

**PILGRIM NUCLEAR POWER STATION
BOSTON EDISON COMPANY
INSERVICE INSPECTION
TENTH REFUELING AND INSPECTION OUTAGE**

FINAL REPORT

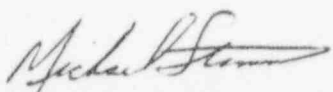
GENERAL ELECTRIC COMPANY



PILGRIM NUCLEAR POWER STATION
BOSTON EDISON COMPANY
INSERVICE INSPECTION
TENTH REFUELING AND INSPECTION OUTAGE

FINAL REPORT

GE NUCLEAR ENERGY
640 FREEDOM BUSINESS CENTER
KING OF PRUSSIA PA 19406

SUBMITTED BY: 
MICHAEL STAMM
PROJECT MANAGER
GE INSPECTION SERVICES

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS

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PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
SECTION I
INTRODUCTION

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
REFUELING OUTAGE NUMBER TEN
SECTION I
INTRODUCTION

This report contains the results of the inservice examinations performed on the Pilgrim Nuclear Power Station Reactor Pressure Vessel, National Board No. 20763 and associated components, during the Tenth Refueling Inspection Outage.

The examinations were performed in accordance with the requirements of:

1. **The ASME Boiler and Pressure Vessel Code, 1980 Edition including addenda through Winter 1980.**
 - a. Section V, Nondestructive Examination.
 - b. Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components - Division 1.
2. **United States Code of Federal Regulations, Title 10 Energy.**
 - a. 10CFR21
 - b. 10CFR50 Appendix B
 - c. 10CFR50 Subpart 55
3. **United States Nuclear Regulatory Commission Documents.**
 - a. Generic Letter 88-01, Inspection of BWR Stainless Steel Piping.
4. **American Society for Nondestructive Testing (ASNT).**
 - a. SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing, June 1980 Edition.
5. **General Electric Documents.**
 - a. General Electric SIL 462 Remote Ultrasonic Examination of the Shroud Access Hole Cover.
 - b. General Electric SIL 433 Shroud Head Hold Down Bolt Cracking.
 - c. General Electric RICSIL 055 RPV Head Stud Cracking.

Examinations were performed on ASME Section XI Category B-J, C-F, B-G-1, and B-N-2 components. Volumetric and Surface examinations were performed on HPCI and RWCU piping systems in accordance with ASME Section XI and Generic Letter 88-01, Inspection of BWR Stainless Steel Piping.

Examination of fifty six Reactor Pressure Vessel Closure Head Studs were performed in accordance with ASME Section XI and General Electric RICSIL 055, RPV Head Stud Cracking.

Examination of forty eight Shroud Head Hold Down Bolts were performed in accordance with Sil 433.

Examination of the Zero degree Access Hole Cover was performed in accordance with Sil 462, utilizing the General Electric Smart 2000 Automated Ultrasonic Data Acquisition System.

Visual examinations were performed to support the shroud repair, of four gussets, vertical welds intersecting the H4 weld, radial welds in the top guide support ring, accessible core support clamps during installation of the core plate wedges, and a best effort exam of the top guide restraint blocks and pins at the location of each of the four aligner pins. These examinations were performed in accordance with FRN 94-43-02 utilizing VT-1 (Enhanced) and VT-3 In Vessel Visual requirements.

Original examination and calibration data, personnel certifications, equipment and material certifications, examination procedures, drawings and data evaluations pertaining to these examinations are being retained by BECO. These documents are available for review at the Pilgrim site.

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
SECTION II
SCOPE

PILGRIM NUCLEAR POWER STATION

INSERVICE EXAMINATION

REFUELING OUTAGE NUMBER TEN

SECTION II

SCOPE

The following items, listed by examination category were examined during the Pilgrim Nuclear Power Station Tenth Refueling and Inspection Outage. The items examined and the type(s) performed are listed below.

I ASME Section XI Examination Category B-J items examined in accordance with ASME Section XI requirements and Generic Letter 88-01, Inspection of BWR Stainless Steel Piping.

HPCI	23-O-22R	(Pipe to Valve)	Manual UT/Surface PT
RWCU	12-O-10R	(Elbow to Valve)	Manual UT/Surface PT
RWCU	12-O-11R	(Valve to Pipe)	Manual UT/Surface PT
RWCU	12R-O-32R1	(Pipe to Valve)	Manual UT/Surface PT
RWCU	12-I-16R	(Pipe to Reducer)	Manual UT/Surface PT
RWCU	12-I-17R	(Reducer to Pipe)	Manual UT/Surface PT
RWCU	12-I-18R	(Pipe to Elbow)	Manual UT/Surface PT
RWCU	12-I-19R	(Elbow to Pipe)	Manual UT/Surface PT
RWCU	12-I-20R	(Pipe to Elbow)	Manual UT/Surface PT
RWCU	12-I-21R	(Elbow to pipe)	Manual UT/Surface PT
RWCU	12-I-22R	(Pipe to Elbow)	Manual UT/Surface PT
RWCU	12-I-23R	(Elbow to Pipe)	Manual UT/Surface PT
RWCU	12-I-24R	(Pipe to Elbow)	Manual UT/Surface PT
RWCU	12-I-25R	(Elbow To Pipe)	Manual UT/Surface PT
RWCU	12-I-25AR	(Elbow To Pipe)	Manual UT/Surface PT

II ASME Section XI Examination Category C-F items examined in accordance with ASME Section XI requirements.

HPCI	EB-23-F58R	(Valve to Pipe)	Manual UT/Surface MT
HPCI	EB-23-F59R	(Pipe to Valve)	Manual UT/Surface MT
HPCI	EB-23-F13R	(Valve to Pipe)	Manual UT/Surface MT

III ASME Section XI Examination Category B-G-1 items examined in accordance with ASME Section XI requirements and General Electric RICSIL 055, RPV Head Stud Cracking.

RPV	RPV-CS-1-56	(Closure Studs 1 thru 56)	Manual UT
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IV Examination performed in accordance with the requirements of General Electric Sii 433, Shroud Hold Down Bolt Cracking.

Shroud	Hold Down Bolting	(Bolts 1 thru 48)	Remote UT
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V Examination performed in accordance with the requirements of General Electric SIL 462 Remote Examination of the Access Hole Covers.

Shroud	Access Hole Cover	(0° Cover)	Remote UT
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VI ASME Section XI Examination Category B-N-2 items examined in accordance with ASME Section XI requirements.

Shroud	Gussets & Shroud Vessel Wall	(45°, 135°, 225° & 315°)	Enhanced VT-1
Shroud	Vertical Welds	(V15, V16, V17 & V18)	Enhanced VT-1
Shroud	Core Plate Hold Downs	(45°, 135°, 225° & 315°)	VT-3
Shroud	Ring Segment Welds	(V9, V10, V11, V12, V13 & V14)	Enhanced VT-1
Shroud	Aligner Pins	(0°, 90°, 180° & 270°)	VT-3

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
SECTION III
EXAMINATION RESULTS

CATEGORY B-J PIPING WELDS

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
HPCI	23-O-22R	ISI-I-23-1	B-J	95-P-653	PT	NRI
				95-E-670	UT-0°	NRI
				95-E-671	UT-45°	GEOMETRY
				95-E-672	UT-60°	GEOMETRY
RWCU	12-O-10R	ISI-I-12-1	B-J	95-P-648	PT	NRI
				95-E-677	UT-0°	NRI
				95-E-679	UT-45°	GEOMETRY
RWCU	12-O-11R	ISI-I-12-1	B-J	95-P-650	PT	NRI
				95-E-678	UT-0°	NRI
				95-E-680	UT-45°	GEOMETRY
RWCU	12R-O-32R1	ISI-I-12-1	B-J	95-P-651	PT	NRI
				95-E-664	UT-0°	NRI
				95-E-665	UT-45°	NRI
RWCU	12-I-16R	ISI-I-12-2	B-J	95-P-732	PT	NRI
				95-E-703	UT-0°	NRI
				95-E-704	UT-0°	NRI
				95-E-705	UT-45°	NRI
				95-E-706	UT-45°	NRI
RWCU	12-I-17R	ISI-I-12-2	B-J	95-P-654	PT	NRI
				95-E-696	UT-0°	NRI
				95-E-689	UT-45°	NRI
RWCU	12-I-18R	ISI-I-12-2	B-J	95-P-731	PT	NRI
				95-E-457	UT-0°	NRI
				95-E-463	UT-45°	GEOMETRY
RWCU	12-I-19R	ISI-I-12-2	B-J	95-P-655	PT	NRI
				95-E-695	UT-0°	NRI
				95-E-688	UT-45°	NRI
RWCU	12-I-20R	ISI-I-12-2	B-J	95-P-729	PT	NRI
				95-E-452	UT-0°	NRI
				95-E-444	UT-45°	NRI
RWCU	12-I-21R	ISI-I-12-2	B-J	95-P-656	PT	NRI
				95-E-694	UT-0°	NRI
				95-E-687	UT-45°	NRI
RWCU	12-I-22R	ISI-I-12-2	B-J	95-P-730	PT	NRI
				95-E-458	UT-0°	NRI
				95-E-464	UT-45°	GEOMETRY

BOSTON EDISON COMPANY
 PILGRIM NUCLEAR STATION
 RFO 10 INSERVICE INSPECTION

NRI = NO RECORDABLE INDICATIONS
 R = RESTRICTED EXAMINATION

CATEGORY B-J PIPING WELDS

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
RWCU	12-I-23R	ISI-I-12-2	B-J	95-P-657	PT	NRI
				95-E-693	UT-0°	NRI
				95-E-686	UT-45°	NRI
RWCU	12-I-24R	ISI-I-12-2	B-J	95-P-658	PT	NRI
				95-E-692	UT-0°	NRI
				95-E-685	UT-45°	NRI
RWCU	12-I-25R	ISI-I-12-2	B-J	95-P-728	PT	NRI
				95-E-456	UT-0°	NRI
				95-E-462	UT-45°	GEOMETRY
RWCU	12-I-25-AR	ISI-I-12-2	B-J	95-P-660	PT	NRI
				95-E-691	UT-0°	NRI
				95-E-684	UT-45°	NRI

CATEGORY C-F PIPING WELDS

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
HPCI	EB-23-F58R	ISI-I-23-2	B-J	95-M-645	MT	NRI
				95-E-723	UT-0°	NRI
				95-E-0407	UT-45°	NRI
				95-E-0414	UT-60°	GEOMETRY
HPCI	EB-23-F59R	ISI-I-23-2	B-J	95-M-645	MT	NRI
				95-E-723	UT-0°	NRI
				95-E-724	UT-45°	GEOMETRY
				95-E-725	UT-60°	GEOMETRY
HPCI	EB-23-F13R	ISI-I-23-1	B-J	95-P-652	PT	NRI
				95-E-670	UT-0°	NRI
				95-E-671	UT-45°	NRI
				95-E-672	UT-60°	GEOMETRY

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 PILGRIM NUCLEAR STATION
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REACTOR PRESSURE VESSEL CLOSURE HEAD STUDS

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
RPV	RPV-CS-1-56	ISI-I-54-2	B-G-1	95-E-025	UT-0°	NRI
				95-E-029	UT-0°	NRI

SHROUD HOLD DOWN BOLTING

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
SHROUD	SHDB 1 THRU 48	N/A	SIL 433	95-E-759	UT-0°	NRI
				95-E-761	UT-0°	NRI
				95-E-763	UT-0°	NRI

ACCESS HOLE COVER

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
SHROUD	ZERO DEGREE AHC	N/A	SIL 462	95-E-757	AUTO UT	GEOMETRY

SHROUD VISUAL

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
SHROUD	GUSSET @ 45	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	GUSSET @ 135°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	GUSSET @ 225°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	GUSSET @ 315°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VERTICAL WELD 15	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VERTICAL WELD 16	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VERTICAL WELD 17	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VERTICAL WELD 18	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VESSEL WALL @ 45°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VESSEL WALL @ 135°	PDC 94-43	B-N-2	95-V-734	VT	NRI

BOSTON EDISON COMPANY
 PILGRIM NUCLEAR STATION
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SHROUD VISUAL

SYS	COMPONENT	ISO	CAT	DATA SHEET	METHOD	RESULTS
SHROUD	VESSEL WALL @ 225°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	VESSEL WALL @ 315°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	CORE PLATE HOLD DOWN @ 45B°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	CORE PLATE HOLD DOWN @ 135°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	CORE PLATE HOLD DOWN @ 225°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	CORE PLATE HOLD @ 315°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	RING SEGMENT WELD V9	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	RING SEGMENT WELD V10	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	RING SEGMENT WELD V11	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	RING SEGMENT WELD V12	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	RING SEGMENT WELD V13	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	RING SEGMENT WELD V14	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	ALIGNER PIN @ 0°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	ALIGNER PIN @ 90°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	ALIGNER PIN @ 225°	PDC 94-43	B-N-2	95-V-734	VT	NRI
SHROUD	ALIGNER PIN @ 315°	PDC 94-43	B-N-2	95-V-734	VT	NRI

**BOSTON EDISON COMPANY
PILGRIM NUCLEAR STATION
RFO 10 INSERVICE INSPECTION**

**NRI = NO RECORDABLE INDICATIONS
R = RESTRICTED EXAMINATION**

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
VESSEL AND PIPING WELDS

PROCEDURE No. QCI 50.70 REV. 3 CAL BLOCK# D1-3 LDS# 95-6-023

EXAMINATION PERSONNEL: Scott D. Cain LEVEL I DATE 3-27-95
TOMIE PERRY LEVEL II

INSTRUMENT DATA: MAKE Krautkramer MODEL USK7 S.No 27276-4646
 SEARCH UNIT DATA: MAKE Aerotech TYPE Gamma S.No 401304
 SIZE .5" FREQUENCY 5 MHZ. BEAM ANGLE 0°
 BEAM MODE long WEDGE TYPE N/A

CABLE DATA: LENGTH 6' TYPE BNC/M (RG174)
 COUPLANT DATA: TYPE VibrGel II BATCH No. 092041

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A

1	2	3	4
100		50	
90	N	40	
80	40	30	
70		20	
60		10	

- LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B

5	6	7	8
2 db	32 db	100	50
0	30 db	80	40
-2 db	28 db	61	31
-4 db	26 db	50	25
-6 db	24 db	40	20
-8 db	22 db	35	18
-10 db	20 db	25	12
-12 db	18 db	20	10

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

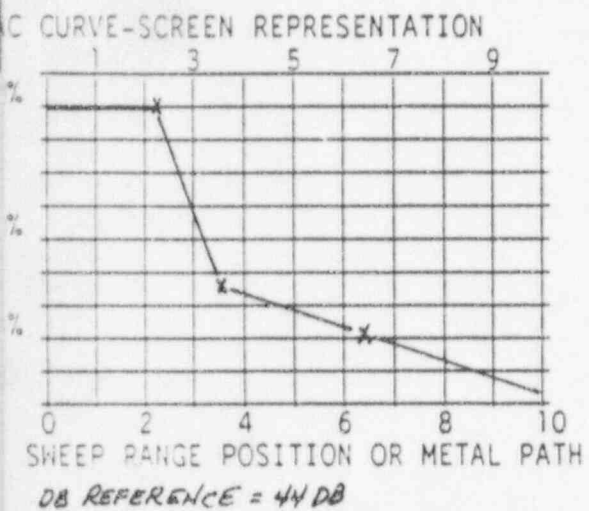
- INDICATION SET AT % FSH
- db CONTROL CHANGE
- INDICATION LIMITS % FSH
- ACTUAL % FULL SCREEN HEIGHT

- db CONTROL CHANGE
- ACTUAL db
- LARGER INDICATION AMPLITUDE %FSH
- SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY ACCEPTABLE UNACCEPTABLE
 AMPLITUDE CONTROL LINEARITY ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 3/29/95
 ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: [Signature] BECO LEVEL III OR DESIGNEE DATE 3-29-95
 REVIEWED BY: [Signature] ANII DATE 3-30-95

PROCEDURE NO. QCI - 50.77 REV. 1 DATE 3-27-95
 EXAMINATION PERSONNEL: NAME TOLLIE PERRY LEVEL II NAME N/A LEVEL N/A
 INSTRUMENT DATA: MAKE KRAUTKRAMER BRANSON MODEL USK 7 SERIAL NO. 27276-4646
 ARCH UNIT DATA: MANUFACTURER KB AEROTECH TYPE GAMMA HP
 SERIAL NO. K01304 SIZE .50" FREQUENCY 5.0 MHz.
 BEAM ANGLE 0° BEAM MODE LONGITUDINAL WEDGE TYPE N/A
 SAMPLE DATA: LENGTH 6.0' TYPE RG 174
 COUPLANT DATA: TYPE ULTRALUB II BATCH NO. 092081
 CALIBRATION STANDARD DATA: SERIAL NO. P1-99 THICKNESS N/A DIAMETER 6.25"
 MATERIAL CS
 CALIBRATION REFLECTOR(S) DATA: TYPE NOTCHES SIZE .564" L x .157" D x .019" W
 ORIENTATION (TO PIPE AXIS) N/A
 OR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR
 MAXIMUM RESPONSE N/A
 PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG. CAL.	CAL.	LAST	LAST	VERIFY	
DATE	CAL.	CHECK	E.D.S.	E.D.S.	25°F LIMIT
TIME	TIME	#	LINE #	YES/NO	
<u>3-27-95</u>	<u>1425</u>	<u>1635</u>	<u>(025)</u>	<u>(1)</u>	<u>YES</u>

I.D. OF WELD/COMPONENT

RPV STUDS NO. 1-56

REVIEWED BY: M. Stamm ^{LV} _{III} DATE 3/28/95
 DATA REVIEWER

ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: B. Perkins DATE 3-29-95
 BECO LEVEL III OR DESIGNEE

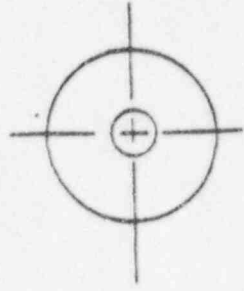
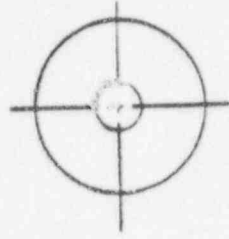
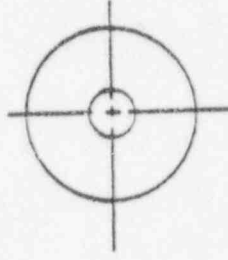
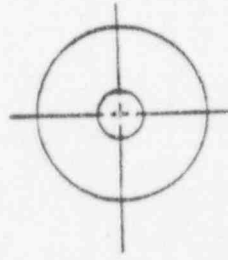
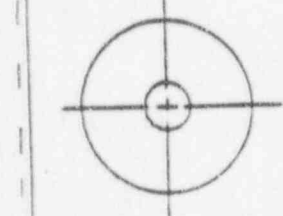
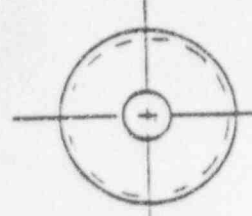
REVIEWED BY: V. Lynn DATE 3-30-95
 ANII

ULTRASONIC ANGLE BEAM REPORT-RPV STUDS

USE SKETCH TO DESCRIBE LOCATION OF IND.

SCAN FROM TOP

BOTTOM



SECTION VIEWS AS REQUIRED

STUD NO.	IND #	% DAC	WIDTH 20% END PTS.	LENGTH 20% END PTS.	S.P.	TIME START/STOP	REMARKS
NO. 1-56		N. R. I.				15/10 16/25	NONE

Accepted By *B. Perkins III* 3-29-95
 BECo Level III or Designee/date

Examiner *[Signature]*
 Level II
 Level NA

Criteria: ASME Sec II, 1980 Winter 80 ASME XI Examination
 ACCEPT NA REJECT
 Further Evaluation Required

Reviewed by: *[Signature]* level III Date 3-30-95
 ANII

EXAMINATION PERSONNEL: Scott D. Carr LEVEL I DATE 3-28-95
Tomie Perry LEVEL II

INSTRUMENT DATA: MAKE Mauthammer MODEL US 47 S.No 27276-4646

SEARCH UNIT DATA: MAKE Aerotech TYPE Gamma S.No 401304

SIZE 5" FREQUENCY 5 MHZ. BEAM ANGLE 0°

BEAM MODE long. WEDGE TYPE N/A

CABLE DATA: LENGTH 6' TYPE BG-174 (BNC-MD)

COUPLANT DATA: TYPE ultragel II BATCH No. 092081

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A	1	2	3	4
	100		50	
	90	N	40	
	80	40	A	30
	70		20	
	60		10	

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
	2 db	24 db	100	50
	0	22 db	80	40
	-2 db	20 db	65	32
	-4 db	18 db	50	25
	-6 db	16 db	40	21
	-8 db	14 db	32	16
	-10 db	12 db	25	12
	-12 db	10 db	20	11

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

ANALYSIS OF RESULTS:

SCREEN HEIGHT LINEARITY
ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
ACCEPTABLE UNACCEPTABLE

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

REVIEWED BY: [Signature] LEVEL III DATE 3/28/95
ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED

ACCEPTED BY: B. Perkins BECO LEVEL (II) OR DESIGNEE DATE 3-29-95
REVIEWED BY: [Signature] ANII DATE 3-30-95

PROCEDURE No. QCI 50.70 REV. 3 CAL BLOCK# PILGRAM-3 LDS# 95-6-027

EXAMINATION PERSONNEL: Jeffrey L. Gofhart LEVEL I DATE 3-27-95
TOMIE PERRY LEVEL II

INSTRUMENT DATA: MAKE KNAUTH MODEL USK7 S.No 27276-4440
 SEARCH UNIT DATA: MAKE KB-Aerotech TYPE Gamma S.No E28208
 SIZE .5" FREQUENCY 10 MHz. BEAM ANGLE 0°
 BEAM MODE LONG WEDGE TYPE N/A
 CABLE DATA: LENGTH 10' TYPE BNC/IMP
 COUPLANT DATA: TYPE UTRAC-6 BATCH No. 092081

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A

1	2	3	4
100		50	
90		40	
80	40	30	
70		20	
60		10	

- LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B

5	6	7	8
2 db	66	100	50
0	64	80	40
-2 db	62	60	30
-4 db	60	50	25
-6 db	58	40	20
-8 db	56	34	17
-10 db	54	26	12
-12 db	52	20	10

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

- INDICATION SET AT % FSH
- db CONTROL CHANGE
- INDICATION LIMITS % FSH
- ACTUAL % FULL SCREEN HEIGHT

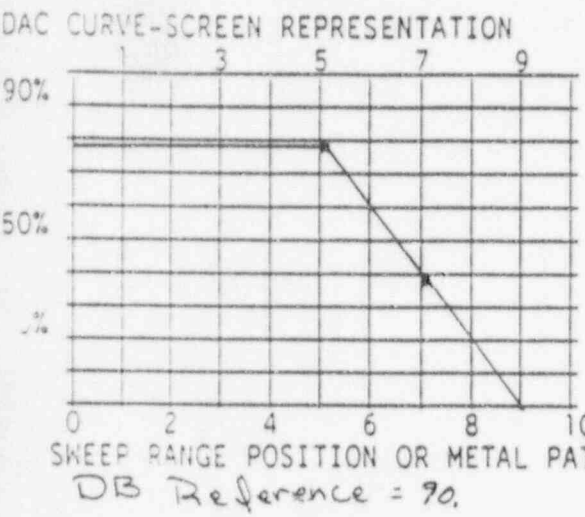
- db CONTROL CHANGE
- ACTUAL db
- LARGER INDICATION AMPLITUDE %FSH
- SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY
 ACCEPTABLE UNACCEPTABLE
 AMPLITUDE CONTROL LINEARITY
 ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 3/28/95
 ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: [Signature] BECO LEVEL III OR DESIGNEE DATE 3-27-95
 REVIEWED BY: [Signature] ANII DATE 3/30/95

Rev. 3
 Attachment A
 Form 50.70-1
 C.D.S. NO. 95-C-028
 U.T.V. No. 073
 L.D.S. NO. 95-L-027
 95-L-030

PROCEDURE NO. QCI-50.77 REV. 1 DATE 3-27-95
 EXAMINATION PERSONNEL: NAME Mike Stamm LEVEL III NAME N/A LEVEL N/A
 INSTRUMENT DATA: MAKE Krautkramer Branson MODEL US27 SERIAL NO. 27276-4640
 SEARCH UNIT DATA: MANUFACTURER KB Aerotech TYPE Gamma
 SERIAL NO. E28208 SIZE .50" FREQUENCY 10 MHz
 BEAM ANGLE 0° BEAM MODE longitudinal WEDGE TYPE N/A
 CABLE DATA: LENGTH 6.0' TYPE BG-174
 COUPLANT DATA: TYPE UltraGel II BATCH NO. 092081
 CALIBRATION STANDARD DATA: SERIAL NO. R1-99 THICKNESS N/A DIAMETER 6.25"
 MATERIAL C.S.
 CALIBRATION REFLECTOR(S) DATA: TYPE Notches SIZE .564" L x .157" W x .019" W
 ORIENTATION (TO PIPE AXIS) N/A
 FOR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR
 MAXIMUM RESPONSE N/A
 PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG. DATE	CAL. CHECK	LAST E.D.S. #	LAST E.D.S. LINE #	VERIFY	25°F LIMIT YES/NO
<u>3-27-95</u>	<u>1425</u>	<u>K35(089)</u>	<u>(1)</u>	<u>yes</u>	<u>yes</u>

I.D. OF WELD/COMPONENT
RPV STUDS No. 1-56

REVIEWED BY: M. Stamm DATE 3/28/95
 DATA REVIEWER

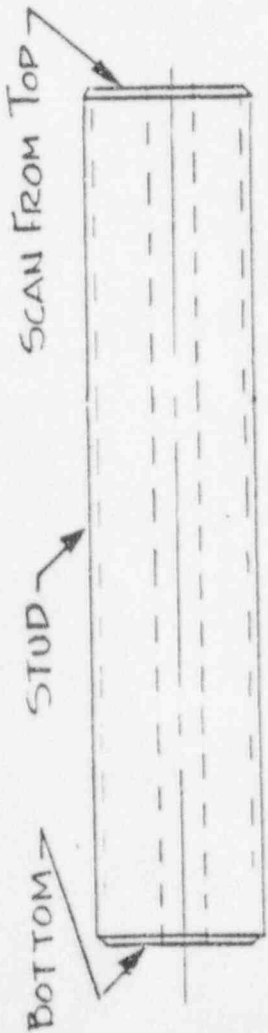
ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: B. Perkins DATE 3-29-95
 BECO LEVEL III OR DESIGNEE

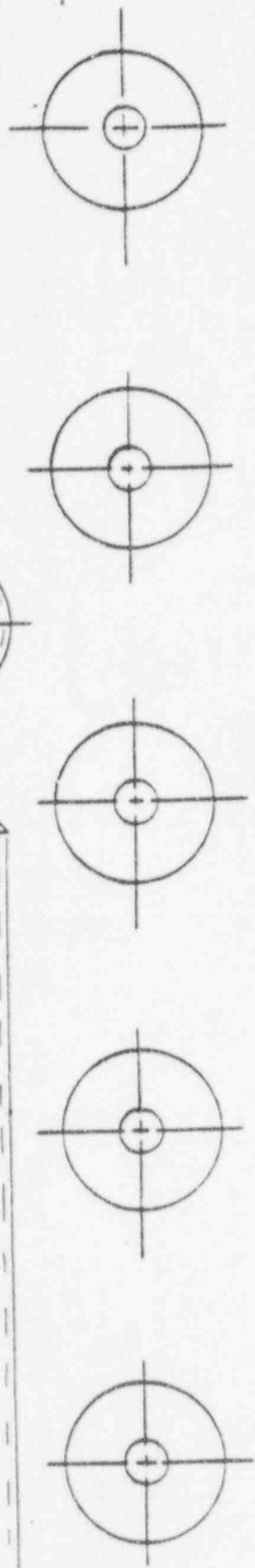
REVIEWED BY: V. Kypur DATE 3-30-95
 ANII

ULTRASONIC ANGLE BEAM REPORT-RPV STUDS

USE SKETCH TO DESCRIBE LOCATION OF IND.



MR # 17500-486
 SYS. # # 57
 TEMP. 125 F°
 DATE 3-27-95
 D.S.N. 95-E-029
 C.D.S. 95-C-028
 SCAN GAIN % 073 dB
 UTV. NO. 073



SECTION VIEWS AS REQUIRED

STUD NO.	IND #	% DAC	WIDTH 20% END PTS.	LENGTH 20% END PTS.	S.P.	TIME START/STOP	REMARKS
NO. 1-56		NRI				1510 / 1625	NONE

Examiners [Signature] Level III
[Signature] Level N/A
 Criteria: ASME SEC. II PART 80 ASME XI Examination
 ACCEPT N/A REJECT YES ANII SIGNATURE REQUIRED
 Further Evaluation Required NO ANII SIGNATURE NOT REQUIRED
 Reviewed by: [Signature] Level III Date 3-30-95
 Accepted By [Signature] Level III or Designee/date 3-29-95
 ANII

PROCEDURE No. QCI 50.70 REV. 3 CAL BLOCK# PK-3 LDS# 95-6-030

EXAMINATION PERSONNEL: Scott D. Cain LEVEL I DATE 3-28-95
Tollie Perry LEVEL II

INSTRUMENT DATA: MAKE Krieger Kramer MODEL USA 7 S.No 27276-4640

SEARCH UNIT DATA: MAKE KB Acrotech TYPE Gamma S.No E28203

SIZE 5" FREQUENCY 10 MHz. BEAM ANGLE 0°

BEAM MODE long WEDGE TYPE N/A

CABLE DATA: LENGTH 6' TYPE BG174 (BNC-MD)

COUPLANT DATA: TYPE Hz Gel BATCH No. 092031

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
NO COMPLETE PART B

A	1	2	3	4
	100		50	
	90		N 40	
	80	40	30	A
	70		20	
	60		10	

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
	2 db	62 db	100	50
	0	60 db	90	40
	-2 db	58 db	60	30
	-4 db	56 db	50	25
	-6 db	54 db	40	20
	-8 db	52 db	34	16
	-10 db	50 db	26	13
	-12 db	48 db	20	10

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY
 ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
 ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 3/28/95
 ASME SECTION XI EXAMINATION: YES ANII SIGNATURE REQUIRED

ACCEPTED BY: [Signature] BECO LEVEL III OR DESIGNEE DATE 3-29-95
 REVIEWED BY: [Signature] ANII DATE 3-30-95

PROCEDURE No. 50.70 REV. 3 CAL BLOCK# ST-007 LDS# 95-L-442

EXAMINATION PERSONNEL: Touie Perry LEVEL II DATE 4-15-95
 N/A LEVEL NA

INSTRUMENT DATA: MAKE KRAUTKRAMER MODEL USK 7 S.No 27276-4640
 SEARCH UNIT DATA: MAKE KDA TYPE GAMMA S.No C15439
 SIZE .25" FREQUENCY 2.25 MHZ. BEAM ANGLE 45°
 BEAM MODE Shear WEDGE TYPE LUCITE

CABLE DATA: LENGTH 6.0' TYPE R6174
 COUPLANT DATA: TYPE UTRAGELL-# BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A

1	2	3	4
100		50	
90		40	
80	40	30	
70		20	
60		10	

- LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B

5	6	7	8
2 db	42	100	50
0	40	80	40
-2 db	38	64	32
-4 db	36	50	25
-6 db	34	40	20
-8 db	32	32	17
-10 db	30	25	12
-12 db	28	20	10

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

- INDICATION SET AT % FSH
- db CONTROL CHANGE
- INDICATION LIMITS % FSH
- ACTUAL % FULL SCREEN HEIGHT

- db CONTROL CHANGE
- ACTUAL db
- LARGER INDICATION AMPLITUDE %FSH
- SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY
 ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
 ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 4/21/95
 ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: [Signature] BECO LEVEL (III) OR DESIGNEE DATE 4-21-95
 REVIEWED BY: [Signature] ANII DATE 5-18-95



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PILGRIM UNIT: 1

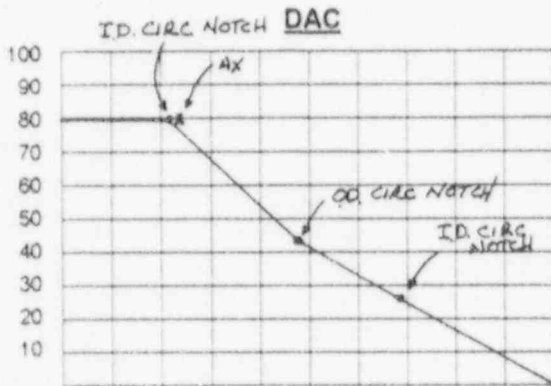
CALIBRATION SHEET NO.: 95-E-443

PROJECT NO.: 1FQ8R

LINEARITY SHEET NO.: 95-L-442

PROCEDURE NO.: UT-PIL-102VO (GE) TP94-072 REV. 1 REVISION: 0 FRR: N/A

Instrument KRAUTKRAMER BRANSON USK-7 27276-4640
 Search Unit KB AEROTECH C15439 .25" 2.25 MHz 45°/S .25"
 Cable RG 174 6.0' 2
 Calibration Standard P.1-98 89 .34" 72 °F
 Couplant ULTRAGEL II 94125 Thermometer N/A



SWEEP: 0 - 10 = 2.0

DEPTH METAL PATH

INSTRUMENT SETTINGS

DAC Construction **Sensitivity**
 Gain - Axial Scan 16 DB Gain - Axial Scan 30 DB
 Gain - Circ. Scan 30 DB Gain - Circ. Scan 44 DB
 Pulse AUTO Range 2.5"
 Damping FIXED Delay 7.50"
 Rep Rate HIGH Velocity N/A
 Filter FIXED Sweep 3.39°
 Frequency AUTO Resolution N/A
 Reject OFF Jack R T

Field Simulator: N/A S/N: N/A

CALIBRATION VERIFICATION

REFLECTOR	<u>N/A</u>	INITIAL CALIBRATION TIME	<u>0900</u>	VERIFICATION TIMES
MAX AMPLITUDE	<u>N/A</u>	FINAL VERIFICATION TIME	<u>1155</u>	<u>N/A</u>
SWEEP	<u>A</u>			<u>A</u>
GAIN	<u>A</u>			<u>A</u>

WELDS EXAMINED

REPORT NO.

COMMENTS:

12-I-20R

95-E-444

PRE SERVICE EXAMINATION.
Component meets
the criteria of
ASME Section XI
1980 (W80) - No
Further Evaluation
Required.

EXAMINER

LEVEL

DATE

REVIEWED BY

LEVEL

DATE

REVIEWED BY

TITLE

DATE

REVIEWED BY

TITLE

DATE

PAGE: 1 OF 1



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-444

PROJECT NO.: IFQBR

CALIBRATION SHEET NO.: 95-C-443

DATA SHEET NO.: 95-E-444 18/1

PROCEDURE NO.: UT-PI-102VO (GE) TP94-072 REV. 1 REVISION: 0 FRR: N/A

SYSTEM: R.W.C.U. EXAM SURFACE TEMP: 78 °F COUPLANT: ULTRAGEL II EXAM START: 11:03

WELD ID: 12-1-20R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 11:20

SEARCH UNIT: 45°S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: T.D.C. AXIAL SCAN SENSITIVITY (dB) 30 DB

Wo REFERENCE: WELD E CIRC SCAN SENSITIVITY (dB) 44 DB

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: {	1 WITH FLOW	X		X
	2 AGAINST FLOW	X		X
CIRC CW: {	3 UPSTREAM	X		X
	4 DOWNSTREAM	X		X
CIRC CCW: {	5 UPSTREAM	X		X
	6 DOWNSTREAM	X		X
	7 L-WAVE BASE METAL			
	8 OTHER			

PIPE COMPONENT

WELD CENTERLINE

ELBOW COMPONENT

INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
NO RECORDABLE INDICATIONS.											

REMARKS: I.D. GEOMETRY OBSERVER FROM BOTH SIDES INTERMITTENTLY 360° AT LESS THAN RECORDABLE AMPLITUDES.

	<u>II</u>	<u>4-15-95</u>		<u>III</u>	<u>4/18/95</u>	PAGE: 1 OF 1
EXAMINER	LEVEL	DATE	REVIEWED BY	LEVEL	DATE	
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>V. J. ...</u>	<u>ANIE</u>	<u>5-18-95</u>	
EXAMINER	LEVEL	DATE	REVIEWED BY	TITLE	DATE	

73 Perkins 4-21-95

PROCEDURE No. 50.70 REV. 3 CAL BLOCK# ST-007 LDS# 95-6-450

EXAMINATION PERSONNEL: Percy Arceneaux LEVEL II DATE 4-15-95
N/A LEVEL N/A

INSTRUMENT DATA: MAKE KRAUTKRAMER MODEL USN 50 S.No 602605
 SEARCH UNIT DATA: MAKE KB AEROTECH TYPE Gamma S.No D15462
 SIZE .25" FREQUENCY 2.25 MHz BEAM ANGLE 0°
 BEAM MODE Long WEDGE TYPE N/A
 CABLE DATA: LENGTH 6.0' TYPE RG 59 x2 SELF CONTAINED
 COUPLANT DATA: TYPE ULTRACED BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
NO COMPLETE PART B

A	1	2	3	4
	100	50	50	25
	90	45	40	20
	80	40	30	15
	70	35	20	10
	60	30	10	5

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
	2 db			
	0			
	-2 db			
	-4 db	N/A		
	-6 db			
	-8 db			
	-10 db			
	-12 db			

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY
 ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
 ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 4-15-95
 ASME SECTION XI EXAMINATION: YES ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: [Signature] BECO LEVEL III OR DESIGNEE DATE 4-21-95
 REVIEWED BY: [Signature] ANII DATE 5-18-95



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (MANUAL EXAMINATION)

SITE: Pilgrim UNIT: I
PROJECT NO.: 1F98R

CALIBRATION SHEET NO.: 95-C-451
LINEARITY SHEET NO.: 95-L-450

PROCEDURE NO.: UT-PIL-10240 (GE) TP99-022 REV.1 REVISION: 0 FRR: N/A

Instrument KRAUTKRAMER USN-50 602605
Manufacturer Model No Serial No

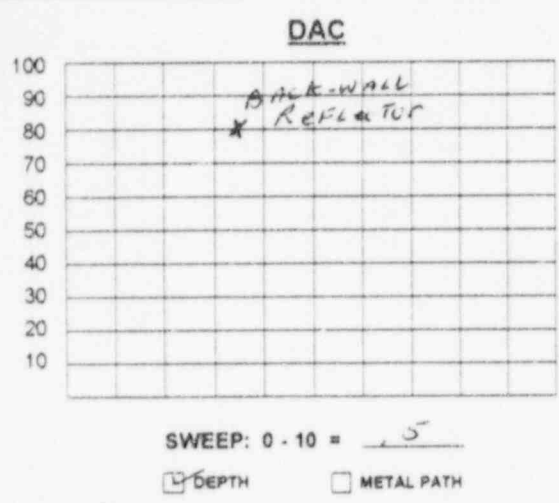
Search Unit KB AeroTech D15462 25 2.25 0° N/A
Manufacturer Serial No Size Freq Angle/Mode Incident to wedge front

Cable BNC X2 SELF CONTAIN 6' 2
Type Length No. of Connectors

Calibration Standard PIL-98 S.S. 34" 72° F
Type Length No. of Connectors

Couplant ULTRAGEL 94125 N/A
Type Serial No Material Thickness Temp

Batch No Thermometer Serial No



INSTRUMENT SETTINGS

DAC Construction	Sensitivity
Gain - Axial Scan <u>N/A</u>	Gain - Axial Scan <u>N/A</u>
Gain - Circ. Scan <u>N/A</u>	Gain - Circ. Scan <u>N/A</u>
Pulse <u>DUAL</u>	Range <u>.5</u>
Damping <u>AUTO</u>	Delay <u>3.875 us</u>
Rep Rate <u>NRPM</u>	Velocity <u>2369 us</u>
Filter <u>FIX</u>	Sweep <u>N/A</u>
Frequency <u>AUTO</u>	Resolution <u>N/A</u>
Reject <u>OFF</u>	Jack <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: N/A S/N: N/A

REFLECTOR	<u>N/A</u>	<u>N/A</u>
MAX AMPLITUDE	<u>A</u>	<u>N/A</u>
SWEEP	<u>A</u>	<u>A</u>
GAIN		

CALIBRATION VERIFICATION

INITIAL CALIBRATION TIME	<u>0930</u>	VERIFICATION TIMES	
FINAL VERIFICATION TIME	<u>1235</u>	<u>1200</u>	<u>N/A</u>
		<u>N/A</u>	<u>N/A</u>

WELDS EXAMINED	REPORT NO.	COMMENTS:
<u>12-I-20R</u>	<u>95-E-452</u>	<u>Pre-Service EXAM</u> Component meets the criteria of ASME Section XI 1980 (W80) - No Further Evaluation Required.

<u>[Signature]</u> <u>II</u> <u>4-15-95</u>	<u>B. Perkins BEL</u> <u>III</u> <u>4-21-95</u>
EXAMINER LEVEL DATE	REVIEWED BY LEVEL DATE
<u>[Signature]</u> <u>III</u> <u>4/21/95</u>	<u>[Signature]</u> <u>ANES</u> <u>5-18-95</u>
REVIEWED BY TITLE DATE	REVIEWED BY TITLE DATE

PAGE: 1 OF: 1

FORM UT-04 REV. 0



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pilgrim UNIT: 1

REPORT NO.: 95-E-452

PROJECT NO.: IFQR

CALIBRATION SHEET NO.: 95-C-451

DATA SHEET NO.: 95-E-452

PROCEDURE NO.: UT-PIL-102VU (65) TP99-072 REV. 1 REVISION: 0 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 78 °F COUPLANT: ULTRAGEL EXAM START: 1205

WELD ID: 12-I-20R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1225

SEARCH UNIT: 0° EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

L₀ REFERENCE: T.D.C. AXIAL SCAN SENSITIVITY (dB) *

W₀ REFERENCE: Weld E CIRC SCAN SENSITIVITY (dB) N/A

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: {	1 WITH FLOW			
	2 AGAINST FLOW			
CIRC CW: {	3 UPSTREAM		N	
	4 DOWNSTREAM		A	
CIRC CCW: {	5 UPSTREAM			
	6 DOWNSTREAM			
	7 L-WAVE BASE METAL	✓		✓
	8 OTHER	N/A	N/A	N/A

INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
	NO Resolvable Ind.										

REMARKS: MAINTAIN 90% BACKWALL REFLECTION DURING EXAMINATION

<u>[Signature]</u>	<u>II</u>	<u>4-15-95</u>	<u>[Signature]</u>	<u>III</u>	<u>4/21/95</u>	PAGE: <u>1</u> OF: <u>2</u>
EXAMINER	LEVEL	DATE	REVIEWED BY	LEVEL	DATE	
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>[Signature]</u>	<u>ANIE</u>	<u>5-18-95</u>	
EXAMINER	LEVEL	DATE	REVIEWED BY	TITLE	DATE	

B.Pekus 4-21-95
DEC III



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

SITE: 1-EGT, m

UNIT: 2

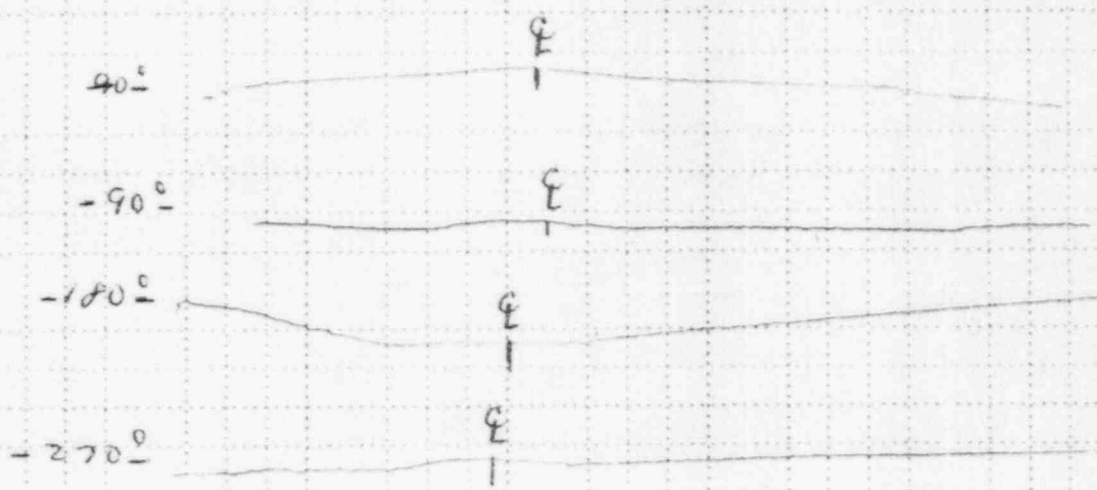
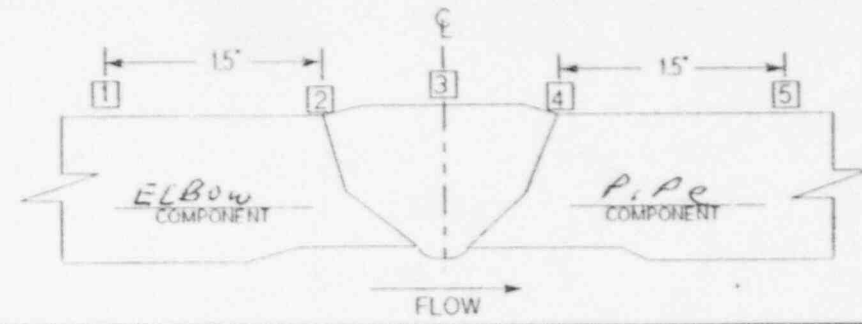
95-E-452

PROJECT NO: 1EQ8R

POSITION	0°	90°	180°	270°
1	325	326	351	374
2	334	368	368	328
3	357	323	402	371
4	333	325	335	334
5	352	377	352	349

SYSTEM ID RW24
 WELD ID NO. 12-7-20R

CROWN HEIGHT: .05"
 CROWN WIDTH: .75"
 NOM. DIAMETER: 4.0"
 WELD LENGTH: 14.4"



Ryan
Examiner

II Level
4-15-95 Date

M. Stann
Reviewed By

III Level
4/21/95 Date

V.M.W.
Reviewed By

ANTI Title
5-18-95 Date

Page 2 of 2

FORM 138 1-13-90

B Perkins 4-21-95
BEL-TIL

PROCEDURE No. QI 50.70 REV. 3 CAL BLOCK# A10251 LDS# 95-2-454

EXAMINATION PERSONNEL: Perry Arceneaux LEVEL II DATE 4-10-95
Scott Cain LEVEL I

INSTRUMENT DATA: MAKE Krautkramer MODEL USN-50 S.No 602605
SEARCH UNIT DATA: MAKE K.B. Acmetech TYPE Gamma S.No 0152163
SIZE 25" FREQUENCY 2.25 MHz. BEAM ANGLE 0°
BEAM MODE longitudinal WEDGE TYPE N/A

CABLE DATA: LENGTH 6' TYPE BNC x 2 self contained
COUPLANT DATA: TYPE Hogel II BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A	1	2	3	4
	100	50	50	25
	90	45	40	20
	80	40	30	15
	70	35	20	10
	60	30	10	5

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
	2 db			
	0			
	-2 db			
	-4 db	N		
	-6 db		A	
	-8 db			
	-10 db			
	-12 db			

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
SCREEN HEIGHT LINEARITY
 ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
 ACCEPTABLE UNACCEPTABLE

REVIEWED BY: Michael LEVEL III DATE 4/11/95
ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
ACCEPTED BY: B.P. Pukys BECO LEVEL III OR DESIGNEE DATE 4-21-95
REVIEWED BY: David ANII DATE 5-18-95



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: Pilgrim UNIT: I

CALIBRATION SHEET NO.: 95-E-455

PROJECT NO.: LEQR

LINEARITY SHEET NO.: 95-L-454

PROCEDURE NO.: UT-PIL-10240(GE) TP94-072 REV.1 REVISION: 0 FRR: N/A

Instrument KRAUTKAMER USA-50 602605
Manufacturer Model No. Serial No.

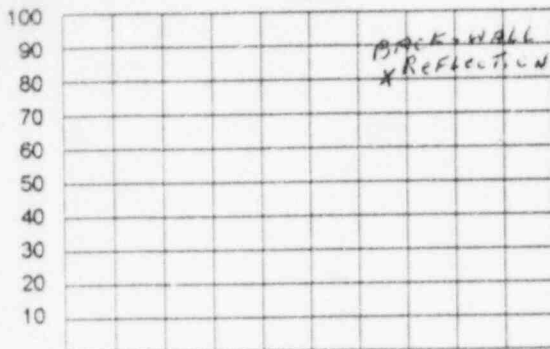
Search Unit KB Acoustic 015463 .25 2.25 MHz 0° N/A
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable BNC X2 SELF CONTAIN 6' 2
Type Length No. of Connectors (0.337)

Calibration Standard A10251 (PIL-88) S.S. 1.5" 70 °F
Serial No. Material Thickness Temp.

Couplant ULTRAGEL 94125 Thermometer N/A
Type Batch No. Serial No.

DAC



SWEEP: 0.10 = .5

DEPTH METAL PATH

INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>N/A</u>	Gain - Axial Scan <u>N/A</u>
Gain - Circ. Scan <u>N/A</u>	Gain - Circ. Scan <u>N/A</u>
Pulse <u>DUAL</u>	Range <u>.5</u>
Damping <u>Fixed</u>	Delay <u>3 719</u>
Rep Rate <u>AUTO</u>	Velocity <u>2386 us</u>
Filter <u>N/A</u>	Sweep <u>N/A</u>
Frequency <u>AUTO</u>	Resolution <u>Fixed</u>
Reject <u>-0-</u>	Jack <input checked="" type="checkbox"/> <input type="checkbox"/>

Field Simulator: N/A S/N: N/A

CALIBRATION VERIFICATION

REFLECTOR			INITIAL CALIBRATION TIME	<u>1015</u>	VERIFICATION TIMES
MAX AMPLITUDE	<u>N</u>	<u>N</u>	FINAL VERIFICATION TIME	<u>1235</u>	<u>N</u>
SWEEP	<u>A</u>	<u>A</u>			<u>A</u>
GAIN					

WELDS EXAMINED	REPORT NO.	COMMENTS:
<u>12-I-18R</u>	<u>95-E-457</u>	<u>Pre-Service EXAM</u>
<u>12-I-22R</u>	<u>95-E-458</u>	<u>Pre-Service EXAM</u>
<u>12-I-25R</u>	<u>95-E-456</u>	<u>Pre-Service EXAM</u>
<u>N</u>		<u>Component meets the criteria of ASME Section XI 1980 (W80) - No Further Evaluation Required.</u>
<u>A</u>		<u>A</u>

<u>[Signature]</u> EXAMINER	<u>II</u> LEVEL	<u>4-10-95</u> DATE	<u>B Perkins BELG III</u> REVIEWED BY	<u>4-21-95</u> DATE
<u>[Signature]</u> REVIEWED BY	<u>AM/III</u> TITLE	<u>4/11/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>5-18-95</u> DATE

PAGE: 1 OF: 1



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pilgrim UNIT: 1
PROJECT NO.: LEQR

REPORT NO.: 95-E-456
CALIBRATION SHEET NO.: 95-C-454
DATA SHEET NO.: 95-E-456

PROCEDURE NO.: UT-PIL-10240(GE) REVISION: 0 FRR: N/A
TP94-072 REV.1

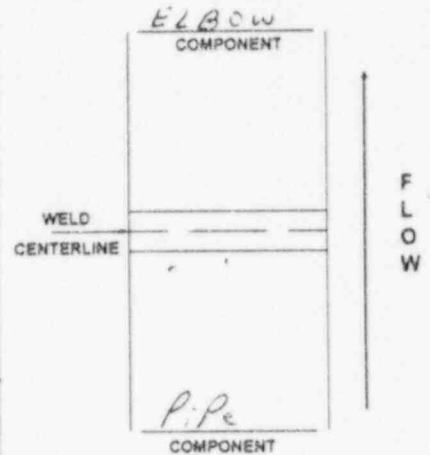
SYSTEM: RWCU EXAM SURFACE TEMP: 62 °F COUPLANT: ULTRAGEL EXAM START: 1055
WELD ID: 12-I-25R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1115

SEARCH UNIT: 0° L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: T.D.C AXIAL SCAN SENSITIVITY (dB) *
Wo REFERENCE: Weld E CIRC SCAN SENSITIVITY (dB) *

- AXIAL: { 1 WITH FLOW
- { 2 AGAINST FLOW
- CIRC CW: { 3 UPSTREAM
- { 4 DOWNSTREAM
- CIRC CCW: { 5 UPSTREAM
- { 6 DOWNSTREAM
- { 7 L-WAVE BASE METAL
- { 8 OTHER _____

PERFORMED		INDICATIONS	
YES	NO	YES	NO
		N	
		A	
✓			✓
		N	
		A	



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
	NO Recordable Ind. Found										

REMARKS: N/A * MAINTAIN 80% BACK WALL REFLECTION THROUGH OUT EXAM.

