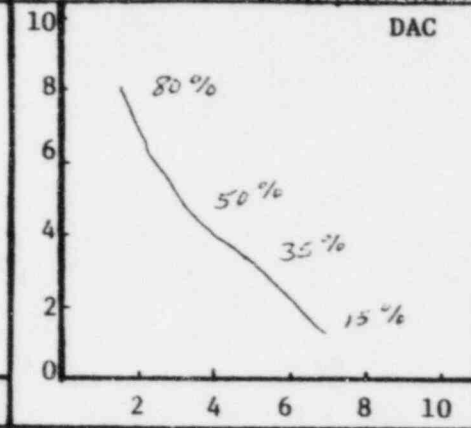
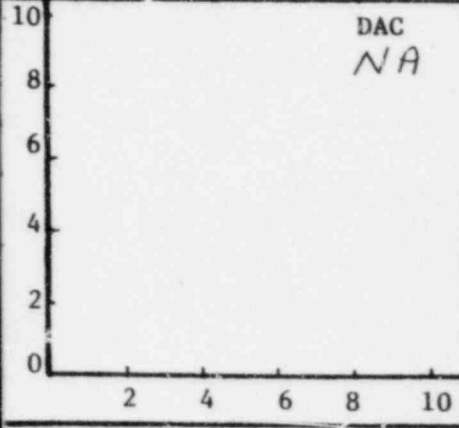
Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit #3	Loop/Zone Iso/Drawing No. <i>117 Zone 7 R-2 F.C. 3 Rdlf</i>
Procedure <i>F.C. 2</i>	Exam Surface <i>OD</i>	Examiner/Level <i>David L. Payne III</i>	VCR Supervisor <i>David L. Payne</i>
Component/Piping System <i>ST. GEN. #1 TO RCP 1A</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block # Couplant: <i>UT-18 Type Sonotube Batch No. R124</i>

Continuation Sheet Attached
 Yes No

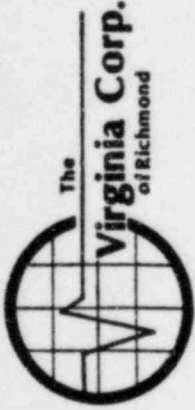
Field Changes:
 Yes No
 If Yes, Number *FC 2*

Transducer			Instrument		
	30°	45°	60°		
S/N	<i>607150</i>	<i>NA</i>	<i>NA</i>	Mfg.	<i>Sonix</i>
Size	<i>.50"</i>			S/N	<i>05473E</i>
Frequency	<i>2.25 MHz</i>			RepRate	<i>1K</i>
Beam Angle	<i>30°</i>			Reject	<i>3</i>
				Damp	<i>Min.</i>
				Freq.	<i>2.0 MHz</i>
				Video	<i>Norm.</i>

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



Additional Comments/Sketch
Calibration for austenetic side.



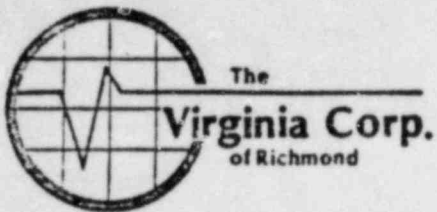
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Ultrasonic Examination Report - Continuation Sheet

Customer: L.P. + L. Plant: WALTER FORD # 3
 Procedure: 151-2.8 Rev. E. 1. 0. D. Exam Surface: Examiner/Level: David T. Ford # 11
 Component/Piping System: ST. VERN # 1 TO RLP 1A. Pipe Size: 3.5". Weld Type: BUTT
 VCR Supervisor: Date: 7-15-82
 Cal. Block Couplant: Type & Batch #: UT-18 SynoTrace 40 Batch # 8122

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results	Remarks
		2	5	7 & 8		Base Metal	Weld		
07-009	NA	Yes	Yes	Yes	NIA	Smooth	Weld flush	NI	SAT. NIA

D. Payne ANIZ 7/19/82

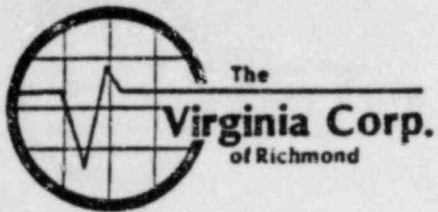


Liquid Penetrant
D. Payne ANII 5/21/82
 Examination Report

Customer <i>LP+L</i>		Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1A/8</i>	
Procedure <i>ISI 3.1 Rev. 0 F.C.2</i>		Examiner/Level <i>Robert Overstreet II</i>		Date <i>5-20-82</i>	
Component/Piping System <i>Sold leg - R.V. to R.C.P. 1A</i>		ISO Drawing No. <i>Zone 8, Rev 2, F.C. 1</i>	VCR Supervisor <i>Daniel Jones</i>		

	Manufacturer	Type	Batch No.
Penetrant	<i>Sherwin</i>	<i>Dublchek</i>	<i>472015</i>
Developer	<i>Sherwin</i>	<i>Dublchek</i>	<i>129 F6</i>
Remover	<i>Sherwin</i>	<i>Dublchek</i>	<i>112 C4</i>

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>08-014</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>08-015</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Liquid Penetrant
D. Payne ANII 4/23/82
 Examination Report

Customer <i>LP+L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/8</i>
Procedure <i>ISI 3.1 R.O F.C.2</i>	Examiner/Level <i>Richard D. II Robert Owen</i>		Date <i>4-23-82</i>
Component/Piping System <i>Cold leg-Reactor to R.C.P. 1A</i>	ISO Drawing No. <i>Zone 8 R.2 F.C.1</i>	VCR Supervisor <i>Daniel Jones</i>	

	Manufacturer	Type	Batch No.
Penetrant	<i>sherwin</i>	<i>Dubl-check</i>	<i>476015</i>
Developer	<i>sherwin</i>	<i>Dubl-check</i>	<i>129 F6</i>
Remover	<i>sherwin</i>	<i>Dubl-check</i>	<i>11254</i>

Weld Number	Comments	PT Results		VT Results	
		NRI	RI	SAT.	UNSAT.
<i>08-007</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>08-009</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<i>08-013</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



Don Payne ANII 3/5/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer <i>LP 16</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/8</i>
Component/Piping System <i>Pump 1A to Reactor Vessel</i>	Examiner/Level <i>David L. Johnson</i>	Date <i>2/27/82</i>	
Procedure <i>ISI 2.5 Rev 0</i>	Iso/Drawing No. <i>Zone 8 R2 FL 1</i>	VCR Supervisor <i>Donal Payne</i>	Continuation Sheet Attached [<input checked="" type="checkbox"/>] Yes [] No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>KB-Aero</i>	Size <i>.50"</i>	Cal. Block <i>UT-5</i>	
Model <i>Mark I</i>			Cal. Block <i>NA</i>	
S/N <i>05304E</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>5"</i>	
Reject <i>OFF</i>	Serial No. <i>F18164</i>		Calibration Checks	
Damp. <i>M.L.</i>	Coax. Cable <i>6' BNC to BNC</i>		<i>IN 1:20 P.M.</i>	
Freq. <i>2.0 MHz</i>	Gain <i>61 Db</i>		<i>OUT 4:20 P.M.</i>	
Rep. Rate <i>1K</i>				
Filter <i>OFF</i>				
Video <i>Norm</i>				
Couplant <i>Sonotrac 40 #8117</i>				

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
08-001	12	3.13"		08-001	8-12	3.33"	
08-001	2	3.13"		08-001	5-2	3.20"	
08-001	4	3.13"		08-001	5-4	3.27"	
08-001	6	3.13"		08-001	5-6	3.20"	
08-001	8	3.20"		08-001	5-8	3.33"	
08-001	10	3.20"		08-001	5-10	3.20"	
08-001	2-12	3.20"		08-001			
08-001	2-2	3.20"		08-002	12	3.53"	
08-001	2-4	3.20"		08-002	2	3.47"	
08-001	2-6	3.20"		08-002	4	3.40"	
08-001	2-8	3.20"		08-002	6	3.53"	
08-001	2-10	3.20"		08-002	8	3.47"	

Sketch/Identification



Ultrasonic Data Sheet
 for *Dan Payne ANII* 3/5/82
 Thickness Measurement
 Continuation Page 1 of 3

Customer <i>LPIL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/8</i>
Component/Piping System <i>Pump 1A to Reactor Vessel</i>	Examiner/Level <i>Daniel L. Johnson</i>	Date <i>2/27/82</i>	
Procedure <i>151-2.5 RO</i>	Iso/Drawing No. <i>Zone 8 R2 FL1</i>	VCR Supervisor <i>Daniel L. Johnson</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
08-002	10	3.53"		08-003LA	3"-2	3.53"	08-003LA and
08-002	2-12	3.53"		08-003LA	6"-2	3.53"	08-004LB.
08-002	2-2	3.60"		08-003LA	9"	3.53"	
08-002	2-4	3.53"		08-003LA	12"-2	3.53"	
08-002	2-6	3.53"		08-003LA	15"-2	3.53"	
08-002	2-8	3.53"					
08-002	2-10	3.53"		08-003LA	3"-5	3.53"	
				08-003LA	6"-5	3.53"	
08-002	5-12	3.20"		08-003LA	9"-5	3.53"	
08-002	5-2	3.20"		08-003LA	12"-5	3.53"	
08-002	5-4	3.20"		08-003LA	15"-5	3.53"	
08-002	5-6	3.20"					
08-002	5-8	3.20"		08-004LR	3"-W	3.47"	
08-002	5-10	3.20"		08-004LR	6"-W	3.40"	
				08-004LR	9"-W	3.40"	
08-003LA	3"-V	3.47"	Measurements were taken approx every 3 inches beginning at centerline (>) mark; for welds	08-004LR	12"-W	3.40"	
08-003LA	6"-W	3.47"		08-004LR	15"-W	3.47"	
08-003LA	9"-W	3.53"		08-004LR	18"-W	3.40"	
08-003LA	12"-W	3.47"		08-004LR	21"-W	3.47"	
08-003LA	15"-W	3.40"		08-004LR	24"-W	3.47"	

Sketch/Identification



Ultrasonic Data Sheet
 for *Don Payne ANII*
 Thickness Measurement *3/5/82*
 Continuation Page *2* of *3*

Customer <i>LP:IL</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/8</i>
Component/Piping System <i>Pump 1A to Reactor</i>	Examiner/Level <i>David L. Foltz</i>	Date <i>2/27/82</i>	
Procedure <i>151-2.5 80</i>	Iso/Drawing No. <i>3006 8 82 FC1</i>	VCR Supervisor <i>Daniel Jensen</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
08-004LB	27"-H	3.47"		08-004LB	15"-5	3.40"	
08-004LB	30"-H	3.47"		08-004LB	18"-5	3.40"	
08-004LB	33"-H	3.47"		08-004LB	21"-5	3.33"	
				08-004LB	24"-5	3.47"	
08-004LB	3"-2	3.53"		08-004LB	27"-5	3.47"	
08-004LB	6"-2	3.47"		08-004LB	30"-5	3.47"	
08-004LB	9"-2	3.40"		08-004LB	33"-5	3.47"	
08-004LB	12"-2	3.47"					
08-004LB	15"-2	3.47"		08-005	12	3.47"	
08-004LB	18"-2	3.33"		08-005	2	3.53"	
08-004LB	21"-2	3.33"		08-005	4	3.47"	
08-004LB	24"-2	3.40"		08-005	6	3.53"	
08-004LB	27"-2	3.47"		08-005	8	3.60"	
08-004LB	30"-2	3.47"		08-005	10	3.53"	
08-004LB	33"-2	3.47"					
				08-005	2-12	3.33"	
08-004LB	3"-5	3.47"		08-005	2-2	3.33"	
08-004LB	6"-5	3.47"		08-005	2-4	3.33"	
08-004LB	9"-5	3.47"		08-005	2-6	3.33"	
08-004LB	12"-5	3.40"		08-005	2-8	3.33"	

Sketch/Identification



Ultrasonic Data Sheet
 for *Don Payne ANEI*
 Thickness Measurement *3/5/82*
 Continuation Page 3 of 3

Customer <i>LP 14</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1/8</i>
Component/Piping System <i>Pump 1A to Reactor</i>	Examiner/Level <i>Daniel J. Jensen II</i>	Date <i>3/27/82</i>	
Procedure <i>ISI-2.5 R0</i>	Iso/Drawing No. <i>Zone 8 R2 FL1</i>	VCR Supervisor <i>Daniel Jensen</i>	

Examination Results

Weld Number	Meas. Point	Thick. Reading	Remarks	Weld Number	Meas. Point	Thick. Reading	Remarks
<i>08-005</i>	<i>2-10</i>	<i>3.32"</i>					
<i>08-005</i>	<i>5-12</i>	<i>3.53"</i>					
<i>08-005</i>	<i>5-2</i>	<i>3.60"</i>					
<i>08-005</i>	<i>5-4</i>	<i>3.60"</i>					
<i>08-005</i>	<i>5-6</i>	<i>3.53"</i>					
<i>08-005</i>	<i>5-8</i>	<i>3.53"</i>					
<i>08-005</i>	<i>5-10</i>	<i>3.53"</i>					

Sketch/Identification



The
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Ultrasonic Examination Report *D. Payne ANIL 4/21/82*

Customer LP&L		Plant WATERFORD	Unit 3	Loop/Zone 1 8	Iso/Drawing No. ZONE 8 R-2 F.C. 1	
Procedure ISI 2.3 RO FC. 1	Exam Surface O.D.	Examiner/Level Nary Longenecker II		VGR Supervisor <i>Dennis Johnson</i>		Date 4-23-82
Component/Piping System COLD LEG PUMP 1A TO R.V.		Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. 8119	

Continuation Sheet Attached
 Yes No

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

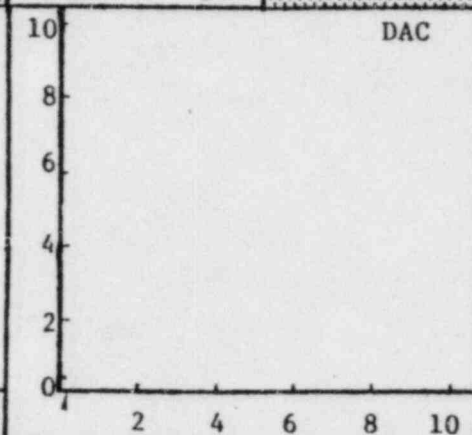
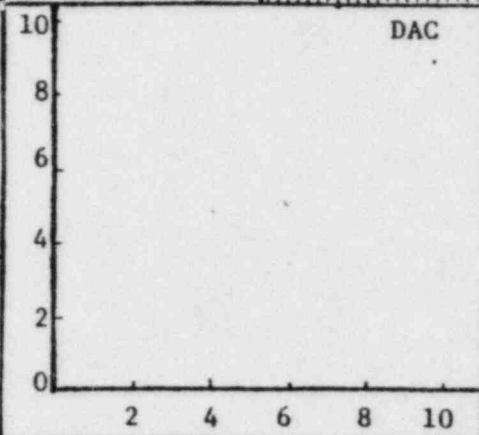
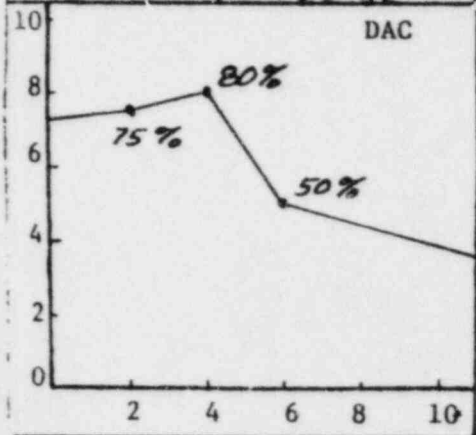
	Transducer	0°	45°	60°	Instrument			
	S/N	98808	NA	NA	Mfr.	SONIC	Model	MARK I
	Size	1.0" dia.			S/N	3709E	RepRate	1K
	Frequency	2.25 MHz			Reject	OFF	Filter	H1
	Beam Angle	0°			Damp	MIN.	Coax	12'

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	75%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	8:50	12:30	NA	NA	NA	NA
1/2 T	80%	4.0														
3/4 T	50%	6.0														
1 T	NA	8.9														
Ref. dB		36 db														



Additional Comments/Sketch



D. Payne ANII 4/27/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1 8
Component/Piping System COLD LEG PUMP 1A TO R.V.		Examiner/Level <i>Navy Longmiller II</i>	Date 4-23-82
Procedure I.S.I. 2.5 R-O F&A	Iso/Drawing No. GL. ZONE 8 R-2 FC.1	VCR Supervisor <i>Denise Jones</i>	Continuation Sheet Attached [<input checked="" type="checkbox"/>] Yes [] No

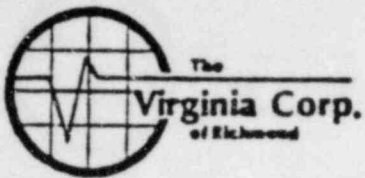
Equipment

Instrument		Transducer		Calibration
Mfgr. SONIC	Mfgr. PANAMETRICS	Size 1.0" DIA.	Cal. Block UT-6	
Model MARK I			Cal. Block	
S/N 03704E	Freq. 2.25 MHz.		Range Cal. 4.167"	
Reject OFF			Calibration Checks	
Damp. MIN.	Serial No. 48808		8:50 CAL. IN	
Freq. 2 MHz.			12:30 CAL. OUT	
Rep. Rate 1K	Coax. Cable 12'		1:45 CAL. IN	
Filter H1			4:10 CAL. OUT	
Video NORM	Gain 36 dB			
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
08-010LA	1'	3.375	3.292	3.333	08-010LA	13'	3.417	3.292	3.333
08-010LA	2'	3.292	3.292	3.333	08-010LA	14'	3.250	3.292	3.292
08-010LA	3'	3.333	3.292	3.292	08-011LB	1'	3.292	3.333	3.292
08-010LA	4'	3.417	3.292	3.292	08-011LB	2'	3.333	3.292	3.292
08-010LA	5'	3.375	3.292	3.333	08-011LB	3'	3.375	3.292	3.292
08-010LA	6'	3.375	3.333	3.292	08-011LB	4'	3.375	3.292	3.292
08-010LA	7'	3.333	3.292	3.292	08-011LB	5'	3.333	3.333	3.292
08-010LA	8'	3.292	3.292	3.292	08-011LB	6'	3.375	3.333	3.292
08-010LA	9'	3.375	3.292	3.292	08-011LB	7'	3.292	3.292	3.292
08-010LA	10'	3.375	3.333	3.250	08-011LB	8'	3.250	3.292	3.292
08-010LA	11'	3.333	3.292	3.333	08-011LB	9'	3.292	3.292	3.250
08-010LA	12'	3.375	3.292	3.292	08-011LB	10'	3.250	3.292	3.208

Sketch/Identification



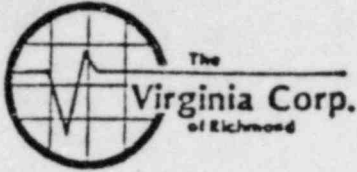
Ultrasonic Data Sheet
 for D. Payne ANII 4/27/82
 Thickness Measurement
 Continuation Page 2 of 2

Customer <u>LP & L</u>	Plant <u>WATERFORD</u>	Unit <u>3</u>	Loop/Zone <u>1 8</u>
Component/Piping System <u>COLD LEG PUMP 1A TO R.V.</u>		Examiner/Level <u>Nary Hongenecker II</u>	Date <u>4-23-82</u>
Procedure <u>I.S.I. 2.5 R-0</u>	Iso/Drawing No. <u>ZONE 8 R-2 F.C. 1</u>	VGR Supervisor <u>Donal Jones</u>	

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
<u>08-011LB</u>	<u>11'</u>	<u>3.292</u>	<u>3.292</u>	<u>3.333</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>08-011LB</u>	<u>12'</u>	<u>3.250</u>	<u>3.292</u>	<u>3.333</u>					
<u>08-011LB</u>	<u>13'</u>	<u>3.333</u>	<u>3.292</u>	<u>3.292</u>					
<u>08-011LB</u>	<u>14'</u>	<u>3.333</u>	<u>3.292</u>	<u>3.292</u>					

Sketch/Identification



P. Payne ANII-4-27-82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1 8
Component/Piping System COLD LEG PUMP 1A TO R.V.		Examiner/Level <i>Dary Longenecker II</i>	Date 4-23-82
Procedure I.S.I. 2.5 R-0	Iso/Drawing No. ZONE 8 R2 FC.1	VCR Supervisor <i>Daniel Johnson</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. SONIC	Mfgr. KB AEROTECH	Size .5"	Cal. Block UT-6	
Model MARK I			Cal. Block	
S/N 01610E	Freq. 2.25 MHZ.	Range Cal. 4.167"		
Reject OFF			Calibration Checks	
Damp. MIN.	Serial No. J02172			
Freq. 2. MHZ.	Coax. Cable 12'	9:00 CAL. IN.		
Rep. Rate 1K			12:35 CAL. OUT	
Filter H1	Gain 25 db	1:45 CAL. IN		
Video NORM			4:15 CAL. OUT	
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
08-008	12	3.750	NA	3.250	NA	NA	NA	NA	NA
08-008	2	3.458		3.042					
08-008	4	3.750		3.208					
08-008	6	3.417		3.292					
08-008	8	3.750		3.292					
08-008	10	3.792		3.417					

Sketch/Identification

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Ultrasonic Examination Report *D. Payne* **ANIE 4/27/82**

Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1 B	Iso/Drawing No. ZONE 8 R-2 F.C.1
Procedure ISI. 2.3 RO FC1	Exam Surface O.D.	Examiner/Level Nary Longenack II	VGR Supervisor Dennis [Signature]	Date 4-23-82
Component/Piping System COLD LEG PUMP 1B TO R.V.	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 42 Batch No. 8119

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No

If Yes, Number **F.C. 1**

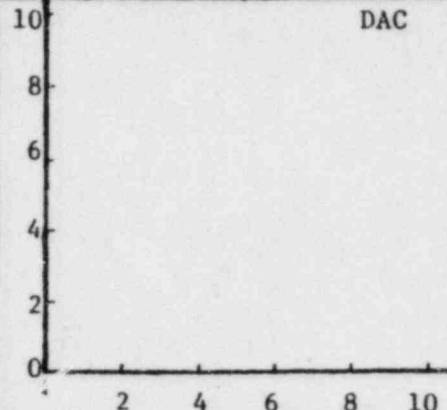
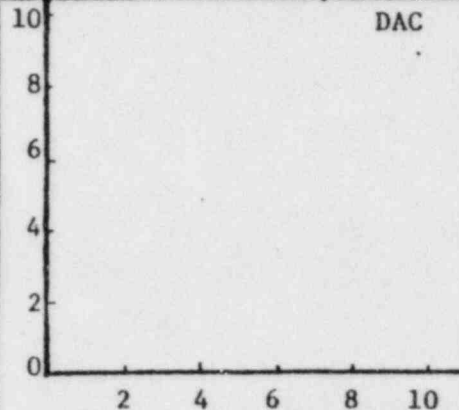
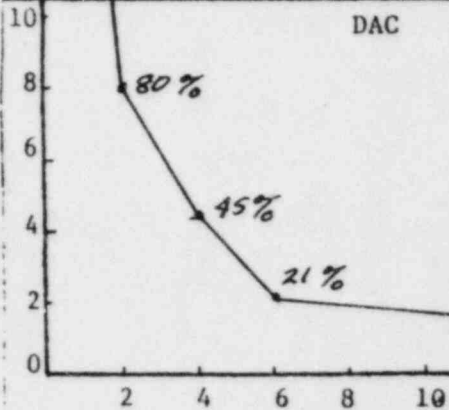
Transducer	0°	45°	60°	Instrument			
S/N	J02172	NA	NA	Mfr.	SONIC	Model	MARK 1
Size	.5" DIA.			S/N	01610E	RepRate	1K
Frequency	2.25 MHz			Reject	OFF	Filter	H1
Beam Angle	0°			Damp	MIN.	Coax	12'
				Freq.	2 MHz	Video	NORM

