TENNESSEE VALLEY AUTHORITY	EXAMINATION SUMMARY AND RESOLUTION SHEET	REPORT NUMBER: R.P0348

PROJECT: *WBN* UNIT: *2* CYCLE *00*				COMPONENT ID: *SIF-D198-03*	
EXAMINATION METHOD				SYSTEM: SIS	ISI DWG NO: *ISI-2063-W-07* REV 1
MT ☐	PT ☐	UT ☑	VT ☐	CONFIGURATION:	CATEGORY
PROCEDURE: *N-UT-84*		REV 0	TC: N/A	*VLV* TO *P*	*B-J*

EXAMINER:	EXAMINER:	EXAMINER:	EXAMINER:
Jason Nissen	N	N	N
LEVEL: II	LEVEL: A	LEVEL: A	LEVEL: A

Total coverage calculated to be approximately 75 %

A single sided phased array ultrasonic examination was performed to meet the requirements of ASME Section XI preservice inspection.

A phased array 1.5 MHz, 16 element probe with a 25°-70° shear wave sector scan display was utilized to perform the examination

A phased array 1.5 MHz, dual 15 element probe with a 40°-70° refracted longitudinal wave sector scan display was also utilized to perform the examination.

No recordable indications observed.

75% examination volume achieved due to valve.

RESOLUTION BY:	REVIEWED BY:	ANII:
Jason Nissen	Darlene Dudley	DATE: 6/3/09
LEVEL II DATE: 5-18-09	LEVEL: III DATE: 5-19-09	Page: 1 OF 6

ACCESS: FORMS DATABASE R-10/04/01

TENNESSEE VALLEY AUTHORITY	PHASED ARRAY ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER: R-P0348

PROJECT: WBN UNIT 2	CYCLE: Ø	CALIBRATION DATE: 5-18-09	
PROC.: N-INT-84	REV: Ø TC: N/A	CALIBRATION BLOCK NO.: WB 83	TEMP: 71.9F
INSTR. MFG: GEIT	DUE DATE: 8-6-09	SIMULATOR BLOCK NO: N/A	
MODEL/TYPE: PHASORXS	M & TE ID: E41821	THERMOMTER S/N: 558271	DUE DATE: 6-24-09
SOFTWARE REVISION: 1.2		COUPLANT Ultragel II	BATCH: 06225F
EXAM TYPE: SHEAR☐ LONG☐ RL☒		EXAM: ISI☐ PSI☒	LIMITATIONS: Y☒ N☐
CABLE TYPE: 2D LENGTH: 2M	#CNT: Ø		

ANGLE VERIFICATION

BLOCK TYPE: ROMPAS	S/N: 790380	NOMINAL ANGLE	ACTUAL ANGLE
REFLECTOR		LOW: 40° HIGH: 70°	LOW: 40° HIGH: 70°

SCAN DIRECTION	NOTCH DEPTH	SDH. DEPTH	REF. SENS/AMPL	ANGLE / METAL PATH	EXAM SENS.
AXIAL	1.500	N/A	21.0 / 80%	50° / 2.300	30.0 dB
CIRCUMFERENTAIL	N/A	N/A	N/A	N/A	N/A

INSTRUMENT SETTINGS

GAIN TOGGLE:	dBD: Ø	dBA: 30.0

PROBE DATA

PROBE MFG: GEIT	MODEL: 115-000-481		
S/N: 01TCT6	APERTURE SIZE: .748		
ELEMENTS: 2 (3 x 5)	PITCH: 4 x .150		
FREQ: 1.5	ELEVATION: 2 x .472		
CONFIGURATION: ARRAY	SHAPE: RECTANGLE		

WEDGE DATA

PROBE CHECK: ☒ PRE-EXAM	☒ POST EXAM		
WEDGE MFG: GEIT	VELOCITY: .0920		
MODEL: 360-151-028	X OFFSET: .591		
WEDGE ANGLE: 18°	Z OFFSET: .472		
CONTOUR: FLAT	ELEMENT 1 POSITION: LOW END		

PART DATA

MATERIAL: Custom	VELOCITY: .2283

CALIBRATION TIMES

INITIAL TIME: 0910	FINAL TIME: 1225			
VERF. TIMES	1130	N/A	N/A	N/A

SCAN DATA

ELECTRONIC		SCAN PATTERN	
TYPE:	Sector	ANGLE START:	40°
FOCAL POINT:	1.500	ANGLE STOP:	70°
WAVE TYPE:	Longitudinal	ANGLE STEP:	1°
RL FOCAL LAW:	D07F150		
LEG: 1.0	MATERIAL THICKNESS:	1.500	