<u>R. J. [Signature]</u> EXAMINER	<u>II</u> LEVEL	<u>4-10-95</u> DATE	<u>Michael [Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>4/11/95</u> DATE	PAGE: <u>1</u> OF: <u>2</u>
<u>N/A</u> EXAMINER	LEVEL	DATE	<u>V. K. [Signature]</u> REVIEWED BY	<u>ANII</u> TITLE	<u>5-18-95</u> DATE	

B. [Signature] 4-21-95



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

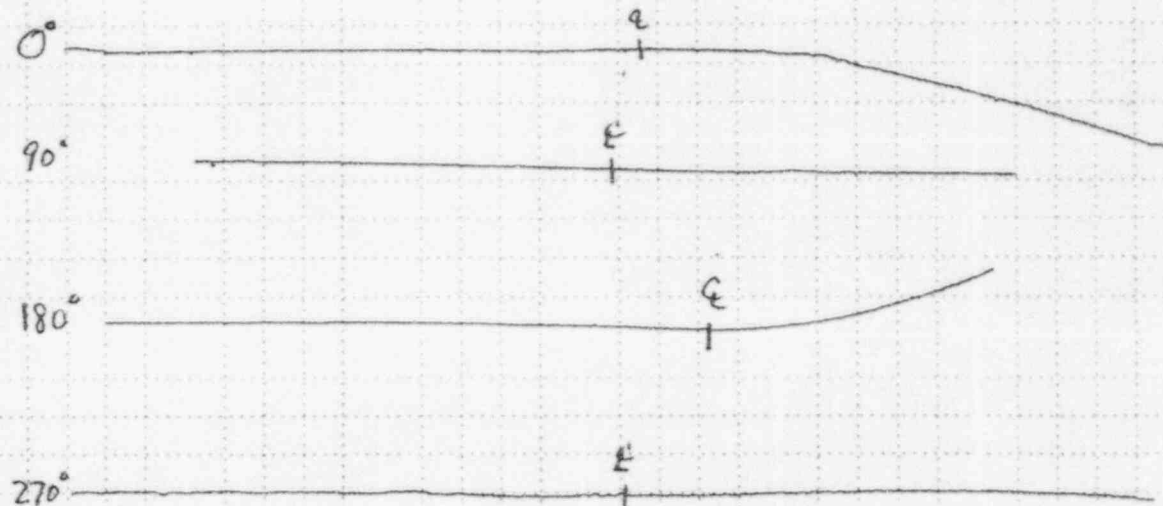
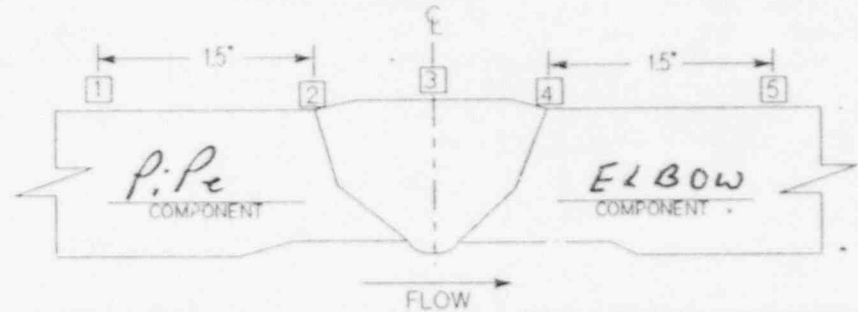
SITE: Pilgrim UNIT: I
PROJECT NO: 1FQ8R

REPORT NO.
95-E-456

POSITION	0°	90°	180°	270°
1	.335	.341	.333	.326
2	.326	.320	.323	.311
3	.343	.346	.375	.380
4	.317	.311	.324	.344
5	.322	.334	.351	.339

SYSTEM ID RWCW
WELD ID NO. 12-I-25R

CROWN HEIGHT: Flush
CROWN WIDTH: .5
NOM. DIAMETER: 4"
WELD LENGTH: 14.4"



B. Pickens 4/21/95
BEG III

<u>P. Ryan</u> Examiner	<u>II</u> Level	<u>4-10-95</u> Date	<u>Michael</u> Reviewed By	<u>III</u> Level	<u>4/11/95</u> Date	<u>V. Ryan</u> Reviewed By	<u>ANJE 5-18-95</u> Title	<u>5-18-95</u> Date	Page 2 Of 2
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GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pilgrim UNIT: I

REPORT NO.: 95-E-457

CALIBRATION SHEET NO.: 95-c-455

PROJECT NO.: IFRR

DATA SHEET NO.: 95-E-457

PROCEDURE NO.: UT-PIL-102VD (66) REVISION: 0 FRR: N/A
TP94-072 REV 1

SYSTEM: RWCU EXAM SURFACE TEMP: 62°F COUPLANT: ULTRACEL EXAM START: 1025

WELD ID: 12-I-18R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1050

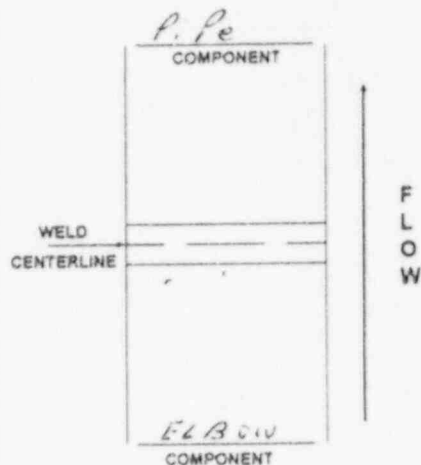
SEARCH UNIT: 0° EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: TDC AXIAL SCAN SENSITIVITY (dB) *

Wo REFERENCE: weld E CIRC SCAN SENSITIVITY (dB) *

- AXIAL: { 1 WITH FLOW
- 2 AGAINST FLOW
- CIRC CW: { 3 UPSTREAM
- 4 DOWNSTREAM
- CIRC CCW: { 5 UPSTREAM
- 6 DOWNSTREAM
- 7 L-WAVE BASE METAL
- 8 OTHER _____

PERFORMED		INDICATIONS	
YES	NO	YES	NO
/			/
		N	
		R	
			/
✓			✓
		N	
		R	



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
No Recordable Ind. Found											

REMARKS: * MAINTAIN 80% BACK WALL REFLECTION
THRU-OUT EXAM.

<u>[Signature]</u> EXAMINER	<u>II</u> LEVEL	<u>4-10-95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>9/11/95</u> DATE	PAGE: <u>1</u> OF: <u>2</u>
<u>N/A</u> EXAMINER			<u>[Signature]</u> REVIEWED BY	<u>ANTI</u> TITLE	<u>5.18.95</u> DATE	

[Signature] 4/21/95
D.P.C. III



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

SITE: Pilgrim UNIT: I

REPORT NO.

95-E-457

PROJECT NO: 1EQPR

POSITION	0°	90°	180°	270°
1	352	356	347	355
2	324	307	327	322
3	367	383	385	382
4	315	315	334	324
5	343	345	339	329

SYSTEM ID RWCU

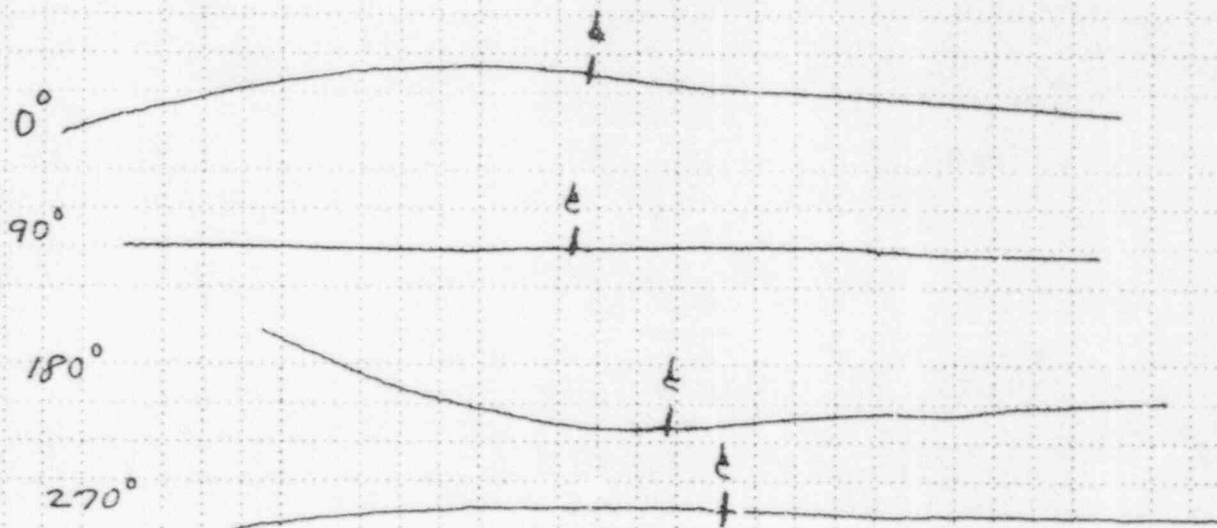
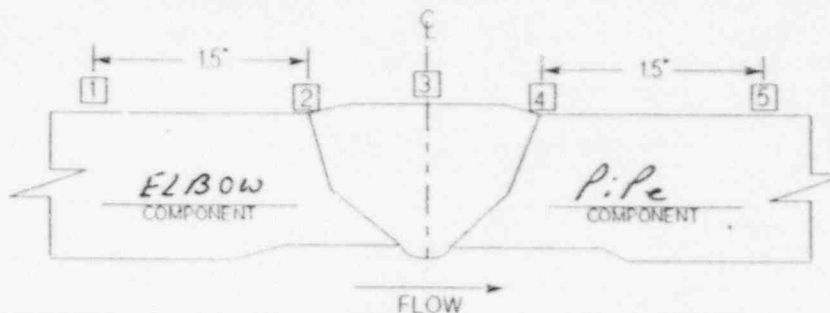
WELD ID NO. 12-I-18R

CROWN HEIGHT: Flush

CROWN WIDTH: .5"

NOM. DIAMETER: 4"

WELD LENGTH: 14.4"



B. P. P. 4-21-95
BEC, III

P. J. ...
Examiner Level II Date 4-20-95

M. J. ...
Reviewed By Level III Date 4/1/95

P. J. ...
Reviewed By Title ANIJ 5-18-95 Date



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pilgrim UNIT: I PROJECT NO.: 1FQR

REPORT NO.: 95-E-458 CALIBRATION SHEET NO.: 95-C-458 DATA SHEET NO.: 95-E-458

PROCEDURE NO.: UT-PIL-10240(56) REVISION: 0 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 62°F COUPLANT: ULTRAGel EXAM START: 1210 WELD ID: 12-I-22R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1231

SEARCH UNIT: 0°L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: T.D.C. W0 REFERENCE: weld E AXIAL SCAN SENSITIVITY (dB): * CIRC SCAN SENSITIVITY (dB): *

- AXIAL: 1 WITH FLOW, 2 AGAINST FLOW, CIRC CW: 3 UPSTREAM, 4 DOWNSTREAM, CIRC CCW: 5 UPSTREAM, 6 DOWNSTREAM, 7 L-WAVE BASE METAL, 8 OTHER

Table with 4 columns: PERFORMED (YES/NO) and INDICATIONS (YES/NO). Contains handwritten 'N' and 'A' marks.

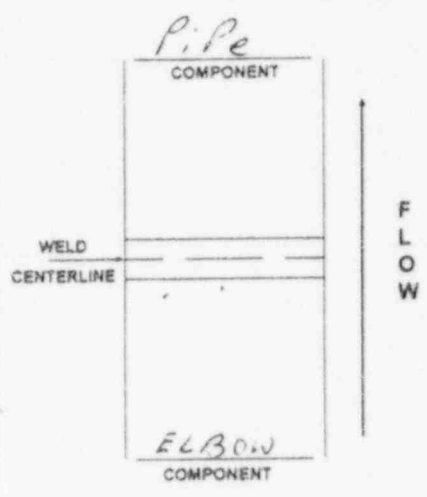


Table with columns: INDICATION NO., L (in) FROM REF (L-1, L-MAX, L-2), W (in) FROM REF (W-1, W-MAX, W-2), SWEEP READING (SW-1, SW-MAX, SW-2), MAX AMP (% DAC), EXAMINATION (1-8). Contains handwritten note: 'No Recordable Ind. Found'

REMARKS: * MAINTAIN 80% BACKWALL REFLECTION THROUGHOUT EXAM

EXAMINER: [Signature] LEVEL: II DATE: 4-10-95 REVIEWED BY: [Signature] LEVEL: III DATE: 4/11/95 EXAMINER: N/A LEVEL: DATE: REVIEWED BY: [Signature] LEVEL: ANNE DATE: 5-18-95 TITLE: DATE: PAGE: 1 OF 2

BPukus 4-21-95



GE Nuclear Energy

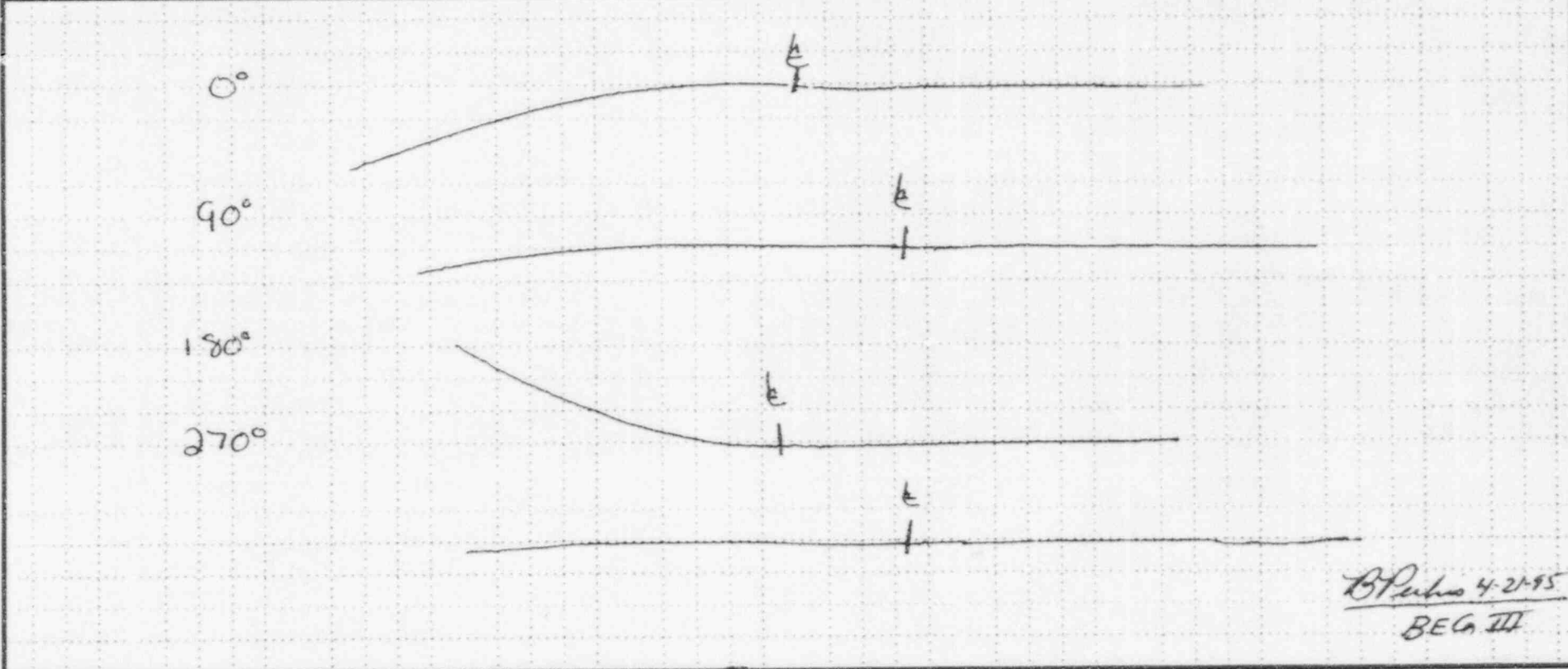
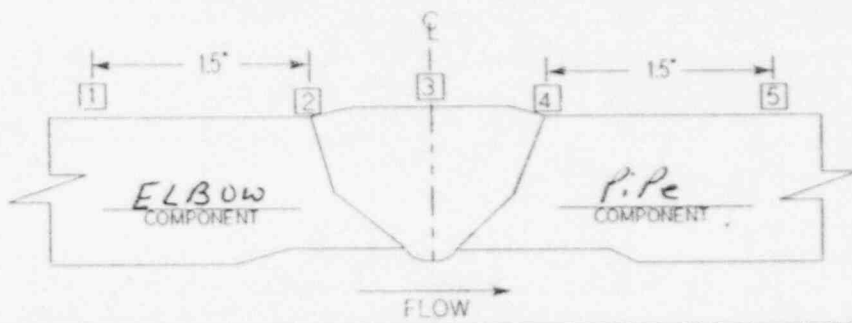
WALL THICKNESS PROFILE SHEET

SITE: *Pilgrim* UNIT: *1*
PROJECT NO: *1FQR*

REPORT NO.
95-E-458

POSITION	0°	90°	180°	270°
1	.321	.341	.352	.343
2	.318	.318	.313	.324
3	.365	.369	.370	.402
4	.245	.245	.315	.296
5	.333	.321	.335	.333

SYSTEM ID *RWC4*
 WELD ID NO. *12-I-22R*
 CROWN HEIGHT: *Flush*
 CROWN WIDTH: *.5*
 NOM. DIAMETER: *4"*
 WELD LENGTH: *14.4"*



B.P. Pichas 4-21-95
BEG III

<i>P. G. ...</i> Examiner	<i>II</i> Level	<i>4-10-95</i> Date	<i>Michael ...</i> Reviewed By	<i>III</i> Level	<i>4/11/95</i> Date	<i>V. ...</i> Reviewed By	<i>ANIT 5-18-95</i> Title	<i>5-18-95</i> Date	Page <i>2</i> Of <i>2</i>	FORM 138 1-13-90
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PROCEDURE No. GCI 50:70 REV. 3 CAL BLOCK# ST-002 LDS# 95-L-459

EXAMINATION PERSONNEL: TOLLIE PERRY LEVEL II DATE 4-15-95
v/a LEVEL v/a

INSTRUMENT DATA: MAKE KIAUKIAMEP MODEL USK7 S.No 27276-4646
 SEARCH UNIT DATA: MAKE KD AEROTECH TYPE Gamma S.No K01304
 SIZE .50 FREQUENCY 2.25 MHz BEAM ANGLE 0°
 BEAM MODE Long WEDGE TYPE v/a
 CABLE DATA: LENGTH 6.0' TYPE RG
 COUPLANT DATA: TYPE ULTRAGEL BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
X NO COMPLETE PART B

A

1	2	3	4
100		50	
90		40	
80	40	30	
70		20	
60		10	

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B

5	6	7	8
2 db	44	100	50
0	42	80	40
-2 db	40	65	33
-4 db	38	51	26
-6 db	36	40	20
-8 db	34	30	15
-10 db	32	25	12
-12 db	30	20	10

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY ACCEPTABLE UNACCEPTABLE
 AMPLITUDE CONTROL LINEARITY ACCEPTABLE UNACCEPTABLE

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

REVIEWED BY: [Signature] LEVEL III DATE 4/25/95
 ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: B Perkins BECO LEVEL (III) OR DESIGNEE DATE 4-21-95
 REVIEWED BY: [Signature] ANII DATE 5-18-95

PROCEDURE No C15070 REV. 3 CAL BLOCK# 785488 LDS# 95-L-460

EXAMINATION PERSONNEL: Tollie Perry LEVEL II DATE 4-10-95
Scott Crain LEVEL I

INSTRUMENT DATA: MAKE Krautkramer MODEL US47 S.No 27276-4646

SEARCH UNIT DATA: MAKE Aerotech TYPE Gamma S.No C15439

SIZE .25 FREQUENCY 2.25 MHz BEAM ANGLE 45°

BEAM MODE Shear WEDGE TYPE Flexiglass

CABLE DATA: LENGTH 6' TYPE BG-174

COUPLANT DATA: TYPE ultra Gel II BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: N YES COMPLETE PART A
X NO COMPLETE PART B

A	1	2	3	4
	100		50	
	90	N	40	
	80	40	30	
	70		20	A
	60		10	

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
	2 db			
		22	100	50
	0			
		20	80	40
	-2 db			
		18	62	32
	-4 db			
		16	50	26
	-6 db			
		14	40	21
	-8 db			
		12	32	18
	-10 db			
		10	25	12
	-12 db			
		8	20	11

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	
			40
80	- 12 db	15 to 24	
			20
40	+ 6 db	64 to 96	
			80
20	+ 12 db	64 to 96	
			80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

ANALYSIS OF RESULTS:
SCREEN HEIGHT LINEARITY
ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 4/11/95
ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
NO - ANII SIGNATURE NOT REQUIRED
ACCEPTED BY: T.B. Perkins BECO LEVEL III OR DESIGNEE DATE 4-21-95
REVIEWED BY: [Signature] ANII DATE 5-15-95



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PILGRIM UNIT: 1

CALIBRATION SHEET NO.: 95-C-441

PROJECT NO.: 1FQ8R

LINEARITY SHEET NO.: 95-L-460

PROCEDURE NO.: UT-PIL-102V0 (G6) REVISION: 0 FRR: N/A
TP 94-072 REV. 1

Instrument KRAUTKRAMER BRAUN USK 7 27276-4646
Manufacturer Model No. Serial No.

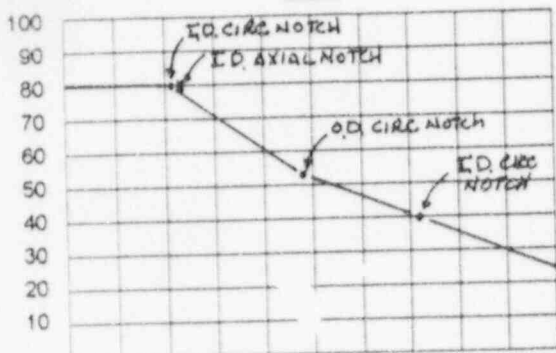
Search Unit KB AEROTECH C15439 .25" 2.25 MHz 45°/S .25"
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable RG 174 6.0' 2
Type Length No. of Connectors

Calibration Standard PIL-98 55 .340 70 °F
Serial No. Material Thickness Temp.

Couplant ULTRAGEL II 94125 Thermometer N/A
Type Batch No. Serial No.

DAC



SWEEP: 0 - 10 = 2.0"

DEPTH METAL PATH

INSTRUMENT SETTINGS

DAC Construction	Sensitivity
Gain - Axial Scan <u>18 DB</u>	Gain - Axial Scan <u>32 DB</u>
Gain - Circ. Scan <u>30 DB</u>	Gain - Circ. Scan <u>44 DB</u>
Pulse <u>AUTO</u>	Range <u>2.5</u>
Damping <u>FIXED</u>	Delay <u>7.48</u>
Rep Rate <u>HIGH</u>	Velocity <u>N/A</u>
Filter <u>FIXED</u>	Sweep <u>3.38</u>
Frequency <u>AUTO</u>	Resolution <u>N/A</u>
Reject <u>OFF</u>	Jack <input checked="" type="checkbox"/> R <input type="checkbox"/> T

Field Simulator: N/A S/N: N/A

CALIBRATION VERIFICATION

REFLECTOR	N A	INITIAL CALIBRATION TIME	<u>0950</u>	VERIFICATION TIMES
MAX AMPLITUDE		FINAL VERIFICATION TIME	<u>1215</u>	N A
SWEEP				
GAIN				

WELDS EXAMINED

REPORT NO.

COMMENTS:

<u>12-I-18R</u>	<u>the criteria of 95-E-46.3</u>	<u>PRE-SERVICE EXAM</u>
<u>12-I-22R</u>	<u>ASME Section XI 95-E-44</u>	<u>PRE-SERVICE EXAM</u>
<u>12-I-25R</u>	<u>1980 (W80) - No 95-E-46.2</u>	<u>PRE-SERVICE EXAM</u>
	<u>Further Evaluation Required.</u>	

N
A

N
A

[Signature] II 4-10-95
EXAMINER LEVEL DATE

[Signature] III 4/11/95
REVIEWED BY TITLE DATE

[Signature] BELG III 4-21-95
REVIEWED BY LEVEL DATE

[Signature] ANII 5-18-95
REVIEWED BY TITLE DATE



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-462

PROJECT NO.: 1EQ88

CALIBRATION SHEET NO.: 95-C-461

DATA SHEET NO.: 95-E-462

PROCEDURE NO.: UT-PIL-102VO (G6)
FP94-072 REV. 1 REVISION: 0 FRR: N/A

SYSTEM: REACTOR WATER CLEAN UP EXAM SURFACE TEMP: 62°F COUPLANT: ULTRAGEL II EXAM START: 10:15

WELD ID: 12-I-25R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 10:50

SEARCH UNIT: 45°/s EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

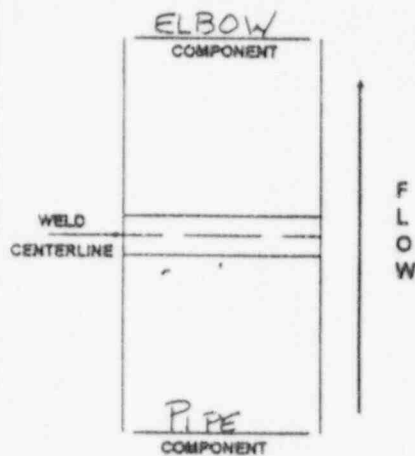
Lo REFERENCE: T.D.C.

AXIAL SCAN SENSITIVITY (dB) 32 DB

Wo REFERENCE: WELD &

CIRC SCAN SENSITIVITY (dB) 44 DB

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL:	1 WITH FLOW	X	X	X
CIRC CW:	3 UPSTREAM	X	X	X
CIRC CCW:	5 UPSTREAM	X	X	X
7 L-WAVE BASE METAL	X	X	N	A



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
1	3.3	3.9	3.95	.33	.40"	.50	2.1	2.9	3.1	25%	1
2	1.5	2.0	2.4	.01	.10	.20	1.3	1.8	2.2	22%	2
					N						
								A			

REMARKS: I.D. GEOMETRY OBSERVED FROM BOTH SIDES (UPSTM & DNST) INTERMITTENTLY 360° AT VARIOUS AMPLITUDES. MAINTAINED 10%-30% ID NOISE LEVELS THROUGH OUT EXAM.

<u>[Signature]</u> EXAMINER	<u>II</u> LEVEL	<u>4-10-95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>4/11/95</u> DATE	PAGE: <u>1</u> OF: <u>2</u>
<u>N/A</u> EXAMINER			<u>[Signature]</u> REVIEWED BY	<u>AUII</u> TITLE	<u>5-18-95</u> DATE	

B. Perkins 4-21-95
BEG III



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PILGRIM UNIT: 1

PROJECT NO: 1FQ8R

REPORT NO.

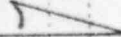
95-E-462

SYSTEM: R.W.C.U.

COMPONENT ID NO: 12-I-25R

CONFIGURATION: PIPE FLOW ELBOW

45° SHEAR

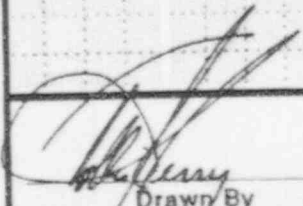
FLOW 



Ⓐ 45° SHEAR ID ROOT GEOMETRY

Ⓑ 45° SHEAR RE-DIRECT

B Perkins 4-21-95
BECO III



Drawn By

II 4-10-95
Level Date

Reviewed By

III 4-11-95
Level Date

Reviewed By

ANIE 5-18-95
Title Date

Page 2 Of 2

FORM 137 1-13-90



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-463

PROJECT NO.: 1FQ8R

CALIBRATION SHEET NO.: 95-C-461

DATA SHEET NO.: 95-E-463

PROCEDURE NO.: UT-PIL-102VO (GE) REVISION: 0 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 62 °F COUPLANT: ULTRAGEL II EXAM START: 10:55

WELD ID: 12-I-18R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 11:17

SEARCH UNIT: 45°/S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: T.D.C. AXIAL SCAN SENSITIVITY (dB) 32 DB

W0 REFERENCE: WELD E CIRC SCAN SENSITIVITY (dB) 44 DB

AXIAL:

- 1 WITH FLOW
2 AGAINST FLOW

CIRC CW:

- 3 UPSTREAM
4 DOWNSTREAM

CIRC CCW:

- 5 UPSTREAM
6 DOWNSTREAM
7 L-WAVE BASE METAL
8 OTHER

Table with columns PERFORMED (YES/NO) and INDICATIONS (YES/NO) for various scan directions.

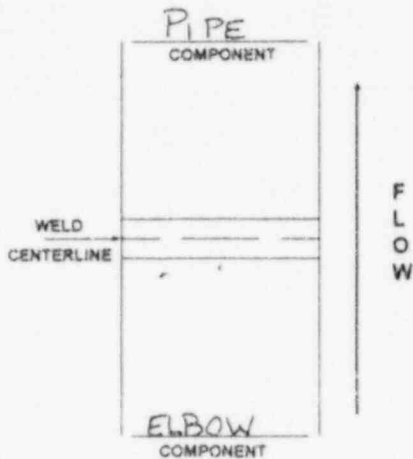


Table with columns: INDICATION NO., L (in) FROM REF, W (in) FROM REF, SWEEP READING, MAX AMP, EXAMINATION. Includes handwritten data for indication 1.

REMARKS: O.D. GEOMETRY OBSERVED FROM BOTH SIDES (UPST & DNST) INTERMITTENTLY 360° AT LESS THAN RECORDABLE AMPLITUDES. MAINTAINED 10%-30% ID NOISE LEVELS THROUGHOUT EXAM.

* LESS THAN RECORDABLE AMPLITUDES N/A
EXAMINER: [Signature] LEVEL: II DATE: 4-10-95
REVIEWED BY: [Signature] LEVEL: III DATE: 4/11/95
EXAMINER: N/A LEVEL: DATE:
REVIEWED BY: [Signature] TITLE: ANTI DATE: 5-18-95

B. Perkins 4-21-95 REG III



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PILGRIM UNIT: 1

REPORT NO.

PROJECT NO: 1FQ8R

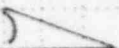
95-E-463

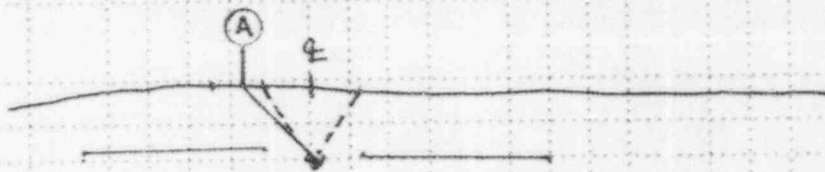
SYSTEM: R.W.C.U.

COMPONENT ID NO: 12-I-18R

CONFIGURATION: ELBOW FLOW PIPE

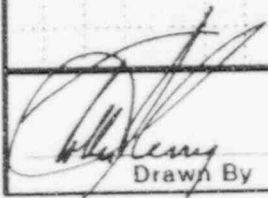
45° SHEAR

FLOW 

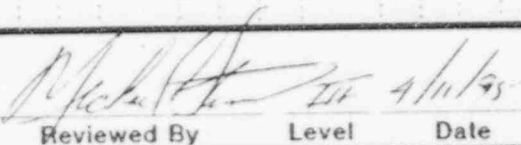


Ⓐ 45° SHEAR I.D. ROOT GEOMETRY

B Perkins 4-21-95
BEG III


Drawn By

II 4-10-95
Level Date


Reviewed By Level Date

V. Hus ANII 5-18-95
Reviewed By Title Date



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-464

PROJECT NO.: 1EQ8R

CALIBRATION SHEET NO.: 95-C-461

DATA SHEET NO.: 95-E-464

PROCEDURE NO.: UT-PIL-102 VO (GE) REVISION: 0 FRR: N/A
TP91-072 REV. 1

SYSTEM: REACTOR WATER CLEAN UP EXAM SURFACE TEMP: 62 °F COUPLANT: ULTRAGEL II EXAM START: 11:20

WELD ID: 12-I-22R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 12:05

SEARCH UNIT: 45°/S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: T.D.C. AXIAL SCAN SENSITIVITY (dB) 32 DB

Wo REFERENCE: WELD E CIRC SCAN SENSITIVITY (dB) 44 DB

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: {	1 WITH FLOW		<input checked="" type="checkbox"/>	
	2 AGAINST FLOW		<input checked="" type="checkbox"/>	
CIRC CW: {	3 UPSTREAM			<input checked="" type="checkbox"/>
	4 DOWNSTREAM			<input checked="" type="checkbox"/>
CIRC CCW: {	5 UPSTREAM			<input checked="" type="checkbox"/>
	6 DOWNSTREAM			<input checked="" type="checkbox"/>
	7 L-WAVE BASE METAL			
	8 OTHER <u>N/A</u>			

AXIAL:

- 1 WITH FLOW
- 2 AGAINST FLOW

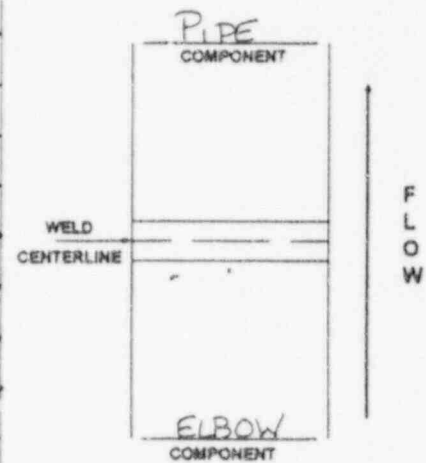
CIRC CW:

- 3 UPSTREAM
- 4 DOWNSTREAM

CIRC CCW:

- 5 UPSTREAM
- 6 DOWNSTREAM

- 7 L-WAVE BASE METAL
- 8 OTHER N/A



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2	% DAC	
1	10.8	11.4	11.7	25	35	45	2.1	2.6	3.0	36%	1
2	7.7	8.15	8.5	25	35	45	1.8	2.2	2.8	20%	2

REMARKS: I.D. GEOMETRY OBSERVED FROM BOTH SIDES (UPST & DNST) INTERMITTENTLY 360° AT VARIOUS AMPLITUDES MAINTAINED 10%-30% I.D. NOISE LEVELS THROUGHOUT EXAM.

<u>[Signature]</u> EXAMINER <u>N/A</u>	<u>II</u> LEVEL	<u>4-10-95</u> DATE	<u>[Signature]</u> REVIEWED BY <u>[Signature]</u>	<u>III</u> LEVEL <u>ANTI</u>	<u>5-18-95</u> DATE	PAGE: <u>1</u> OF: <u>2</u>
EXAMINER	LEVEL	DATE	REVIEWED BY	TITLE	DATE	FORM UT-45 REV 0

B Perkins 4-21-95
REG III



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PILGRIM UNIT: 1

REPORT NO.

PROJECT NO: IFQ8R


95-E-464

SYSTEM: RWC.U

COMPONENT ID NO: 12-I-22R

CONFIGURATION: ELBOW FLOW PIPE

45° SHEAR

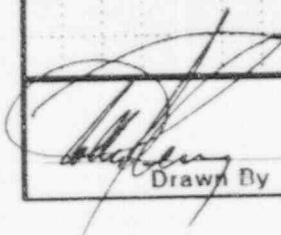
FLOW 



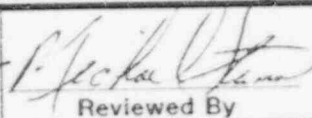
Ⓐ 45° SHEAR I.D. ROOT GEOMETRY.

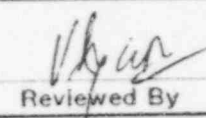
Ⓑ 45° SHEAR I.D. GEOMETRY.

B. Perkins 4-21-95
BELC III


Drawn By

II 4-10-95
Level Date

 III Alukas
Reviewed By Level Date

 ANII 5-18-95
Reviewed By Title Date

PROCEDURE No. QCI 50.70 REV. 3 CAL BLOCK# 785488 LDS# 45-6-445

EXAMINATION PERSONNEL: Talhe Perry LEVEL II DATE 4-10-95
Scott Cavin LEVEL I

INSTRUMENT DATA: MAKE KrautKramer MODEL US67 S.No 27276-4646
 SEARCH UNIT DATA: MAKE Aerotech TYPE Gamma S.No C15439
 SIZE .25" FREQUENCY 2.25 MHZ. BEAM ANGLE 45°
 BEAM MODE shear WEDGE TYPE Plexiglass

CABLE DATA: LENGTH 6' TYPE RG-174
 COUPLANT DATA: TYPE ultraGel II BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
~~NO~~ COMPLETE PART B

A

1	2	3	4
100		50	
90	N	40	
80	40	30	
70		20	A
60		10	

- LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B

5	6	7	8
2 db	26	100	50
0	24	80	40
-2 db	22	62	36
-4 db	20	50	26
-6 db	18	40	20
-8 db	16	30	16
-10 db	14	24	13
-12 db	12	20	11

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	40
80	- 12 db	15 to 24	20
40	+ 6 db	64 to 96	80
20	+ 12 db	64 to 96	80

- INDICATION SET AT % FSH
- db CONTROL CHANGE
- INDICATION LIMITS % FSH
- ACTUAL % FULL SCREEN HEIGHT

- db CONTROL CHANGE
- ACTUAL db
- LARGER INDICATION AMPLITUDE %FSH
- SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY ACCEPTABLE UNACCEPTABLE
 AMPLITUDE CONTROL LINEARITY ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 4/11/95
 ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: B Perkins BECO LEVEL III OR DESIGNEE DATE 4-21-95
 REVIEWED BY: [Signature] ANII DATE 5-18-95



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: Pilgrim UNIT: 1

CALIBRATION SHEET NO.: 95-C-662

PROJECT NO.: 1FQ8R

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

Instrument STAVELEY SONIC 136 1152 M

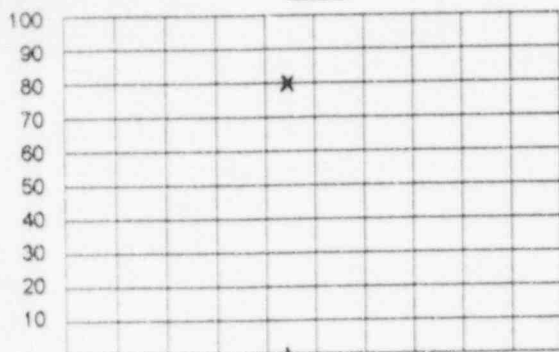
Search Unit KB-ACRTECH C24256 .25" 5.0 MHz 0°L N/A

Cable RC174/W 6' 2

Calibration Standard PK 96 STAINLESS .432" 65 °F

Couplant Ultragel II 94125 Thermometer N/A

DAC



INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>50</u>	Gain - Axial Scan <u>50</u>
Gain - Circ. Scan <u>N/A</u>	Gain - Circ. Scan <u>N/A</u>
Pulse <u>100</u>	Range <u>.270</u>
Damping <u>200</u>	Delay <u>.122</u>
Rep Rate <u>500</u>	Velocity <u>.064</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR N

MAX AMPLITUDE A

SWEEP _____

GAIN _____

INITIAL CALIBRATION TIME	<u>1430</u>	VERIFICATION TIMES
FINAL VERIFICATION TIME	<u>1815</u>	<u>N/A</u>

WELDS EXAMINED REPORT NO.

12-C-32 R1 95-E-664

COMMENTS: CALIBRATION USED FOR LAMINATION SCAN.

Philip East III 5/5/95

EXAMINER LEVEL DATE

M. [Signature] PM/ELW 5/11/95

REVIEWED BY TITLE DATE

B. [Signature] 5/16/95

REVIEWED BY LEVEL DATE

[Signature] ANIS 5-17-95

REVIEWED BY TITLE DATE

PROCEDURE No. GCI 50.70 REV. 3 CAL BLOCK# PIL 96 LDS# 95-L-661

EXAMINATION PERSONNEL: FRY M. S. LEVEL III DATE 5/5/95
N/A LEVEL N/A

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 1.36S No 1152 M

SEARCH UNIT DATA: MAKE RR-AEROTECH TYPE GAMMA S.No D19642

SIZE .25" FREQUENCY 2.25 MHz. BEAM ANGLE 45°

BEAM MODE SHEAR WEDGE TYPE LUCITE

CABLE DATA: LENGTH 6' TYPE RG-174

COUPLANT DATA: TYPE OUTRAGE 17 BATCH No. 94125

SCREEN HEIGHT
LINEARITY CHECK:

FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A	1	2	3	4
100		50	50	25
90		45	40	20
80		40	30	15
70		35	20	10
60		30	10	5

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
2 db	N/A			
0				
-2 db				
-4 db				
-6 db				
-8 db				
-10 db				
-12 db				

AMPLITUDE CONTROL LINEARITY CHECK

	9	10	11	12
80	- 6 db	32 TO 48		38
80	- 12 db	15 to 24		16
40	+ 6 db	64 to 96		90
20	+ 12 db	64 to 96		92

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

ANALYSIS OF RESULTS:
SCREEN HEIGHT LINEARITY
ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
ACCEPTABLE UNACCEPTABLE

5. db CONTROL CHANGE
6. ACTUAL db
7. LARGER INDICATION AMPLITUDE %FSH
8. SMALLER INDICATION AMPLITUDE %FSH

REVIEWED BY: [Signature] LEVEL III DATE 5/16/95
ASME SECTION XI EXAMINATION: YES ANII SIGNATURE REQUIRED

ACCEPTED BY: [Signature] BECO LEVEL III OR DESIGNEE DATE 5/16/95
REVIEWED BY: [Signature] ANII DATE 5-17-95



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PIRGIM UNIT: 1

CALIBRATION SHEET NO.: 95-C-663

PROJECT NO.: IFQER

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

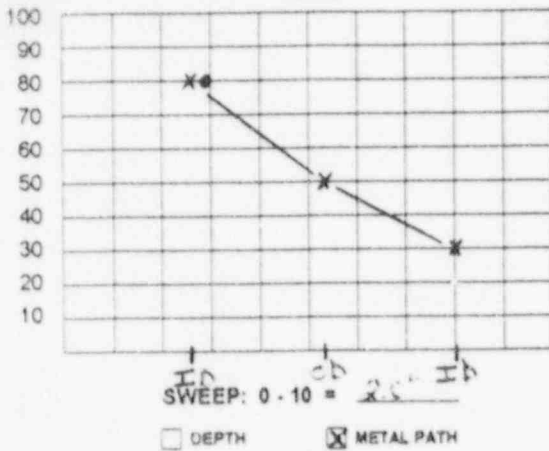
Instrument STAVELEY SONIC 136 1152 M
 Search Unit KB-AEROTECH D19642 .25" 2.25 MHz 45° S .30"
Manufacturer Model No. Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable RG174/U 6' 1
Manufacturer Length No. of Connectors

Calibration Standard PL96 STAINLESS .432 65
Type Length No. of Connectors Thickness Temp

Couplant UTRAGEK II 94125 N/A
Serial No. Material Batch No. Thermometer Serial No.

DAC



INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>49</u>	Gain - Axial Scan <u>49</u>
Gain - Circ. Scan <u>55</u>	Gain - Circ. Scan <u>55</u>
Pulse <u>100</u>	Range <u>1.31</u>
Damping <u>200</u>	Delay <u>.174</u>
Rep Rate <u>500</u>	Velocity <u>.081</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR	<u>N</u>	INITIAL CALIBRATION TIME	<u>1445</u>	VERIFICATION TIMES
MAX AMPLITUDE	<u>A</u>	FINAL VERIFICATION TIME	<u>1810</u>	<u>N/A</u>
SWEEP				
GAIN				

WELDS EXAMINED

REPORT NO.

COMMENTS: MEASURED ANGLE IN COMPONENT 44

12-0-32 R1

95-E-665

N
A

<u>Philip M. [Signature]</u> EXAMINER	<u>III</u> LEVEL	<u>5/5/95</u> DATE	<u>B. P. [Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/16/95</u> DATE	PAGE: <u>3</u> OF: <u>5</u>
<u>[Signature]</u> REVIEWED BY	<u>[Signature]</u> TITLE	<u>5/16/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>ANII</u> TITLE	<u>5-17-95</u> DATE	



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1
PROJECT NO.: 1FG8R

REPORT NO.: 95-E-664
CALIBRATION SHEET NO.: 95-C-662
DATA SHEET NO.: 95-E-664

PROCEDURE NO.: TP 94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 74°F COUPLANT: UTRAGEL II EXAM START: 1630
WELD ID: 12-C-32R1 THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1640

SEARCH UNIT: 0°L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A
Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 60
Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) N/A

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: {	1 WITH FLOW		✓	
	2 AGAINST FLOW		✓	
CIRC CW: {	3 UPSTREAM		✓	
	4 DOWNSTREAM		✓	
CIRC CCW: {	5 UPSTREAM		✓	
	6 DOWNSTREAM		✓	
	7 L-WAVE BASE METAL	✓		✓
	8 OTHER <u>N/A</u>			

VALVE COMPONENT

P.I.P.E COMPONENT

INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
<u>NO RECORDABLE INDICATIONS</u>											

REMARKS: MAINTAIN 80% BACK REFLECTION DURING SCAN. COMPLETE SCAN PIPE SIDE ONLY; DUE TO PIPE TO VALVE CONFIGURATION

Ref 95-C-666 For T/C

<u>[Signature]</u> EXAMINER	<u>III</u> LEVEL	<u>5/5/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/16/95</u> DATE	PAGE: <u>2</u> OF <u>5</u> <u>19/191</u>
<u>N/A</u> EXAMINER	<u>N/A</u> LEVEL	<u> </u> DATE	<u>[Signature]</u> REVIEWED BY	<u>ANIT</u> TITLE	<u>5-17-95</u> DATE	

R. P. [Signature] BEC III 5/16/95



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1
PROJECT NO.: 1FG8R

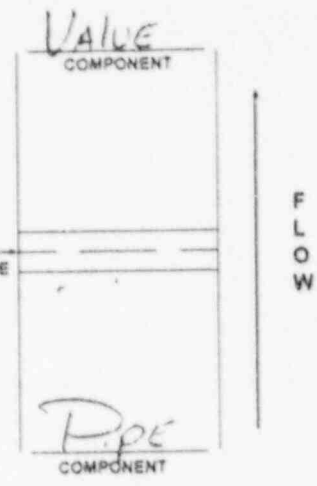
REPORT NO.: 95-E-665
CALIBRATION SHEET NO.: 95-C-663
DATA SHEET NO.: 95-E-665

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 74 °F COUPLANT: UTRAGEL II EXAM START: 1640
WELD ID: 12-C-32R1 THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1650

SEARCH UNIT: 45°S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A
Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 63
Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) 63

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL:	1 WITH FLOW	✓		✓
	2 AGAINST FLOW		✓	
CIRC CW:	3 UPSTREAM	✓		✓
	4 DOWNSTREAM	✓		✓
CIRC CCW:	5 UPSTREAM	✓		✓
	6 DOWNSTREAM	✓		✓
	7 L-VALE BASE METAL		✓	
	8 OTHER <u>N/A</u>		✓	



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
<u>No RECORDABLE INDICATIONS</u>											

REMARKS: MAINTAIN 10% TO 30% I.D. ROLL DURING SCAN
Complete SCAN Pipe SIDE ONLY; DUE TO PIPE
TO VALVE CONFIGURATION

<u>REG III</u> EXAMINER	<u>5/5/95</u> DATE	<u>REG III</u> REVIEWED BY	<u>5/17/95</u> DATE	<u>1 of 1</u> PAGE:
<u>N/A</u> EXAMINER	<u> </u> DATE	<u>ANET</u> REVIEWED BY	<u> </u> DATE	<u>4 of 5</u> OF:

REG III 5/16/95



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

SITE: PIRGIM

UNIT: 1

95-E-666

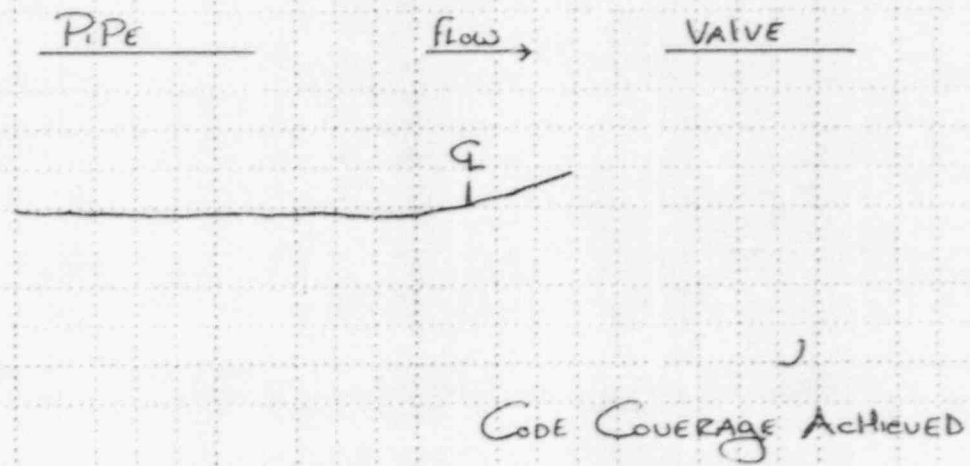
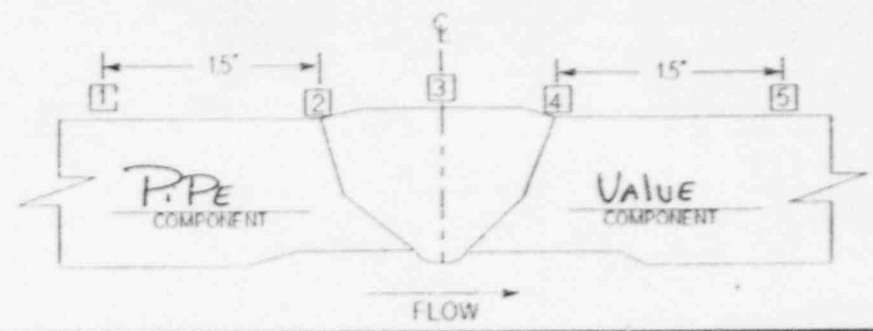
pg 1 of 1

PROJECT NO: 1FQ8R

POSITION	0°	90°	180°	270°
1	.46			
2	.45			
3	.51		N/A	
4	.55			
5	*			

SYSTEM ID RWCU
 WELD ID NO. 12-0-32R1

CROWN HEIGHT: FLUSH
 CROWN WIDTH: .80"
 NOM. DIAMETER: 6.0"
 WELD LENGTH: 19"



* NO THICKNESS READING DUE TO VALVE CONFIGURATION

<u>F.H.S.</u> Examiner	<u>III</u> Level	<u>5/5/95</u> Date	<u>M. [Signature]</u> Reviewed By	<u>III</u> Level	<u>5/16/95</u> Date	<u>[Signature]</u> Reviewed By	<u>ANII 5-1795</u> Title	<u>5/16/95</u> Date	Page <u>5</u> of <u>5</u> BP	FORM 138 1-13-90
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B.P. Rubin BE III 5/16/95

UT CALIBRATION DATA SHEET

Instruction No. 50.70

Rev. 3

Attachment A

Form 50.70-1

C.D.S. NO. 95-C-667 pg 1 of 1

U.T.V. No. 046

L.D.S. NO. 95-L-661

PROCEDURE NO. QCI 50.71 REV. 2 DATE 5/16/95

EXAMINATION PERSONNEL: NAME PLM LEVEL III NAME N/A LEVEL N/A

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 136 SERIAL NO. 1152 M

SEARCH UNIT DATA: MANUFACTURER KB-AEROTECH TYPE GAMMA

SERIAL NO. C24256 SIZE .25" FREQUENCY 5.0 MHZ

BEAM ANGLE 0° BEAM MODE LONG. WEDGE TYPE N/A

CABLE DATA: LENGTH 6' TYPE RG 174 / U

COUPLANT DATA: TYPE UTRAGEL II BATCH NO. 94125

CALIBRATION STANDARD DATA: SERIAL NO. PL-14A THICKNESS .594" DIAMETER 10"

MATERIAL SA-106 GR-B

CALIBRATION REFLECTOR(S) DATA: TYPE S.D.H. / B.R. SIZE 3/32" DIA. X 1 1/2" L.

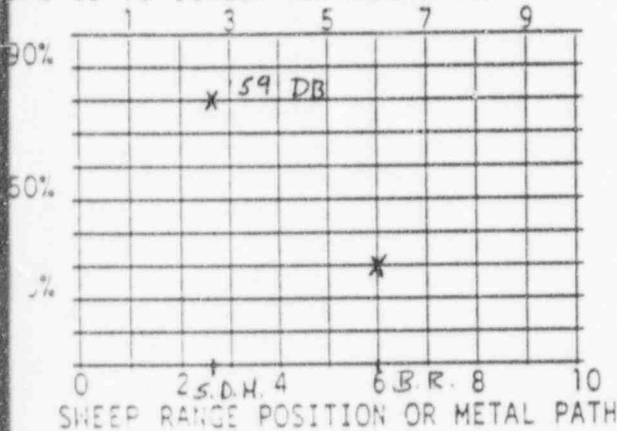
ORIENTATION (TO PIPE AXIS) CIRC.