Calibration 0°

2 & 5 Scan

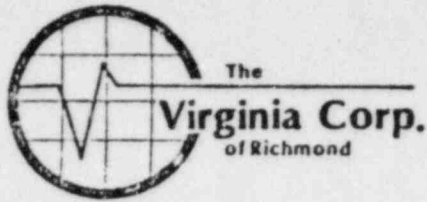
7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
											In	Out	In	Out	In	Out
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA	9:00	12:35	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															



Additional Comments/Sketch

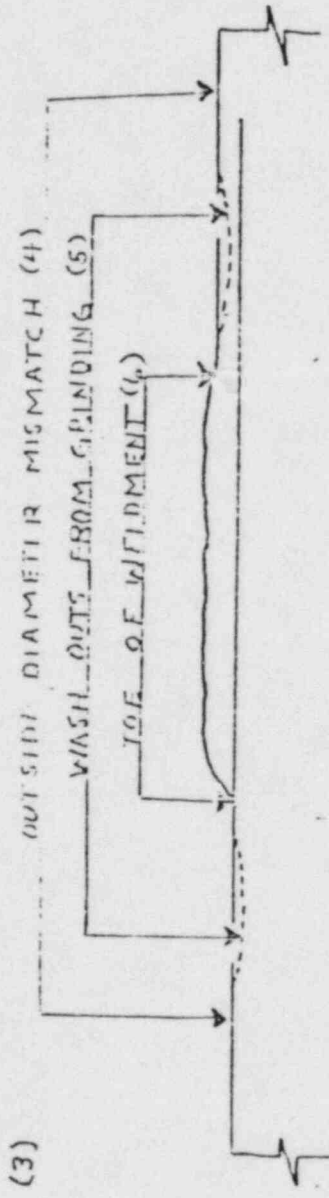
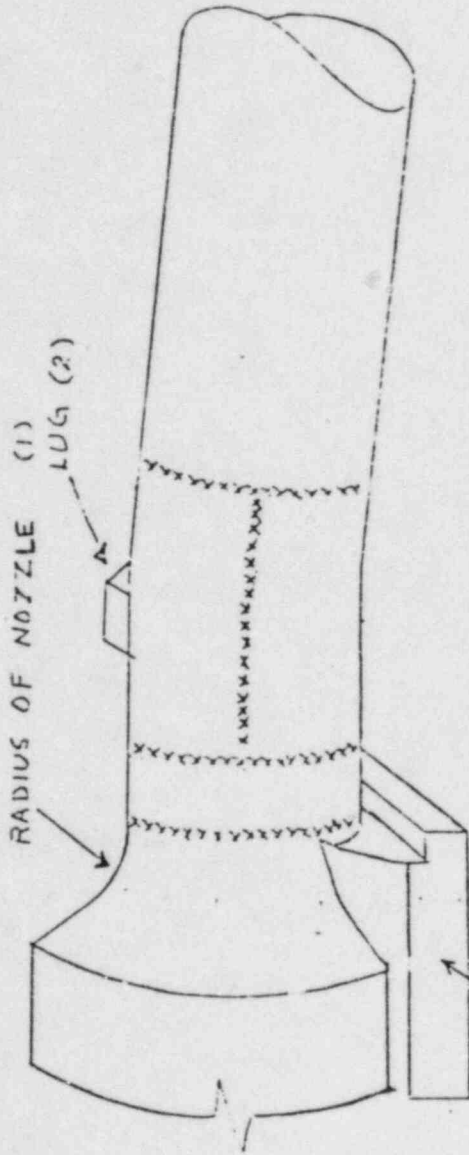
R. Payne ANEI 4/27/82

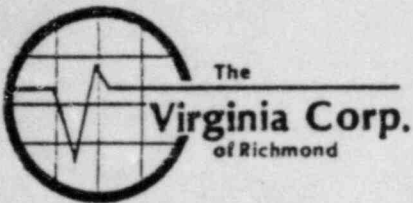


Ultrasonic Examination Report - Continuation Sheet Page 2 of 5

Customer <i>LP&L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/ Zone <i>1 8</i>	Iso/Drawing No. <i>ZONE 8 R-2 F.C.1</i>		
Procedure <i>ISI 2.3 R.O.F.C.I</i>		Exam Surface <i>O.D.</i>	Examiner/Level <i>Gary Longentake J.E.</i>		VCR Supervisor <i>Dani Jensen</i>	Date <i>4-23-82</i>
Component/Piping System <i>COLD LEG PUMP IB TO R.V.</i>		Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-6</i>	Couplant: Type & Batch # <i>SONOTRACE 40 8119</i>	

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>08-001</i>	<i>NA</i>	<i>PAR</i>	<i>NA</i>	<i>NA</i>	<i>PAR</i>	<i>SEE ATTACHED SHEET</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>08-002</i>		<i>PAR</i>				<i>SEE ATTACHED SHEET</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>08-003A</i>		<i>YES</i>				<i>✓ 6L</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>08-004B</i>		<i>YES</i>					<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>08-005</i>		<i>PAR</i>				<i>SEE ATTACHED SHEET</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	
<i>08-008</i>		<i>PAR</i>				<i>SEE ATTACHED SHEET</i>	<i>CLEAN</i>	<i>GROUND</i>	<i>NI</i>	<i>SAT.</i>	





Date 4-23-82

Page 4 of 5

To: _____

Subject INSPECTION LIMITATIONS
ZONE 8

WELD NO. 08-001 BASE METAL SCAN WAS TOTALLY OBSTRUCTED
BY CONDITION 3 ON THE 5 SIDE FROM 36" TO 75",
AND OBSTRUCTED BY CONDITION 1 FOR ONLY
2" OF BASE METAL ON THE 5 SIDE FOR THE
REST OF THE CIRCUMFERENCE.

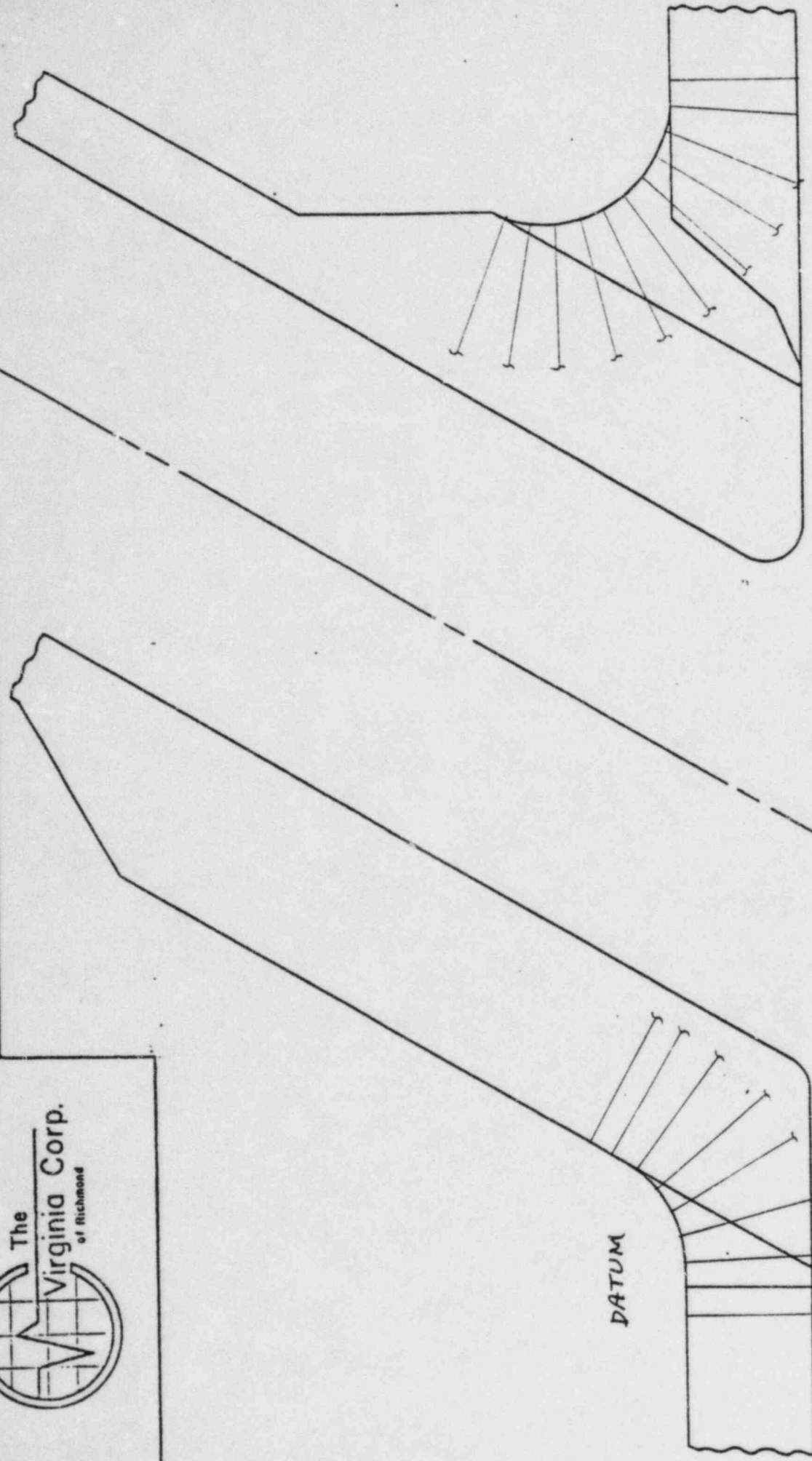
0° SCAN THE HAZ. ON THE 5 SIDE WAS
OBSTRUCTED BY CONDITION 3 FROM 36" TO 75".

WELD NO. 08-002 BASE METAL SCAN WAS OBSTRUCTED BY
CONDITION 3 ON THE 5 SIDE TO ONLY 6" OF
BASE METAL FROM 36" TO 75". AND OBSTRUCTED
BY CONDITION 2 ON 2 SIDE TO ONLY 7" BASE
METAL FROM 59" TO 69" AND FROM 108" TO 113".

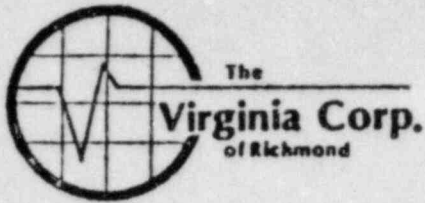
WELD NO. 08-005 BASE METAL SCAN WAS OBSTRUCTED BY
CONDITION 2 ON THE 5 SIDE TO ONLY 7"
BASE METAL FROM 59" TO 69" AND FROM 108"
TO 113".

WELD NO. 08-008 BASE METAL SCAN ON 2 SIDE RUNS OFF
SCREEN BECAUSE NOZZLE IS APPROX 5" THICK
0° SCAN RUNS OFF SCREEN BECAUSE OF
RADIUS, OPPOSITE DATUM SIDE, CAUSING INCREASED
METAL PATH AND NOZZLE THICKNESS
SEE ATTACHED SHEET 4 OF 4

Signed Larry Longenecker



WELD NO. 08-008



Ultrasonic Examination Report

D. Payne ANII 4/27/82

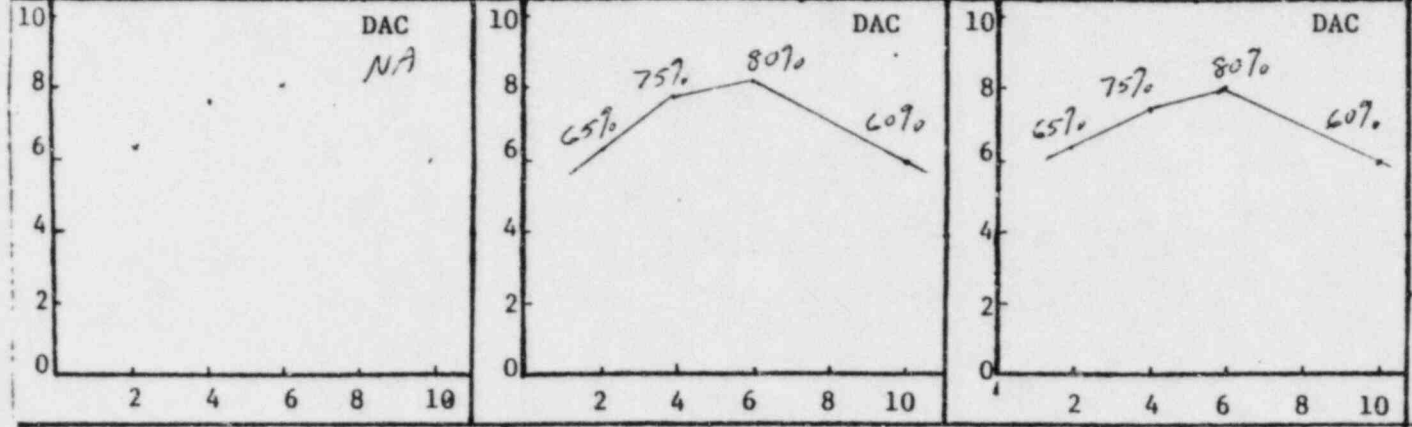
Customer <i>LP AND L</i>		Plant <i>WATERFORD</i>		Unit <i>3</i>	Loop/Zone <i>1A/8</i>	Iso/Drawing No. <i>ZONE 8, REV 2, F.C. 1</i>	
Procedure <i>EST 2.3, REV 0, F.C. 1</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>CRP/II</i>		VGR Supervisor <i>Kevin Jensen</i>		Date <i>4-23-82</i>	
Component/Piping System <i>COLD LEG REACTOR VESSEL TO RCP 1A</i>		Pipe Size <i>36"</i>	Weld Type <i>BUTT</i>		Cal. Block <i>UT-6</i>	Couplant: <i>SONOTRACE</i> Type <i>40</i> Batch No <i>8119</i>	

Continuation Sheet Attached
 Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N <i>NA</i>	<i>L19139</i>	<i>NA</i>	Mfr. <i>SONIC</i>	Model <i>ETS MARK I</i>		
	Size <i>1"</i>			S/N <i>05304E</i>	RepRate <i>200</i>		
	Frequency <i>2.25 MHz</i>			Reject <i>OFF</i>	Filter <i>HI</i>		
Beam Angle <i>44.5°</i>			Damp <i>MIN</i>	Coax <i>12'</i>			
Freq. <i>2</i>			Video <i>NORM</i>				

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4 T</i>	<i>NA</i>	<i>NA</i>	<i>65</i>	<i>2.0</i>	<i>5/8</i>	<i>1 3/32 1 3/16</i>	<i>65</i>	<i>2.0</i>	<i>5/8</i>	<i>1 3/32 1 3/16</i>	<i>NA</i>	<i>NA</i>	<i>1345</i>	<i>1615</i>	<i>NA</i>	<i>NA</i>
<i>1/2 T</i>			<i>75</i>	<i>4.0</i>	<i>1 2 1/32</i>	<i>1 1/2 1 3/32</i>	<i>75</i>	<i>4.0</i>	<i>1 2 1/32</i>	<i>1 1/2 1 3/32</i>						
<i>3/4 T</i>			<i>80</i>	<i>6.0</i>	<i>2 9/16</i>	<i>2 5/16 2 3/4</i>	<i>80</i>	<i>6.0</i>	<i>2 9/16</i>	<i>2 5/16 2 3/4</i>						
<i>5/4 T</i>			<i>60</i>	<i>10.0</i>			<i>60</i>	<i>10.0</i>								
Ref. dB			<i>60</i>				<i>60</i>									



Additional Comments/Sketch

R. Payne ANEI 4/23/82



Ultrasonic Examination Report - Continuation Sheet

Customer LP AND L	Plant WATERFORD	Unit 3	Loop/ Zone 1A/ 8	Iso/Drawing No. ZONE 8, REV 2, F.C. 1
Procedure ISE 2.3, REV D, F.C. 1	Exam Surface O.P.	Examiner/Level CR Stamp/II	VCR Supervisor Dennis Jensen	Date 4-23-82
Component/Piping System COLD LEG REACTOR VESSEL TO RCP 1A	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch # SONOTRACE 43 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	
08-001	NA	YES	PAR	YES	NA	SEE ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
08-002	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
08-003LA	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
08-004LB	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
08-005	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
08-010LA	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	
08-011LB	NA	YES	YES	YES	NA		CLEAN	SMOOTH	NI	SAT	



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Date 4-23-82

Page 3 of 5

To: _____

Subject ZONE 8, LOOP 1A,
WELD 08-001 ATTACHMENT
SHEET.

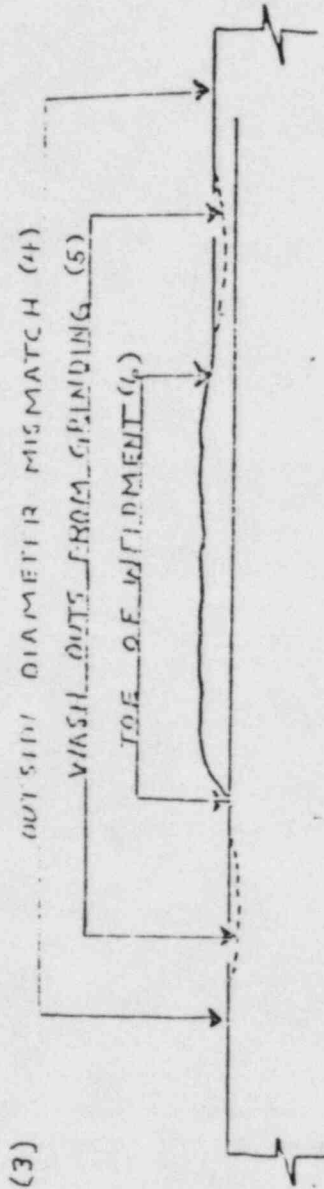
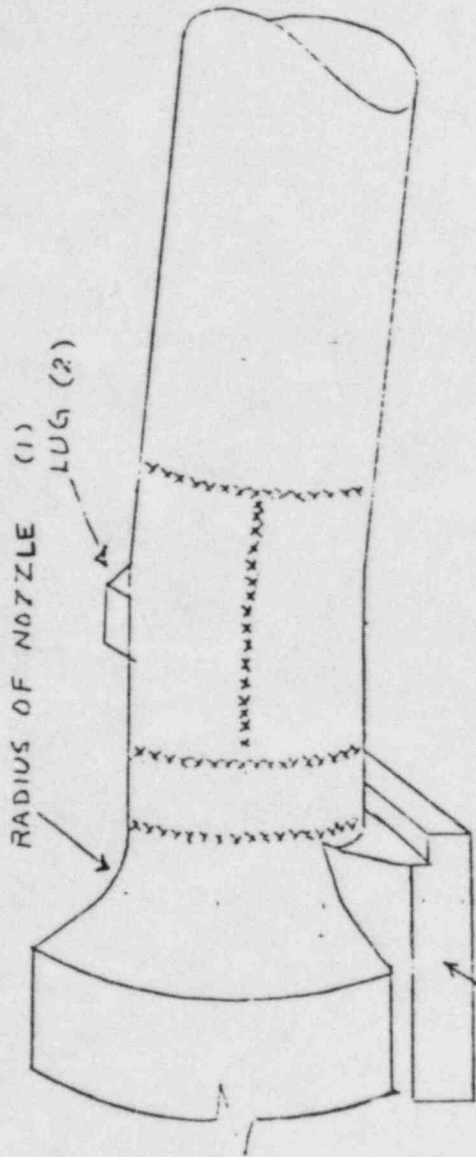
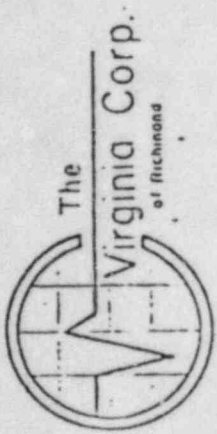
THE 5 SCAN OF WELD 08-001 IS LISTED AS A
PARTIAL SCAN DUE TO GEOMETRY.

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

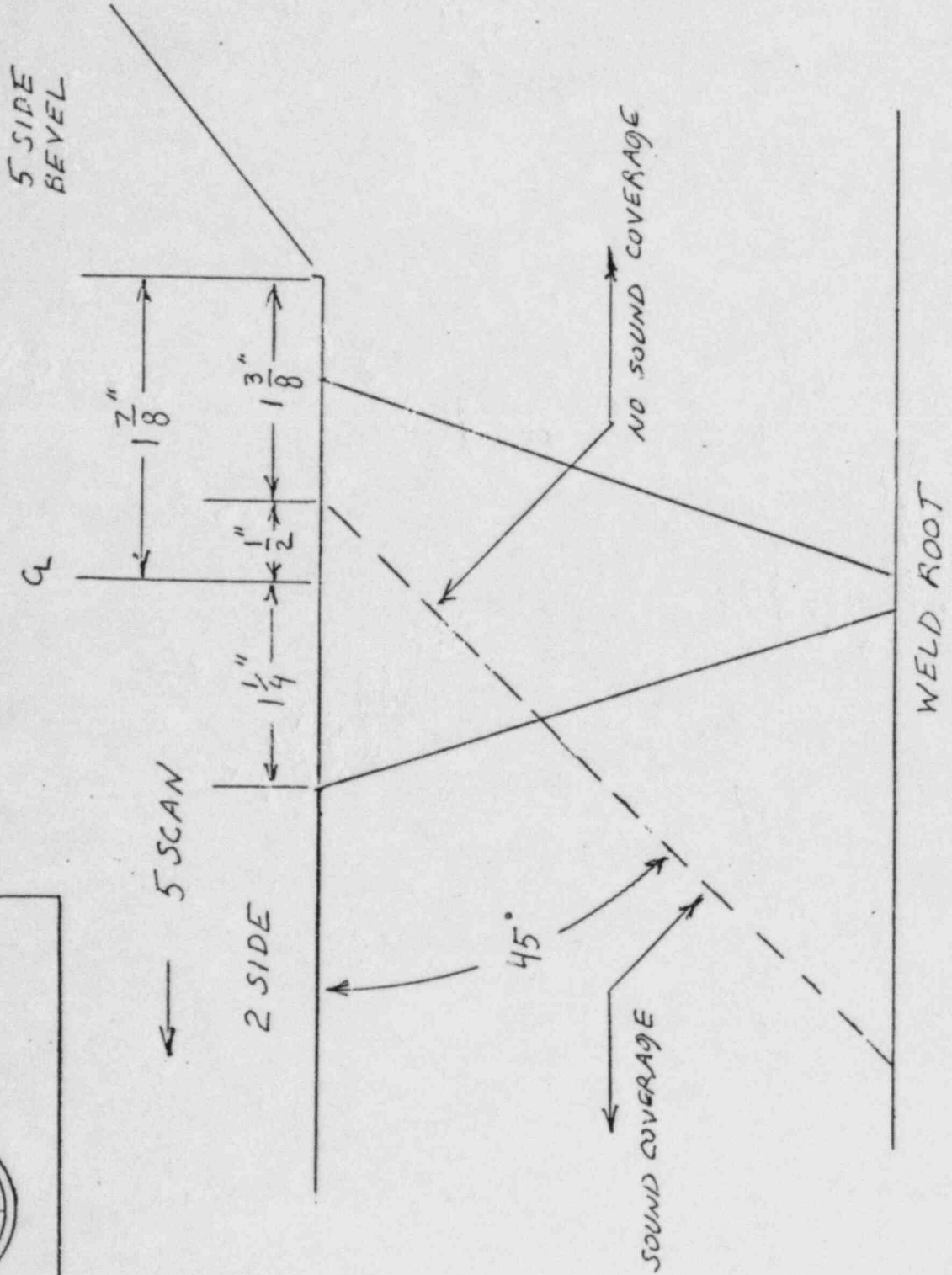
THE SOUND COVERAGE ACHIEVED IS GRAPHICALLY
ILLUSTRATED ON PAGE 5.

