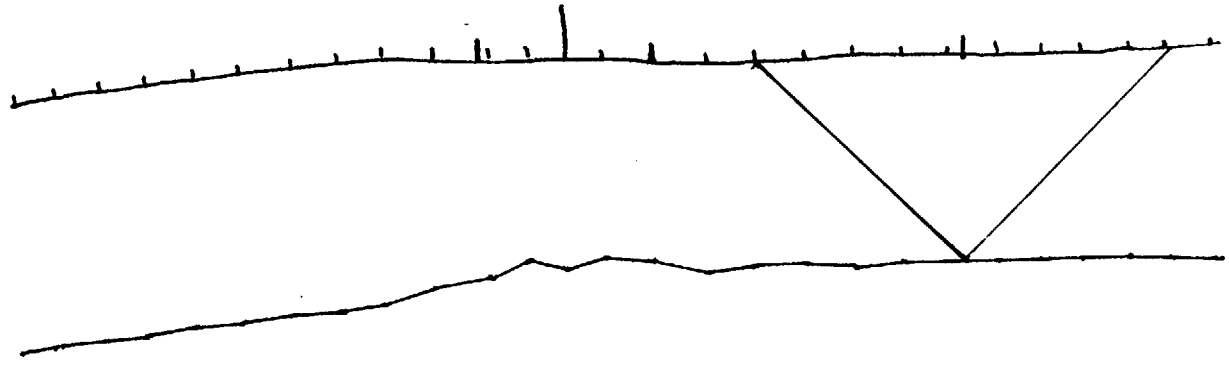
BEAM ANGLE MEASUREMENT FOR 45° ON

10-SJ-1131-10 10-13-95

SUM 098500

SHEET 126202

ELBOW SIDE PIPE SIDE



← FLOW

Sketch 20
1 of 2

PSEG
INSPECTION SERVICES
Reviewed and Approved
WD 10-14-95
N.D.E. SUPERVISOR

L W Cay LVIII
10-14-95

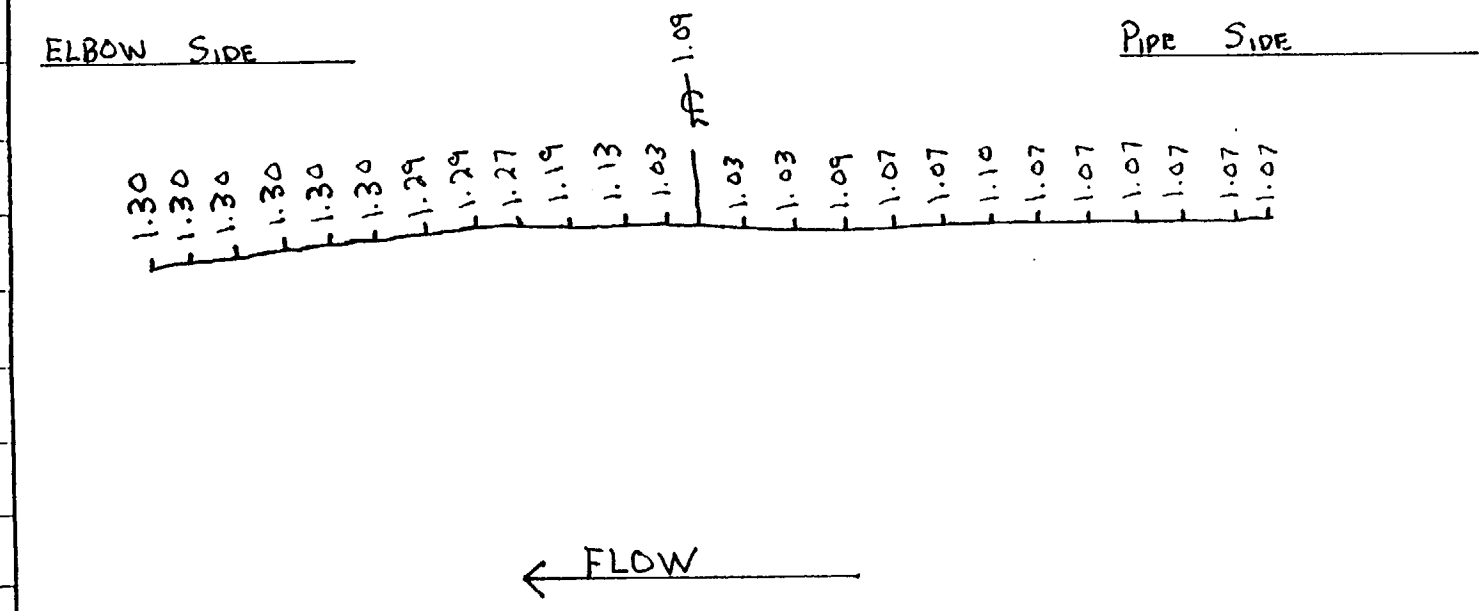
ULTRASONIC WELD PROFILE AND THICKNESS EXAMINATION RECORD

SH.RA-AP.ZZ-0101(Q)

098500

NDE Lab: VCR	SITE: SALEM UNIT # 1	DATE: 10-13-95	TIME (24 HR. CLOCK) INT. 1015 FINAL 1025		SHEET NO: 120029
EXAMINER: Pat Irwin	SNT LEVEL II / II	Procedure No. & Rev: SH-RA-IS-ZZ-0121Q	INSTRUMENT: SONIC MARK I ☐ OTHER ☒	SERIAL NO: EPOCH II PANAMETRICS 92086704	COMPONENT ID: 10-SJ-1131-10
EXAMINER: VANCE COLE / PAT IRWIN	SNT LEVEL II / II	REV. 1	Couplant, Specify Type: SONOTRACE 40 BAT # 94014		REFERENCE BLK NO: IIW 788176

SEARCH UNITS	
BRAND	KBA
SERIAL NO	F30701
SIZE	.25"
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	1.84"
DELAY	1.35
MATL. CAL.	.230
RANGE	.184 in/DIV
REP. RATE	FIXED
JACK USED	N / A
TRANS MODE	LONG.