FOR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR

MAXIMUM RESPONSE 80%

PARALLEL AMPLITUDE 80% TRANSVERSE AMPLITUDE 80%

DAC CURVE-SCREEN REPRESENTATION



10" SCREEN

CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG.	CAL.	LAST	LAST	VERIFY	
DATE	CAL.	CHECK	E.D.S.	E.D.S.	25°F LIMIT
TIME	TIME	#	LINE #	YES/NO	
<u>5/16/95</u>	<u>0800-1145</u>				
		<u>95-E-670</u>	<u>2</u>	<u>YES</u>	

I.D. OF WELD/COMPONENT

23-O-22R / EB-23-F13R

REVIEWED BY: [Signature] DATE 5/16/95
DATA REVIEWER

ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: [Signature] DATE 5/16/95
BECO LEVEL III OR DESIGNEE

REVIEWED BY: [Signature] DATE 5-18-95
ANII

UT CALIBRATION DATA SHEET

Instruction No. 50.70

Rev. 3

Attachment A

Form 50.70-1

C.D.S. No. 95-C-668 pg 1 of 1

U.T.V. No. 032

L.D.S. No. 95-L-661

PROCEDURE NO. QCT 50.71 REV. 2 DATE 5/6/95

EXAMINATION PERSONNEL: NAME PL 14A LEVEL III NAME N/A LEVEL N/A

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 136 SERIAL NO. 1152 M

SEARCH UNIT DATA: MANUFACTURER KB-AEROTECH TYPE GAMMA

SERIAL NO. D19642 SIZE .25" FREQUENCY 2.25 MHZ

BEAM ANGLE 45° BEAM MODE SHEAR WEDGE TYPE LUCITE

TABLE DATA: LENGTH 6' TYPE RG 174 / U

COUPLANT DATA: TYPE ULTRAGEL II BATCH NO. 94125

CALIBRATION STANDARD DATA: SERIAL NO. PL 14A THICKNESS .594" DIAMETER 10"

MATERIAL SA-106 GR-B

CALIBRATION REFLECTOR(S) DATA: TYPE NOTCH SIZE .125" W X 10" L X .060 DEEP

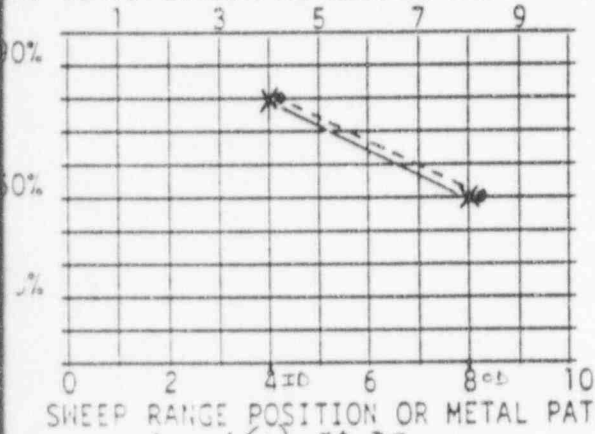
ORIENTATION (TO PIPE AXIS) AXIAL / CIRC

FOR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR

MAXIMUM RESPONSE 80% BP

PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A

DAC CURVE-SCREEN REPRESENTATION



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG. CAL.	LAST	LAST	VERIFY		
DATE	CAL. CHECK	E.D.S. #	E.D.S. LINE #	25°F LIMIT YES/NO	
5/6/95	0815-1155			YES	
				95-L-671 2 pg 2 of 3	
				Page 2 of 3	

I.D. OF WELD/COMPONENT

23-0-22R / EB-23-F13R

REVIEWED BY: M. Stamm DATE 5/16/95
DATA REVIEWER

ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: B. P. Rubin DATE 5/16/95
BECO LEVEL III OR DESIGNEE

REVIEWED BY: V. H. ... DATE 5-18-95
ANII

UT CALIBRATION DATA SHEET

Instruction No. 50.70

Rev. 3

Attachment A

Form 50.70-1

C.D.S. NO. 95-C-669 Pg 1 of 1

U.T.V. No. 032

L.D.S. NO. 95-L-661

PROCEDURE NO. QCI 50.71 REV. 2 DATE 5/6/95

EXAMINATION PERSONNEL: NAME FLYNN, B-R LEVEL III NAME N/A LEVEL N/A

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 136 SERIAL NO. 1152 M

SEARCH UNIT DATA: MANUFACTURER KB-AEROTECH TYPE GAMMA

SERIAL NO. C15439 SIZE .25" FREQUENCY 2.25 MHz

BEAM ANGLE 60° SHEAR BEAM MODE SHEAR WEDGE TYPE LUCITE

SCANNING DATA: LENGTH 6' TYPE RG 174 / U

COUPLANT DATA: TYPE UHRAGEL II BATCH NO. 94125

CALIBRATION STANDARD DATA: SERIAL NO. PK-14A THICKNESS .594" DIAMETER 10"

MATERIAL SA 106 GR-B

CALIBRATION REFLECTOR(S) DATA: TYPE Notch SIZE .125" W X 1.0" L X .060" DEEP

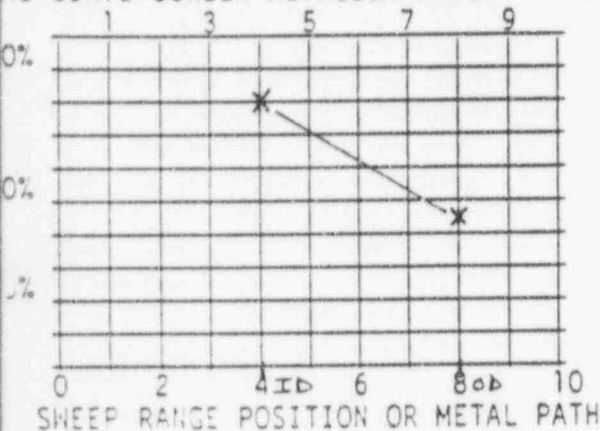
ORIENTATION (TO PIPE AXIS) CIRC

OR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR

MAXIMUM RESPONSE 80%

PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A

AC CURVE-SCREEN REPRESENTATION



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG. CAL.	CAL.	LAST	LAST	VERIFY	VERIFY
DATE CAL.	CHECK	E.D.S.	E.D.S.	25°F LIMIT	25°F LIMIT
TIME	TIME	#	LINE #	YES/NO	YES/NO
<u>5/6/95</u>	<u>0845-1150</u>				
		<u>95-E-672</u>	<u>2</u>	<u>YES</u>	

I.D. OF WELD/COMPONENT

23-0-22R / EB-23-F13R

REVIEWED BY: [Signature] DATE 5/16/95
DATA REVIEWER

ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: [Signature] DATE 5/16/95
BECO LEVEL III OR DESIGNEE

REVIEWED BY: [Signature] DATE 5-18-95
ANII

ULTRASONIC STRAIGHT BEAM REPORT

MR # 19401362-01
 SYSTEM HPCI
 TEMP 75°F
 DATE 5/6/95

E.D.S. 95-E-670
 C.D.S. 95-C-667
 L.D.S. 95-L-661
 UTV. NO. 046

SCANNING GAIN 70 dB
 BEAM ANGLE 0° L

WELD/ITEM NO.	IND. NO.	S.P.	POSITION: WELD C/L PERPENDICULAR/PARALLEL	SCAN SURFACE	TYPE TOTAL LOSS/SIGNALS	TIME START/STOP	REMARKS
23-0-22R	NO	RECORDABLE INDICATIONS		PIPE SIDE	PIPE TO VALVE	1010 / 1020	MAINTAIN 80%
EB-23-F13R	NO	RECORDABLE INDICATIONS		PIPE SIDE	VALVE TO PIPE	1035 / 1045	BACK REFLECTION DURING SCAN

Examiners [Signature] Level III
NA Level NA

Criteria: ASME SECTION XI
 ACCEPT REJECT
 Further Evaluation Required

Reviewed by: [Signature] Level III

Accepted by [Signature] 5/16/95
 BECo Level III or Designee/Date

ASME XI Examination
 YES ANII SIGNATURE REQUIRED
 NO ANII SIGNATURE NOT REQUIRED

Reviewed by: [Signature] 5-18-95
 ANII Date

BOSTON EDISON COMPANY
ULTRASONIC EXAMINATION DATA SHEET

EXAMINATION PERSONNEL:

Name Philip M. [Signature] Level III

Name N/A Level N/A

Beam Angle 45° S

M. R. No. 19401362-01
Couplant Ultracel II
Scanning Gain 61 DB

EDS No. 95-E-671 Pg 143
CDS No. 95-C-668
L.D.S. 95-L-661
UTV No. 032
DATE 5/6/95

(W) DIMENSION (L) DIMENSION

WELD COMP #	CONFIG	IND #	SCAN NO. DIRECTION AND SURFACE	MAX AMP	Lo Wo	W ₁ SP _{W1}	W _m SP _m	W ₂ SP _{W2}	L ₁ SP _{L1}	L _m	L ₂ SP _{L2}	TIME OF EXAM START	EXAM STOP	COMP. TEMP.	REMARKS
23-0-22R	PIPE TO VALVE	1	I/+/-	50%	*	—	.60"	—	360°	11"	360°	1020	1025	75°F	LIMITED SCAN SEE SKETCH
11	11		II/C.W.			NO RECORDABLE INDICATIONS					1025	1027	75°F	COMPLETE SCAN	
11	11		II/C.C.W.			NO RECORDABLE INDICATIONS					1027	1029	75°F	COMPLETE SCAN	
EB-23-F13R	VALVE TO PIPE		I/-/+			NO RECORDABLE INDICATIONS					1045	1050	75°F	COMPLETE SCAN	

Components meet ASME Section XI Acceptance Criteria:

YES NO FURTHER EVALUATION REQUIRED

Remarks: * LO = OUTSIDE RADIUS OF UPSTREAM ELBOW
WO = WELD CENTERLINE

INDICATION #1 I.D. GEOMETRY - ROOT
360° INTERMITTENTLY AT VARYING AMPLITUDE
SEE 95-Q-674

ASME Section XI Examination:

YES-ANII Signature Required
 NO-ANII Signature Not Required

Evaluated By: [Signature] Level III Date 5/6/95

Accepted By: [Signature] Level III Date 5/6/95
BECO Level III or Designee

ANII Review by: [Signature] Date 5-18-95

BOSTON EDISON COMPANY
ULTRASONIC EXAMINATION DATA SHEET

EXAMINATION PERSONNEL:

Name T. P. H. Smith Level III

M. R. No. 1940/362-01

EDS No. 95-E-671 pg 2 of 3

Name N/A Level N/A

Couplant ULTRAGEL II

CDS No. 95-C-668

Scanning Gain 61 DB

L.D.S. 95-L-661

UTV No. 032

Beam Angle 45° S

(W) DIMENSION (L) DIMENSION

DATE 5/6/95

WELD COMP #	CONFIG	IND. #	SCAN NO. DIRECTION AND SURFACE	MAX AMP.	Lo Wo	W ₁	W _m	W ₂	L ₁	L _m	L ₂	TIME OF START	EXAM STOP	COMP. TEMP.	REMARKS
						SP _{W1}	SP _m	SP _{W2}	SP _{L1}	SP _{L2}					
EB-23- F13R	VALVE TO PIPE		II / CW.			NO RECORDABLE INDICATIONS						1050	1052	75°F	Complete SCAN
"	"		II / CW.			NO RECORDABLE INDICATIONS						1052	1054	75°F	Complete SCAN

Components meet ASME Section XI Acceptance Criteria:

YES NO FURTHER EVALUATION REQUIRED

Remarks: NONE

ASME Section XI Examination:

YES-ANII Signature Required
 NO-ANII Signature Not Required

Evaluated By: M. Stone Level III Date 5/10/95

Accepted By: B. Perkins Level III Date 5/10/95
BECO Level III or Designee

ANII Review by: W. J. ... Date 5-18-95



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PLGrim UNIT: 1
PROJECT NO: 1FN9M

REPORT NO. 95-E-671

19393

SYSTEM: HRCI

COMPONENT ID NO: 23-C-22R

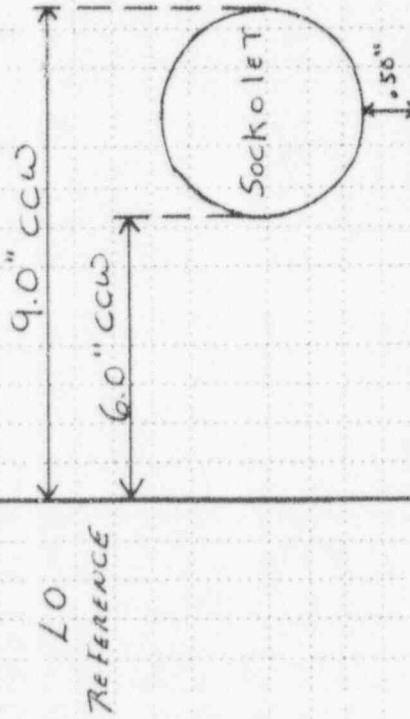
CONFIGURATION: PIPE

FLUG VALUE

AXIAL SCAN LIMITED DUE TO SOCKET
REQUIRED SCAN AREA = 81.6"
ACTUAL SCAN AREA = 73.95"
PERCENT COMPLETE = 90.6%

CIRC SCAN = 100% COMPLETE

PIPE



LO REFERENCE =
OUTSIDE RADIIUS OF
UPSTREAM ELBOW.

VALUE

Drawn By: See III Level: 5/10/95 Date: 5/10/95

Reviewed By: PLGrim Level: 5/10/95 Date: 5/10/95

Reviewed By: PLGrim Title: ANZI 5.18.95 Date: 5.18.95 Page: 1 of 1

B. Beck
REC. III

BOSTON EDISON COMPANY
ULTRASONIC EXAMINATION DATA SHEET

EXAMINATION PERSONNEL:

Name FRANK S. Level III

M. R. No. 1940/362-01
Couplant UTRAGEL II
Scanning Gain 76 DB

EDS No. 95-E-672 pg 1 of 1
CDS No. 95-C-669
L.D.S. 95-L-661
UTV No. 032
DA. 5/6/95

Name N/A Level N/A

Beam Angle 60° S (W) DIMENSION (L) DIMENSION

WELD COMP #	CONFIG	IND #	SCAN NO. DIRECTION AND SURFACE	MAX AMP	Lo Wo	W1 SPW1	Wm SPm	W2 SPW2	L1 SPL1	Lm	L2 SPL2	TIME OF START	EXAM STOP	COMP. TEMP.	REMARKS
23-0-22R	PIPE TO VALVE	2	I/+/-	100%	*	—	.85"	—	360°	LO	360°	1030	1035	75°F	Limited Scan SEE SKETCH SEE 95-E-671
EB-23-F13R	VALVE TO PIPE	1	I/-/+	100%	*	—	.85"	—	360°	LO	360°	1055	1100	75°F	Complete Scan pg 3 of 3

Components meet ASME Section XI Acceptance Criteria:

YES NO FURTHER EVALUATION REQUIRED

Remarks: * LO = OUTSIDE RADII of UPST. ELBOW
WO = WEID CENTERLINE

INDICATIONS # 1 & 2 I.D. GEOMETRY - ROOT
360° INTERMITTENTLY AT VARYING AMPLITUDE
SEE: 95-Q-673

ASME Section XI Examination:

YES-ANII Signature Required
 NO-ANII Signature Not Required

Evaluated By: M. S. Level III Date 5/16/95

Accepted By: BP Level III Date 5/16/95
BECO Level III or Designee

ANII Review by: V. G. Date 5-18-95



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

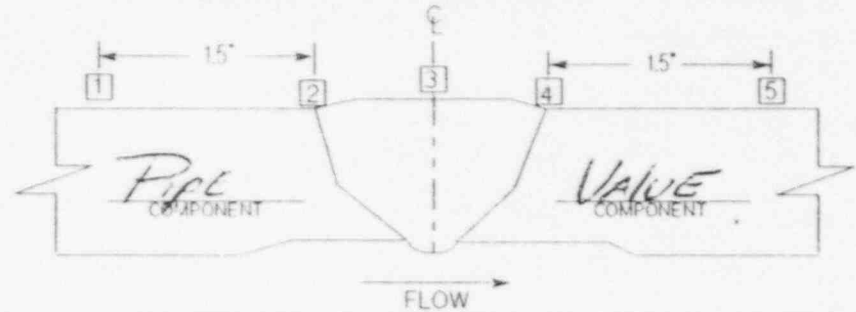
SITE: FLORIDA UNIT: 1
PROJECT NO: 1FN9M

REPORT NO.
95-U-673

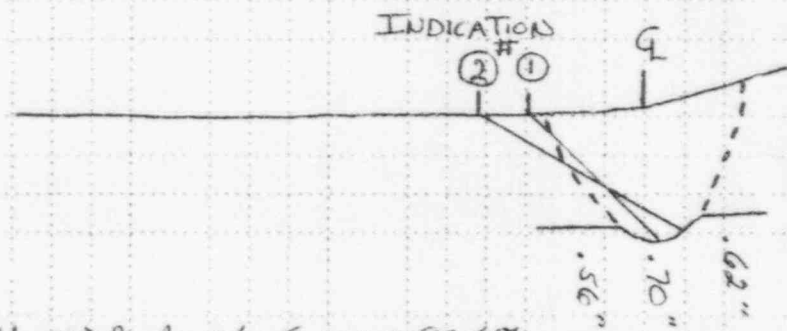
POSITION	0°	90°	180°	270°
1	.57			
2	.56			
3	.70		N/A	
4	.62			
5	*			

SYSTEM ID HICI
WELD ID NO. 23-C-22K

CROWN HEIGHT: FRESH
CROWN WIDTH: 1.0"
NOM. DIAMETER: 10"
WELD LENGTH: 32"



PIPE FLOW → VALVE



CODE COVERAGE ACHIEVED: AXIAL SCAN = 90.6%
CIRC SCAN = 100%

* NO THICKNESS READING DUE TO
VALVE CONFIGURATION.

INDICATION # 1 ID GEOMETRY - ROOT - 45° SHEAR
INDICATION # 2 ID GEOMETRY - ROOT - 60° SHEAR
BOTH: 360° INTERMITTENTLY

<u>H. J. G. III</u> Examiner	<u>III</u> Level	<u>5/6/95</u> Date	<u>M. J. G. III</u> Reviewed By	<u>III</u> Level	<u>5/10/95</u> Date	<u>V. J. G.</u> Reviewed By	<u>ANDI</u> Title	<u>5.18.95</u> Date	Page <u>1</u> Of <u>1</u>
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B. P. G. III 5/10/95
REC. III



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

SITE: FIL-RIM UNIT:

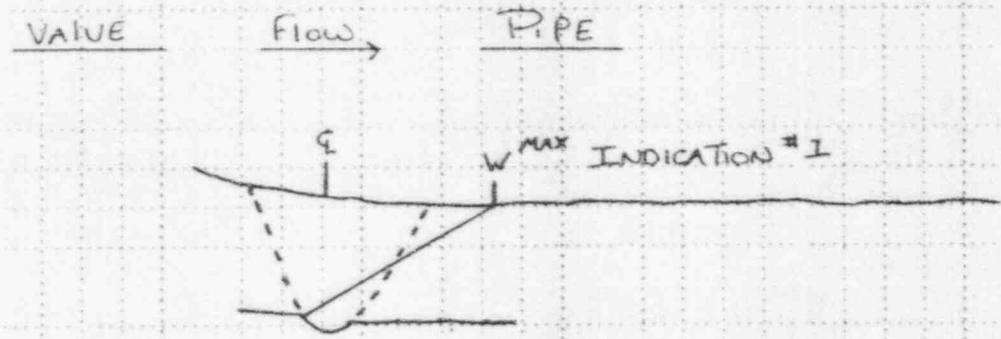
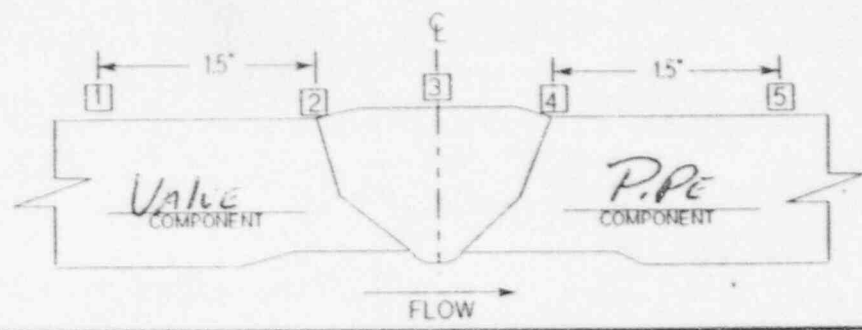
PROJECT NO: 1FN9M

95-E-674

POSITION	0°	90°	180°	270°
1	*			
2	.63			
3	.72		N/A	
4	.57			
5	.59			

SYSTEM ID HPCI
 WELD ID NO. EB-23-F13R

CROWN HEIGHT: FLUSH
 CROWN WIDTH: 10"
 NOM. DIAMETER: 10"
 WELD LENGTH: .32"



CODE COVERAGE ACHIEVED

INDICATION #1 ID GEOMETRY - ROOT 60° SHEAR

* NO THICKNESS READING DUE TO VALVE CONFIGURATION

360° INTERMITTENTLY

Felix M. S. III 5/6/95
 Examiner Level Date

M. Stan III 5/1/95
 Reviewed By Level Date

 ANSI 5-18-95
 Reviewed By Title Date

Page 1 of 1
 FORM 138 1-13-90

B. Perkins 5/10/95
BECO III



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PKCrim UNIT: 1

CALIBRATION SHEET NO.: 95-C-675

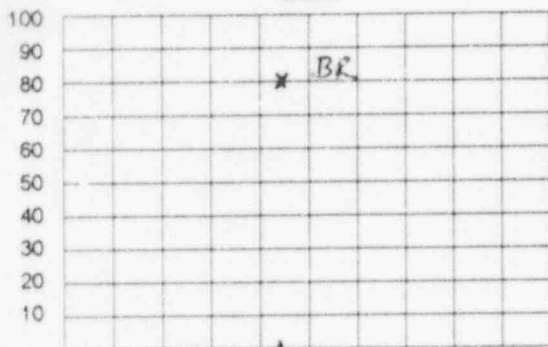
PROJECT NO.: 1FW7M

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

Instrument STAVELEY SONIC 136 1152 M
 Search Unit KB-AERCTECH C24256 .25" 5.0 MHz C/L N/A
Manufacturer Model No Serial No Size Freq Angle/Mode Incident to wedge front
 Cable RG-174 / U 6' 2
Manufacturer Serial No Length No. of Connectors
 Calibration Standard PK 96 STAINLESS .432" 65°F
Type Material Thickness Temp
 Couplant ULTRAGEL II 94125 N/A
Type Batch No Thermometer Serial No

DAC



SWEEP: $\frac{ID}{10} = 10"$

DEPTH METAL PATH

INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>52</u>	Gain - Axial Scan <u>52</u>
Gain - Circ. Scan <u>N/A</u>	Gain - Circ. Scan <u>N/A</u>
Pulse <u>100</u>	Range <u>.270</u>
Damping <u>200</u>	Delay <u>.122</u>
Rep Rate <u>500</u>	Velocity <u>.064</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR: <u>N/A</u>	INITIAL CALIBRATION TIME: <u>CECC</u>	VERIFICATION TIMES
MAX AMPLITUDE: <u>A</u>	FINAL VERIFICATION TIME: <u>1100</u>	<u>N/A</u>
SWEEP: _____		
GAIN: _____		

WELDS EXAMINED	REPORT NO.	COMMENTS:
<u>5' 12-I-11R</u>	<u>95-E-677</u>	<u>CALIBRATION USED FOR LAMINATION SCAN.</u>
<u>5' 12-I-11R</u>	<u>95-E-678</u>	
<u>12R-0-10R</u>		
<u>12R-0-11R</u>		

<u>PKCrim III</u> EXAMINER	<u>5/8/95</u> DATE	<u>B. P. ... III</u> REVIEWED BY	<u>5/16/95</u> DATE	PAGE: <u>1</u> OF: <u>1</u>
<u>PKCrim</u> REVIEWED BY	<u>5/16/95</u> DATE	<u>ANIE</u> REVIEWED BY	<u>5/19/95</u> DATE	



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PILGRIM UNIT: 1

CALIBRATION SHEET NO.: 95-C-676

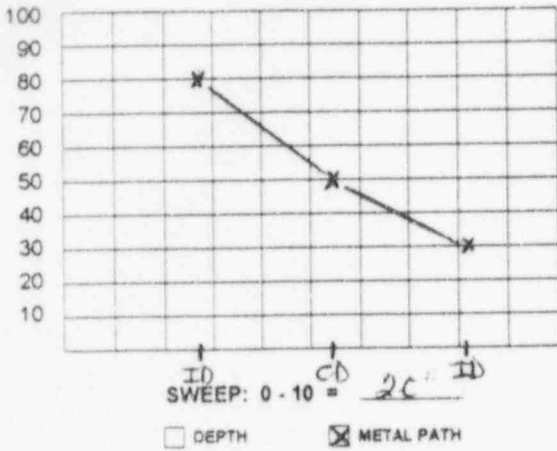
PROJECT NO.: 1FW7M

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP94-C72 REVISION: 1 FRR: N/A

Instrument STAVELEY SONIC 136 1152 M
 Search Unit KB-Aerotech D19642 .25" 2.25 MHz 45° S .30"
Manufacturer Model No. Serial No. Size Freq. Angle/Mode Incident to wedge front
 Cable RC174/L 6' 1
Manufacturer Serial No. Length No. of Connectors
 Calibration Standard PL 96 STAINLESS .432" 65"
Type Material Thickness Temp.
 Couplant ULTRAGEL II 94125 N/A
Type Batch No. Thermometer Serial No.

DAC



INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>51</u>	Gain - Axial Scan <u>51</u>
Gain - Circ. Scan <u>54</u>	Gain - Circ. Scan <u>54</u>
Pulse <u>100</u>	Range <u>1.31</u>
Damping <u>200</u>	Delay <u>.174</u>
Rep Rate <u>500</u>	Velocity <u>.081</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR: <u>N</u>	INITIAL CALIBRATION TIME: <u>0810</u>	VERIFICATION TIMES
MAX AMPLITUDE: <u>A</u>	FINAL VERIFICATION TIME: <u>1105</u>	<u>N/A</u>
SWEEP		<u>A</u>
GAIN		

WELDS EXAMINED	REPORT NO.	COMMENTS:
19 I 10R	95-E-679	MEASURED ANGLE IN CALIBRATION BLOCK 44°
12 I 11R	95-E-680	
12R-0-10R		
12R-0-11R		

<u>F.H.M. III</u>	<u>5/18/95</u>	<u>B. P. B. III</u>	<u>5/16/95</u>	1 of 1 PAGE: <u>4</u> OF: <u>8</u>
EXAMINER	LEVEL	DATE	REVIEWED BY	
<u>M. J. ...</u>	<u>Inspector</u>	<u>5/16/95</u>	<u>V. ...</u>	REVIEWED BY
REVIEWED BY	TITLE	DATE	REVIEWED BY	DATE



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pikgrim UNIT: 1
PROJECT NO.: 1FW7M

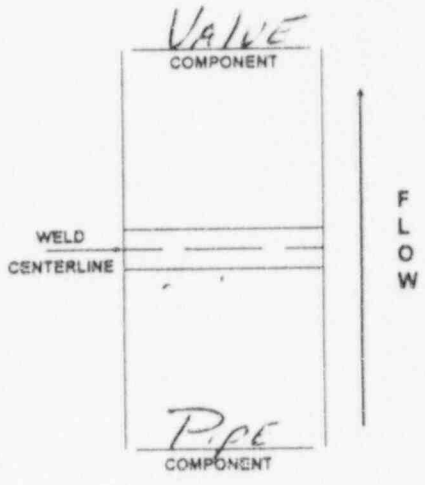
REPORT NO.: 95-E-677
CALIBRATION SHEET NO.: 95-C-675
DATA SHEET NO.: 95-E-677

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 85°F COUPLANT: ULTRAGE/II EXAM START: 1000
WELD ID: 56-12-ITER THERMOMETER S/N: 128-0-10R BATCH NO.: 94125 EXAM END: 1005

SEARCH UNIT: 0°L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A
Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 62
Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) N/A

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: {	1 WITH FLOW		✓	
	2 AGAINST FLOW		✓	
CIRC CW: {	3 UPSTREAM		✓	
	4 DOWNSTREAM		✓	
CIRC CCW: {	5 UPSTREAM		✓	
	6 DOWNSTREAM		✓	
7 L-WAVE BASE METAL	✓			✓
8 OTHER <u>N/A</u>		✓		



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
<u>NO RECORDABLE INDICATIONS</u>											

REMARKS: MAINTAIN 80% BACK REFLECTION DURING SCAN. COMPLETE SCAN PIPE SIDE ONLY; DUE TO PIPE TO VALVE CONFIGURATION.

Philip R. III EXAMINER 5/8/95 DATE M. Turner REVIEWED BY III TITLE 5/16/95 DATE 1 of 1 PAGE: 2 OF: 2
N/A EXAMINER N/A LEVEL 5/16/95 DATE BEG III REVIEWED BY ANIE TITLE 5-17-95 DATE 2 OF: 2

FORM UT-05 REV. 2



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pilgrim UNIT: 1

REPORT NO.: 95-E-67E

PROJECT NO.: 1FW7M

CALIBRATION SHEET NO.: 95-C-675

DATA SHEET NO.: 95-E-67E

PROCEDURE NO.: TP94-C72 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 85°F COUPLANT: UTRAGEL II EXAM START: 1005

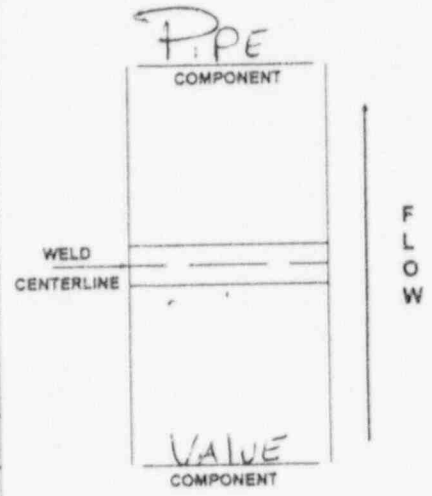
WELD ID: 12 I HR THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1010

SEARCH UNIT: C°L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

L_o REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 62

W_o REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) N/A

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: { 1 WITH FLOW		✓		
{ 2 AGAINST FLOW		✓		
CIRC CW: { 3 UPSTREAM		✓		
{ 4 DOWNSTREAM		✓		
CIRC CCW: { 5 UPSTREAM		✓		
{ 6 DOWNSTREAM		✓		
7 L-WAVE BASE METAL	✓			✓
8 OTHER <u>N/A</u>		✓		



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
NO RECORDABLE INDICATIONS											

REMARKS: MAINTAIN 80% BACK REFLECTION DURING SCAN. Complete SCAN PIPE SIDE ONLY; DUE TO PIPE TO VALVE CONFIGURATION.

EXAMINER: [Signature] LEVEL: III DATE: 5/8/95
 REVIEWED BY: [Signature] LEVEL: IV DATE: 5/17/95
 EXAMINER: N/A LEVEL: N/A DATE:
 REVIEWED BY: [Signature] TITLE: ANEE DATE:

PAGE: 3 OF: 5

RP. I. 5/10/95 BELO III



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1
PROJECT NO.: 1FW7M

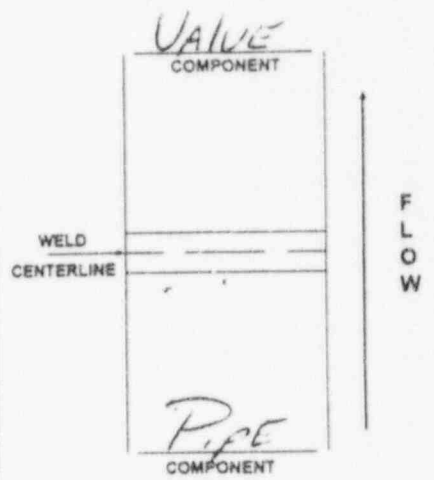
REPORT NO.: 95-E-679
CALIBRATION SHEET NO.: 95-C-676
DATA SHEET NO.: 95-E-679

PROCEDURE NO.: TP 94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 85 °F COUPLANT: UITRAGEL II EXAM START: 1010
WELD ID: SEC 72 T-10R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1020

SEARCH UNIT: 45°S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A
Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 64
Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) 64

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: { 1 WITH FLOW	✓		✓	
2 AGAINST FLOW		✓		
CIRC CW: { 3 UPSTREAM	✓			✓
4 DOWNSTREAM	✓			✓
CIRC CCW: { 5 UPSTREAM	✓			✓
6 DOWNSTREAM	✓			✓
7 L-WAVE BASE METAL		✓		
8 OTHER <u>N/A</u>		✓		



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
1	—	TDC	—	—	.50"	—	—	3.4	—	40	1

REMARKS: MAINTAIN 10% TO 30% ID NOISE LEVEL DURING SCAN. COMPLETE SCAN PIPE SIDE ONLY; DUE TO PIPE TO VALVE CONFIGURATION. INDICATION #1 ID GEOMETRY - ROOT 30.0° INTERMITTENTLY AT VARYING AMPLITUDE. Ref 95-U-681 FOR INDICATION PLOT SHEET

<u>FRP</u> EXAMINER	<u>III</u> LEVEL	<u>5/8/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/16/95</u> DATE	PAGE: <u>5</u> OF: <u>2</u>
<u>MST</u> EXAMINER	<u>N/A</u> LEVEL	<u>5/16/95</u> DATE	<u>B. Perkins</u> REVIEWED BY	<u>BEGT</u> TITLE	<u>5/16/95</u> DATE	

V. Moran 5-17-95



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: Pilgrim UNIT: 1
PROJECT NO.: 1FW7M

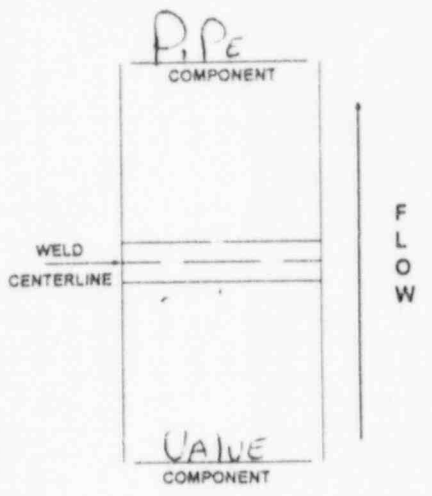
REPORT NO.: 95-E-680
CALIBRATION SHEET NO.: 95-C-676
DATA SHEET NO.: 95-E-680

PROCEDURE NO.: TP 94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 85°F COUPLANT: Ultragel II EXAM START: 1020
WELD ID: 12 I-HR THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1030

SEARCH UNIT: 45°S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A
Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 64
Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) 64

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: { 1 WITH FLOW		/		
2 AGAINST FLOW	/		/	
CIRC CW: { 3 UPSTREAM	/			/
4 DOWNSTREAM	/			/
CIRC CCW: { 5 UPSTREAM	/			/
6 DOWNSTREAM	/			/
7 L-WAVE BASE METAL		/		
8 OTHER <u>N/A</u>		/		



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
1	—	9.5'	—	—	.50"	—	—	3.5	—	40	2

REMARKS: MAINTAIN 10% TO 30% ID NOISE LEVEL DURING SCAN
COMPLETE SCAN PIPE SIDE ONLY; DUE TO PIPE TO
VALVE CONFIGURATION. INDICATION # 1 I.D GEOMETRY - ROT
360° INTERMITTENTLY AT VARYING AMPLITUDES
REF 95-U-682 FOR INDICATION PLOT SHEET

<u>[Signature]</u> EXAMINER	<u>III</u> LEVEL	<u>5/8/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/16/95</u> DATE	PAGE: <u>6</u> OF <u>10</u> FORM UT-REV 95
<u>N/A</u> EXAMINER	<u>N/A</u> LEVEL	<u> </u> DATE	<u>[Signature]</u> REVIEWED BY	<u>ANII</u> TITLE	<u>5-17-95</u> DATE	

TRD, II, BEG III 5/16/95



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

SITE: PKUP UNIT: 1

PROJECT NO: 1FW7M

REPORT NO.

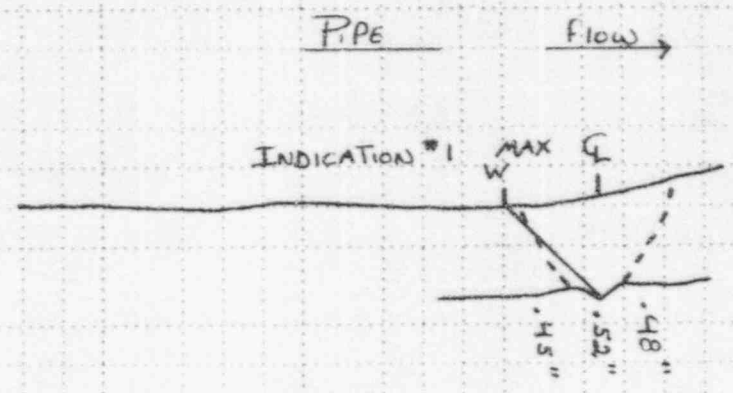
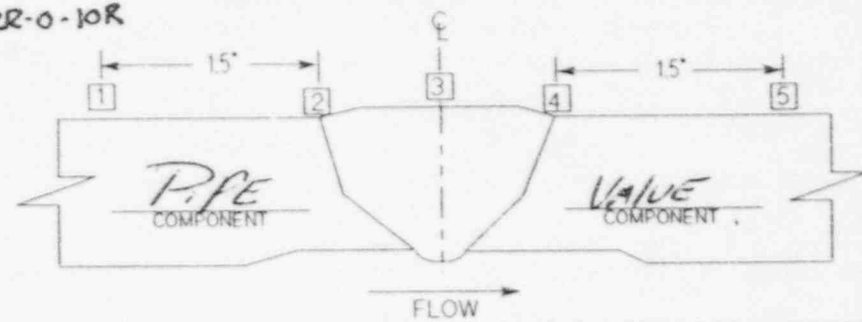
95-E-681

POSITION	0°	90°	180°	270°
1	4E			
2	45			
3	52		N/A	
4	4E			
5	*			

SYSTEM ID RUCU
 WELD ID NO. SEC 12-I-TCR

12R-0-10R

CROWN HEIGHT: FLUSH
 CROWN WIDTH: .80"
 NOM. DIAMETER: 6"
 WELD LENGTH: 19"



CODE COVERAGE ACHIEVED

* NO THICKNESS READING
DUE TO VALVE CONFIGURATION

INDICATION #1 I.D. GEOMETRY - ROOT
360° INTERMITTENTLY

Paul M. Se III 5/16/95
 Examiner Level Date

M. Storm III 5/16/95
 Reviewed By Level Date

V. M. ANIL 5-17-95
 Reviewed By Title Date

Page 7 of 8
2013
 FORM 138 1-13-90

B. Perkins BEG III 5/16/95



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

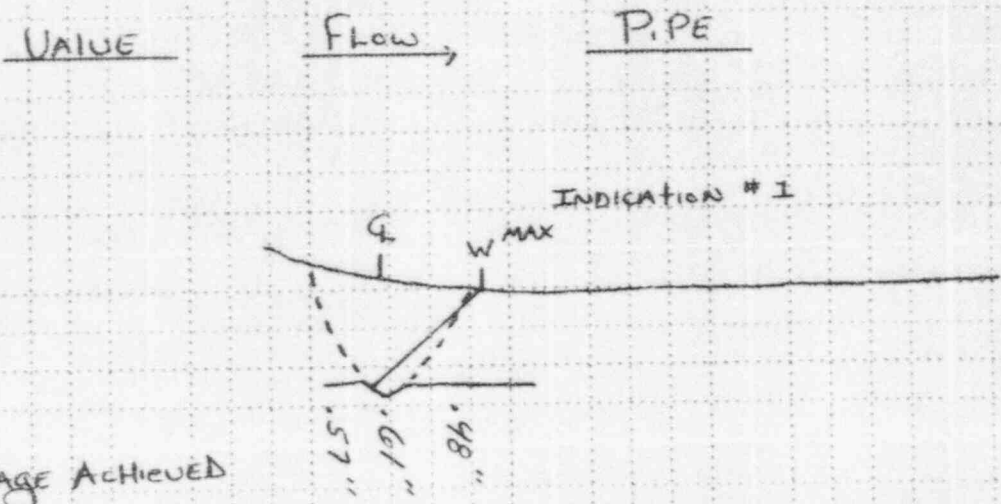
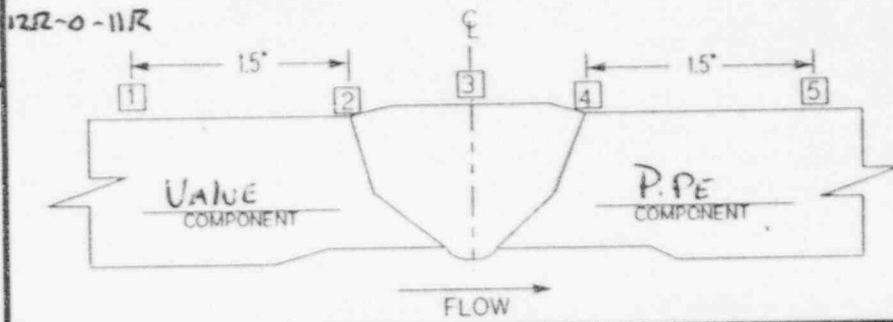
SITE: Pickens UNIT: 1
PROJECT NO: 1FW7M

REPORT NO.

95-E-662 *pg 1 of 1*

POSITION	0°	90°	180°	270°
1	*			
2	.57			
3	.61		N/A	
4	.48			
5	.50			

SYSTEM ID: RWCC
 WELD ID NO.: 58-12-11R
 CROWN HEIGHT: FLUSH
 CROWN WIDTH: .80"
 NOM. DIAMETER: 6"
 WELD LENGTH: 19"



CODE COVERAGE ACHIEVED

INDICATION # 1 ID Geometry - Root
360° Intermittently

* NO THICKNESS READING
DUE TO VALVE CONFIGURATION

<u>Philip J. Smith III</u> Examiner	<u>III</u> Level	<u>5/8/95</u> Date	<u>M. J. ...</u> Reviewed By	<u>III</u> Level	<u>5/14/95</u> Date	<u>W. J. ...</u> Reviewed By	<u>ANII 5-1795</u> Title	<u>Date</u>	Page <u>8</u> of <u>8</u> <u>2 of 2</u>
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B. P. ... BEG III 5/16/95

130



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PIGEM UNIT: 1

CALIBRATION SHEET NO.: 95-C-703

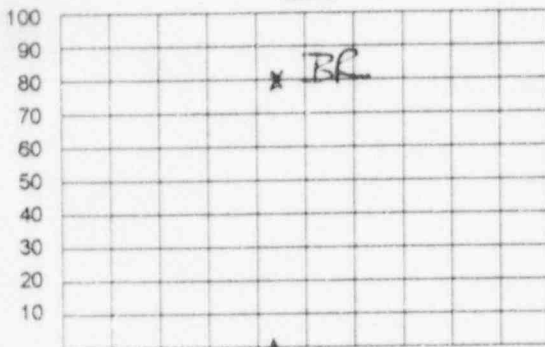
PROJECT NO.: 1FW7M

LINEARITY SHEET NO.: 45-L-661

PROCEDURE NO.: TP94-C72 REVISION: 1 FRR: N/A

Instrument STAVELEY SONIC 136 1152 M
 Search Unit KB-AKROTECH C24256 .25" 5.0 MHz C^oL N/A
Manufacturer Model No. Serial No. Size Freq. Angle/Mode Incident to wedge front
 Cable BC 174 / U 6' 2
Manufacturer Serial No. Length No. of Connectors
 Calibration Standard P.I. 96 STAINLESS .432" 65"
Type Length Material Thickness Temp.
 Couplant LITRAGEL II 94125 N/A
Type Batch No. Thermometer Serial No.

DAC



SWEEP: $0-10 = 1.0"$

DEPTH METAL PATH

INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>52</u>	Gain - Axial Scan <u>52</u>
Gain - Circ. Scan <u>N/A</u>	Gain - Circ. Scan <u>N/A</u>
Pulse <u>100</u>	Range <u>.270</u>
Damping <u>200</u>	Delay <u>.122</u>
Rep Rate <u>500</u>	Velocity <u>.064</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR: <u>N/A</u>	INITIAL CALIBRATION TIME: <u>0915</u>	VERIFICATION TIMES
MAX AMPLITUDE: <u>A</u>	FINAL VERIFICATION TIME: <u>1300</u>	<u>N/A</u>
SWEEP: _____		
GAIN: _____		

WELDS EXAMINED

REPORT NO.

COMMENTS: CALIBRATION USED FOR LAMINATION SCANS STAINLESS STEEL SIDE ONLY.

12-I-16 R

95-E-707

[Signature] III 5/19/95
 EXAMINER LEVEL DATE
[Signature] AN/IV 5/16/95
 REVIEWED BY TITLE DATE

[Signature] BEGO III 5/16/95
 REVIEWED BY LEVEL DATE
[Signature] AN/II 5/17/95
 REVIEWED BY TITLE DATE

PAGE: 1 OF: 9



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PIGGRIM UNIT: 1

CALIBRATION SHEET NO.: 95-C-704

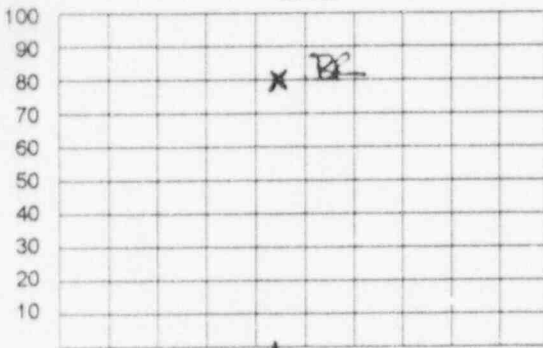
PROJECT NO.: 1FW7M

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP 94-072 REVISION: 1 FRR: N/A

Instrument STAVELEY SONIC 136 1152M
Manufacturer Model No. Serial No.
 Search Unit KB-Aerotech C24256 .25" 5.0 MHz C/L N/A
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front
 Cable RG 174/U 6' 2
Type Length No. of Connectors
 Calibration Standard PIL 73 CARBON .432" 65°
Type Serial No. Material Thickness Temp.
 Couplant UTRAGEL II 94125 Thermometer N/A
Type Batch No. Serial No.

DAC



SWEEP: $0 - 10 = 1.0''$

DEPTH METAL PATH

INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>5.2</u>	Gain - Axial Scan <u>5.2</u>
Gain - Circ. Scan <u>N/A</u>	Gain - Circ. Scan <u>N/A</u>
Pulse <u>100</u>	Range <u>.270</u>
Damping <u>200</u>	Delay <u>.115</u>
Rep Rate <u>500</u>	Velocity <u>.064</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>CFF</u>	Jack <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR	INITIAL CALIBRATION TIME <u>0920</u>	VERIFICATION TIMES
MAX AMPLITUDE	FINAL VERIFICATION TIME <u>1305</u>	<u>N/A</u>
SWEEP		<u>A</u>
GAIN		

WELDS EXAMINED REPORT NO.

12-I-16 R 95-E-70E

COMMENTS: CALIBRATION USED FOR LAMINATION SCAN CARBON STEEL SIDE ONLY.

[Signature] III 5/19/95
EXAMINER LEVEL DATE

[Signature] III 5/16/95
REVIEWED BY LEVEL DATE

[Signature] III 5/16/95
REVIEWED BY TITLE DATE

[Signature] III 5/17/95
REVIEWED BY TITLE DATE

1 of 1
PAGE: 3 OF: 9



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PILGRIM UNIT: 1

PROJECT NO.: 1FW7M

CALIBRATION SHEET NO.: 95-C-705

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

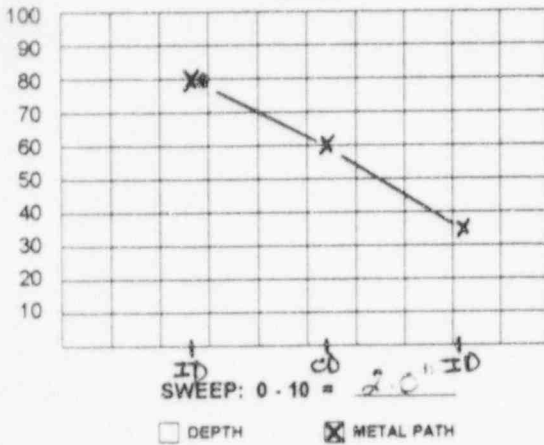
Instrument STAUELEY Sonic 136 1152 M
 Search Unit KB-Aerotech D19642 .25" 2.25 MHz 45°S .30"
Manufacturer Model No. Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable RG174/U 6' 1
Type Length No. of Connectors

Calibration Standard PL96 STAINLESS .432" 6.5"
Type Material Thickness Temp

Couplant UTRAGEL II 94125 N/A
Type Batch No. Thermometer Serial No.

DAC



INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>51</u>	Gain - Axial Scan <u>51</u>
Gain - Circ. Scan <u>53</u>	Gain - Circ. Scan <u>53</u>
Pulse <u>100</u>	Range <u>1.31</u>
Damping <u>200</u>	Delay <u>.174</u>
Rep Rate <u>500</u>	Velocity <u>.081</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

REFLECTOR N

MAX AMPLITUDE A

SWEEP _____

GAIN _____

CALIBRATION VERIFICATION

INITIAL CALIBRATION TIME	<u>0910</u>	VERIFICATION TIMES
FINAL VERIFICATION TIME	<u>1255</u>	<u>N/A</u>

WELDS EXAMINED REPORT NO.

12-I-16 R 95-E-709

COMMENTS: CALIBRATION USED FOR SHEAR WAVE EXAMINATION STAINLESS STEEL SIDE ONLY

[Signature] 5/9/95
 EXAMINER LEVEL DATE

[Signature] 5/16/95
 REVIEWED BY TITLE DATE

[Signature] 5/14/95
 REVIEWED BY LEVEL DATE

[Signature] 5/17/95
 REVIEWED BY TITLE DATE

1 of 1
 PAGE: 5 OF: 9
 FORM UT-04 REV 0



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET

(MANUAL EXAMINATION)

SITE: PIECIM UNIT: 1

CALIBRATION SHEET NO.: 95-C-706

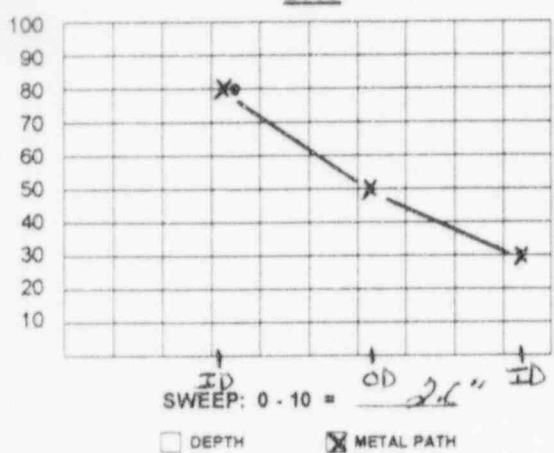
PROJECT NO.: 1FW7M

LINEARITY SHEET NO.: 95-L-661

PROCEDURE NO.: TP 94-072 REVISION: 1 FRR: N/A

Instrument STAVELEY SONIC 136 1152 M
 Search Unit KB-AEROTECH D19642 .25" 2.25 MHz 45°S .30"
Manufacturer Model No. Serial No. Size Freq. Angle/Mode Incident to wedge front
 Cable RG-174/U 6' 1
Manufacturer Serial No. Length No. of Connectors
 Calibration Standard PIL 73 CARBON .432" 65°F
Type Length Material Thickness Temp
 Couplant UTRAGEL II 94125 N/A
Type Batch No. Thermometer Serial No.

DAC



INSTRUMENT SETTINGS

<u>DAC Construction</u>	<u>Sensitivity</u>
Gain - Axial Scan <u>54</u>	Gain - Axial Scan <u>54</u>
Gain - Circ. Scan <u>60</u>	Gain - Circ. Scan <u>60</u>
Pulse <u>100</u>	Range <u>1.31</u>
Damping <u>200</u>	Delay <u>.160</u>
Rep Rate <u>500</u>	Velocity <u>.081</u>
Filter <u>1</u>	Sweep <u>N/A</u>
Frequency <u>5.0</u>	Resolution <u>FIXED</u>
Reject <u>OFF</u>	Jack <input type="checkbox"/> R <input checked="" type="checkbox"/> T

Field Simulator: _____ S/N: _____

CALIBRATION VERIFICATION

REFLECTOR: N/A
 MAX AMPLITUDE: A
 SWEEP: _____
 GAIN: _____

INITIAL CALIBRATION TIME	<u>0930</u>	VERIFICATION TIMES
FINAL VERIFICATION TIME	<u>1310</u>	<u>N/A</u>

WELDS EXAMINED	REPORT NO.	COMMENTS:
<u>12-I-16 R</u>	<u>95-E-710</u>	<u>CALIBRATION USED FOR SHEAR WAVE EXAMINATION CARBON STEEL SIDE ONLY.</u>

<u>[Signature]</u> EXAMINER	<u>III</u> LEVEL	<u>5/9/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>666 III</u> LEVEL	<u>5/16/95</u> DATE	PAGE: <u>7</u> OF: <u>9</u>
<u>[Signature]</u> REVIEWED BY	<u>III</u> TITLE	<u>5/16/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>ANZI</u> TITLE	<u>5-17-95</u> DATE	



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-707

PROJECT NO.: 1FW7M

CALIBRATION SHEET NO.: 95-C-703

DATA SHEET NO.: 95-E-707

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 78 °F COUPLANT: ULTRAGEL II EXAM START: 1055

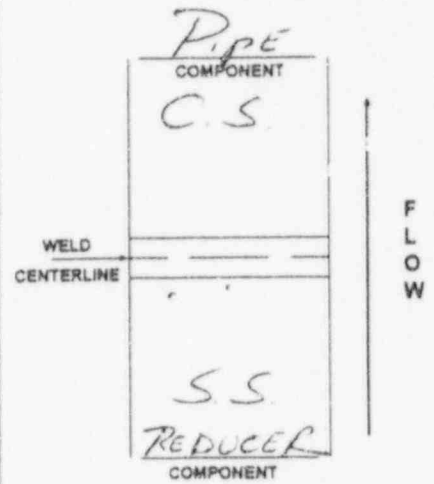
WELD ID: 12-I-16R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1100

SEARCH UNIT: C°L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 62

Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) N/A

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL: {	1 WITH FLOW		✓	
	2 AGAINST FLOW		✓	
CIRC CW: {	3 UPSTREAM		✓	
	4 DOWNSTREAM		✓	
CIRC CCW: {	5 UPSTREAM		✓	
	6 DOWNSTREAM		✓	
	7 L-WAVE BASE METAL	✓		✓
	8 OTHER <u>N/A</u>		✓	



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
NO RECORDABLE INDICATIONS											

REMARKS: MAINTAIN 80% BACK REFLECTION DURING SCAN.
EXAMINED REDUCER SIDE ONLY - STAINLESS STEEL SIDE

<u>[Signature]</u> EXAMINER	<u>III</u> LEVEL	<u>5/19/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/17/95</u> DATE	PAGE: <u>2</u> OF: <u>9</u>
<u>N/A</u> EXAMINER	<u>N/A</u> LEVEL	<u> </u> DATE	<u>[Signature]</u> REVIEWED BY	<u>AMT I</u> TITLE	<u>5-17-95</u> DATE	

RD. III BEG III 5/10/95



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-708

PROJECT NO.: IFW7M

CALIBRATION SHEET NO.: 95-C-704

DATA SHEET NO.: 95-E-708

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 78°F COUPLANT: OUTRAGE II EXAM START: 1100

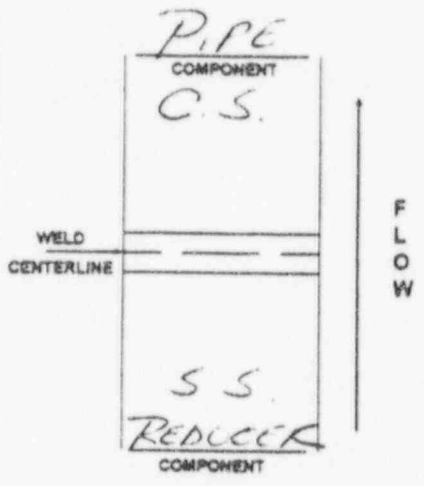
WELD ID: 12-I-16R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1105

SEARCH UNIT: C°L EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

L_o REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB): 62

W_o REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB): N/A

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL:	1 WITH FLOW		✓	
	2 AGAINST FLOW		✓	
CIRC CW:	3 UPSTREAM		✓	
	4 DOWNSTREAM		✓	
CIRC CCW:	5 UPSTREAM		✓	
	6 DOWNSTREAM		✓	
	7 L-WAVE BASE METAL	✓		✓
	8 OTHER <u>N/A</u>		✓	



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
<u>NO RECORDABLE INDICATIONS</u>											

REMARKS: MAINTAIN 80% BACK REFLECTION DURING SCAN
EXAMINED PIPE SIDE ONLY - CARBON STEEL SIDE

<u>[Signature]</u> EXAMINER	<u>III</u> LEVEL	<u>5/19/95</u> DATE	<u>[Signature]</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/16/95</u> DATE	<u>10/1</u> PAGE: <u>4</u> OF: <u>9</u>
<u>N/A</u> EXAMINER	<u>N/A</u> LEVEL	<u> </u> DATE	<u>[Signature]</u> REVIEWED BY	<u>INEL</u> TITLE	<u>5/17/95</u> DATE	

R. P. ... REC III 5/16/95



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PIGRIM UNIT: 1

REPORT NO.: 95-E-709

PROJECT NO.: 1FW7M

CALIBRATION SHEET NO.: 95-C-705

DATA SHEET NO.: 95-E-709

PROCEDURE NO.: TP 94-072

REVISION: 1

FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 78 °F COUPLANT: ULTRAGEL II EXAM START: 1110

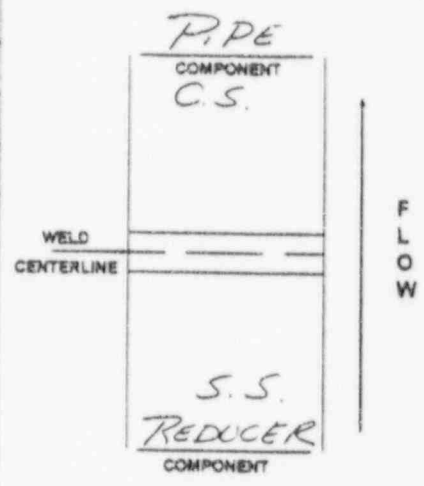
WELD ID: 12-I-16R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1115

SEARCH UNIT: 45° S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

L_o REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 63

W_o REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) 63

	PERFORMED		INDICATIONS	
	YES	NO	YES	NO
AXIAL:	1 WITH FLOW	✓		✓
	2 AGAINST FLOW		✓	
CIRC CW:	3 UPSTREAM	✓		✓
	4 DOWNSTREAM		✓	
CIRC CCW:	5 UPSTREAM	✓		✓
	6 DOWNSTREAM		✓	
	7 L-WAVE BASE METAL		✓	
	8 OTHER <u>N/A</u>		✓	



INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
<u>NO RECORDABLE INDICATIONS</u>											

REMARKS: MAINTAIN 10% TO 30% I.D. NOISE LEVEL DURING SCAN
EXAMINED REDUCER SIDE ONLY - STAINLESS STEEL SIDE

<u>PLM</u> EXAMINER	<u>III</u> LEVEL	<u>5/19/95</u> DATE	<u>M. J. ...</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/17/95</u> DATE	<u>1 of 1</u> PAGE: <u>6</u> OF: <u>9</u>
<u>N/A</u> EXAMINER	<u>N/A</u> LEVEL	<u> </u> DATE	<u> </u> REVIEWED BY	<u> </u> TITLE	<u> </u> DATE	FORM UT-68 REV 1

B. P. ... RECEIVED 5/16/95



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (MANUAL PIPING)

SITE: PILGRIM UNIT: 1

REPORT NO.: 95-E-710

PROJECT NO.: 1FW7M

CALIBRATION SHEET NO.: 95-C-706

DATA SHEET NO.: 95-E-710

PROCEDURE NO.: TP94-072 REVISION: 1 FRR: N/A

SYSTEM: RWCU EXAM SURFACE TEMP: 78°F COUPLANT: ULTRAGEL II EXAM START: 1105

WELD ID: 12-I-16R THERMOMETER S/N: N/A BATCH NO.: 94125 EXAM END: 1110

SEARCH UNIT: 45°S EXAMINATION SURFACE: ID OD MATERIAL TYPE: CS SS OTHER: N/A

Lo REFERENCE: TOP DEAD CENTER AXIAL SCAN SENSITIVITY (dB) 60

Wo REFERENCE: WELD CENTERLINE CIRC SCAN SENSITIVITY (dB) 66

	PERFORMED		INDICATIONS		WELD CENTERLINE	FLOW
	YES	NO	YES	NO		
AXIAL:	1 WITH FLOW		✓		P.P.E COMPONENT C.S.	↑
	2 AGAINST FLOW	✓		✓		
CIRC CW:	3 UPSTREAM		✓		S.S. REDUCER COMPONENT	↓
	4 DOWNSTREAM	✓		✓		
CIRC CCW:	5 UPSTREAM		✓			
	6 DOWNSTREAM	✓		✓		
	7 L-WAVE BASE METAL		✓			
	8 OTHER <u>N/A</u>		✓			

INDICATION NO.	L (in) FROM REF			W (in) FROM REF			SWEEP READING			MAX AMP % DAC	EXAMINATION (1-8)
	L-1	L-MAX	L-2	W-1	W-MAX	W-2	SW-1	SW-MAX	SW-2		
1	—	4.0"cw	—	—	.50"	—	—	3.0	—	100	2

REMARKS: EXAMINED PIPE SIDE ONLY - CARBON STEEL SIDE INDICATION # 1 I.D. GEOMETRY - ROOT - 360° INTERMITTENTLY AT VARYING AMPLITUDE.