Signed

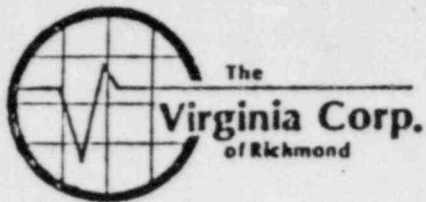
CR [Signature]



WELD 08-001



11



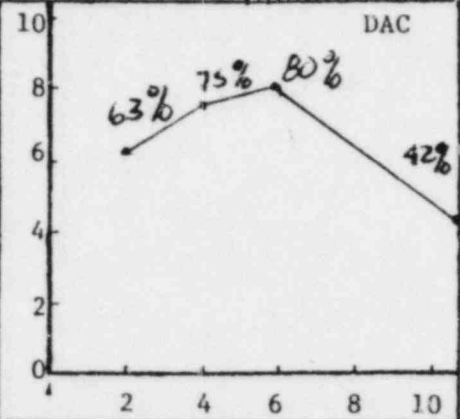
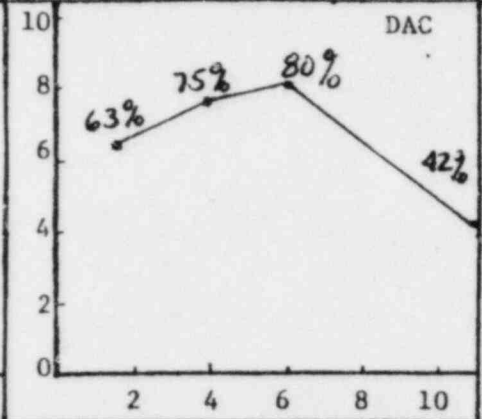
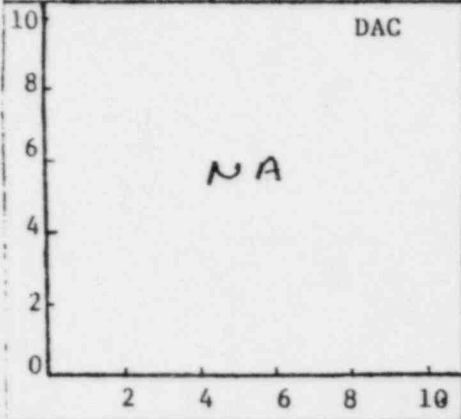
Ultrasonic Examination Report *D. Payne ANZI 4/27/82*

Customer LPEL		Plant WATERFORD		Unit 3	Loop/Zone 1A/8	Iso/Drawing No. 8 R.2 FC.1	
Procedure ISI 2.3 R.O FC1		Exam Surface 00	Examiner/Level <i>Richard DeLo II</i>		VER Supervisor <i>Daniel Jones</i>		Date 4 23 82
Component/Piping System Cold leg RCP1A to Reactor			Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type SONDRACE 40 Batch No. 8119	

Continuation Sheet Attached
 Yes No

Field Changes: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, Number 1	Transducer			Instrument				
	S/N	0°	45°	60°	Mfr.	SONIC	Model	MARK 1
	Size	NA	NA	L19801	S/N	780836	RepRate	1K
	Frequency			1"	Reject	OFF	Filter	OFF
	Beam Angle			2.25 MHz	Damp	MIN.	Coax	12'
				60°45' HD	Freq.	2 MHz	Video	NORM

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
						NA	NA				NA	NA	10:30	11:50						
1/4 T	NA	NA	63	2	1 9/32"	1 1/8"	1 1/8"	63	2	1 4/32"	1 1/8"	1 1/8"								
1/2 T			75	4	3 5/32"	2 7/8"	3 5/8"	75	4	3 5/32"	2 7/8"	3 5/8"								
3/4 T			80	6	4 25/32"	4 1/2"	5 1/8"	80	6	4 25/32"	4 1/2"	5 1/8"								
5/4 T			42	10				42	10											
Ref. dB			55					55												



Additional Comments/Sketch

D. Payne ANIE 4/23/82

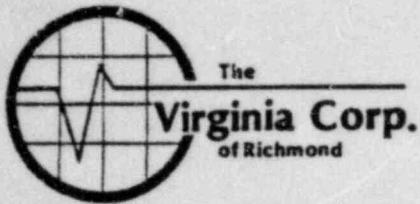


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Ultrasonic Examination Report - Continuation Sheet Page of

Customer LPEL	Plant WATERFORD	Unit 3	Loop/ Zone 1A/B	Iso/Drawing No. 8 R.2 FC.1
Procedure ISI 2.3 R.U FC.1	Exam Surface OD	Examiner/Level Richard W. De III	VCR Supervisor Daniel Jensen	Date 4-23-82
Component/Piping System Cold Leg RCP 1A To Reactor	Pipe Size 36"	Weld Type BUTT	Cal. Block UT 6	Couplant: Type & Batch # SONTRACE 40 BATCH #9114

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
08-001	NA	Yes	PAR	Yes	NA	Sec ATTACHMENT	CLEAN	SMOOTH	NI	SAT	
08-002		Yes	Yes	Yes			CLEAN	SMOOTH	NI	SAT	
08-003A		Yes	Yes	Yes			CLEAN	SMOOTH	NI	SAT	
08-004B		Yes	Yes	Yes			CLEAN	SMOOTH	NI	SAT	
08-005		Yes	Yes	Yes			CLEAN	SMOOTH	NI	SAT	
08-010LA		Yes	Yes	Yes			CLEAN	SMOOTH	NI	SAT	
08-011LB		Yes	Yes	Yes			CLEAN	SMOOTH	NI	SAT	



Date 4-23-82

Page 3 of 5

To: _____

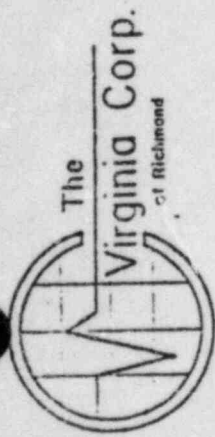
Subject Zone 8 Loop 1A
Weld 08-001 Attachment sheet

The S scan of weld 08-001 is listed as a partial scan due to OD geometry

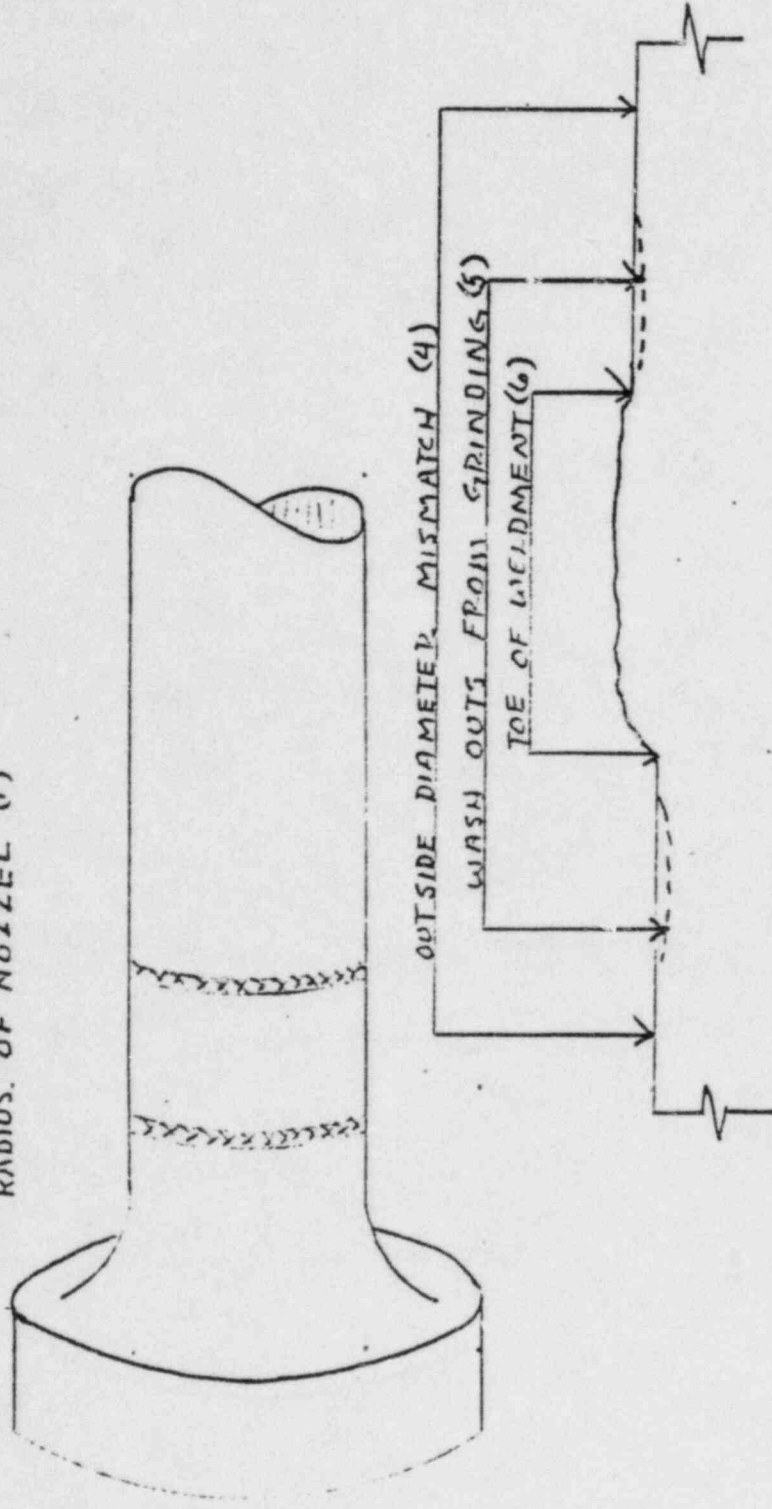
Reference note (1) of page 4 attached, indicating a nozzle bevel area adjacent to the weld

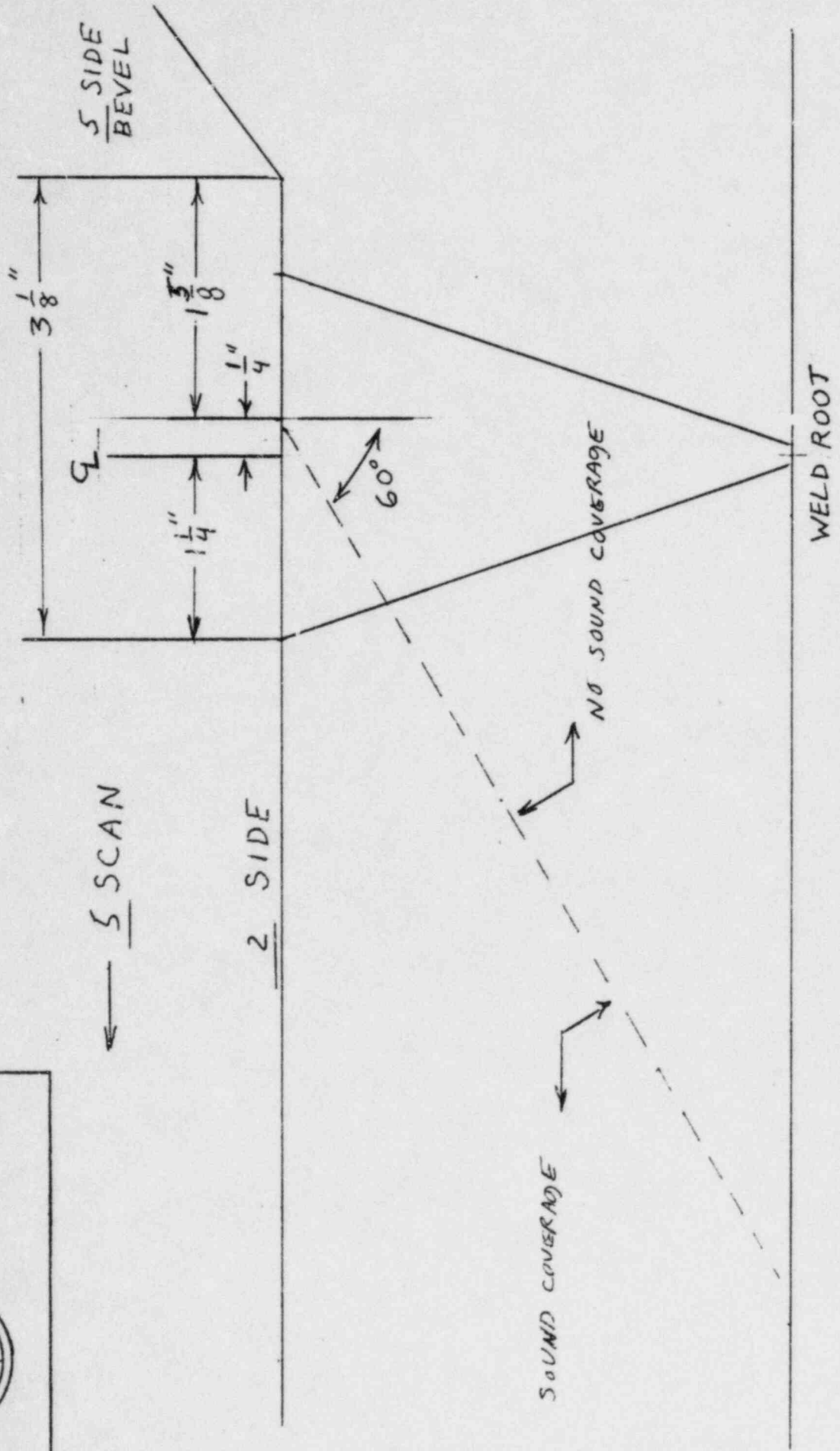
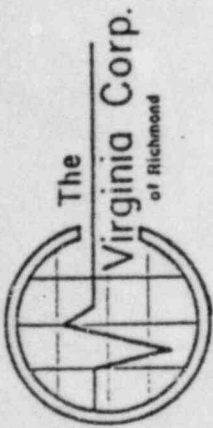
the sound coverage achieved is graphically illustrated on page 5

Signed Richard D. [Signature]



RADIUS OF NOZZEL (1)







Ultrasonic Examination Report

D. Payne ANII 4/27/82

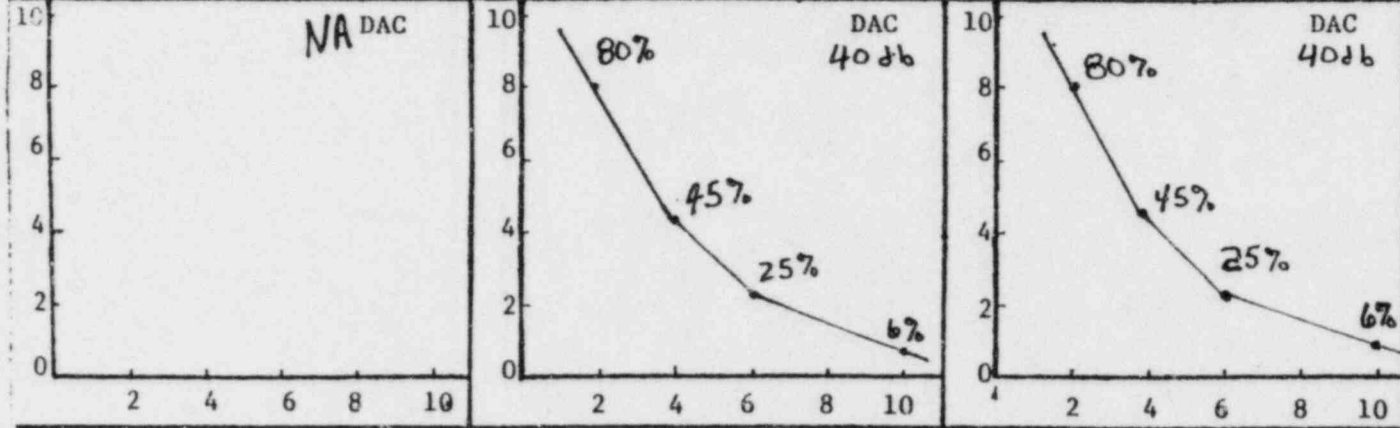
Customer LPCL		Plant Waterford		Unit 3	Loop/Zone 1A/8	Iso/Drawing No. Zone B, Rev 2, F.C. 1	
Procedure ISI-2.3 Rev. F.C. 1		Exam Surface O.D.		Examiner/Level <i>CRB/ANII</i>		VGR Supervisor <i>David Jensen</i>	
Component/Piping System Cold Leg Reactor Vessel to RCP 1A		Pipe Size 36"		Weld Type Butt		Date 4-24-82	
				Cal. Block UT-6		Couplant: Sonotrace Type 40 Batch No. 2119	

Continuation Sheet Attached
 Yes No

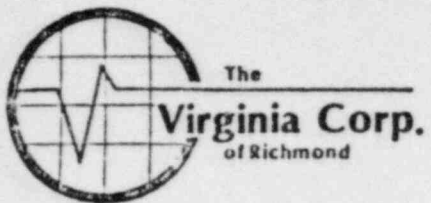
Field Changes:
 Yes No
 If Yes, Number **F.C. 1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	G07150	NA	Mfg.: Sonic	Model	FTS Mark I	
		1/2"		S/N: 05304E	RepRate	200	
		225 MHz		Reject: Min	Filter	OFF	
	45°			Damp: Min	Coax	6'	
				Freq.: 2 MHz	Video	Diff	

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			0°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
1/4T	NA	NA	80%	1.8	1 5/16	1 3/16	1 1/16	80%	1.8	1 5/16	1 3/16	1 1/16	NA	NA	0930	1250	NA	NA		
1/2T			45%	4.0	1 29/32	1 15/16	1 21/32	45%	4.0	1 29/32	1 15/16	1 21/32								
3/4T			25%	6.0	2 13/16	2 11/16	2 3/8	25%	6.0	2 13/16	2 11/16	2 3/8								
5/4T			6%	10.0				6%	10.0											
Ref. dB	↓	↓	40 db					40 db					↓	↓	↓	↓	↓	↓		



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet

Page 2 of 7

D. Payne ANEI 4/7/82

Customer LPEL	Plant Waterford	Unit 3	Loop/Zone 1A/8	Iso/Drawing No. Zone 8, Rev 2, F.C. 1
Procedure ISI-2.3, Rev 0, FCI	Exam Surface O.D	Examiner/Level CSB/AA		VCR Supervisor Daniel Jensen
Date 4-24-82		Cal. Block UT-6		Couplant: Type & Batch # Sensotrace 40 Batch 8119
Component/Piping System Cold Leg Reactor Vessel to RCP 1A	Pipe Size 36"	Weld Type Butt		

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
08-006	NA	NO	PAR	Yes	NA		Clean	Smooth	NI	SAT	
08-008	NA	PAR	PAR	Yes	NA		Clean	Smooth	NI	SAT	
08-012	NA	NO	PAR	Yes	NA		Clean	Smooth	NI	SAT	



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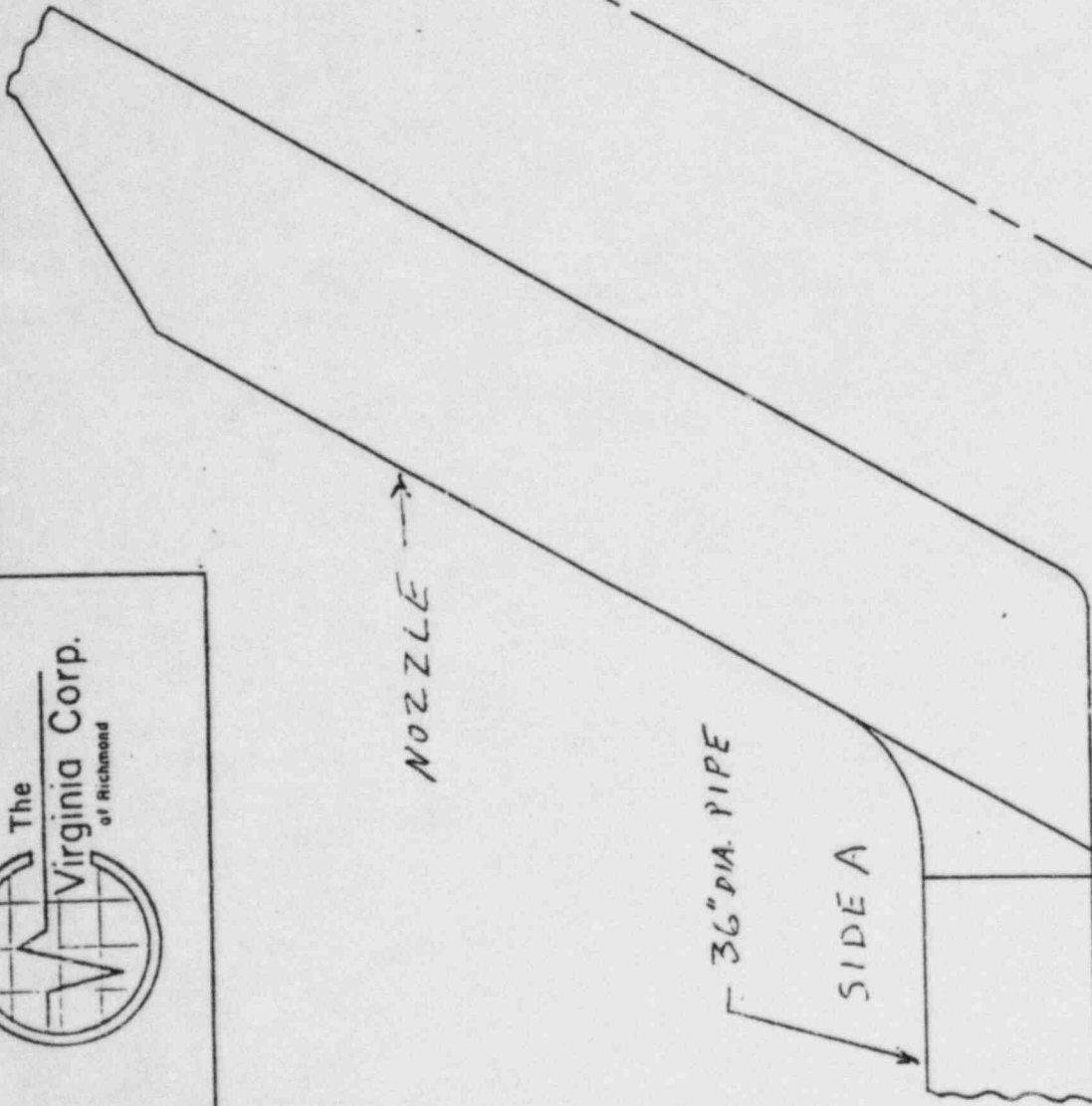
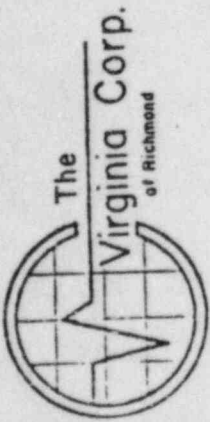
Page 3 of 7

To: _____

Subject SOUND COVERAGE
LIMITATIONS

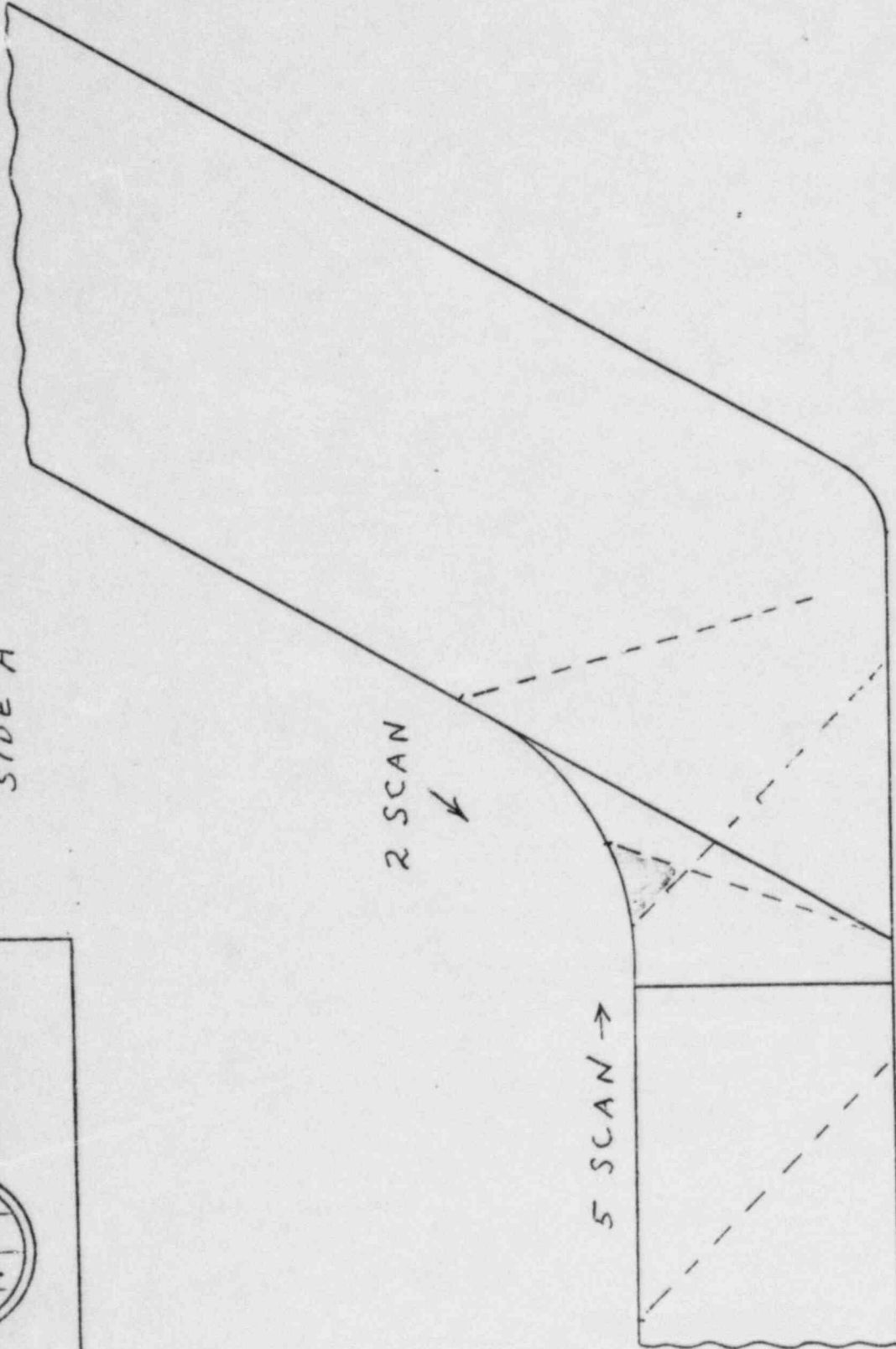
THE NOZZLE WELDMENTS IN THIS LOOP
HAVE A RADIUS WHICH CAUSES THE TRANSDUCER
TO LIFT OFF NEAR THE CENTER OF THE
RADIUS AND THUS LOSE SOUND ENTRY. THIS IS
PARTICULARLY TRUE FOR THE 2 AND 5 SCAN
AND IS GRAPHICALLY ILLUSTRATED IN THE
ATTACHED SKETCHS. THE ESTIMATED LACK
OF SOUND COVERAGE AREAS ARE SHADED.

