George A. Lippard
Vice President, Nuclear Operations
803.345.4810

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A SCANA COMPANY

May 6, 2016
RC-16-0077

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

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
RELIEF REQUEST RR-III-12 PROPOSED ALTERNATIVE INSPECTION REQUIREMENTS FOR PIPING WELDS – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

References:

1. SCE&G Letter from T. D. Gatlin to NRC Document Control Desk, "Relief Request RR-III-12 Proposed Alternative Inspection Requirements for Piping Welds," dated November 10, 2015 (ML15316A556)
2. NRC Letter to G. A. Lippard (SCE&G), "Virgil C. Summer Nuclear Station, Unit No. 1 – Request for Additional Information (CAC No. MF7098)," dated April 8, 2016 (ML16097A081)

South Carolina Electric & Gas Company (SCE&G), acting for itself and as an agent for South Carolina Public Service Authority pursuant to 10CFR50.55a(g)(5)(iii), requested relief from the volumetric requirement of ASME Code Section XI per Reference 1. NRC review of this relief request determined that additional information was required. A request for additional information (RAI) was issued by Reference 2.

Attachment I provides the VCSNS response to the RAIs. Attachments II through VI provide supporting information for the responses found in Attachment I.

A047
NRR

This letter contains no commitments. If you have any questions or require additional information, please contact Bruce Thompson at (803) 931-5042.

Very truly yours,

George A. Lippard

WLT/GAL/wm

Attachments:

I. VCSNS Response to Request for Additional Information
II. Exam Data Sheets for Welds 1-4102A-5 and 1-4303-17
III. Weld 1-4102A-1 Details and Data Sheets
IV. Weld 1-4102A-7 Details and Data Sheets
V. Weld 1-4202A-14 Details and Data Sheets
VI. Weld 1-4502-13 Details and Data Sheets

c: K. B. Marsh
S. A. Byrne
J. B. Archie
N. S. Carns
J. H. Hamilton
J. W. Williams
W. M. Cherry
C. Haney
S. A. Williams
NRC Resident Inspector
K. M. Sutton
NSRC
RTS (CR-15-04026)
File (810.19)
PRSF (RC-16-0077)

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment I

VCSNS Response to Request for Additional Information

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the South Carolina Electric & Gas Company (SCE&G) alternative request dated November 10, 2015 (Agencywide Documents Access and Management System Accession No. ML15316A556), for the Virgil C. Summer Nuclear Station, Unit 1. The NRC staff has determined that the following request for additional information (RAI) is required to complete its review.

RAI No. 1:

Please discuss the ASME Code Section XI, Appendix I requirement from which procedure SCANA-UT-98-2 is based. If supplements apply, please discuss which supplements were used.

VCSNS Response:

The procedure, SCANA-UT-98-13, states "...describes the manual contact ultrasonic examination of full penetration vessel welds not greater than 2 inches in thickness. This procedure is in accordance with the requirements of ASME Boiler and Pressure Vessel Code Section XI...This procedure is applicable to full penetration butt welds and adjacent base metal in vessels having nominal wall thickness of 0.2 inches to 2.0 inches inclusive." The applicable ASME BPV Code for Sections V and XI is 1998 edition through 2000 addenda.

Section XI, Appendix I, Ultrasonic Examinations, Article I-2200 which states, "Vessels not greater than 2 in. in thickness and all piping welds" is applicable to procedure SCANA-UT-98-13. Article I-2210 is for vessels, and instructs "Ultrasonic examination of vessels not greater than 2 in. in thickness shall be conducted in accordance with Appendix III, as supplemented by Table I-2000-1." The column labeled "Other Vessels ≤ 2 in. Thick I-2210" in Table I-2000-1 shows the required supplements of Appendix I to be used.

TABLE I-2000-1
REQUIRED SUPPLEMENTS

Supplement	Reactor Vessel Flange and Attachment Welds I-2110(b)	Reactor Vessel CRD Housing Welds I-2110(c)	Other Vessels > 2 in. Thick I-2120	Other Vessels ≤ 2 in. Thick I-2210	Other I-2400
1 — Calibration Block Material and Thickness	X		X		X
2 — Calibration Blocks for Clad Welds/ Components	X		X	X	X
3 — Calibration Blocks for Curved Surfaces			X	X	X
4 — Alternative Calibration Block Design	X		X	X	X
5 — Electronic Simulators	X		X	X	X
6 — Pulse Repetition Rate	X		X	X	X
7 — Instrument Calibration	X		X		X
8 — Scan Overlap and Search Unit Oscillation			X		X
9 — Scan Angles			X		
10 — Recording Criteria	X	X	X	X	X
11 — Geometric Reflectors	X		X	X	X
12 — Flaw Sizing	X	X	X	X	X

Appendix III, as instructed to be utilized by Appendix I Article I-2210, is titled "Ultrasonic Examination of Vessels Not Greater Than 2 Inches in Thickness." According to Appendix III, Article III-1100(c), Supplement 1 of Appendix III is to be used on austenitic welds such as the welds CGE-2-1110-1B/1 and CGE-2-1110-1B/2.

RAI No. 2:

For each subject weld, discuss any plant-specific operating experience regarding potential degradation in the subject B-J welds such as stress corrosion cracking, fatigue cracking, and general corrosion. In addition, provide any information on any examinations on other welds susceptible to the same degradation mechanism.

VCSNS Response:

There has not been any identified degradation on ASME Section XI, Examination Category B-J, Item Number B9.11 welds to date.

As requested, two recent exams performed on welds with the same potential degradation mechanisms (TT - thermal transient, TASCS - Thermal Stratification, Cycling, and Striping) are provided in Attachment II for welds 1-4102A-5 performed in RF22, and 1-4303-17 performed in RF21.

RAI No. 3:

For each subject weld, please provide the pipe diameter, material of the weld and surrounding materials, and the scanning limitation in greater detail. Please also provide the coverage calculations for each subject weld.

VCSNS Response:

1-4102A-1: 12 in. diameter, 1.125 in. thick SS Pipe - SS Weld - SS Branch Connection to SS A HL

- The full single sided exam performed on this weld means that only 50% of the full bi-directional weld was able to be performed. The ability to examine the exam volume fully in one direction only intended that the calculation was not necessary as this is 50% of the full bi-directional exam. Weld details and examination data sheets are provided in Attachment III.

1-4102A-7: 12 in. diameter, 1.125 in. thick SS Pipe - SS Weld - SS Valve Body of XVG08702A-RH

- The full single sided exam performed on this weld means that only 50% of the full bi-directional weld was able to be performed. The ability to examine the exam volume fully in one direction only intended that the calculation was not necessary as this is 50% of the full bi-directional exam. Weld details and examination data sheets are provided in Attachment IV.

1-4202A-14: 6 in. diameter, 0.719 in. thick SS Pipe - SS Weld - SS Valve Body of XVC08998B-SI

- The full single sided exam for this weld is partially obstructed by a branch connection on the pipe, 1-4202A-24BC, thus not allowing the full 50% coverage for the single sided exam. Weld details, coverage calculations and examination data sheets are provided in Attachment V.

1-4502-13; 6 in. diameter, 0.719 in. thick SS Pipe - SS Weld - SS Pipe Tee

- The full single sided exam performed on this weld means that only 50% of the full bi-directional weld was able to be performed. The ability to examine the exam volume fully in one direction only meant that the calculation was not necessary as this is 50% of the full bi-directional exam. Weld details and examination data sheets are provided in Attachment VI.

RAI No. 4:

Please identify if any non-code best effort examinations were performed on the subject welds.

VCSNS Response:

Non-code exams have not been performed.

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment II

Exam Data Sheets for Welds 1-4102A-5 and 1-4303-17

Attachment II contains:

Exam Data Sheets for welds 1-4102A-5 and 1-4303-17 from RF22 (Fall 2015) and RF21 (Spring 2014), respectively, as examples requested for welds of the same category with similar degradation mechanisms.

WESDYNE INTERNATIONAL
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ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-010

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-5/ RC HL "A" loop Cal. Blk. #: 105256 Ref. Blk.#: 102362 "T" Nom.: 1.125" Nom. Pipe Ø: 12.0"

Isometric Dwg #: CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 78 °F

Due Date: 7/29/2016

SEARCH UNIT

Scan Angle:	45°	Mode:	Shear
Serial No.:	010YLN	Mfr.	KBA
Fixturing:	Non-Integral	Model:	Comp-G
Size:	0.50"	Shape:	Round
Frequency:	2.25 MHz	# Elem:	1
Measured Angle:	45°	Exit Pnt.:	0.30"

FS N/A

Couplant Type/Batch #: Ultragel II/15D018

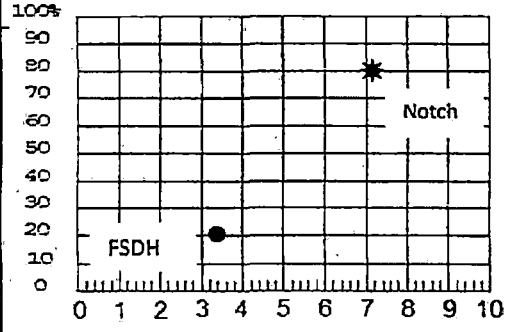
Cable / Length / # Conn: RG-174/6'/0

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions. 10 = 3.0"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	14A00LTD		
Pulser: Square -	☑ Single ☐ Dual	Pulse Wth.:	220
Damping:	500	Reject:	0
Freq.:	2.25 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☑ T ☐ R

Range:	3.0"	Velocity	0.1234
Probe Delay:	6.7044	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	16.9	28.9	dB
Gain 0° or //	N/A	28.9	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☑

CAL CHECKS	TIME
Initial Cal.	1359
Intermediate	1601
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1757

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	7.1	16.9
FSDH	20	3.5	16.9

EXAMINATION AREA / WELD

CGE-1-4102A-5

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☐ YES ☑ NO

Remarks: 100% Exam volume coverage achieved. NRI

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/20/2015

Print Troy Steinbauer

Examiner Lv. N/A Date: N/A

Print N/A

Reviewer: [signature] L III Date: 10-25-15

Reviewer: [signature] L-III Date: 10-26-15

ANII Review: [signature] Date: 10/27/15

WESDYNE INTERNATIONAL
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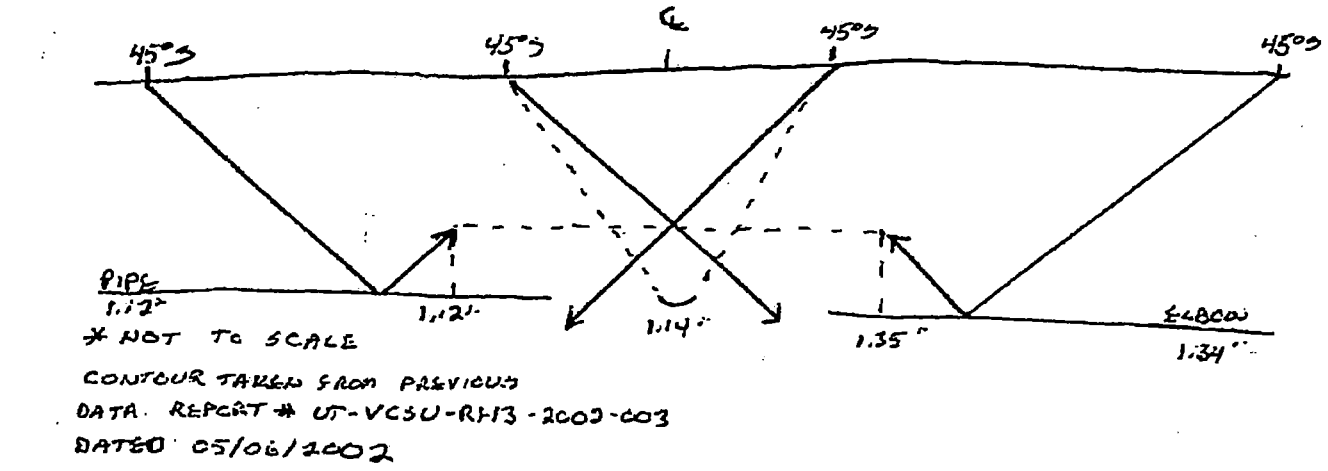
Coverage / Sketch
Sheet

Report # *RF22-UT-010*

Site: *V.C. Summer* Unit: *1* Outage #: *RF22* Procedure # *WDI-STD-1036* Revision: *4* FCN: *N/A*
System: *RCS* Weld #: ***CGE-1-4102A-5***

CGE-1-4103 A-5



* NOT TO SCALE

CONTOUR TAKEN FROM PREVIOUS DATA REPORT # UT-VCSU-RH3-2003-003 DATED 05/06/2002

Examiner: STEINBAUER, TROY Level II Date 10/20/2015
Examiner: N/A Level Date

Pg 2 of 2

Reviewer: Level III Date 10-23-15
Reviewer: Level III Date 10-26-15

ANII Review: Date 10/27/15

WESDYNE INTERNATIONAL
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ULTRASONIC EXAMINATION REPORT

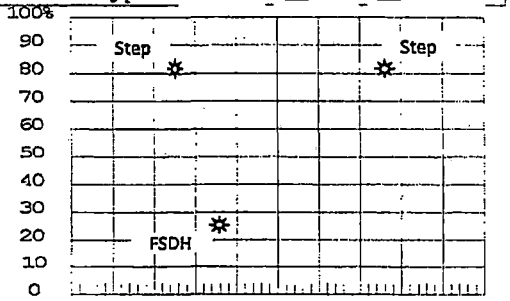
Report # RF21-UT-022
Work Order # 1309893-020