COMPARED TO ~~PRV~~ 10-18-95 PREVIOUS DATA

____ ° Search Unit chosen for coverage using ____ N ____ A ____ nodes.

____ ° Search Unit chosen for coverage using ____ N ____ A ____ nodes.

EXAM SHEET 120028

Reviewed By: Jan W. Lang | SNT LEVEL: III | DATE: 10-14-95

Sheet 20 of 22

PSEG INSPECTION SERVICES Reviewed and Approved

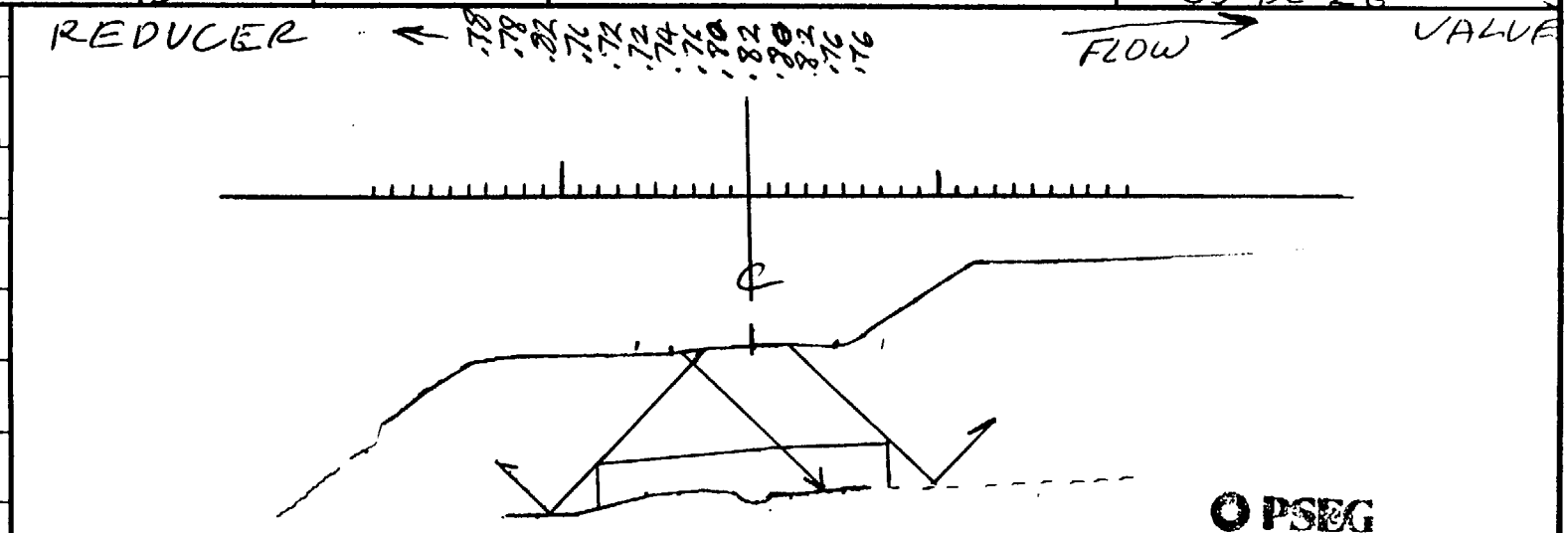
ANI/AL REVIEW INITIAL: DATE: 11-1-95

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)		SHEET NO:
17-4823	Salem Generating Station, Unit 1	1 MAY 92	INT. 0810	FINAL 0845	135063

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE	INSTRUMENT:	SERIAL NO:	COMPONENT ID:
L R MATHENA	II	No. PSE-UT31 REV 2	SONIC MARK I ☐ OTHER 136 ☐	559G	G-SJ-1111-1
EXAMINER	**SNT LEVEL**	CHG 0	**COUPLANT:**		**REFERENCE BLK NO:**
F K BRAUN	II	ICN ☒ N/A	GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		SS-DC-26

SEARCH UNITS	
BRAND	KBA GAMMA
SERIAL NO	L-17921
SIZE	1/4
FREQ. (MHz)	5.0
INSTRUMENT SETTINGS	
SCREEN SIZE	1.0
DELAY	0.330
MATL. CAL. VELOCITY	0.215
RANGE	1.00
REP. RATE	4 KHZ
JACK USED	RCV/XMT
TRANS MODE	DUAL



ANI I REVIEW
INITIAL
DATE 5/19/92

PSEG
INSPECTION SERVICES
Reviewed and Approved
5-19-92
N.D.E. SUPERVISOR

100% COVERAGE

45°	Search Unit chosen for coverage using	3/4 1/4 1/4 nodes.	NAME: E.K. Braun	SNT LEVEL: III
N/A°	Search Unit chosen for coverage using	N/A nodes.		

REVIEWED BY:	SNT LEVEL:	DATE:
E.K. Braun	III	17 MAY 92

SWRI FORM No. NDTR 17-135 (REV. 6/90)

Sketch #21 1of1

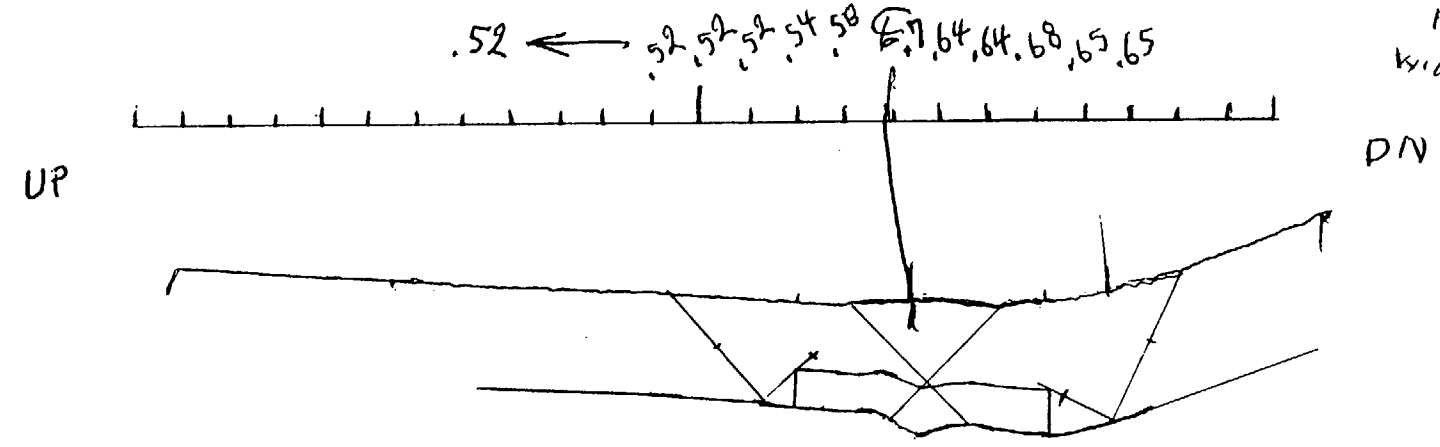
124/100

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)		SHEET NO:
17-3645	Salem Generating Station, Unit 1	16 FEB 91	INT. 1049	FINAL 1048	135031

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE	INSTRUMENT:	SERIAL NO:	COMPONENT ID:
C. LITTLEFIELD	II	No. PES-UT49 REV 0	SONIC MARK I ☒ OTHER ☐	04324E	4-SJ-1182-18
EXAMINER	SNT LEVEL	CHG 0	COUPLANT:		REFERENCE BLK NO:
D. TREVATHAN	I T.	ICN ☒ N/A	GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		SS DC 28

SEARCH UNITS	
BRAND	AEROTECH
SERIAL NO	A10070
SIZE	1/4 PC
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	1
DELAY	140-1
MATL. CAL.	106
RANGE	1
REP. RATE	3.K
JACK USED	R+T
TRANS MODE	THRU



PSEG INSPECTION SERVICES Reviewed and Approved 2/23/91 N.D.E. SUPERVISOR

ANI REVIEW INITIAL ___ DATE 3-5-91

100% TWO DIRECTIONAL COVERAGE OBTAIN.

45° Search Unit chosen for coverage using 3/4, 7/4, 10/4 nodes.

N/A° Search Unit chosen for coverage using N/A nodes.