Signed CR [Signature]



ULTRASONIC SUPPLEMENTAL DATA SHEET

WELD 08-008
45°
SIDE A

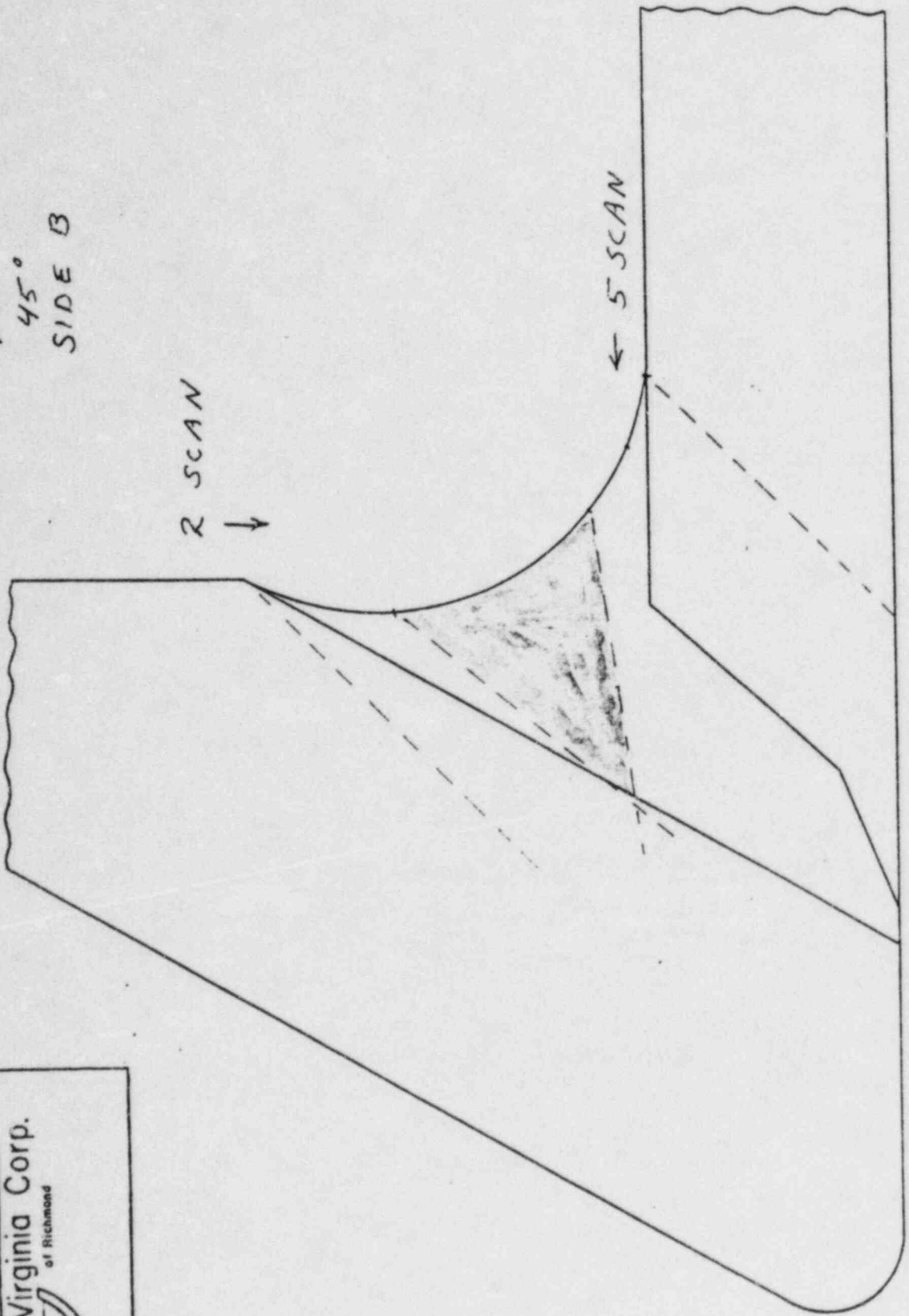
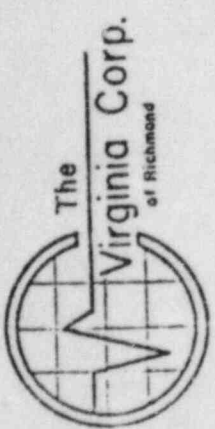


WELD ROOT

2 SCAN ↙

5 SCAN →

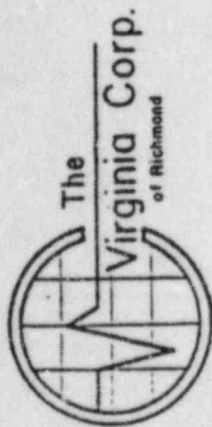
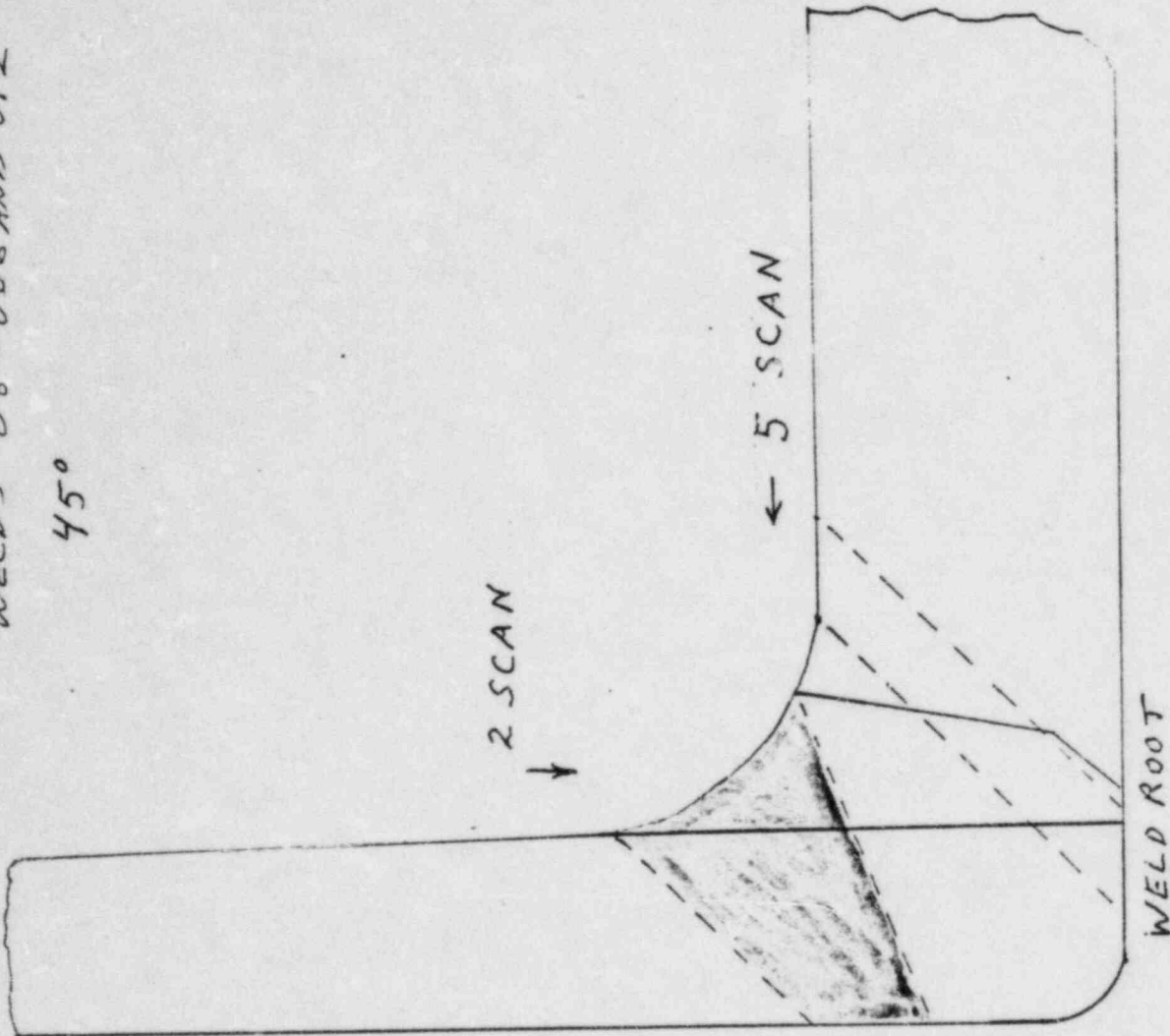
WELD 08-008
45°
SIDE B



WELD ROOT

WELDS 08-006 AND 012

45°



Ultrasonic Examination Report *D. Payne ANSI* 4/27/82



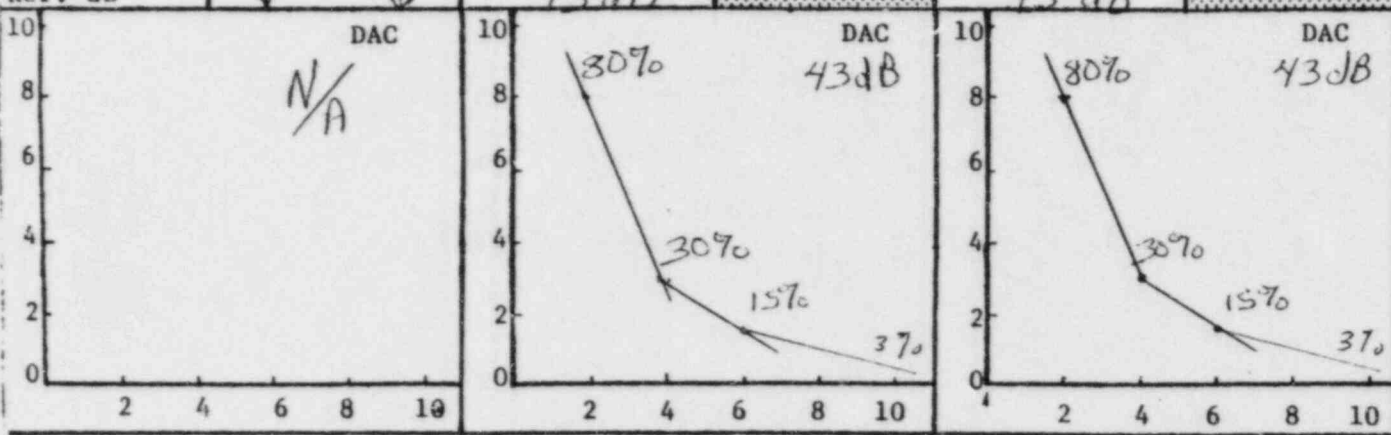
Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1A/8	Iso/Drawing No. Zone 8 Rev 2, F.C.1
Procedure Rev 0 ISI 2.3 F.C.1	Exam Surface OD	Examiner/Level CR Salt II	VCR Supervisor Marie Jensen	Date 4-24-82
Component/Piping System Cold leg - R.V. to R.C.P. 1A	Pipe Size 36"	Weld Type Butt	Cal. Block UT-6	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

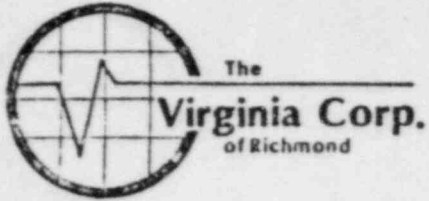
Field Changes:
 Yes No
 If Yes, Number **1**

Transducer S/N Size Frequency Beam Angle	0°	45°	60°	Instrument			
	NA	NA	F18164	Mfr.	Sonic	Model	FTSMWKE
			.50"	S/N	01610E	RepRate	200
			2.25Mhz	Reject	OFF	Filter	H.
	✓	✓	60°	Damp	Min	Coax	6'
				Freq.	2 Mhz	Video	Norm

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1 3/16	1 3/16	80%	2.0	1 3/16	1 3/16	NA	NA	NA	NA	0950	1275
1/2 T			30%	4.0	3	2 3/4	30%	4.0	3	2 3/4						
3/4 T			15%	6.0	4 9/16	4 9/16	15%	6.0	4 9/16	4 9/16						
3/4 T			3%	10.0			3%	10.0								
Ref. dB	✓	✓	43 dB				43 dB									



Additional Comments/Sketch



D. Payne ANE 4/2/82

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 7

Customer LP+L	Plant Waterford	Unit 3	Loop/Zone 1A/8	Iso/Drawing No. Zone 8 Reel 2 F.C.1	
Procedure Revo TST 2.3 F.C.1	Exam Surface OD	Examiner/Level CR Smith II		VCR Supervisor Daniel Jensen	Date 4-24-82
Component/Piping System Cold leg - R.V. to R.C.P. 1A	Pipe Size 36"	Weld Type Butt	Cal. Block	Couplant: Type & Batch # UT-6 Sonotrace 40/B.#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	
08-006	NA	No	Par	yes	NA		clean	smooth	NI	Sat	
08-008	NA	Par	Par	yes	NA		clean	smooth	NI	Sat	
08-012	NA	No	P.C.	yes	NA		clean	smooth	NI	Sat	



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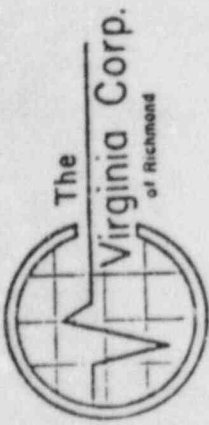
Page 3 of 7

To: _____

Subject SOUND COVERAGE
LIMITATIONS

THE NOZZLE WELDMENTS IN THIS LOOP
HAVE A RADIUS WHICH CAUSES THE TRANSDUCER
TO LIFT OFF NEAR THE CENTER OF THE
RADIUS AND THUS LOSE SOUND ENTRY. THIS IS
PARTICULARLY 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 Stumpf