Plant: VC Summer Unit: 1 Procedure No.: WDI-STD-1038 Rev.: 4
FCN # N/A
Comp/ System: RCS Cal. Blk. # SAP 105256 Ref. Blk.# SAP 102362 "T" Nom. 0.719" Nom. Pipe Ø 6"
Isometric Dwg # CGE-1-4303 Thermometer S/N: 30006637 Block / Comp Temp: 76 °F / 80 °F

SEARCH UNIT

Scan Angle: 0° Mode: Long.
Serial No.: 5746350003 Mfr. GEIT
Fixturing: Integral Model: MSEB4
Size: 3.5x10 Shape: Round
Frequency: 4 Mhz # Elem: 2
Measured Angle: 0° Exit Point N/A
RL Focal Point Verified ☑ N/A ~FS / FD
Couplant Type/Batch #: UltraGel II 12H028
Cable / Length / # Conn: RG- 174 / 6' / 0
Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

OD Surface Condition: Ground Smooth
Material Type ☐ CS ☑ SS ☐ DM



0 1 2 3 4 5 6 7 8 9 10
Screen Divisions, 10 = 2.0

INSTRUMENT SETTINGS

Mfr/Model No. GE / KrautKramer USN 60 SW
Serial No.: SAP 105205
Pulser: Square ☑ Dual On ☐ Dual Off Puls Wth : 130
Damping: 500 Reject: 0%
Freq : 4 Mhz Rectify: Fullwave
PRF: Auto High Volt: 450 Jack: T/R

Range:	2.00"	Velocity	0.2323
Swp Delay:	0.00	SU Delay	8.7988

	Cal	Scan	
Gain 0° or ⊥	39.2	*	dB
Gain ||	N/A	N/A	dB

SCAN AREA

0° WRV	☐
0° BM	☑
⊥ To Weld	☐
|| To Weld	☐

CAL CHECKS	TIME
Initial Cal.	0740
Intermediate	1310
Intermediate	N/A
Intermediate	N/A
Final Cal.	1545

DAC

Reflector ID	% FSH	Swp Pos	dB
0.5"	81	2.5	39.3
1.5"	81	7.8	39.3
FSDH	25	3.6	39.3

Scanned || on Weld : ☑ YES ☐ NO

EXAMINATION WELD/AREA

1-4303-17

Recordable Indications ☐ YES ☑ NO
Scan Limitations ☐ YES ☑ NO

Remarks: *As needed to achieve 80% signal.

Examiner [signature] Lv. II Date: 4/21/2014
Print Stephen Williams
Examiner N/A Lv. N/A Date: N/A
Print N/A

Code Coverage Achieved N/A %
Risk Informed ☑ YES ☐ NO C'Bore ☑ Y ☐ N
Exam is Acceptable ☑ YES ☐ NO

Reviewer: Paul S Bleck III Date: 4/24/2014
Reviewer: [signature] Date: 4/24/2014
Authorized Inspection Agency ELMOSTAFA Ezzouh 4/28/2014

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ULTRASONIC EXAMINATION REPORT

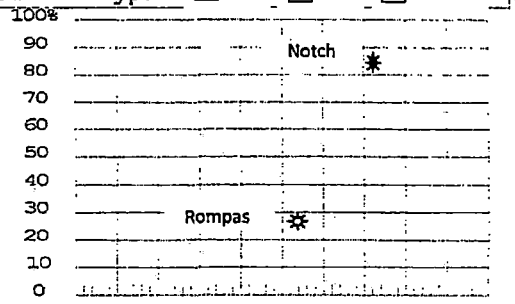
Report # RF21-UT-022
Work Order # 1309893-020

Plant: VC Summer | Unit: 1 | Procedure No.: WDI-STD-1036 | Rev.: 4
FCN # N/A
Comp/ System: RCS | Cal. Blk. # SAP 105256 | Ref. Blk.# SAP 102362 | "T" Nom. 0.719" | Nom. Pipe Ø 6"
Isometric Dwg # CGE-1-4303 | Thermometer S/N: 30006637 | Block / Comp Temp: 76 °F / 80 °F

SEARCH UNIT

Scan Angle: 45° | Mode: Shear
Serial No.: 00YMBD | Mfr. KBA
Fixturing: Non-Integral | Model: Comp G
Size: 0.375 | Shape: Round
Frequency: 2.25 Mhz | # Elem: 1
Measured Angle: 45° | Exit Point 0.25
RL Focal Point Verified ☑ N/A | ~FS / FD
Couplant Type/Batch #: UltraGel II 12H028
Cable / Length / # Conn: RG- 174 / 6' / 0
Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

OD Surface Condition: Ground Smooth
Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 2.0

INSTRUMENT SETTINGS

Mfr/Model No. GE / KrautKramer USN 60 SW
Serial No.: SAP 105205
Pulser: Square ☐ Dual On ☑ Dual Off | Puls Wth : 220
Damping: 500 | Reject: 0%
Freq : 2.25 Mhz | Rectify: Fullwave
PRF: Auto High | Volt: 450 | Jack: R

Range: 2.00" | Velocity 0.1241
Swp Delay: 0.00 | SU Delay 5.661

	Cal	Scan	
Gain 0° or ⊥	20.5	32.5	dB
Gain ∥	20.5	32.5	dB

SCAN AREA

0° WRV	☐
0° BM	☐
⊥ To Weld	☑
∥ To Weld	☑

CAL CHECKS	TIME
Initial Cal.	0742
Intermediate	1330
Intermediate	N/A
Intermediate	N/A
Final Cal.	1539

Scanned ∥ on Weld : ☑ YES ☐ NO

DAC

Reflector ID	% FSH	Swp Pos	dB
1.0" Notch	82	7.1	20.5
Rompas FSDH	28	5.2	21.1

EXAMINATION WELD/AREA

1-4303-17

Recordable Indications ☐ YES ☑ NO
Scan Limitations ☐ YES ☑ NO

Remarks: N/A

Code Coverage Achieved 100 %
Risk Informed ☑ YES ☐ NO | C'Bore ☑ Y ☐ N
Exam is Acceptable ☑ YES ☐ NO

Examiner Stephen T Williams | Lv. II | Date: 4/21/2014
Print Stephen Williams
Examiner N/A | Lv. N/A | Date: N/A
Print N/A

Reviewer: Paul S Blanton III | Date: 4/24/2014
Reviewer: [signature] | Date: 4/24/2014
Authorized Inspection Agency [signature] 4/28/2014

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ULTRASONIC EXAMINATION REPORT

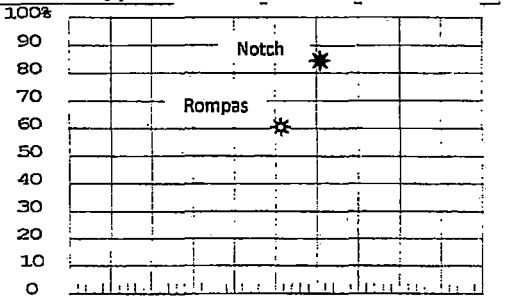
Report # RF21-UT-022
Work Order # 1309893-020

Plant: VC Summer | Unit: 1 | Procedure No.: WDI-STD-1036 | Rev.: 4
FCN # N/A
Comp/ System: RCS | Cal. Blk. #: SAP 105256 | Ref. Blk.#: SAP 102362 | "T" Nom.: 0.719" | Nom. Pipe Ø: 6"
Isometric Dwg #: CGE-1-4303 | Thermometer S/N: 30006637 | Block / Comp Temp: 76 °F / 80 °F

SEARCH UNIT

Scan Angle: 60° | Mode: Shear
Serial No.: 00YMBB | Mfr.: KBA
Fixturing: Non-Integral | Model: Comp G
Size: 0.375 | Shape: Round
Frequency: 2.25 Mhz | # Elem: 1
Measured Angle: 58° | Exit Point: 0.3
RL Focal Point Verified ☑ N/A | ~FS / FD
Couplant Type/Batch #: UltraGel II 12H028
Cable / Length / # Conn: RG- 174 / 6' / 0
Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

OD Surface Condition: Ground Smooth
Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 3.0

INSTRUMENT SETTINGS

Mfr/Model No.: GE / KrautKramer USN 60 SW
Serial No.: SAP 105205
Pulser: Square ☑ | Dual On Dual Off ☐ | Puls Wth: 220
Damping: 500 | Reject: 0%
Freq: 2.25 Mhz | Rectify: Fullwave
PRF: Auto High | Volt: 450 | Jack: R

Range:	3.0"	Velocity	0.1241
Swp Delay:	0.00	SU Delay	6.178

	Cal	Scan	
Gain 0° or ⊥	35.0	37.0	dB
Gain ∥	35.0	37.0	dB

SCAN AREA

0° WRV	☐
0° BM	☐
⊥ To Weld	☑
∥ To Weld	☐

CAL CHECKS	TIME
Initial Cal.	0745
Intermediate	1356
Intermediate	N/A
Intermediate	N/A
Final Cal.	1542

Scanned ∥ on Weld: ☐ YES ☑ NO

DAC

Reflector ID	% FSH	Swp Pos	dB
1.0" Notch	82	6.1	35.0
Rompas FSDH	60	5.1	33.4

EXAMINATION WELD/AREA

1-4303-17

Recordable Indications ☐ YES ☑ NO
Scan Limitations ☐ YES ☑ NO

Remarks: Could not scan at risk based sensitivity, maintained 5 to 20% ID Roll.

Code Coverage Achieved: 100 %
Risk Informed ☑ YES ☐ NO | C'Bore ☑ Y ☐ N
Exam is Acceptable ☑ YES ☐ NO

Examiner: Stephen Williams | Lv. II | Date: 4/21/2014
Print: Stephen Williams
Examiner: N/A | Lv. N/A | Date: N/A
Print: N/A

Reviewer: Paul S Black III | Date: 4/24/2014
Reviewer: [illegible] | Date: 4/24/2014
Authorized Inspection Agency: [illegible] 4/28/2014

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ULTRASONIC EXAMINATION SKETCH SHEET

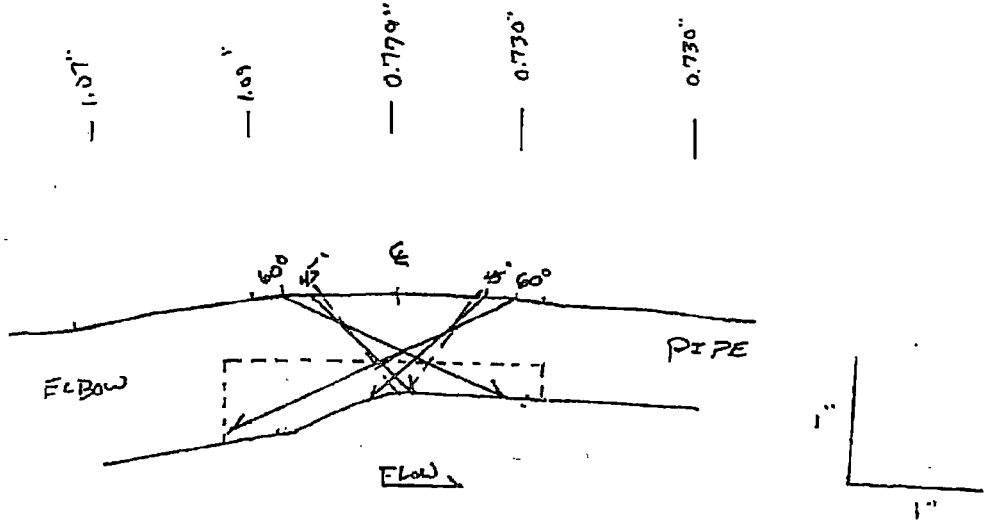
Report # RF21-UT-022
Work Order # 1309893-020

Plant/Unit: VC Summer

Comp/System: RCS

Weld / Component ID Number: 1-4303-17

Crown Height:	Flush
Crown Width:	1.2"
Diameter:	6"
Weld Length:	21"



COMMENTS: N/A

EXAMINER: Stephen Williams Lv. II Date 4/21/2014 EXAMINER: N/A Lv. N/A Date N/A
Print Stephen Williams Print N/A

REVIEWER: Paul S Bleck Lv. III DATE 4/24/2014 REVIEWER: [signature] Lv. L-III DATE: 4/24/2014

Authorized Inspection Agency MOSTAFA ELKOUSH DATE 4/28/2014

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VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment III

Weld 1-4102A-1 Details and Data Sheets

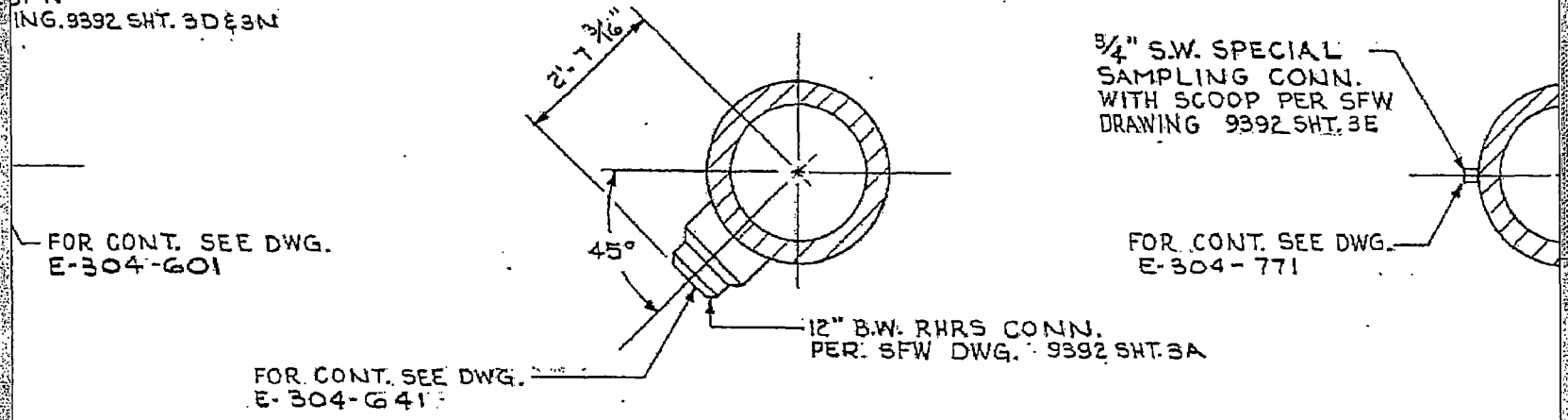
Attachment III contains:

- Drawing detail from drawing 304-602 showing the 1211 branch connection from the A Hot Leg of the Reactor Coolant Loop piping. This branch connection nozzle is the obstruction associated with the examination of weld 1-4102A-1.