NAME: [signature] SNT LEVEL: II

REVIEWED BY: [signature] SNT LEVEL: III DATE: 18 FEB. 91

SWRI FORM No. NDTR 17-135 (REV. 6/90)

Sketch # 22 1/81

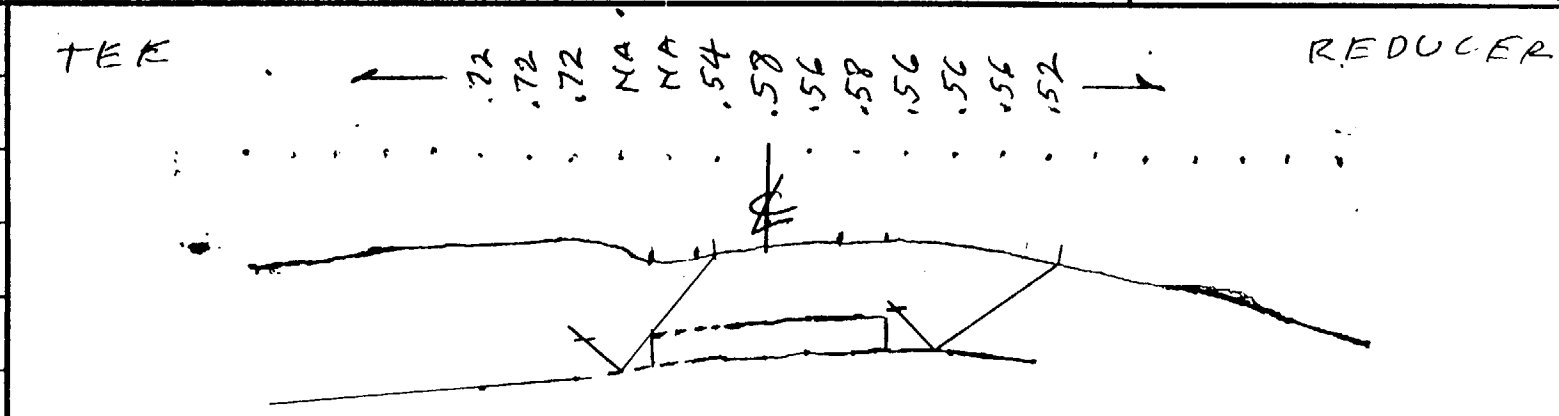
129400

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO: 17-5858	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 18 OCT. 93	TIME (24 HR. CLOCK) INT. 0825 FINAL 1030	SHEET NO: 135035

EXAMINER: T. JACKSON	SNT LEVEL: II	THK. MEAS. REQ'D BY PROCEDURE ☒ No. PSE-UT31 REV 2 CHG 0 ICN ☑ N/A	INSTRUMENT: SONIC MARK I ☐ OTHER 136 ☑	SERIAL NO: 136-555G	COMPONENT ID: 4-SJ-1172-38
EXAMINER: F. BRAUN	SNT LEVEL: IT		COUPLANT: GLYCERINE ☐ WATER ☐ OTHER (SPECIFY) ULTRAGEL		REFERENCE BLK NO: SS-DC-42

SEARCH UNITS	
BRAND	SWRI
SERIAL NO	3008
SIZE	3/8
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	1.00
DELAY	0.414
MATL. CAL. VEL	0.215
RANGE	1.00
REP. RATE	4 KHZ
JACK USED	REV/XMT
TRANS MODE	DUAL



REQUIRED COVERAGE OBTAINED FROM REDUCER SIDE.

PROFILE TAKEN AT L-11"

PSEG-VS1.SS-15.22-0014 Rev 4 WELD WIDTH = 3/4"

ANI I REVIEW INITIAL DLK DATE 10-22-93

PSEG INSPECTION SERVICES Reviewed and Approved 10-20-93 N.D.E. SUPERVISOR

45°	Search Unit chosen for coverage using 3/8, 6/8, 10/8 nodes.	NAME: Tommy E. Jackson	SNT LEVEL: II
N/A°	Search Unit chosen for coverage using N/A nodes.		

REVIEWED BY: Vic [illegible]	SNT LEVEL: III	DATE: 19 OCT 93

Sketch #23 1 of 1

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/19/01

Summary No.: 016700

Site: Salem Unit 1, RFO 14

Examination Method: UT

System: Chemical and Volume Control System

Identification: 3-CV-1141-14

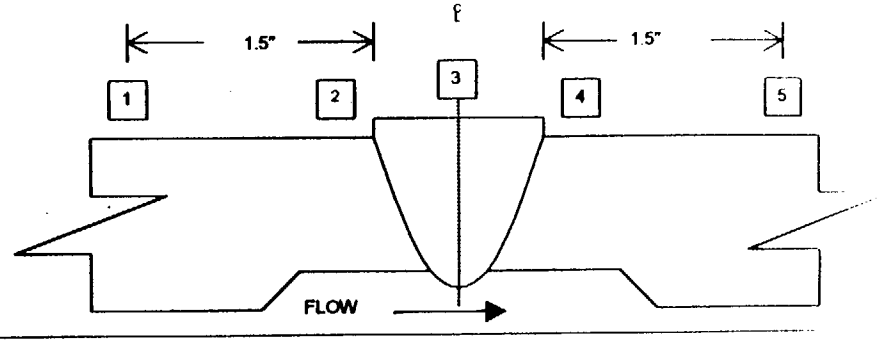
POSITION	0	90	180	270
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	0.520"	N/A	N/A	N/A
4	0.480"	N/A	N/A	N/A
5	0.480"	N/A	N/A	N/A

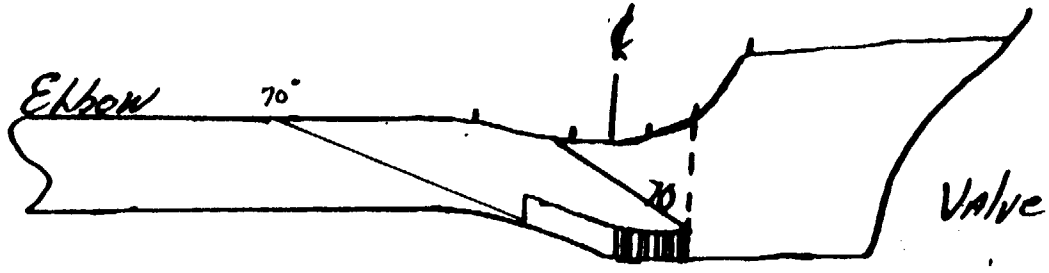
CROWN HEIGHT: Flush

CROWN WIDTH: 0.400"

NOM DIAMETER: 3.0"

WELD LENGTH: 9.1"