Ref 95-U-711 FOR INDICATION PLOT SHEET

<u>FRANK S. III</u> EXAMINER	<u>III</u> LEVEL	<u>5/9/95</u> DATE	<u>M. J. ...</u> REVIEWED BY	<u>III</u> LEVEL	<u>5/17/95</u> DATE	<u>2 of 2</u> PAGE: 2 OF 2
<u>N/A</u> EXAMINER	<u>N/A</u> LEVEL	<u> </u> DATE	<u>V. ...</u> REVIEWED BY	<u> </u> LEVEL	<u> </u> DATE	<u> </u> PAGE: OF:

R.P. ... REG. III 5/11/95



GE Nuclear Energy

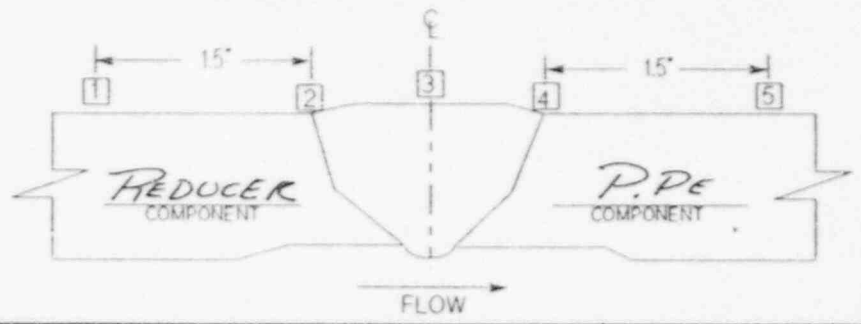
WALL THICKNESS PROFILE SHEET

SITE: PILGRIM UNIT: 1
PROJECT NO: 1FW7M

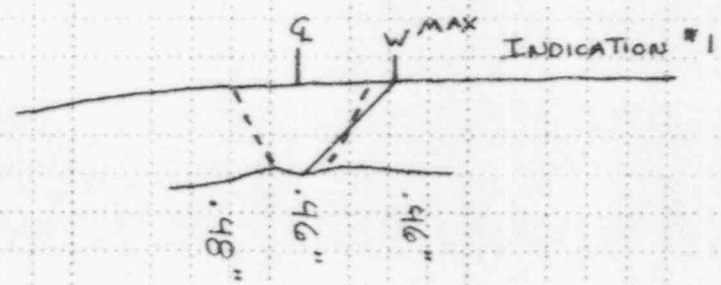
REPORT NO. 95-~~E~~-711 *pg 1 of 1*

POSITION	0°	90°	180°	270°
1	.46			
2	.46			
3	.46		N/A	
4	.44			
5	.46			

SYSTEM ID RWCU
 WELD ID NO. 12-I-16TR
 CROWN HEIGHT: FLUSH
 CROWN WIDTH: .80"
 NOM. DIAMETER: 6.0"
 WELD LENGTH: 19"



REDUCER
STAINLESS
SIDE Flow P.P.E
CARBON
SIDE



INDICATION #1
I.D. GEOMETRY - ROOT

CODE COVERAGE ACHIEVED

<u>PHL</u> Examiner	<u>III</u> Level	<u>5/4/95</u> Date	<u>M. [Signature]</u> Reviewed By	<u>III</u> Level	<u>5/16/95</u> Date	<u>V. [Signature]</u> Reviewed By	<u>ANIF 51795</u> Title	<u>8/12/95</u> Date	Page <u>2012</u> FORM 138 1-13-90
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B. Pechua BELCO #4 5/16/95

BP

OSTON EDISON LINEARITY DATA SHEET
 PROCEDURE No. QCI 50.70 REV. 3 CAL BLOCK# P.L-14A LDS# 95-L-719 FINAL
 EXAMINATION PERSONNEL: [Signature] LEVEL III DATE 5/13/95
N/A LEVEL N/A

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 136 S.No 1152 M
 SEARCH UNIT DATA: MAKE KB-AEROTECH TYPE GAMMA S.No D19642
 SIZE .25" FREQUENCY 2.25 MHZ. BEAM ANGLE 45° S
 BEAM MODE SHEAR WEDGE TYPE LUCITE
 TABLE DATA: LENGTH 6' TYPE 76174/C
 DUPLANT DATA: TYPE UNIAXIAL BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A

	1	2	3	4
100		50	50	25
90		45	40	30
80		40	30	15
70		35	20	10
60		30	10	5

- LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 - SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B

	5	6	7	8
2 db				
0				
-2 db				
-4 db				
-6 db				
-8 db				
-10 db				
-12 db				

N/A

AMPLITUDE CONTROL LINEARITY CHECK

	9	10	11	12
80	- 6 db	32 TO 48		39
80	- 12 db	15 to 24		19
40	+ 6 db	64 to 96		84
20	+ 12 db	64 to 96		90

- INDICATION SET AT % FSH
- db CONTROL CHANGE
- INDICATION LIMITS % FSH
- ACTUAL % FULL SCREEN HEIGHT

- db CONTROL CHANGE
- ACTUAL db
- LARGER INDICATION AMPLITUDE %FSH
- SMALLER INDICATION AMPLITUDE %FSH

ANALYSIS OF RESULTS:
 SCREEN HEIGHT LINEARITY
 ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
 ACCEPTABLE UNACCEPTABLE

REVIEWED BY: [Signature] LEVEL III DATE 5/16/95
 ASME SECTION XI EXAMINATION: YES ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED
 ACCEPTED BY: [Signature] BECO LEVEL III OR DESIGNEE DATE 5/16/95
 REVIEWED BY: [Signature] ANII DATE 5-18-95

UT CALIBRATION DATA SHEET

Instruction No. 50.70

Rev. 3

Attachment A

Form 50.70-1

C.D.S. NO. 95-C-720 pg 1 of 1

U.T.V. No. 046

L.D.S. NO. 95-L-661

PROCEDURE NO. QCI 50.71 REV. 2 DATE 5/13/95

EXAMINATION PERSONNEL: NAME BLANK LEVEL III NAME NA LEVEL NA

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 136 SERIAL NO. 1152 M

SEARCH UNIT DATA: MANUFACTURER KB-AEROTECH TYPE GAMMA

SERIAL NO. BC7057 SIZE .375" FREQUENCY 2.25 MHZ

BEAM ANGLE 0° BEAM MODE LONG WEDGE TYPE N/A

ABLE DATA: LENGTH 6' TYPE RC174 TL

COUPLANT DATA: TYPE CHKAGEL II BATCH NO. 94125

CALIBRATION STANDARD DATA: SERIAL NO. PL-14A THICKNESS .594" DIAMETER 10"

MATERIAL SA-106 GR-B

CALIBRATION REFLECTOR(S) DATA: TYPE S.D.H. / RR SIZE 3/32" DIA. X 1 1/2" L

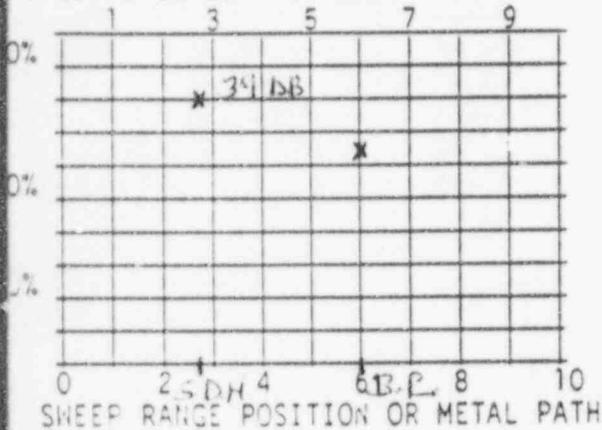
ORIENTATION (TO PIPE AXIS) CIRC

OR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR

MAXIMUM RESPONSE EC%²

PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A

AC CURVE-SCREEN REPRESENTATION



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG. DATE	CAL. DATE	LAST CHECK	LAST E.D.S. #	LAST E.D.S. LINE #	VERIFY 25°F LIMIT YES/NO
5/13/95		95-E-72.3	2		YES
		C900-1200			

I.D. OF WELD/COMPONENT

23-I-F5ER / 23-I-F59R

REVIEWED BY: M. Flann
DATA REVIEWER

DATE 5/16/95

ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: Bruce Perkins
BECO LEVEL III OR DESIGNEE

DATE 5/16/95

REVIEWED BY: [Signature]
ANII

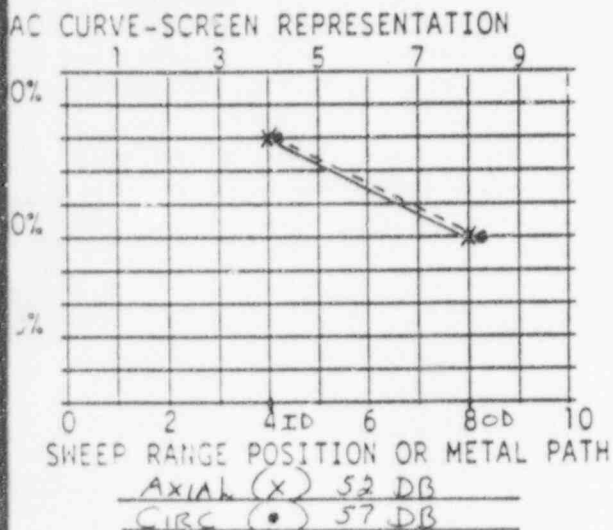
DATE 5-18-95

1.0" SCREEN

UT CALIBRATION DATA SHEET

Instruction No. 50.70
 Rev. 3
 Attachment A
 Form 50.70-1
 C.D.S. NO. 95-C-721
 U.T.V. No. C32
 L.D.S. NO. 95-L-661

PROCEDURE NO. QCI 50.71 REV. 2 DATE 5/13/95
 EXAMINATION PERSONNEL: NAME [Signature] LEVEL III NAME N/A LEVEL N/A
 INSTRUMENT DATA: MAKE STAELEY MODEL SONIC 136 SERIAL NO. 1152 M
 SEARCH UNIT DATA: MANUFACTURER KB-ACROTECH TYPE GAMMA
 SERIAL NO. D19642 SIZE .25" FREQUENCY 2.25 MHZ
 BEAM ANGLE 45° BEAM MODE SHEAR WEDGE TYPE LOCITE
 PROBABLE DATA: LENGTH 6' TYPE BG-174/U
 COUPLANT DATA: TYPE Wetragel/TL BATCH NO. 94125
 CALIBRATION STANDARD DATA: SERIAL NO. PL-14A THICKNESS .594" DIAMETER 10"
 MATERIAL SA 106 GR-B
 CALIBRATION REFLECTOR(S) DATA: TYPE NOTCH SIZE .125" W X 1.0" L X .060 DEEP
 ORIENTATION (TO PIPE AXIS) AXIAL / CIRC
 PROBE OR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR
 MAXIMUM RESPONSE CE 70 BP
 PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG. DATE	CAL. CHECK	LAST E.D.S. #	LAST E.D.S. LINE #	VERIFY	25°F LIMIT YES/NO
5/13/95			95-E-724		YES
CESS-1205 Page 2 of 2					
2					

I.D. OF WELD/COMPONENT

23-I-F58R / 23-I-F59R

REVIEWED BY: [Signature] DATE 5/16/95
 DATA REVIEWER

ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: [Signature] DATE 5/16/95
 BECO LEVEL III OR DESIGNEE

REVIEWED BY: [Signature] DATE 5-18-95
 ANII

UT CALIBRATION DATA SHEET

Instruction No. 50.70

Rev. 3

Attachment A

Form 50.70-1

C.D.S. NO. 95-C-722 *1/1*

U.T.V. No. 032

L.D.S. NO. 95-L-661

PROCEDURE NO. GCI 50.71 REV. 2 DATE 5/13/95

EXAMINATION PERSONNEL: NAME [Signature] LEVEL III NAME N/A LEVEL N/A

INSTRUMENT DATA: MAKE STAVELEY MODEL SONIC 136 SERIAL NO. 1152 M

SEARCH UNIT DATA: MANUFACTURER KB-AEROTECH TYPE GAMMA

SERIAL NO. 015439 SIZE .25" FREQUENCY 2.25 MHz

BEAM ANGLE 60° BEAM MODE SHEAR WEDGE TYPE LUCITE

SCANNABLE DATA: LENGTH 6' TYPE RG 174 / U

COUPLANT DATA: TYPE ULTRACEL 71 BATCH NO. 94125

CALIBRATION STANDARD DATA: SERIAL NO. PL-14A THICKNESS .594" DIAMETER 10"

MATERIAL SA106 GR-B

CALIBRATION REFLECTOR(S) DATA: TYPE NOTCH SIZE .125" W x 1.0" L x .060 DEEP

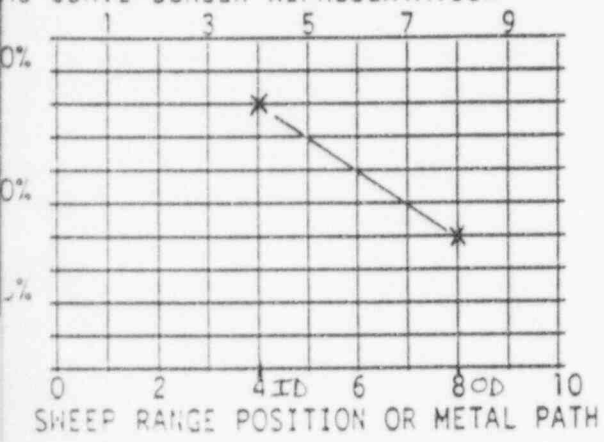
ORIENTATION (TO PIPE AXIS) CIRC

OR DUAL ELEMENT TRANSDUCERS: SPLIT ORIENTATION (TO HOLE CENTERLINE) FOR

MAXIMUM RESPONSE 80% 73P

PARALLEL AMPLITUDE N/A TRANSVERSE AMPLITUDE N/A

AC CURVE-SCREEN REPRESENTATION



CALIBRATION TIME - RECORDS

00	01	02	03	04	05
ORIG.	CAL.	LAST	LAST	VERIFY	
DATE	CAL.	CHECK	E.D.S.	E.D.S.	25°F LIMIT
TIME	TIME	#	LINE #	YES/NO	
5/13/95			95-E-725	2	YES
			CE50-1210		

I.D. OF WELD/COMPONENT

23-I-F58R / 23-I-F59R

AXIAL SCAN (X) 70 DB

REVIEWED BY: [Signature] DATE 5/14/95
DATA REVIEWER

ASME SECTION XI EXAMINATION; YES - ANII SIGNATURE REQUIRED
 NO - ANII SIGNATURE NOT REQUIRED

ACCEPTED BY: [Signature] DATE 5/16/95
BECCO LEVEL III OR DESIGNEE

REVIEWED BY: [Signature] DATE 5-18-95
ANII

ULTRASONIC STRAIGHT BEAM REPORT

MR # 19401362-01 E.D.S. 95-E-723 ^{19/10/1} SCANNING GAIN 50 dB
 SYSTEM HPII C.D.S. 95-C-720 BEAM ANGLE 0°L
 TEMP 70°F L.D.S. 95-L-661
 DATE 5/13/95 UTV. NO. 046

WELD/ITEM NO.	IND. NO.	S.P.	POSITION: WELD C/L PERPENDICULAR/PARALLEL	SCAN SURFACE	TYPE TOTAL LOSS/SIGNALS	TIME START/STOP	REMARKS
EB-23- F39K	NO		RECORDABLE INDICATIONS	PIPE SIDE	PIPE TO VALVE	1000 / 1010	MAINTAIN 80%
EB-23- F58K	NO		RECORDABLE INDICATIONS	PIPE SIDE	VALVE TO PIPE	1010 / 1020	BACK REFLECTION DURING SCAN.

Examiners HPII Level III
~~NA~~ Level N/A

Accepted by YB Pickens III 5-16-95
 BECo Level III or Designee/Date

Criteria: ASME SECTION XI
 ACCEPT REJECT
 NO Further Evaluation Required

ASME XI Examination
 YES ANII SIGNATURE REQUIRED
 NO ANII SIGNATURE NOT REQUIRED

Reviewed by: M. J. [Signature] Level III

Reviewed by: [Signature] ANII
 Date 5.18.95

BOSTON EDISON COMPANY
ULTRASONIC EXAMINATION DATA SHEET

EXAMINATION PERSONNEL:

Name PHILIP J. [Signature] Level III

Name N/A Level N/A

Beam Angle 45° S

M. R. No. 19401362-C1

Couplant CITRACEL II

Scanning Gain 6.3 DB

EDS No. 95-E-724 pg 1 of 2

CDS No. 95-C-721

L.D.S. 95-L-661

UTV No. 032

DATE 5/13/95

(W) DIMENSION (L) DIMENSION

WELD COMP #	CONFIG	IND #	SCAN NO. DIRECTION AND SURFACE	MAX AMP	Lo Wo	W1	Wm	W2	L1	Lm	L2	TIME OF EXAM START	EXAM STOP	COMP. TEMP.	REMARKS
						SPW1	SPm	SPW2	SPL1		SPL2				
EB-23	PIPE TO VALVE	1	I/+/-	50%	*	—	.50"	—	360°	L.O.	360°	1020	1030	70°F	Limited SCAN SEE SKETCH
"	"		II K.W.			NO RECORDABLE INDICATIONS						1030	1035	70°F	Complete SCAN
"	"		II/C.C.W.			NO RECORDABLE INDICATIONS						1035	1040	70°F	Complete SCAN
EB-23	VALVE TO PIPE		I/-/+			NO RECORDABLE INDICATIONS						1040	1050	70°F	Complete SCAN

Components meet ASME Section XI Acceptance Criteria:

YES NO FURTHER EVALUATION REQUIRED

Remarks: * L.O = Top DEAD CENTER
Wo = WEID CENTERLINE

INDICATION #1 I.D. GEOMETRY - Root
360° INTERMITTENTLY AT VARYING Amplitude
SEE: 95-Q-726, 727 and
95-Q-733.

ASME Section XI Examination:

YES-ANII Signature Required

NO-ANII Signature Not Required

Evaluated By: [Signature] Level III Date 5/14/95

Accepted By: [Signature] Level III Date 5/16/95
BECO Level III or Designee

ANII Review by: [Signature] Date 5-18-95

BOSTON EDISON COMPANY
ULTRASONIC EXAMINATION DATA SHEET

EXAMINATION PERSONNEL:

Name PHILIP S. [Signature] Level III

Name N/A Level N/A

Beam Angle 45° S

M. R. No. 19401362-C1
Couplant VITRAGEL II
Scanning Gain 63 DB

EDS No. 95-E-724 pg 2 of 2
CDS No. 95-C-721
L.D.S. 95-L-661
UTV No. 032
DATE 5/13/95

(W) DIMENSION (L) DIMENSION

WELD COMP #	CONFIG	IND. #	SCAN NO. DIRECTION AND SURFACE	MAX AMP.	Lo Wo	W ₁	W _m	W ₂	L ₁	L _m	L ₂	TIME OF START	EXAM STOP	COMP. TEMP.	REMARKS
						SP _{w1}	SP _m	SP _{w2}	SP _{L1}	SP _{L2}					
ED-23- 23-E	VALVE TO PIPE		II / C.W.			NO RECORDABLE INDICATIONS						1050	1055	70°F	Complete SCAN
"	"		II / CCW.			NO RECORDABLE INDICATIONS						1055	1100	70°F	Complete SCAN

Components meet ASME Section XI Acceptance Criteria:

YES NO FURTHER EVALUATION REQUIRED

Remarks: NONE

ASME Section XI Examination:

YES-ANII Signature Required
 NO-ANII Signature Not Required

Evaluated By: M. [Signature] Level III Date 5/14/95

Accepted By: B. [Signature] Level III Date 5/16/95
BECO Level III or Designee

ANII Review by: [Signature] Date 5-18-95

BOSTON EDISON COMPANY
ULTRASONIC EXAMINATION DATA SHEET

EXAMINATION PERSONNEL:

Name PLAHL, S. J. Level III

M. R. No. 19401362-01
Couplant UTRAGEI II
Scanning Gain 75 DB

EDS No. 95-E-725 pg 1 of 1
CDS No. 95-C-722
L.D.S. 95-L-661
UTV No. 032
DATE 5/13/95

Name N/A Level N/A

Beam Angle 60° S (W) DIMENSION (L) DIMENSION

WELD COMP #	CONFIG	IND #	SCAN NO. DIRECTION AND SURFACE	MAX AMP	Lo Wo	W1 SP _{w1}	Wm SP _m	W2 SP _{w2}	L1 SPL1	Lm	L2 SPL2	TIME OF EXAM START STOP	COMP. TEMP.	REMARKS
EB-23 F59R EB-23	Pipe TO VALVE	2	I/+/-	100%	*	—	.90"	—	360°	Lc	360°	1100 1115	70°F	Limited Scan SEE SKETCH
EB-23 F58R	VALVE TO PIPE	1	I/-/+	100%	*	—	.90"	—	360°	24" CW	360°	1115 1130	70°F	Complete SCAN

Components meet ASME Section XI Acceptance Criteria:

YES NO FURTHER EVALUATION REQUIRED

Remarks: * Lo = Top Dead Center
Wo = WEID CENTERLINE

INDICATIONS * 1+2 I.D. GEOMETRY - Root
360° INTERMITTENTLY AT VARYING Amplitude
SEE: 95-Q-726, 727 and
95-Q-733

ASME Section XI Examination:

YES-ANII Signature Required
 NO-ANII Signature Not Required

Evaluated By: M. [Signature] Level II Date 5/14/95

Accepted By: B. [Signature] Level III Date 5/16/95
BECO Level III or Designee

ANII Review by: V. [Signature] Date 5-18-95



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

SITE: PILGRIM UNIT: 1

PROJECT NO: LFN9M

REPORT NO.

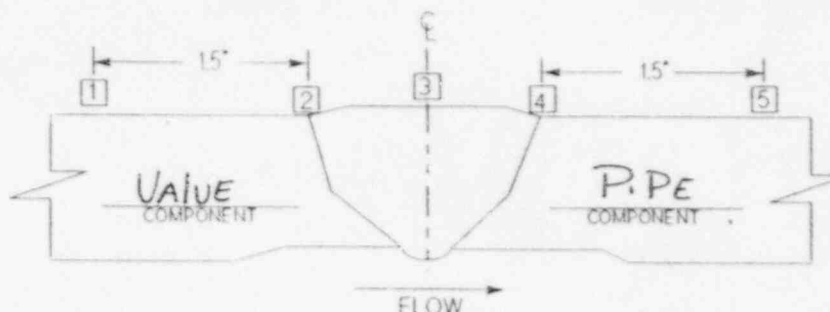
95-02-726

pg 1 of 1

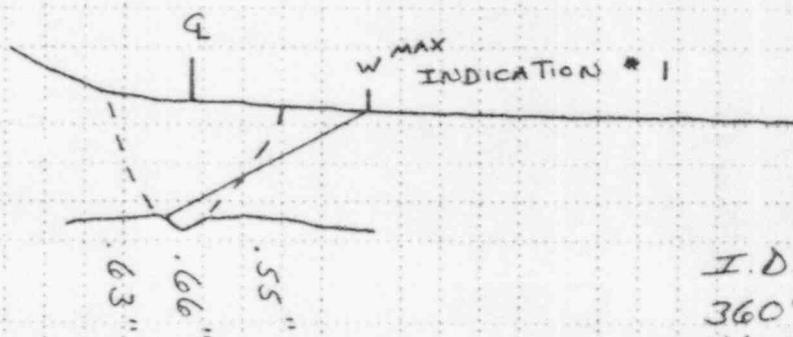
POSITION	0°	90°	180°	270°
1				*
2				.63
3		N/A		.66
4				.55
5				.60

SYSTEM ID: HPCI
SEL: EG-23
WELD ID NO: 23-I-F58R

CROWN HEIGHT: FLUSH
CROWN WIDTH: .90"
NOM. DIAMETER: 10"
WELD LENGTH: 32"



VALVE Flow → P.I.P.E



CODE COVERAGE ACHIEVED

I.D. GEOMETRY - ROOT
360° INTERMITTENTLY AT
VARYING AMPLITUDE.

* NO THICKNESS READING DUE TO VALVE CONFIGURATION.

P. M. D. III 5/13/95
Examiner Level Date

M. [Signature] III 5/16/95
Reviewed By Level Date

V. M. W. ANIS-1895
Reviewed By Title Date

Page ___ Of ___
FORM 138 1-13-90

B. Perkins 5/16/95
REC III



GE Nuclear Energy

WALL THICKNESS PROFILE SHEET

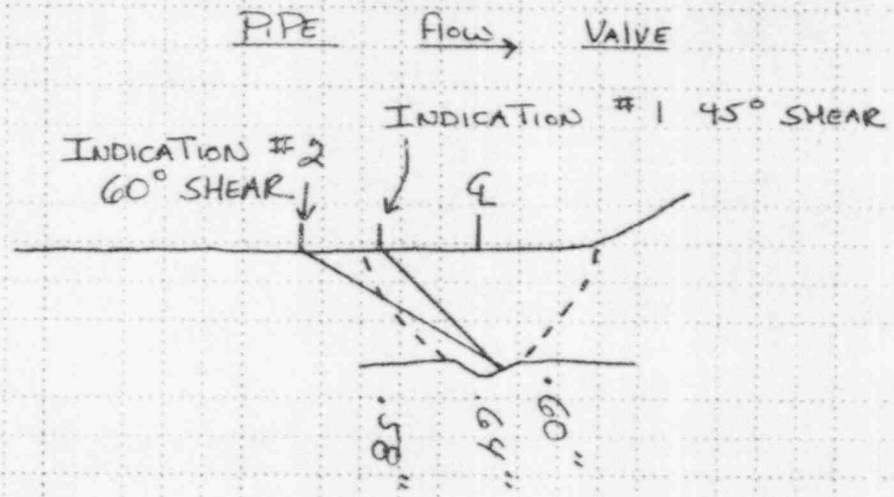
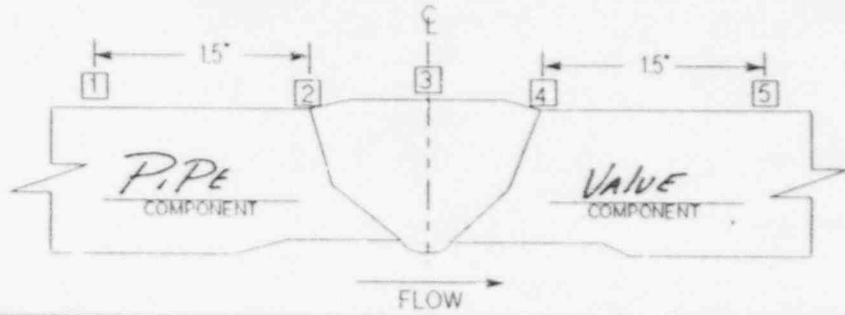
SITE: PILGRIM UNIT: 1
PROJECT NO: 1FN9M

REPORT NO.
95-0-727
pg 1 of 1

POSITION	0°	90°	180°	270°
1	.58			
2	.54			
3	.64		N/A	
4	.60			
5	*			

SYSTEM ID HPCI
WELD ID NO. SEC. ED. 23-
23-1 F59R

CROWN HEIGHT: FLUSH
CROWN WIDTH: 1.2"
NOM. DIAMETER: 10"
WELD LENGTH: 32"



LIMITED SCAN
SEE ATTACHED SKETCH

* NO THICKNESS READING
DUE TO VALVE CONFIGURATION

I.D. GEOMETRY - ROOT
360° INTERMITTENTLY
AT VARYING AMPLITUDE.

<u>Phil M. S.</u> Examiner	<u>III</u> Level	<u>5/13/95</u> Date	<u>M. Stone</u> Reviewed By	<u>III</u> Level	<u>5/14/95</u> Date	<u>V. J. ...</u> Reviewed By	<u>ANII 5-18-95</u> Title	<u>Date</u>	Page <u> </u> Of <u> </u>
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B. Puckin 5/16/95
BEG III



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PIGRIM UNIT: 1

REPORT NO. NA BP

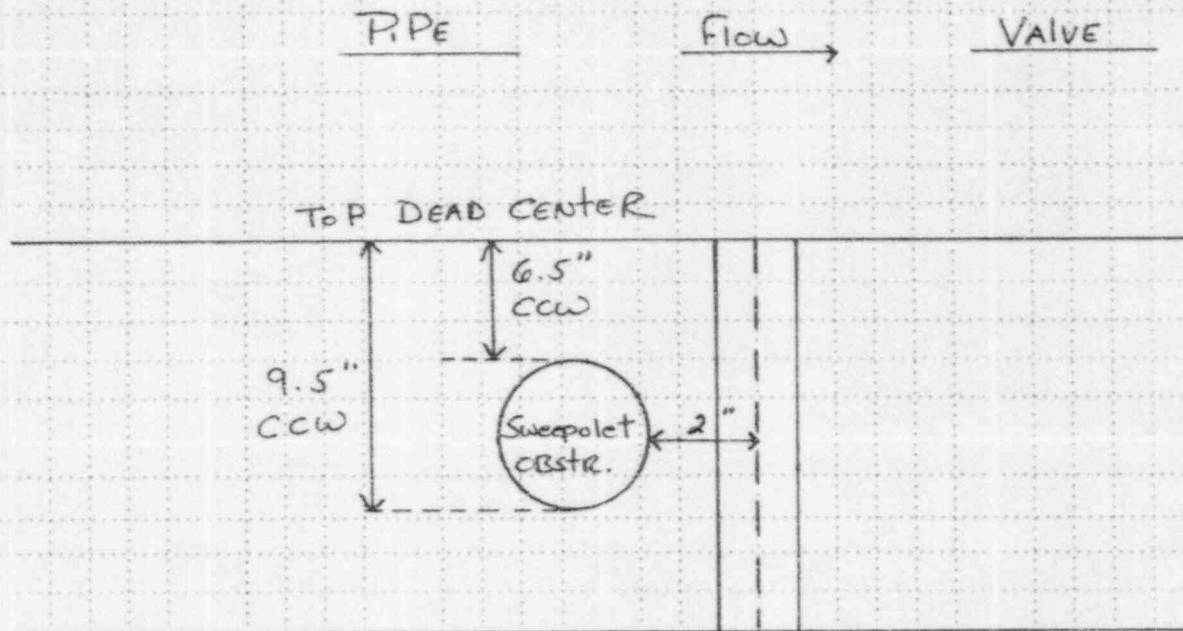
PROJECT NO: 1FN9M

95-~~7~~733 10/91

SYSTEM: HPCI

COMPONENT ID NO: ^{SEC EB-23-}~~23 I~~ F59R

CONFIGURATION: PIPE FLOW VALVE



SKETCH SHOWING LIMITED SCAN
DUE TO SWEEPolet

AXIAL SCAN
 REQUIRED SCAN AREA : 84.8"
 ACTUAL SCAN AREA : 76.85"
 PERCENT Complete : 90.6%

CIRC SCAN
 PERCENT Complete : 100%

M. J. S. III 5/13/95
 Drawn By Level Date

M. J. S. III 5/16/95
 Reviewed By Level Date

V. G. M. ANJI 5-18-95
 Reviewed By Title Date

Page Of
 FORM 137 1-13-90

B. P. P. III 5/16/95
REC. III



GE Nuclear Energy

INDICATION PLOT SHEET

EB-23

SITE: PIGRIM UNIT: 1

PROJECT NO: 1FN9M

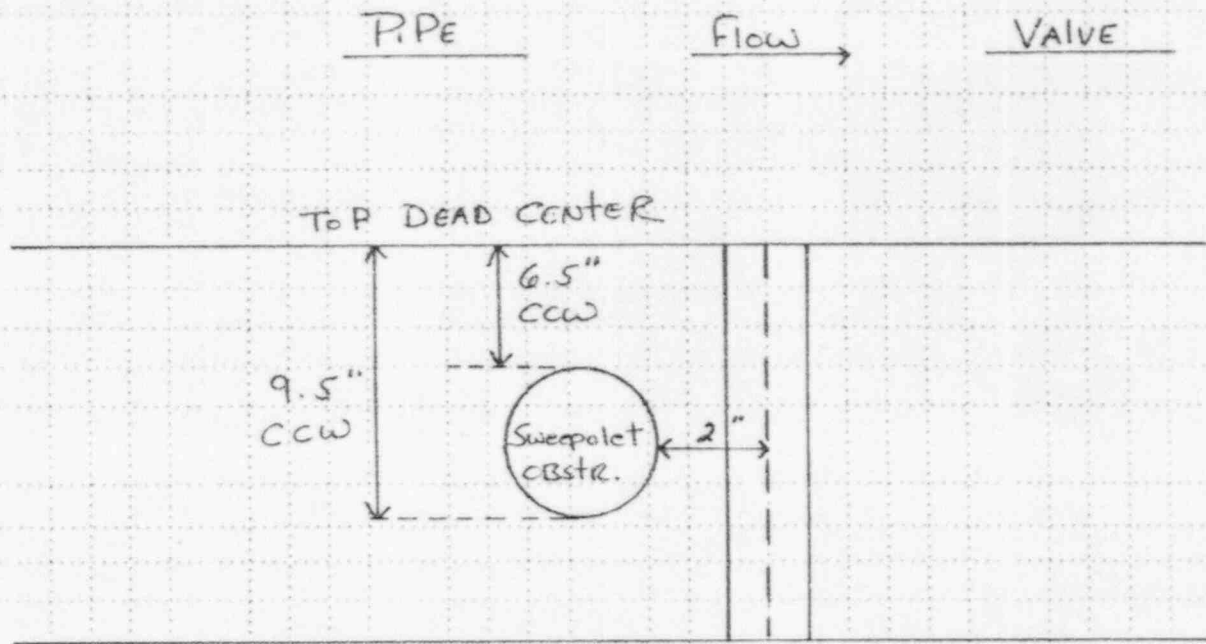
REPORT NO.

11A B P
95-4-733 10/81

SYSTEM: HPI

COMPONENT ID NO: 23-I-F59R

CONFIGURATION: PIPE FLOW VALVE



SKETCH SHOWING LIMITED SCAN
DUE TO SWEEPolet

AXIAL SCAN
 REQUIRED SCAN AREA : 84.8"
 ACTUAL SCAN AREA : 76.85"
 PERCENT Complete : 90.6%

CIRC SCAN
 PERCENT Complete : 100%

FRJ M S III 5/13/95
 Drawn By Level Date

M H III 5/16/95
 Reviewed By Level Date

Myka ANJI 5-18-95
 Reviewed By Title Date

Page Of
 FORM 137 1-13-90

B Peckus 5/16/95

PROCEDURE No. 5070

REV. 3 CAL BLOCK# 78548A LDS# 952-736

EXAMINATION PERSONNEL: TOLLIE PERRY LEVEL II DATE 4-24-95
JEFF GEPHART LEVEL I

INSTRUMENT DATA: MAKE KRAUTHRAMER MODEL VSN-50 S.No 602605
SEARCH UNIT DATA: MAKE K.B.AERO TECH TYPE GAMMA S.No B254277
SIZE: 5X1.0 FREQUENCY 2.25 MHZ. BEAM ANGLE 45°
BEAM MODE SHEAR WEDGE TYPE LUCITE
CABLE DATA: LENGTH 12 TYPE RG-59
COUPLANT DATA: TYPE ULTRAGEL BATCH No. 94125

SCREEN HEIGHT LINEARITY CHECK: FINE GAIN AVAILABLE: YES COMPLETE PART A
 NO COMPLETE PART B

A	1	2	3	4
	100		50	
		50		26
	90		40	
		46		20
	80	40	30	
				15
	70		20	
		36		10
	60		10	
		30		5

1. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 2. SMALLER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 3. LARGER INDICATION AMPLITUDE IN % FULL SCREEN HEIGHT
 4. SMALLER INDICATION HEIGHT IN % FULL SCREEN HEIGHT
- Note: SMALLER INDICATION MUST BE 50% OF LARGER INDICATION WITHIN 5% FULL SCREEN HEIGHT

B	5	6	7	8
	2 db			
	0			
	-2 db			
	-4 db	N	A	
	-6 db			
	-8 db			
	-10 db			
	-12 db			

AMPLITUDE CONTROL LINEARITY CHECK

9	10	11	12
80	- 6 db	32 TO 48	
			40
80	- 12 db	15 to 24	
			20
40	+ 6 db	64 to 96	
			80
20	+ 12 db	64 to 96	
			80

9. INDICATION SET AT % FSH
10. db CONTROL CHANGE
11. INDICATION LIMITS % FSH
12. ACTUAL % FULL SCREEN HEIGHT

ANALYSIS OF RESULTS:
SCREEN HEIGHT LINEARITY
ACCEPTABLE UNACCEPTABLE

AMPLITUDE CONTROL LINEARITY
ACCEPTABLE UNACCEPTABLE

REVIEWED BY: M. Lane LEVEL III DATE 4/25/95
ASME SECTION XI EXAMINATION: YES - ANII SIGNATURE REQUIRED
NO - ANII SIGNATURE NOT REQUIRED
ACCEPTED BY: B. Perkins BECO LEVEL III OR DESIGNEE DATE 5-1-95
REVIEWED BY: V. H. B. ANII DATE 5-18-95

BOSTON EDISON COMPANY
 RECORD OF MAGNETIC PARTICLE EXAMINATION

DATA SHEET # 95-17-645

~~HEBII-MT-0012-26~~
 5/16/95

ITEM ID/PIECE # 23-I-F58R	SYSTEM <u>23/HPCL</u> LOCATION <u>HPCLRM</u>	MR # <u>19400658-02</u>	ISO/DWG NUMBER <u>LSI-1-23-2 REV. E2</u>
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A. MATERIAL TYPE CARBON STEEL

CROSS SECTION THICKNESS	MAX <u>N/A</u>	MIN <u>N/A</u>	GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/>	OTHER <u>VALVE MD2301-3</u>
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FABRICATION PROCESS CAST WORKED WELDED OTHER _____

SURFACE	MACHINED <input type="checkbox"/>	<u>GROUND</u> <input checked="" type="checkbox"/>	AS FABRICATED <input type="checkbox"/>	OTHER <input type="checkbox"/>	INSPECTION HOLD PT <u>MT OF FINAL WELD</u>	<u>PSI</u>
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SURFACE IS SUITABLE FOR SCHEDULED MT UT EXAMINATION YES/NO

SKETCH OR OTHER DETAIL ATTACHED YES NO WEIGHT 10 LB. N/A 40 LB

B. PROCEDURE # VALIDATION # POLE SPACING	<u>QCI-50.20 R/04</u> <u>N/A</u> <u>4"-6"</u>	EQUIPMENT IDENTIFICATION <input checked="" type="checkbox"/> AC <u>N/A</u> HWAC <u>S# 354</u>
--	---	---

C. EVALUATION

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT, REWORK, REJECT AND COMMENT AS NECESSARY.)
<u>1</u>		<u>23-I-F58R</u>	<u>MT OF FINAL WELD REVEALED NO</u>
<u>2</u>			<u>RECORDABLE INDICATIONS - ACCEPT</u>
<u>3</u>			
<u>4</u>			<u>REF. FRN# PDC-93-10I-12 - LSI PREP</u>
<u>5</u>			
<u>6</u>			
<u>7</u>			

D. CRITERIA ASME SECT. XI 1580/W80 ADD.

E. ATTEST COMPONENTS MEET DO NOT MEET ASME SECTION XI ACCEPTANCE CRITERIA, FURTHER EVALUATION REQUIRED N/A YES NO

RESponsible Certified Personnel [Signature] LEVEL II DATE 5/13/95

BECO LEVEL III [Signature] DATE 5/16/95 ANTI [Signature] DATE 5/18/95

BOSTON EDISON COMPANY
 RECORD OF MAGNETIC PARTICLE EXAMINATION

DATA SHEET # 95-M-646

~~HEBIRJ-MT-002-B~~ ~~Rev~~
 5/10/95

ITEM ID/PIECE # B-23- 23-I-F59R	SYSTEM <u>23/HPCI</u> LOCATION <u>HPCI RM.</u>	MR # 19400658-02	ISO/DWG NUMBER 151-1-23-2 REVELED
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MATERIAL	TYPE CARBON STEEL
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CROSS SECTION THICKNESS	MAX N/A	MIN N/A	GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/>	OTHER VALVE MD2301-3
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FABRICATION PROCESS	CAST <input type="checkbox"/>	WORKED <input type="checkbox"/>	WELDED <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>
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SURFACE	MACHINED <input type="checkbox"/>	GROUND <input checked="" type="checkbox"/>	AS FABRICATED <input type="checkbox"/>	OTHER <input type="checkbox"/>	INSPECTION HOLD PT MT OF FINAL WELD PST
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SURFACE IS SUITABLE FOR SCHEDULED	MT <input checked="" type="checkbox"/>	UT <input checked="" type="checkbox"/>	EXAMINATION	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
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SKETCH OR OTHER DETAIL ATTACHED	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	WEIGHT	10 LB. <input checked="" type="checkbox"/>	40 LB <input type="checkbox"/>
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PROCEDURE # VALIDATION # POLE SPACING	<u>QCI-50.20 204</u> <u>N/A</u> <u>4"-6"</u>	EQUIPMENT IDENTIFICATION AC <input checked="" type="checkbox"/> HWAC <input type="checkbox"/>	S#354
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EVALUATION	
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LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT, REWORK, REJECT AND COMMENT AS NECESSARY.)
1 23-I-F59R			MT OF FINAL WELD REVEALED NO
2			RECORDABLE INDICATIONS - ACCEPT
3			
4			REF. FRN* PDC-93-10I-12 - ISI PREP
5			
6			
7			

D. CRITERIA	ASME SECT. XI 1980/W 80 ADD.
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E. ATTEST	COMPONENTS <input checked="" type="checkbox"/> MEET / DO NOT MEET ASME SECTION XI ACCEPTANCE CRITERIA, FURTHER EVALUATION REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
-----------	--

RESponsible Certified Personnel	Level	Date
<u>[Signature]</u>	III	5/13/95

BECCO LEVEL III	DATE	ANTI	DATE
<u>[Signature]</u>	5/16/95	<u>[Signature]</u>	5/18/95

95-P-648

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION

DATA SHEET #
~~12-BH-PT-005B~~
REV 5/16/95

ITEM ID/PIECE SEC 12-I-10R 12R-0-10R	SYSTEM LOCATION RWCU DRYWELL	MR# 19401363-01	ISO/DWG NUMBER 151-1-12-1 ^{REV 5}
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A. MATERIAL	TYPE <u>STAINLESS STEEL</u>		
GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/> OTHER <u>VALVE NO-1201-2</u>
FABRICATION PROCESS	CAST <input type="checkbox"/>	WORKED <input type="checkbox"/>	WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
		INSPECTION HOLD POINT <u>PT OF FINAL WELD PSI</u>	

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A F</u>	PROCEDURE # <u>QC1 50.10 REV. 05</u>	PT VALIDATION # <u>N/A</u>
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SURFACE IS SUITABLE FOR SCHEDULED PT UT EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	324154
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	324154
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	431156
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	324154

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-I-10R</u>			PT OF FINAL WELD AFTER ISI PREP
2.			REVEALED NO RECORDABLE INDICATIONS -
3.	<u>N/A</u>		ACCEPT
4.			REF. FRM# PDC-93-10C-10

D. CRITERIA ASME SECT. XI 1980 / W 80 ADD.

E. ATTEST

COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

James Matthews RESPONSIBLE CERTIFIED PERSONNEL II / II LEVEL 5/8/95 DATE

B Perkins 5/16/95 DATE VIKSK AN II 5/17/95 DATE

BOSTON EDISON RECORD OF LIQUID PENETRANT EXAMINATION ^{FILE} DATA SHEET # ~~LEBHI-PE-0064~~ 5/16/95

ITEM ID/PIECE <u>12-I-11R 12R-0-11R</u>	SYSTEM LOCATION <u>RWCU DRYWELL</u>	MR# <u>19401363-01</u>	ISO/DWG NUMBER <u>151-1-12-1 ^RYES</u>
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A. MATERIAL	TYPE <u>STAINLESS STEEL</u>
GEOMETRY	PIPE <input checked="" type="checkbox"/> PLATE <input type="checkbox"/> ROD <input type="checkbox"/> OTHER <u>VALVE MO-1201-2</u>
FABRICATION PROCESS	CAST <input type="checkbox"/> WORKED <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> INSPECTION HOLD POINT <u>PT OF FINAL WELD PSI</u>

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A F</u>	PROCEDURE # <u>QC150.10 REV.05</u>	PT VALIDATION # <u>N/A</u>
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SURFACE IS SUITABLE FOR SCHEDULED PT UT EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DABL-CHEK SHERWIN	DR-60	324154
2. PENETRANT	DABL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DABL-CHEK SHERWIN	DR-60	324154
4. DEVELOPER	DABL-CHEK SHERWIN	D-100	431156
5. POST EXAM CLEANER	DABL-CHEK SHERWIN	DR-60	324154

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-I-11R</u>			PT OF FINAL WELD AFTER ISI PREP
2.			REVEALED NO RECORDABLE INDICATIONS -
3.	<u>N/A</u>		ACCEPT
4.			REF. FRN# PDC-93-10C-10

D. CRITERIA ASME SECT. XI 1980 / W 80 ADD.

E. ATTEST COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 5/18/95 DATE

[Signature] 1 5/16/95 [Signature] 1 5/17/95 DATE

95-P-651

BOSTON EDISON RECORD OF LIQUID PENETRANT EXAMINATION ^{THE} DATA SHEET # ~~12BHL-PT-0012~~

ITEM ID/PIECE <u>12-0-32R1</u>	SYSTEM LOCATION <u>RWCU HT. XCHGR. RM.</u>	MR# <u>19401361-01</u>	ISO/DWG NUMBER <u>151-1-12-1 B/ES</u>
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A. MATERIAL TYPE STAINLESS STEEL

GEOMETRY PIPE PLATE ROD OTHER

FABRICATION PROCESS CAST WORKED WELDED OTHER INSPECTION HOLD POINT PT OF FINAL WELD PSI

B. PROCEDURE TEMPERATURE (IF NOT BETWEEN 60-125 F) N/A F PROCEDURE # QC150.10 REV.05 PT VALIDATION # N/A

SURFACE IS SUITABLE FOR SCHEDULED PT ~~W/~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	324154
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	324154
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	431166
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	324154

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-0-32R1</u>			<u>PT OF FINAL WELD REVEALED NO</u>
2.			<u>RECORDABLE INDICATIONS -</u>
3.	<u>N/A</u>		<u>ACCEPT</u>
4.			

D. CRITERIA ASME SECT. XI 1980/W80 ADD.

E. ATTEST COMPONENTS (MEET) DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 4/30/95 DATE

B.P. Pappas 1 5/16/95 [Signature] 1 5/17/95
RECO LEVEL III DATE DATE

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION

DATA SHEET #
~~LEBHN-PT-0013~~

ITEM ID/PIECE <u>23-T-F13R</u>	SYSTEM LOCATION <u>HPCI</u> <u>B'RHRYLVDM.</u>	MR# <u>19401762-01</u>	ISO/DWG NUMBER <u>LSI-1-23-1 R/SL</u>
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A. MATERIAL	TYPE <u>CARBON STEEL</u>
GEOMETRY	PIPE <input checked="" type="checkbox"/> PLATE <input type="checkbox"/> ROD <input type="checkbox"/> OTHER <input type="checkbox"/>
FABRICATION PROCESS	CAST <input type="checkbox"/> WORKED <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> INSPECTION HOLD POINT <u>PT OF FINAL WELD PST</u>

B. PROCEDURE <u>QC1 50.10 REV.05</u>	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A F</u>	PROCEDURE # <u>QC1 50.10 REV.05</u>	PT VALIDATION # <u>N/A</u>
---	---	--	-------------------------------

SURFACE IS SUITABLE FOR SCHEDULED PT ~~W/PT~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DURL-CHEK SHERWIN	DR-60	32464
2. PENETRANT	DURL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DURL-CHEK SHERWIN	DR-60	32454
4. DEVELOPER	DURL-CHEK SHERWIN	D-100	431EG
5. POST EXAM CLEANER	DURL-CHEK SHERWIN	DR-60	32454

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>23-T-F13R</u>			<u>PT OF FINAL WELD REVEALED</u>
2.			<u>NO RECORDABLE INDICATIONS</u>
3.	<u>N/A</u>		<u>ACCEPT</u>
4.			

D. CRITERIA ASME SECT XI 1980/WFO ADD.

E. ATTEST

COMPONENTS (MEET) DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 4/13060 DATE

[Signature] 1 5/16/95 DATE [Signature] 1 5/18/95 DATE

95-P-653

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION

DATA SHEET #
5/16/95
~~LEBHN-PT-0028~~

ITEM ID/PIECE <u>23-0-22R</u>	SYSTEM <u>HPCI</u>	MR# <u>19401362-01</u>	ISO/DWG NUMBER <u>LSI-1-23-1 R/EI</u>
LOCATION <u>B'RHR.VLV.DM.</u>			

A. MATERIAL	TYPE <u>CARBON STEEL</u>		
GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/> OTHER <input type="checkbox"/>
FABRICATION PROCESS	CAST <input type="checkbox"/>	WORKED <input type="checkbox"/>	WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
		INSPECTION HOLD POINT <u>PT OF FINAL WELD PSI</u>	

E. PROCEDURE <u>QC1 50.10 REV.05</u>	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A</u> F	PROCEDURE # <u>QC1 50.10 REV.05</u>	PT VALIDATION # <u>N/A</u>
---	--	--	-------------------------------

SURFACE IS SUITABLE FOR SCHEDULED PT ~~W/PT~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	324E4
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	324E4
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	431E6
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	324E4

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>23-0-22R</u>			PT OF FINAL WELD REVEALED
2.			NO RECORDABLE INDICATIONS
3.	<u>N/A</u>		ACCEPT
4.			

D. CRITERIA ASME SECT. XI 1980/WFO ADD.

E. ATTEST

COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA.
FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 4/130/95 DATE

[Signature] 5/16/95 DATE [Signature] 5/18/95 DATE

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION

DATA SHEET #
BP ~~1524-PT-013A~~

ITEM ID/PIECE <u>WELD # 12-1-25R</u>	SYSTEM LOCATION <u>12/RWCH FAB SHOP</u>	MR# <u>19302083-03</u>	ISO/DWG NUMBER <u>M1002C-274-1 2/03</u>
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A. MATERIAL	TYPE <u>STAINLESS STEEL</u>		
GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/> OTHER <u>4" Ø</u>
FABRICATION PROCESS	CAST <input type="checkbox"/>	WORKED <input type="checkbox"/>	WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
			INSPECTION HOLD POINT <u>PT OF FINAL WELD</u>

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A</u> F	PROCEDURE # <u>QC1 50.10 REV 05</u>	PT VALIDATION # <u>N/A</u>
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SURFACE IS SUITABLE FOR SCHEDULED PT ~~PT~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	324E4
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	324E4
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	431E6
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	324E4

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION, ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-1-25R</u>			PT OF FINAL WELD REVEALED
2.			NO RECORDABLE INDICATIONS.
3.	<u>N/A</u>		ACCEPT
4.			

D. CRITERIA
ASME SECT. XI 1980/W1980 ADD.

E. ATTEST
COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

J. Matthews II / II 4/3/95
RESPONSIBLE CERTIFIED PERSONNEL LEVEL DATE

(Go) M. Perkins

BP Perkins 4/28/95 15/118/95
DATE DATE

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION DATA SHEET # BP 12-1-20R

ITEM ID/PIECE <u>WELD # 12-1-20R</u>	SYSTEM LOCATION <u>12 RWCU A VLV. Rm.</u>	MR# <u>19302083-03</u>	ISO/DWG NUMBER <u>M1003C-274-1 2/03</u>
---	--	---------------------------	--

A. MATERIAL	TYPE <u>STAINLESS STEEL</u>		
GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/> OTHER <u>FLOW-4"Ø</u>
FABRICATION PROCESS	CAST <input type="checkbox"/>	WORKED <input type="checkbox"/>	WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
		INSPECTION HOLD POINT <u>PT OF FINAL WELD</u>	

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A</u> F	PROCEDURE # <u>QCL 50.10 REV 05</u>	PT VALIDATION # <u>N/A</u>
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SURFACE IS SUITABLE FOR SCHEDULED PT ~~NUT~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	32454
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	32454
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	43156
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	32454

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION, ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-1-20R</u>			<u>PT OF FINAL WELD REVEALED</u>
2.			<u>NO DISCORDABLE INDICATIONS</u>
3.	<u>N/A</u>		<u>ACCEPT</u>
4.			

D. CRITERIA ASME SECT. XI 1980/W1980 ADD.

E. ATTEST COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 4/15/95 DATE

[Signature]

B Perkins / 4/28/95 DATE / [Signature] / 5/18/95 DATE

95-P-730

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION

DATA SHEET #
BP ~~11224~~ PT-012A

ITEM ID/PIECE <u>WELD # 12-I-22R</u>	SYSTEM LOCATION <u>12/RWCU FAB SHOP</u>	MR# <u>193020X3-03</u>	ISO/DWG NUMBER <u>MI00BC-274-1 2/03</u>
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A. MATERIAL	TYPE <u>STAINLESS STEEL</u>		
GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/> OTHER <u>4" Ø</u>
FABRICATION PROCESS	CAST <input type="checkbox"/> WORKED <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	INSPECTION HOLD POINT <u>PT OF FINAL WELD</u>	

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A</u> F	PROCEDURE # <u>QCI 50.10 REV 05</u>	PT VALIDATION # <u>N/A</u>
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SURFACE IS SUITABLE FOR SCHEDULED PT ^{4.25} UT EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	32454
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	32454
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	43116
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	32454

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-I-22R</u>			<u>PT OF FINAL WELD REVEALED</u>
2.			<u>NO RECORDABLE INDICATIONS.</u>
3.	<u>N/A</u>		<u>ACCEPT</u>
4.			