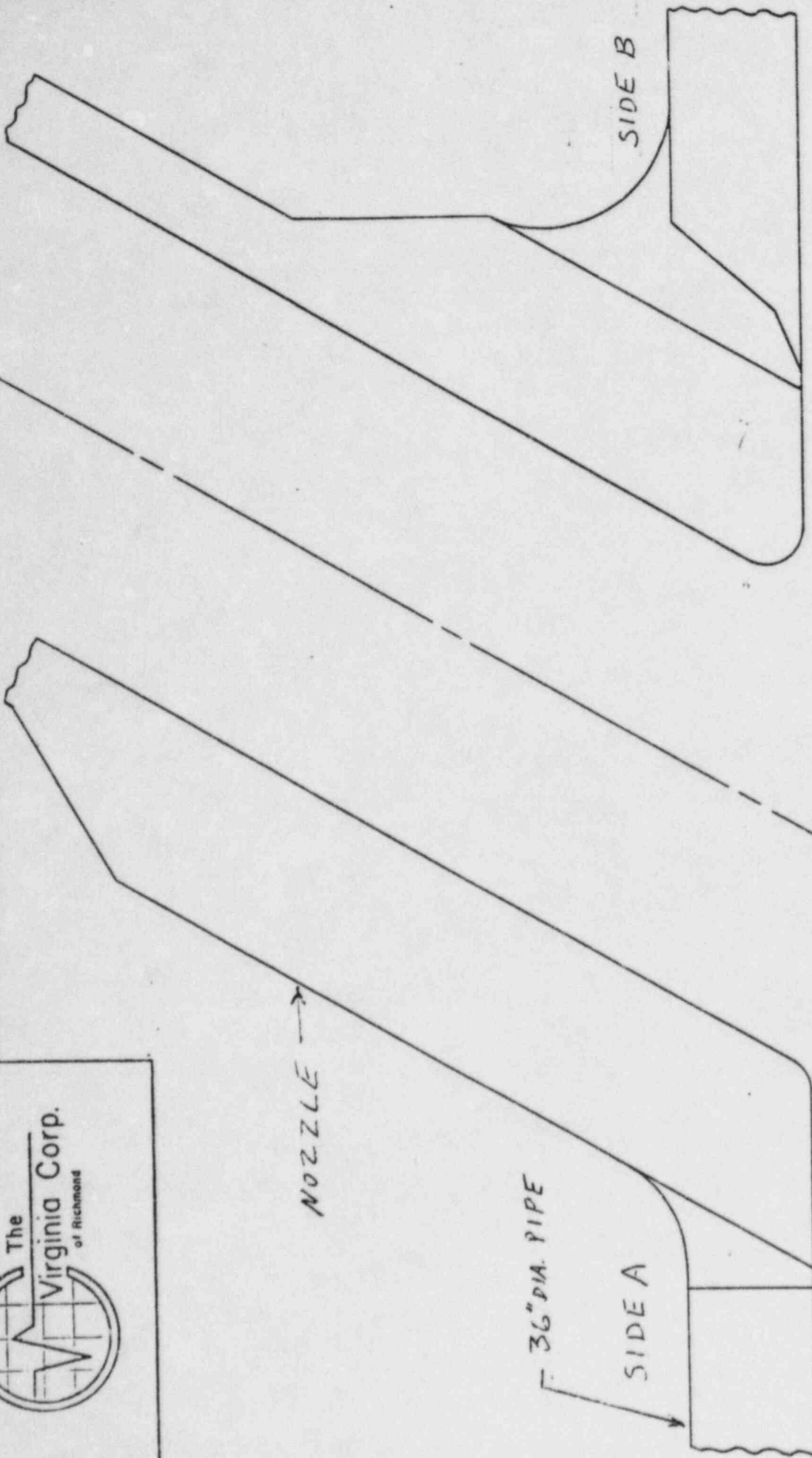


NOZZLE →

36" DIA. PIPE

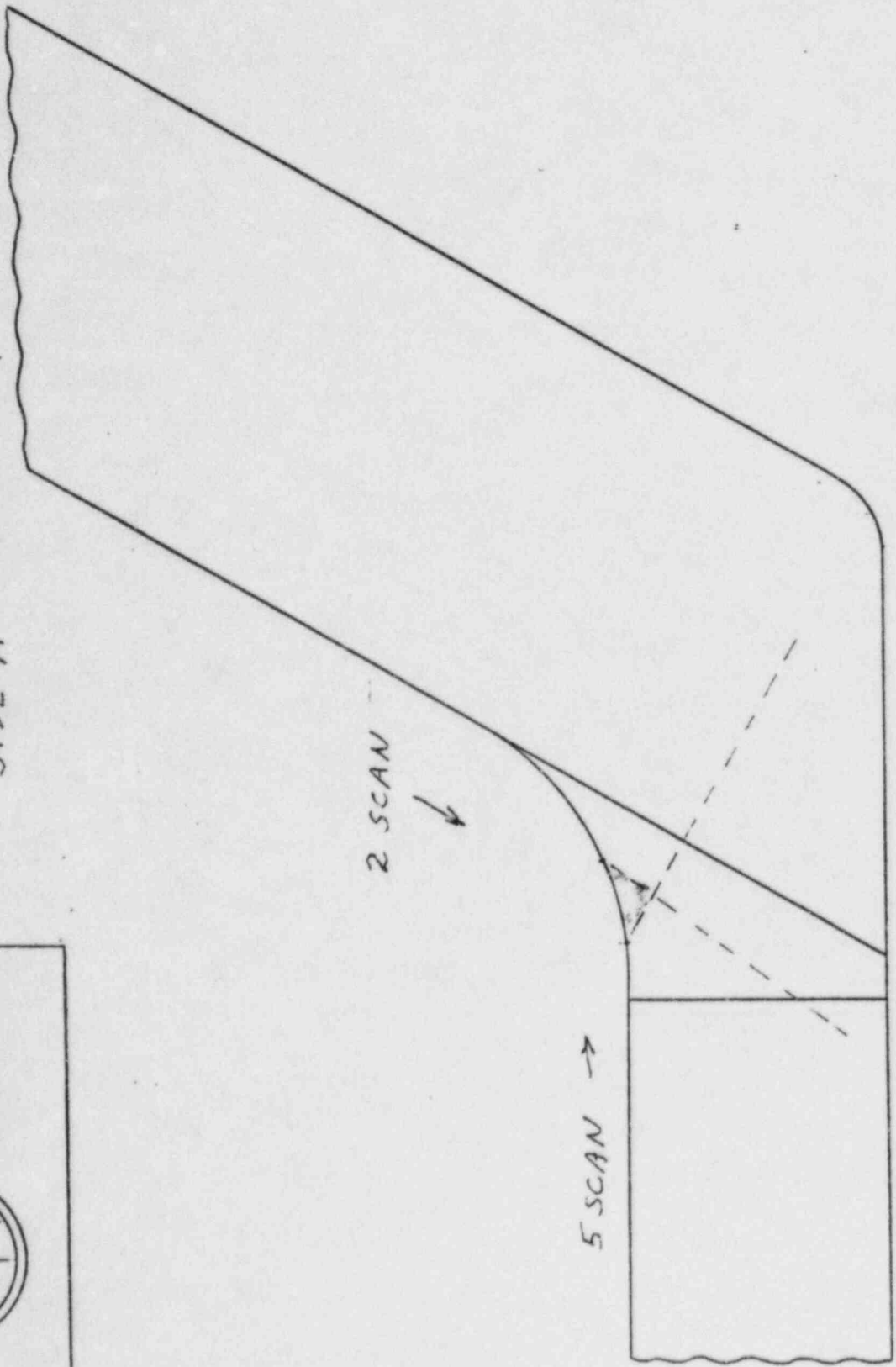
SIDE A

SIDE B



ULTRASONIC SUPPLEMENTAL DATA SHEET

WELD 08-008
60°
SIDE A

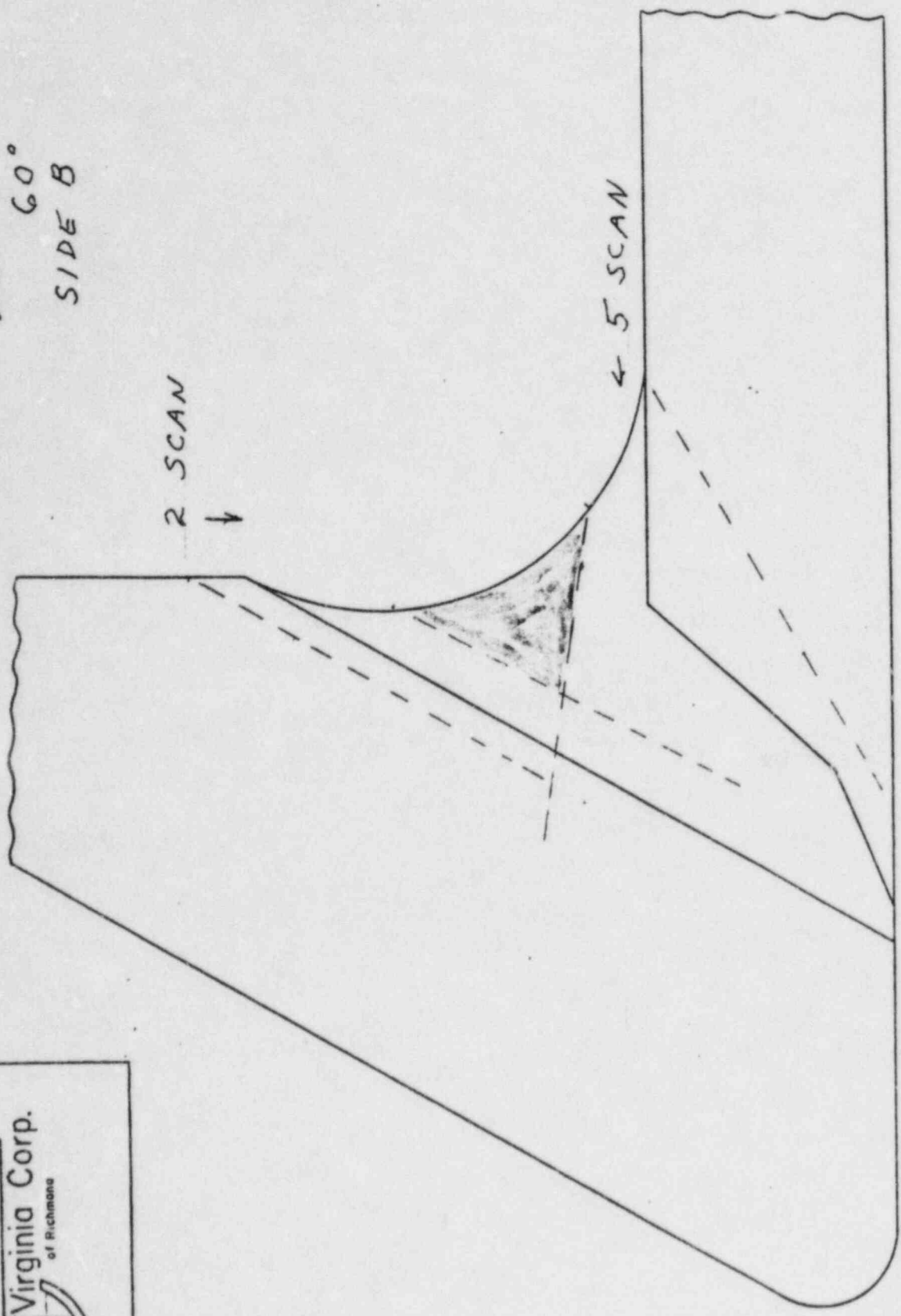


WELD ROOT

5 SCAN →

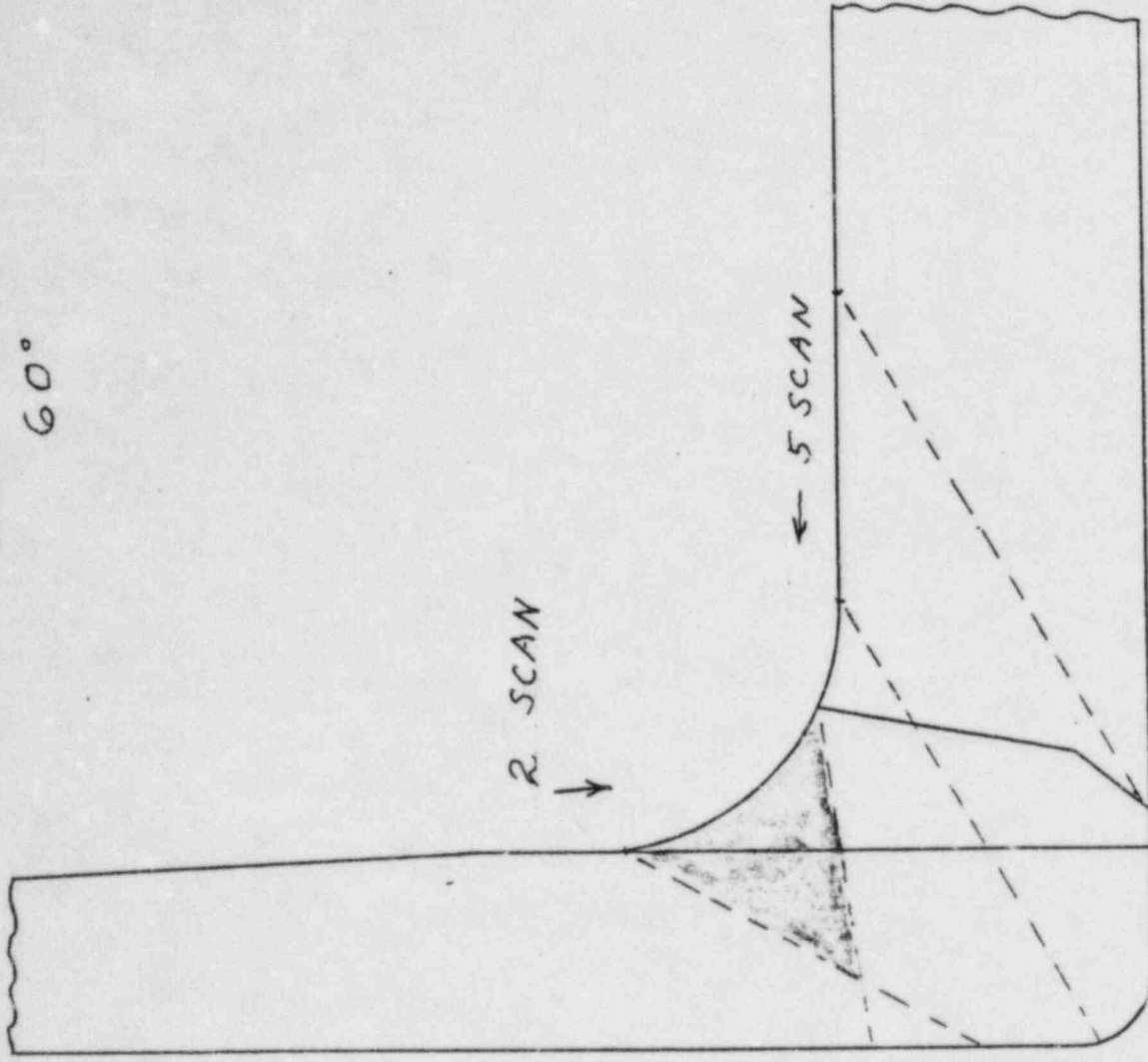
2 SCAN ↙

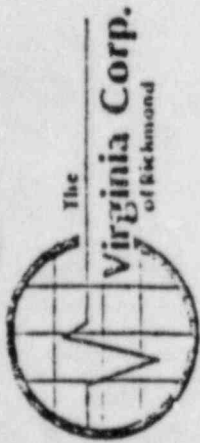
WELD 08-008
60°
SIDE B



WELD ROOT

WELDS 08-006 AND 012
60°





Ultrasonic Examination Report

Loop/Zone: ISO/Drawing No.
1A, B ZONE B, REV. 2, FC-2.1
 VPR Supervisor: Donald Spivey
 Date: 5-5-82
 Cal. Block: UT-6, 3.50" Type: 70 Batch No: 9119

Customer	Plant	Unit	
<u>LPIL</u>	<u>Waterford</u>	<u>3</u>	
Procedure	Exam Surface	Examiner/Level	
<u>ISI-2.3 Rev. FC.1</u>	<u>O.D.</u>	<u>BURLINGAME II</u>	
Component/Piping System	Pipe Size	Weld Type	
<u>Reactor Coolant</u>	<u>36" ID</u>	<u>Butt</u>	
Transducer	30°	45°	60°
S/N	<u>J22935</u>	<u>NA</u>	<u>NA</u>
Size	<u>1/2"</u>		
Frequency	<u>2.25 MHz</u>		
Beam Angle	<u>30°</u>		

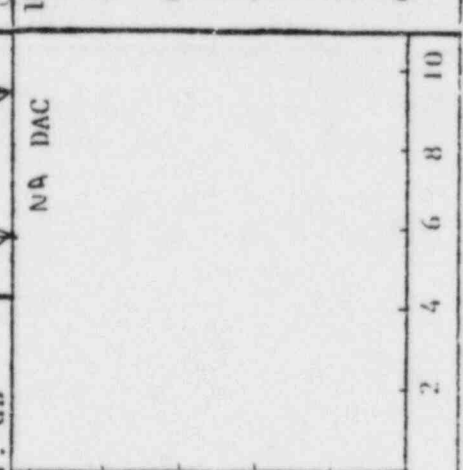
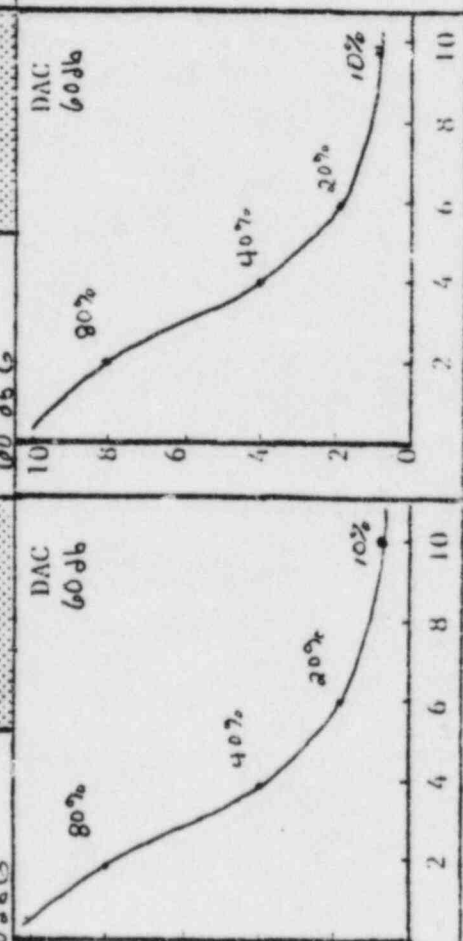
Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No

IF Yes, Number FC.1

Calibration Reflector Location	Signal Amp.	Sweep	2 & 5 Scan		7 & 8 Scan		Sound Entry Point To:
			Signal Amp.	Sweep	Signal Amp.	Sweep	
<u>1/4 T</u>	<u>NA</u>	<u>NA</u>	<u>80%</u>	<u>2.0</u>	<u>17/32</u>	<u>15/32</u>	<u>50% DAC</u>
<u>1/2 T</u>			<u>40%</u>	<u>4.0</u>	<u>1 1/16</u>	<u>7/8</u>	<u>1 3/32</u>
<u>3/4 T</u>			<u>20%</u>	<u>6.0</u>	<u>1 7/16</u>	<u>3/4</u>	<u>1 1/16</u>
<u>T</u>			<u>80%</u>	<u>8.6</u>			
			<u>10%</u>	<u>10</u>			

Calibration Reflector Location	Signal Amp.	Sweep	2 & 5 Scan		7 & 8 Scan		Sound Entry Point To:
			Signal Amp.	Sweep	Signal Amp.	Sweep	
<u>1/4 T</u>	<u>NA</u>	<u>NA</u>	<u>80%</u>	<u>2.0</u>	<u>17/32</u>	<u>15/32</u>	<u>50% DAC</u>
<u>1/2 T</u>			<u>40%</u>	<u>4.0</u>	<u>1 1/16</u>	<u>7/8</u>	<u>1 3/32</u>
<u>3/4 T</u>			<u>20%</u>	<u>6.0</u>	<u>1 7/16</u>	<u>3/4</u>	<u>1 1/16</u>
<u>T</u>			<u>80%</u>	<u>8.6</u>			
			<u>10%</u>	<u>10</u>			



Ref. dB

Calibration Check:	30°		45°		Additional Comments/Sketch
	In	Out	In	Out	
0730	11/5	NA	NA	NA	



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Date 5-5-82

Page of

To: _____

Subject EXAMINATION

LIMITATIONS.

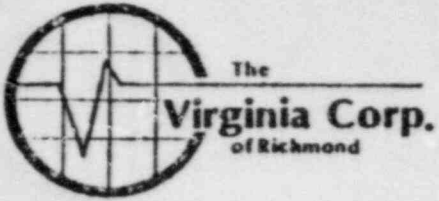
ZONE B, REL 2, FC-2

08-001 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE WAS OBTAINED WITH 60° ANGLE AND 45° ANGLE. SCAN 5 WAS LIMITED FOR APPROX. 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 5 SIDE BY THE SUPPORT LUG AND O.D. SLOPE AND ON THE 2 SCAN SIDE BY O.D. MISMATCH BETWEEN THE NOZZLE EXTENSION AND ELBOW. ROOT AREA COVERAGE WAS GOOD WITH THE 7 & 8 SCANS.

08-002 SCAN 2 WAS NOT PERFORMED BECAUSE COVERAGE OF THE ROOT AREA WAS OBTAINED WITH THE 45° AND 60° ANGLES. SCAN 5 WAS LIMITED 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.

08-006, 08-008 & 08-012 THESE WELDS FORM BRANCH CONNECTIONS. THE WELD CROWN FORMS THE RADIUS BETWEEN THE R.C. PIPE AND BRANCH NOZZLE. SCAN 2 WAS NOT PERFORMED BECAUSE THE ULTRASONIC BEAM IS DIRECTED AWAY FROM THE WELD ROOT. SCANS 7 & 8 WERE LIMITED BY THE RADIUS OF THE WELD CROWN.

Signed _____



Ultrasonic Examination Report

D. Payne ANII 5/26/82

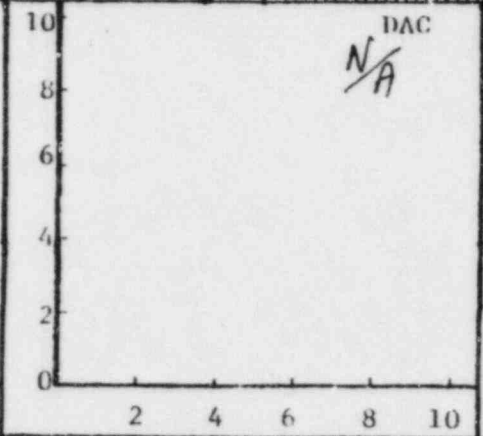
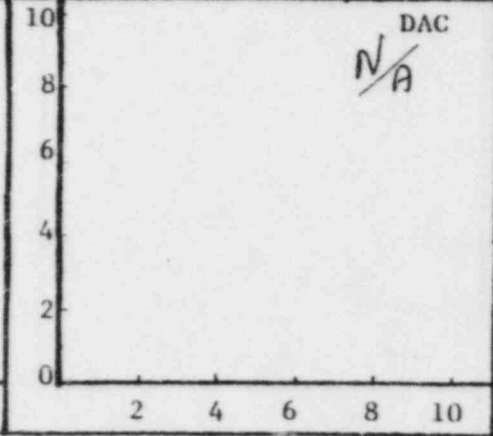
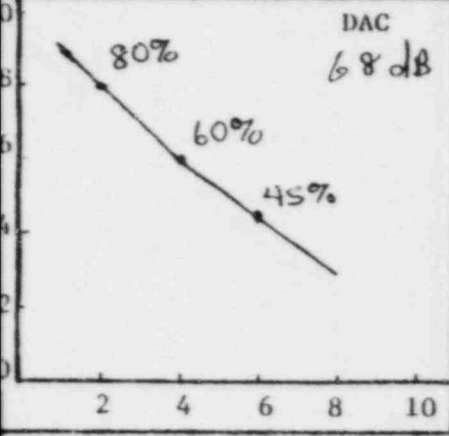
Customer L P + L		Plant Waterford		Unit 3	Loop/Zone 1A/8	Iso/Drawing No. Zone 8, Rev. 2 F.C.O	
Procedure Rev. 0 ISI 2.3 F.C.1	Exam Surface ID	Examiner Level Richard DeL II		VCA Supervisor Daniel Jones	Date 5-8-82		
Component/Piping System Cold leg - R.V. to R.C.P. 1A		Pipe Size 36"	Weld Type Butt	Cal.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

Continuation Sheet Attached
 Yes No

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

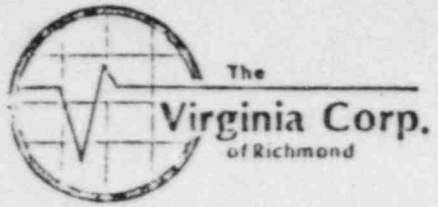
	Transducer	0°	45°	60°	Instrument			
	S/N	48807	NA	NA	Mfg.	Sonic	Model	FIS Mark I
	Size	1"			S/N	788036	RepRate	1K
	Frequency	2.25 Mhz			Reject	off	Filter	High
Beam Angle	0°			Damp	Min	Coax	13'	
				Freq.	2 Mhz	Video	Norm	

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



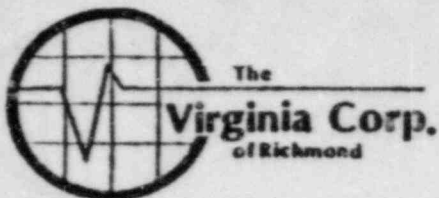
Additional Comments/Sketch

Ultrasonic Examination Report - Continuation Sheet



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

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
08-001	Yes	N/A	N/A	N/A	Yes		Clean	Ground	NI	Sat	
08-002	Yes	N/A	N/A	N/A	Yes		Clean	Ground	NI	Sat	



Ultrasonic Examination Report

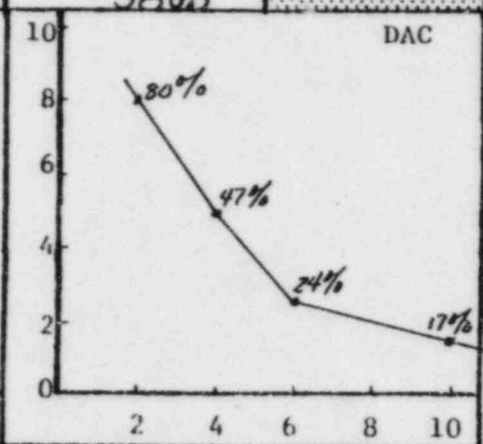
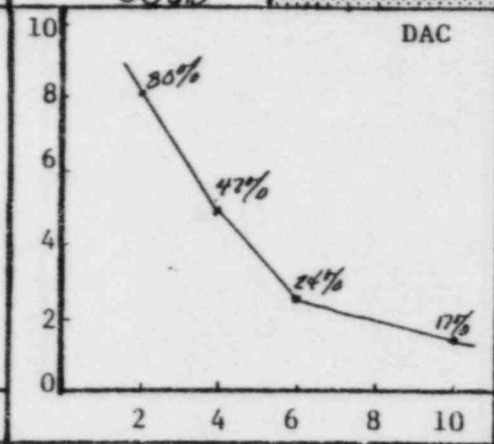
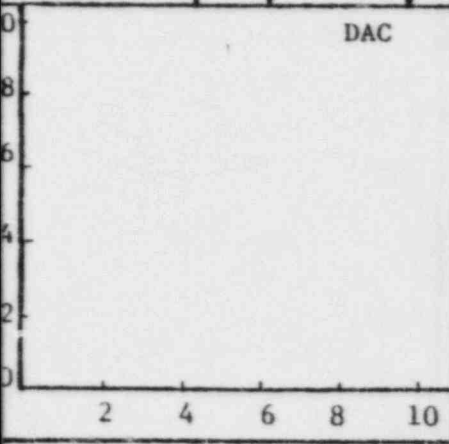
Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone Iso/Drawing No. IA 18 ZONE 8, REV. 2, FC-1
Procedure ISI 2.3 REV. 0, FC-1	Exam Surface O.D	Examiner/Level Randy Longenecker II	VCR Supervisor Daniel Jones
Component/Piping System COLD LEG - PUMP 1A TO R.V.	Pipe Size 36" S	Weld Type BUTT	Date 5-8-82
		Cal. Block UT-6 3.50"	Couplant: SONOTRACE Type 4U Batch No 8119

Continuation Sheet Attached
 Yes No

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

	Transducer	30°	45°	60°	Instrument			
	S/N	TZZ935	N/A	N/A	Mfer.	SONIC	Model	FTS MARK I
	Size	1/2"			S/N	01610E	RepRate	1K
	Frequency	2.25MHz			Reject	OFF	Filter	OFF
	Beam Angle	30°			Damp	MIN.	Coax	12'
					Freq.	2 MHz	Video	NORMAL

Calibration 0°			2 & 5 Scan						7 & 8 Scan						Calibration Checks					
Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			30°		45°		60°			
					Scribe Line	50% DAC				Scribe Line	50% DAC		In	Out	In	Out	In	Out		
						Line	Line				Line	Line	Line	Line	Line	Line	Line	Line		
V4T	N/A	N/A	80%	2.0	15/32	3/8	19/32	80%	2.0	15/32	3/8	19/32	8:45	12:05	N/A	N/A	N/A	N/A		
V2T			47%	4.0	1 1/16	7/8	1 1/4	47%	4.0	1 1/16	7/8	1 1/4								
3/4T			24%	6.0	1 7/16	1 5/16	1 3/8	24%	6.0	1 7/16	1 5/16	1 3/8								
5/4T			17%	10.0				17%	10.0											
			58dB						58dB											



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet

D. Dymally ANIE 5/26/82

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1 B	Iso/Drawing No. ZONE 8 R-2 F.C.1
Procedure ISI. 73 R0 FC.1	Exam Surface O.D.	Examiner/Level <i>Navy Longenecker II</i>	VCR Supervisor <i>Daniel Jones</i>	Date 5-8-82
Component/Piping System COLD LEG R.C.P. 1A TO R.V.	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch # SONOTRACE 40 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
08-0031A	NA	NA	YES	YES	NA	NA	CLEAN	GROUND	NI	SAT.	
08-0045	NA	NA	YES	YES	NA	NA	CLEAN	GROUND	NI	SAT.	
08-005	NA	NA	NA	NA	YES	NA	CLEAN	GROUND	NI	SAT.	