COMPILED FROM PREVIOUS DATA

Circ

AREA NOT EXAMINED

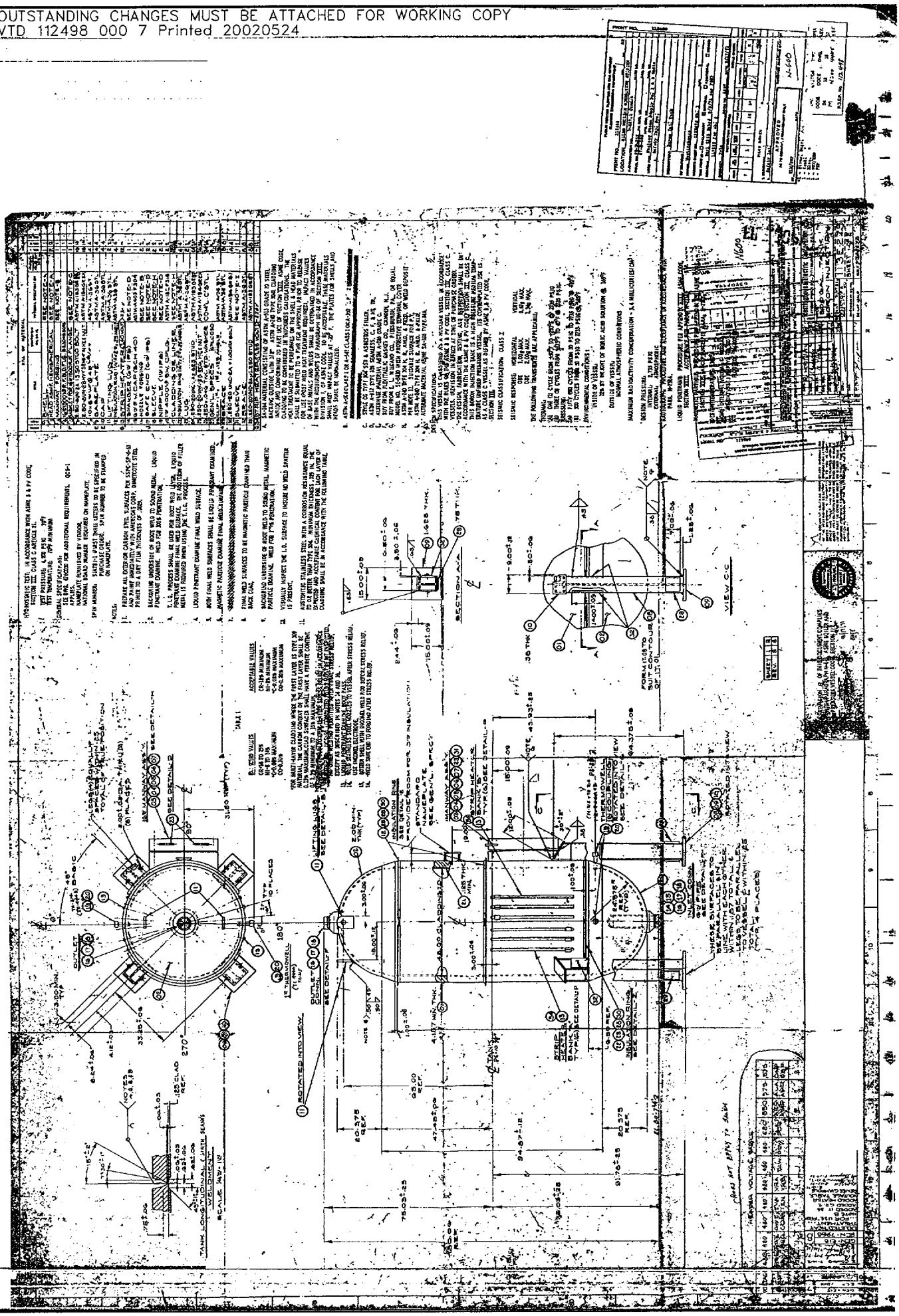
Sketch #24
1 of 1

R.E. Smith 4-19-01
Prepared By Date

Bob Kellenwell 4/23/01
Reviewed By Date

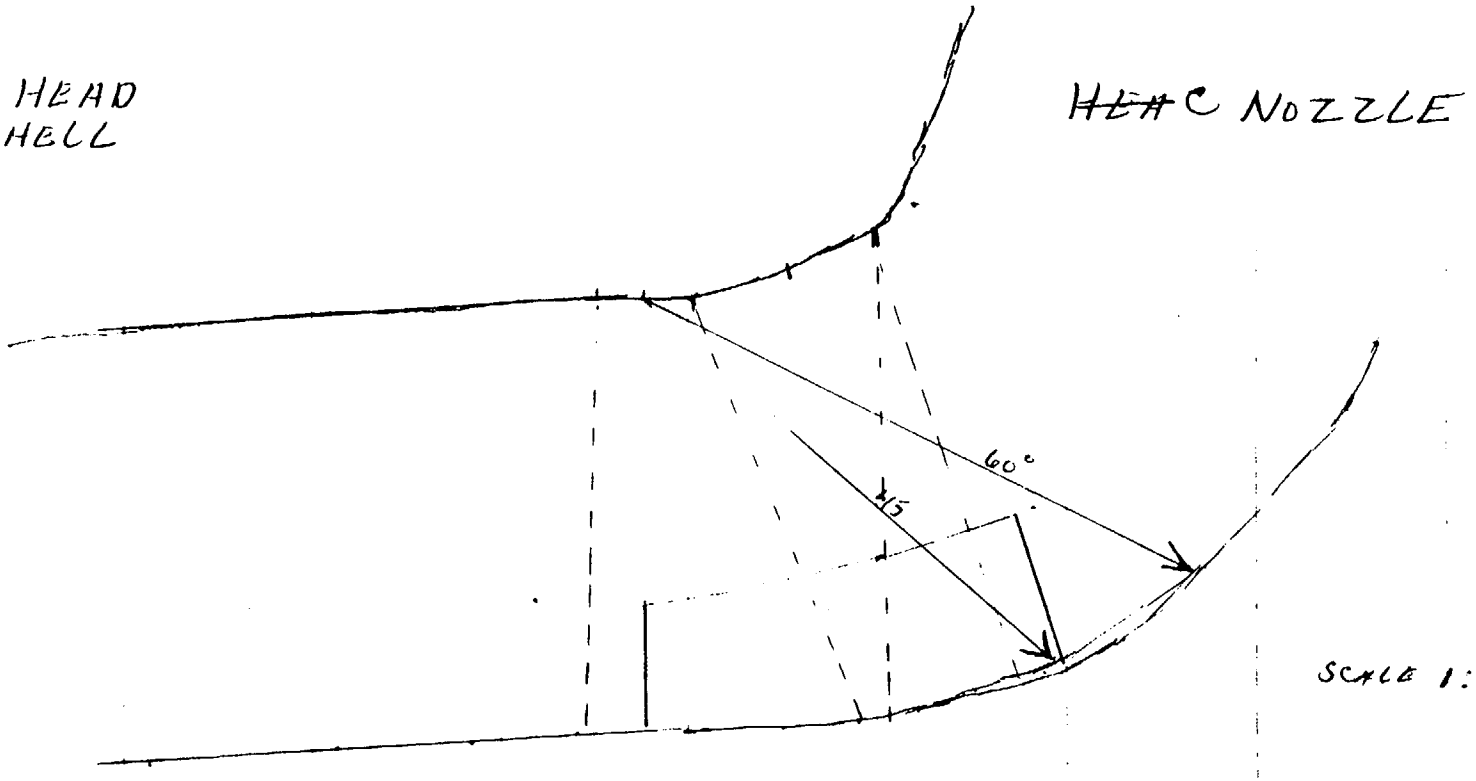
Wayne Darlington 4-24-01
Utility Review By Date

OUTSTANDING CHANGES MUST BE ATTACHED FOR WORKING COPY
VTD 112498 000 7 Printed 20020524



Sketch #
25
12 10

BORON INJECTION TANK
1-BIT-1



SCALE 1:1

SALEM UNIT 1

45° & 60° obtain only one-directional coverage.
50%

REF. DATA SHT. # 135073

28 FEB. 91

ANI REVIEW
INITIAL
DATE 3-12-91

PSEG INSPECTION SERVICES
Reviewed and Approved
3/6/91
N.D.E. SUPERVISOR

204440

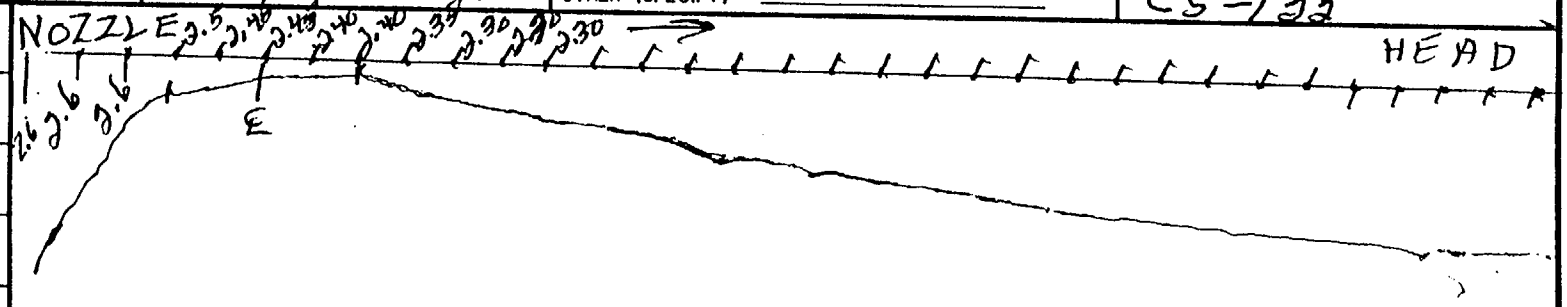
Sketch #25
2 of 10

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO: 17-3645	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 26 FEB 91	TIME (24 HR. CLOCK) INT 1613 FINAL 1625	SHEET NO: 135073