APERTURE

NUMBER OF STEPS:	1	FIRST ELEMENT:	1
APERTURE SIZE:	10	APERTURE STEP:	4

DISPLAY DATA	ANGLE CORRECTION	☒ON	☐OFF

UT DATA

BASE	PULSER	RECIEVER	NRM/TCG
DELAY: 0.0	VOLT: 150	FREQ: BB 0.6-6.5	CYC GAIN CNTL 0.0
	WIDTH: 330	ASCAN RECT: Fullwave	
MATERIAL: Custom	PRF VALUE: AH		

LINEARITY CHECK

VERTICAL											
SIGNAL 1	100	90	80	70	60	50	40	30	20	10	
SIGNAL 2	50	45	40	35	30	25	20	15	10	5	

ATTENUATOR								
GAIN	SET	-6 dB	-12 dB	SET	+12	SET	+6
AMP	80	32-48	16-24	20	64-96	40	64-96
		40	20		80		80

COMMENTS:	WELDS/ITEMS EXAMINED: SIF-D198-03

EXAMINER:	EXAMINER:	REVIEWER:	ANII:
LEVEL: II	LEVEL: N/A	LEVEL: III DATE: 5-19-09	DATE: 6/3/09
			PG. 3 OF 6

TENNESSEE VALLEY AUTHORITY	MANUAL ULTRASONIC PIPING EXAMINATION DATA SHEET	REPORT NUMBER R.P0348

PROJECT: WBN UNIT/CYCLE 2/00
SYSTEM: SIS
WELD I.D.: SIF-D198-03
CONFIG.: VLV TO P
FLOW →

EXAMINATION DATE 5-18-09
START TIME: 1108 END TIME: 1150
EXAM SURFACE ☐ ID ☒ OD
MATERIAL TYPE: ☐ CS ☒ SS ☐ CSCL ☐ CCSS
SURFACE TEMP.: 81.7 PYRO NO. 558271

PROCEDURE: N-UT-84 REV: 0 TC: N/A
Wo REFERENCE: WELD ℄
Lo REFERENCE: TDC

EXAMINATION ANGLE	25°/70° DEG.	40°/70° RL DEG.
AXIAL SCAN SENSITIVITY	35°/70° 24.0dB	30.0 dB
CIRC. SCAN SENSITIVITY	25°/70° 28.0dB	N/A dB

IND NO.	L (in) FROM REF.			AT MAX AMP			MAX AMP % DAC	EXAM NO. 3-14	NOM. ANG.	NRI	INDICATION INFORMATION: TYPE, DAMPING, ETC.
	L1	L Max	L2	W MAX	MP MAX	D MAX					
								4	40°/70° RL	☒	
								4	35°/70°	☒	
								5	25°/70°	☒	
								6	25°/70°	☒	
										☐	
										☐	

REMARKS/LIMITATIONS Examination scans performed maintaining 5-20% ID Roll. Scanned across the weld. Exam was one sided due to Valve.

EXAMINER: [signature] LEVEL: II
EXAMINER: N/A LEVEL: N/A
REVIEWED BY: [signature] LEVEL: III DATE: 5-19-09

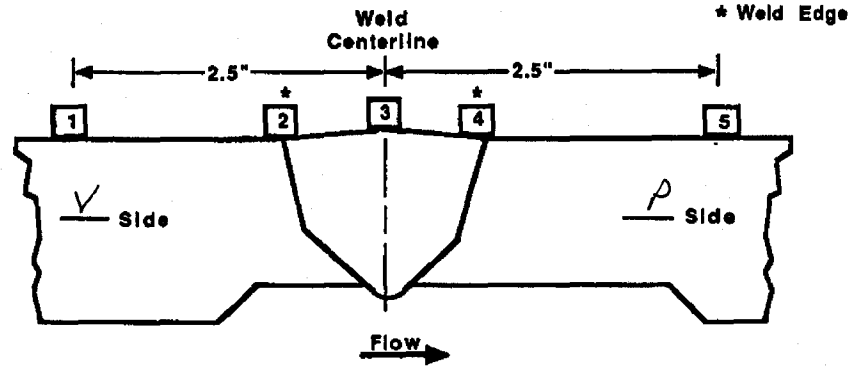
ANII: [signature]
DATE: 6/3/09
PAGE 4 OF 6