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Ultrasonic Examination Report *D. PapilANIE 5/24/82*

Customer LP&L		Plant WATERFORD	Unit 3	Loop/Zone 1A B	Iso/Drawing No. ZONE 8 R-2, F.C.1
Procedure ISI 2.3 R-O, F.C.1	Exam Surface O.D.	Examiner/Level Mary Komenecik II		VGR Supervisor Daniel Jensen	Date 5-10-82
Component/Piping System COLD LEG R.C.P. 1A TO R.K		Pipe Size 36"	Weld Type BUTT	Cal. Block # UT-6	Couplant: SONOTRACE Type 90 Batch No. 8119

Continuation Sheet Attached

Yes No

Field Changes:

Yes No

If Yes, Number **1**

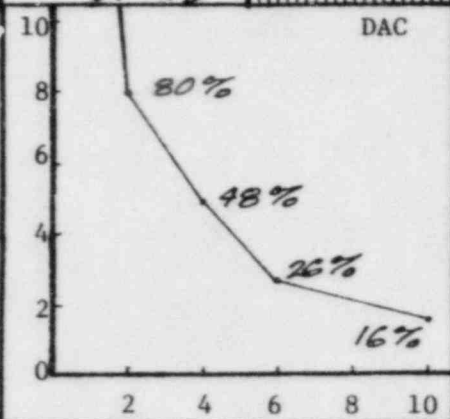
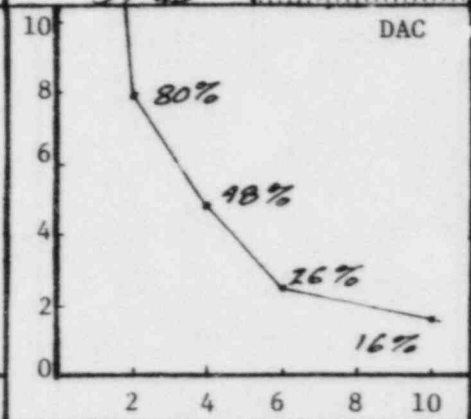
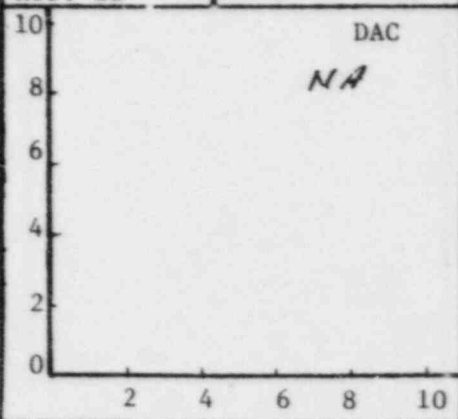
Transducer	30°	45°	60°	Instrument			
S/N	J22935	NA	NA	Mfr.	SONIC	Model	MARK 1
Size	.5" DIA			S/N	01610E	RepRate	1K
Frequency	2.25 MHz			Reject	OFF	Filter	H1
Beam Angle	30°			Damp	MIN.	Coax	12'
				Freq.	2. MHz.	Video	NORM

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
					Scribe Line	50% DAC				Scribe Line	50% DAC		0°		45°		60°	
						In	Out				In	Out	In	Out	In	Out		
1/4 T	NA	NA	80%	2.0	1 7/32"	3/8"	1/32"	80%	2.0	1 7/32"	3/8"	1/32"	9:50	11:30	NA	NA	NA	NA
1/2 T			48%	4.0	1 3/32"	29/32"	1/32"	48%	4.0	1 3/32"	29/32"	1/32"						
3/4 T			26%	6.0	1 19/32"	1 1/2"	1/32"	26%	6.0	1 19/32"	1 1/2"	1/32"						
5/4 T			16%	10.0	NA	NA	NA	16%	10.0	NA	NA	NA						
Ref. dB			59 dB					59 dB										



Additional Comments/Sketch



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

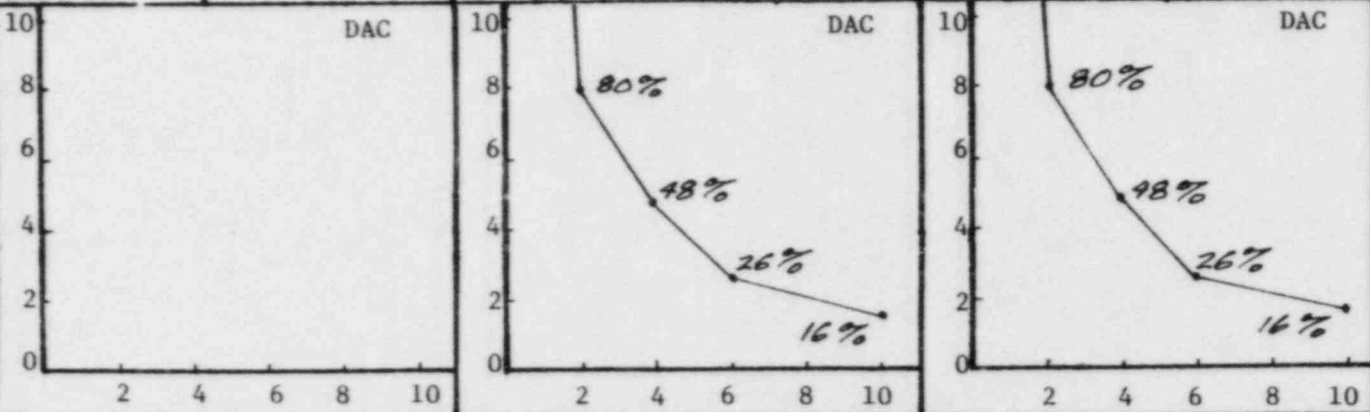
Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1A B	Iso/Drawing No. ZONE B R.2, F.C. 1
Procedure I.S.I. 2.3 R.O.F.C. 1	Exam Surface O.D.	Examiner/Level Nary Longenecker II	VCE Supervisor Daniel Jones	Date 5-11-82
Component/Piping System COLD LEG R.C.P. 1A TO R.V.		Pipe Size 36"	Weld Type BUTT	Cal. Block # UT-6
				Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

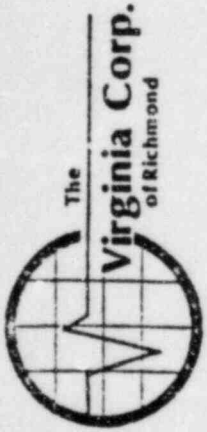
Field Changes:
 Yes No
 If Yes, Number 1

Transducer	30°	45°	60°	Instrument			
	S/N J22935	NA	NA	Mfr. SONIC	Model MARK 1	RepRate 1K	Filter H1
Size	.5" DIA.			S/N 01610E	Reject OFF	Coax 12'	Video NORM
Frequency	2.25 MHz			Freq. 2. MHz.			
Beam Angle	30°						

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	NA	NA	80%	2.0	1 1/32"	3/8" 3/32"	80%	2.0	1 1/32"	3/8" 3/32"	2:15	3:15	NA	NA	NA	NA
1/2 T			48%	4.0	1 3/32"	29/32" 1 1/32"	48%	4.0	1 3/32"	29/32" 1 1/32"						
3/4 T			26%	6.0	1 19/32"	1 1/2" 1 23/32"	26%	6.0	1 19/32"	1 1/2" 1 23/32"						
5/4 T			16%	10.0	NA	NA NA	16%	10.0	NA	NA NA						
Ref. dB			59 db				59 db									



Additional Comments/Sketch



Ultrasonic Examination Report - Continuation Sheet

D. Pappalardo 5/11/82

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone IA/8	Iso/Drawing No. ZONE 8, REV. #2, F.C.-1
Procedure ISI 2.3, REV. 0, FC-1	Exam Surface O.D.	Examiner <i>[Signature]</i>	VCR Supervisor <i>[Signature]</i>	Date 5-11-82
Component/Piping System COLD LEG-PUMP IA TO R.V.	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6 3-50" SONOTRACE 40 8/19	

Weld No.	Base Metal Scan	Scan Direction			Inspection Limitations	Surface Condition		Examination Results UT Visual	Remarks
		2	5	7 & 8		Base Metal	Weld		
08	VIOLA N/A	YES	YES	N/A		CLEAN	GROUND	SAT	



D. Payne ANII 5/11/82
 Ultrasonic Data Sheet
 for
 Thickness Measurement

Customer LP & L	Plant WATERFORD	Unit 3	Loop/Zone 1 08
Component/Piping System COLD LEG R.C.P. 1A TO R.V.		Examiner/Level Harry Koenigsheiter II	Date 5-10-82
Procedure I.S.I. 2.5 R-0	Iso/Drawing No. ZONE 08 R.2, FC.1	VCA Supervisor Denise Jones	Continuation Sheet Attached [] Yes [X] No

Equipment

Instrument		Transducer		Calibration	
Mfgr.	SONIC	Mfgr.	K-B AEROTECH	Cal. Block	UT-6
Model	MARK 1	Size	.25" DIA.	Cal. Block	
S/N	780836	Freq.	2.25 MHZ.	Range Cal.	4.167"
Reject	OFF	Serial No.	L05819	Calibration Checks	
Damp.	MIN.			9:30 CAL. IN	11:30 CAL. OUT
Freq.	2 MHZ.	Coax. Cable	6'		
Rep. Rate	1K	Gain	77 db		
Filter	H1				
Video	NORM				
Couplant	SONOTRACE 40 B119				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
08-006	12	3.458	*	3.333					
08-006	2	3.417	*	3.333					
08-006	4	3.458	*	3.250					
08-006	6	3.500	*	3.292					
08-006	8	3.417	*	3.250					
08-006	10	3.458	*	3.292					
08-012	12	3.333	*	3.250					
08-012	2	3.333	*	3.250					
08-012	4	3.250	*	3.167					
08-012	6	3.417	*	3.208					
08-012	8	3.417	*	3.250					
08-012	10	3.417	*	3.208					

Sketch/Identification

* SCAN 2 NO DUE TO RADIUS.



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Ultrasonic Examination Report *D. Jay LANEI 4/27/82*

Customer LP&L	Plant WATERFORD	Unit 3	Loop/Zone 1 8	Iso/Drawing No. ZONE B R-2 F.C. 1
Procedure ISI. 2.3 R-O F.C. 1	Exam Surface O.D.	Examiner/Level <i>Navy Longenack III</i>	VCR Supervisor <i>Denise Jensen</i>	Date 4-23-82
Component/Piping System COLD LEG PUMP 1A TO R.V.	Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: SONOTRACE Type 40 Batch No. 8119

Continuation Sheet Attached
Yes No

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

Transducer	0°	45°	60°	Instrument			
	S/N LO5B19	NA	NA	Mfg.	SONIC	Model	MARK 1
	Size .25" DIA			S/N	03709E	RepRate	1K
	Frequency 2.25 MHz			Reject	OFF	Filter	H1
Beam Angle 0°				Damp	MIN.	Coax	6'
				Freq.	2 MHz	Video	NORM

Calibration 0°

2 & 5 Scan

7 & 8 Scan

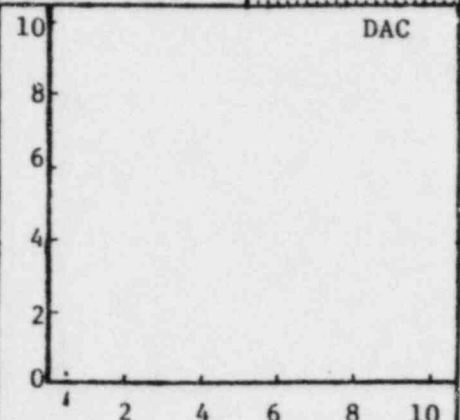
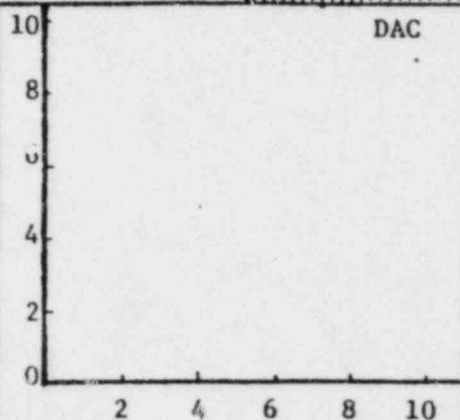
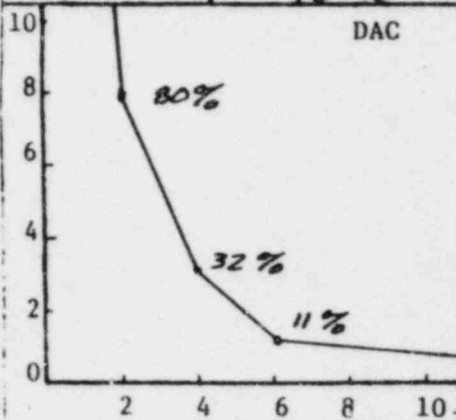
Calibration Checks

0° 45° 60°

In	Out	In	Out	In	Out
4:20	5:10	NA	NA	NA	NA

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks					
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°	
1/4 T	80%	2.0	NA	NA	NA	NA	NA	NA	NA	NA						
1/2 T	32%	4.0														
3/4 T	11%	6.0														
1 T	NA	8.4														

Ref. dB **40 dB**



Additional Comments/Sketch

R. Payne ANEI 4/23/82

Ultrasonic Examination Report - Continuation Sheet



The Virginia Corp. of Richmond

Customer LP&L	Plant WATERFORD	Unit 3	Loop/ Zone 1 8	Iso/Drawing No. ZONE B R-2 F.C.1
Procedure ISI 2.3 R-0 FC1	Exam Surface O.D.	Examiner/Level Harry Longenecker II	VCR Supervisor Daniel Jensen	Date 4-23-82
Component/Piping System COLD LEG PUMP 1A TO R.V.	Pipe/Size 36"	Weld Type BUTT	Cal. Block UT-6	Couplant: Type & Batch # SONOTRACE 40 8119

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
08-006	NA	YES	NA	NA	NA	YES		CLEAN	GROUND	NI	SAT	
08-012	NA	PAR	NA	NA	NA	YES	*	CLEAN	GROUND	NI	SAT	

* DISSIMILAR METAL WELD 08-014 WITHIN EXAMINATION AREA



Ultrasonic Examination Report

D. Payne ANZI 5/26/82

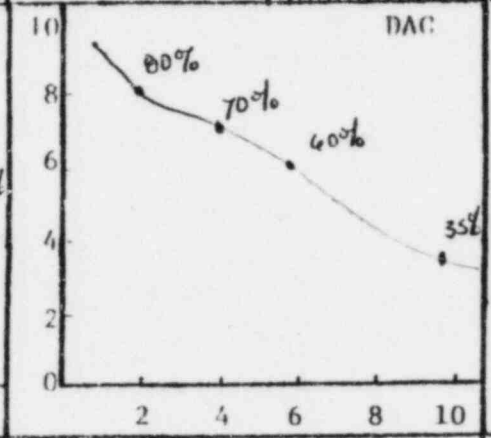
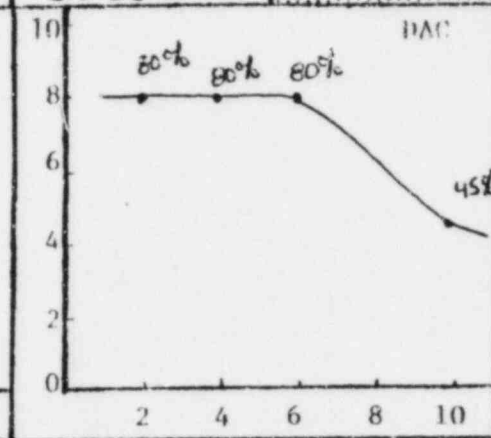
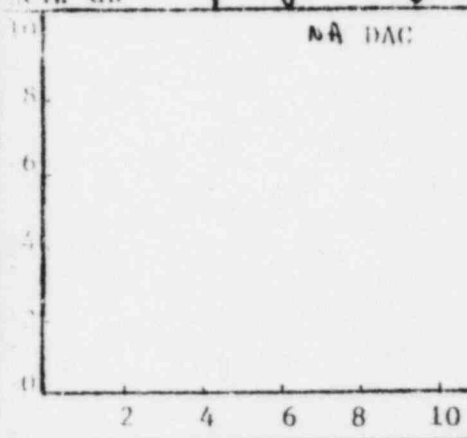
Customer LPCL		Plant Waterford	Unit 3	Loop/Zone 1A/8	Iso/Drawing No. Zone 8, Rev 3, FC.1
Procedure WAM	Exam Surface ID	Examiner/Level <i>[Signature]</i>		VER Supervisor <i>[Signature]</i>	Date 5-15-82
Component/Piping System Reactor Coolant		Pipe Size 36"	Weld Type Butt	Cal. Block # UT-6, 3.50"	Couplant: Sonotrace Type 40 Batch No. 8119

Continuation Sheet Attached
 Yes No

Transducer	0°	45°	60°	Instrument			
	S/N NA	219134	NA	Mfg.	Serial	Model	PTS MARK I
Size		1.0"		S/N	05304E	RepRate	1000
Frequency		2.25 MHz		Reject	OFF	Filter	Hi
Beam Angle	↓	45°	↓	Damp	Min	Coax	12'
				Freq.	2 MHz	Video	Norm

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

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



Additional Comments/Sketch



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

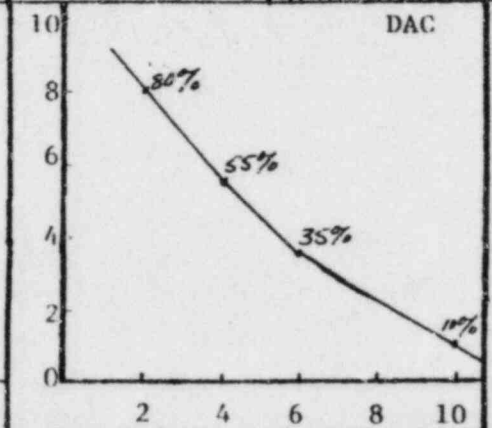
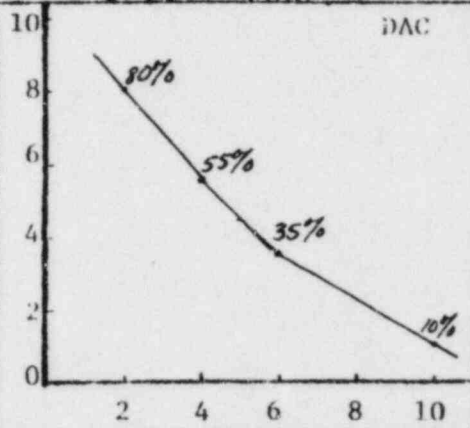
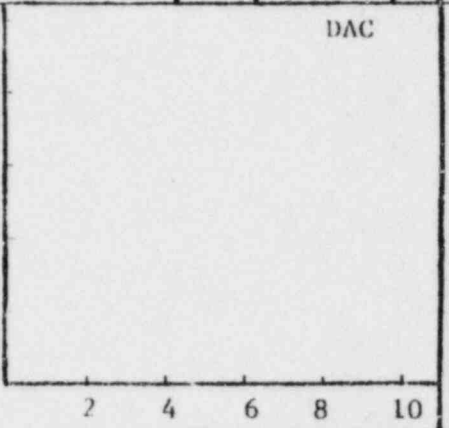
Customer LPEL	Plant WATERFORD	Unit 3	Loop/Zone 1A/8	Iso/Drawing No. ZONE 8, REV. #2, F.C.-1
Procedure <i>NRM 10A</i> ISI 2.3 REV. 0 F.C. #2	Exam Surface I.D.	Examiner/Level <i>Bob Higgins II</i>	VCR Supervisor <i>Denise Jones</i>	Date 5-15-82
Component/Piping System COLD LEG - REACTOR COOLANT		Pipe Size 36"	Weld Type BUTT	Cal. Block UT-6 3.50"
		Couplant: SONOTRACE		Batch No 8119

Continuation Sheet Attached
 Yes No

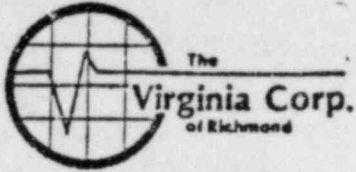
Field Changes:
 Yes No
 Yes, Number **F.C. #2**

	Transducer			Instrument			
		0°	45°	60°	Mfg.	Model	
	S/N	N/A	N/A	L19801	SONIC	FTS MARK I	
	Size			1"	S/N	05704E	RepRate 1K
	Frequency			2.25MHz	Reject	OFF	Filter OFF
Beam Angle			61°	Damp	MIN.	Coax 12'	
				Freq.	2 MHz	Video NORMAL	

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



Additional Comments/Sketch



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

Customer <i>LP3L</i>	Plant <i>WATERFORD</i>	Unit <i>3</i>	Loop/Zone <i>1, E</i>
Component/Piping System <i>REACTOR COOLANT</i>	Examiner/Level <i>BURLINGAME II</i>	Date <i>5-22-82</i>	
Procedure <i>ISI-2.5, REC.0</i>	Iso/Drawing No. <i>ZONE 8, REC.2, FC1</i>	VCR Supervisor <i>Daniel Jones</i>	Continuation Sheet Attached [] Yes [<input checked="" type="checkbox"/>] No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>SONIC</i>	Mfgr. <i>AEROTECH</i>	Size <i>1.0"</i>	Cal. Block <i>CT-15</i>	Cal. Block
Model <i>FTS-MK I</i>	Freq. <i>1 MHz</i>	Serial No. <i>L19814</i>	Range Cal. <i>3/4" = F.D.I.D.</i>	Calibration Checks
S/N <i>780836</i>	Coax. Cable <i>12'</i>	Gain <i>68 db</i>	<i>CECO</i>	<i>1045</i>
Reject <i>OFF</i>	Video <i>NORMAL</i>			
Damp. <i>MIN</i>	Couplant <i>SONOTRACE 40 # 8119</i>			
Freq. <i>1 MHz</i>				
Rep. Rate <i>1000</i>				
Filter <i>OFF</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>OB-015</i>	<i>12</i>	<i>3.43</i>	<i>3.04</i>	<i>4.06</i>	<i>OB-014</i>	<i>12</i>	<i>3.20</i>	<i>3.20</i>	<i>3.04</i>
	<i>2</i>	<i>3.32</i>	<i>3.04</i>	<i>4.06</i>		<i>2</i>	<i>3.28</i>	<i>3.20</i>	<i>3.04</i>
	<i>4</i>	<i>3.28</i>	<i>3.12</i>	<i>4.06</i>		<i>4</i>	<i>3.24</i>	<i>3.16</i>	<i>3.12</i>
	<i>6</i>	<i>3.32</i>	<i>3.12</i>	<i>4.06</i>		<i>6</i>	<i>3.28</i>	<i>3.24</i>	<i>3.12</i>
	<i>8</i>	<i>3.32</i>	<i>3.20</i>	<i>4.06</i>		<i>8</i>	<i>3.12</i>	<i>3.20</i>	<i>3.20</i>
	<i>10</i>	<i>3.32</i>	<i>3.12</i>	<i>4.06</i>		<i>10</i>	<i>3.28</i>	<i>3.12</i>	<i>3.12</i>

Sketch/Identification



The Virginia Corp.
of Richmond

Ultrasonic Examination Report

Dr. Payne ANEZ 6/2

2 of 7

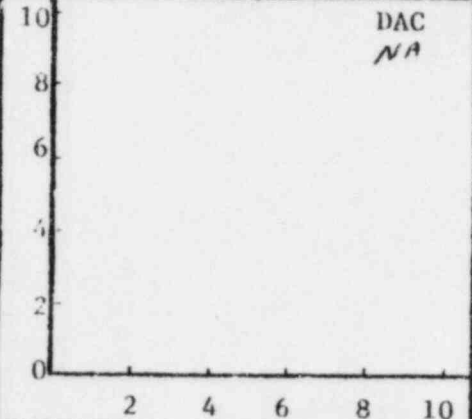
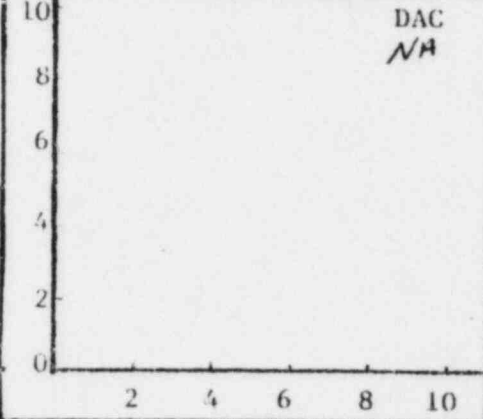
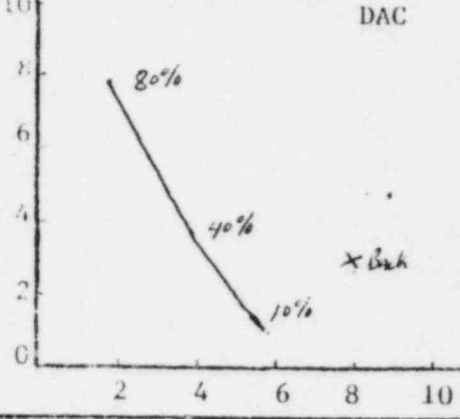
Customer LPL	Plant Waterford	Unit # 3	Loop/Zone 1/8	Isos/Drawing No. Zone B, Rev. 2 FC-1
Procedure ISI-2.8 Rev. 0 FC1	Exam Surface OD	Examiner/Level BURLINGAME II 93	VCR Supervisor Daniel Jones	Date 5-22-82
Component/Piping System Reactor Coolant	Pipe Size 30" 3/8	Weld Type BUTT	Cal. Block UT-15	Couplant: Type Sanyo 42 Batch No. 8119