EXAMINER: J. WARDWELL	SNT LEVEL: II	THK. MEAS. REQ'D BY PROCEDURE No. PSE-UT15 REV 0 CHG 0 ICN ☒ N/A	INSTRUMENT: SONIC MARK I ☒ OTHER ☐	SERIAL NO: 01105E	COMPONENT ID: 1-RIT-1
EXAMINER: D. FORHAN	SNT LEVEL: I T		COUPLANT: GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		REFERENCE BLK NO: CS-122

SEARCH UNITS	
BRAND	SWRI
SERIAL NO	2370
SIZE	1/2
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	5
DELAY	081-1
MATL. CAL.	102
RANGE	5
REP. RATE	2
JACK USED	R
TRANS MODE	NORMAL



SEE ATTACHED DRAWING

CONTOUR UPSIDE DOWN

ANI REVIEW INITIAL [illegible] DATE 3-12-91

PSEG INSPECTION SERVICES Reviewed and Approved [illegible] 3/6/91 N.D.E. SUPERVISOR

45 ° Search Unit chosen for coverage using 2/8 2/4 3/8 nodes.

60 ° Search Unit chosen for coverage using 2/4 2/8 3/8 nodes.

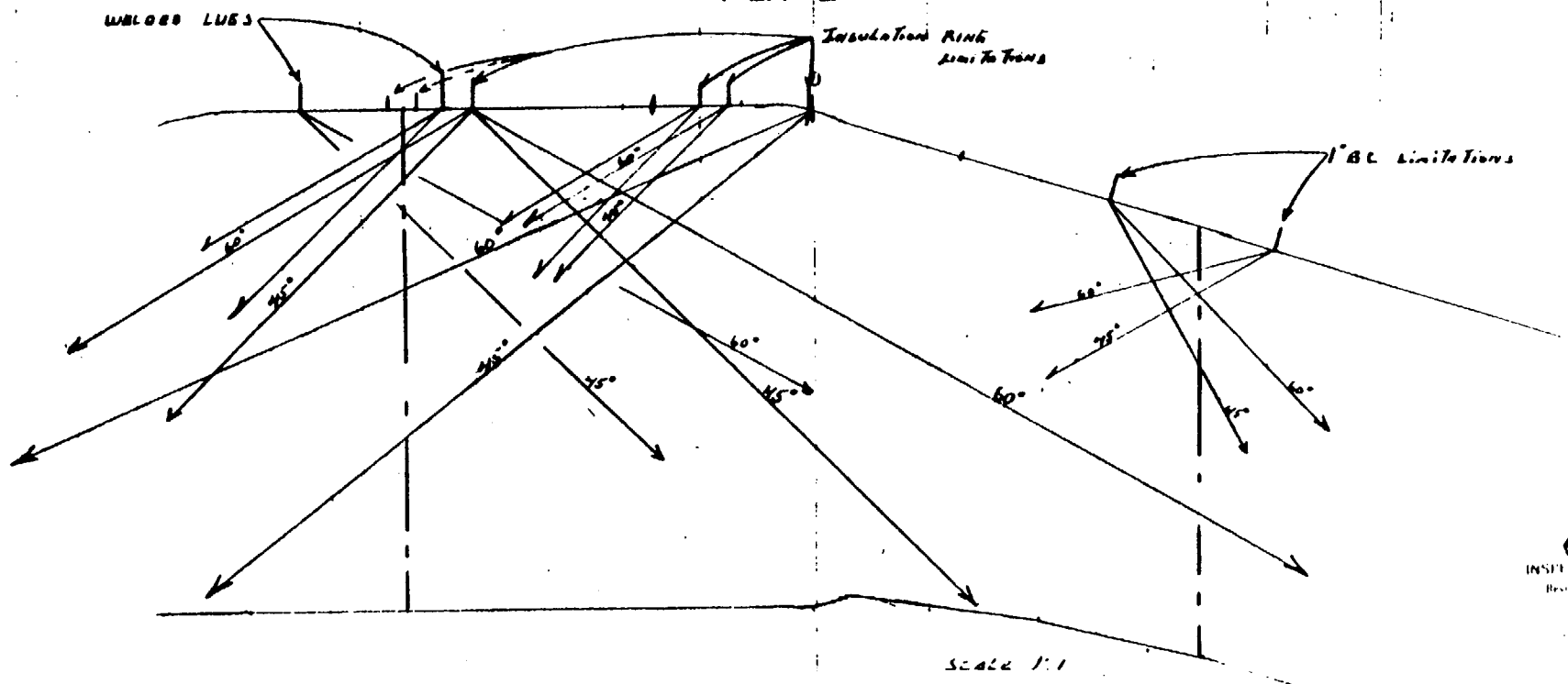
NAME: [illegible] SNT LEVEL: III

REVIEWED BY: [illegible] SNT LEVEL: III DATE: 28 FEB 91

SWRI FORM No. NDTR 17-135 (REV. 6/90)