TVA	WALL THICKNESS PROFILE SHEET	REPORT NO: R-P0348

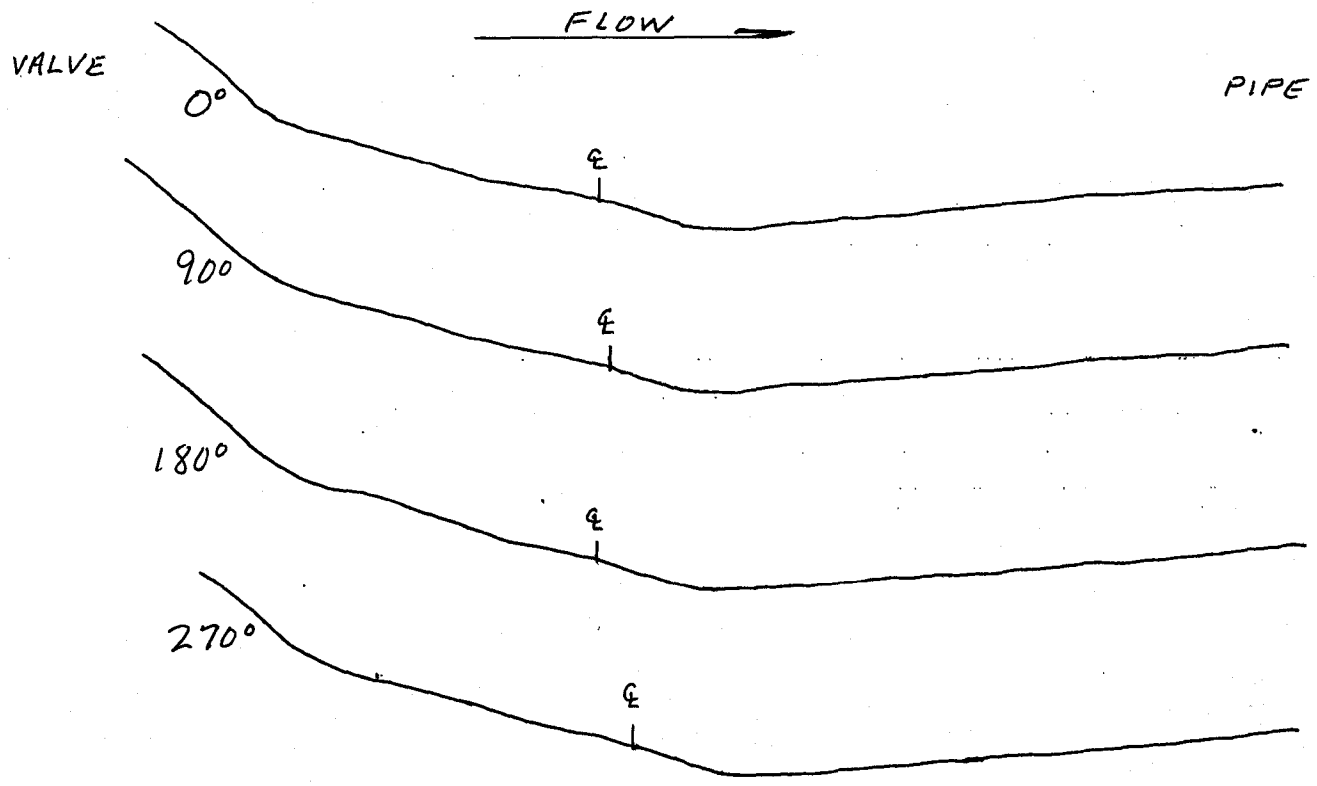
PROJECT: WBN
UNIT: 2
WELD NO: SIF-D198-03
SYSTEM: SIF

Record Thickness Measurements As Indicated, Including Weld Width, Edge-To-Edge At 0°

Position	0°	90°	180°	270°
1	N/A	N/A	N/A	N/A
2	1.5	1.57	1.27	1.51
3	1.26	1.10	1.14	1.28
4	.96	.96	.93	.98
5	1.03	1.04	1.08	1.04