- Exam data sheets from the most recent RF22 (Fall 2015) examination of weld 1-4102A-1 with sketch showing the configuration.

- Sketch 1-4102A from the ISI Sketch Manual, 1MS-94B-0375, notating the location of weld 1-4102A-1.

drawing 304-602, Section 7-7; branch connection detail for 1-4100A-18BC which connects to RHR piping via weld 1-4102A-1. Detail for RAI 3 to RR-III-12.



SECTION "7-7"

SCALE: 1/2" = 1'-0"

2 - REQ'D.

SECTION

SCALE:

2 - R

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-012

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-1/ RC HL "A" loop Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 1.125" Nom. Pipe Ø 12.0"

Isometric Dwg # CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 87 °F

Due Date: 7/29/2016

SEARCH UNIT

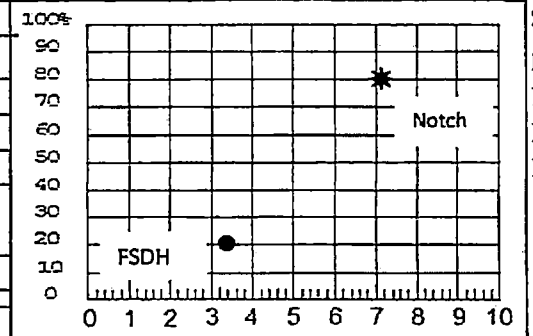
Scan Angle:	45°	Mode:	Shear
Serial No.:	010YLN	Mfr.	KBA
Fixturing:	Non-Integral	Model:	Comp-G
Size:	0.50"	Shape:	Round
Frequency:	2.25 MHz	# Elem:	1
Measured Angle:	45°	Exit Pnt.:	0.30"
FS	N/A		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6'/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 3.0"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	14A00LTD		
Pulser: Square -	☑ Single ☐ Dual	Pulse Wth.:	220
Damping:	500	Reject:	0
Freq.:	2.25 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☑ T ☐ R
Range:	3.0"	Velocity	0.1234
Probe Delay:	6.7044	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	16.9	28.9	dB
Gain 0° or //	N/A	28.9	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☑

CAL CHECKS	TIME
Initial Cal.	0811
Intermediate	1035
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1357

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	7.1	16.9
FSDH	20	3.5	16.9

EXAMINATION AREA / WELD

CGE-1-4102A-1

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: NRI. Scanned from Pipe side only due to U/S Nozzle.

Single side Exam. 50% Code Coverage required.

CR-15-05303 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/22/2015

Print Troy Steinbauer

Examiner Lv. N/A Date: N/A

Print N/A

Reviewer: [signature] L-III Date: 10-23-15

Reviewer: [signature] L-III Date: 10-26-15

ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-012

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-1/ RC HL "A" loop Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 1.125" Nom. Pipe Ø 12.0"

Isometric Dwg # CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 87 °F

Due Date: 7/29/2016

SEARCH UNIT

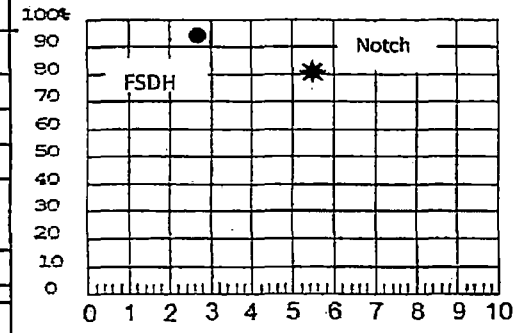
Scan Angle:	60°	Mode:	Shear
Serial No.:	010YLN	Mfr.	KBA
Fixturing:	Non-Integral	Model:	Comp-G
Size:	0.50"	Shape:	Round
Frequency:	2.25 MHz	# Elem:	1
Measured Angle:	60°	Exit Pnt.:	0.40"
FS	N/A		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6'/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 5.0"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	14A00LTD		
Pulser: Square -	☑ Single ☐ Dual	Pulse Wth.:	220
Damping:	500	Reject:	0
Freq.:	2.25 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☑ T ☐ R

Range:	5.0"	Velocity	9.2244
Probe Delay:	0.1234	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	35.3	41.3	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	0809
Intermediate	1103
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1359

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	5.4	35.3
FSDH	94	2.9	35.3

EXAMINATION AREA / WELD

CGE-1-4102A-1

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: NRI. Scanned from Pipe side only due to U/S Nozzle.

Single side Exam. 50% Code Coverage required.

AWH 10-28-15

CR-15-05303 AWH 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/22/2015

Print Troy Steinbauer

Examiner Lv. Date: N/A

Print N/A

Reviewer: [signature] L-III Date: AWH 10-23-15

Reviewer: [signature] L-III Date: 10-26-15

ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-012

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-1/ RC HL "A" loop Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 1.125" Nom. Pipe Ø 12.0"

Isometric Dwg # CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 87 °F

Due Date: 7/29/2016

SEARCH UNIT

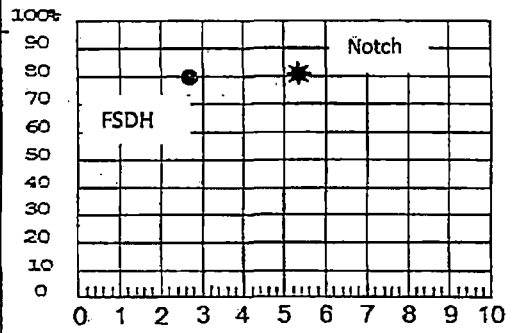
Scan Angle:	60°	Mode:	Long.
Serial No.:	01-44	Mfr.	RTD
Fixturing:	Integral	Model:	TRLA
Size:	2 (10x18)	Shape:	Rect.
Frequency:	2.0 MHz	# Elem:	2
Measured Angle:	60°	Exit Pnt.:	0.35"
FS	FD-20		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6'/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 5.0"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	14A00LTD		
Pulser: Square - ☐ Single ☑ Dual		Pulse Wth.:	250
Damping:	500	Reject:	0
Freq.:	2.00 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☑ T ☑ R

Range:	5.0"	Velocity	0.2256
Probe Delay:	9.4109	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	58.0	61.0	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	0807
Intermediate	1114
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1354

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	5.4	58.0
FSDH	80	2.9	53.9	

EXAMINATION AREA / WELD

CGE-1-4102A-1

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: NRI. Scanned from Pipe side only due to U/S Nozzle.

Single side Exam. 50% Code Coverage required.

CR-15-05303 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/22/2015

Print Troy Steinbauer

Examiner Lv. Date: N/A

Print N/A

Reviewer: [signature] L III Date: 10-23-15

Reviewer: [signature] L-III Date: 10-26-15

ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
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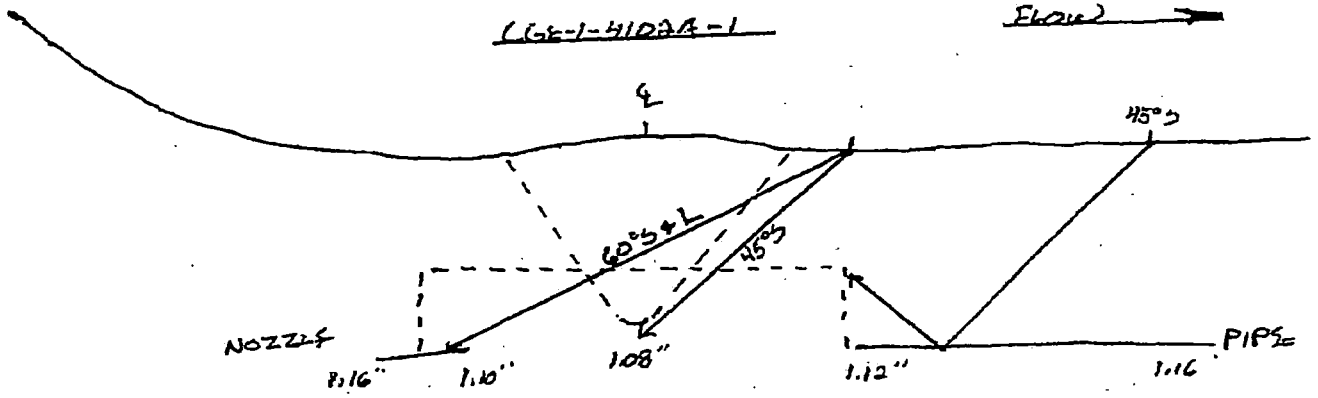
Coverage / Sketch
Sheet

Report # RF22-UT-012

Site: V.C. Summer Unit: 1 Outage #: RF22 Procedure # WDI-STD-1036 Revision: 4 FCN: N/A
System: RCS Weld #: **CGE-1-4102A-1**



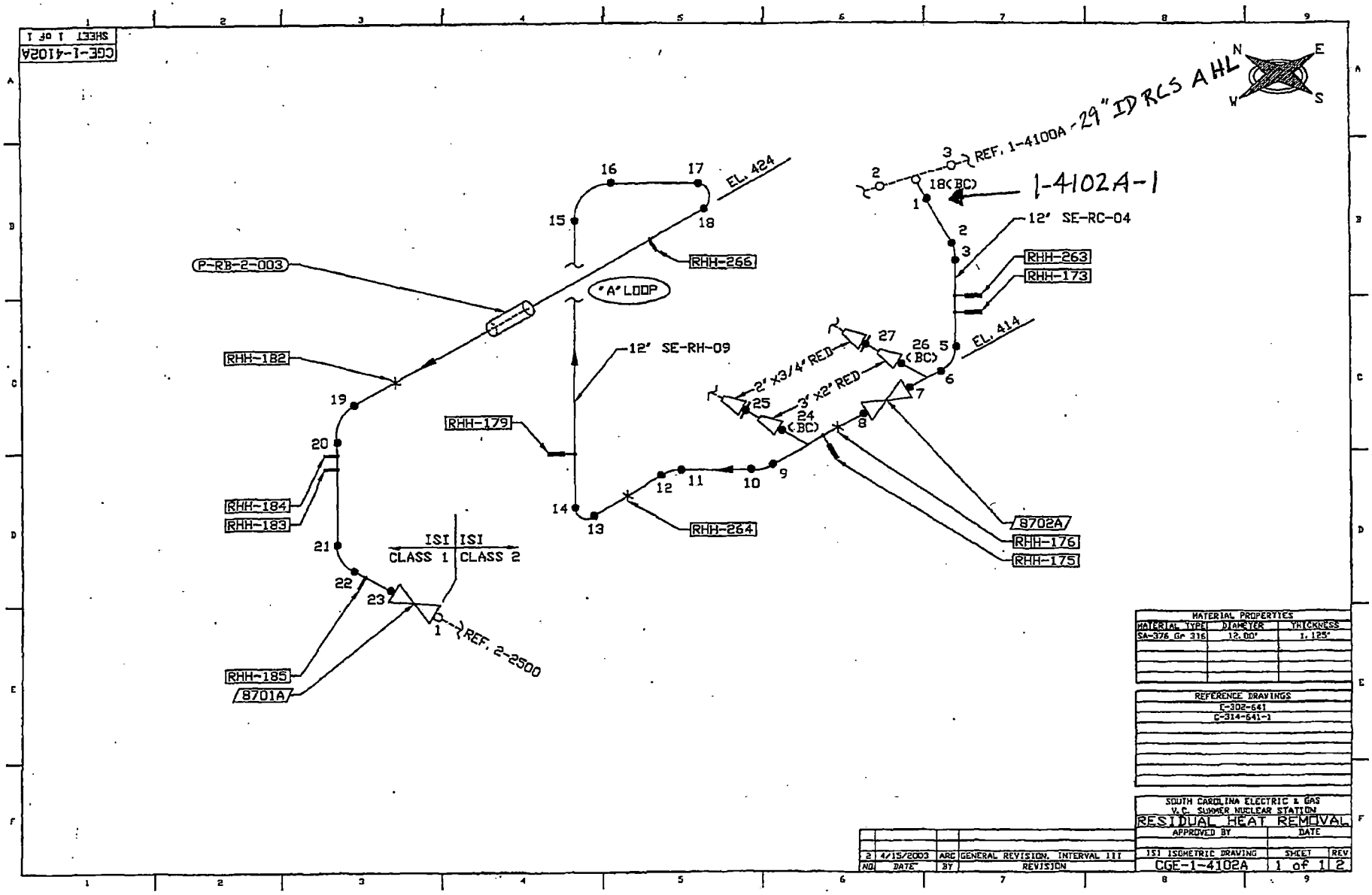
* NOT TO SCALE
CONTOUR TAKEN FROM PREVIOUS DATA
DATED: 10/30/2006

Examiner : STEINBACKER, TROY Level II Date 10/22/2015
Examiner : N/A Level Date N/A