D. CRITERIA ASME SECT. XI 1980/W1980 ADD.

E. ATTEST

COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 4/3/95 DATE

(GE) M. [Signature]

BP Perkins / 4/28/95 DATE [Signature] / 5/18/95 DATE

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION BP DATA SHEET # ~~WENZY PT 010A~~

ITEM ID/PIECE WELD # 12-T-15R (PIPE)	SYSTEM LOCATION 12/RWCU FAB SHOP	MR# 19302083-03	ISO/DWG NUMBER M100BC-274-1 2/03
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A. MATERIAL	TYPE STAINLESS STEEL
GEOMETRY	PIPE <input checked="" type="checkbox"/> PLATE <input type="checkbox"/> ROD <input type="checkbox"/> OTHER 4" Ø
FABRICATION PROCESS	CAST <input type="checkbox"/> WORKED <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> INSPECTION HOLD POINT PT OF FINAL WELD

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) N/A F	PROCEDURE # QC150.10 REV.05	PT VALIDATION # N/A
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SURFACE IS SUITABLE FOR SCHEDULED PT ~~UT~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	324154
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	324154
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	43156
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	324154

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. 12-T-15R			PT OF FINAL WELD REVEALED
2.			NO RECORDABLE INDICATIONS.
3.	N/A		ACCEPT
4.			

D. CRITERIA ASME SECT. XI 1980/W 1980 ADD.

E. ATTEST COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

James P. Matthews II/II 04/01/95
RESPONSIBLE CERTIFIED PERSONNEL LEVEL DATE

(GO) M. Flannery

B. Perkins 4/28/95 Chan 5/18/95
DATE DATE

BOSTON EDISON
RECORD OF LIQUID PENETRANT EXAMINATION DATA SHEET #
RP-~~WENDY PT 027A~~

ITEM ID/PIECE <u>WELD # 12-T-16R</u>	SYSTEM <u>12 RWCU</u>	MR# <u>19302083-03</u>	ISO/DWG NUMBER <u>M1002C-274-1 2/03</u>
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A. MATERIAL	TYPE <u>STAINLESS STEEL / CARBON STEEL</u>		
GEOMETRY	PIPE <input checked="" type="checkbox"/>	PLATE <input type="checkbox"/>	ROD <input type="checkbox"/> OTHER <u>6" Ø</u>
FABRICATION PROCESS	CAST <input type="checkbox"/>	WORKED <input type="checkbox"/>	WELDED <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
			INSPECTION HOLD POINT <u>PT OF FINAL WELD PSI</u>

B. PROCEDURE	TEMPERATURE (IF NOT BETWEEN 60-125 F) <u>N/A</u> F	PROCEDURE # <u>QCL 50.10 REV 05</u>	PT VALIDATION # <u>N/A</u>
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SURFACE IS SUITABLE FOR SCHEDULED PT ~~N/A~~ EXAMINATION YES NO

INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH #
1. PRE-CLEANER	DUBL-CHEK SHERWIN	DR-60	32454
2. PENETRANT	DUBL-CHEK SHERWIN	DP-40	23A1
3. REMOVER	DUBL-CHEK SHERWIN	DR-60	32454
4. DEVELOPER	DUBL-CHEK SHERWIN	D-100	43.16
5. POST EXAM CLEANER	DUBL-CHEK SHERWIN	DR-60	32454

SKETCH OR OTHER DETAILS ATTACHED YES NO

C. EVALUATION
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. USE ADDITIONAL SHEETS AS NECESSARY.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION. ACCEPT/REJECT AND COMMENT AS NECESSARY
1. <u>12-T-16R</u>			<u>PT OF FINAL WELD REVISITED</u> <u>NO RECORDEABLE INDICATIONS.</u>
3.	<u>N/A</u>		<u>ACCEPT</u>
4.			

D. CRITERIA ASME SECT. XI 1980/W 1980 ADD.

E. ATTEST
COMPONENTS MEET DO NOT MEET ASME SECT. XI CRITERIA. FURTHER EVALUATION REQUIRED YES NO

[Signature] RESPONSIBLE CERTIFIED PERSONNEL II/II LEVEL 4/18/95 DATE

[Signature] 4/28/95 DATE [Signature] 5/17/95 DATE

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
SHROUD HOLD DOWN BOLTS

APRIL 25, 1995

cc: C. Garrow (BECO)
B. Perkins (BECO)
R. Sheridan (BECO)

Boston Edison Company
Pilgrim Nuclear Power Station
Plymouth MA 02360

SUBJECT: ULTRASONIC EXAMINATION - SHROUD HEAD HOLD DOWN BOLTING
PILGRIM NUCLEAR POWER STATION

SUMMARY

During Pilgrim Nuclear Power Station Refueling Outage (PNPS) number ten, General Electric Nuclear Energy (GENE) examination personnel performed an ultrasonic (UT) examination on all 48 shroud head hold down bolts attached to the steam separator for indications of cracking. Of the 48 bolts examined, no indications of cracking were detected.

INTRODUCTION

Over the years, cracking has been detected in the shroud head hold down bolting associated with Boiling Water Reactors (BWR). The cracking in these bolts (BWR 4's and earlier) has been confined to a creviced region created by a 304 stainless steel ring welded to an alloy 600 series inconel shaft. Typically, this cracking is IGSCC in nature and is located approximately 9.5 inches up from the bottom end of the shaft.

DISCUSSION

The steam separator, because of radiation activation, and contamination, is stored underwater (storage pool) for shielding purposes when removed from the reactor pressure vessel. To examine the shroud head hold down bolting attached to the steam separator, remote ultrasonic techniques (UT) are used. The examination of the 48 shroud hold down bolts were completed, using a movable pick located over the equipment storage pool and the steam separator. The UT fixture by design is shaped like a shoe and is attached to 30 feet of one inch diameter aluminum poles. The UT fixture with an ultrasonic transducer mounted on its bottom end, looking up, is slipped over the bottom end of the bolt, an air cylinder is then actuated, locking the UT fixture to the bolt to be examined. Bolt interrogation is then commenced, by ultrasonic test instrumentation.

PROCEDURE USED

GE Nuclear Energy Test Procedure UT-PIL-501Vi Rev. 0, "UT Procedure For Remote Examination of Shroud Head Hold Down Bolting" (PNPS Temporary Procedure No. TP95-082).

EXAMINATION PERSONNEL

M. Stamm Level III
J. Gebhart Level I
R. Sheridan Level I


EQUIPMENT

1. Special UT fixture (patented) for shroud head hold down bolts.
2. Staveley Sonic 136 ultrasonic instrument.
3. KB-Aerotech 0.5 inch. flat focus, immersion, 2.25 MHz UT transducer
4. 600 series Inconel calibration reference standard containing a 5% of volume EDM notch. This reference block is used to calibrate the test system.
5. Water and Ultra-Gel used as couplant.

TEST RESULTS

All 48 shroud head hold down bolts attached to the PNPS steam separator were examined ultrasonically for indications of cracking. No indications of cracking were detected in any of the 48 bolts examined.

All data and supporting documents pertaining to these examinations are included as attachments to this report.



UT Level III, GE-Nuclear Energy

GENERAL ELECTRIC
SHROUD HEAD HOLD DOWN BOLT EXAMINATION DATA SHEET

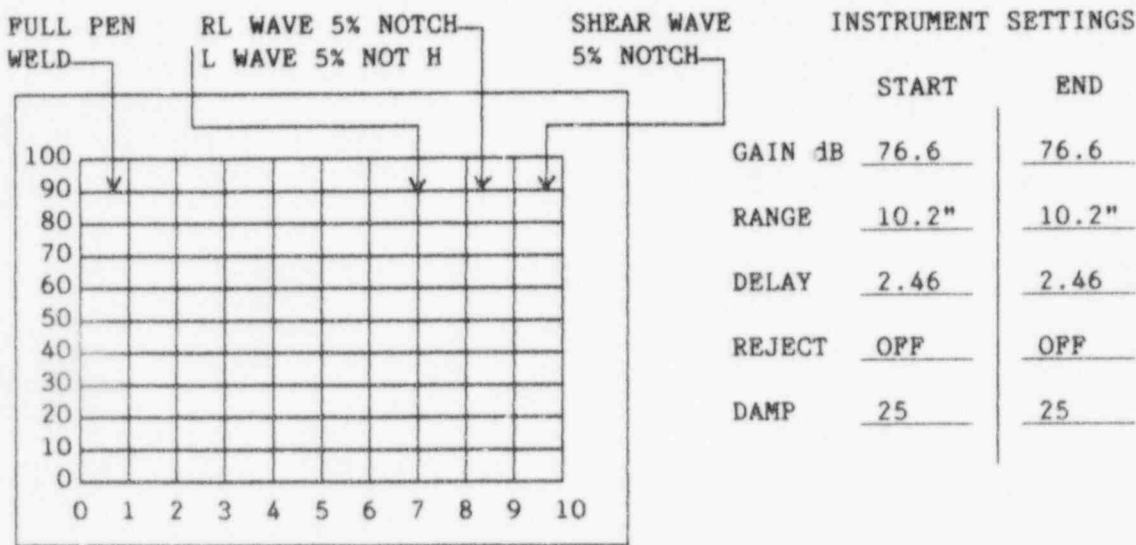
SITE Pilgrina UNIT 1 DATE 4/25/95 DATA SHEET # 1
 EXAMINER Michael Stamm LEVEL III EXAMINATION FREQUENCY 2.25 MHz

BOLT NUMBER	BACK ECHO	MP	AMP	MP	AMP	MP	AMP	COMMENTS
1	YES	N/A	N/A	N/A	N/A	N/A	N/A	OK
2	YES							OK
3	YES							OK
4	YES							OK
5	YES							OK
6	YES							OK
7	YES							OK
8	YES							OK
9	YES							OK
10	YES							OK
11	YES							OK
12	YES							OK
13	YES							OK
14	YES							OK
15	YES							OK
16	YES							OK
17	YES							OK
18	YES							OK
19	YES							OK
20	YES							OK
21	YES							OK
22	YES							OK
23	YES							OK
24	YES							OK
25	YES							OK
26	YES							OK
27	YES							OK
28	YES							OK
29	YF							OK
30	YES							OK
31	YES							OK
32	YES							OK
33	YES							OK
34	YES							OK
35	YES							OK
36	YES							OK
37	YES							OK
38	YES							OK
39	YES							OK
40	YES							OK
41	YES							OK
42	YES							OK
43	YES							OK
44	YES							OK
45	YES							OK
46	YES							OK
47	YES							OK
48	YES							OK

ULTRASONIC EXAMINATION CALIBRATION SHEET
SHROUD HEAD HOLD DOWN BOLTING

SITE Pilgrim UNIT #1 DATE 04/10/95 CAL. SHEET # 95-C-758
 PROCEDURE #TP95-082 REV. 0 Pg 1 of 2
 EXAMINER Michael Stamm LEVEL III
 DATA RECORDER R. Sheridan / J. Gephart LEVEL I

INSTRUMENT: MANUFACTURE Staveley MODEL Sonic 136
 SERIAL # 1152M CAL DATE MARCH 28, 1995
 TRANSDUCER: MANUFACTURE Aerotech TYPE GAMMA SERIAL # E03810
 SIZE 0.5" FREQ. 2.25 MHz ANGLE 0
 CABLES: TYPE RG58 LENGTH 70'
 CAL. STD. TYPE Inconel NUMBER TAPBE5-002 THK. 1.75"
 TYPE Inconel NUMBER TAPBE5-002 THK. 2.0"



ULTRASONIC SCOPE
SEE ATTACHED SCREEN PRINT

CALBRATION NOTCH 5% of T AMPLITUDE 80% FSH SWEEP 9.5"
 INITAL CALIBRATION 1410 FINAL CALIBRATION 1800

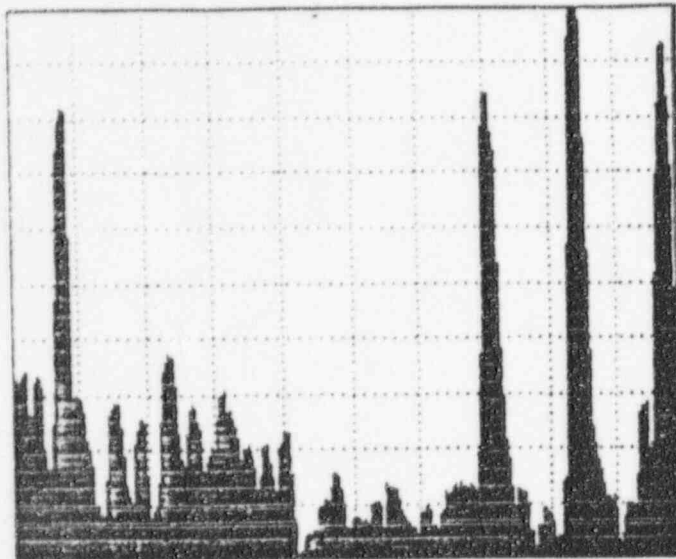
COMMENTS: NONE

SIGNATURE Michael Stamm TITLE LV III DATE 4/10/95

B. Perpensi BEC III 7-7-95

95-C-758
Pg 2 of 2

SCREEN PRINT CAL IN 4/10/95 / TIME 1410



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

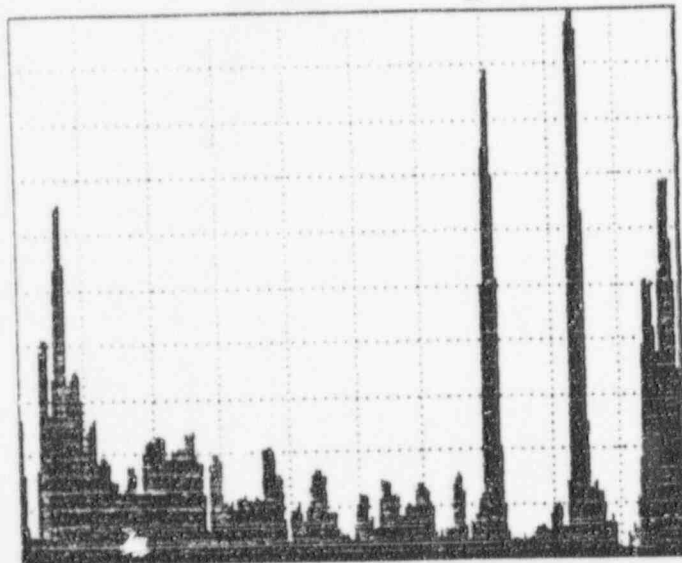
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.55in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT CAL OUT 4/10/95 / TIME 1800



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

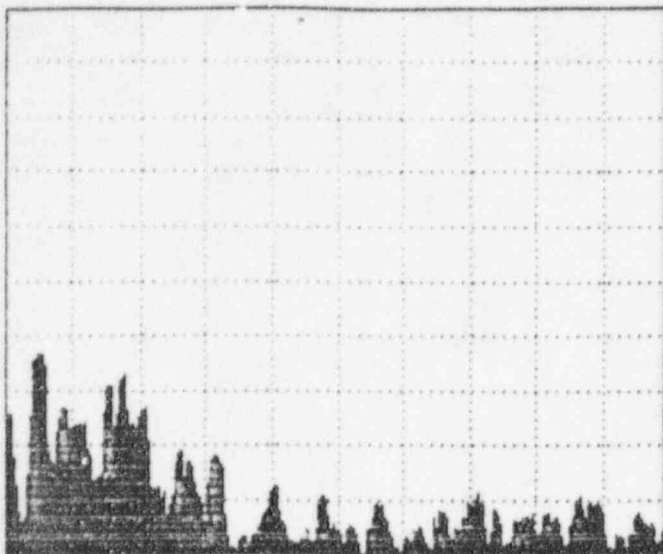
GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

95-E-759
Pg 1 of 32

SCREEN PRINT #1 4/10/95

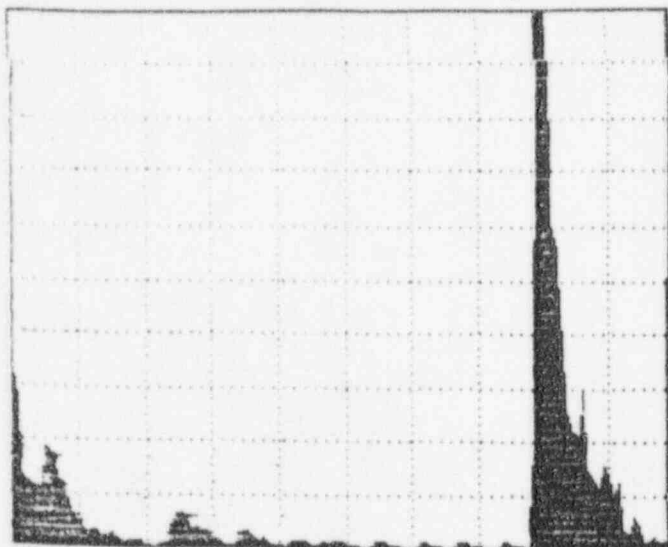


RANGE		RECEIVER	
RANGE	10.2in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	5.01in	DAMPING	25%
WIDTH	2.54in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	76.6dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	36.6

SCREEN PRINT #1



RANGE		RECEIVER	
RANGE	200in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	52.4in	DAMPING	25%
WIDTH	49.9in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

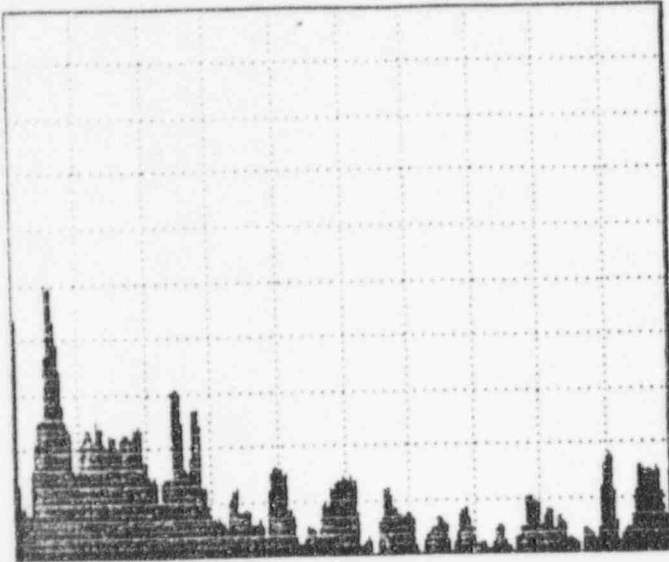
GAIN REFERENCE	
GAIN	76.6dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	36.6

REVIEWED DATA - Bolts 1-5, 8-21, 24-31
44-48

B. Perkins BEQ III 7-7-95

95-E-759
Pg 2 of 32

SCREEN PRINT #2 9/10/95

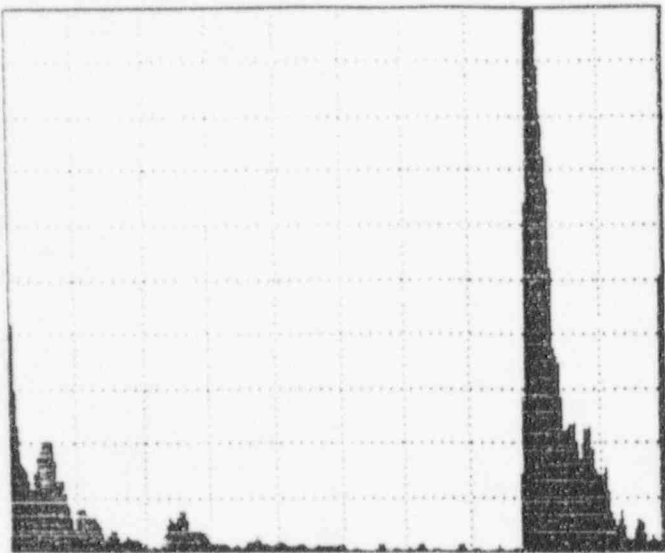


RANGE		RECEIVER	
RANGE	10.2in	GAIN	78.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	5.01in	DAMPING	25
WIDTH	2.54in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	78.6dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	36.6

SCREEN PRINT #2



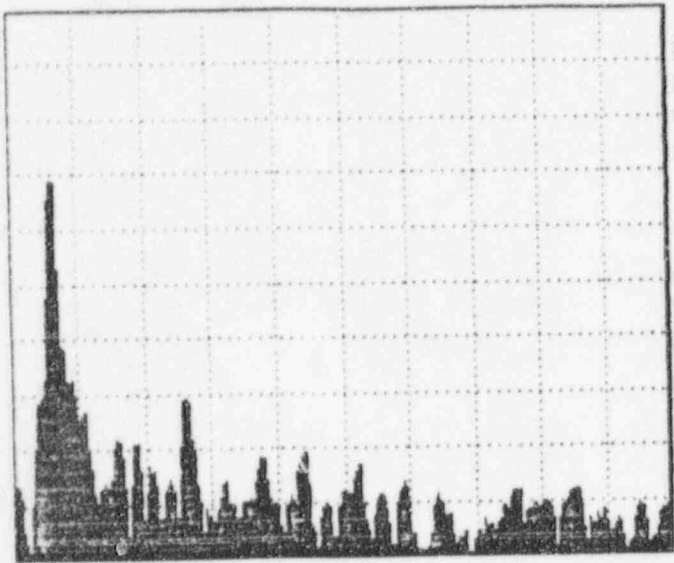
RANGE		RECEIVER	
RANGE	200in	GAIN	78.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	52.5in	DAMPING	25
WIDTH	50.0in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	78.6dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	36.6

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SCREEN PRINT # 3 4/10/95

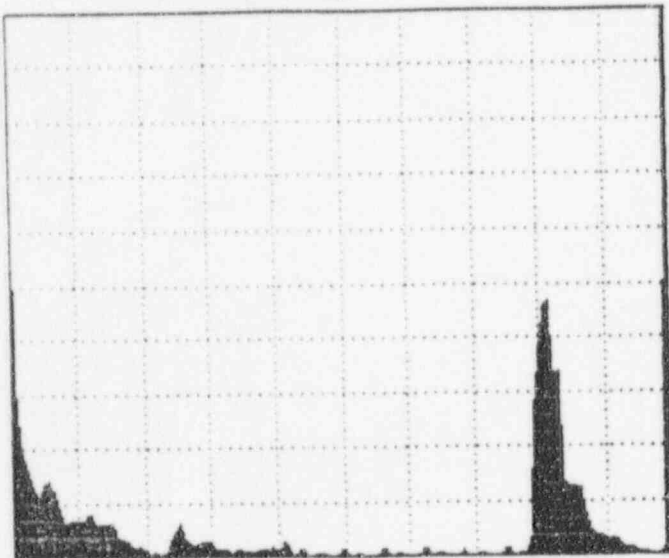


RANGE RECEPTOR
RANGE 10.2in GAIN 76.6dB
DELAY 2.46in DISPLAY FILT2
VEL 0.230 in/us FREQ 2.25MHz
UNITS in REJECT OFF

GATE PULSER
LEVEL OFF PULSE 222nS
POSN 5.02in DAMPING 25
WIDTH 2.56in PULSE ECHO
POLARITY + REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT # 3



RANGE RECEPTOR
RANGE 200in GAIN 76.6dB
DELAY 2.46in DISPLAY FILT2
VEL 0.230 in/us FREQ 2.25MHz
UNITS in REJECT OFF

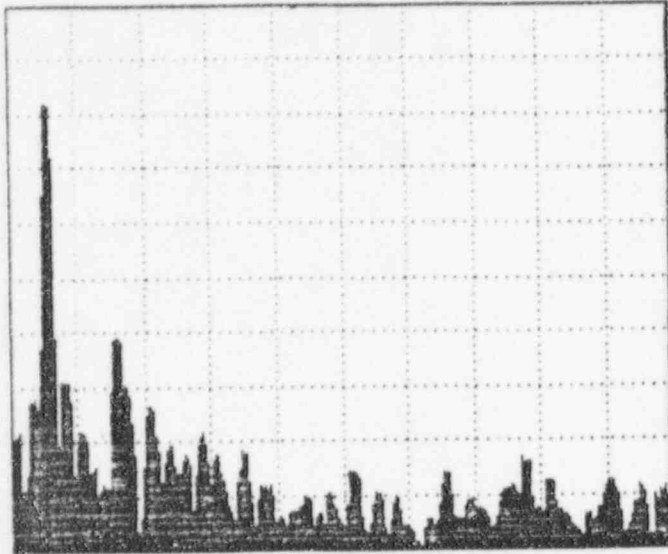
GATE PULSER
LEVEL OFF PULSE 222nS
POSN 52.5in DAMPING 25
WIDTH 50.0in PULSE ECHO
POLARITY + REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT

4
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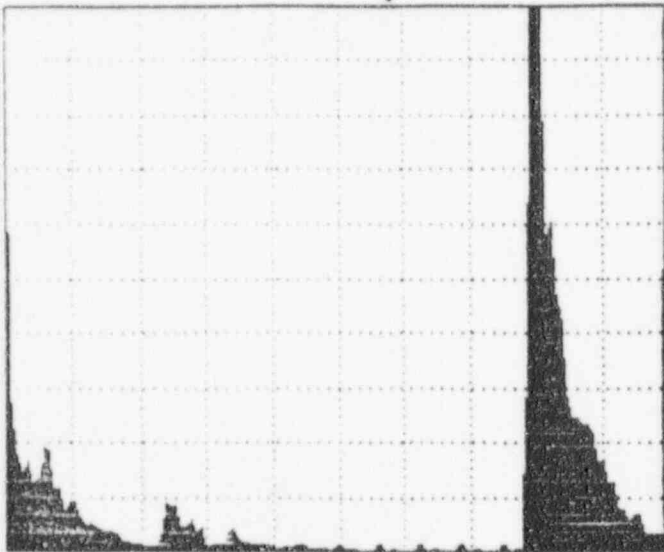
RANGE		RECEIVER	
RANGE	10.2in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	5.02in	DAMPING	25%
WIDTH	2.55in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	76.6dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	36.6

SCREEN PRINT

4

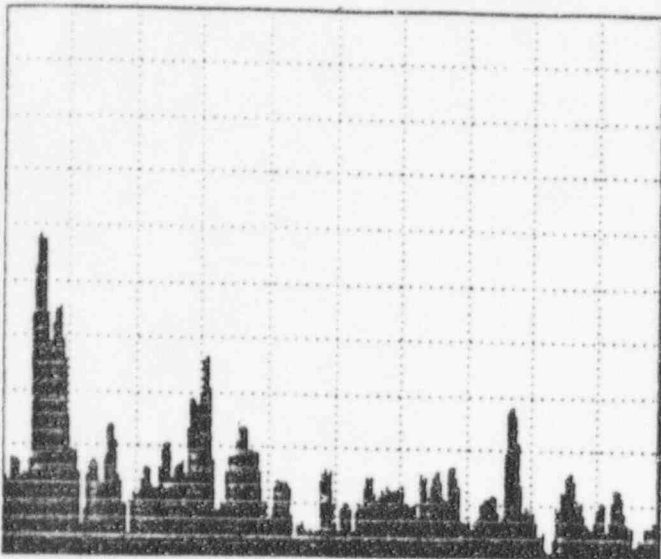


RANGE		RECEIVER	
RANGE	200in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	52.4in	DAMPING	25%
WIDTH	49.9in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	76.6dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	36.6

SCREEN PRINT #5 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

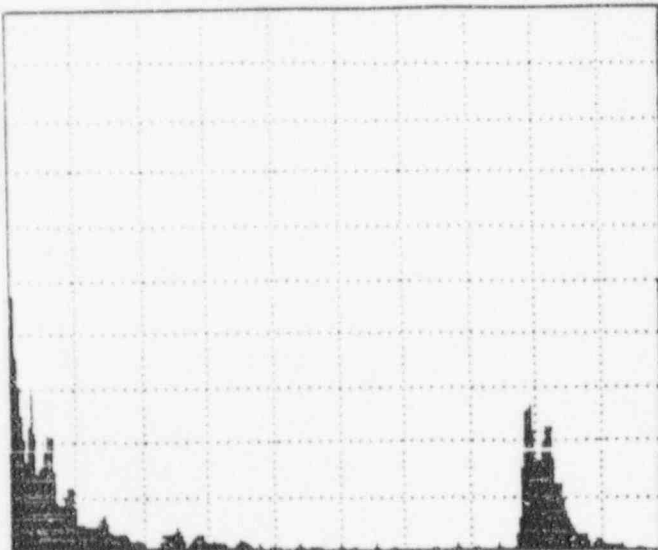
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #5



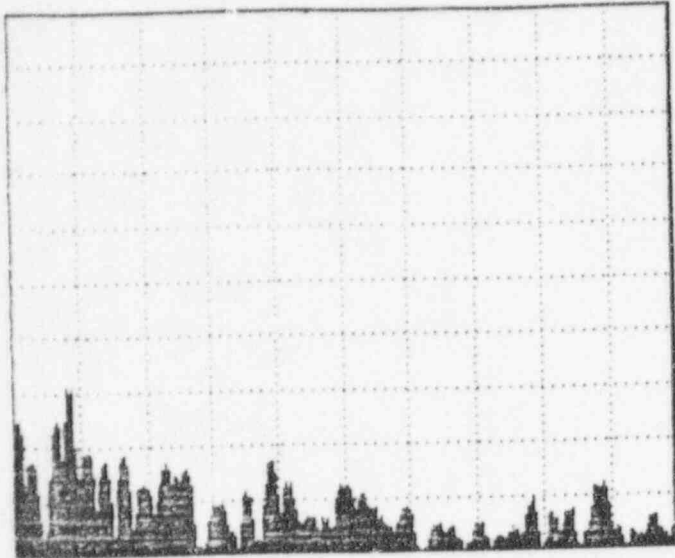
RANGE RECEIVER
RANGE 200in GAIN 76.6dB
DELAY 2.46in DISPLAY FILT2
VEL 0.230 in/us FREQ 2.25MHz
UNITS in REJECT OFF

GATE PULSER
LEVEL OFF PULSE 222ns
POSN 52.6in DAMPING 25
WIDTH 50.1in PULSE ECHO
POLARITY + REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT #8 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

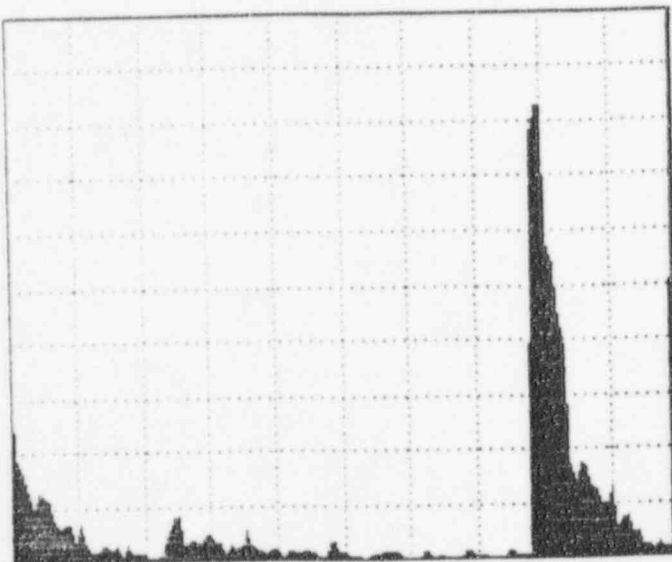
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #8



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.6in
WIDTH 50.1in
POLARITY +

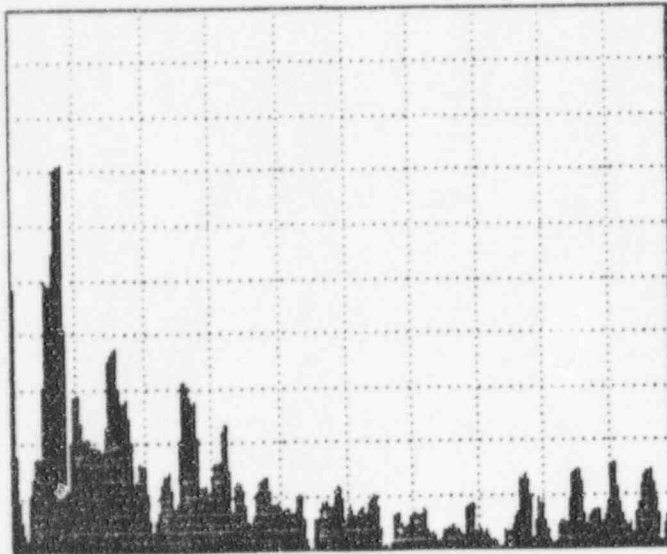
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #9 9/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

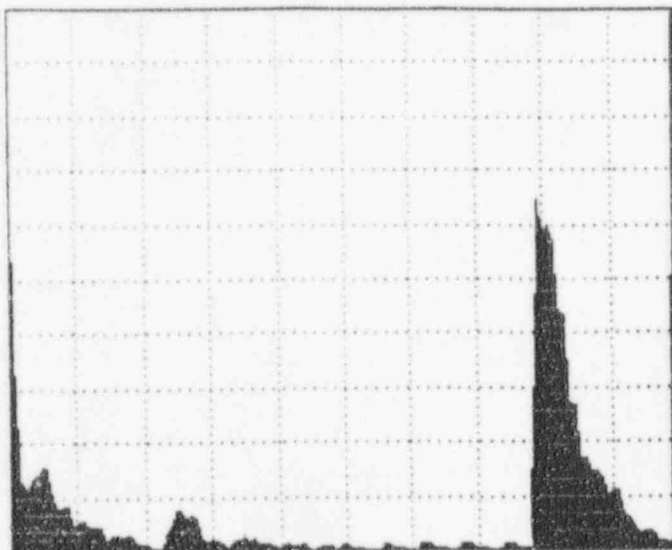
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #9



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

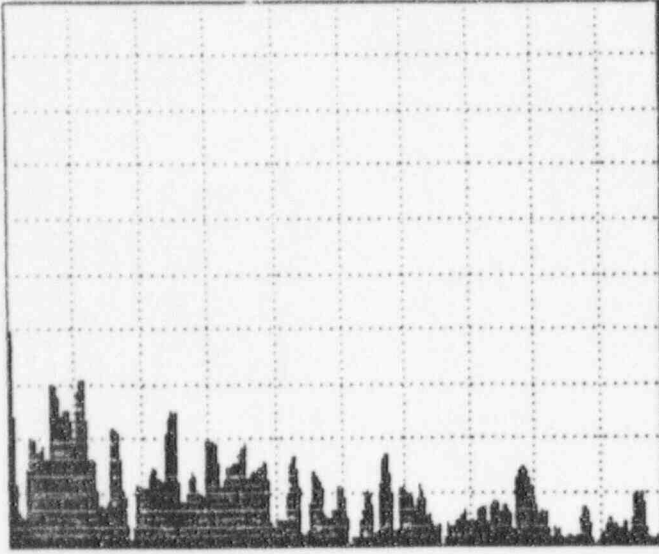
GATE
LEVEL OFF
POSN 52.6in
WIDTH 50.1in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT #10 9/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

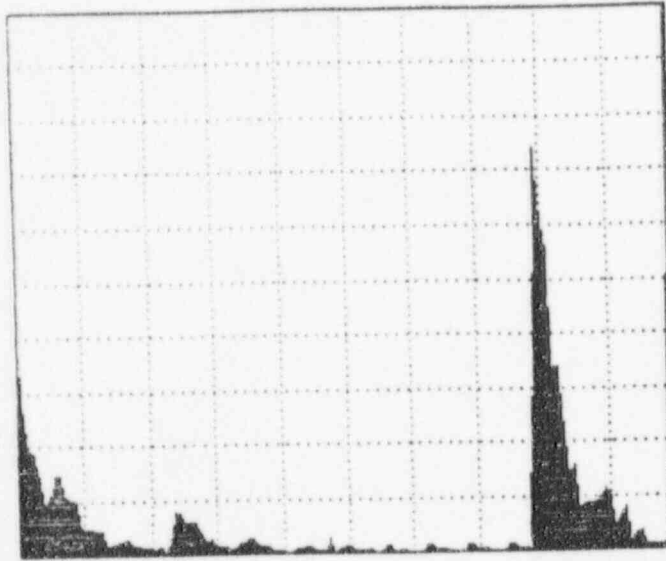
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25°
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #10



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

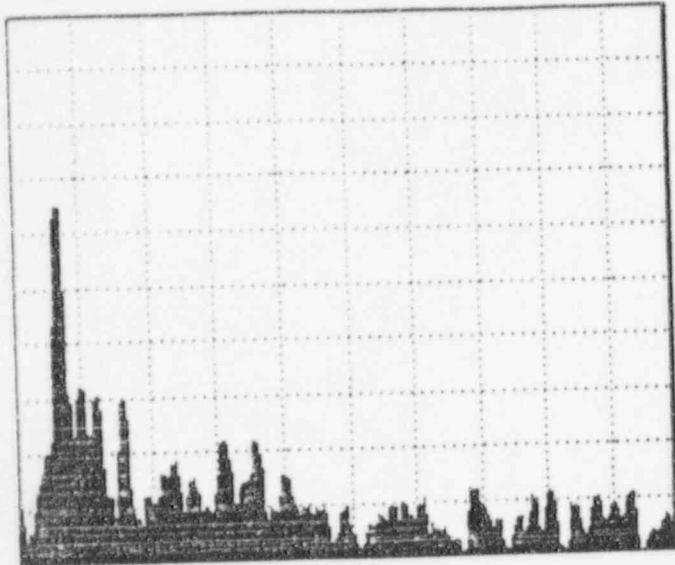
GATE
LEVEL OFF
POSN 52.6in
WIDTH 50.1in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25°
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT #11 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

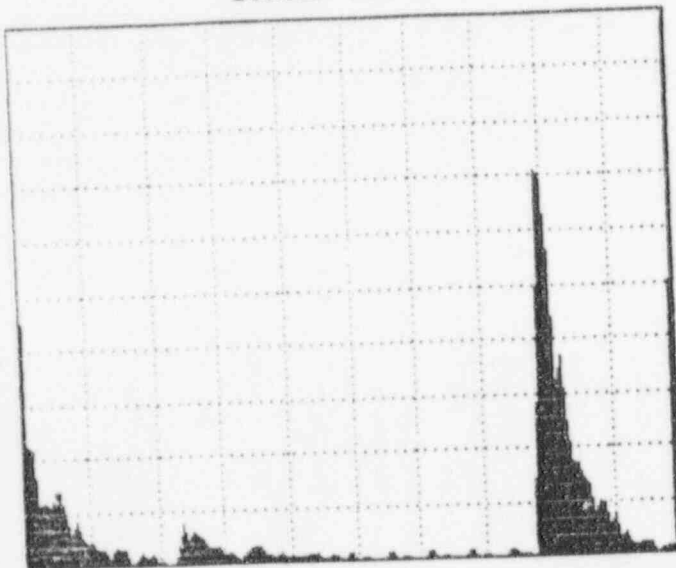
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 250
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #11



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

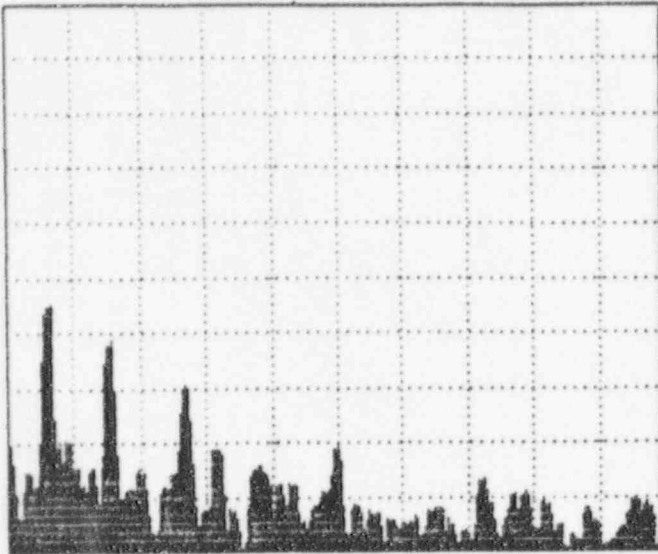
GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

PULSER
PULSE 222ns
DAMPING 250
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT #12 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

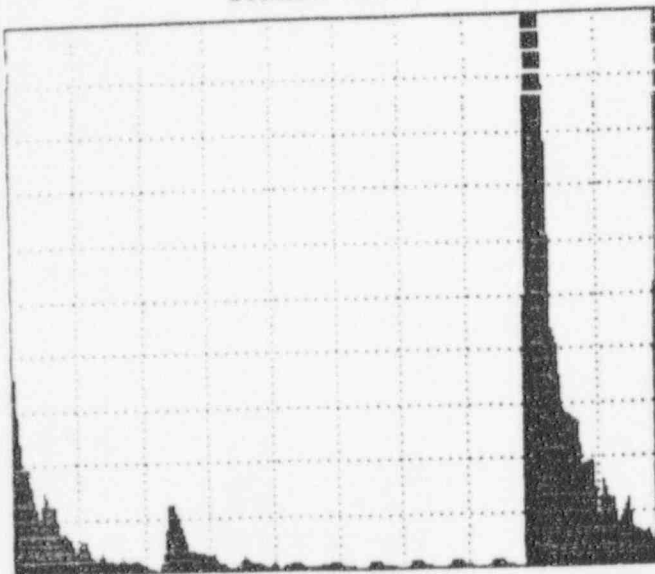
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 3.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25.0
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #12



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.4in
WIDTH 50.0in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

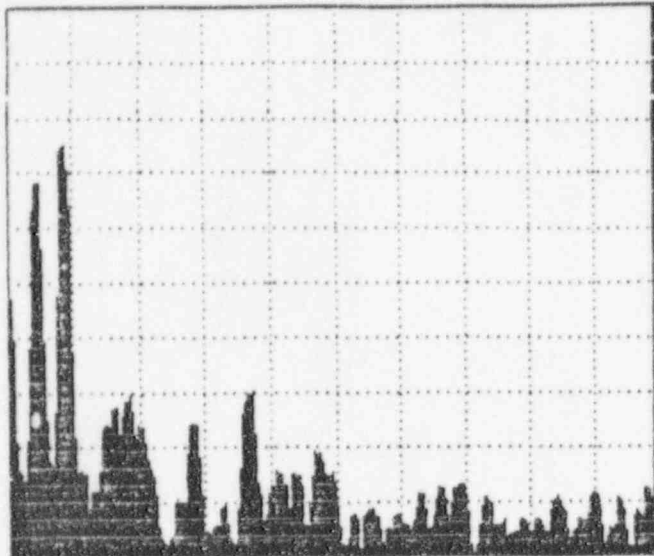
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25.0
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #13

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RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

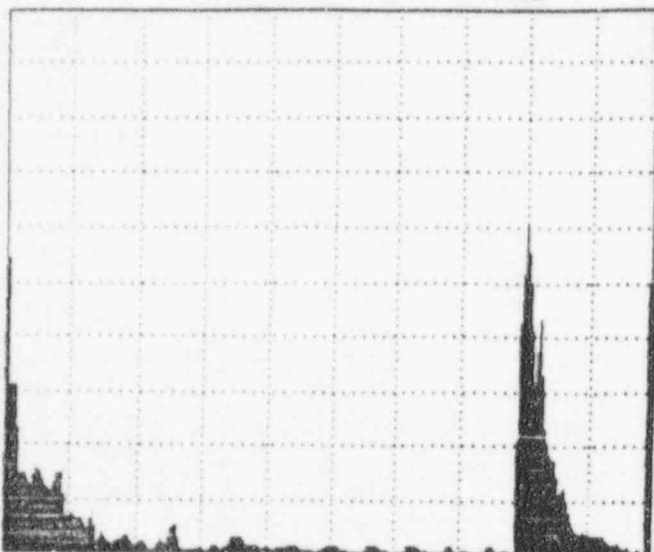
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #13



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.4in
WIDTH 50.0in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

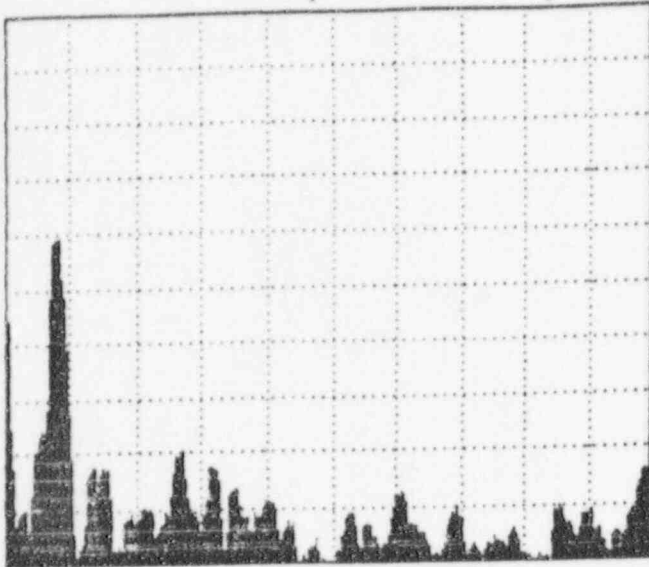
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #14

4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

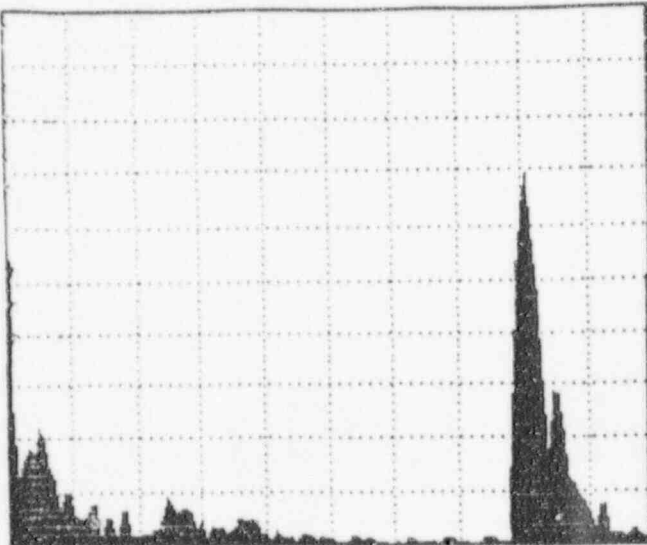
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #14

#14



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

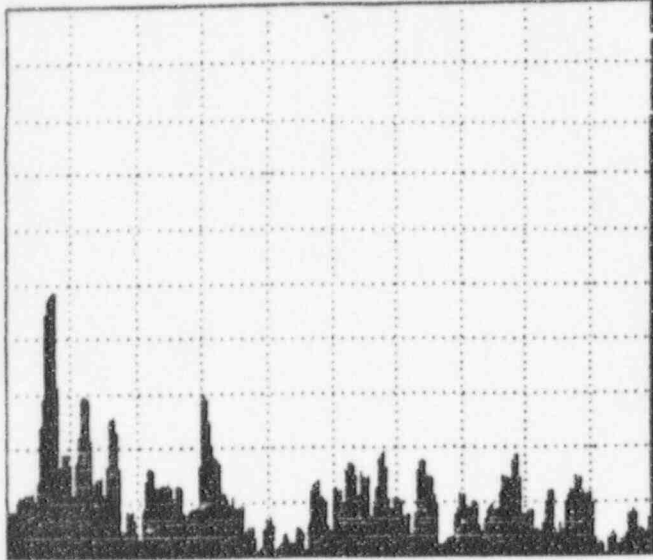
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

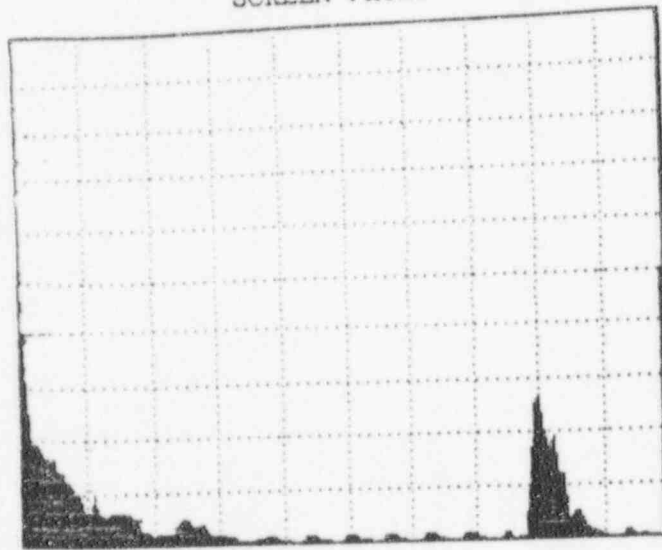
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SCREEN PRINT #15 4/10/95



<u>RANGE</u>		<u>RECEIVER</u>	
RANGE	10.2in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
<u>GATE</u>		<u>PULSER</u>	
LEVEL	OFF	PULSE	222ns
POSN	5.03in	DAMPING	25%
WIDTH	2.56in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz
<u>GAIN REFERENCE</u>			
GAIN	76.6dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	36.6		

SCREEN PRINT #15

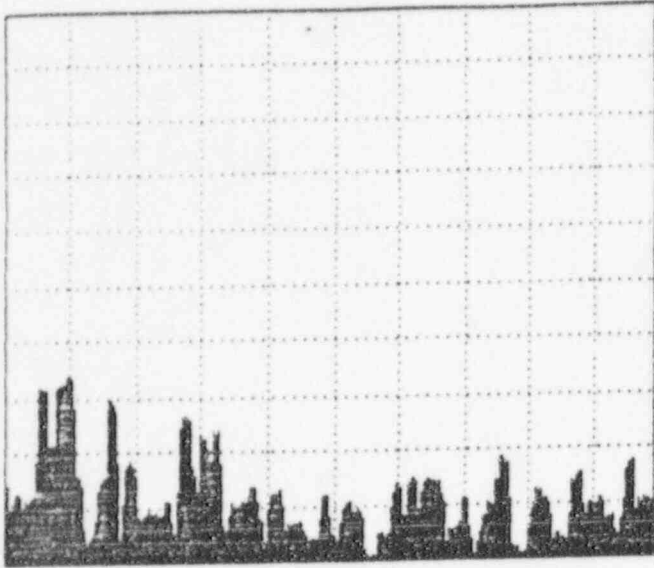


<u>RANGE</u>		<u>RECEIVER</u>	
RANGE	200in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
<u>GATE</u>		<u>PULSER</u>	
LEVEL	OFF	PULSE	222ns
POSN	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz
<u>GAIN REFERENCE</u>			
GAIN	76.6dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	36.6		

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SCREEN PRINT #16

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RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

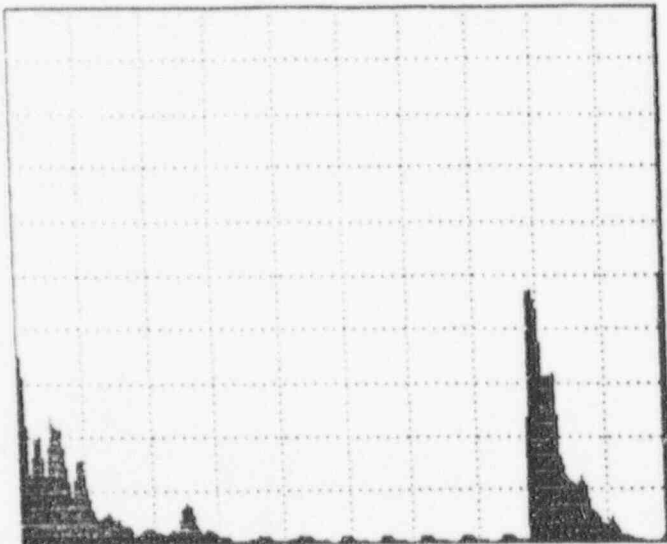
GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #16



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.6in
WIDTH 50.2in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

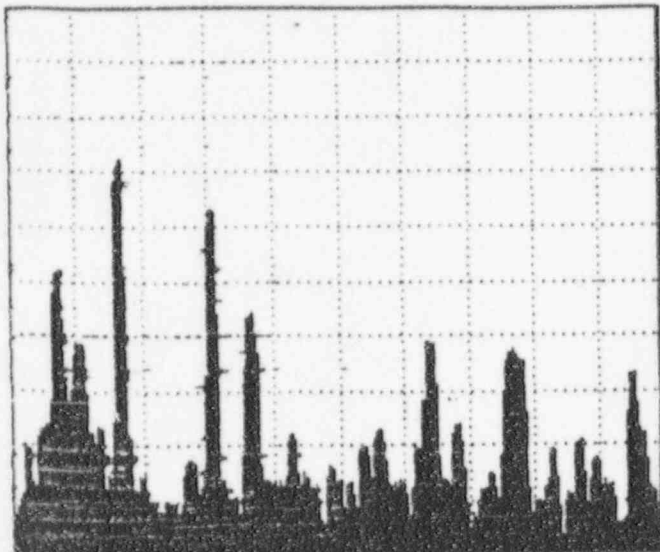
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #17 4/10/95



RANGE
 RANGE 10.2in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

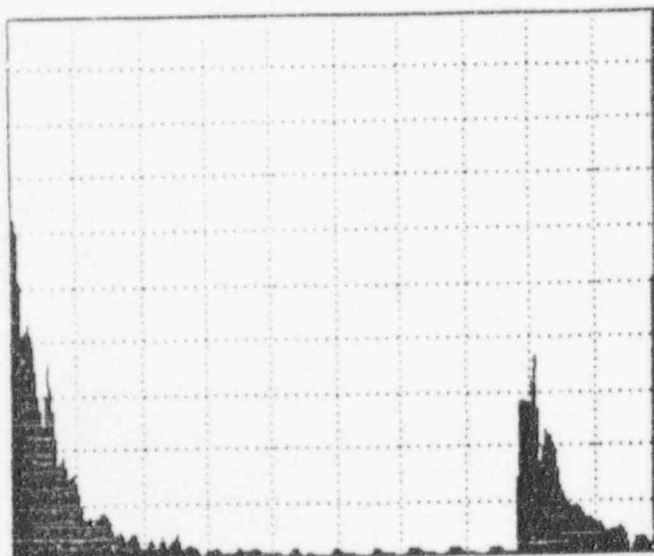
GATE
 LEVEL OFF
 POSN 5.02in
 WIDTH 2.56in
 POLARITY +

GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

PULSER
 PULSE 222ns
 DAMPING 25%
 PULSE ECHO
 REP RATE 1 KHz

SCREEN PRINT #17



RANGE
 RANGE 200in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

GATE
 LEVEL OFF
 POSN 52.6in
 WIDTH 50.2in
 POLARITY +

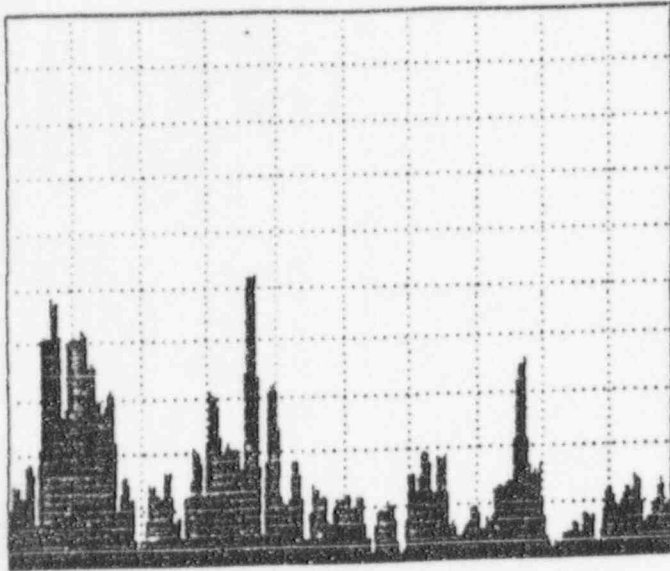
GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