CROWN HEIGHT: FLUSH
CROWN WIDTH: 1.0
DIAMETER: ~~10.0~~ 10.0
WELD LENGTH: 36.25



EXAMINER: [signature]
LEVEL: II
DATE: 05-06-09

REVIEWED BY: [signature]
LEVEL: III
DATE: 5-19-09

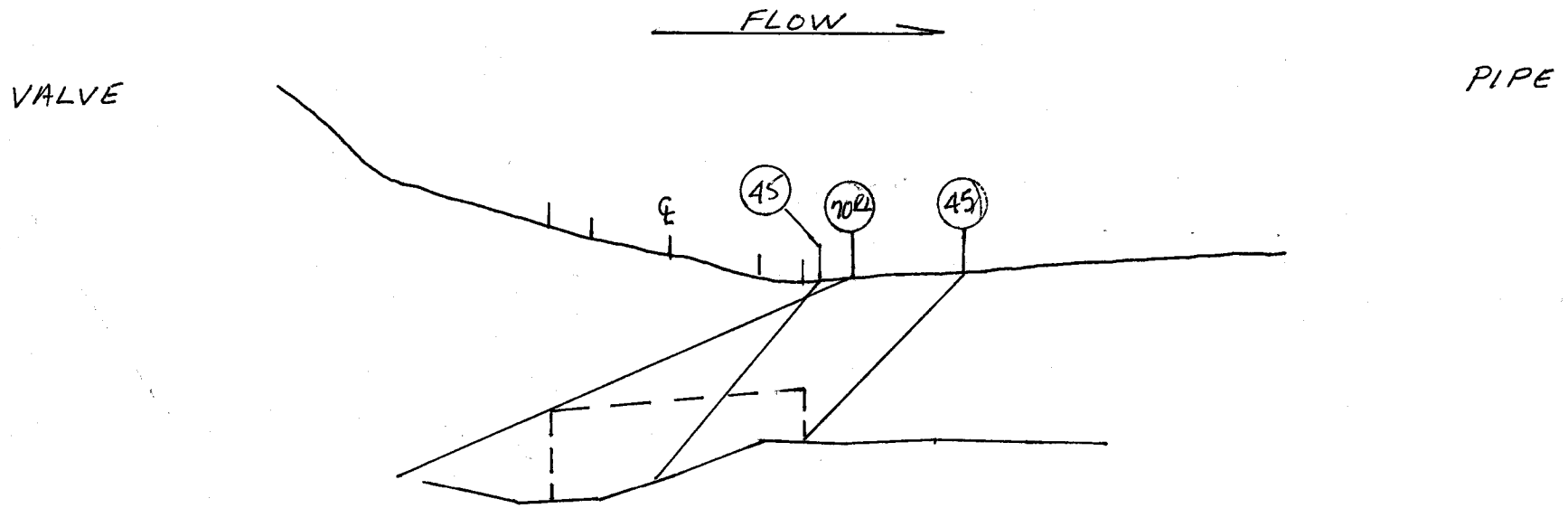
ANII: [signature]
DATE: 06/15/09

PAGE 5 OF 6

TVA 19668 (NP-5-89)

1-108-999-44

TVA Office of Nuclear Power	PROJECT: WBN SYSTEM: SIS UNIT: 2 WELD NO: SIF-D198±03	REPORT NO.: R-P0348 ~~PAC 0120~~ JR 05-06-09



Plot shown represents primary angle of 45°, phased array angles used 25°-70°, RL angles used 40°-70°

BY: Jose Alejandro LEVEL: II DATE: 05-06-09 PAGE 6 OF 6

SI F - D198 -03

R-P0348

TVA Procedure
N-GP-31

Attachment 3

Item 1	Required examination Volume in sq. in. **(width x height)**	1.5	0.53	0.795	sq. in.
Item 2	Number of **scan directions**			4	directions
Item 3	Total Scan **volume** in sq. in.			3.18	sq. in.
Item 4	Total **length** of weld			36.25	inches
Item 5	Total required **exam volume** in cubic inches			115.28	cu. in.
Item 6	**Exam volume achieved** (sq. in.) in direction 1 X **length of weld achieved**	0.795	36.25	28.819	cu. In.
Item 7	**Exam volume achieved** (sq. in.) in direction 2 X **length of weld achieved**	0.795	36.25	28.819	cu. In.
Item 8	**Exam volume achieved** (sq. in.) in direction 3 X **length of weld achieved**	0.795	36.25	28.819	cu. In.
Item 9	**Exam volume achieved** (sq. in.) in direction 4 X **length of weld achieved**	0	0	0	cu. In.
Item 10	Determined the **achivied exam volume** add 6, 7, 8 & 9			86.456	cu. In.
Item 11	Exam **volume percentage** item 10/item 5 x 100			75	%

INFORMATION ONLY

one sided / limited due to valve

II

5/18/09