Sketch #25 3 of 10

BORON INJECTION TANK
1-BIT-B



SALEM UNIT 1
17-3645

REF. DATA SHEET NO 135054

Sketch #25
4B 10

EXAM VOLUME: 4.1(AVG.) X 7 X 179 = 5137.3

LIMITATIONS OF NO EXAM

LEG SUPPORTS - VOLUME 1040.373

INSULATION RING:
"ω" 0-3" - VOLUME - 60.9
"ω" 3/4 - 3/2 - VOLUME - 18.0
"ω" 1" - 3 3/4 - VOLUME - 11.25
90.15

WELDED LUGS VOLUME - 0.72

1" BRANCH CONNECTIONS VOLUME - .76

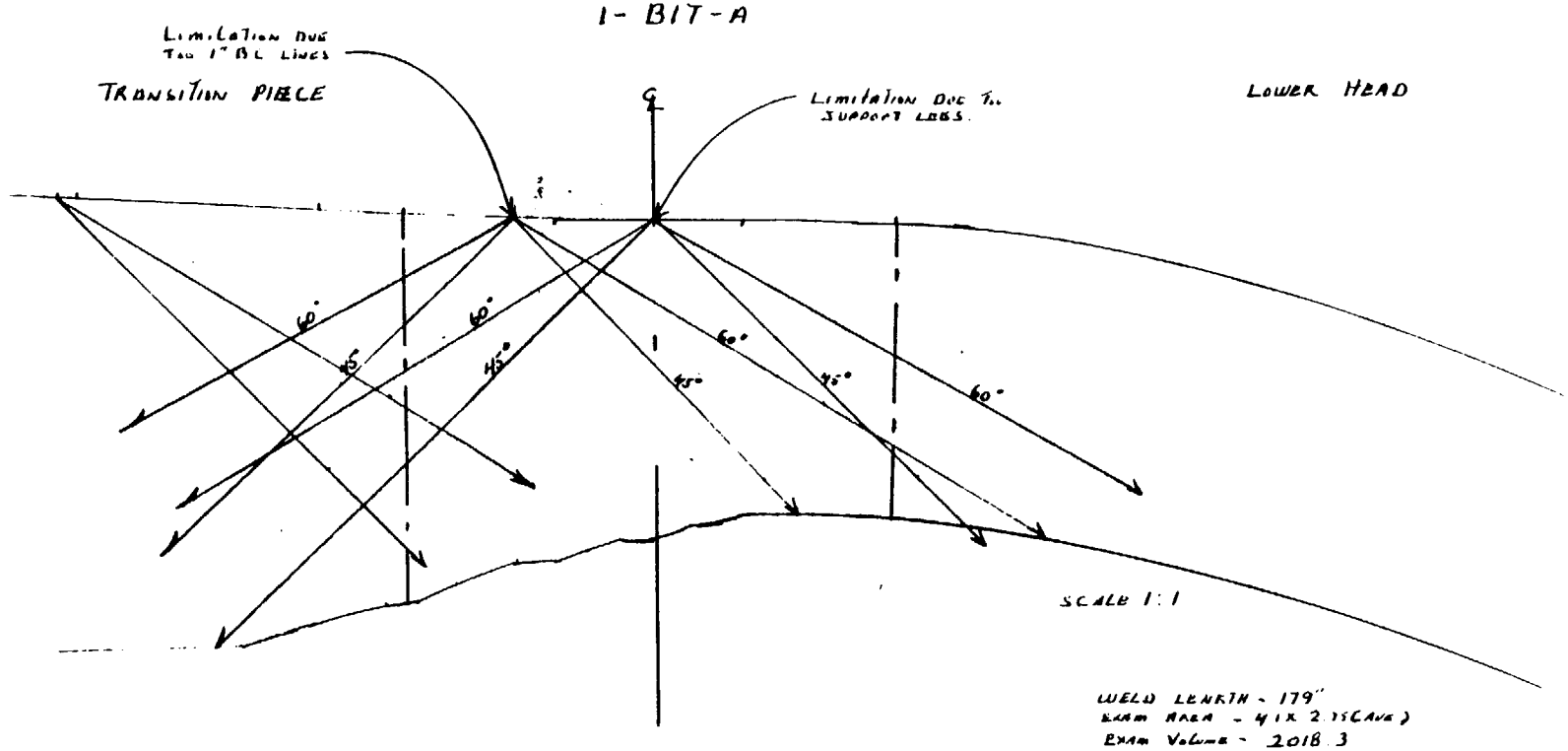
NO EXAM - 22%
ONE DIRECTIONAL EXAM - 78%
TWO - DIRECTIONAL EXAM - 73%
TRANSVERSE EXAM - 58%

NOTE: INSULATION RING BAND STRIPS DO NOT WELD AND IS INSTALLED.

OPSEG
INSPECTION SERVICES

BORON INJECTION TANK

1-BIT-A



WELD LENGTH - 179"
EXAM AREA - 4 1X 2.25(AVG)
EXAM VOLUME - 2018.3

SALEM UNIT 1
17-364.5.

MEASURED THICKNESS

UP	CL	DOWN
2.4"	2.6"	2.8"

William N Lewis Jr III
6/11/91

LEG SUPPORT LIMITATIONS
EXAM AREA 2.1 X 1.3 ÷ 2 - 1.365
LIMITATIONS LENGTH - 36.25
LIMITATION VOLUME - ~~37.196~~ 49.481

1" BC LIMITATIONS
EXAM AREA .9 X .5 ÷ 2 = .225
LIMITATIONS LENGTH - 3.0
LIMITATIONS VOLUME - .675

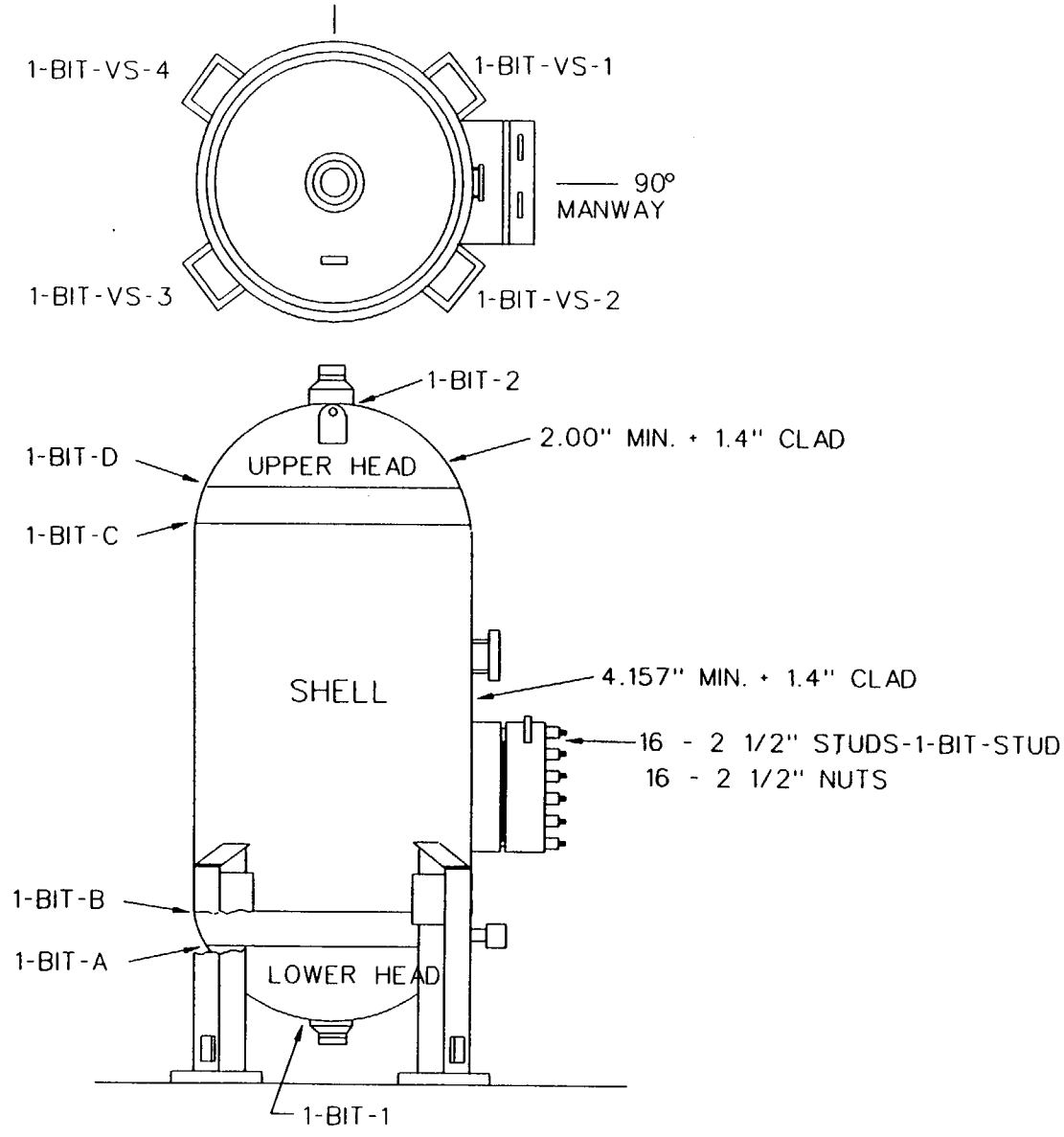
REF. DATA SHEET NO. 135053

97.5% RECEIVED 2) EXAMINATIONS
2.5% NO EXAMINATIONS
81.7% RECEIVED DIAL GAGES
90.2% RECEIVED TRANSDUCERS

PSEG
INSPECTION SERVICES
Reviewed and Approved
6/13/91
NDE SUPERVISOR

Sketch #25
Sp 10

Sum #204400
5/5 Page 4271



HEAD & SHELL MATERIAL

SA-264 (ASTM A-516 GR. 70

CLADDING

ASTM 1-240 (TYPE 304L)