Pg 4 of 4

Reviewer : L III Date 10-23-15
Reviewer : L-III Date 10-26-15

ANII Review: Alostaffa Elkoum Date 10/18/15


SHEET 1 OF 1
CGE-1-4102A
N
E
W
S
1-4102A-1
REF. 1-4100A-29" ID RCS A HL
12" SE-RC-04
RHH-263
RHH-173
EL. 414
2" X 3/4" RED
3" X 2" RED
(BC)
EL. 424
16
17
18
15
RHH-266
P-RB-2-003
"A" LOOP
12" SE-RH-09
RHH-182
19
20
RHH-179
RHH-184
RHH-183
21
22
23
ISI
CLASS 1
ISI
CLASS 2
REF. 2-2500
RHH-185
8701A
14
13
12
11
10
9
RHH-264
8
7
6
5
8702A
RHH-176
RHH-175
MATERIAL PROPERTIES
MATERIAL TYPE
DIAMETER
THICKNESS
SA-376 Gr 316
12.00"
1.125"
REFERENCE DRAWINGS
E-302-641
E-314-641-1
SOUTH CAROLINA ELECTRIC & GAS
V.C. SUMMER NUCLEAR STATION
RESIDUAL HEAT REMOVAL
APPROVED BY
DATE
ISI ISOMETRIC DRAWING
CGE-1-4102A
SHEET
1 of 1
REV
2
4/15/2003
ARC
GENERAL REVISION, INTERVAL III
NO.
DATE
BY
REVISION

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment IV

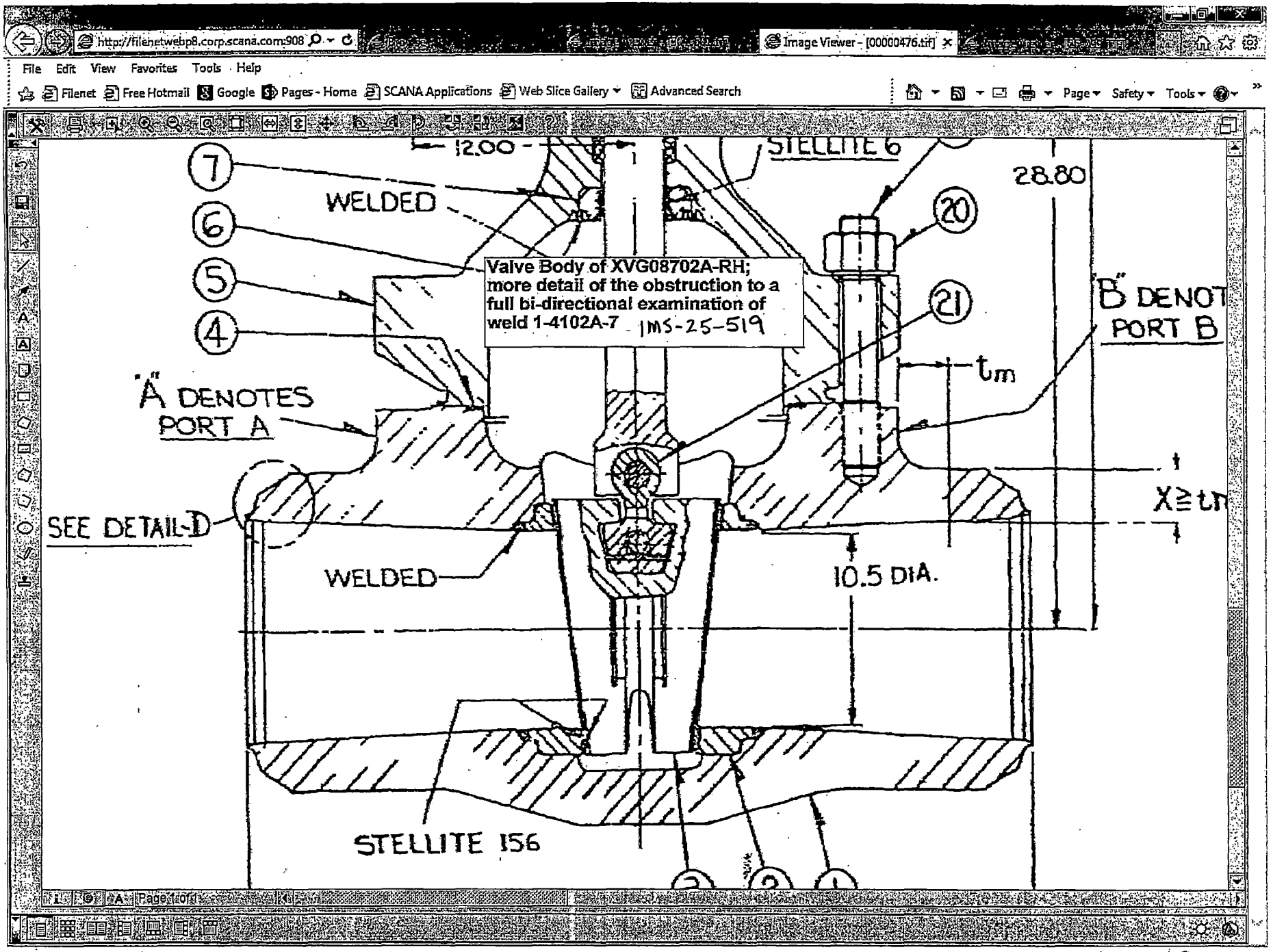
Weld 1-4102A-7 Details and Data Sheets

Attachment IV contains:

- Drawing detail from drawing 1MS-25-519 showing valve XVG08702A-RH detail. This valve is the obstruction associated with the examination of weld 1-4102A-7.

- Exam data sheets from the most recent RF22 (Fall 2015) examination of weld 1-4102A-7 with sketch showing the configuration.

- Sketch 1-4102A from the ISI Sketch Manual, 1MS-94B-0375, notating the location of weld 1-4102A-7.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File Edit View Favorites Tools Help
12.00
STELLITE 6
28.80
7
WELDED
6
5
4
20
21
Valve Body of XVG08702A-RH; more detail of the obstruction to a full bi-directional examination of weld 1-4102A-7 IMS-25-519
"B" DENOTES PORT B
tm
"A" DENOTES PORT A
X≧tm
SEE DETAIL-D
WELDED
10.5 DIA.
STELLITE 156
100%

WESDYNE INTERNATIONAL
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ULTRASONIC EXAMINATION REPORT

Page 1 of 4

UT Report No. RF22-UT-011

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-7/ RC HL "A" loop Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 1.125" Nom. Pipe Ø 12.0"

Isometric Dwg # CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 78 °F

Due Date: 7/29/2016

SEARCH UNIT

Scan Angle: 60° Mode: Long.

Serial No.: 01-44 Mfr. RTD

Fixturing: Integral Model: TRLA

Size: 2 (10x18) Shape: Rect.

Frequency: 2.0 MHz # Elem: 2

Measured Angle: 60° Exit Pnt.: 0.35"

FS FD~20

Couplant Type/Batch #: Ultragel II/15D018

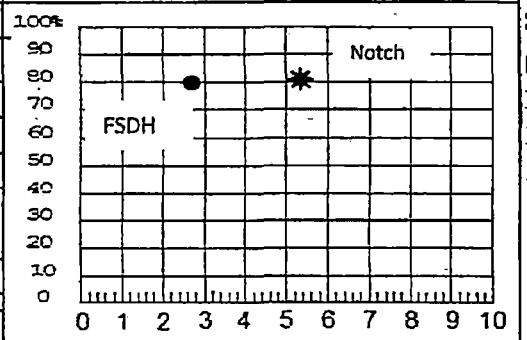
Cable / Length / # Conn: RG-174/6'/0

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 5.0"

INSTRUMENT SETTINGS

Mfr/Model No.: GE/T / USN 60L SW

Serial No.: 14A00LTD

Pulser: Square - ☐ Single ☑ Dual Pulse Wth.: 250

Damping: 500 Reject: 0

Freq.: 2.00 MHz Rectify: Fullwave

PRF: Auto High Volt: 450 Jack: ☑ T ☑ R

Range:	5.0"	Velocity	0.2256
Probe Delay:	9.4109	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	58.0	61.0	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	1402
Intermediate	1712
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1755

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	5.4	58.0
FSDH	80	2.9	53.9	

EXAMINATION AREA / WELD

CGE-1-4102A-7

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: NRI. Scanned from Pipe side only due to D/S Valve.

Single side Exam. 50% Code Coverage required.

CR-15-05303 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/20/2015

Print Troy.Steinbauer

Examiner Lv. Date: N/A

Print N/A

Reviewer: [signature] L III Date: 10-23-15

Reviewer: [signature] L-III Date: 10-26-15

ANII Review: [signature] Date: 10/28/15

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ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-011

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-7/ RC HL "A" loop Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 1.125" Nom. Pipe Ø 12.0"

Isometric Dwg # CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 78 °F

Due Date: 7/29/2016

SEARCH UNIT

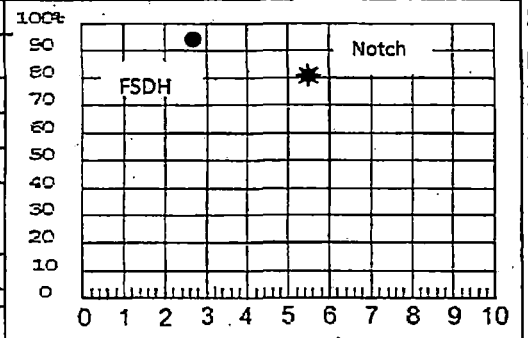
Scan Angle:	60°	Mode:	Shear
Serial No.:	010YLN	Mfr.	KBA
Fixturing:	Non-Integral	Model:	Comp-G
Size:	0.50"	Shape:	Round
Frequency:	2.25 MHz	# Elem:	1
Measured Angle:	60°	Exit Pnt.:	0.40"
FS	N/A		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6'/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 5.0"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	14A00LTD		
Pulser: Square -	☑ Single ☐ Dual	Pulse Wth.:	220
Damping:	500	Reject:	0
Freq.:	2.25 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☑ T ☐ R

Range:	5.0"	Velocity	9.2244
Probe Delay:	0.1234	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	35.3	41.3	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	1400
Intermediate	1657
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1758

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	5.4	35.3
FSDH	94	2.9	35.3

EXAMINATION AREA / WELD

CGE-1-4102A-7

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: NRI. Scanned from Pipe side only due to D/S Valve.

Single side Exam. 50% Code Coverage required.

CR-15-05303 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/20/2015

Print Troy Steinbauer

Examiner Lv. Date: N/A

Print N/A

Reviewer: [signature] L III Date: 10-23-15

Reviewer: [signature] L-III Date: 10-26-15

ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-011

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4102A-7/ RC HL "A" loop Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 1.125" Nom. Pipe Ø 12.0"

Isometric Dwg # CGE-1-4102A Thermometer S/N: 30015737 Block / Comp Temp: 70 °F / 78 °F

Due Date: 7/29/2016

SEARCH UNIT

Scan Angle: 45° Mode: Shear

Serial No.: 010YLN Mfr. KBA

Fixturing: Non-Integral Model: Comp-G

Size: 0.50" Shape: Round

Frequency: 2.25 MHz # Elem: 1

Measured Angle: 45° Exit Pnt.: 0.30"

FS N/A

Couplant Type/Batch #: Ultragel II/15D018

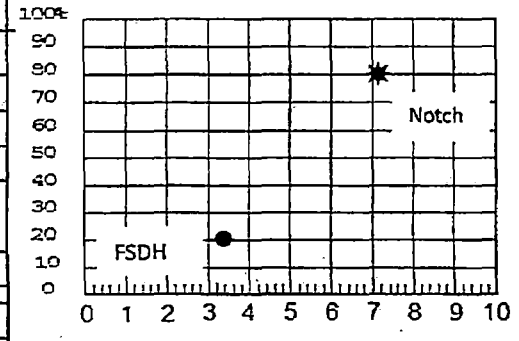
Cable / Length / # Conn: RG-174/6'/0

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 3.0"

INSTRUMENT SETTINGS

Mfr/Model No.: GEIT / USN 60L SW

Serial No.: 14A00LTD

Pulser: Square - ☑ Single ☐ Dual Pulse Wth.: 220

Damping: 500 Reject: 0

Freq.: 2.25 MHz Rectify: Fullwave

PRF: Auto High Volt: 450 Jack: ☑ T ☐ R

Range:	3.0"	Velocity	0.1234
Probe Delay:	6.7044	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	16.9	28.9	dB
Gain 0° or //	N/A	28.9	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☑

CAL CHECKS	TIME
Initial Cal.	1359
Intermediate	1601
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1757

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" ID Notch	80	7.1	16.9
FSDH	20	3.5	16.9

EXAMINATION AREA / WELD

CGE-1-4102A-7

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: NRI. Scanned from Pipe side only due to D/S Valve.

Single side Exam. 50% Code Coverage required.