Continuation Sheet Attached
 Yes No

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

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

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks						
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°		
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out	
Y4 T	20%	1.8	NA	NA	NA			NA	NA			0805	1050	NA	NA	NA	NA
Y2 T	40%	3.8										1250	1630				
3/4 T	10%	5.8															
Crack	35%	8.0															
Ref. dB	68 dB		NA				NA										



Additional Comments/Sketch:

R. Payne ANEZ 6/4/82

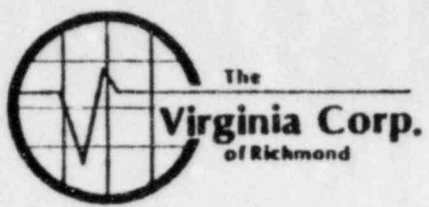


The
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Ultrasonic Examination Report - Continuation Sheet

Customer <u>LP3L</u>	Plant <u>WATERFORD</u>	Unit <u>3</u>	Loop/ Zone <u>1, 6</u>	Iso/Drawing No. <u>ZONE B, REV. 2, FC-1</u>
Procedure <u>FC-1</u>	Exam Surface <u>CD</u>	Examiner/Level <u>BURLINGAME II</u>	VCR Supervisor <u>Daniel Jones</u>	Date <u>5-22-82</u>
Component/Piping System <u>REACTOR COOLANT</u>		Pipe Size <u>30" ID</u>	Weld Type <u>BUTT</u>	Cal. Block <u>UT-15</u>
		Couplant: Type & Batch # <u>SCOUTRACE 40, 78119</u>		

Weld No.	Base Metal Scan	Scan Direction 2 5 7 & 8 0	Inspection Limitations	Surface Condition		Examination Results		Remarks
				Base Metal	Weld	UT	Visual	
<u>08</u>	<u>015</u>	<u>YES</u>	<u>NA NA NA YES</u>	<u>CLEAN</u>	<u>GRIND</u>	<u>NI</u>	<u>SAT</u>	<u>GEOMETRY</u>
<u>08</u>	<u>014</u>	<u>YES</u>	<u>NA NA NA YES</u>	<u>CLEAN</u>	<u>GRIND</u>	<u>NI</u>	<u>SAT</u>	<u>GEOMETRY</u>



Ultrasonic Examination Report Page 4 of 7

Customer LP&L	Plant Waterford	Unit 3	Loop/Zone 1-8	Iso/Drawing No. Zone 8 Rev-2 F.C.-1
Procedure ISI-2.8, Rev-0 F.C.1	Exam Surface O.D.	Examiner/Level BURLINGAME/II	VCR Supervisor Kevin White	Date 5-22-82
Component/Piping System Reactor Coolant		Pipe Size 30" I.D.	Weld Type Butt	Cal. Block UT-15, 3 1/8"
		Couplant: Sonotrac Type 40		Batch No 8119

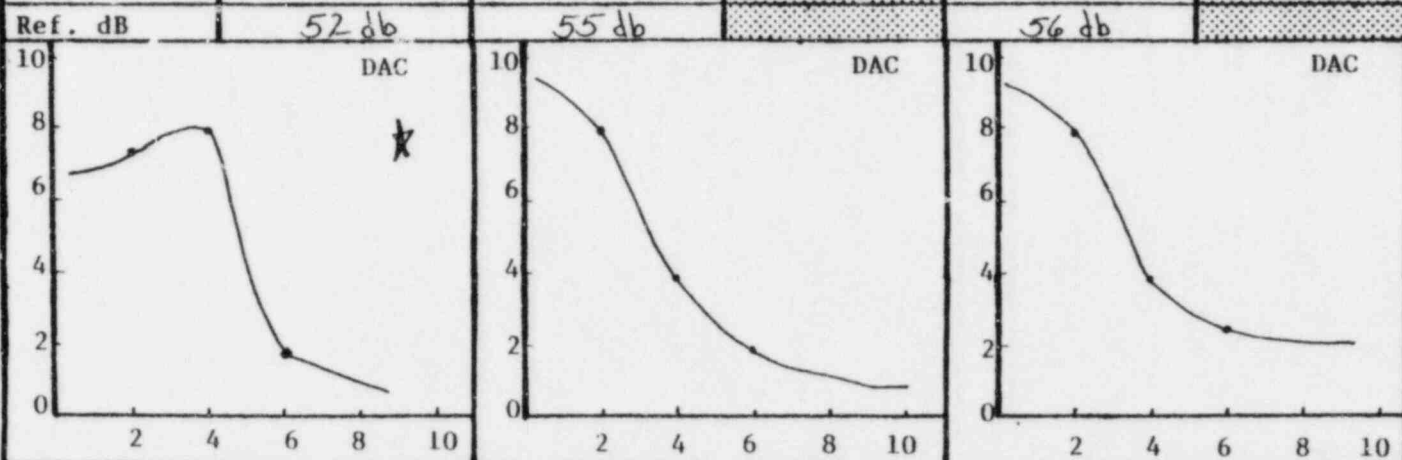
Continuation Sheet Attached
 Yes No

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

	Transducer	2+5 (CS)	2+5 (SS)	7+8	Instrument			
	S/N	T8468	T8468	V3035	Mfg.	Sonic	Model	FTS Mark I
	Size	1.0"	1.0"	1.0"	S/N	01610E	RepRate	1000
	Frequency	1MHz	1MHz	1MHz	Reject	3	Filter	off
	Beam Angle	45°L	45°L	45°L	Damp	4.5	Coax	6'
				Freq.	1MHz/BB	Video	Norm.	

		2 & 5 Scan					7 & 8 Scan					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:		
					Scribe Line	50% DAC				Scribe Line	50% DAC	
1/4T	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			

Calibration Checks							
		0°		45°		60°	
In	Out	In	Out	In	Out	In	Out
NA	NA	0800	1095	NA	NA		
		1245	1630				



Additional Comments/Sketch

★ The shape of the D.A.C. is due to the ratio of the carbon steel metal path to the stainless steel metal path. (or inconel)

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

D. P. ANNE 9/82

Ultrasonic Examination Report - Continuation Sheet



The Virginia Corp. of Richmond

Customer LP3L	Plant WATERFORD	Unit 3	Loop/ Zone 1/18	Iso/Drawing No. ZONE 8, REL 3, FC-1
Procedure FC-1 151 28 REL 0	Exam Surface OD	Examiner/Level BURLINGAME II B	VCR Supervisor Daniel Jones	Date 5-22-82
Component/Piping System 45 REACTOR COOLANT	Pipe Size 30" ID	Weld Type BUTT	Cal. Block UT-15	Couplant: Type & Batch # SONOTRACE 40 #819

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks	
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual		
08	C15	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETRY
08	C14	NA	PAR	PAR	PAR	NA	O.D. MISMATCH	CLEAN	GROUND	NI	SAT	GEOMETRY
							SEE ATTACHMENT					SEE ATTACHMENT FIG. 1



The Virginia Corp.
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Date _____

Page 6 of 7

To: _____

Subject EXAMINATION
LIMITATIONS

ZONE B, REIL 2, FC-1

08-015 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.

08-014 (D.M. WELD) ALL SCANS WERE RESTRICTED BY O.D.
MISMATCH BY THE PIPE TO SAFE END WELD AND
THE SAFE END TO PUMP WELD.

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

Signed _____

TYR PUMP TO SAFE END TO PIPE
CONFIGURATION

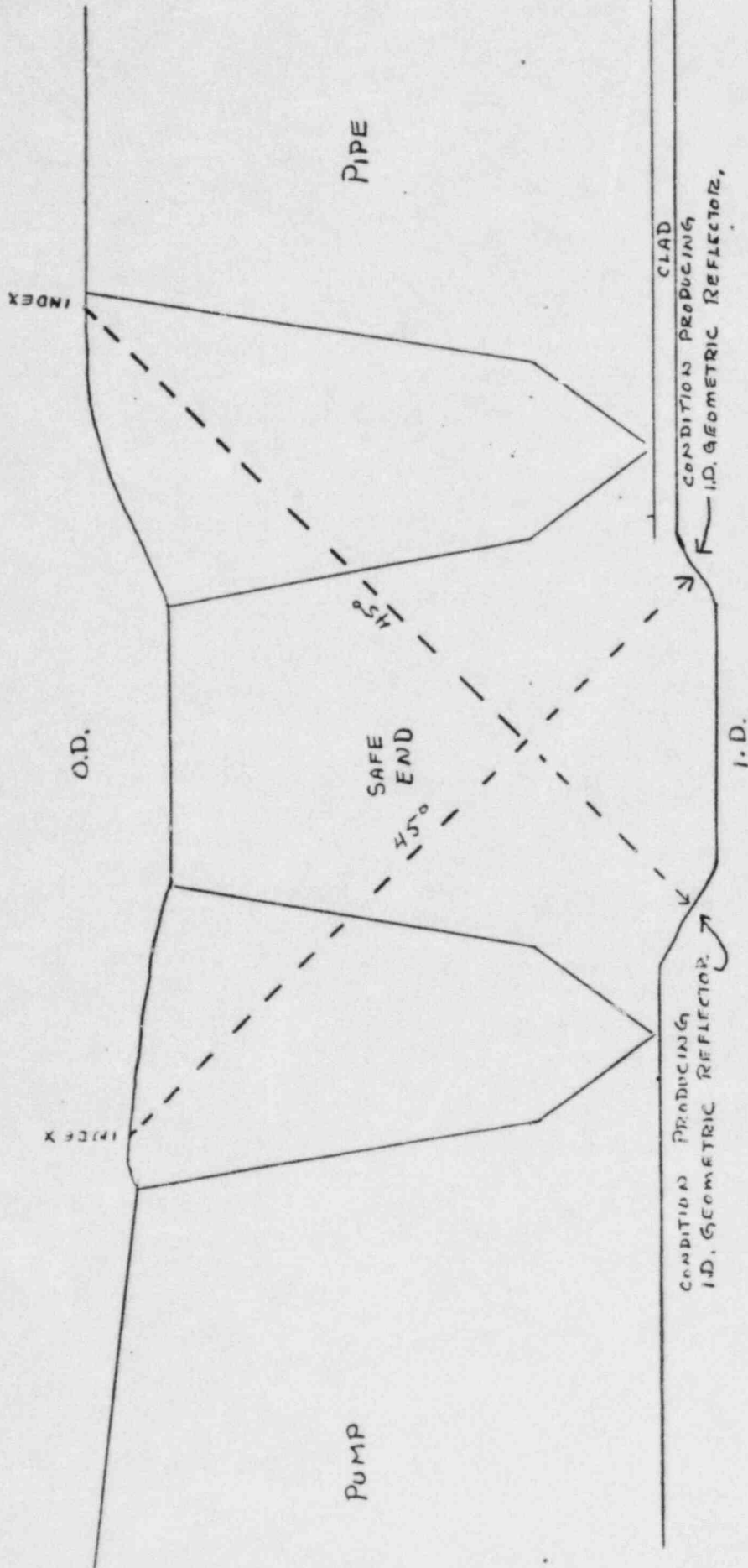
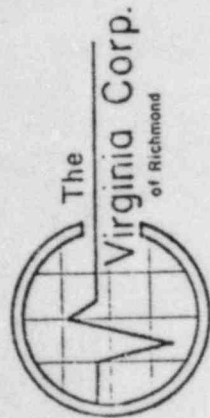
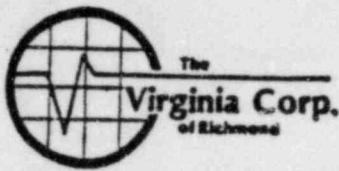


FIG. 1



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

Customer <i>L.P. & L.</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1A18</i>
Component/Piping System <i>Cold Leg - R.G. Pump 1A to R.V.</i>	Examiner/Level <i>David J. Fokem/H</i>	Date <i>6-15-82</i>	
Procedure <i>ISI 2.5 REV. 0</i>	Iso/Drawing No. <i>Zone 8 Rev. 2/82</i>	VGR Supervisor <i>Danul Jensen</i>	Continuation Sheet Attached [] Yes [x] No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Panaetrics</i>	Size <i>.50"</i>	Cal. Block <i>UT-16</i>	
Model <i>ETS MARK I</i>	Size <i>.50"</i>		Cal. Block <i>N/A</i>	
S/N <i>01610E</i>	Freq. <i>3.5 MHz</i>		Range Cal. <i>2.2"</i>	
Reject <i>OFF</i>	Serial No. <i>41874</i>		Calibration Checks	
Damp. <i>M.D.</i>	Coax. Cable <i>6' Dual</i>		<i>Initial 1:20 p.m.</i>	
Freq. <i>2.0 MHz</i>	Gain <i>50dB</i>		<i>Final 2:40 p.m.</i>	
Rep. Rate <i>1K</i>				
Filter <i>OFF</i>				
Video <i>Norm.</i>				
Couplant <i>Sonotrace 40 #8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
<i>08-009</i>	<i>12</i>	<i>N/A</i>	<i>N/A</i>	<i>1.58"</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>08-009</i>	<i>2</i>			<i>1.58"</i>					
<i>08-009</i>	<i>4</i>			<i>1.60"</i>					
<i>08-009</i>	<i>6</i>			<i>1.58"</i>					
<i>08-009</i>	<i>8</i>			<i>1.58"</i>					
<i>08-009</i>	<i>10</i>			<i>1.58"</i>					

Sketch/Identification



The
Virginia Corp.
of Richmond

Ultrasonic Examination Report

D. Payne ANZI 6/24/82

Customer <i>LP+L</i>		Plant <i>Waterford</i>		Unit # <i>3</i>	Loop/Zone <i>1A18</i>	Iso/Drawing No. <i>Zone 8 Rev. 2 F.C. X2</i>	
Procedure <i>F.C.I 1513.8 Rev. 1</i>		Exam Surface <i>0.0</i>	Examiner/Level <i>David T. Foltz</i>		VCR Supervisor <i>Donald Jensen</i>		Date <i>6/15/82</i>
Component/Piping System <i>Cold leg - R.C.P. 1A to Reactor Vess.</i>			Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-16</i>	Couplant: Type <i>Sox 40</i> Batch No. <i>8124</i>	

Continuation Sheet Attached
 Yes No

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

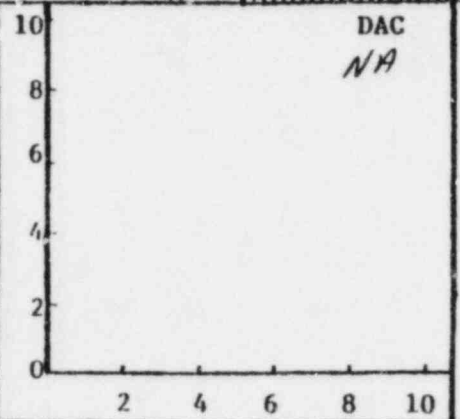
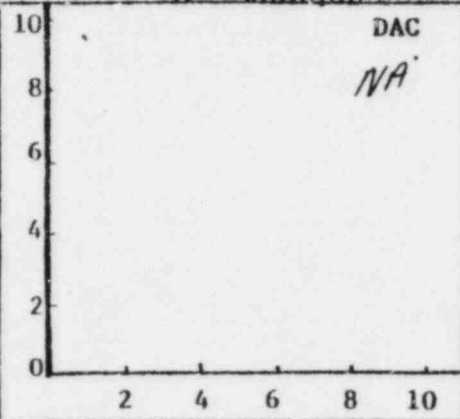
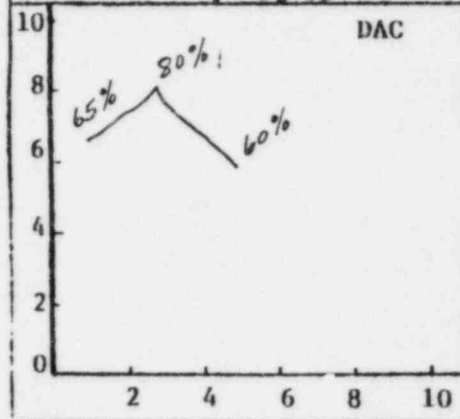
	Transducer	0°	45°	60°	Instrument			
	S/N	<i>KB2728</i>	<i>NA</i>	<i>NA</i>	Mfr.	<i>Sonic</i>	Model	<i>TRAK I</i>
	Size	<i>1/2"</i>			S/N	<i>05473 E</i>	RepRate	<i>1K</i>
	Frequency	<i>2.25 MHz</i>			Reject	<i>off</i>	Filter	<i>off</i>
	Beam Angle	<i>0°</i>			Damp	<i>Min</i>	Coax	<i>6' Dual</i>
					Freq.	<i>2.0 MHz</i>	Video	<i>Norm.</i>

Calibration 0°

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		Calibration Checks													
					Scribe Line	50% DAC			Scribe Line	50% DAC	0°		45°		60°									
											In	Out	In	Out	In	Out								
<i>1/4 T</i>	<i>65%</i>	<i>1.5</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	
<i>1/2 T</i>	<i>80%</i>	<i>3.0</i>																						
<i>3/4 T</i>	<i>60%</i>	<i>4.5</i>																						
Ref. dB	<i>66 dB</i>																							



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

D. Payne ANIT 6/24/82

Ultrasonic Examination Report - Continuation Sheet



Customer <i>L.P & L</i>	Plant <i>Waterford</i>	Unit <i># 3</i>	Loop/ Zone <i>1A / 8</i>	Iso/Drawing No. <i>Zone 8 Rev. 2 FC. 7 dff</i>
Procedure <i>ISI 2.8 Rev. 1 f.c.i</i>	Exam Surface <i>OD</i>	Examiner/Level <i>Dwight Folsom III</i>	VCR Supervisor <i>Daniel Jensen</i>	Date <i>6-15-82</i>
Component/Piping System <i>Cold leg - R.C.P. 1A to Reactor Vessel</i>	Pipe Size <i>12"</i>	Weld Type <i>BUTT</i>	Cal. Block <i>UT-16</i>	Couplant: Type & Batch # <i>Sonotone 40 Batch # 8129</i>

Weld No.	Base Metal Scan	Scan Direction				Inspection Limitations	Surface Condition		Examination Results		Remarks
		2	5	7 & 8	0		Base Metal	Weld	UT	Visual	
<i>08-004</i>	<i>Yes</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>Yes</i>	<i>N/A</i>	<i>Smooth</i>	<i>Ground</i>	<i>N/A</i>	<i>Sat</i>	<i>Inspection of carbon steel side only</i>



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

Customer LP & L	Plant WATER FORTS	Unit III	Loop/Zone 1A/8
Component/Piping System COLD LEG-REACTOR VESSEL TO RCP 1A	Examiner/Level David Z. Foke III	Date 6/19/82	
Procedure ISI 2.5 REV D	Iso/Drawing No. ZONE 8/REV 2 FL. 2	VCR Supervisor Dennis Jensen	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Parametrics</i>	Size <i>.50"</i>	Cal. Block <i>UT-16</i>	
Model <i>Mark I</i>			Cal. Block <i>N/A</i>	
S/N <i>C1610 E</i>	Freq. <i>2.25 MHz</i>		Range Cal. <i>1.8"</i>	
Reject <i>OFF</i>	Serial No. <i>44652</i>		Calibration Checks	
Damp. <i>MIL</i>			<i>(IN) 0900</i>	<i>(OUT) 1145</i>
Freq. <i>2.0 MHz</i>	Coax. Cable <i>6' BNC-BNC</i>			
Rep. Rate <i>1K</i>	Gain <i>50 dB</i>			
Filter <i>HIGH</i>				
Video <i>Norm.</i>				
Couplant <i>Sony Trace 40 / Batch #8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
08-009	12	1.28"	1.38"	N/A	N/A	N/A	N/A	N/A	N/A
08-009	2	1.33"	1.38"						
08-009	4	1.38"	1.33"						
08-009	6	1.38"	1.38"						
08-009	8	1.38"	1.35"						
08-009	10	1.28"	1.35"						

Sketch/Identification

Ultrasonic Examination Report

D. Payne ANII 6/24/82



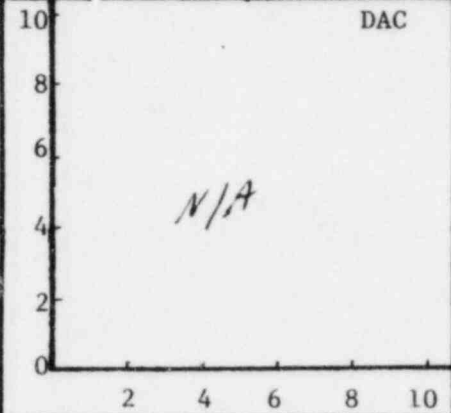
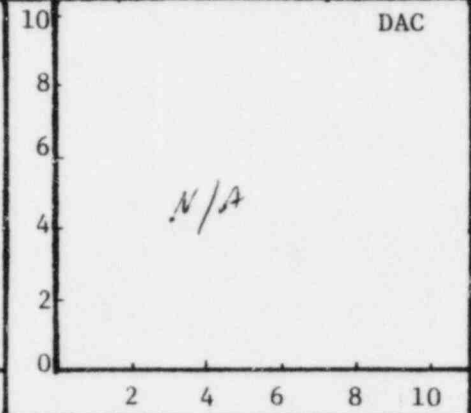
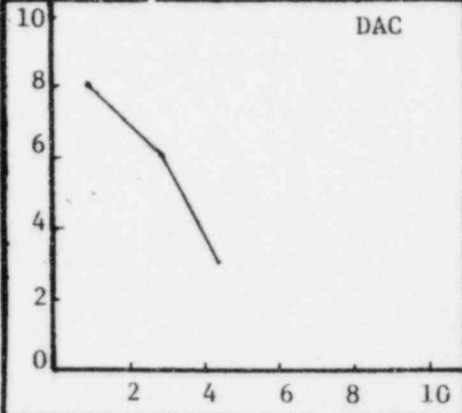
Customer LP & L		Plant WATERFORD		Unit III		Loop/Zone 1A/8		Iso/Drawing No. ZONE 8 / REV. 2 F.C. 7 dlf	
Procedure ISI 28 REV. 1		Exam Surface O.D.		Examiner/Level David J. Fisher III		VGR Supervisor Manuel F. Jones		Date 6/19/82	
Component/Piping System OLD LEG-REACTOR VESSEL TO RCP 1A				Pipe Size 12"		Weld Type BUTT		Cal. Block UT-16	
						Couplant SONOTRACE		Batch No 8124	

Continuation Sheet Attached
 Yes No

Field Changes:
Yes No
If Yes, Number 1

	Transducer			Instrument			
	S/N	44652	N/A	Mfr.	Sonic	Model	Mark I
	Size	.50"		S/N	01610 E	RepRate	1K
	Frequency	2.25 MHz		Reject	OFF	Filter	High
	Beam Angle	0°		Damp	Min.	Coax	6' BNC-BNC
			Freq.	2 MHz	Video	NORM	

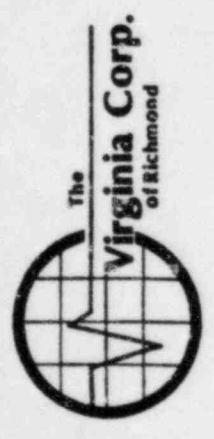
Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
1/4 T	80%	1.5	N/A	N/A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

D. Payne ANII 6/24/82

Ultrasonic Examination Report - Continuation Sheet



Customer L.P. & L	Plant WATERFORD	Unit III	Loop/ Zone 1A/ 8	Iso/Drawing No. ZONE 8/REV 2 F.C. X.dlf
Procedure 15128 REV 1 F.C. 1 C.D.	Exam Surface C.D.	Examiner/Level <i>David J. Follen</i>	VCR Supervisor <i>Devin...</i>	Date 6/19/82
Component/Piping System COOL LEG - REACTOR VESSEL TO RP1A	Pipe Size 12"	Weld Type Butt	Cal. Block UT-16	Complant: Type & Batch # Sovotrace 40/8124

Weld No.	Scan Direction			Base Metal Scan	Inspection Limitations	Surface Condition		Examination Results		Remarks
	2	5	7 & 8			Base Metal	Weld	UT	Visual	
	08-009	N/A	N/A			N/A	Smooth Ground	NI	Sat	