CALIBRATION BLOCKS

TO BE DETERMINED

Sketch 25
6 of 10

BUILDING:	LOCATION:	ELEVATIONS:
AUXILIARY	MECHANICAL PENETRATION 1 BIT ROOM	78'

BORON INJECTION TANK

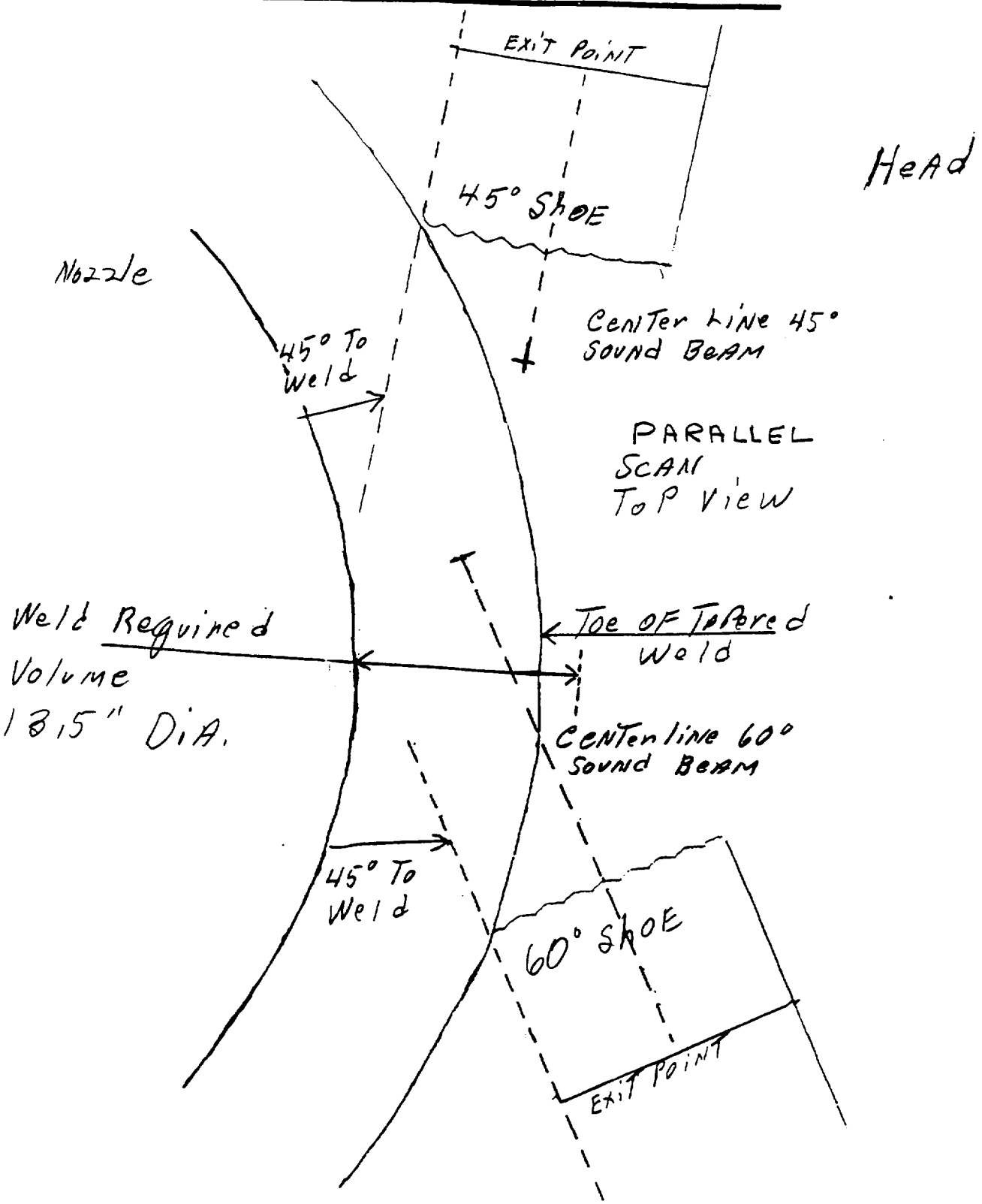
ATTENTION: ANY REVISION TO THIS DRAWING SHALL BE MADE ONLY BY CAED

REV.	DATE	DESCRIPTION
1		REVISED PER ORDER No. 80008418.