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/20/2015

Print Troy Steinbauer

Examiner Lv. N/A Date: N/A

Print N/A

Reviewer: [signature] L-III Date: 10-23-15

Reviewer: [signature] L-III Date: 10-26-15

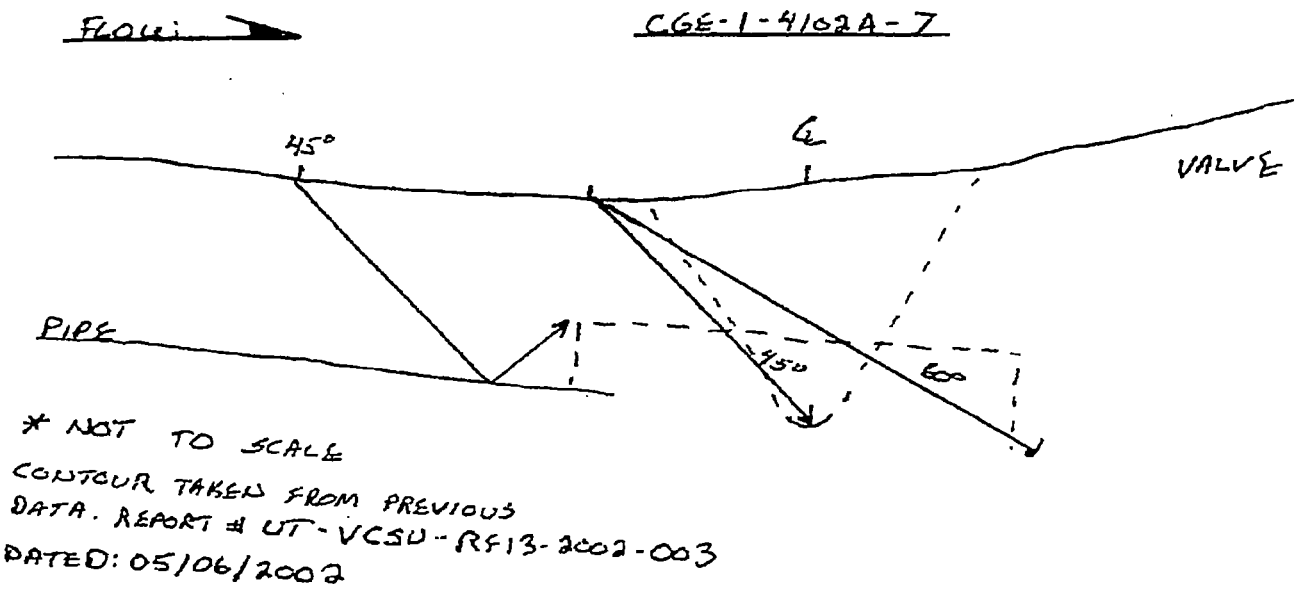
ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

Coverage / Sketch
Sheet

Report # RF22-UT-011

Site: V.C. Summer Unit: 1 Outage #: RF22 Procedure #: WDI-STD-1036 Revision: 4 FCN: N/A
System: RCS Weld #: CGE-1-4102A-7



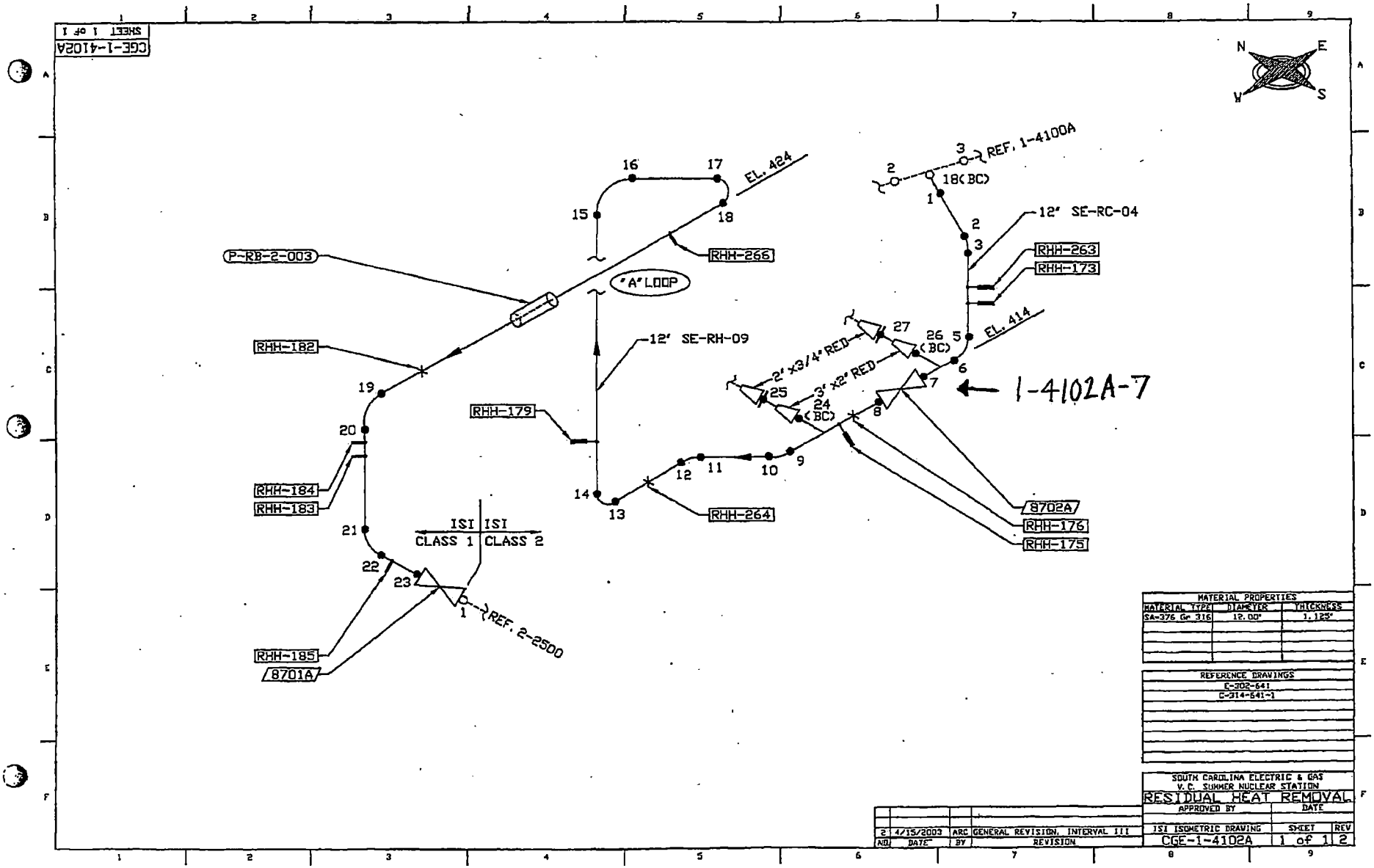
* NOT TO SCALE
CONTOUR TAKEN FROM PREVIOUS DATA. REPORT # UT-VCSU-RF13-2002-003
DATED: 05/06/2002

Examiner: [signature] Level II Date 10/20/2015
Examiner: N/A Level — Date N/A

Pg 4 of 4

Reviewer: [signature] L III Date 10-23-15
Reviewer: [signature] L-III Date 10-26-15

ANII Review: [signature] Date 10/28/15


CGE-1-4102A SHEET 1 OF 1
N
E
W
S
EL. 424
EL. 414
16
17
15
18
P-RB-2-003
"A" LOOP
RHH-266
RHH-182
12" SE-RH-09
19
20
RHH-179
RHH-184
RHH-183
21
22
23
1
REF. 2-2500
ISI CLASS 1
ISI CLASS 2
RHH-185
8701A
14
13
12
11
10
9
RHH-264
8
7
6
5
27
26 (BC)
25
24 (BC)
2" x 3/4" RED
3" x 2" RED
2
3
REF. 1-4100A
18 (BC)
1
12" SE-RC-04
RHH-263
RHH-173
1-4102A-7
8702A
RHH-176
RHH-175
MATERIAL PROPERTIES
MATERIAL TYPE: SA-376 Gr 316
DIAMETER: 12.00"
THICKNESS: 1.125"
REFERENCE DRAWINGS
C-202-641
C-314-641-1
SOUTH CAROLINA ELECTRIC & GAS
V. C. SUMMER NUCLEAR STATION
RESIDUAL HEAT REMOVAL
APPROVED BY
DATE
ISI ISOMETRIC DRAWING
CGE-1-4102A
SHEET 1 of 1
REV 2
NO. 2 DATE 4/15/2003 BY ARC REVISION GENERAL REVISION, INTERVAL III

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment V

Weld 1-4202A-14 Details and Data Sheets

Attachment V contains:

- Drawing detail from drawing 1MS-25-099 showing valve XVC08998B-SI detail. This valve is the obstruction associated with the examination of weld 1-4202A-14.

- Exam data sheets for most recent RF22 (Fall 2015) examination of weld 1-4202A-14 with sketch showing the configuration along with the coverage calculation.

- Sketch 1-4202A from the ISI Sketch Manual, 1MS-948-0375, notating the location of weld 1-4202A-14

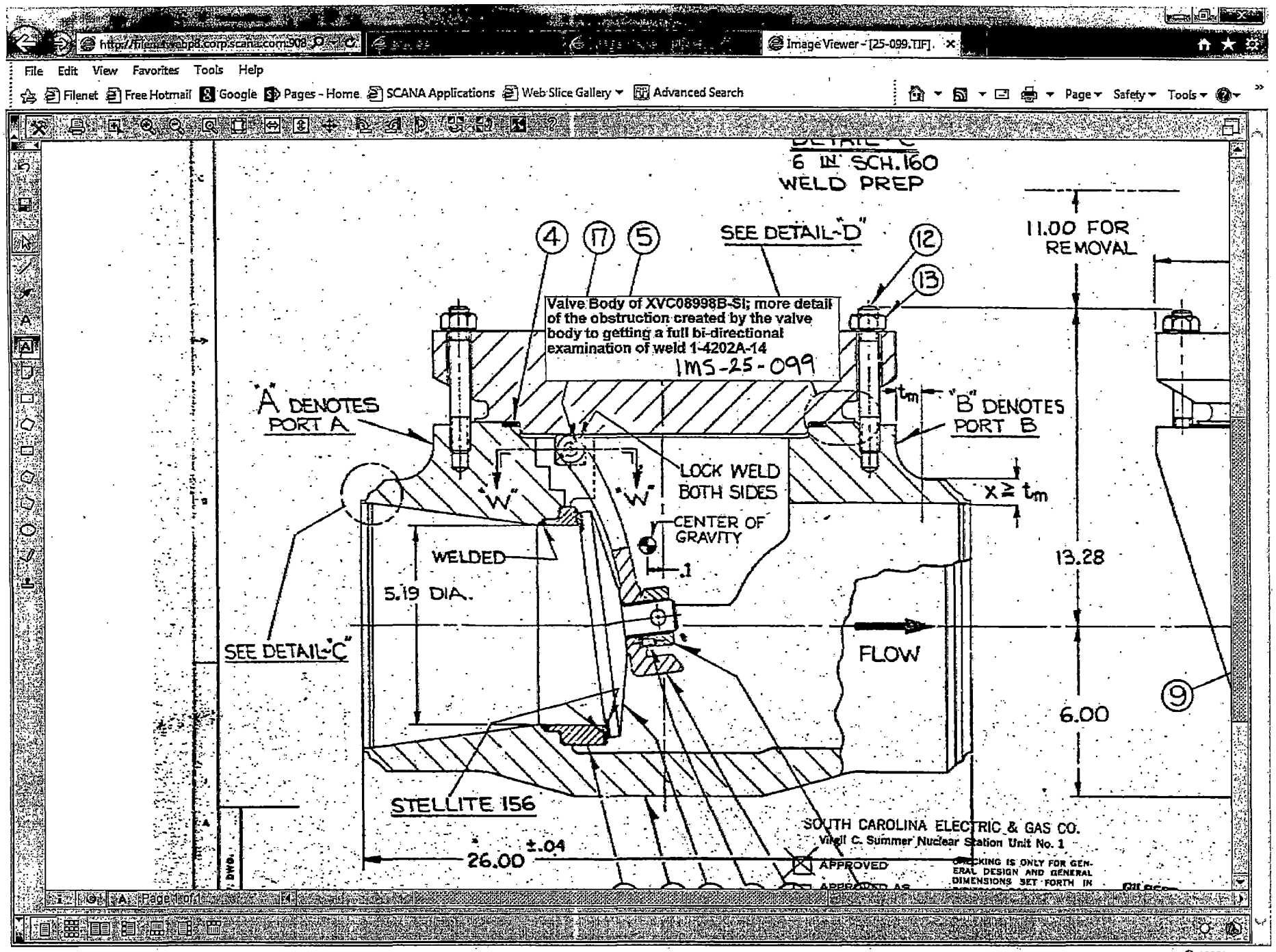


Image Viewer - [25-099.TIF]
File Edit View Favorites Tools Help
Filenet Free Hotmail Google Pages - Home SCANA Applications Web Slice Gallery Advanced Search
6 IN SCH.160
WELD PREP
SEE DETAIL-"D"
11.00 FOR
REMOVAL
4
17
5
12
13
Valve Body of XVC08998B-SI; more detail of the obstruction created by the valve body to getting a full bi-directional examination of weld 1-4202A-14
IMS-25-099
"A" DENOTES
PORT A
"B" DENOTES
PORT B
t_m
$x \geq t_m$
LOCK WELD
BOTH SIDES
"W"
"W"
CENTER OF
GRAVITY
.1
WELDED
5.19 DIA.
13.28
SEE DETAIL-"C"
FLOW
9
6.00
STELLITE 156
26.00 ±.04
SOUTH CAROLINA ELECTRIC & GAS CO.
Virgil C. Summer Nuclear Station Unit No. 1
APPROVED
CHECKING IS ONLY FOR GEN-
ERAL DESIGN AND GENERAL
DIMENSIONS SET FORTH IN
Page 1 of 1
100%

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

Page 1 of 8 GWV 10-29-15

UT Report No. RF22-UT-015

Plant: *V.C. Summer* Unit: *1* Procedure No.: *WDI-STD-1036* Rev.: *4*

FCN # *N/A*

Comp / System: *CGE-1-4202A-14 / SI* Cal. Blk. # *105256* Ref. Blk.# *102362* "T" Nom. *0.719"* Nom. Pipe Ø *6"*