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



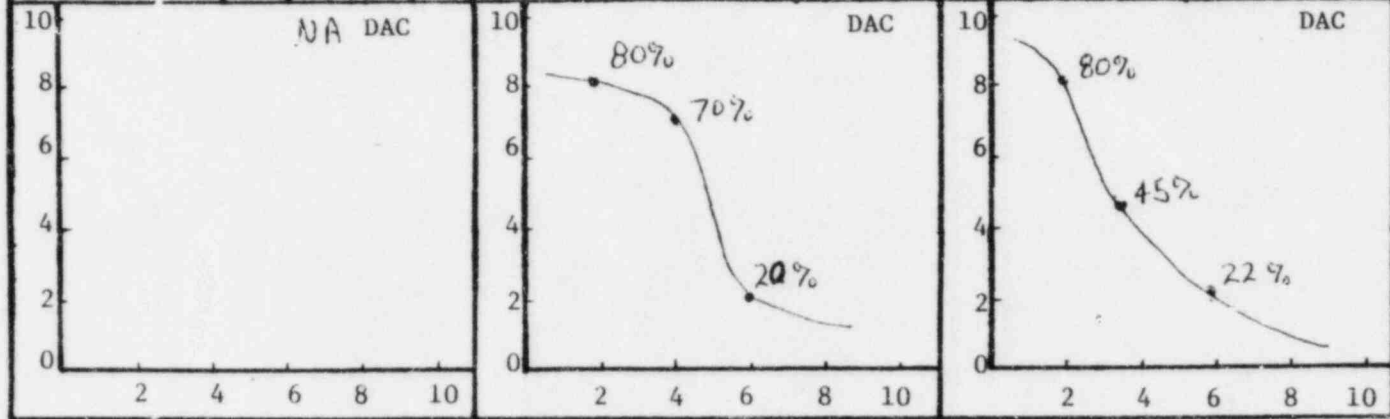
Customer <i>LP&L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone/ISO/Drawing No. <i>1A/8 Zone 8 Rev 2, F.C. 12</i>
Procedure <i>ISI-2.9, Rev 1, FCF</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>BURLINGAME</i>	VGR Supervisor <i>Dennis Jensen</i>
Component/Piping System <i>Cold Leg - Reactor Vessel to RCP 1A</i>	Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Date <i>6-19-82</i>
		Cal. Block <i>UT-16</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>8124</i>

Continuation Sheet Attached
 Yes No

Field Changes:
 Yes No
 If Yes, Number *FC 12*

Transducer S/N Size Frequency Beam Angle	<i>0°</i>	<i>45° RL</i>	<i>60°</i>	Instrument			
	<i>NA</i>	<i>G07152</i>	<i>NA</i>	Mfr.	<i>Sonic</i>	Model	<i>FTS Mk I</i>
	<i>1/2"</i>	<i>2.25 MHz</i>	<i>1</i>	S/N	<i>780836</i>	RepRate	<i>3000</i>
	<i>43°</i>	<i>2</i>	<i>1</i>	Reject	<i>1</i>	Filter	<i>H:</i>
	<i>↓</i>	<i>43°</i>	<i>↓</i>	Damp	<i>Min</i>	Coax	<i>6'</i>
				Freq.	<i>2 MHz</i>	Video	<i>Norm</i>

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>			<i>80%</i>	<i>1.8</i>			<i>NA</i>	<i>NA</i>	<i>0.830</i>	<i>1000</i>	<i>NA</i>	<i>NA</i>
<i>1/2</i>			<i>70%</i>	<i>4.0</i>			<i>45%</i>	<i>3.8</i>								
<i>3/4</i>			<i>20%</i>	<i>6.0</i>			<i>22%</i>	<i>5.8</i>								
Ref. dB	<i>↓</i>	<i>↓</i>	<i>60 db</i>				<i>55 db</i>				<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>



Additional Comments/Sketch
Carbon Steel



Ultrasonic Examination Report *D. Payne ANEI 6/24/82*

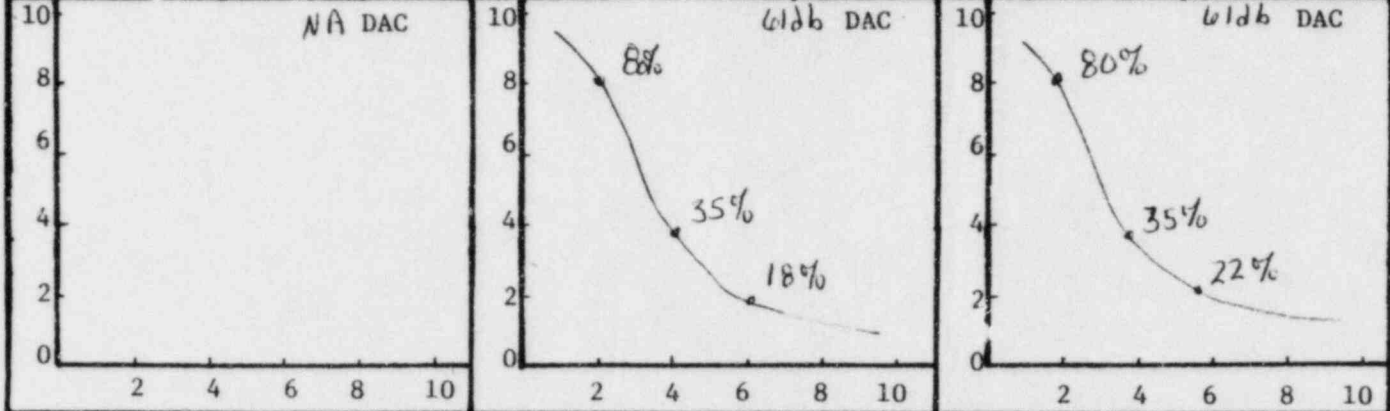
Customer <i>2P 2L</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>1A/B</i>	Iso/Drawing No. <i>Zone B, Rev 2, FCT 2</i>
Procedure <i>151-2.8 Rev. FCT 2</i>	Exam Surface <i>OD</i>	Examiner/Level <i>BURLINGAME</i>	VGR Supervisor <i>Walter Jensen</i>	Date <i>6-19-82</i>
Component/Piping System <i>Cold Leg - Reactor Vessel to RCP 1A</i>	Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-16</i>	Couplant: <i>Sonotrace</i> Type <i>40</i> Batch No. <i>B124</i>

Continuation Sheet Attached
 Yes No

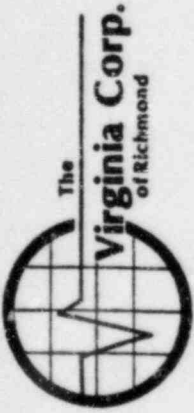
Transducer	<i>0°</i>	<i>45° R/L</i>	<i>60°</i>	Instrument			
	S/N <i>NA</i>	<i>607152</i>	<i>NA</i>	Mfr. <i>Senic</i>	Model <i>FTS MK1</i>	RepRate <i>3000</i>	Filter <i>H1</i>
Size	<i>1/2"</i>			S/N <i>780836</i>	Coax <i>6'</i>	Video <i>None</i>	
Frequency	<i>2.25 MHz</i>			Reject <i>1</i>			
Beam Angle	<i>43°</i>			Damp <i>M.W</i>			

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

Calibration 0°			2 & 5 Scan				7 & 8 Scan				Calibration Checks					
Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:		Signal Amp.	Sweep	Sound Entry Point To:		0°		45°		60°	
					Scribe Line	50% DAC			Scribe Line	50% DAC	In	Out	In	Out	In	Out
<i>1/4</i>	<i>NA</i>	<i>NA</i>	<i>80%</i>	<i>2.0</i>			<i>80%</i>	<i>1.8</i>			<i>NA</i>	<i>NA</i>	<i>0830</i>	<i>1000</i>	<i>NA</i>	<i>NA</i>
<i>1/2</i>			<i>35%</i>	<i>4.0</i>			<i>35%</i>	<i>3.8</i>								
<i>3/4</i>			<i>18%</i>	<i>6.0</i>			<i>22%</i>	<i>5.6</i>								



Additional Comments/Sketch
Austenitic



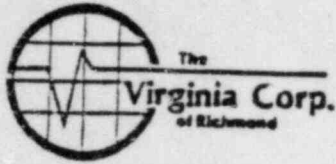
Ultrasonic Examination Report - Continuation Sheet

Page of

R. Payne ANII 9/24/82

Customer <i>LP E L</i>	Plant <i>Wackerhof</i>	Unit <i>3</i>	Loop/ Zone <i>1A / 8</i>	Iso/Drawing No. <i>Zone B, Rev 2, FC-2</i>
Procedure <i>MS-2.8, Rev 1, FC-2</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>BURLINGAME JTB</i>	VCR Supervisor <i>Randy Benson</i>	Date <i>10-19-82</i>
Component/Piping System <i>(old leg. Receiver Vessel to RCP 1A)</i>	Pipe Size <i>12"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-16</i>	Compliant: Type & Batch # <i>Section 40, Batch 8124</i>

Weld No.	Base Metal Scan	Scan Direction	Inspection Limitations	Surface Condition		Examination Results		Remarks
				Metal	Weld	UT	Visual	
<i>08-</i>	<i>NA</i>	<i>2 PAR PAR 7 & 8</i>	<i>NA SOME O.D MISMATCH AND SLOPE OF NOZZLE GOOD. ROOT AREA WAS OBTAINED.</i>	<i>CLEAN</i>	<i>ROUND</i>	<i>NI</i>	<i>SAT</i>	



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

Customer <i>L.P. & L.</i>	Plant <i>Waterford</i>	Unit <i>#3</i>	Loop/Zone <i>1A/08</i>
Component/Piping System <i>Cold Leg - Reactor Vessel to 1A</i>	Examiner/Level <i>Michael W. Blaw II</i>	Date <i>7-10-82</i>	
Procedure <i>ISI-25 Rev. 0, E.C. 0</i>	Iso/Drawing No. <i>Zone 8 Rev. 2 E.C. 1</i>	VCR Supervisor <i>Ranil Djenen</i>	Continuation Sheet Attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Equipment

Instrument		Transducer		Calibration
Mfgr. <i>Sonic</i>	Mfgr. <i>Panometrics</i>	Size <i>.5"</i>	Cal. Block <i>UT-18</i>	
Model <i>Mark I</i>	Freq. <i>2.25 MHz</i>		Cal. Block <i>NA</i>	
S/N <i>01058E</i>	Serial No. <i>44651</i>		Range Cal. <i>2.135"</i>	
Reject <i>OFF</i>	Coax. Cable <i>6' Duol</i>		Calibration Checks	
Damp. <i>Min</i>	Gain <i>47 db</i>		In <i>1:15</i>	
Freq. <i>2.0 MHz</i>			Out <i>4:40</i>	
Rep. Rate <i>1X</i>				
Filter <i>Hi</i>				
Video <i>Norm.</i>				
Couplant <i>Sonotrace 40 SN 8124</i>				

Examination Results

Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5	Weld Number	Meas. Point	Reading Weld	Reading Scan 2	Reading Scan 5
08-007	12	1.324"	.897"	1.580"	NA	NA	NA	NA	NA
08-007	2	1.324"	.854"	1.580"					
08-007	4	1.324"	.854"	1.537"					
08-007	6	1.324"	.854"	1.537"					
08-007	8	1.324"	.854"	1.580"					
08-007	10	1.324"	.897"	1.601"					
08-013	12	.982"	.854"	1.580"					
08-013	2	.875"	.726"	1.559"					
08-013	4	.897"	.683"	1.580"					
08-013	6	.897"	.769"	1.537"					
08-013	8	.939"	.769"	1.495"					
08-013	10	1.067"	.726"	1.623"					

Sketch/Identification



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

Customer <i>L.P. & L.</i>		Plant <i>Waterford</i>		Unit <i>3</i>	Loop/Zone <i>1A/8</i>	Iso/Drawing No. <i>Zone 8, Rev. 2, F.C. X 2</i>	
Procedure <i>mw# 2</i> <i>ISI-28 R.L.F.C.N</i>		Exam Surface <i>O.D.</i>		Examiner/Level <i>Michael W. Blew II</i>		VER Supervisor <i>Daniel Jensen</i>	
Component/Piping System <i>Cold Leg - Reactor Vessel to RCP 1A</i>		Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>		Cal. Block <i>UT-18</i>	Couplant: <i>Sonotrac 40</i>	
					Batch No. <i>8124</i>		

Continuation Sheet Attached
 Yes No

Transducer	Instrument		
	Mfg.	Model	Mark
S/N	<i>44651</i>	<i>NA</i>	<i>NA</i>
Size	<i>.5"</i>		
Frequency	<i>2.25 MHz</i>		
Beam Angle	<i>0°</i>		

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

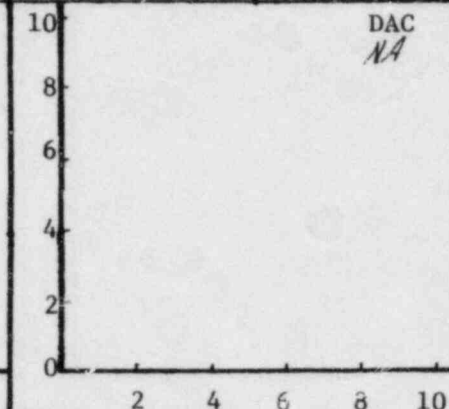
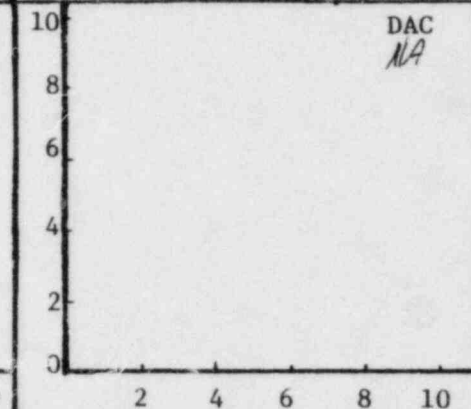
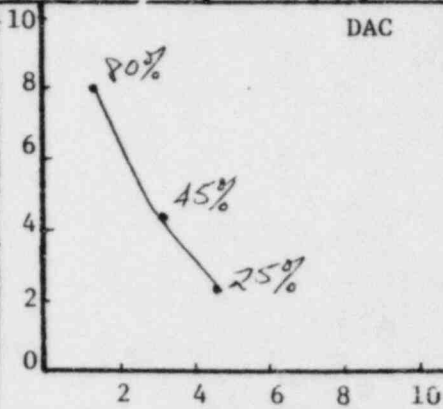
Calibration *0°*

2 & 5 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks								
					Scribe Line	50% DAC				Scribe Line	50% DAC		0°		45°		60°				
						In	Out				In	Out	In	Out							
<i>1/4 T</i>	<i>80%</i>	<i>1.3</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	
<i>1/2 T</i>	<i>45%</i>	<i>2.8</i>																			
<i>3/4 T</i>	<i>25%</i>	<i>4.3</i>																			

Ref. dB *47 dB*



Additional Comments/Sketch

D. Payne ANII 7/19/82

Ultrasonic Examination Report - Continuation Sheet

Page 2 of 2



Customer	Plant	Unit	Loop/Zone	Iso/Drawing No.
LPA	WATERFORD	3	1A/B	MOV 2
Procedure	Exam Surface	Examiner/Level	VCR Supervisor	Date
151-2.8 RIFK	Q. D.	Michael W. Ab. II	R. J. [unclear]	7-10-82
Component/Piping System	Pipe Size	Weld Type	Cal. Block	Couplant: Type & Batch #
Cold Leg-R.V. To RCP 1A	3.5"	Butt	UT-18	SWIFT RACE 403/ 8124

Weld No.	Scan Direction			Inspection Limitations	Surface Condition			Examination Results	Remarks
	Base Metal Scan	2	5		7 & 8	0	Base Metal		
08-007	YES	NA	NA	NA	0	Smooth	Smooth	NI	NA
08-013	YES	NA	NA	NA	0	Smooth	Smooth	NI	NA



The Virginia Corp.
of Richmond

Ultrasonic Examination Report

D. Payne ANII 7/19/82

Customer <i>L.P. 6</i>	Plant <i>Waterford</i>	Unit <i>3</i>	Loop/Zone <i>118</i>	Iso/Drawing No. <i>Zone 8 REV. 2 F.C. & dff</i>
Procedure <i>FL-2</i>	Exam Surface <i>O.D.</i>	Examiner/Level <i>Daniel Z. Fokan III</i>	VCR Supervisor <i>W. C. King</i>	Date <i>7/15/82</i>
Component/Piping System <i>Reactor Vessel - RCPIA</i>	Pipe Size <i>35"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: <i>Scotch-Brite</i> Type <i>40</i> Batch No. <i>3024</i>

Continuation Sheet Attached

Yes No

Field Changes:

Yes No

If Yes, Number *2*

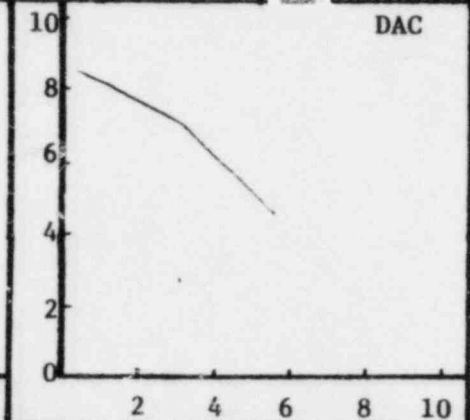
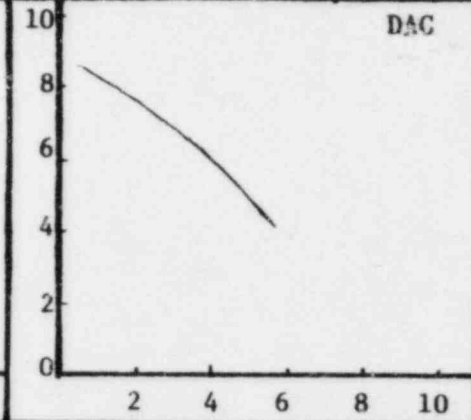
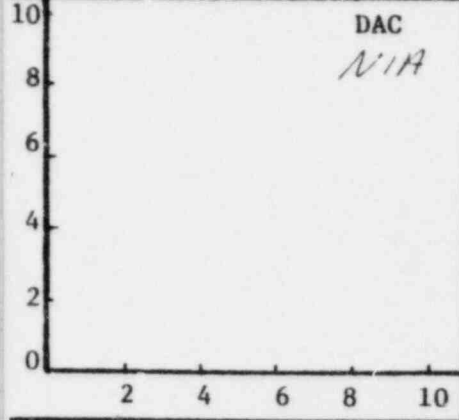
Transducer S/N Size Frequency Beam Angle	30°	45°	60°	Instrument			
	607150	N/A	N/A	Mfg.	Sonic	Model	Murki
	.50"			S/N	05473E	RepRate	1K
	225.4kHz			Reject	3	Filter	HI
	30°			Damp	N/A	Coax	6846-MD
				Freq.	2.0MHz	Video	Norm

Calibration 0°

2 & 3 Scan

7 & 8 Scan

Calibration Reflector Location	Signal Amp.	Sweep	Signal Amp.	Sweep	Sound Entry Point To:			Signal Amp.	Sweep	Sound Entry Point To:			Calibration Checks					
					Scribe Line	50% DAC				Scribe Line	50% DAC		30°		45°		60°	
						In	Out				In	Out	In	Out	In	Out		
4T	N/A	N/A	80%	1.5	N/A	N/A	N/A	80%	1.5	N/A	N/A	N/A	8.00	10:53	N/A	N/A	N/A	N/A
4T			70%	3.0				70%	3.0									
34T			55%	4.5				55%	4.5									
Ref. dB	N/A		62					62										



Additional Comments/Sketch
Calibration for carbon steel side



The Virginia Corp.
of Richmond

Ultrasonic Examination Report

D. Payne ANIE 7/19/82

Customer <i>L.P. + L</i>	Plant <i>Waterford</i>	Unit # <i>3</i>	Loop/Zone <i>1/8</i>	Is ² /Drawing No. <i>Zone 2 Rev. 2 FC² dlf</i>
Procedure <i>IST-2.8 Rev 1FC2</i>	Exam Surface <i>OD</i>	Examiner/Level <i>David P. Payne</i>	VGR Supervisor <i>Kevin P. Payne</i>	Date <i>7-15-82</i>
Component/Piping System <i>Reactor Vessel to RCP 1A</i>	Pipe Size <i>3.5"</i>	Weld Type <i>Butt</i>	Cal. Block <i>UT-18</i>	Couplant: <i>Type Sonoloy Batch No. 8124</i>

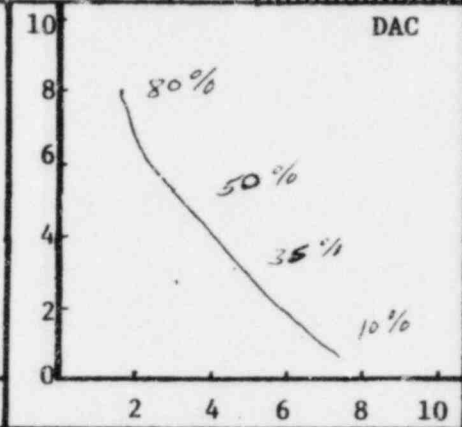
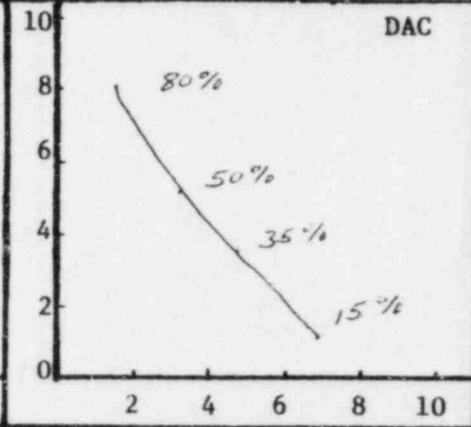
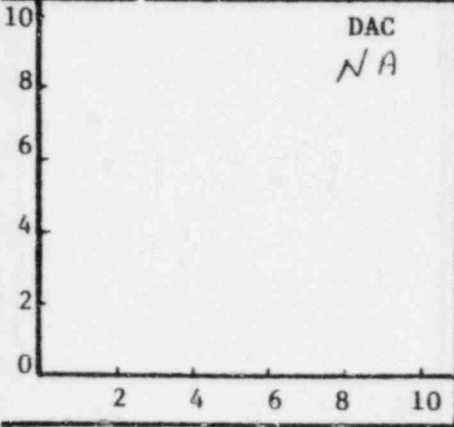
Continuation Sheet Attached
 Yes No

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

Transducer	30°	45°	60°	Instrument			
	S/N <i>607150</i>	<i>NA</i>	<i>NA</i>	Mfr. <i>SONIC</i>	Model <i>MARK I</i>	RepRate <i>1K</i>	Filter <i>HI</i>
	Size <i>.50"</i>			S/N <i>05473E</i>	Coax <i>6' BNC TAMP</i>	Video <i>None</i>	
	Frequency <i>2.25 mhz</i>			Reject <i>3</i>			
	Beam Angle <i>30°</i>			Damp <i>M.N.</i>			

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

Calibration Checks					
30°		45°		60°	
In	Out	In	Out	In	Out
<i>7:50</i>	<i>10:53</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>



Additional Comments/Sketch
Calibration for austenetic side

D. Payne ANEI 7/19/82



Ultrasonic Examination Report - Continuation Sheet Page **3** of **3**

Customer LP + L	Plant Waterford	Unit #3	Loop/Zone 1/8	Iso/Drawing No. 2 ZONE 8 REV. 2 FLC Xdf
Procedure ISI-2.8 REV 1 FL2	Exam Surface OD	Examiner/Level David T. Fokuhl III	VCR Supervisor David L. Jones	Date 7-15-82
Component/Piping System Reactor Vessel to RCP 1A	Pipe Size 3.5"	Weld Type BUTT	Cal. Block UT-18	Couplant: Type & Batch # Sonic trace 40 Batch # 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	
		08-007	NA	PAR	PAR		PAR	NA	Weld contour	Smooth	
08-013	NA	PAR	PAR	PAR	NA	weld contour & adjacent weld			NI	SAT	Sscan limited to 5" from toe on 2 side due to adjacent weld.