PULSER
 PULSE 222ns
 DAMPING 25%
 PULSE ECHO
 REP RATE 250Hz

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SCREEN PRINT #18 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

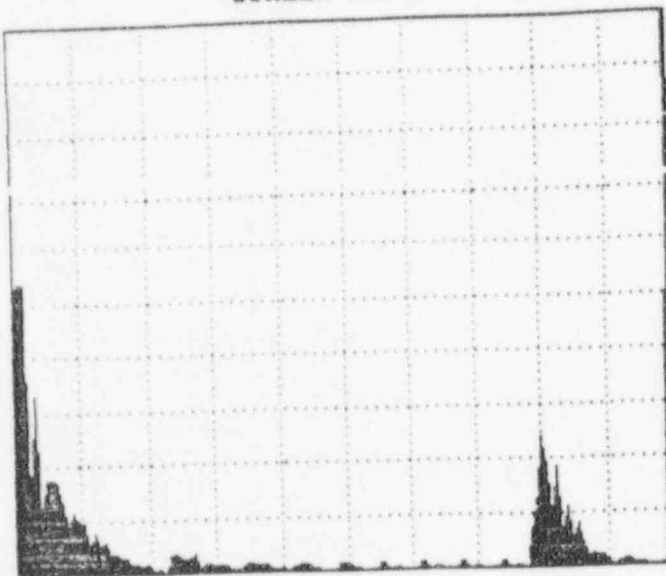
GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILTZ
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222nS
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #18



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

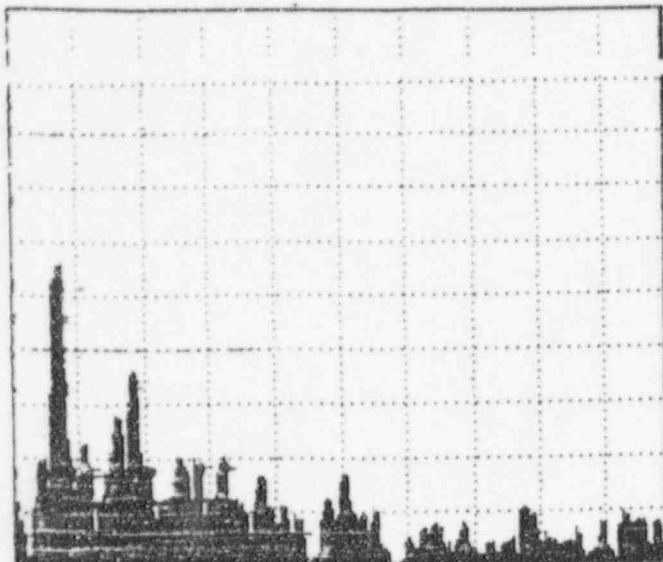
GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILTZ
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222nS
DAMPING 25
PULSE ECHO
REP RATE 250Hz

SCREEN PRINT #19 4/10/95



RANGE
 RANGE 10.2in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

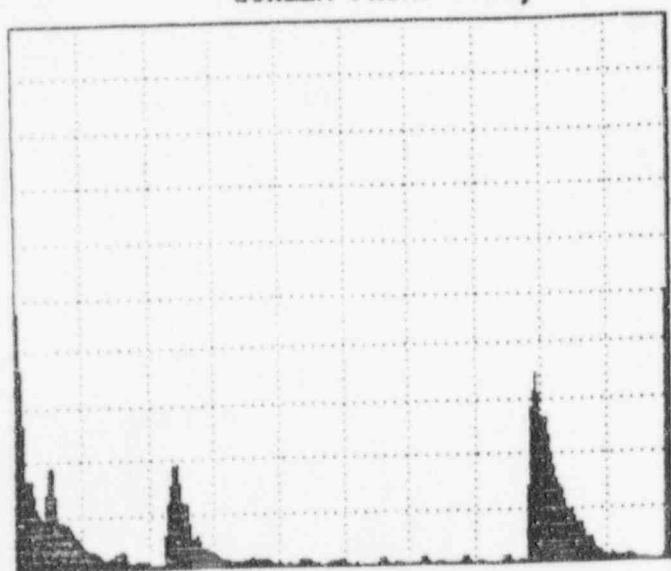
GATE
 LEVEL OFF
 POSN 5.03in
 WIDTH 2.56in
 POLARITY +

GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

PULSER
 PULSE 222ns
 DAMPING 250
 PULSE ECHO
 REP RATE 1 KHz

SCREEN PRINT #19



RANGE
 RANGE 200in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

GATE
 LEVEL OFF
 POSN 52.5in
 WIDTH 50.1in
 POLARITY +

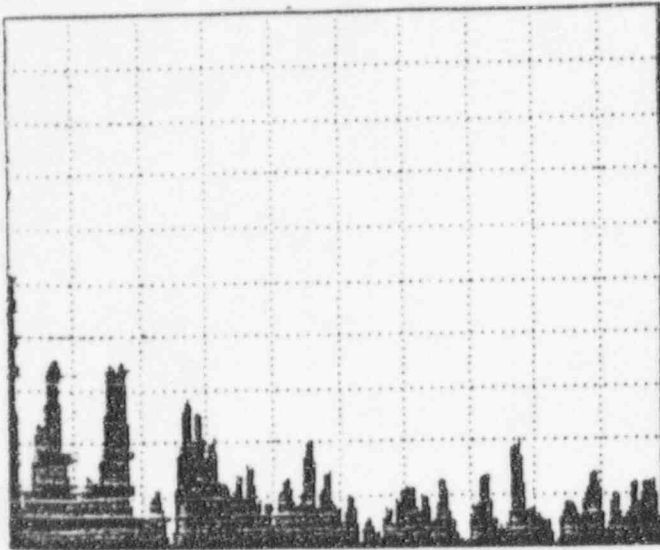
GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

PULSER
 PULSE 222ns
 DAMPING 250
 PULSE ECHO
 REP RATE 250Hz

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SCREEN PRINT #20 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

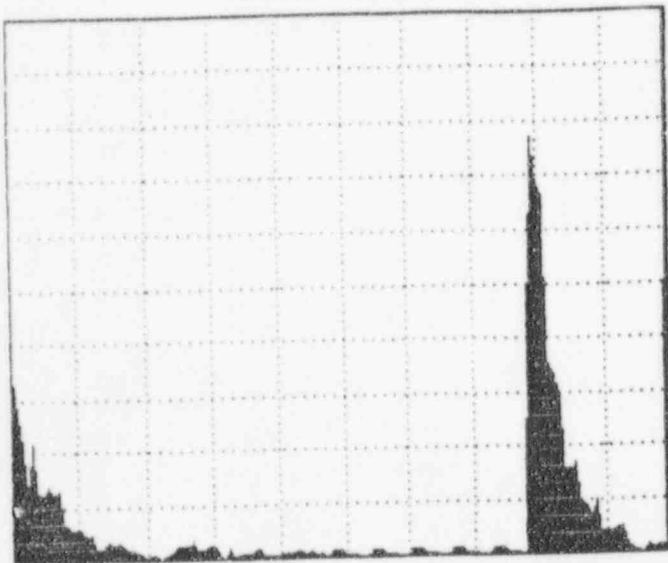
GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #20



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

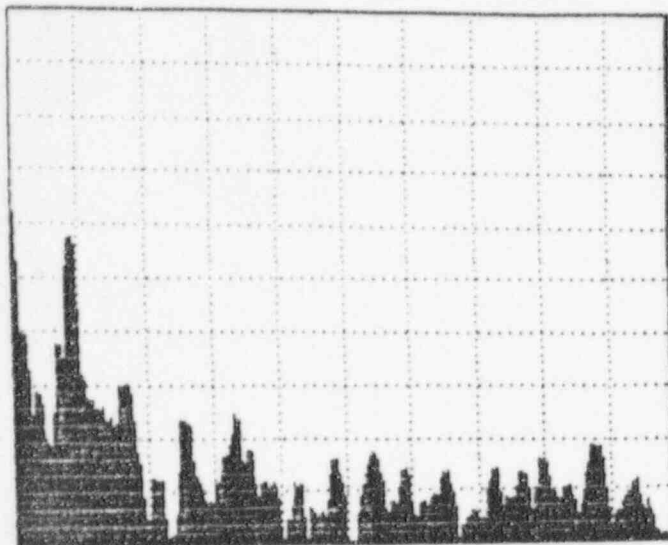
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #21 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

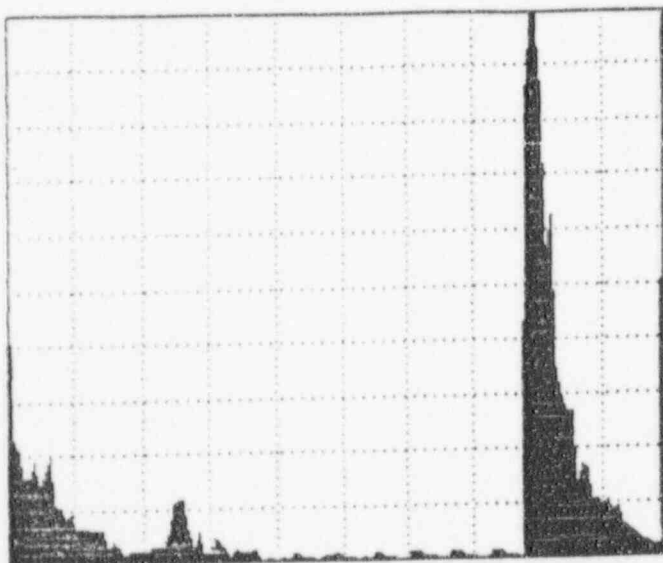
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #21



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

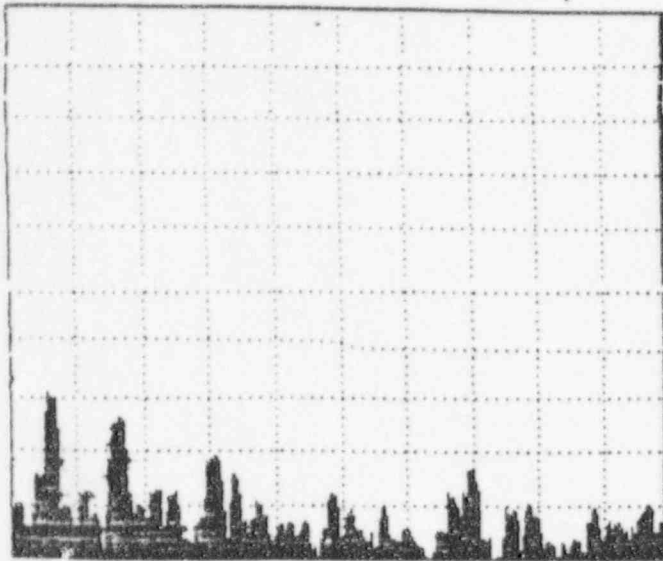
GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT #24 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

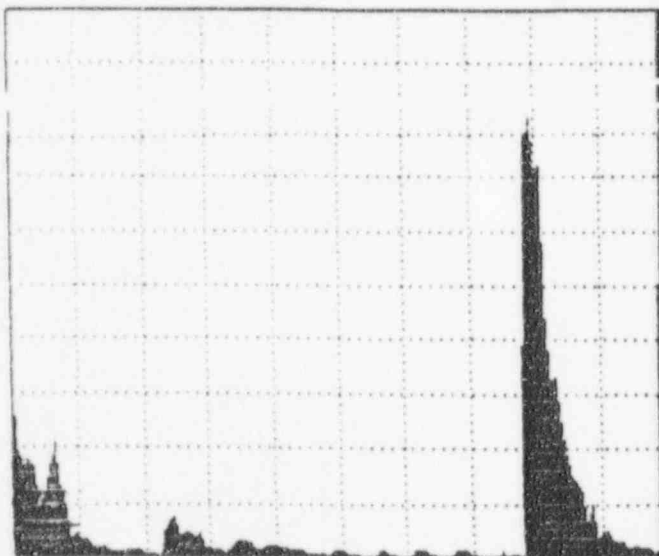
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.54in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 kHz

SCREEN PRINT #24



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

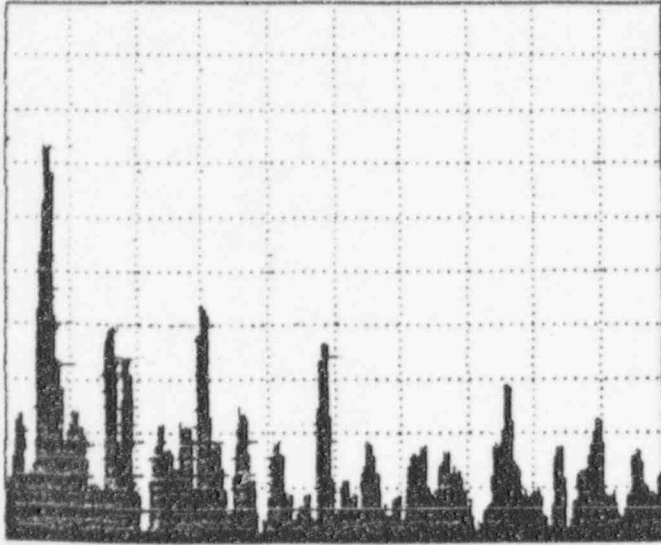
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #25 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

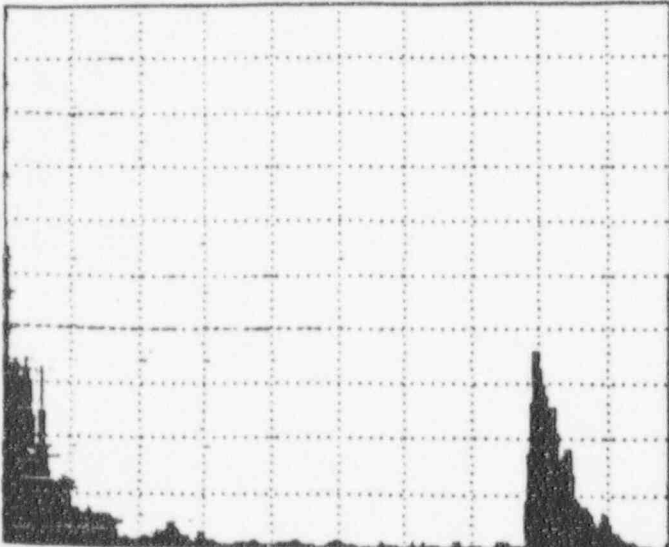
GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REF RATE 1 KHz

SCREEN PRINT #25



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

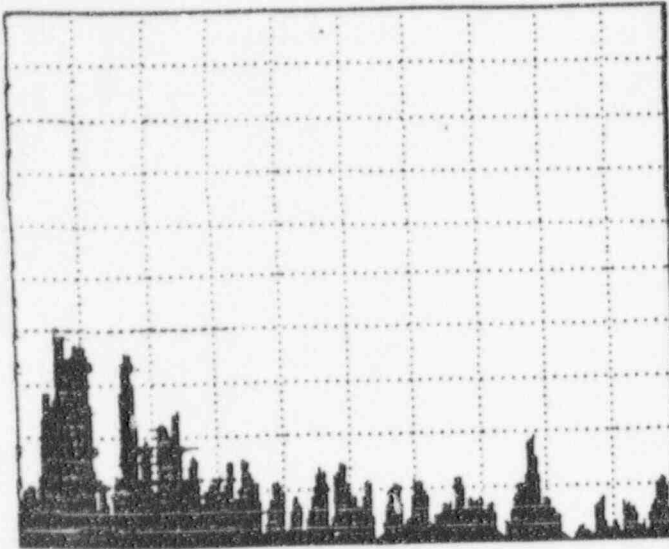
GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REF RATE 250Hz

SCREEN PRINT #26 4/10/95



RANGE
 RANGE 10.2in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

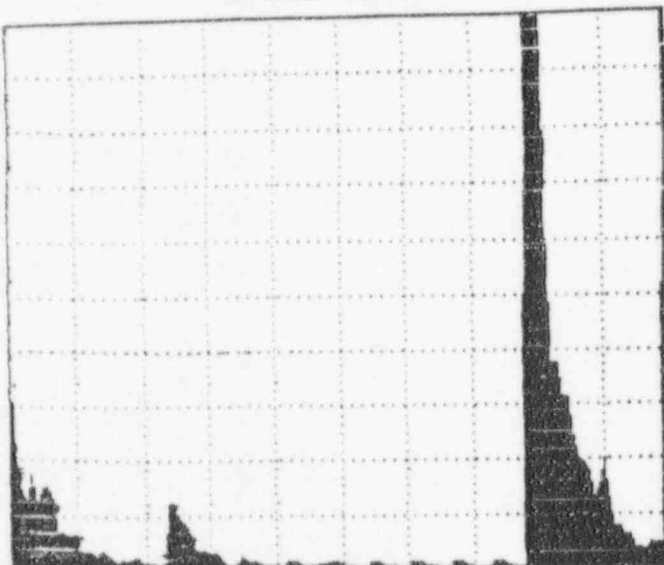
RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

GATE
 LEVEL OFF
 POSN 5.02in
 WIDTH 2.55in
 POLARITY +

PULSER
 PULSE 222ns
 DAMPING 25%
 PULSE ECHO
 REF RATE 1 KHz

GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

SCREEN PRINT #26



RANGE
 RANGE 200in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

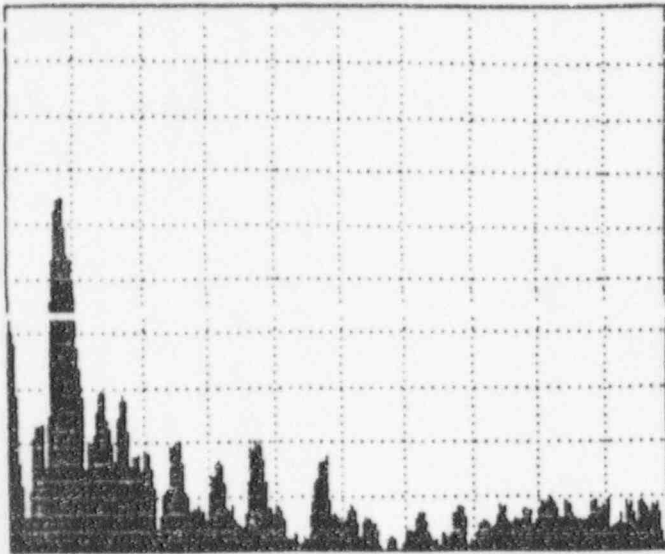
RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

GATE
 LEVEL OFF
 POSN 52.5in
 WIDTH 50.1in
 POLARITY +

PULSER
 PULSE 222ns
 DAMPING 25%
 PULSE ECHO
 REF RATE 250Hz

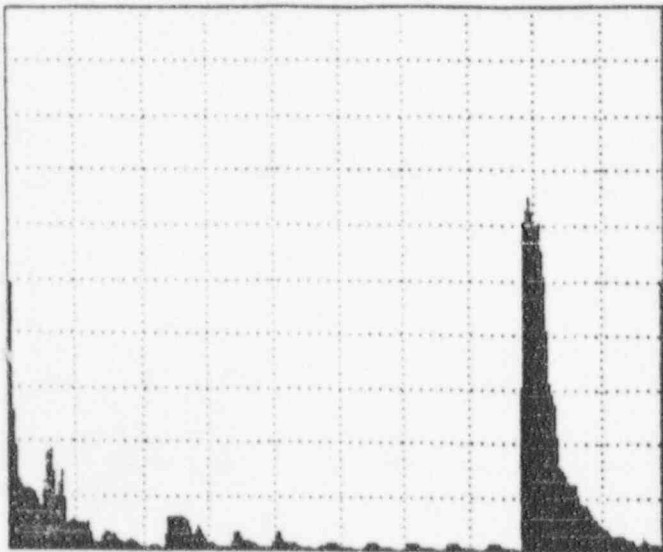
GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

SCREEN PRINT #27 4/10/95



<u>RANGE</u>		<u>RECEIVER</u>	
RANGE	10.2in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
<u>GATE</u>		<u>PULSER</u>	
LEVEL	OFF	PULSE	222ns
POSN	5.02in	DAMPING	25"
WIDTH	2.55in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz
<u>GAIN REFERENCE</u>			
GAIN	76.6dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	36.6		

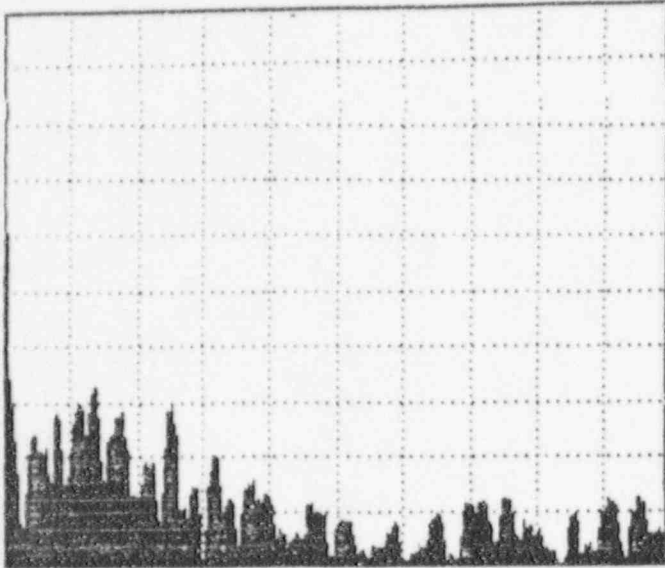
SCREEN PRINT #27



<u>RANGE</u>		<u>RECEIVER</u>	
RANGE	200in	GAIN	76.6dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
<u>GATE</u>		<u>PULSER</u>	
LEVEL	OFF	PULSE	222ns
POSN	52.7in	DAMPING	25"
WIDTH	50.2in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz
<u>GAIN REFERENCE</u>			
GAIN	76.6dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	36.6		

SCREEN PRINT #28

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RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

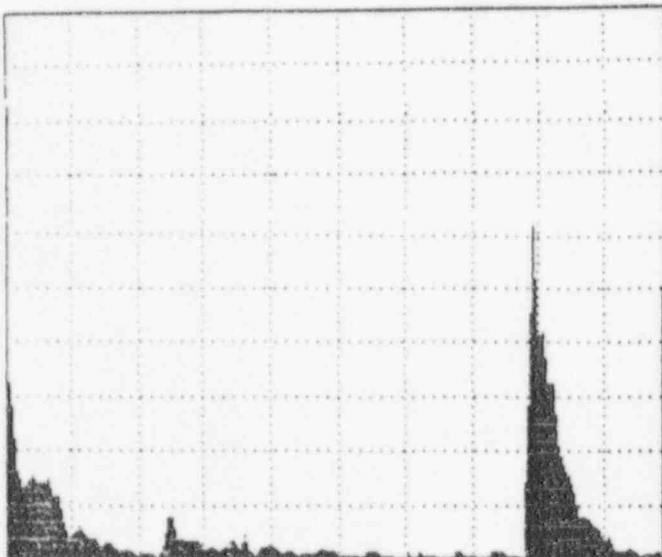
GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #28



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.7in
WIDTH 50.2in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

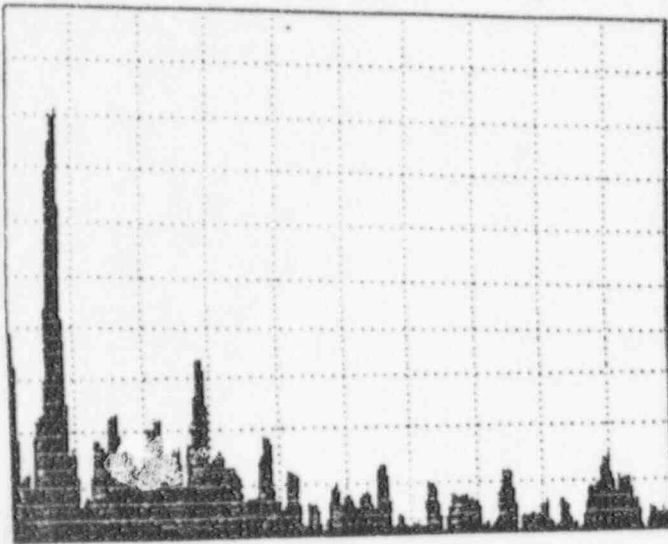
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #29

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RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

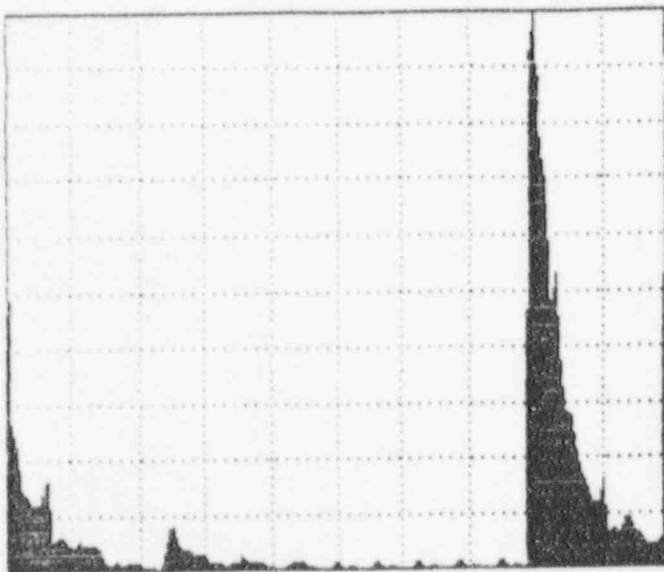
RECEIVER
GAIN 76.6dB
DISPLAY FILTZ
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #29



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 76.6dB
DISPLAY FILTZ
FREQ 2.25MHz
REJECT OFF

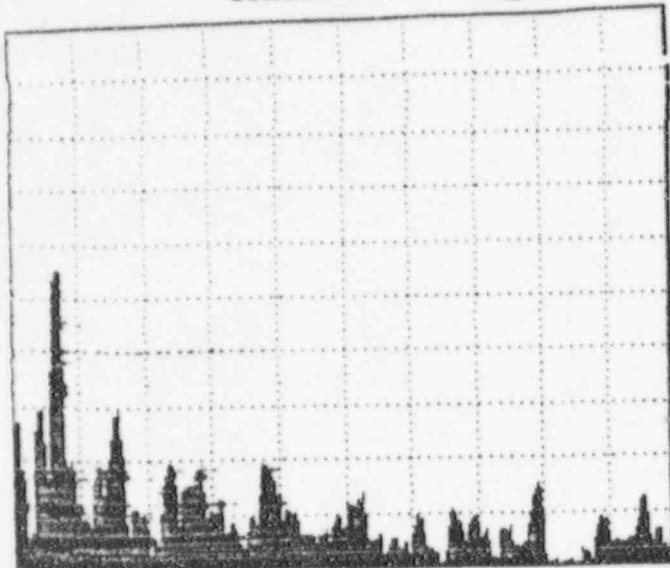
GATE
LEVEL OFF
POSN 52.4in
WIDTH 49.9in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

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SCREEN PRINT #30 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

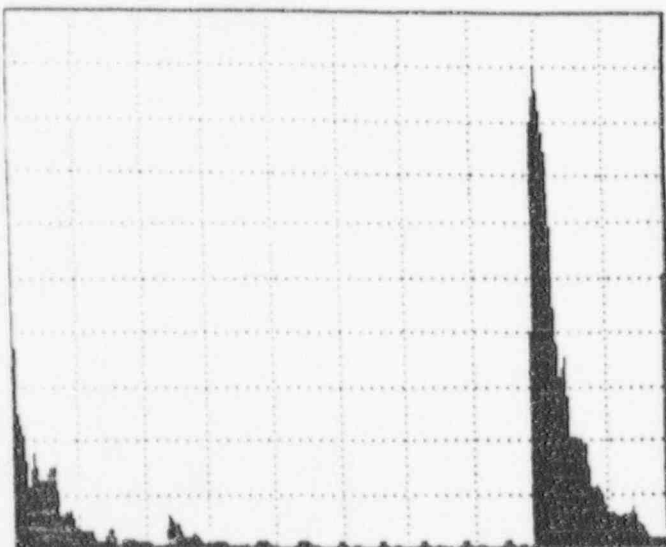
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.54in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 kHz

SCREEN PRINT #30



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.4in
WIDTH 49.9in
POLARITY +

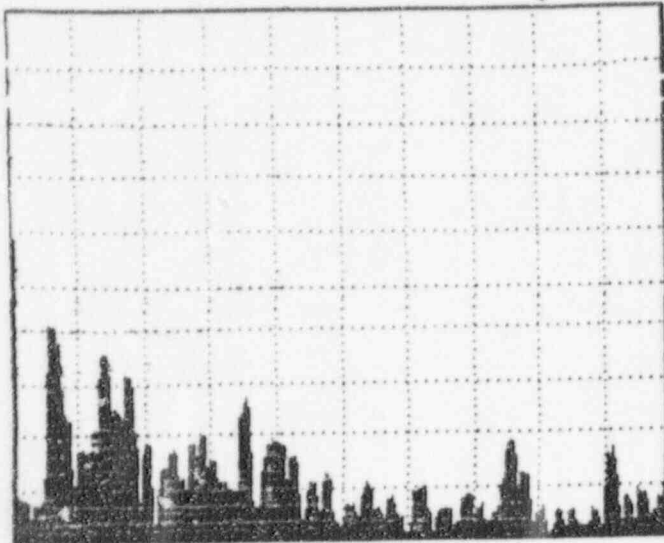
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #31 9/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

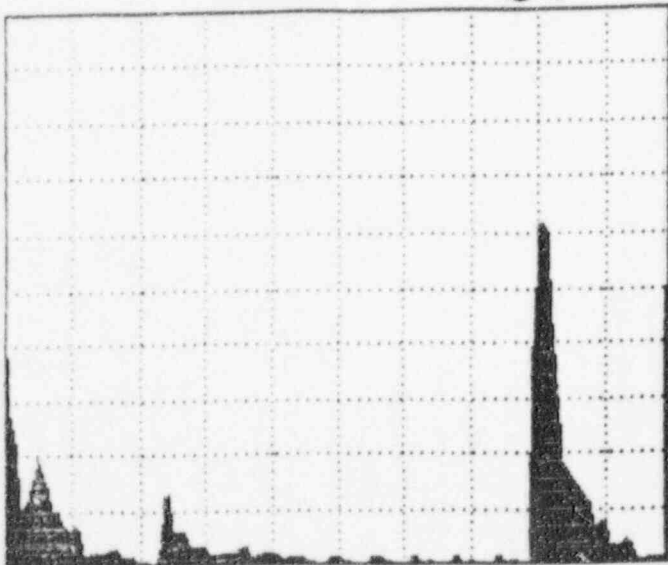
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.54in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 250
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #31



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

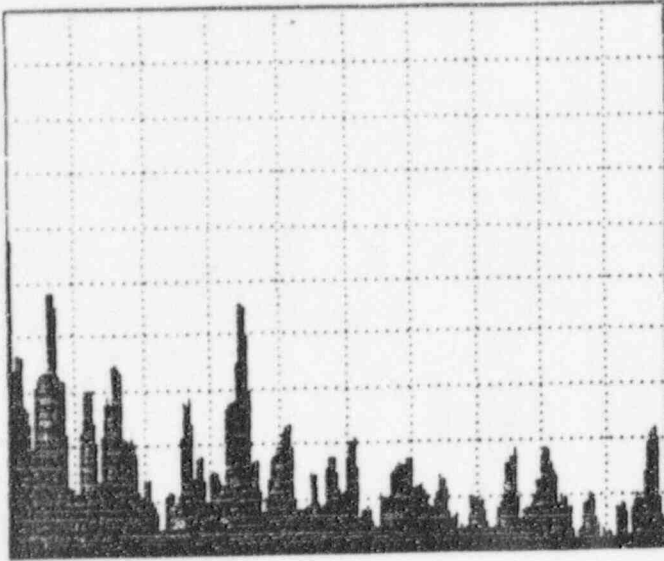
GATE
LEVEL OFF
POSN 52.4in
WIDTH 49.9in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 250
PULSE ECHO
REP RATE 250Hz

SCREEN PRINT # 44 9/10/85



RANGE
 RANGE 10.2in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

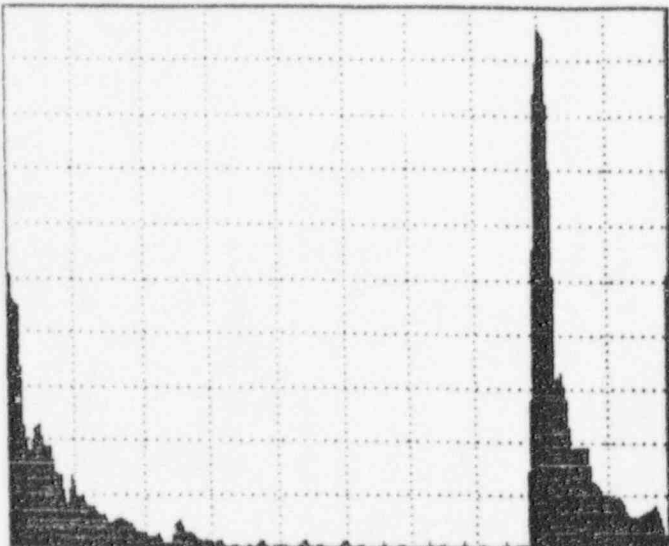
RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

GATE
 LEVEL OFF
 POSN 5.01in
 WIDTH 2.54in
 POLARITY +

PULSER
 PULSE 222ns
 DAMPING 25
 PULSE ECHO
 REP RATE 1 KHz

GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

SCREEN PRINT #44



RANGE
 RANGE 200in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

RECEIVER
 GAIN 76.6dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

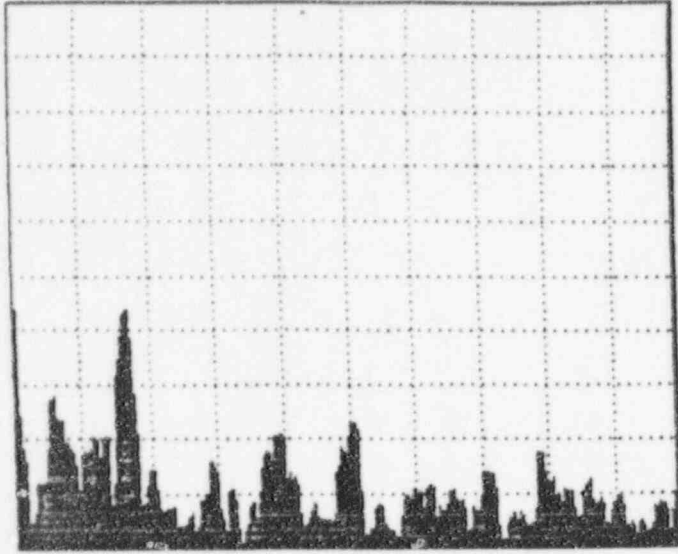
GATE
 LEVEL OFF
 POSN 52.5in
 WIDTH 50.0in
 POLARITY +

PULSER
 PULSE 222ns
 DAMPING 25
 PULSE ECHO
 REP RATE 250Hz

GAIN REFERENCE
 GAIN 76.6dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 36.6

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SCREEN PRINT #45 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

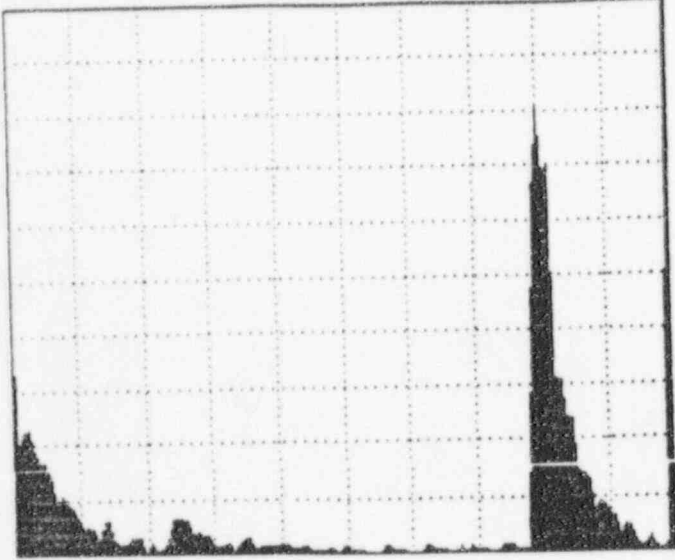
GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #45



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.0in
POLARITY +

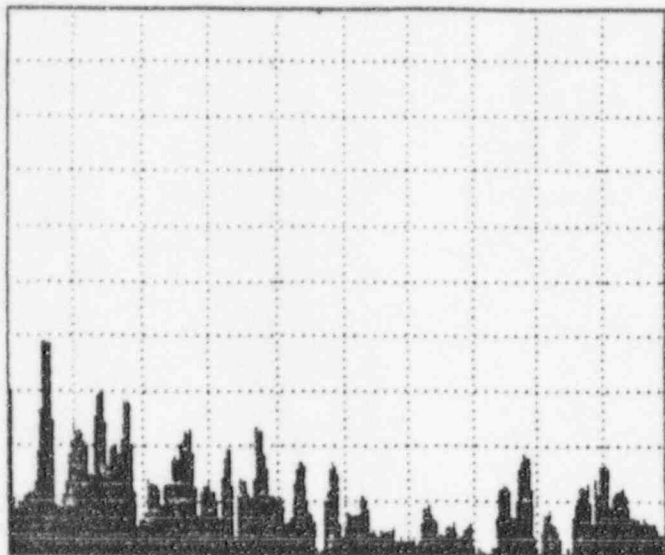
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

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SCREEN PRINT #46 4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

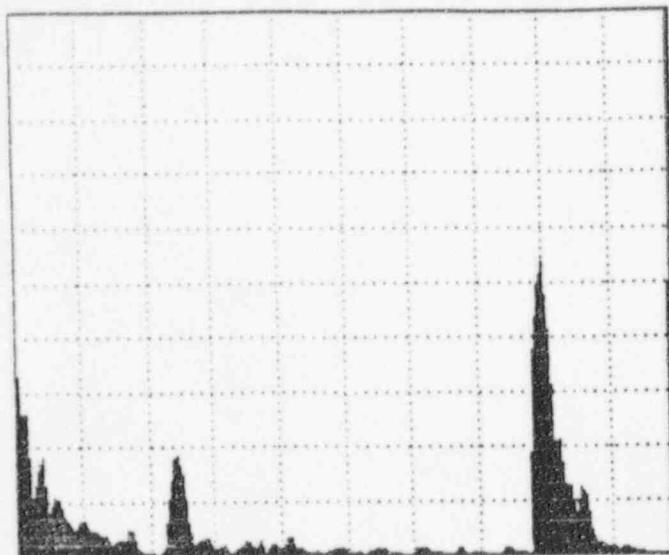
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222nS
DAMPING 25%
PULSE ECHO
REP RATE 1 kHz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #46



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

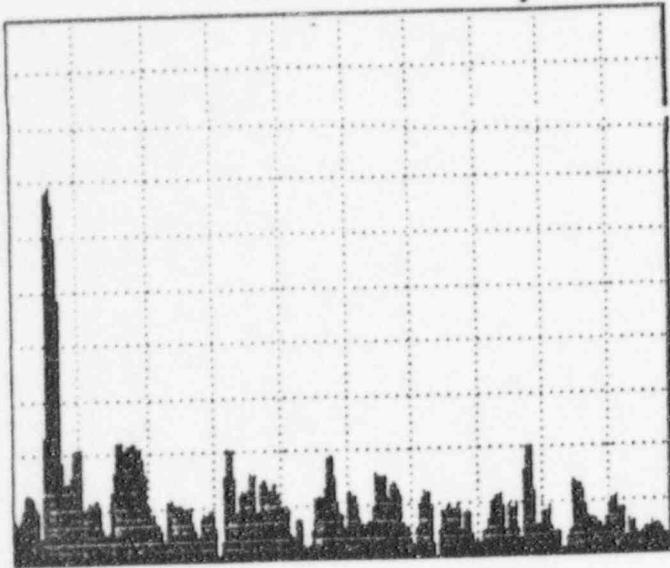
RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

PULSER
PULSE 222nS
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

SCREEN PRINT #47 4/14/55



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

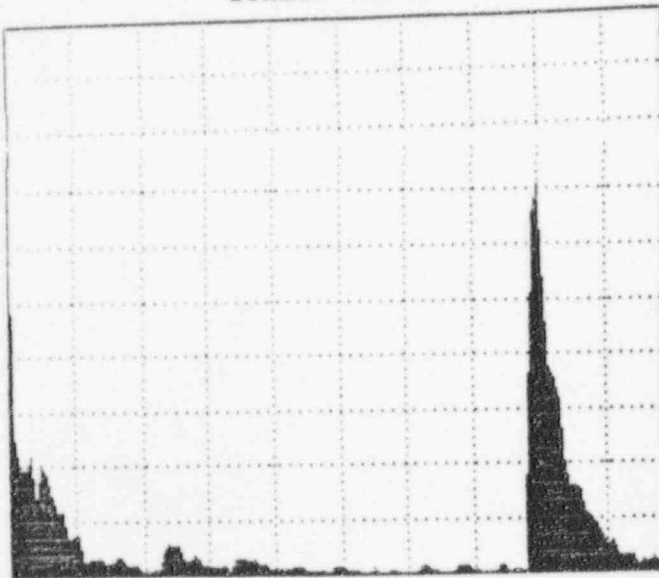
GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222nS
DAMPING 250
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #47



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

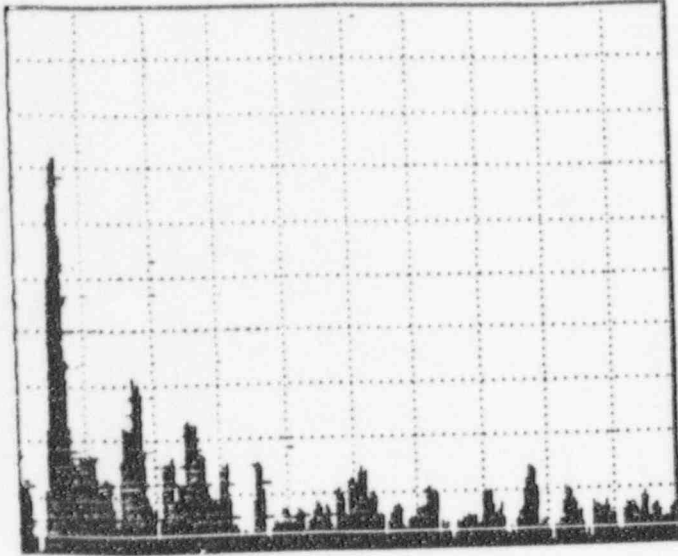
GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222nS
DAMPING 250
PULSE ECHO
REP RATE 250Hz

SCREEN PRINT #48

4/10/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

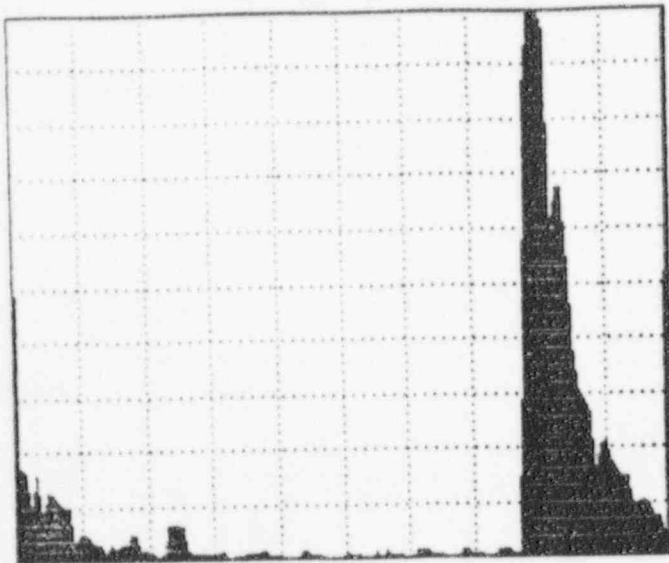
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.54in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #48



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

GAIN REFERENCE
GAIN 76.6dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 36.6

RECEIVER
GAIN 76.6dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25%
PULSE ECHO
REP RATE 250Hz

ULTRASONIC EXAMINATION CALIBRATION SHEET
SHROUD HEAD HOLD DOWN BOLTING

SITE Pilgrim UNIT #1 DATE 04/20/95 CAL. SHEET # 95-C-761

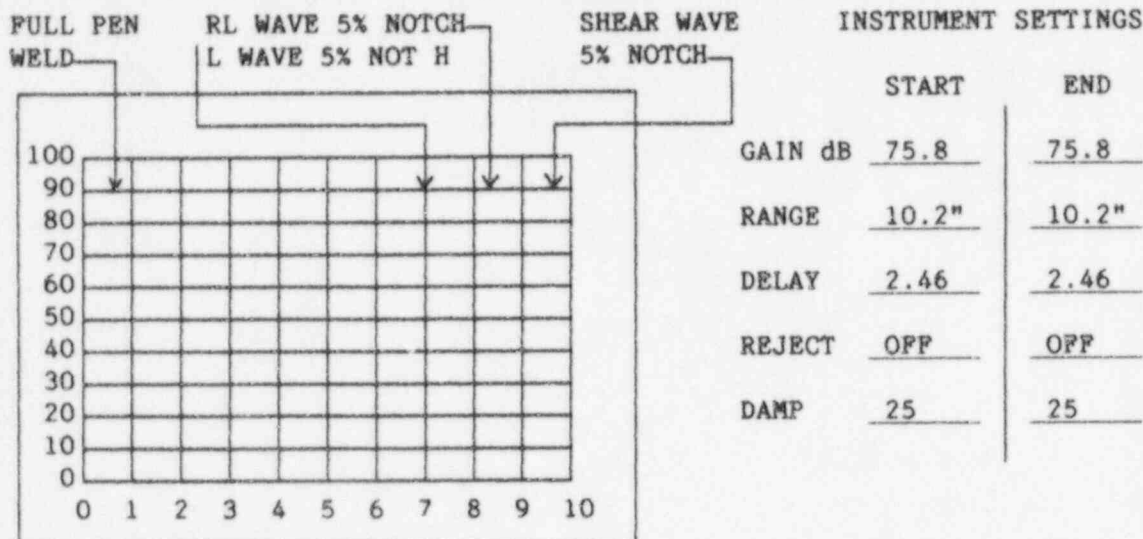
PROCEDURE #TP95-082 REV. 0

pg 1 of 2

EXAMINER Michael Stamm LEVEL III

DATA RECORDER R. Sheridan / J. Gephart LEVEL I

INSTRUMENT: MANUFACTURE Staveley MODEL Sonic 136
 SERIAL # 1152M CAL DATE MARCH 28, 1995
 TRANSDUCER: MANUFACTURE Aerotech TYPE GAMMA SERIAL # E03810
 SIZE 0.5" FREQ. 2.25 MHz ANGLE 0
 CABLES: TYPE RG58 LENGTH 70'
 CAL. STD. TYPE Inconel NUMBER TAPBE5-002 THK. 1.75"
 TYPE Inconel NUMBER TAPBE5-002 THK. 2.0"



ULTRASONIC SCOPE
SEE ATTACHED SCREEN PRINT

CALBRATION NOTCH 5% of T AMPLITUDE 80% FSH SWEEP 9.5"

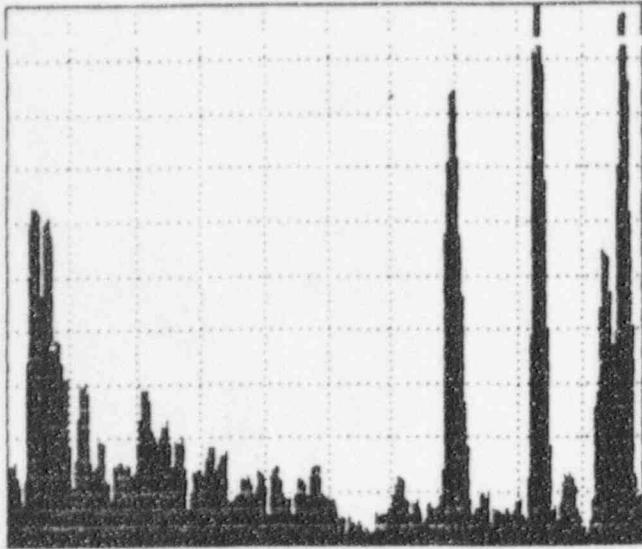
INITAL CALIBRATION 1018 FINAL CALIBRATION 1330

COMMENTS: NONE

SIGNATURE *Michael Stamm* TITLE *LVIII* DATE *4/20/95*

B. Perkins BEG III 7-7-95

SCREEN PRINT CAL IN 4/20/95 / TIME 1013

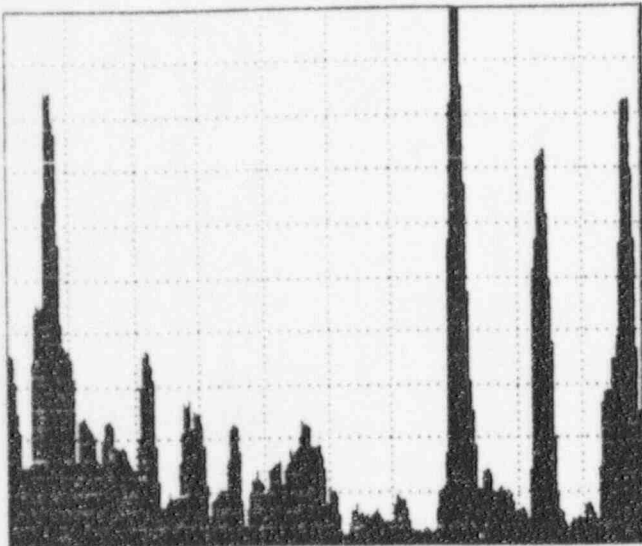


RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	5.02in	DAMPING	25%
WIDTH	2.55in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT CAL OUT 4/20/95 / TIME 1330



RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

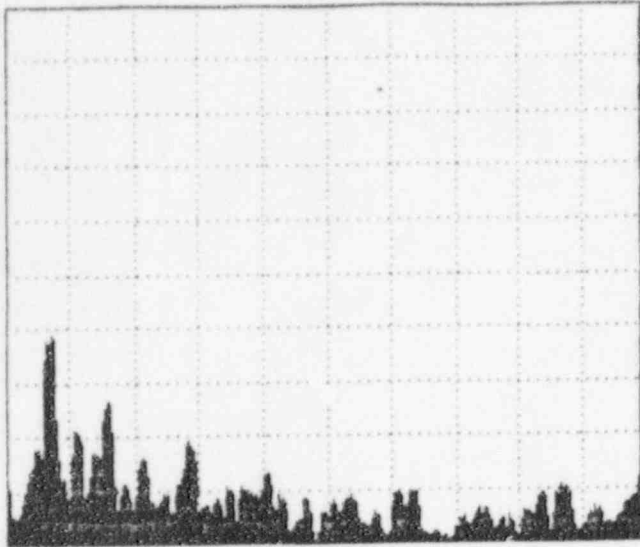
GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	5.01in	DAMPING	25%
WIDTH	2.55in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

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Pg 1 of 9

SCREEN PRINT #6

4/20/95

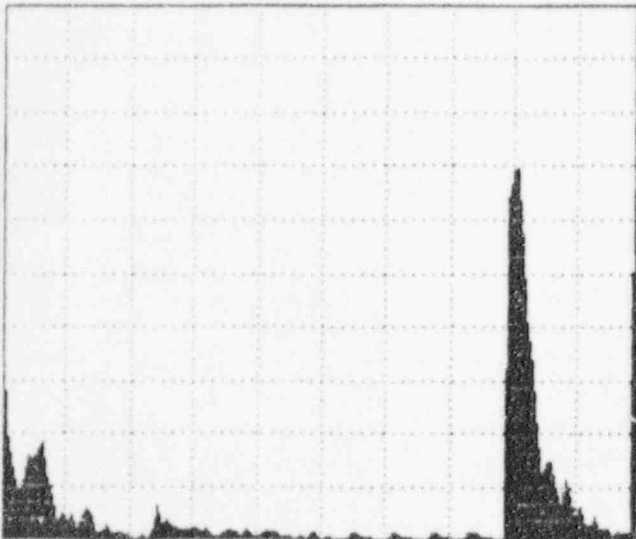


RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	5.03in	DAMPING	25%
WIDTH	2.56in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT #6



RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	52.4in	DAMPING	25%
WIDTH	49.9in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

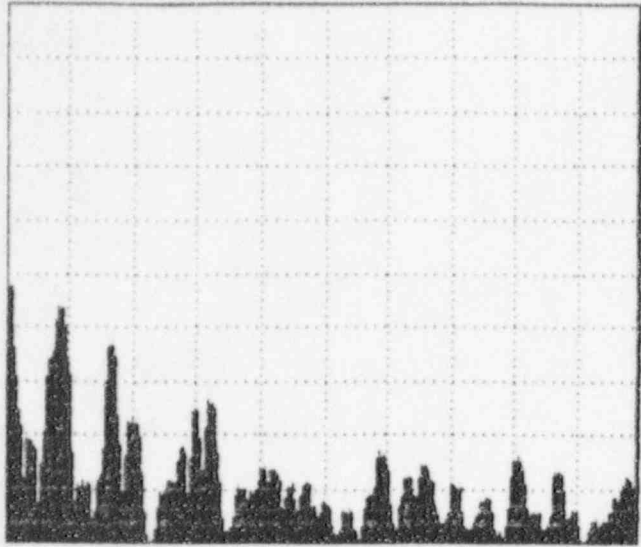
GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

REVIEWED DATA: BOLTS 6, 7, 22, 23, 32-36

B. Pukins BEC III 7-7-95

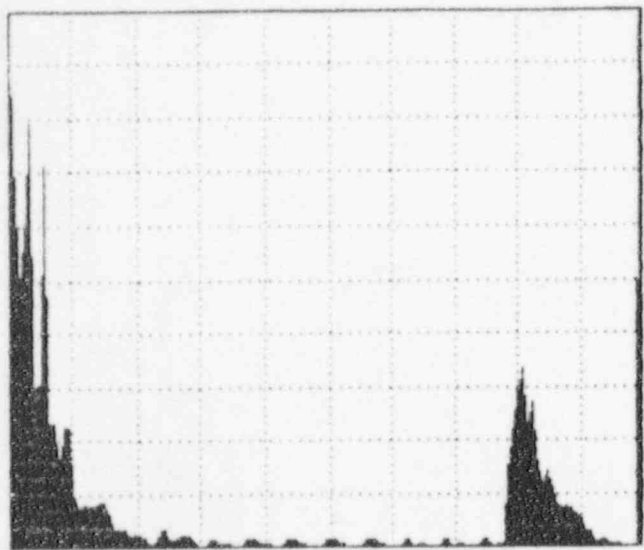
SCREEN PRINT #7 4/20/95

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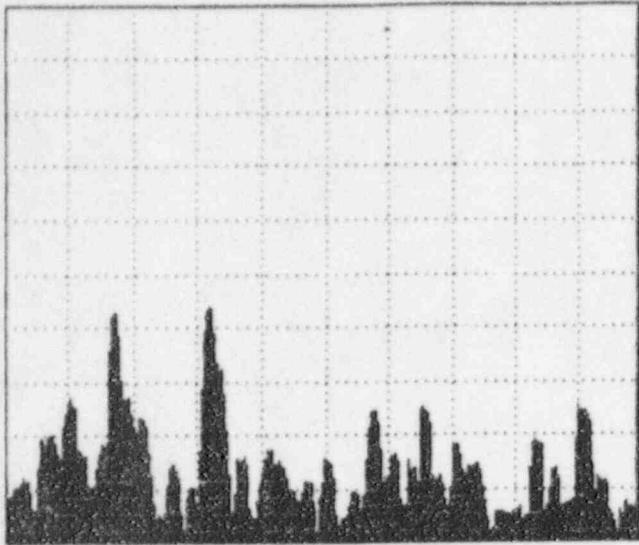
RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	5.03in	DAMPING	25%
WIDTH	2.56in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz
GAIN REFERENCE			
GAIN	75.8dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	35.8		