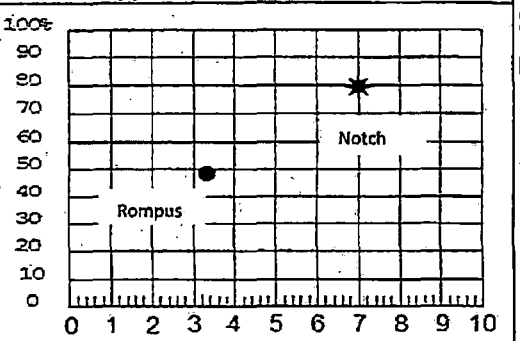
Isometric Dwg # *C-314-691, Sht.12, Rev.8* Thermometer S/N: *30015729* Block / Comp Temp: *70* °F / *86* °F

Due Date: *7/29/2016*

SEARCH UNIT

Scan Angle: *45°* Mode: *Shear*
Serial No.: *00X0TP* Mfr. *KBA*
Fixturing: *Non-Integral* Model: *Comp-G*
Size: *0.25"* Shape: *Round*
Frequency: *2.25 MHz* # Elem: *1*
Measured Angle: *44°* Exit Pnt.: *0.20"*
FS *N/A*
Couplant Type/Batch #: *Ultragel II/15D018*
Cable / Length / # Conn: *RG-174/6'/0*
Contoured Wedge ☑ N/A ☐ Ax ☐ Circ
Contour: *N/A*

Examination Surface ☐ Butter ☐ ID ☑ OD
Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = *3.0"*

INSTRUMENT SETTINGS

Mfr/Model No.: *GEIT / USN 60 SW*
Serial No.: *104768*
Pulser: Square - ☑ Single ☐ Dual Pulse Wth.: *220*
Damping: *500* Reject: *0*
Freq.: *2.25* MHz Rectify: *Fullwave*
PRF: *Auto High* Volt: *450* Jack: ☐ T ☑ R

Range: *3.00"* Velocity *0.1230*
Probe Delay: *4.4384* Disp. Delay *0.00*

	Cal	Scan	
Gain 0° or ⊥	29.3	41.3	dB
Gain 0° or //	29.3	41.3	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☑

CAL CHECKS	TIME
Initial Cal.	0732
Intermediate	1030
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1326

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" Notch	*82*	*7.0*	*29.3*
Rompus FSDH	*48*	*3.4*	*29.3*

EXAMINATION AREA / WELD

CGE-1-4202A-14

Recordable Indications ☐ YES ☑ NO
Scan Limitations ☑ YES ☐ NO
Remarks: U/S scan only due to Component configuration. Pipe to Valve. 2.4" obstruction U/S T.D.C. due to 2" Socket Weld.
47.1% total Exam coverage achieved.
CR-15-05303 MWP 10-29-15
Risk Informed ☑ YES ☑ NO
Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. *II* Date: *10/22/2015*
Print *Giovanni Gbemudu*
Examiner Lv. Date: *N/A*
Print *N/A*
Reviewer: [signature] L III Date: *10-26-15*
Reviewer: [signature] L-III Date: *10-26-15*

ANII Review: [signature] Date: *10/29/15*

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

 MWJ 10-29-15

UT Report No. RF22-UT-015

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4202A-14 / SI Cal. Blk. #: 105256 Ref. Blk.#: 102362 "T" Nom.: 0.719" Nom. Pipe Ø: 6"

Isometric Dwg #: C-314-691, Sht.12, Rev.8 Thermometer S/N: 30015729 Block / Comp Temp: 70 °F / 86 °F

Due Date: 7/29/2016

SEARCH UNIT

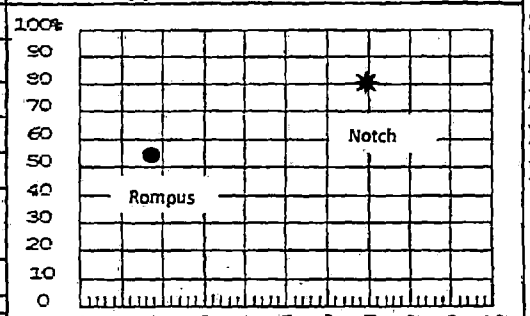
Scan Angle:	60°	Mode:	Shear
Serial No.:	00X0TP	Mfr.	KBA
Fixturing:	Non-Integral	Model:	Comp-G
Size:	0.25"	Shape:	Round
Frequency:	2.25 MHz	# Elem:	1
Measured Angle:	57°	Exit Pnt.:	0.25"
FS	N/A		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6'/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 3.5"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60 SW		
Serial No.:	104768		
Pulser: Square - ☑ Single ☐ Dual		Pulse Wth.:	220
Damping:	500	Reject:	0
Freq.:	2.25 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☐ T ☑ R
Range:	3.50"	Velocity	0.1230
Probe Delay:	5.5903	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	43.1	51.0	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	0737
Intermediate	1050
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1322

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" Notch	81	7.0	43.1
Rompus NSDH	51	1.7	32.1	

EXAMINATION AREA / WELD

CGE-1-4202A-14

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: U/S scan only due to Component configuration. Pipe to Valve. 2.4" obstruction U/S T.D.C. due to 2" Socket Weld. 47.1% total Exam coverage achieved. 60° Scan to ensure coverage.

CR-IS-05303 MWJ ~~10-15~~ 10-29-15

Risk Informed ~~☑~~ YES ☑ NO MWJ 10-29-15

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/22/2015

Print Giovanni Gbemudu

Examiner Lv. Date: N/A

Print N/A

Reviewer: [signature] L III Date: 10-26-15

Reviewer: [signature] L III Date: 10-27-15

ANII Review: [signature] Date: 10/29/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

 Mod 10-29-15

UT Report No. RF22-UT-015

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4202A-14 / SI Cal. Blk. # 105256 Ref. Blk.# 102362 "T" Nom. 0.719" Nom. Pipe Ø 6"

Isometric Dwg # C-314-691, Sht.12, Rev.8 Thermometer S/N: 30015729 Block / Comp Temp: 70 °F / 86 °F

Due Date: 7/29/2016

SEARCH UNIT

Scan Angle:	60°	Mode:	Long.
Serial No.:	09-1679	Mfr.	RTD
Fixturing:	Integral	Model:	TRL-2-Aust
Size:	2(7x10)	Shape:	Rect.
Frequency:	2.0 MHz	# Elem:	2
Measured Angle:	57°	Exit Pnt.:	0.25"

FS 25MM

Couplant Type/Batch #: Ultragel II/15D018

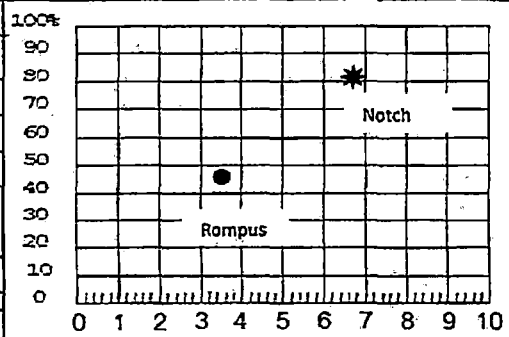
Cable / Length / # Conn: RG-174/12'/0

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 4.0"

INSTRUMENT SETTINGS

Mfr/Model No.: GEIT / USN 60 SW

Serial No.: 104768

Pulser: Square - ☐ Single ☑ Dual Pulse Wth.: 250

Damping: 500 Reject: 0

Freq.: 2.00 MHz Rectify: Fullwave

PRF: Auto High Volt: 450 Jack: ☑ T ☑ R

Range:	4.0"	Velocity	0.2330
Probe Delay:	7.1403	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	61.0	61.0	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA

0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS

	TIME
Initial Cal.	0742
Intermediate	1114
Intermediate	N/A
Intermediate	N/A
Intermediate	N/A
Final Cal.	1330

DAC

Reflector ID	% FSH	Swp Pos	dB
1.5" Notch	80	6.8	61.0
Rompus FSDH	46	3.7	47.6	

EXAMINATION AREA / WELD

CGE-1-4202A-14

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: 60° RL Scan as per Procedure.

CR-15-05303 MWF 10-29-15

Risk Informed ☑ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner [signature] Lv. II Date: 10/22/2015

Print Giovanni Gbemudu

Examiner Lv. Date: N/A

Print N/A

Reviewer: [signature] LIII Date: 10-26-15

Reviewer: [signature] LIII Date: 10-26-15

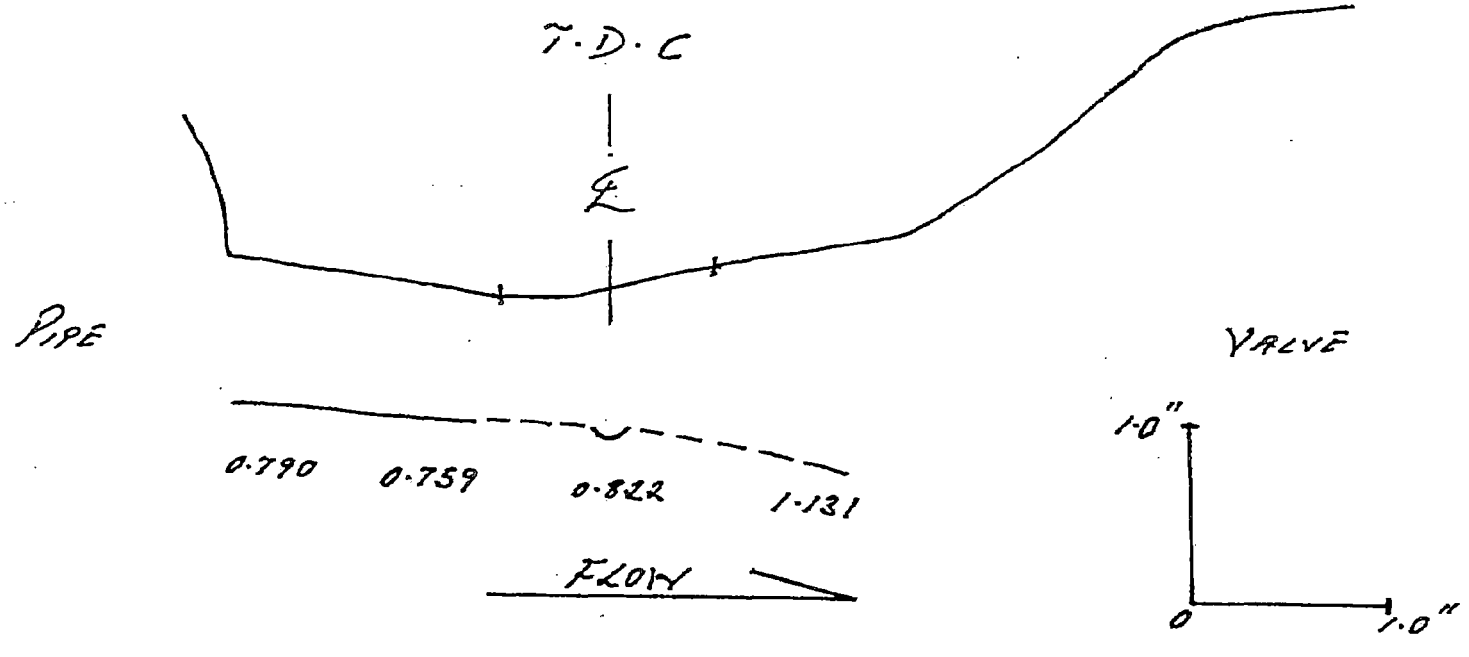
ANII Review: A MOSTAFA A KOUM Date: 10/29/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

Coverage / Sketch
Sheet

Report # RF22-UT-015

Site: V.C. Summer Unit: 1 Outage #: RF22 Procedure # WDI-STD-1036 Revision: 4 FCN: N/A
System: SI Weld #: CGE-1-4202A-14



Examiner : GIOVANNI GRECUCCI Level II Date 10/22/2015
Examiner : N/A Level Date

Pg 4 of 56 MWV 10-29-15

Reviewer : MW Level III Date 10-26-15
Reviewer : [illegible] Level III Date 10-26-15

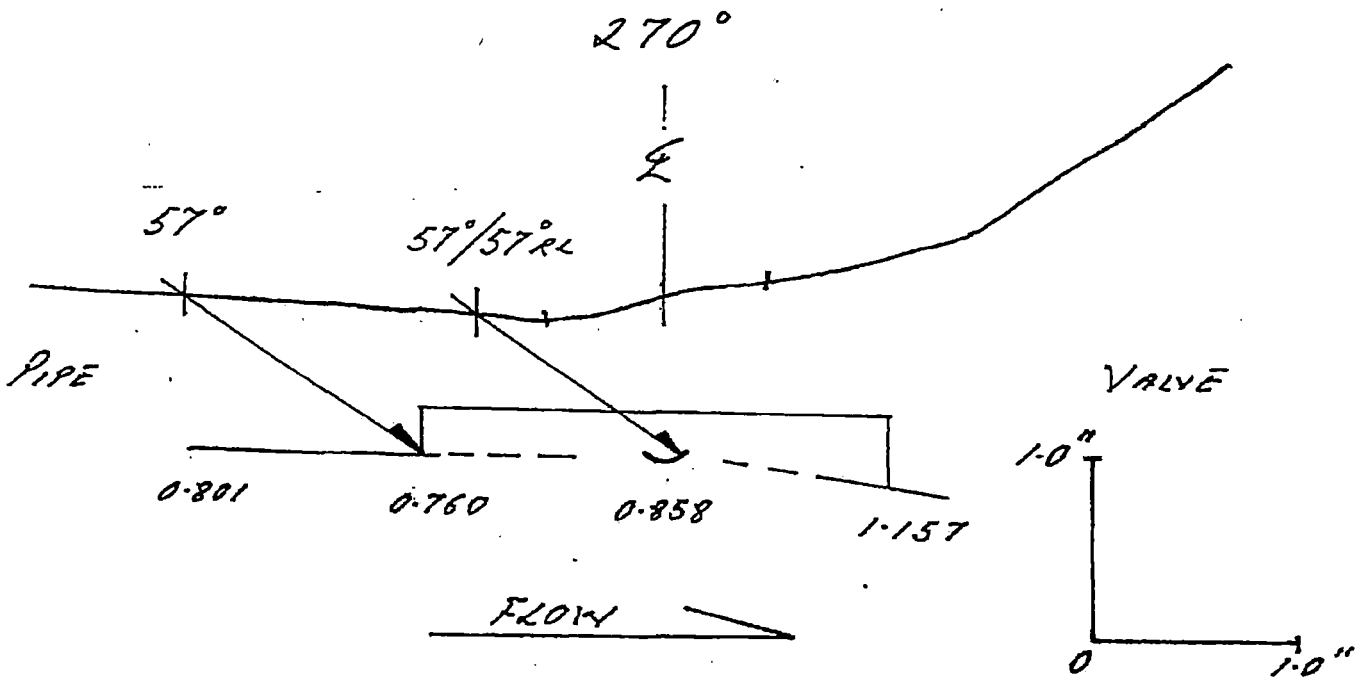
ANII Review: ELIZABETH ELLIS Date 10/29/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