SCREEN PRINT #7



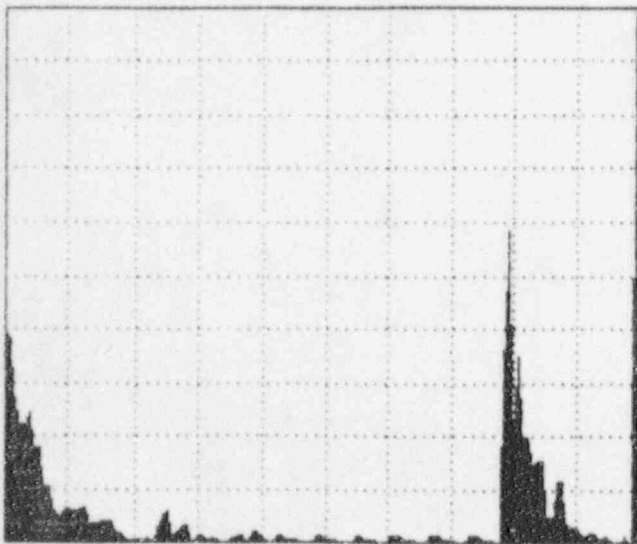
RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz
GAIN REFERENCE			
GAIN	75.8dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	35.8		

SCREEN PRINT #22 4/20/95



RANGE		RECEIVER	
RANGE	10.1in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSH	5.00in	DAMPING	25%
WIDTH	2.53in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz
GAIN REFERENCE			
GAIN	75.8dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	35.8		

SCREEN PRINT #22

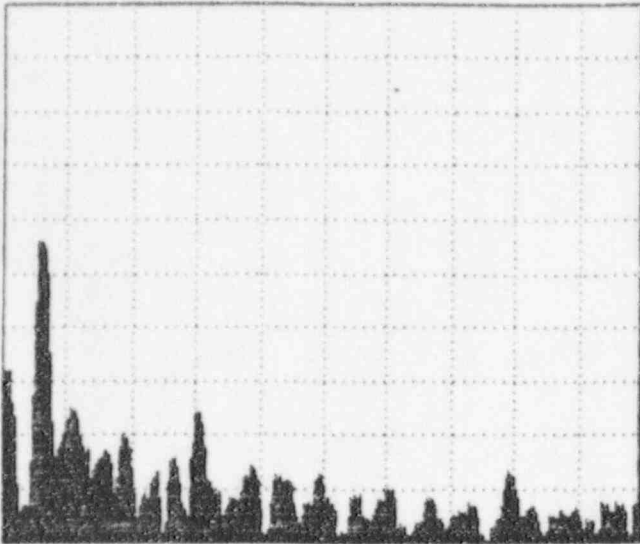


RANGE		RECEIVER	
RANGE	199in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSH	52.3in	DAMPING	25%
WIDTH	49.8in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz
GAIN REFERENCE			
GAIN	75.8dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	35.8		

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SCREEN PRINT #23

4/20/95

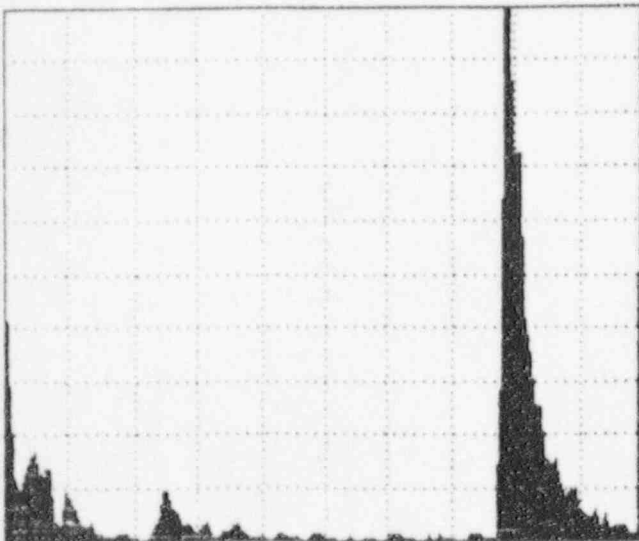


RANGE		RECEIVER	
RANGE	10.1in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	5.00in	DAMPING	25%
WIDTH	2.53in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT #23



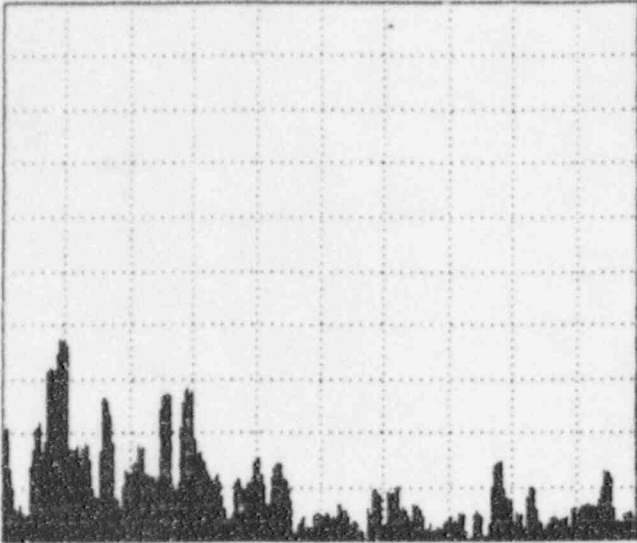
RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222nS
POSN	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

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Pg 5 of 9

SCREEN PRINT #32 4/20/95

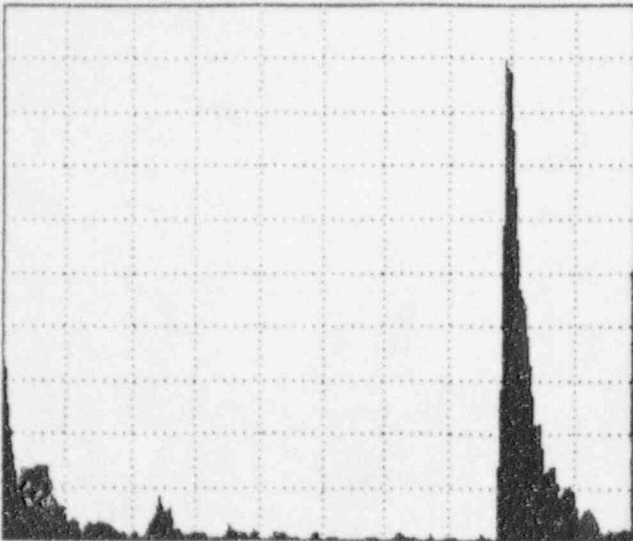


RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	5.02in	DAMPING	25%
WIDTH	2.55in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT #32



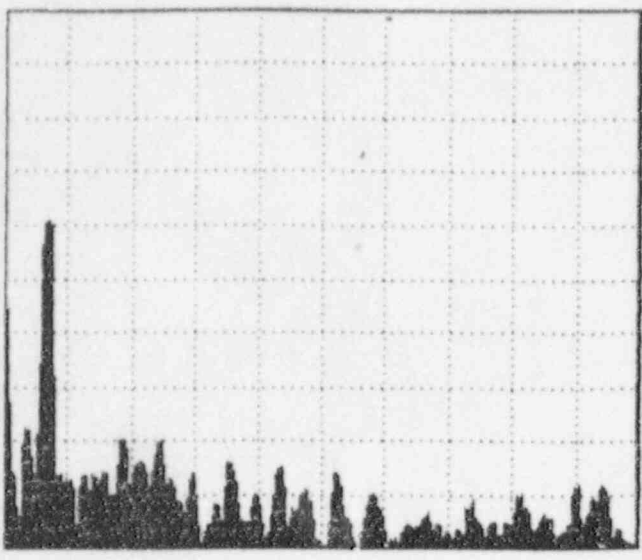
RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	52.4in	DAMPING	25%
WIDTH	49.9in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

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pg 6 of 9

SCREEN PRINT #33 4/20/95

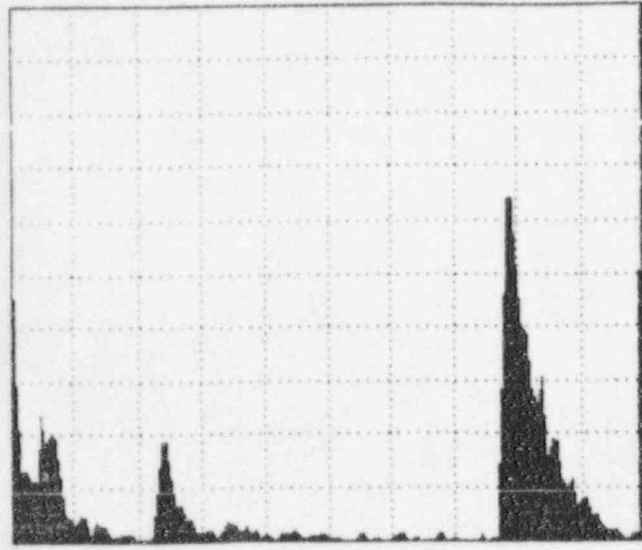


RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSH	5.02in	DAMPING	25%
WIDTH	2.55in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT #33



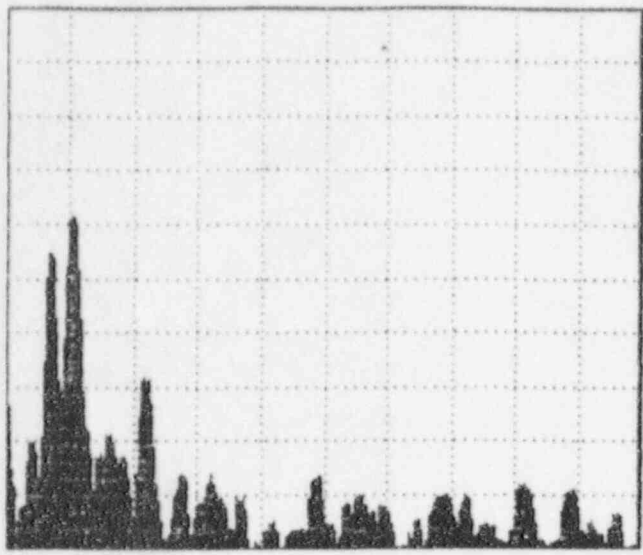
RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSH	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

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SCREEN PRINT #34 4/20/95

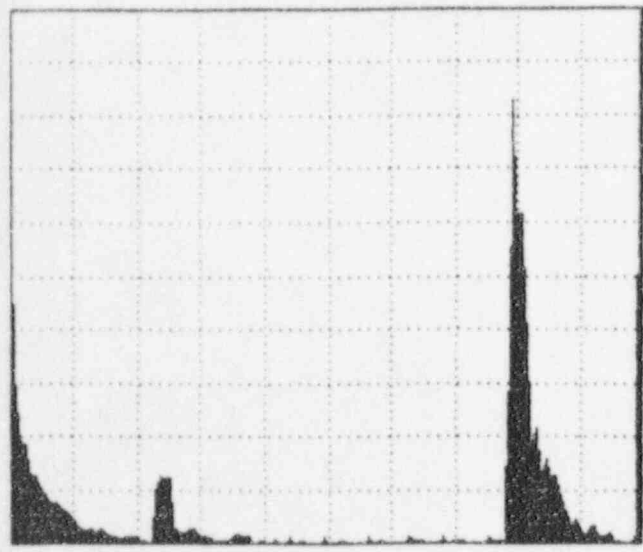


RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.200 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSM	5.01in	DAMPING	25%
WIDTH	2.54in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT #34



RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.200 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

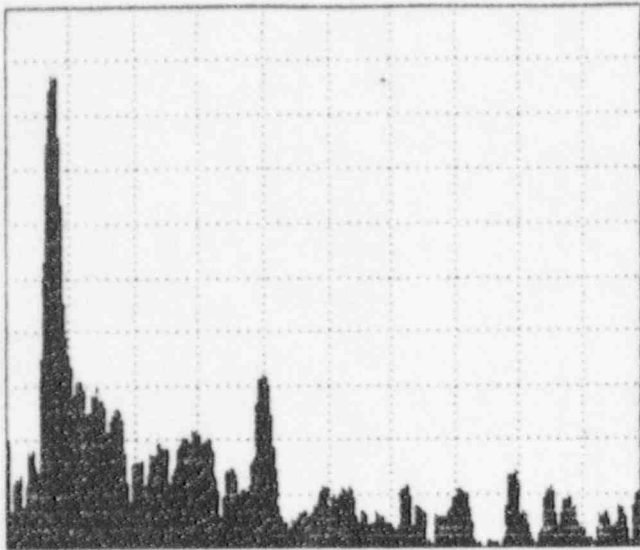
GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSM	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

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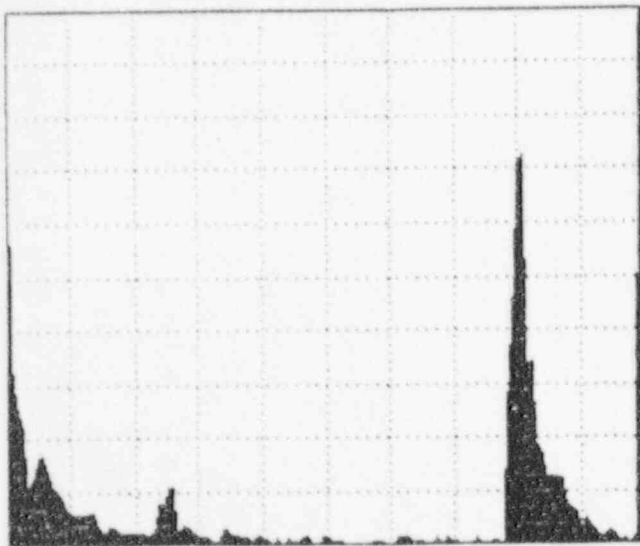
SCREEN PRINT #35

4/20/95



RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	5.01in	DAMPING	25%
WIDTH	2.54in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz
GAIN REFERENCE			
GAIN	75.8dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	35.8		

SCREEN PRINT #35

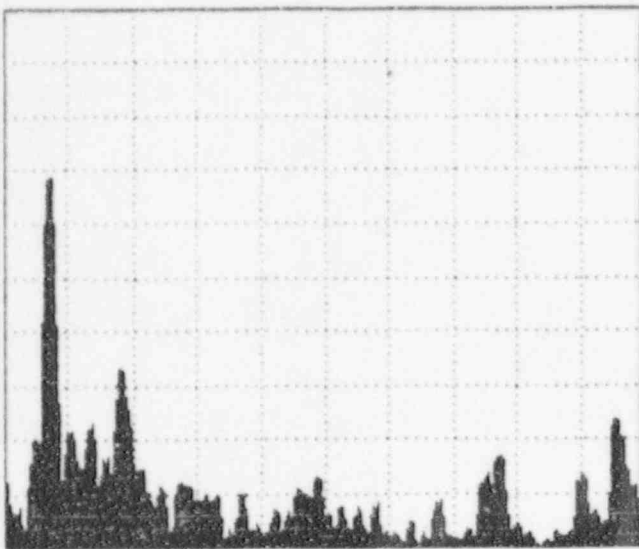


RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF
GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSN	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz
GAIN REFERENCE			
GAIN	75.8dB		
REF LVL	40.0dB		
% CHANGE	XXXX		
dB CHANGE	35.8		

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SCREEN PRINT #36

4/20/95

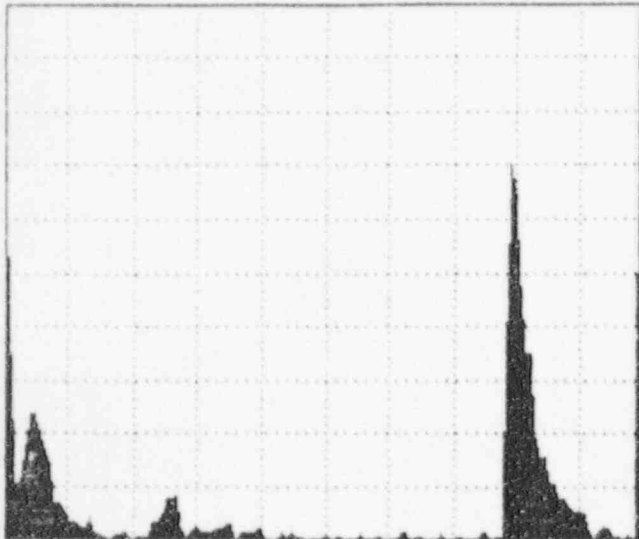


RANGE		RECEIVER	
RANGE	10.2in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSM	5.03in	DAMPING	25%
WIDTH	2.56in	PULSE ECHO	
POLARITY	+	REP RATE	1 KHz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

SCREEN PRINT #36



RANGE		RECEIVER	
RANGE	200in	GAIN	75.8dB
DELAY	2.46in	DISPLAY	FILT2
VEL	0.230 in/us	FREQ	2.25MHz
UNITS	in	REJECT	OFF

GATE		PULSER	
LEVEL	OFF	PULSE	222ns
POSM	52.5in	DAMPING	25%
WIDTH	50.1in	PULSE ECHO	
POLARITY	+	REP RATE	250Hz

GAIN REFERENCE	
GAIN	75.8dB
REF LVL	40.0dB
% CHANGE	XXXX
dB CHANGE	35.8

ULTRASONIC EXAMINATION CALIBRATION SHEET
SHROUD HEAD HOLD DOWN BOLTING

SITE Pilgrim UNIT #1 DATE 04/25/95 CAL. SHEET # 95-C-762

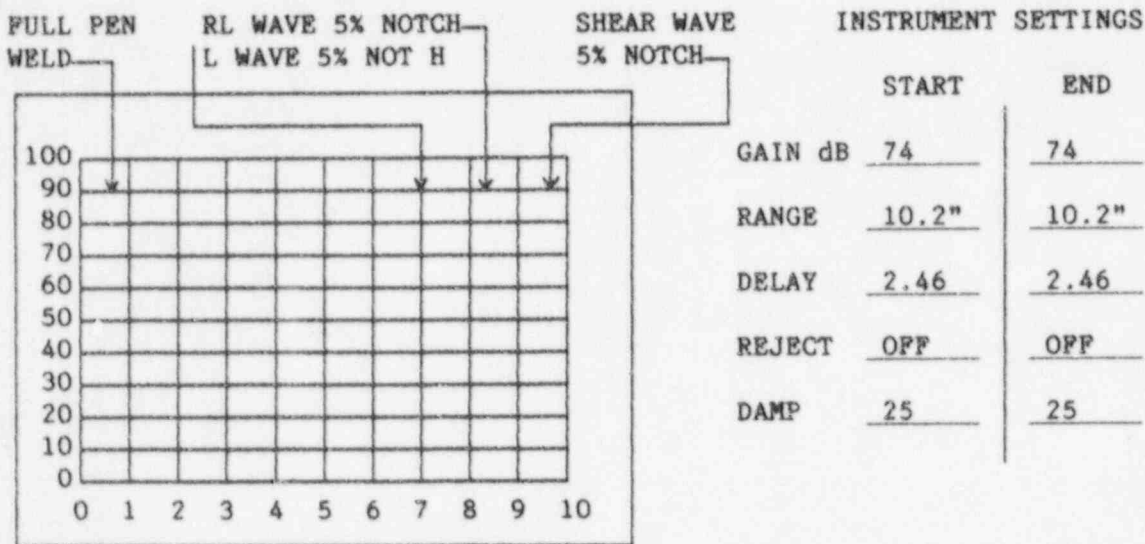
PROCEDURE #TP95-082 REV. 0

Pg 1 of 2

EXAMINER Michael Stamm LEVEL III

DATA RECORDER R. Sheridan / J. Gephart LEVEL I

INSTRUMENT: MANUFACTURE Staveley MODEL Sonic 136
 SERIAL # 1152M CAL DATE MARCH 28, 1995
 TRANSDUCER: MANUFACTURE Aerotech TYPE GAMMA SERIAL # EO3810
 SIZE 0.5" FREQ. 2.25 MHz ANGLE 0
 CABLES: TYPE RG58 LENGTH 70'
 CAL. STD. TYPE Inconel NUMBER TAPBE5-002 THK. 1.75"
 TYPE Inconel NUMBER TAPBE5-002 THK. 2.0"



ULTRASONIC SCOPE
SEE ATTACHED SCREEN PRINT

CALBRATION NOTCH 5% of T AMPLITUDE 80% FSH SWEEP 9.5"

INITAL CALIBRATION 1000 FINAL CALIBRATION 1230

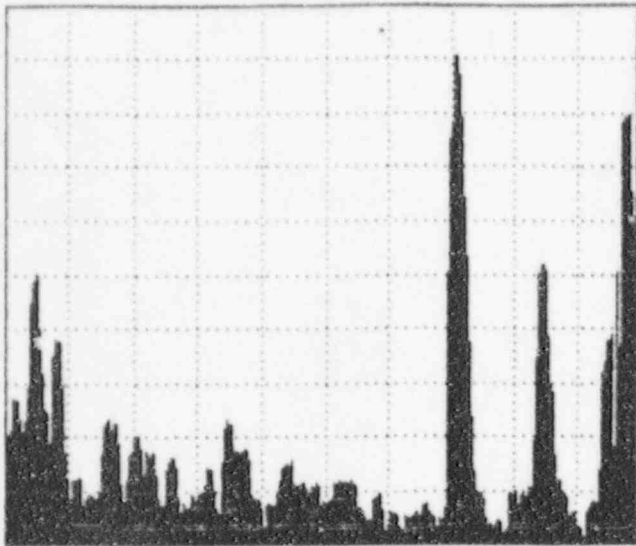
COMMENTS: NONE

SIGNATURE *Michael Stamm* TITLE *LV III* DATE *4/25/95*

B Perkins BEC. III 7-795

95-C-762
Pg 242

SCREEN PRINT CAL IN 4/25/95 / TIME 1000



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

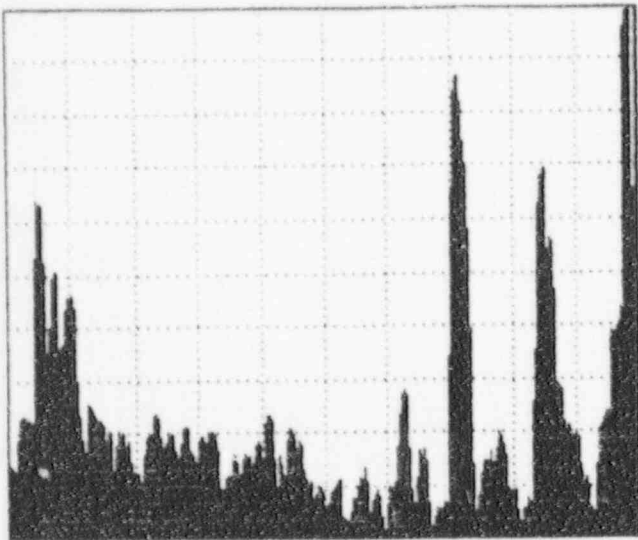
RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.55in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

SCREEN PRINT CAL OUT 4/25/95 / TIME 1230



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

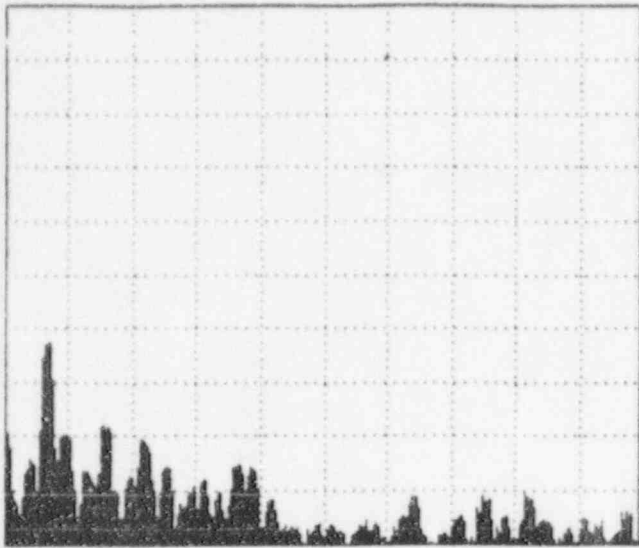
GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

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Pg 1 of 7

SCREEN PRINT #37 4/25/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

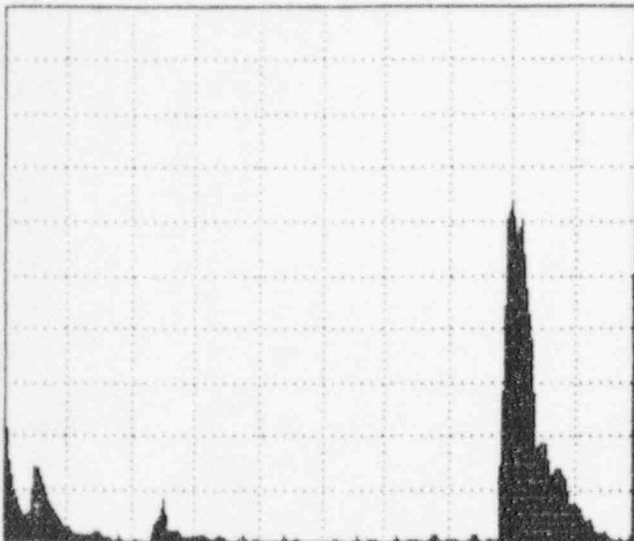
RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.01in
WIDTH 2.55in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25 σ
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

SCREEN PRINT #37



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 52.4in
WIDTH 49.9in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25 σ
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

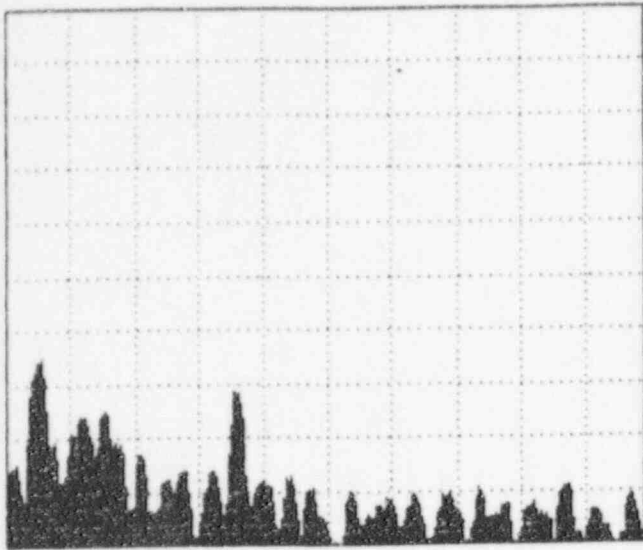
REVIEWED DATA: BOTS 37-43

B. P. P. BEG III 7-7-95

95-E-763
Pg 247

SCREEN PRINT #38

4/25/95



RANGE
RANGE 10.1in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

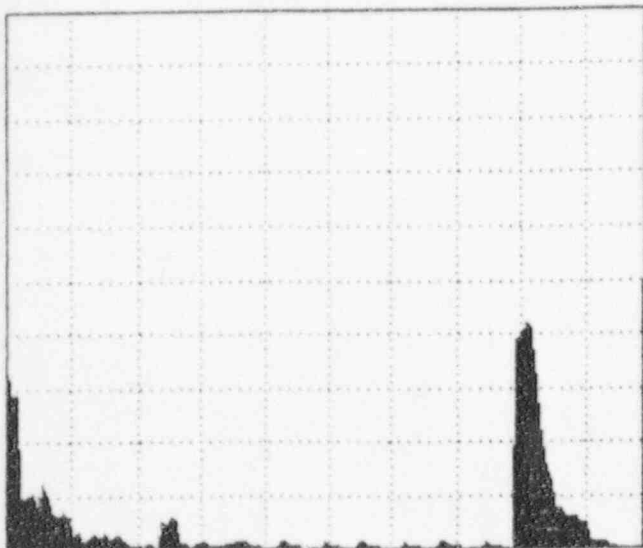
GATE
LEVEL OFF
POSN 5.00in
WIDTH 2.53in
POLARITY +

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25Ω
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #38



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

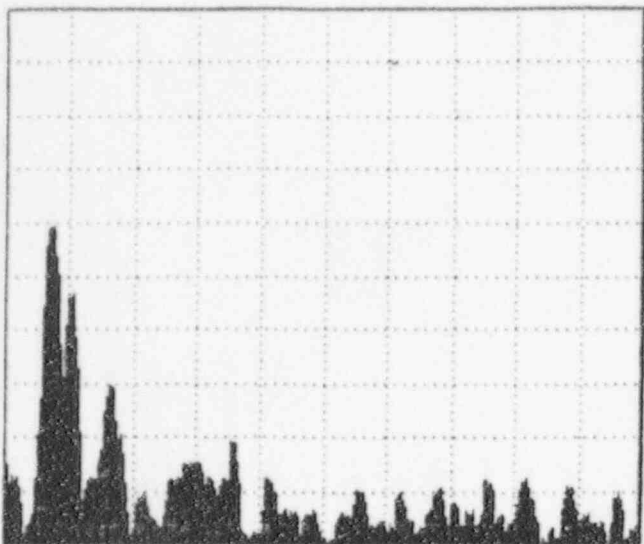
GATE
LEVEL OFF
POSN 52.4in
WIDTH 49.9in
POLARITY +

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222ns
DAMPING 25Ω
PULSE ECHO
REP RATE 250Hz

SCREEN PRINT #39 4/25/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

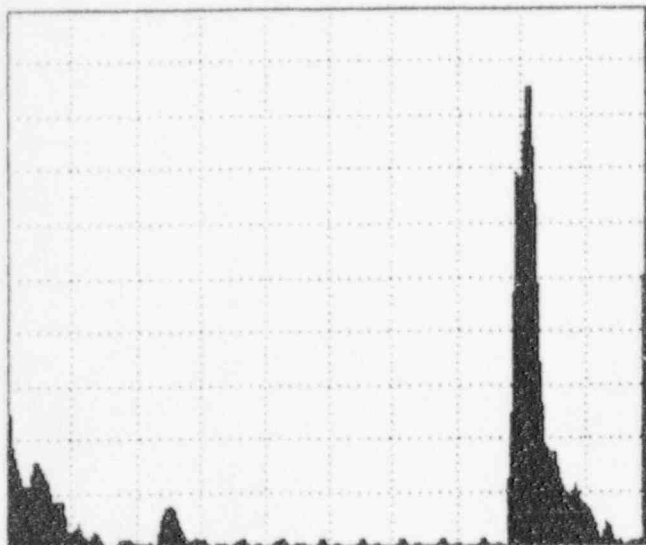
RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

SCREEN PRINT #39



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.0in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

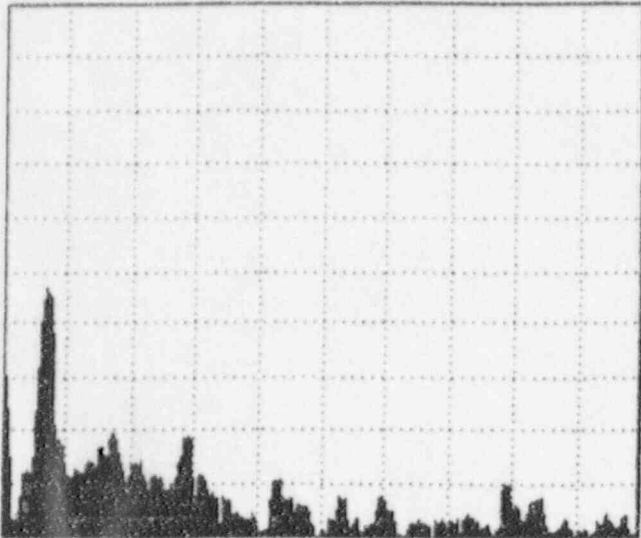
GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

95-E-763

pg 4 of 7

SCREEN PRINT #40

4/25/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

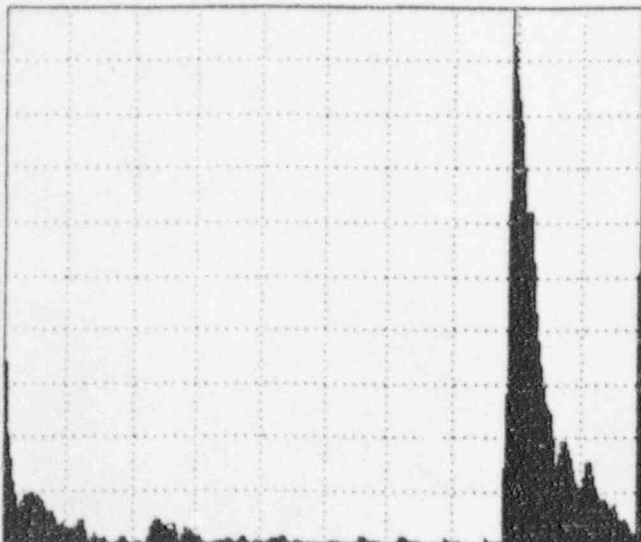
GATE
LEVEL OFF
POSN 5.03in
WIDTH 2.56in
POLARITY +

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222nS
DAMPING 25⁰
PULSE ECHO
REP RATE 1 KHz

SCREEN PRINT #40



RANGE
RANGE 201in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

GATE
LEVEL OFF
POSN 52.8in
WIDTH 50.3in
POLARITY +

GAIN REFERENCE
GAIN 74.0dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 34.0

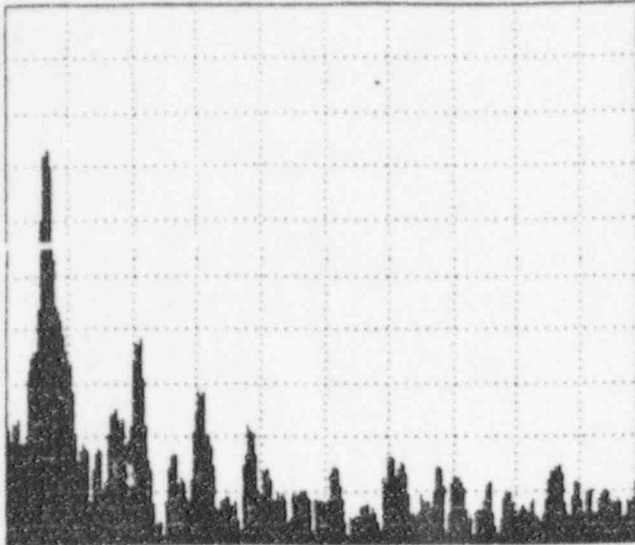
RECEIVER
GAIN 74.0dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

PULSER
PULSE 222nS
DAMPING 25⁰
PULSE ECHO
REP RATE 250Hz

95-E-763
Pg 5 of 7

SCREEN PRINT #41

9/20/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

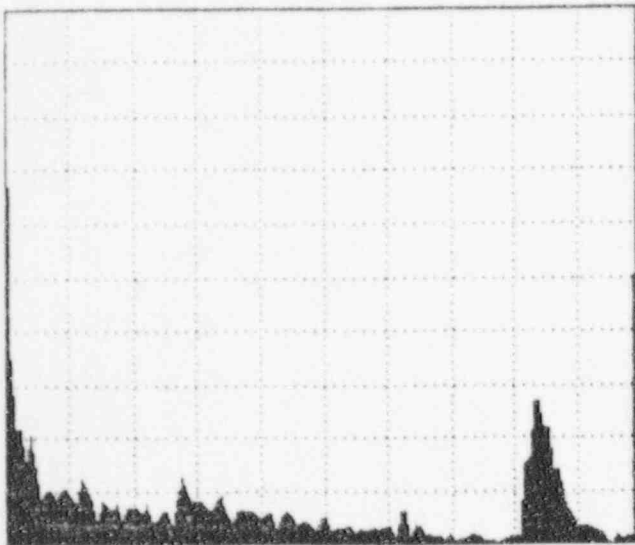
RECEIVER
GAIN 75.3dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222nS
DAMPING 25°
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 75.8dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 35.8

SCREEN PRINT #41



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 75.8dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 52.5in
WIDTH 50.1in
POLARITY +

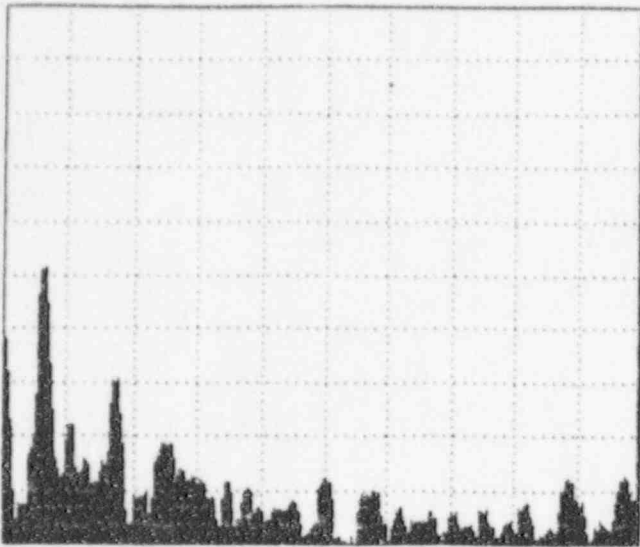
PULSER
PULSE 222nS
DAMPING 25°
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 75.3dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 35.8

95-E-763
Pg 6 of 7

SCREEN PRINT #42

4/20/95



RANGE
RANGE 10.2in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

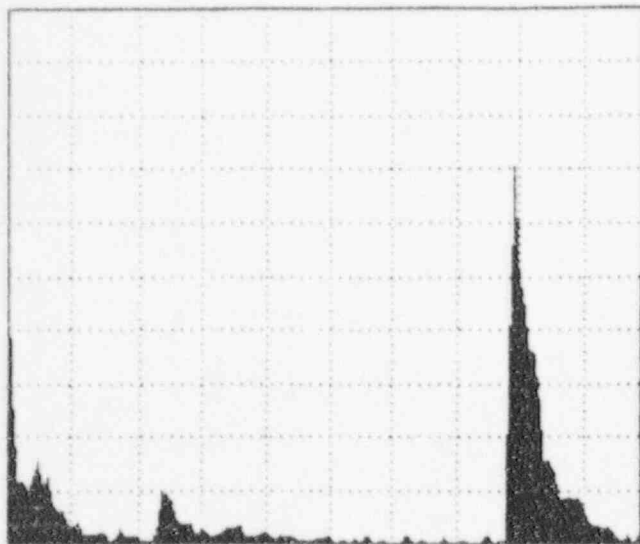
RECEIVER
GAIN 75.8dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 5.02in
WIDTH 2.56in
POLARITY +

PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 1 KHz

GAIN REFERENCE
GAIN 75.8dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 35.8

SCREEN PRINT #42



RANGE
RANGE 200in
DELAY 2.46in
VEL 0.230 in/us
UNITS in

RECEIVER
GAIN 75.8dB
DISPLAY FILT2
FREQ 2.25MHz
REJECT OFF

GATE
LEVEL OFF
POSN 52.6in
WIDTH 50.1in
POLARITY +

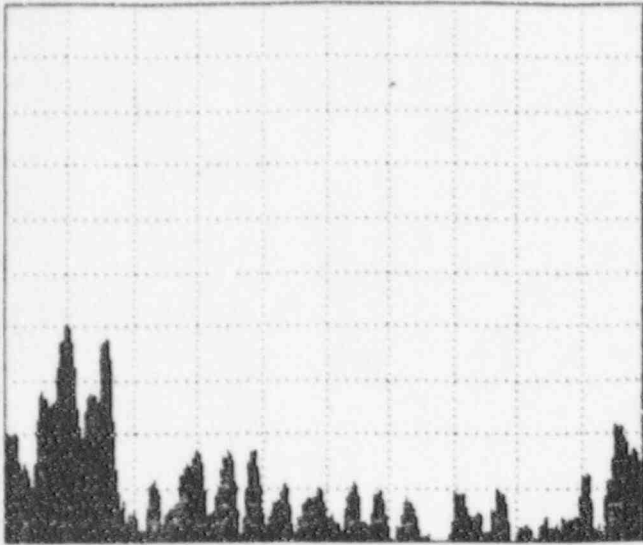
PULSER
PULSE 222ns
DAMPING 25
PULSE ECHO
REP RATE 250Hz

GAIN REFERENCE
GAIN 75.8dB
REF LVL 40.0dB
% CHANGE XXXX
dB CHANGE 35.8

95-E-763

pg 7 of 7

SCREEN PRINT #43 9/20/95



RANGE
 RANGE 10.2in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

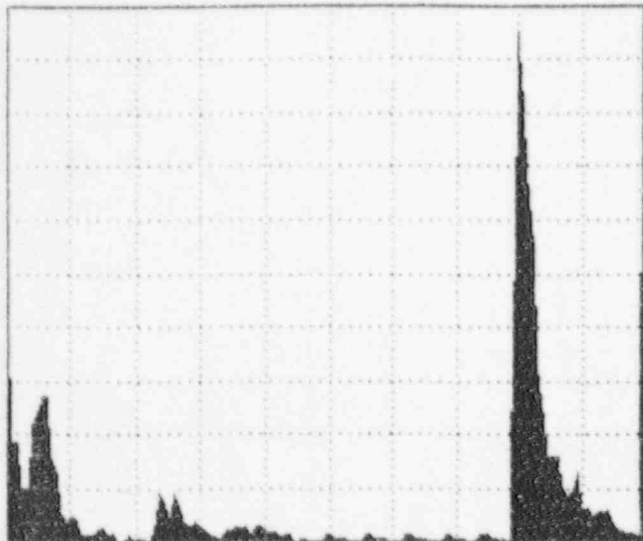
RECEIVER
 GAIN 75.8dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

GATE
 LEVEL OFF
 POSN 5.02in
 WIDTH 2.56in
 POLARITY +

PULSER
 PULSE 222ns
 DAMPING 25
 PULSE ECHO
 REP RATE 1 KHz

GAIN REFERENCE
 GAIN 75.8dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 35.8

SCREEN PRINT #43



RANGE
 RANGE 200in
 DELAY 2.46in
 VEL 0.230 in/us
 UNITS in

RECEIVER
 GAIN 75.8dB
 DISPLAY FILT2
 FREQ 2.25MHz
 REJECT OFF

GATE
 LEVEL OFF
 POSN 52.4in
 WIDTH 49.9in
 POLARITY +

PULSER
 PULSE 222ns
 DAMPING 25
 PULSE ECHO
 REP RATE 250Hz

GAIN REFERENCE
 GAIN 75.8dB
 REF LVL 40.0dB
 % CHANGE XXXX
 dB CHANGE 35.8

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
ACCESS HOLE COVER



GE Nuclear Energy

EXAMINATION SUMMARY SHEET

PROJECT: PILGRIM 1FX4V	PROCEDURE: TP95-109	REV: 0	FRR: N/A N/A N/A
SYSTEM: RPV	N/A	REV: N/A	FRR: N/A N/A N/A
WELD NO.: Access Hole Cover @ 0°	<input type="checkbox"/> MT <input type="checkbox"/> PT <input checked="" type="checkbox"/> UT <input type="checkbox"/> VT		
CONFIGURATION: AHC TO SHROUD LEDGE	<input checked="" type="checkbox"/> CIRCUMFERENTIAL		
EXAMINER: P. JOHNSON LEVEL: III	<input type="checkbox"/> LONGITUDINAL <input type="checkbox"/> OTHER N/A		
EXAMINER: N/A LEVEL: N/A	CAL SHEET NO.(S): C-01,02,03,04,05,06, & 07		
EXAMINER: N/A LEVEL: N/A			

During the automated ultrasonic examination of the above referenced weld, no indications associated with IGSCC were recorded by the Smart 2000 system utilizing 45° shear wave and 60° Refracted Longitudinal (RL) wave search units. The visual indication recorded during the Spring 1995 IVVI examination could not be confirmed with UT.

ID geometry was recorded with both the 45° shear and 60° RL search units.

Approximately 45% of the weld circumference was not examined from the ledge side of the weld due to the proximity of the reactor vessel and the shroud wall.

IVVI tapes and previous data were reviewed prior to this summary.

NOTE: Prior to the Ultrasonic Examination of the 0 degree Access Hole Cover, the weld was brushed using a Honda motor attached to a pole. This brushing was done so an exploratory Enhanced vT-1 could be performed of the previously reported IVVI indication identified during the 1995 Spring Outage. This indication was examined using a .0005" mil wire. During the exam, camera angles and lighting were changed to evaluate the indication. This indication, surface irregularities, did not indicate that it had any depth. During the Ultrasonic examination of the access hole cover, no indications were recorded. The only Ultrasonic reflectors that were recorded was inside geometry.

Note made by M. Stamm, GE-NE, Project Manager, Level III

Michael Stamm LV III
5/24/95

<i>Paul Johnson</i> SUMMARY BY	III LEVEL	5-13-95 DATE	<i>Bruce Pepin</i> REVIEWED BY	5-24-95 DATE	PAGE: 1 OF: 10
<i>Michael Stamm</i> GE REVIEW	III LEVEL	5/23/95 DATE	<i>BEG III</i>		FORM UT-09 REV 7

95-E-757 pg 1 of 11



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PILGRIM UNIT: 1

REPORT NO.:

PROJECT: 1FX4V

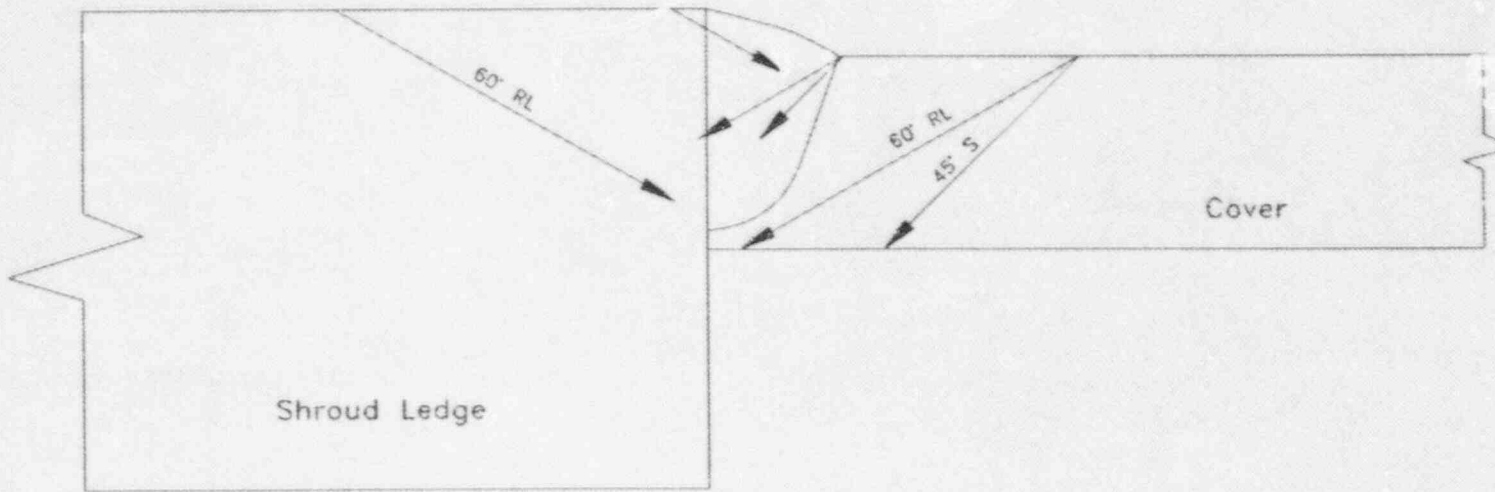
R35-01

SYSTEM: Reactor Pressure Vessel

COMPONENT ID NO.: Access Hole Cover @ 0"

CONFIGURATION: Shroud Ledge FLOW Cover

Coverage Plot



No exam was performed from 0' to 40' and 320' to 360' from the ledge side of the weld due to the proximity of the vessel wall.

No exam was performed from 132' to 220' from the ledge side of the weld due to the proximity of the shroud wall.