Coverage / Sketch
Sheet

Report # RF22-UT-015

Site: V.C. Summer Unit: 1 Outage #: RF22 Procedure # WDI-STD-1036 Revision: 4 FCN: N/A
System: SI Weld #: CGE-1-4202A-14



Examiner : Giovanni Ebemudu Level II Date 10/22/2015
Examiner : N/A Level Date

Pg 5 of 8C

Reviewer : L III Date 10-26-15
Reviewer : L-III Date 10-27-15

ANII Review: A Mostka Date 10/29/15

Weld No 1-4202A-14	6" Pipe to Valve					Report No	RF22-UT-015	Page 6 of 6
Thickness UPST	0.76	Thickness DNST		1.13	Length 20.8			
Weld Crown	1.2	UPST Exam	0.25	DNST Exam	0.25			
"W" UPST	0.85	"W" DNST	0.85	"L" UPST Axial	18.4	"L" UPST Circ	20.8	
T UPST	0.25	T DNST	0.38	"L" DNST Axial	0	"L" DNST Circ	0	

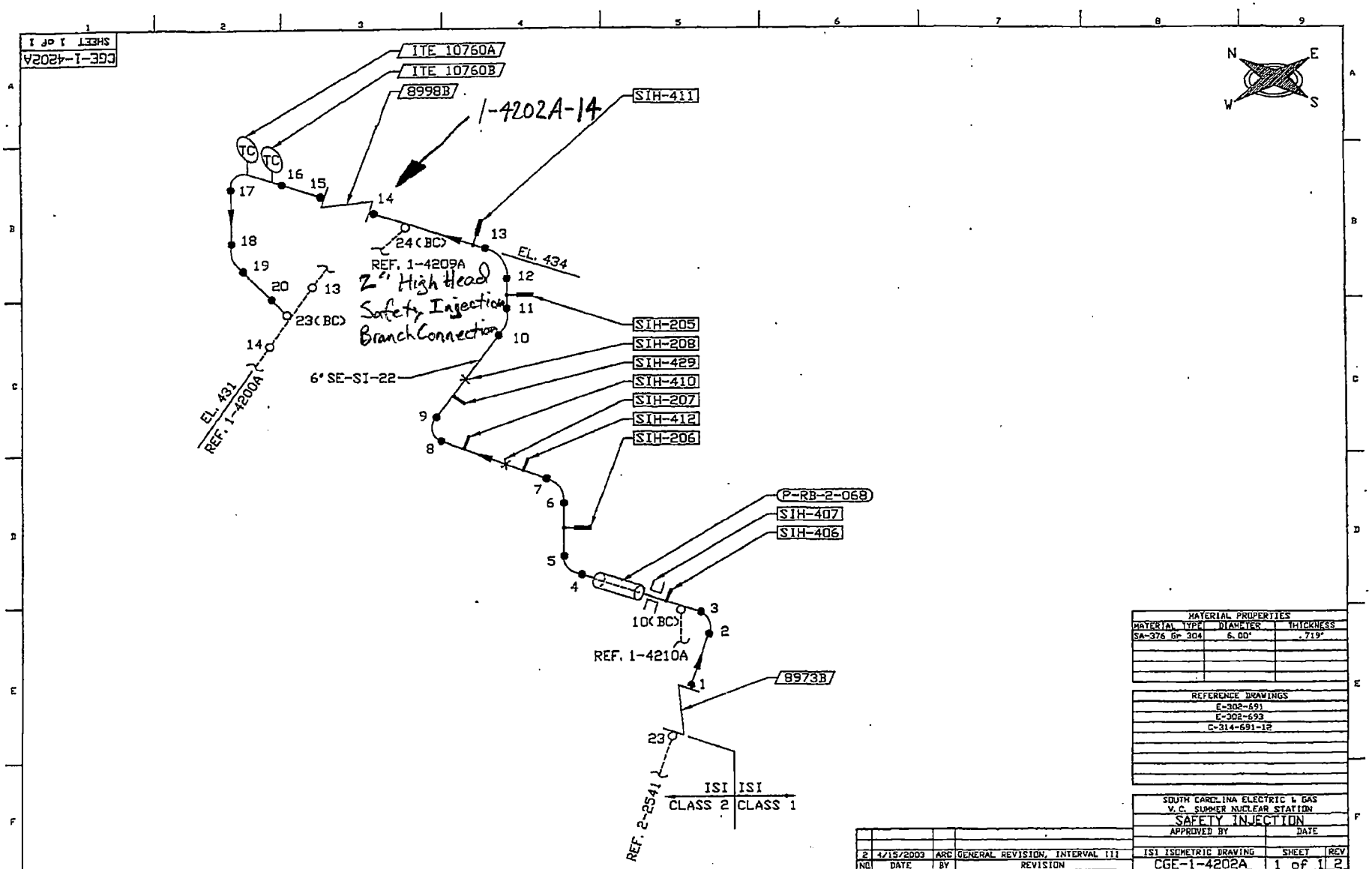
W x T UPST = Cross Sectional View (CSV) =	0.22
W x T DNST = Cross Sectional View (CSV) =	0.32
Examination Volume (EV) UPST = CSV x L =	4.48
Examination Volume (EV) DNST = CSV x L =	6.66

Axial UPST = CVS x L =	3.96	divided by EV =	4.48	88%
Axial DNST = CVS x L =	0.00	divided by EV =	6.66	0%
Circ UPST = CVS x L =	4.48	divided by EV =	4.48	100%
Circ DNST = CVS x L =	0.00	divided by EV =	6.66	0%
		Total Coverage =		47.1%

Evaluation By: _____ L III Date 10/28/2015

Reviewed By: _____ L-III Date 10/28/15

ANII _____ Date 10/29/15



MATERIAL PROPERTIES		
MATERIAL TYPE	DIAMETER	THICKNESS
SA-376 Gr 304	6.00"	.719"

REFERENCE DRAWINGS
E-302-691
E-302-693
C-314-691-12

NO	DATE	BY	REVISION
2	4/15/2003	ARC	GENERAL REVISION, INTERVAL III

SOUTH CAROLINA ELECTRIC & GAS
V. C. SUMMER NUCLEAR STATION
SAFETY INJECTION

APPROVED BY	DATE

ISI ISOMETRIC DRAWING	SHEET	REV
CGE-1-4202A	1 of 1	2

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment VI

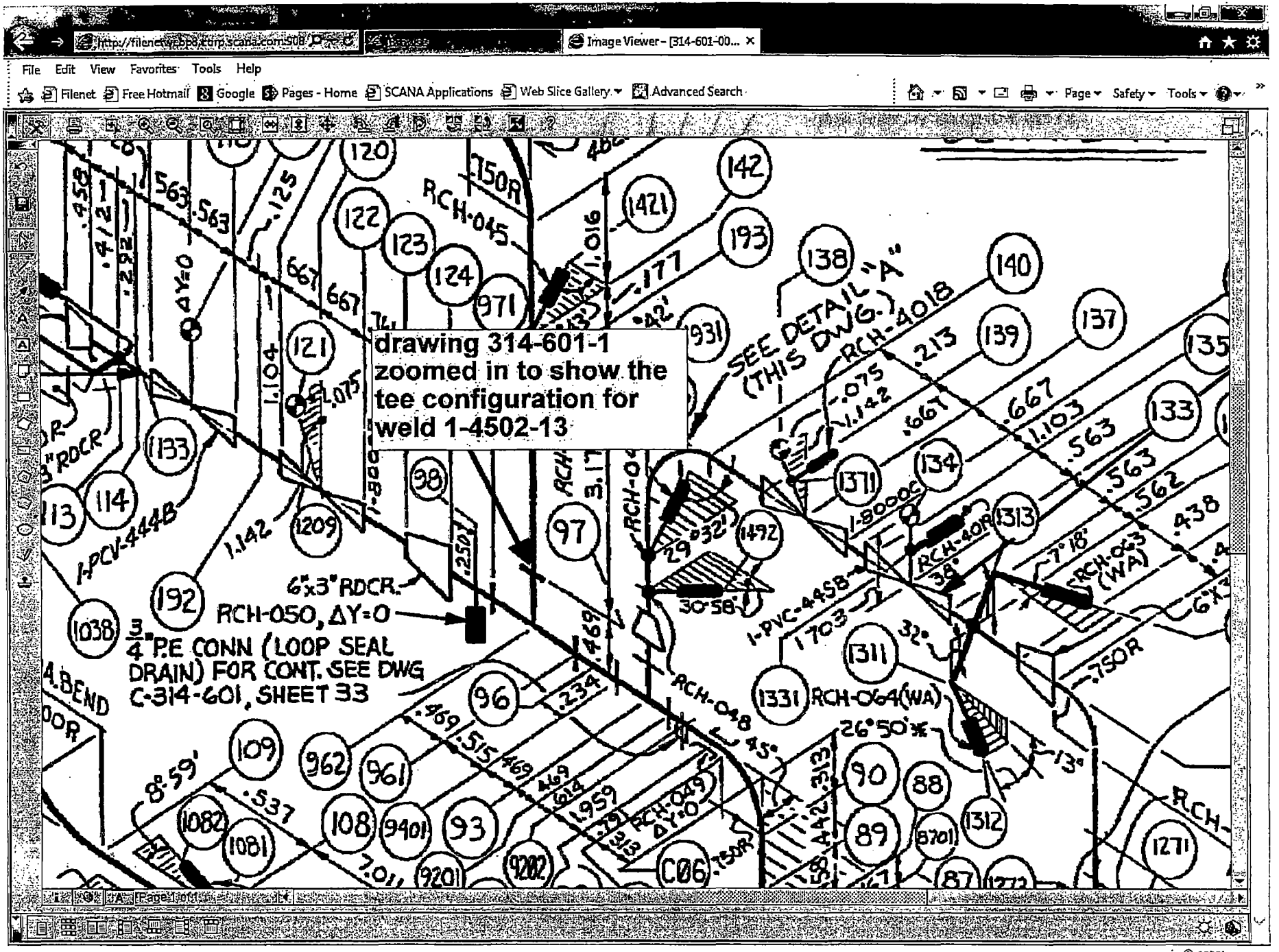
Weld 1-4502-13 Details and Data Sheets

Attachment VI contains:

- Drawing detail from drawing 314-601-1 showing the detail of the tee configuration associated with weld 1-4502-13.

- Exam data sheets for most recent RF22 (Fall 2015) examination of weld 1-4502-13 with sketch showing the configuration.

- Sketch 1-4502 from the ISI Sketch Manual, 1MS-94B-0375, notating the location of weld 1-4502-13.


drawing 314-601-1
zoomed in to show the
tee configuration for
weld 1-4502-13
SEE DETAIL "A"
(THIS DWG.)
RCH-040B
RCH-045
RCH-050, ΔY=0
6"x3"RDCR
3/4" P.E CONN (LOOP SEAL
DRAIN) FOR CONT. SEE DWG
C-314-601, SHEET 33
1-PCV-444B
1-PVC-445B
RCH-048
RCH-049
ΔY=0
RCH-064(WA)
RCH-063
(WA)
4 BEND
DOOR
.750R
.125
.563
.667
1.104
1.142
1.016
.177
.213
1.103
.562
.438
.469
.515
.537
.234
1.959
2.01
3.17
1.703
1.442
29°32'
30°58'
26°50'
8°59'
7°18'
38°
32°
13°
45°
100%

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-002

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4502-13 / RC Cal. Blk. # 105256 Ref. Blk.# 103771 "T" Nom. 0.719" Nom. Pipe Ø 6"

Isometric Dwg # CGE-1-4502 R2 Thermometer S/N: 30018948 Block / Comp Temp: 70 °F / 81 °F

Due Date: 7/29/2016

SEARCH UNIT

Scan Angle: 45° Mode: Shear

Serial No.: 00TH24 Mfr. GEIT

Fixturing: Non-Integral Model: Comp-G

Size: 0.25" Shape: Round

Frequency: 2.25 MHz # Elem: 1

Measured Angle: 45° Exit Pnt.: 0.20"

FS N/A

Couplant Type/Batch #: Ultragel II/15D018

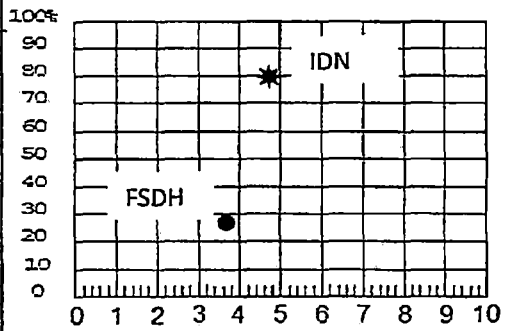
Cable / Length / # Conn: RG-174/6"/0

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 3.0"

INSTRUMENT SETTINGS

Mfr/Model No.: GEIT / USN 60L.SW

Serial No.: 105205

Pulser: Square - ☑ Single ☐ Dual Pulse Wth.: 220

Damping: 500 Reject: 0

Freq.: 2.25 MHz Rectify: Fullwave

PRF: Auto High Volt: 450 Jack: ☑ T ☐ R

Range: 3.00" Velocity 0.1231

Probe Delay: 4.3694 Disp. Delay 0.00

	Cal	Scan	
Gain 0° or ⊥	24.5	36.5	dB
Gain 0° or //	24.5	38.5	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☑

CAL CHECKS	TIME
Initial Cal.	0925
Intermediate	N/A
Intermediate	1508
Intermediate	1605
Intermediate	N/A
Final Cal.	1737

DAC

Reflector ID	% FSH	Swp Pos	dB
1.0" IDN	82	4.7	24.5
Simulator FSDH	25	3.6	24.5

EXAMINATION AREA / WELD

CGE-1-4502-13

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: Exam limited to pipe side only due to Tee side configuration. 50% Exam volume coverage achieved.