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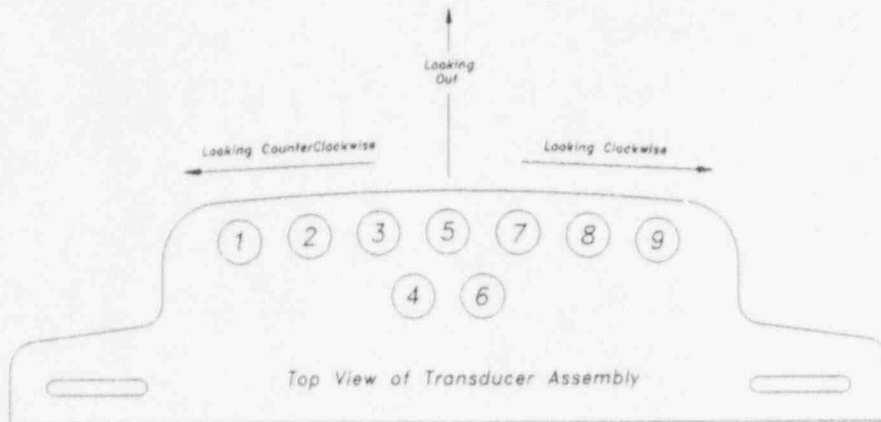
Paul Johnson III 5-13-95
DRAWN BY LEVEL DATE

Michael... 5/24/95
GE REVIEW DATE

B Perkins 5-24-95
UTILITY REVIEW *BEC III* DATE

Pilgrim Nuclear Power Station

Access Hole Cover Examination Transducer Layout



- ① 60° RL Looking CounterClockwise S/N 923893023
- ② 45° Shear Looking CounterClockwise S/N 923793008
- ③ 45° Shear Looking In S/N 923793022
- ④ 45° Shear Looking Out S/N 923793044
- ⑤ 0° S/N 006093003
- ⑥ 60° RL Looking In S/N 923893008
- ⑦ 60° RL Looking Out S/N 923893036
- ⑧ 45° Shear Looking Clockwise S/N 923793029
- ⑨ 60° RL Looking Clockwise S/N 923893021



GE Nuclear Energy

INDICATION PLOT SHEET

SITE: PILGRIM UNIT: 1

REPORT NO.:

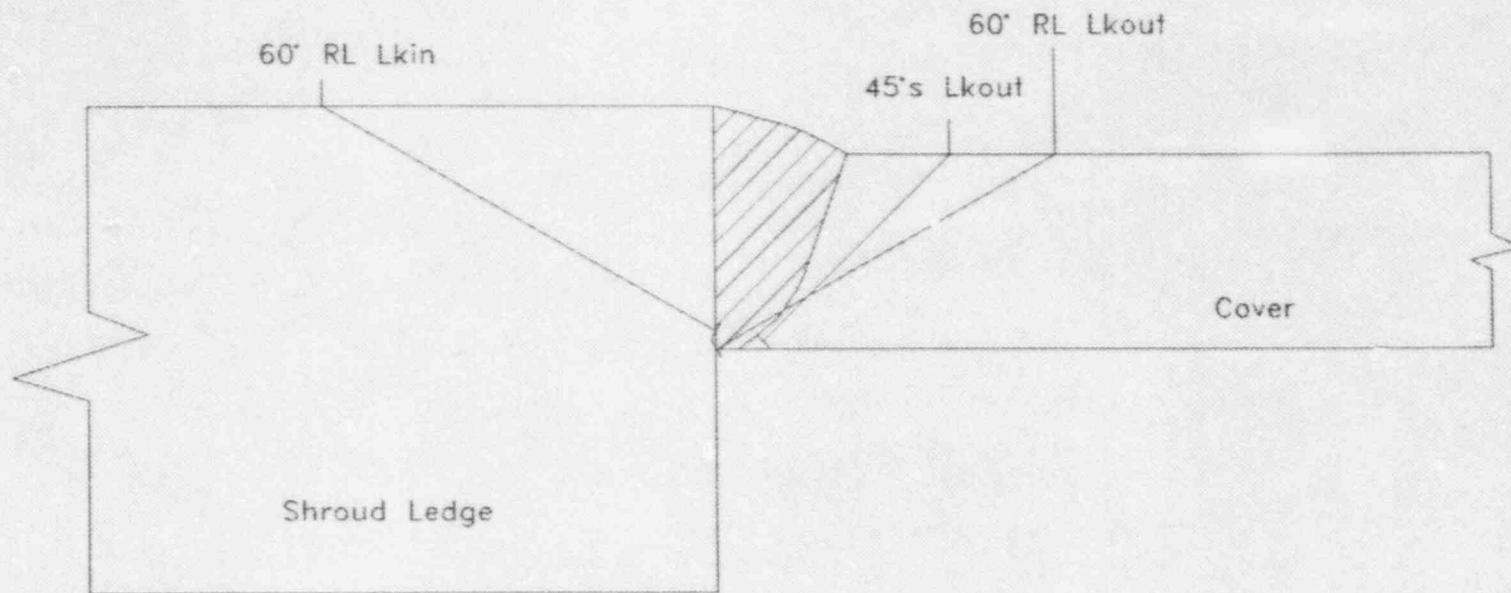
PROJECT: 1FX4V

R95-01

SYSTEM: Reactor Pressure Vessel

COMPONENT ID NO.: Access Hole Cover @ 0°

CONFIGURATION: Shroud Ledge FLOW Cover



45° Shear and 60° RL - ID Geometry (Typical)

95-E-757 PA 4/11

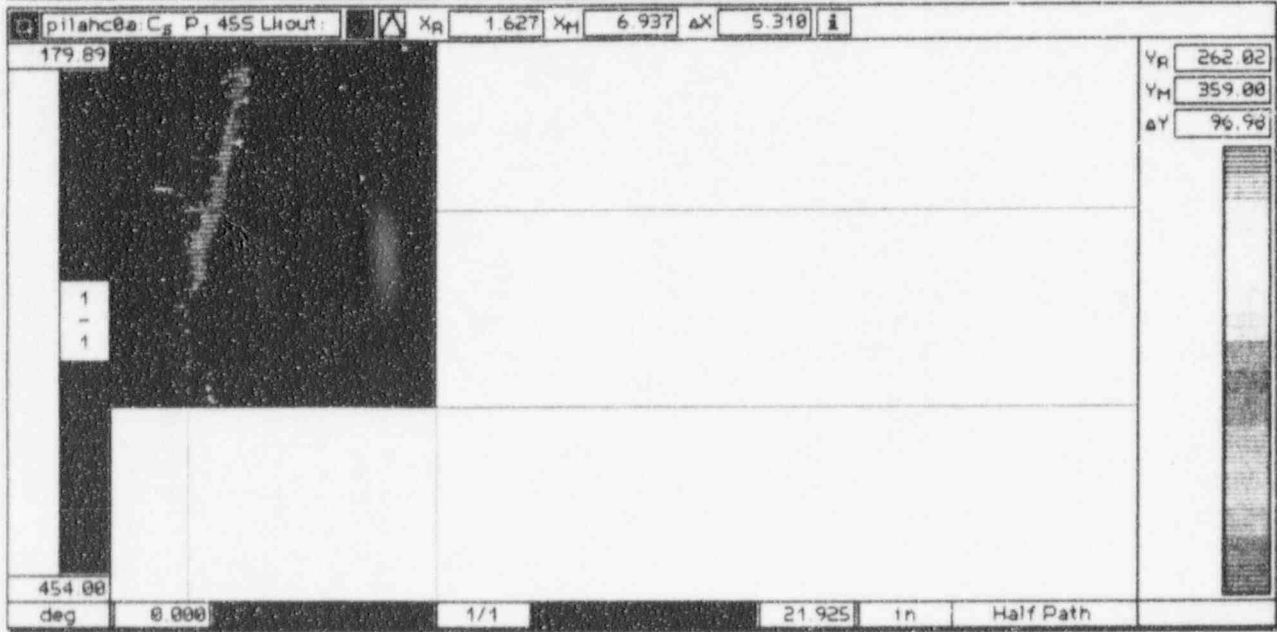
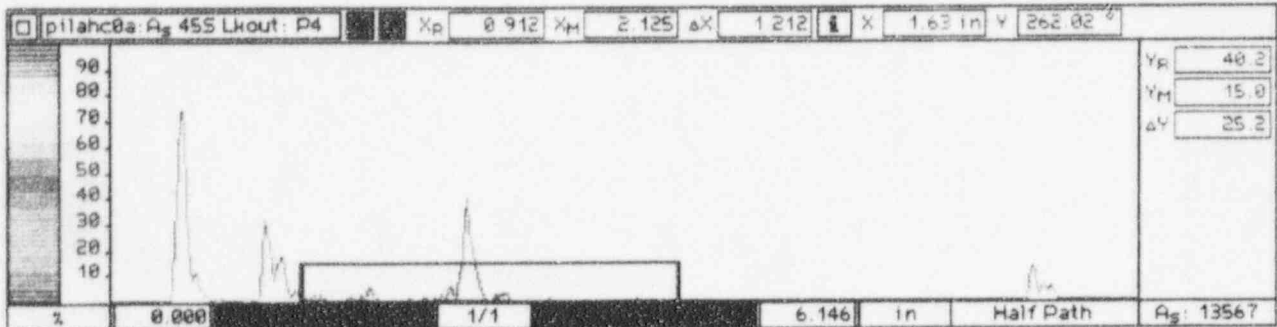
Paul Johnson III 5-13-95
 DRAWN BY LEVEL DATE

M. J. [Signature] 5/25/95
 GE REVIEW DATE

B. P. [Signature] BELGOTT 5-24-95
 UTILITY REVIEW DATE

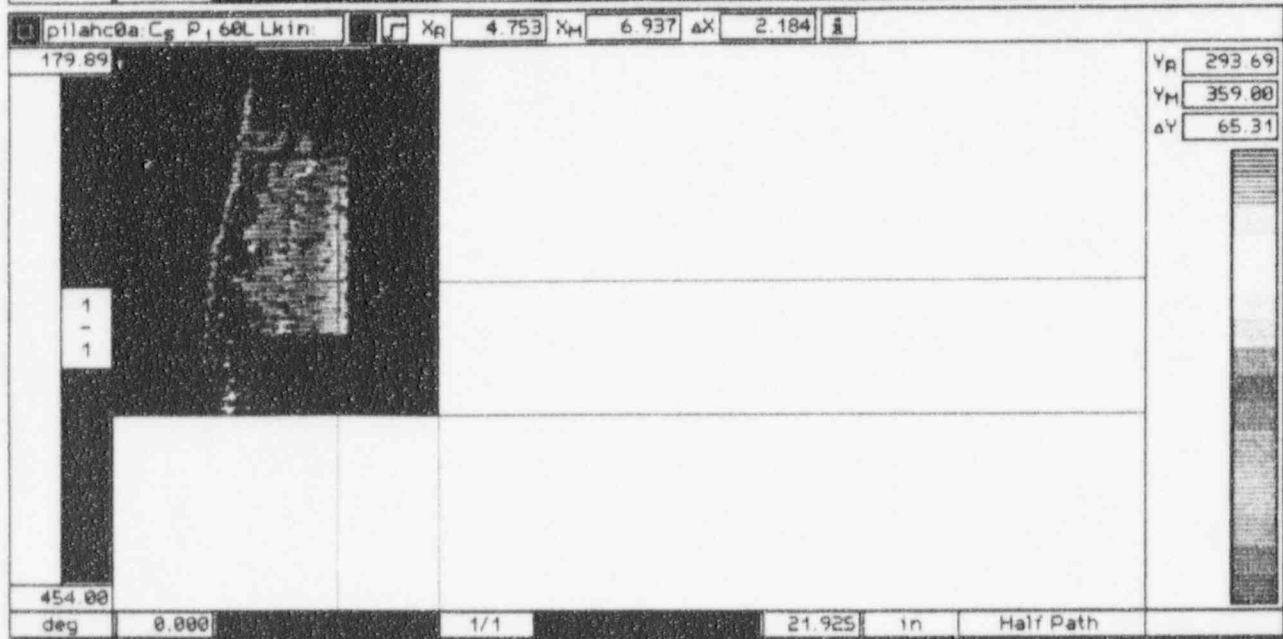
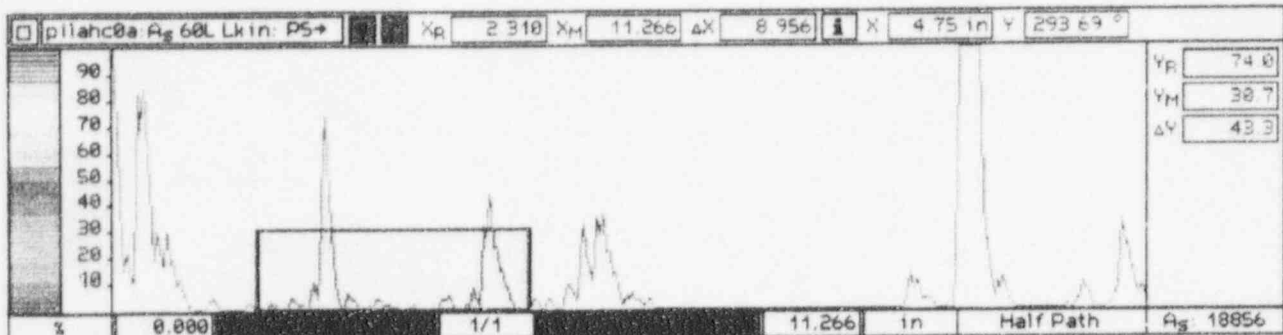


Access Hole Cover @ 0° 45° Shear Looking Out





Access Hole Cover @ 0° 60° RL Looking In

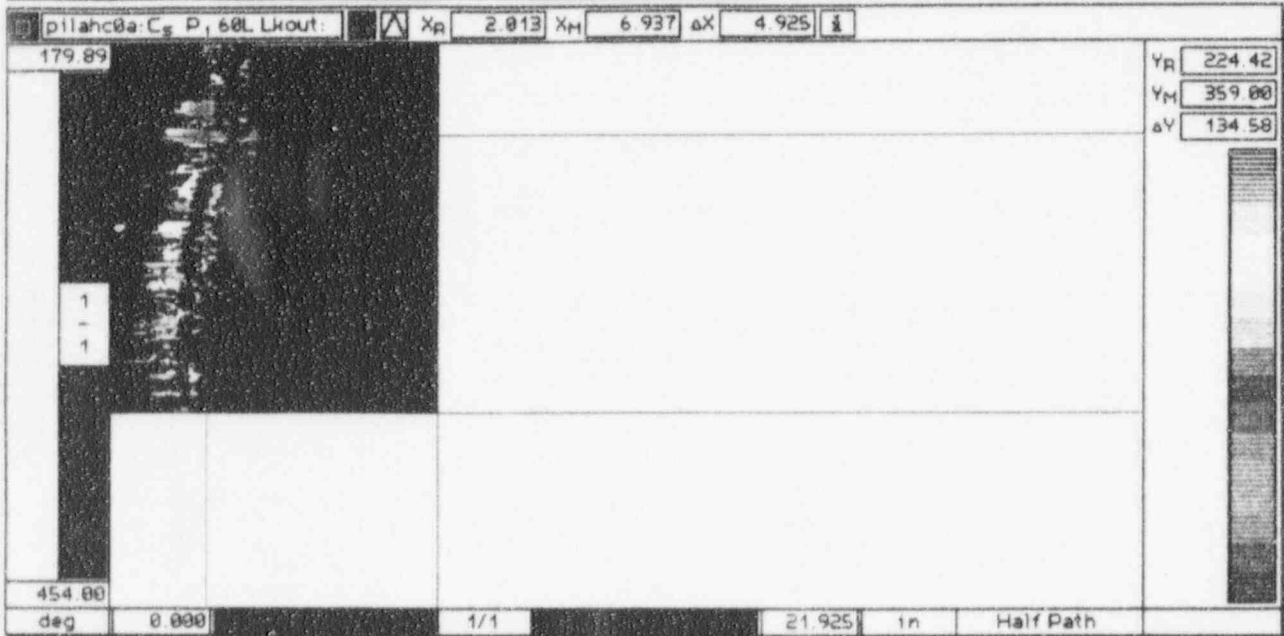
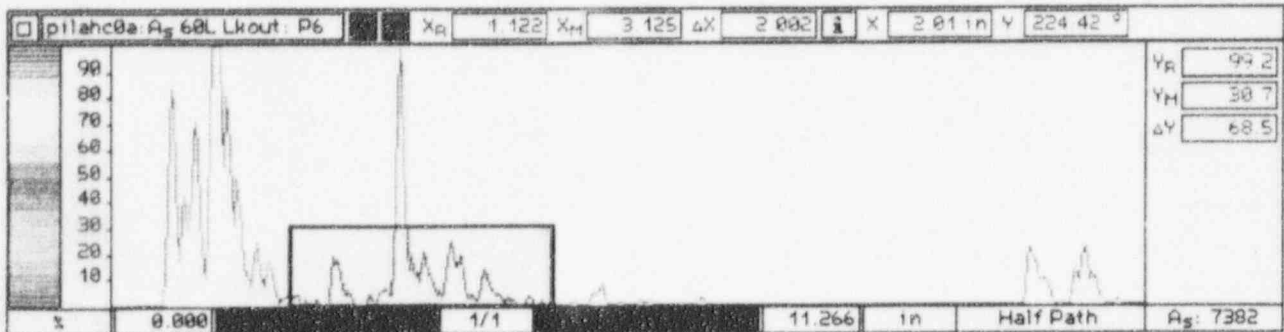


SITE: PILGRIM UNIT: 1 PROJECT NO.: 1FX4V REPORT NO.: R95-01
 WELD NO.: AHC @ 0° SEARCH UNIT: 60°RL INDICATION NO.: N/A PAGE: 6 OF: 10

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Access Hole Cover @ 0° 60° RL Looking Out



SITE: PILGRIM UNIT: 1 PROJECT NO.: 1FX4V REPORT NO.: R95-01

WELD NO.: AHC @ 0° SEARCH UNIT: 60°RL INDICATION NO.: N/A PAGE: 7 OF: 10

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GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM
UNIT: 1
PROJECT NO.: 1FX4V

PROCEDURE NO.: TP95-109
REVISION NO.: 0
FRR NO.: N/A

REPORT NO.: R95-01
DATA SHEET NO.: D-001
CALIBRATION SHEET NO.: C-01, 02, 03

SYSTEM: Reactor Pressure Vessel EXAM SURFACE TEMP: 83 °F COUPLANT: DEMIN WATER EXAM START: 05:00

WELD ID: AHC @ 0° THERMOMETER S/N: CTRL RM BATCH NO.: N/A EXAM END: 05:55

SEARCH UNIT: 45°S & 60°RL EXAMINATION SURFACE: OD COMPONENT: Shroud Ledge Cover

SCAN: 45°S SCAN DIRECTION: Lkout GAIN(dB): 33

DISK/SIDE: PGM/B FILENAME(S): PILAHC_0 PILAHC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
ROOT GEOMETRY
COUNTERBORE GEOMETRY
NON-RELEVANT INDICATIONS
ACOUSTIC INTERFACE
INSIDE SURFACE GEOMETRY
NON-GEOMETRIC INDICATIONS
OTHER

COMMENTS: N/A

SCAN: 60°RL SCAN DIRECTION: Lkout GAIN(dB): 45.5

DISK/SIDE: PGM/B FILENAME(S): PILAHC_0 PILAHC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
ROOT GEOMETRY
COUNTERBORE GEOMETRY
NON-RELEVANT INDICATIONS
ACOUSTIC INTERFACE
INSIDE SURFACE GEOMETRY
NON-GEOMETRIC INDICATIONS
OTHER

COMMENTS: N/A

SCAN: 60°RL SCAN DIRECTION: Lkin GAIN(dB): 46.5

DISK/SIDE: PGM/B FILENAME(S): PILAHC_0 PILAHC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
ROOT GEOMETRY
COUNTERBORE GEOMETRY
NON-RELEVANT INDICATIONS
ACOUSTIC INTERFACE
INSIDE SURFACE GEOMETRY
NON-GEOMETRIC INDICATIONS
OTHER

COMMENTS: N/A

SCAN: N/A SCAN DIRECTION: GAIN(dB):

DISK/SIDE: FILENAME(S):

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
ROOT GEOMETRY
COUNTERBORE GEOMETRY
NON-RELEVANT INDICATIONS
ACOUSTIC INTERFACE
INSIDE SURFACE GEOMETRY
NON-GEOMETRIC INDICATIONS
OTHER

COMMENTS:

SCAN: N/A SCAN DIRECTION: GAIN(dB):

DISK/SIDE: FILENAME(S):

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
ROOT GEOMETRY
COUNTERBORE GEOMETRY
NON-RELEVANT INDICATIONS
ACOUSTIC INTERFACE
INSIDE SURFACE GEOMETRY
NON-GEOMETRIC INDICATIONS
OTHER

COMMENTS:

SCAN: N/A SCAN DIRECTION: GAIN(dB):

DISK/SIDE: FILENAME(S):

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
ROOT GEOMETRY
COUNTERBORE GEOMETRY
NON-RELEVANT INDICATIONS
ACOUSTIC INTERFACE
INSIDE SURFACE GEOMETRY
NON-GEOMETRIC INDICATIONS
OTHER

COMMENTS:

REMARKS: N/A

Paul Johnson III 5-12-95
EXAMINER LEVEL DATE
N/A
GE REVIEWED BY III 5/23/95
LEVEL DATE

BT Rubin BEG III 5/24/95
UTILITY REVIEW DATE
N/A
ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM
UNIT: 1
PROJECT NO.: 1FX4V

PROCEDURE NO.: TP95-109
REVISION NO.: 0
FRR NO.: N/A

REPORT NO.: R95-01
DATA SHEET NO.: D-002
CALIBRATION SHEET NO.: C-04.05.06.07

SYSTEM: Reactor Pressure Vessel EXAM SURFACE TEMP: 83 °F COUPLANT: DEMIN WATER EXAM START: 07.05

WELD ID: AHC @ 0° THERMOMETER S/N: CTRL RM BATCH NO.: N/A EXAM END: 08.35

SEARCH UNIT: 45°S & 60°RL EXAMINATION SURFACE: OD COMPONENT: Shroud Ledge FLOW Cover

SCAN: 45°S SCAN DIRECTION: Lkccw GAIN(dB): 43

DISK/SIDE: PGM/B FILENAME(S): PILCIR0B
PILCRC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
- ROOT GEOMETRY
- COUNTERBORE GEOMETRY
- NON-RELEVANT INDICATIONS
- ACOUSTIC INTERFACE
- INSIDE SURFACE GEOMETRY
- NON-GEOMETRIC INDICATIONS
- OTHER

COMMENTS:

N/A

SCAN: 45°S SCAN DIRECTION: Lkccw GAIN(dB): 40

DISK/SIDE: PGM/B FILENAME(S): PILCIR0B
PILCRC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
- ROOT GEOMETRY
- COUNTERBORE GEOMETRY
- NON-RELEVANT INDICATIONS
- ACOUSTIC INTERFACE
- INSIDE SURFACE GEOMETRY
- NON-GEOMETRIC INDICATIONS
- OTHER

COMMENTS:

N/A

SCAN: 60°RL SCAN DIRECTION: Lkccw GAIN(dB): 54

DISK/SIDE: PGM/B FILENAME(S): PILCIR0B
PILCRC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
- ROOT GEOMETRY
- COUNTERBORE GEOMETRY
- NON-RELEVANT INDICATIONS
- ACOUSTIC INTERFACE
- INSIDE SURFACE GEOMETRY
- NON-GEOMETRIC INDICATIONS
- OTHER

COMMENTS:

N/A

SCAN: 60°RL SCAN DIRECTION: Lkccw GAIN(dB): 47.5

DISK/SIDE: PGM/B FILENAME(S): PILCIR0B
PILCRC0A

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
- ROOT GEOMETRY
- COUNTERBORE GEOMETRY
- NON-RELEVANT INDICATIONS
- ACOUSTIC INTERFACE
- INSIDE SURFACE GEOMETRY
- NON-GEOMETRIC INDICATIONS
- OTHER

COMMENTS:

SCAN: N/A SCAN DIRECTION: _____ GAIN(dB): _____

DISK/SIDE: _____ FILENAME(S): _____

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
- ROOT GEOMETRY
- COUNTERBORE GEOMETRY
- NON-RELEVANT INDICATIONS
- ACOUSTIC INTERFACE
- INSIDE SURFACE GEOMETRY
- NON-GEOMETRIC INDICATIONS
- OTHER

COMMENTS:

SCAN: N/A SCAN DIRECTION: _____ GAIN(dB): _____

DISK/SIDE: _____ FILENAME(S): _____

EXAMINATION RESULTS:

- NO RECORDED INDICATIONS
- ROOT GEOMETRY
- COUNTERBORE GEOMETRY
- NON-RELEVANT INDICATIONS
- ACOUSTIC INTERFACE
- INSIDE SURFACE GEOMETRY
- NON-GEOMETRIC INDICATIONS
- OTHER

COMMENTS:

REMARKS: N/A

Paul Johnson III 5-12-95
EXAMINER LEVEL DATE

Michael III 5/25/95
GE REVIEWED BY LEVEL DATE

B.P. Bette III 5/24/95
UTILITY REVIEW DATE

N/A
ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC SCAN PARAMETER SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM	PROCEDURE NO.: TP95-109	REPORT NO.: R95-01
UNIT: 1	REVISION NO.: 0	DATA SHEET NO.: D-001 & D-002
PROJECT NO.: 1FX4V	FRR NO.: N/A	CALIBRATION SHEET NO.: C-01, 02, 03, 04, 05, 06, & 07

SYSTEM: Reactor Pressure Vessel WELD ID: AHC @ 0° MOTOR STEPS: CIR: N/A TRA: N/A
 WELD REFERENCE, (GE-ADM-1005): Lo: VESSEL 0 Wo: WELD CL SEARCH UNIT: See Remarks

EXAMINATION SETUP

COMPONENT DIA: 19.91" WELD LENGTH: 82.5" TRACK DIA: N/A ARM LENGTH: N/A TRACK LOCATION: N/A

SCAN PARAMETERS

SCAN: AX1	SCAN DIRECTION: IN / OUT	SKEW: N/A	SCAN: AX2	SCAN DIRECTION: IN / OUT	SKEW: N/A
SCANNING "X": INDEXING "Y": START: 0° 0° SIZE: 5" 180" OFFSET: 0" 0" CIR: VESSEL 0 RESOLUTION: 0.428" 990" TRA: 2.5" IN FROM WELD CL MOTOR DIR: N/A N/A ROT: N/A			SCANNING "X": INDEXING "Y": START: 0° 180° SIZE: 5" 180" OFFSET: 0" 0" CIR: VESSEL 0 RESOLUTION: 0.428" 990" TRA: 2.5" IN FROM WELD CL MOTOR DIR: N/A N/A ROT: N/A		

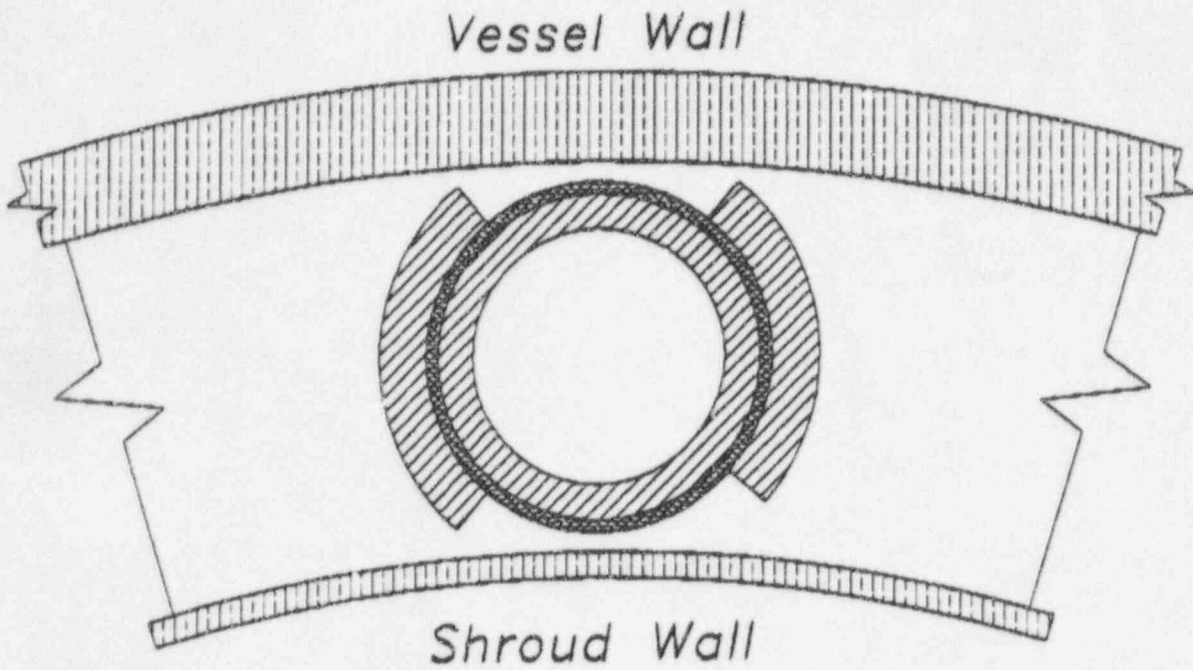
SCAN: CIRC1	SCAN DIRECTION: CW / CCW	SKEW: N/A	SCAN: CIRC2	SCAN DIRECTION: CW / CCW	SKEW: N/A
SCANNING "X": INDEXING "Y": START: 0° 0° SIZE: 180" 3.1" OFFSET: 0" 0" CIR: VESSEL 0 RESOLUTION: 214" 1172" TRA: 1.5" IN FROM WELD CL MOTOR DIR: N/A N/A ROT: N/A			SCANNING "X": INDEXING "Y": START: 180° 0° SIZE: 180" 3.1" OFFSET: 0" 0" CIR: VESSEL 0 RESOLUTION: 214" 1417" TRA: 1.5" IN FROM WELD CL MOTOR DIR: N/A N/A ROT: N/A		

SCAN: N/A	SCAN DIRECTION:	SKEW:	SCAN: N/A	SCAN DIRECTION:	SKEW:
SCANNING "X": INDEXING "Y": START: _____ SIZE: _____ OFFSET: _____ CIR: _____ RESOLUTION: _____ TRA: _____ MOTOR DIR: _____ ROT: _____			SCANNING "X": INDEXING "Y": START: _____ SIZE: _____ OFFSET: _____ CIR: _____ RESOLUTION: _____ TRA: _____ MOTOR DIR: _____ ROT: _____		

REMARKS: 45° shear looking out, clockwise, and counterclockwise. 60° RL looking in, out, clockwise, and counterclockwise.

<i>Paul Johnson III</i> EXAMINER	5-12-95 LEVEL DATE	<i>Michael Steiner</i> GE REVIEW	DATE	PAGE: 10 OF: 10
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UT Scan Coverage Area



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PII.GRIM UNIT: 1 CALIBRATION SHEET NO.: C-001
 PROJECT NO.: 1FX4V LINEARITY SHEET NO.: L-006

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN TTS10090100
Manufacturer / Model System Serial No.
 Search Unit SIGMA (60° RL LKOUT) 923893036 5" 2.25 MHz 60°RL N/A
Manufacturer Serial No. Size Freq Angle/Mode Incident to wedge front
 Cable RG-174 250' 3
Type Length No. of Connectors
 Calibration Standard GE107E6382P001-1 INCONEL .625" Amb. *F
Serial No. Material Thickness Temp
 Thermometer N/A
Serial No.
 Couplant DEMIN WATER N/A
Type Batch No.

CALIBRATION

ORIENTATION: CIRC N/A
 TYPE: 50% ID NOTCH N/A
 DEPTH: .31" N/A
 AMPLITUDE: 80% N/A
 SWEEP: .638" N/A
 GAIN: (dB) 39.5 N/A
 TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 9.0161 in.
 2. TIMEBASE: 11.2660 in.
 3. FREQUENCY: (MHz) 5
 4. RATE: /S 50
 5. UNITS: DISTANCE HALF PATH TIME
 6. VELOCITY: 220039 in/s
 7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

REFLECTOR:	<u>N/A</u>	<u>N/A</u>
MAX AMPLITUDE:	<u>N/A</u>	<u>N/A</u>
SWEEP:	<u>N/A</u>	<u>N/A</u>
GAIN: (dB)	<u>N/A</u>	<u>N/A</u>

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION
 2. PULSER: P6 TO P6
 3. VOLTAGE: (v) 400
 4. WIDTH: (Ns) 200
 5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz
 6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR
 7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23.45	05/11/95	<i>[Signature]</i>	0" AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11:30	05/12/95	<i>[Signature]</i>	0" AHC	R95-01

Paul Johnson III 5-11-95
 EXAMINER LEVEL DATE
Michael Stone III 5/25/95
 GE REVIEWED BY LEVEL DATE

R.P. Perkins BETOTT 5-24-95
 UTILITY REVIEW DATE
N/A
 ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM UNIT: 1 CALIBRATION SHEET NO.: C-002
 PROJECT NO.: 1FX4V LINEARITY SHEET NO.: L-004

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN System Serial No. TTS10090100
Manufacturer / Model
 Search Unit SIGMA (45° S LKOUT) 923793044 5" 2.25 MHz 45°S N/A
Manufacturer Serial No. Size Freq. Ang. Mode Incident to wedge front
 Cable RG-174 250' 3
Type Length No. of Connectors
 Calibration Standard GE107E6382P001-1 INCONEL 625" Amb. °F
Serial No. Material Thickness Temp
 Thermometer N/A
Serial No.
 Couplant DEMIN WATER N/A
Type Batch No.

CALIBRATION

ORIENTATION: CIRC N/A
 TYPE: ID NOTCH N/A
 DEPTH: 625" N/A
 AMPLITUDE: 80% N/A
 SWEEP: 876" N/A
 GAIN: (dB) 27.0 N/A
 TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 4.8676 in.
 2. TIMEBASE: 6.1460 in.
 3. FREQUENCY: (MHz) 5
 4. RATE: /S 50
 5. UNITS: DISTANCE HALF PATH TIME
 6. VELOCITY: 120039 in/s
 7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION
 2. PULSER: P4 TO P4
 3. VOLTAGE: (v) 400
 4. WIDTH: (Ns) 200
 5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz
 6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR
 7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23:40	05/11/95	<i>[Signature]</i>	0" AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11:25	05/12/95	<i>[Signature]</i>	0" AHC	R95-01

Paul Johnson III 5-11-95
 EXAMINER LEVEL DATE
Michael Stone III 5/25/95
 GE REVIEWED BY LEVEL DATE

B. P. B. BELT 5/24/95
 UTILITY REVIEW DATE
N/A
 ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM UNIT: 1

CALIBRATION SHEET NO.: C-003

PROJECT NO.: 1FX4V

LINEARITY SHEET NO.: L-005

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN TTS10090100
Manufacturer / Model System Serial No.

Search Unit SIGMA (60° RL LKIN) 923893008 5" 2.25 MHz 60°RL N/A
Manufacturer Serial No. Size Freq Angle/Mode Incident to wedge front

Cable RG-174 250' 3
Type Length No. of Connectors

Calibration Standard GE107E6382P001-1 INCONEL .625" Amb °F
Serial No. Material Thickness Temp

Thermometer N/A
Serial No.

Couplant DEMIN WATER N/A
Type Batch No.

CALIBRATION

ORIENTATION: CIRC N/A

TYPE: 50% ID NOTCH N/A

DEPTH: .31" N/A

AMPLITUDE: 80% N/A

SWEEP: .638" N/A

GAIN: (dB) 39.5 N/A

TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 9.0161 in.

2. TIMEBASE: 11.2660 in.

3. FREQUENCY: (MHz) 5

4. RATE: /S 50

5. UNITS: DISTANCE HALF PATH TIME

6. VELOCITY: 220039 in/s

7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

REFLECTOR:	N/A	N/A
MAX AMPLITUDE:	N/A	N/A
SWEEP:	N/A	N/A
GAIN: (dB)	N/A	N/A

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION

2. PULSER: P5 TO P5

3. VOLTAGE: (v) 400

4. WIDTH: (Ns) 200

5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz

6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR

7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23:30	05/11/95	<i>[Signature]</i>	0° AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11:20	05/12/95	<i>[Signature]</i>	0° AHC	R95-01

Paul Johnson III 5-11-95
EXAMINER LEVEL DATE

Michael [Signature] III 5/25/95
GE REVIEWED BY LEVEL DATE

BP Rubio BELATI 5/24/95
UTILITY REVIEW DATE

[Signature] N/A
ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM UNIT: 1

CALIBRATION SHEET NO.: C-004

PROJECT NO.: 1FX4V

LINEARITY SHEET NO.: L-007

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN TTS10090100
Manufacturer / Model System Serial No.

Search Unit SIGMA (45° S LKCW) 923793029 .5" 2.25 MHz 45°S N/A
Manufacturer Serial No Size Freq Angle/Mode incident to wedge front

Cable RG-174 250' 3
Type Length No. of Connectors

Calibration Standard GE107E6382P001-1 INCONEL .625" Amb °F
Serial No Material Thickness Temp

Thermometer N/A
Serial No

Couplant DEMIN WATER N/A
Type Batch No

CALIBRATION

ORIENTATION: AX N/A

TYPE: ID NOTCH N/A

DEPTH: .925" N/A

AMPLITUDE: 80% N/A

SWEEP: .864" N/A

GAIN: (dB) 43.0 N/A

TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 4.8676 in.

2. TIMEBASE: 6.1460 in.

3. FREQUENCY: (MHz) 5

4. RATE: /S 50

5. UNITS: DISTANCE HALF PATH TIME

6. VELOCITY: 120039 in/s

7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

REFLECTOR:	N/A	N/A
MAX AMPLITUDE:	N/A	N/A
SWEEP:	N/A	N/A
GAIN: (dB)	N/A	N/A

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION

2. PULSER: P7 TO P7

3. VOLTAGE: (v) 400

4. WIDTH: (Ns) 200

5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz

6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR

7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23:00	05/11/95	<i>[Signature]</i>	0" AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11:00	05/12/95	<i>[Signature]</i>	0" AHC	R95-01

Paul Johnson III 5-11-95
EXAMINER LEVEL DATE

B. P. B. B. B. III 5/24/95
UTILITY REVIEW DATE

GE REVIEWED BY LEVEL DATE

ANII REVIEW DATE

PAGE: 1 OF: 1

FORM UT-08 REV 5

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GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM UNIT: 1

CALIBRATION SHEET NO.: C-005

PROJECT NO.: 1FX4V

LINEARITY SHEET NO.: L-002

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN TTS10090100
Manufacturer / Model System Serial No.

Search Unit SIGMA (45° S LKCCW) 923793008 .5" 2.25 MHz 45°S N/A
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable RG-174 250' 3
Type Length No. of Connectors

Calibration Standard GE107E6382P001-1 INCONEL .625" Amb. °F
Serial No. Material Thickness Temp.

Thermometer N/A
Serial No.

Couplant DEMIN WATER N/A
Type Batch No.

CALIBRATION

ORIENTATION: AX N/A

TYPE: ID NOTCH N/A

DEPTH: .625" N/A

AMPLITUDE: 80% N/A

SWEEP: .818" N/A

GAIN: (dB) 40.0 N/A

TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 4.8676 in.

2. TIMEBASE: 6.1460 in.

3. FREQUENCY: (MHz) 5

4. RATE: /S 50

5. UNITS: DISTANCE HALF PATH TIME

6. VELOCITY: 120039 in/s

7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION

2. PULSER: P2 TO P2

3. VOLTAGE: (v) 400

4. WIDTH: (Ns) 200

5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz

6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR

7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23.05	05/11/95	<i>[Signature]</i>	0* AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11.15	05/12/95	<i>[Signature]</i>	0* AHC	R95-01

Paul Johnson III 5-11-95
EXAMINER LEVEL DATE

[Signature] III 5/25/95
GE REVIEWED BY LEVEL DATE

B. P. [Signature] III 5/24/95
UTILITY REVIEW DATE

N/A
ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM UNIT: 1

CALIBRATION SHEET NO.: C-006

PROJECT NO.: 1FX4V

LINEARITY SHEET NO.: L-008

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN TTS10090100
Manufacturer / Model System Serial No.

Search Unit SIGMA (60° RL LKCW) 923893021 5" 2.25 MHz 60°RL N/A
Manufacturer Serial No. Size Freq Angle/Mode Incident to wedge front

Cable RG-174 250' 3
Type Length No. of Connectors

Calibration Standard GE107E6382P001-1 INCONEL 625" Amb °F
Serial No. Material Thickness Temp

Thermometer N/A
Serial No.

Couplant DEMIN WATER N/A
Type Batch No.

CALIBRATION

ORIENTATION: AX N/A

TYPE: 50% ID NOTCH N/A

DEPTH: 31" N/A

AMPLITUDE: 80% N/A

SWEEP: 572" N/A

GAIN: (dB) 54.0 N/A

TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 9.0161 in.

2. TIMEBASE: 11.2660 in.

3. FREQUENCY: (MHz) 5

4. RATE: /S 50

5. UNITS: DISTANCE HALF PATH TIME

6. VELOCITY: 220039 in/s

7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

REFLECTOR:	N/A	N/A
MAX AMPLITUDE:	N/A	N/A
SWEEP:	N/A	N/A
GAIN: (dB)	N/A	N/A

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION

2. PULSER: P8 TO P8

3. VOLTAGE: (v) 400

4. WIDTH: (Ns) 200

5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz

6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR

7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23 10	05/11/95	<i>[Signature]</i>	0" AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11 05	05/12/95	<i>[Signature]</i>	0" AHC	R95-01

Paul Johnson III 5-11-95
 EXAMINER LEVEL DATE

B. Pichia BEG III 5/24/95
 UTILITY REVIEW DATE

Michael Stone III 5/25/95
 GE REVIEWED BY LEVEL DATE

N/A
 ANII REVIEW DATE

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GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: PILGRIM UNIT: 1 CALIBRATION SHEET NO.: C-007

PROJECT NO.: 1FX4V LINEARITY SHEET NO.: L-001

PROCEDURE NO.: TP95-109 REVISION: 0 FRR: N/A

Instrument TECRAD/TOMOSCAN TTS10090100
Manufacturer / Model System Serial No.

Search Unit SIGMA (60° RL LKCCW) 923893023 5" 2.25 MHz 60°RL N/A
Manufacturer Serial No. Size Freq Angle/Mode Incident to wedge front

Cable RG-174 250' 3
Type Length No. of Connectors

Calibration Standard GE107E6382P001-1 INCONEL .625" Amb. °F
Serial No. Material Thickness Temp.

Thermometer N/A
Serial No.

Couplant DEMIN WATER N/A
Type Batch No.

CALIBRATION

ORIENTATION: AX N/A

TYPE: 50% ID NOTCH N/A

DEPTH: 31" N/A

AMPLITUDE: 80% N/A

SWEEP: 594" N/A

GAIN: (dB) 47.5 N/A

TIME DEPTH METAL PATH

BASIC SETTINGS

1. DELAY: 9.0161 in.

2. TIMEBASE: 11.2660 in.

3. FREQUENCY: (MHz) 5

4. RATE: /S 50

5. UNITS: DISTANCE HALF PATH TIME

6. VELOCITY: 220039 in/s

7. SAMPLES: 512

FIELD SIMULATOR: N/A S/N: N/A

REFLECTOR:	<u>N/A</u>	<u>N/A</u>
MAX AMPLITUDE:	<u>N/A</u>	<u>N/A</u>
SWEEP:	<u>N/A</u>	<u>N/A</u>
GAIN: (dB)	<u>N/A</u>	<u>N/A</u>

PULSER / RECEIVER

1. MODE: PULSE ECHO THRU-TRANSMISSION

2. PULSER: P1 TO P1

3. VOLTAGE: (v) 400

4. WIDTH: (Ns) 200

5. FILTER: NONE 0.5 - 2 MHz 1 - 5 MHz
 2 - 10 MHz 5 - 15 MHz

6. RECTIFICATION: NONE UNIPOLAR + UNIPOLAR -
 BIPOLAR

7. SMOOTHING: NONE FAST MEDIUM SLOW

CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP. ID	REPORT NO
INITIAL	23 15	05/11/95	<i>[Signature]</i>	0° AHC	R95-01
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	11 10	05/12/95	<i>[Signature]</i>	0° AHC	R95-01

Paul Johnson III 5-11-95
EXAMINER LEVEL DATE

[Signature] 5/25/95
GE REVIEWED BY LEVEL DATE

B.P. Phipps BEG III 5/24/95
UTILITY REVIEW DATE

N/A
ANII REVIEW DATE

95-C-756 pg 7 of 7

PILGRIM NUCLEAR POWER STATION
INSERVICE EXAMINATION
TENTH REFUELING AND INSPECTION OUTAGE
REPORT OF EXAMINATION RESULTS
SHROUD VISUAL



**PILGRIM NUCLEAR POWER STATION
REACTOR SHROUD VISUAL INSPECTION
TENTH REFUELING AND INSPECTION**

SUMMARY

EXAMINATION SUMMARY

During the period of April, 1995, General Electric Nuclear Energy personnel performed In Vessel Visual Inspection of the Pilgrim Reactor Shroud. This section details the techniques utilized, examination procedure, examination personnel and the results of the inspections.

EXAMINATION PROCEDURE

TP95-083 Revision No. 0, Procedure For In vessel Inspection Of RPV Core Support Shroud Welds.

EXAMINATION PERSONNEL

The following is a list that identifies the certification levels of the General Electric visual examination personnel that performed the In Vessel Inspection.

Name	Visual Level
M. Stamm	Level III
Dan Thomas	Level II
Dave Thomas	Level II
E. Wall	Level II
J. Bzenas	Level II
T. McAndrew	Level II

EXAMINATION TECHNIQUES

The examinations were performed using remote CCTV equipment, hand held camera mounted lighting, and VHS videotape recording equipment. System resolution was verified using both a .0005" Mil Diameter Wire and a .001" Diameter wire attached to a holding fixture. Resolution was verified on each videotape recorded.

WORKSCOPE

The following identifies the Pilgrim In vessel (RPV) Internals that were scheduled for inspection. These inspections were performed in accordance with Procedure TP95-083 Rev 0.

1. Accessible Gusset Welds, Shroud Support Plate and Vessel Wall at 45°, 135°, 225° and 315°. (VT-1 Enhanced)
2. Vertical Welds V15, V16, V17 & V18 ID and OD, Intersecting Weld H4. (VT-1 Enhanced)
3. Accessible Core Plate Hold Downs at 45°, 135°, 225° and 315°. (VT-3)
4. Aligner Pins at 0°, 90°, 180° and 270°. (VT-3)
5. Ring Segment Welds V9, V10, V11, V12, V13 and V14. (Enhanced VT-1)

EXAMINATION RESULTS

No Relevant Indications were reported during the In vessel Visual Examination. (IVVI)



INVESSEL VISUAL EXAMINATION DATA

GE Nuclear Energy

SITE: Pilgrim Nuclear Station PROJECT NUMBER: 1E2AW	CAMERA RESOLUTION	TYPE OF VISUAL EXAMINATION	
	<input type="checkbox"/> .001" Diameter Wire <input checked="" type="checkbox"/> .0005" Diameter Wire <input type="checkbox"/> 1/32" Black Line	<input type="checkbox"/> VT-1 <input type="checkbox"/> VT-3 <input checked="" type="checkbox"/> ENHANCED VT-1	<input type="checkbox"/> DIRECT <input checked="" type="checkbox"/> REMOTE
Equipment Used During the Examination ETV-1250 Underwater Camera with twin 50's Super VHS Recorder		Procedure No. TP95-083	
		Revision No. 0	
		FRR No. NONE	

Component / Area Viewed	Description of Recordable Indications	Ind. No.	Accept	Reject	Film Footage
CAMERA RESOLUTION	N/A	N/A	X		00:00-00:46
GUSSET WELDS AT 315 DEGREE	NRI	N/A	X		00:46-16:25
CAMERA RESOLUTION	N/A	N/A	X		16:25-17:40

<p><u>DAN THOMAS</u> II 04/12/95 Examiner Level Date</p> <p><u>DAVE THOMAS</u> II 04/12/95 Examiner Level Date</p> <p><u>ED WALL</u> II 04/12/95 Examiner Level Date</p> <p><u>JOHN BAZENAS</u> II 04/12/95 Examiner Level Date</p> <p><u>TIM McANDREW</u> II 04/12/95 Examiner Level Date</p>		<p>COMMENTS: PILGRIM SHROUD REPAIR</p> <p><i>Mike Stamm III</i> 5/17/95 Reviewed Level Date</p> <p><i>B. Rubin</i> N/A 5/17/95 Reviewed Level Date</p> <p><i>V. Hest</i> 5-18-95 ANNI Date</p>	<p>Report Number 95-V-734 P91 of 6</p> <p>Tape Number 95-06</p>
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INVESSEL VISUAL EXAMINATION DATA

GE Nuclear Energy

SITE: Pilgrim Nuclear Station PROJECT NUMBER: 1E2AW	CAMERA RESOLUTION	TYPE OF VISUAL EXAMINATION	
	<input type="checkbox"/> .001" Diameter Wire <input checked="" type="checkbox"/> .0005" Diameter Wire <input type="checkbox"/> 1/32" Black Line	<input type="checkbox"/> VT-1 <input type="checkbox"/> VT-3 <input checked="" type="checkbox"/> ENHANCED VT-1	<input type="checkbox"/> DIRECT <input checked="" type="checkbox"/> REMOTE

Equipment Used During the Examination ETV-1250 Underwater Camera with twin 50's Super VHS Recorder	Procedure No. TP95-083 Revision No. 0 FRR No. NONE
--	--

Component / Area Viewed	Description of Recordable Indications	Ind. No.	Accept	Reject	Film Footage
CAMERA RESOLUTION	N/A	N/A	X		00:00-00:51
V18 225 DEGREES OD	NRI	N/A	X		00:51-07:43
V18 225 DEGREES ID	NRI	N/A	X		07:43-14:29
CAMERA RESOLUTION	N/A	N/A	X		14:29-15:04
V16 315 DEGREES OD	NRI	N/A	X		15:04-19:50
V16 315 DEGREES ID	NRI	N/A	X		19:50-24:05
CAMERA RESOLUTION	N/A	N/A	X		24:05-24:58
V15 135 DEGREES OD	NRI	N/A	X		24:58-35:48
V15 135 DEGREES ID	NRI	N/A	X		35:48-45:41
V17 45 DEGREES OD	NRI	N/A	X		45:41-54:17
V17 45 DEGREES ID	NRI	N/A	X		54:17-1:00:55
CAMERA RESOLUTION	N/A	N/A	X		1:00:55-1:01:50

COMMENTS: PILGRIM SHROUD REPAIR	
DAN THOMAS II 04/12/95 <i>Examiner Level Date</i>	Report Number <u>95-V-734</u> <u>pg 2 of 6</u> Tape Number <u>95-07</u>
DAVE THOMAS II 04/12/95 <i>Examiner Level Date</i>	
ED WALL II 04/12/95 <i>Examiner Level Date</i>	
JOHN BAZENAS II 04/12/95 <i>Examiner Level Date</i>	
TIM McANDREW II 04/12/95 <i>Examiner Level Date</i>	
<i>Michael Thomas</i> 5/17/95 <i>Reviewed Level Date</i>	
<i>B. P. ...</i> N/A 5/17/95 <i>Reviewed Level Date</i>	
<i>V. Hooker</i> 5-18-95 <i>ANNI Date</i>	



INVESSEL VISUAL EXAMINATION DATA

GE Nuclear Energy

SITE: Pilgrim Nuclear Station PROJECT NUMBER: 1E2AW	CAMERA RESOLUTION	TYPE OF VISUAL EXAMINATION	
	<input type="checkbox"/> .001" Diameter Wire <input checked="" type="checkbox"/> .0005" Diameter Wire <input type="checkbox"/> 1/32" Black Line	<input type="checkbox"/> VT-1 <input type="checkbox"/> VT-3 <input checked="" type="checkbox"/> ENHANCED VT-1	<input type="checkbox"/> DIRECT <input checked="" type="checkbox"/> REMOTE
Equipment Used During the Examination ETV-1250 Underwater Camera with twin 50's Super VHS Recorder	Procedure No. TP95-083 Revision No. 0 FRR No. NONE		

Component / Area Viewed	Description of Recordable Indications	Ind. No.	Accept	Reject	Film Footage
CAMERA RESOLUTION	N/A	N/A	X		00:00-01:00
CORE PLATE HOLD DOWNS @ 45° & 135° *	NRI	N/A	X		01:00-13:58
ALIGNER PINS @ 0, 90, 180, & 270 DEGREES *	NRI	N/A	X		13:58-29:39
CORE PLATE HOLD DOWNS @ 225° & 315° *	NRI	N/A	X		29:39-37:45
CAMERA RESOLUTION	N/A	N/A	X		37:45-38:36
RING SEGMENT OD V9, V10 & V11	NRI	N/A	X		38:36-43:20
V12 190 DEGREES	NRI	N/A	X		43:20-46:38
V13 250 DEGREES	NRI	N/A	X		46:38-50:15
V14 310 DEGREES	NRI	N/A	X		50:15-52:58
CAMERA RESOLUTION	N/A	N/A	X		53:02-54:52
V9 10 DEGREES	NRI	N/A	X		54:52-1:01:45
V10 70 DEGREES	NRI	N/A	X		1:01:45-1:14:10
V11 130 DEGREES	NRI	N/A	X		1:14:10-1:17:15
CAMERA RESOLUTION	N/A	N/A	X		1:17:15-1:18:37

DAN THOMAS II 04/12/95 <i>Examiner Level Date</i>		COMMENTS: PILGRIM SHROUD REPAIR * VT-3 EXAMINATIONS
DAVE THOMAS II 04/12/95 <i>Examiner Level Date</i>		
ED WALL II 04/12/95 <i>Examiner Level Date</i>		Report Number 95-V-734 Pg 3 of 6 Tape Number 95-08
JOHN BAZENAS II 04/12/95 <i>Examiner Level Date</i>		
TIM McANDREW II 04/12/95 <i>Examiner Level Date</i>		
ANNI <i>ANNI</i> 5.18.95 <i>Date</i>		



INVESSEL VISUAL EXAMINATION DATA

GE Nuclear Energy

SITE: Pilgrim Nuclear Station PROJECT NUMBER: 1E2AW	CAMERA RESOLUTION	TYPE OF VISUAL EXAMINATION	
	<input type="checkbox"/> .001" Diameter Wire <input checked="" type="checkbox"/> .0005" Diameter Wire <input type="checkbox"/> 1/32" Black Line	<input type="checkbox"/> VT-1 <input type="checkbox"/> VT-3 <input checked="" type="checkbox"/> ENHANCED VT-1	<input type="checkbox"/> DIRECT <input checked="" type="checkbox"/> REMOTE
Equipment Used During the Examination ETV-1250 Underwater Camera with twin 50's Super VHS Recorder		Procedure No. TP95-083	
		Revision No. 0	
		FRR No. NONE	

Component / Area Viewed	Description of Recordable Indications	Ind. No.	Accept	Reject	Film Footage
CAMERA RESOLUTION	N/A	N/A	X		00:00-01:22
GUSSET WELDS AT 45 DEGREE	NRI	N/A	X		01:22-53:31
CAMERA RESOLUTION	N/A	N/A	X		53.31-56:00

		COMMENTS: PILGRIM SHROUD REPAIR	
DAN THOMAS	II	04/12/95	
Examiner	Level	Date	
DAVE THOMAS	II	04/12/95	
Examiner	Level	Date	
ED WALL	II	04/12/95	
Examiner	Level	Date	
JOHN BAZENAS	II	04/12/95	Report Number <u>95-V-734</u> Tape Number <u>95-03</u>
Examiner	Level	Date	
TIM McANDREW	II	04/12/95	
Examiner	Level	Date	
ANNI		5/18/95	
		Date	



INVESSEL VISUAL EXAMINATION DATA

GE Nuclear Energy

SITE: Pilgrim Nuclear Station PROJECT NUMBER: 1E2AW	CAMERA RESOLUTION	TYPE OF VISUAL EXAMINATION	
	<input type="checkbox"/> .001" Diameter Wire	<input type="checkbox"/> VT-1	<input type="checkbox"/> DIRECT
	<input checked="" type="checkbox"/> .0005" Diameter Wire	<input type="checkbox"/> VT-3	<input checked="" type="checkbox"/> REMOTE
	<input type="checkbox"/> 1/32" Black Line	<input checked="" type="checkbox"/> ENHANCED VT-1	

Equipment Used During the Examination ETV-1250 Underwater Camera with twin 50's Super VHS Recorder	Procedure No. TP95-083 Revision No. 0 FRR No. NONE
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Component / Area Viewed	Description of Recordable Indications	Ind. No.	Accept	Reject	Film Footage
CAMERA RESOLUTION	N/A	N/A	X		18:35-20:02
GUSSET WELDS AT 135 DEGREE	NRI	N/A	X		20:02-58:34
CAMERA RESOLUTION	N/A	N/A	X		58:34-1:00:51
GUSSET WELDS AT 135 DEGREE (RETAKE)	NRI	N/A	X		1:00:51-1:08:04
CAMERA RESOLUTION	N/A	N/A	X		1:08:04-1:08:40

DAN THOMAS II 04/12/95 Examiner Level Date DAVE THOMAS II 04/12/95 Examiner Level Date ED WALL II 04/12/95 Examiner Level Date JOHN BAZENAS II 04/12/95 Examiner Level Date TIM McANDREW II 04/12/95 Examiner Level Date	COMMENTS: PILGRIM SHROUD REPAIR	
	<i>Michael Thomas III</i> 5/17/95 Reviewed Level Date	
	<i>B. P. Rubin</i> N/A 5/17/95 Reviewed Level Date	
	<i>ANNI</i> 5-18-95 ANNI Date	Report Number <u>95-V-734</u> Tape Number <u>Py 546</u> <u>95-04</u>



INVESSEL VISUAL EXAMINATION DATA

GE Nuclear Energy

SITE: Pilgrim Nuclear Station PROJECT NUMBER: 1E2AW	CAMERA RESOLUTION	TYPE OF VISUAL EXAMINATION	
	<input type="checkbox"/> .001" Diameter Wire <input checked="" type="checkbox"/> .0005" Diameter Wire <input type="checkbox"/> 1/32" Black Line	<input type="checkbox"/> VT-1 <input type="checkbox"/> VT-3 <input checked="" type="checkbox"/> ENHANCED VT-1	<input type="checkbox"/> DIRECT <input checked="" type="checkbox"/> REMOTE
Equipment Used During the Examination ETV-1250 Underwater Camera with twin 50's Super VHS Recorder	Procedure No. TP95-083 Revision No. 0 FRR No. NONE		

Component / Area Viewed	Description of Recordable Indications	Ind. No.	Accept	Reject	Film Footage
CAMERA RESOLUTION	N/A	N/A	X		00:00-01:37
GUSSET WELDS AT 225 DEGREE	NRI	N/A	X		01:37-26:43
CAMERA RESOLUTION	N/A	N/A	X		26:46-27:30

DAN THOMAS II 04/12/95 <i>Examiner Level Date</i>		COMMENTS: PILGRIM SHROUD REPAIR Reviewed Level Date <i>Michael Thomas II 5/17/95</i> Reviewed Level Date <i>B. Purdie N/A 5/17/95</i> Reviewed Level Date <i>V. Williams 5-18-95</i> ANNI Date	Report Number 95-V-734 Pg 6 of 6 Tape Number 95-05
DAVE THOMAS II 04/12/95 <i>Examiner Level Date</i>			
ED WALL II 04/12/95 <i>Examiner Level Date</i>			
JOHN BAZENAS II 04/12/95 <i>Examiner Level Date</i>			
TIM McANDREW II 04/12/95 <i>Examiner Level Date</i>			

Office Memorandum

Boston Edison Company

To: F. Famulari

From: D. Heard

Record Type A4 08

Date: April 4, 1995

Dept. Doc. P&C95-052

Non-Safety Related

Subject: **RFO-10 Reactor Shroud Examination Scope and Acceptance Criteria**

Distribution:

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Examination of the reactor shroud will be performed by General Electric (GE) as part of the shroud repair project. PDC 94-43 (Section I) gives the scope for the shroud examination (applicable ASME Code is Section XI 1980-W80 Edition). The following information is provided for guidance and to include additional visual examinations in response to GE SIL-588:

1. For the visual examination of the gusset welds to the shroud support plate and vessel wall, the allowable length for a surface indication is conservatively based on ASME Section XI IWB-3510 such that 5/16" (0.31") will be used as an initial screening criteria (value for ferritic steels is used since no nickel alloy criteria is given).
2. Any indication in a gusset weld that is above the allowable length must be characterized by ultrasonic (UT) examination. GE has a gusset UT scanner that is available for this purpose.
3. Vertical welds intersecting the H4 weld will be visually examined for a minimum length of 4" for those welds above H4 and a minimum length of 8" for those below H4. The allowable length for a linear surface indication is conservatively based on ASME Section XI IWA-3400 and Table IWB-3514-3 such that 0.35" (for the 1.5" thick shroud) will be used as an initial screening criteria.
4. If an indication is found which exceeds the allowable length, expand the examination area to a minimum of 12" of total vertical weld length. Any indication with a length greater than the allowable within the area examined must have the total length of indication identified and an additional 4" of weld length shall be examined.
5. For the radial welds in the top guide support ring, the allowable length for a linear surface indication is conservatively based on ASME Section XI IWA-3400 and Table IWB-3514-3 such that 0.45" (for 2" thickness) will be used as an initial screening criteria. However, any relevant indication found on these welds shall be recorded and reported to NESD.

6. All indications above the allowable lengths shall be recorded and the results given to NESD for evaluation
7. The NESD evaluation of flaws will be performed in general accordance with ASME Section XI IWB-3600 methods.
8. Additional examinations will be included in the GE scope as part of the shroud repair. These examinations are in response to GE SIL-588 on top guide and core plate cracking. A VT-3 examination will be performed for accessible core support clamps during installation of the core plate wedges. A best effort VT-3 examination will be performed for the top guide restraint blocks and pins at the location of each of the four aligner pins.

DBH/rep