CR-15-05303 MWK 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner Kenneth R. Smith Lv. III Date: 10/13/2015

Print Kenneth R. Smith

Examiner [signature] Lv. III Date: 10/13/2015

Print Dane Shaugabay

Reviewer: [signature] L III Date: 10-16-15

Reviewer: [signature] L III Date: 10/20/15

ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-002

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4502-13 / RC Cal. Blk. # 105256 Ref. Blk.# 103771 "T" Nom. 0.719" Nom. Pipe Ø 6"

Isometric Dwg # CGE-1-4502 R2 Thermometer S/N: 30018948 Block / Comp Temp: 70 °F / 81 °F

Due Date: 7/29/2016

SEARCH UNIT

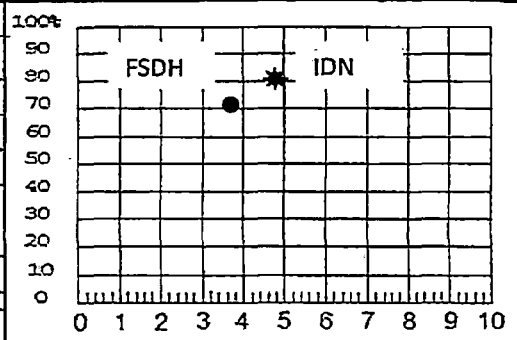
Scan Angle:	60°	Mode:	Shear
Serial No.:	010R02	Mfr.	GEIT
Fixturing:	Non-Integral	Model:	Comp-G
Size:	0.25"	Shape:	Round
Frequency:	2.25 MHz	# Elem:	1
Measured Angle:	59°	Exit Pnt.:	0.25"
FS	N/A		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6"/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 3.8"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	105205		
Pulser: Square -	☑ Single ☐ Dual	Pulse Wth.:	220
Damping:	500	Reject:	0
Freq.:	2.25 MHz	Rectify:	Fullwave
PRF: Auto High	Volt: 450	Jack:	☑ T ☐ R

Range:	3.80"	Velocity	0.1231
Probe Delay:	5.4991	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	41.8	49.8-53.8	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	0940
Intermediate	N/A
Intermediate	1606
Intermediate	1625
Intermediate	N/A
Final Cal.	1736

DAC

Reflector ID	% FSH	Swp Pos	dB
1.00" IDN	80	4.6	41.8
Simulator FSDH	70	3.7	41.8

EXAMINATION AREA / WELD

CGE-1-4502-13

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: Exam limited to pipe side only due to Tee side configuration. 50% Exam volume coverage achieved.

CR-15-05303 MJH 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner Kenneth R. Smith Lv. III Date: 10/13/2015

Print Kenneth R. Smith

Examiner Dane Shugabay Lv. IIL Date: 10/13/2015

Print Dane Shugabay

Reviewer: LIII Date: 10-16-15

Reviewer: LIII Date: 10-20-15

ANII Review: Acceptable Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

ULTRASONIC EXAMINATION REPORT

UT Report No. RF22-UT-002

Plant: V.C. Summer Unit: 1 Procedure No.: WDI-STD-1036 Rev.: 4

FCN # N/A

Comp / System: CGE-1-4502-13 / RC Cal. Blk. # 105256 Ref. Blk.# 103771 "T" Nom. 0.719" Nom. Pipe Ø 6"

Isometric Dwg # CGE-1-4502 R2 Thermometer S/N: 30018948 Block / Comp Temp: 70 °F / 81 °F

Due Date: 7/29/2016

SEARCH UNIT

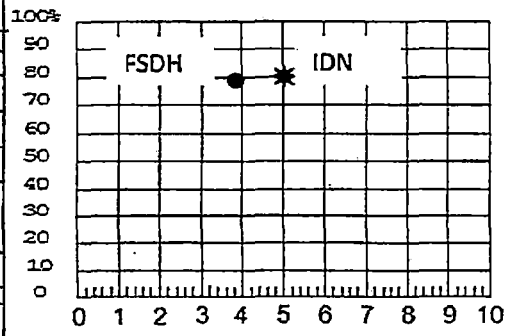
Scan Angle:	60°	Mode:	Long
Serial No.:	09-1679	Mfr.	RTD
Fixturing:	Integral	Model:	TRL2-AUST
Size:	2(7x10mm)	Shape:	Rect.
Frequency:	2.0 MHz	# Elem:	2
Measured Angle:	60°	Exit Pnt.:	0.30"
FS	25mm		
Couplant Type/Batch #:	Ultragel II/15D018		
Cable / Length / # Conn:	RG-174/6"/0		

Contoured Wedge ☑ N/A ☐ Ax ☐ Circ

Contour: N/A

Examination Surface ☐ Butter ☐ ID ☑ OD

Material Type ☐ CS ☑ SS ☐ DM



Screen Divisions, 10 = 4.0"

INSTRUMENT SETTINGS

Mfr/Model No.:	GEIT / USN 60L SW		
Serial No.:	105205		
Pulser: Square -	☐ Single ☑ Dual	Pulse Wth.:	250
Damping:	500	Reject:	0
Freq.:	2.00 MHz	Rectify:	Fullwave
PRF: Auto High	Volt.: 450	Jack:	☑ T ☑ R

Range:	4.00"	Velocity	0.2129
Probe Delay:	5.8694	Disp. Delay	0.00

	Cal	Scan	
Gain 0° or ⊥	58.5	58.5	dB
Gain 0° or //	N/A	N/A	dB

SCAN AREA	
0° Buttering	☐
0° BM	☐
⊥ to Weld	☑
// to Weld	☐

CAL CHECKS	TIME
Initial Cal.	1000
Intermediate	N/A
Intermediate	1628
Intermediate	1640
Intermediate	N/A
Final Cal.	1735

DAC

Reflector ID	% FSH	Swp Pos	dB
1.00" IDN	80	5.0	58.5
Simulator FSDH	80	3.9	54.0

EXAMINATION AREA / WELD

CGE-1-4502-13

Recordable Indications ☐ YES ☑ NO

Scan Limitations ☑ YES ☐ NO

Remarks: Exam limited to pipe side only due to Tee side configuration. 50% Exam volume coverage achieved.

CR-15-05303 10-28-15

Risk Informed ☐ YES ☑ NO

Exam is Acceptable ☑ YES ☐ NO

Examiner Kenneth R. Smith Lv. III Date: 10/13/2015

Print Kenneth R. Smith

Examiner [signature] Lv. IIL Date: 10/13/2015

Print Dane Shangabay

Reviewer: [signature] L II Date: 10-16-15

Reviewer: [signature] Date: 10/20/15

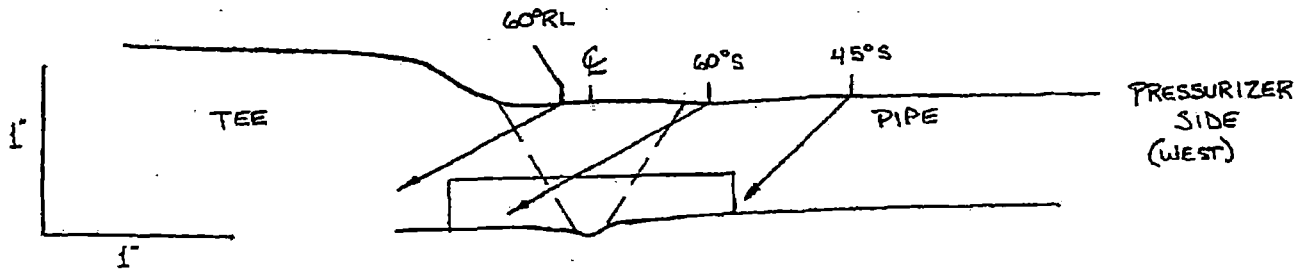
ANII Review: [signature] Date: 10/28/15

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

Coverage / Sketch Sheet

Report # RF22-UT-002

Site: V.C. Summer Unit: 1 Outage #: R22 Procedure # WDI-STD-1036 Revision: 4 FCN: N/A
System: RC Weld #: CGE-1-4502-13



FLOW

DRAWING TO SCALE
TAKEN FROM PREVIOUS DATA (2005)

Examiner: Kenneth R. Smith Level III Date 10/13/15
Examiner: [signature] Level III Date 10/13/15

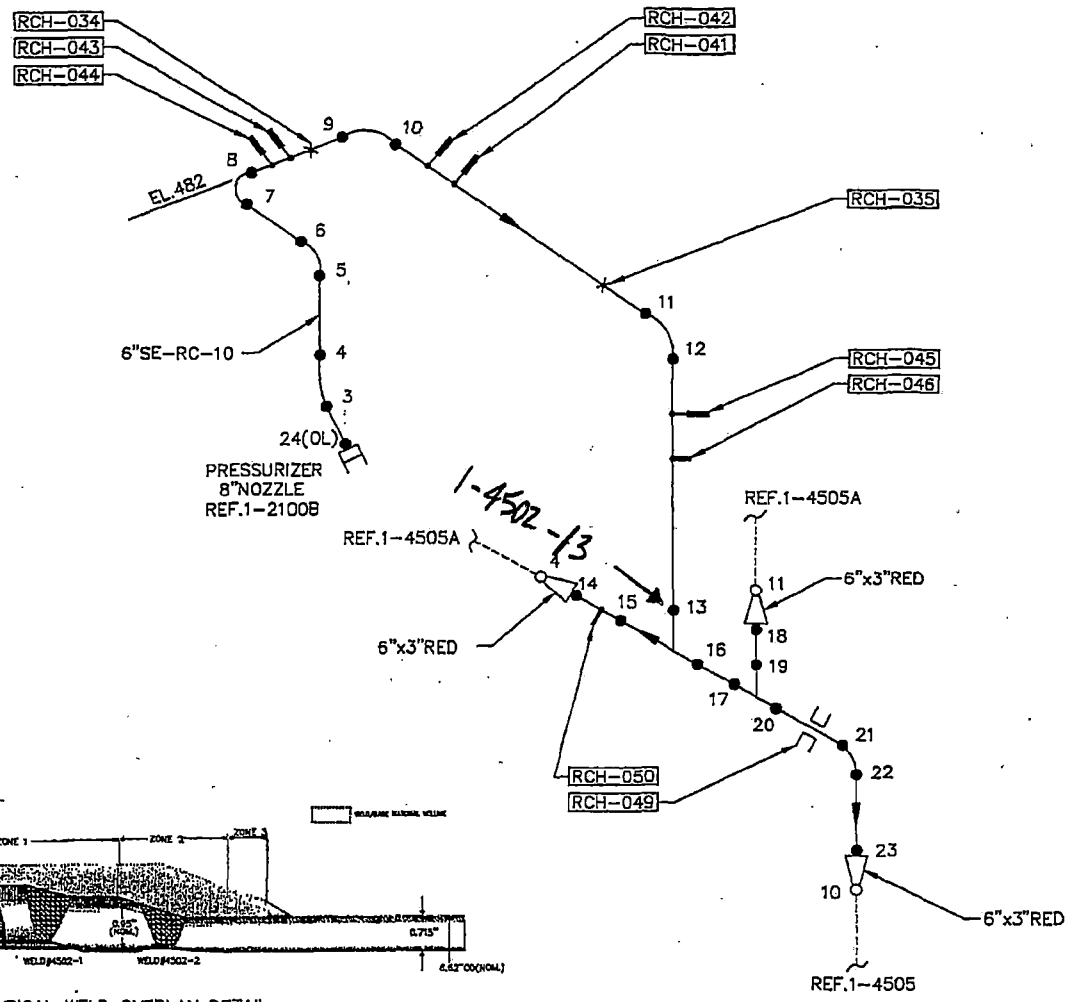
Pg 4 of 4

Reviewer: [signature] L III Date 10-16-15
Reviewer: [signature] Date 10/20/15

ANII Review: [signature] Date 10/28/15

SHEET 1 of 1

CGE-1-4502



PRESSURIZER PORV (3) 4502-240L

TYPICAL WELD OVERLAY DETAIL

MATERIAL PROPERTIES		
MATERIAL TYPE	DIAMETER	THICKNESS
SA-376 Gr 304	6.00"	.719"

REFERENCE DRAWINGS
E-302-602
C-314-601-1

NO	DATE	BY	REVISION
2	10/7/2010	RHM	GENERAL REVISION
1	4/15/2003	ARC	GENERAL REVISION, INTERVAL III

SOUTH CAROLINA ELECTRIC & GAS
V.C. SUMMER NUCLEAR STATION
PRESSURIZER RELIEF

APPROVED BY	DATE

ISI ISOMETRIC DRAWING	SHEET	REV
CGE-1-4502	1 of 1	2