PSEG Nuclear, LLC
SALEM NUCLEAR GENERATING STATION
WELD IDENTIFICATION FIGURE

FIGURE: B-108 | REVISION: 1
SYSTEM: BORON INJECTION TANK
TIME: N/A

UT COVERAGE PLOT

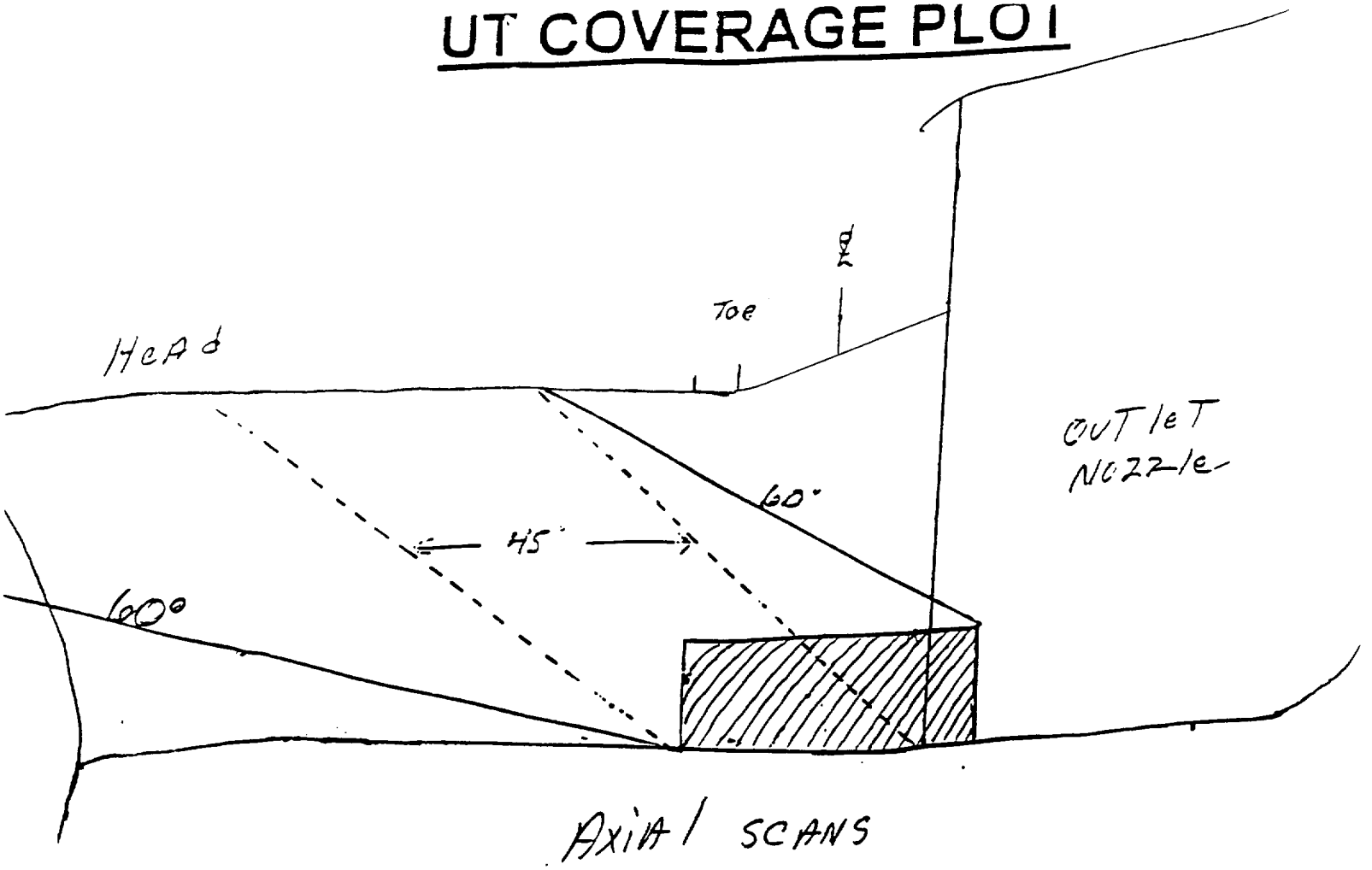


SUMMARY NO.: 204450

WELD: 1-BIT-2

Sketch 25
7 of 10

UT COVERAGE PLOT

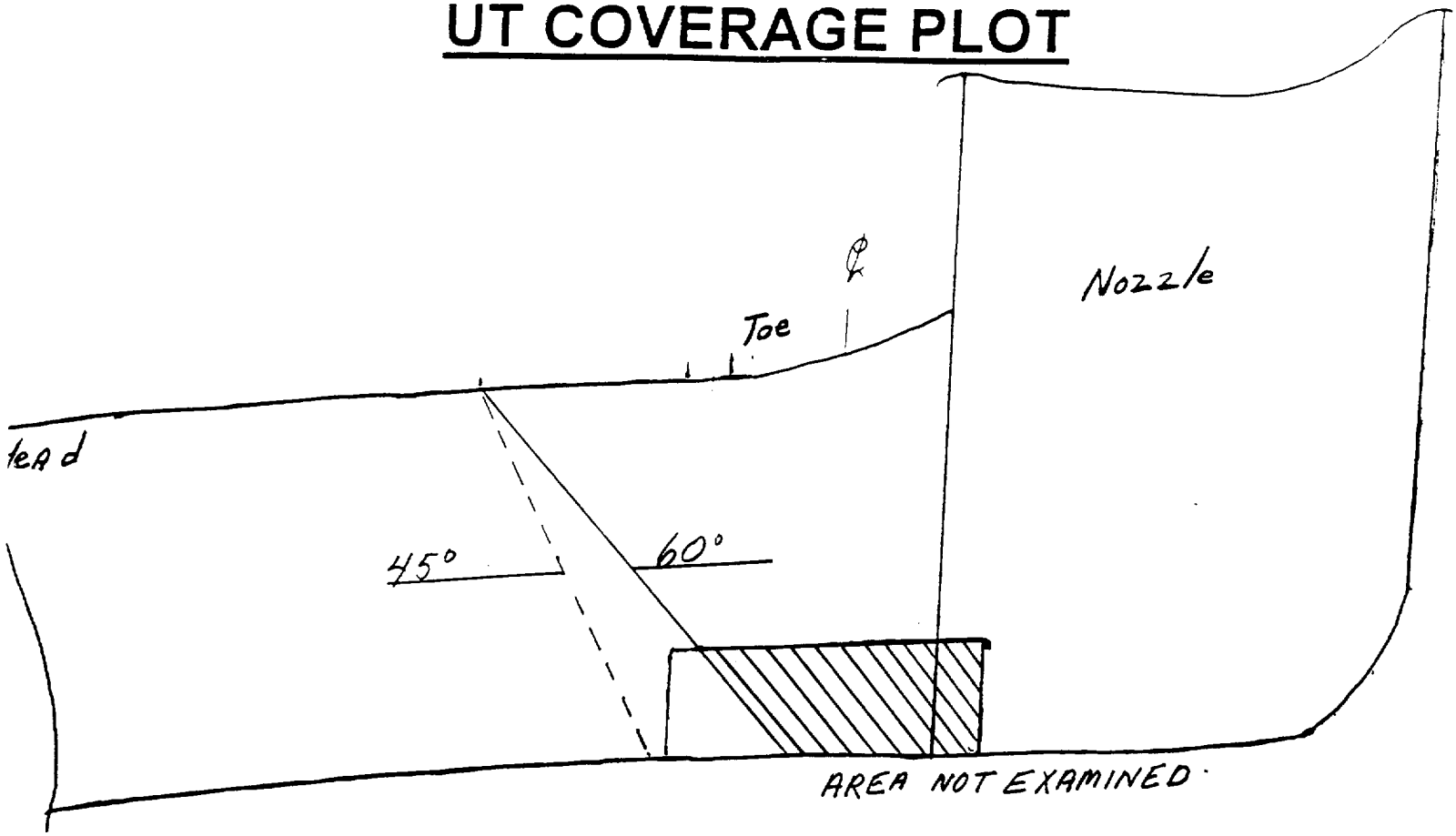


SUMMARY NO.: 204450

WELD: 1-BIT-2

Sketch 25
8 of 10

UT COVERAGE PLOT



PARALLEL beam PATH

AT 45° To Weld

Cross Section

SUMMARY NO.: 204450

WELD: 1-BIT-2

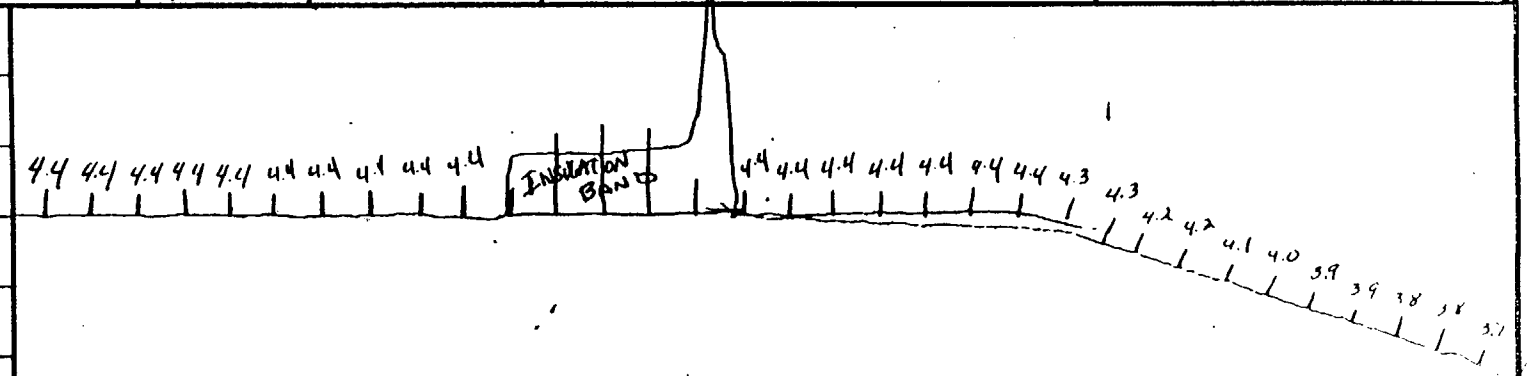
Sketch 25-
9710

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)	SHEET NO.
17-3645	Salem Generating Station, Unit 1	21 Feb 91	INT. 0822 FINAL 1128	135054

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE	INSTRUMENT:	SERIAL NO:	COMPONENT ID:
J Wheadwell	II	No. PSE-UT15 REV 0 CHG 0 ICN ☒ N/A	SONIC MARK I ☒ OTHER ☐	01105E	Boron inject 1-BIT-B
EXAMINER	**SNT LEVEL**		**COUPLANT:**		**REFERENCE BLK NO:**
M Delgado	II		GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		CS-DC-27

SEARCH UNITS	
BRAND	SwRI
SERIAL NO	2370
SIZE	1/2
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	5
DELAY	078-1
MATL. CAL.	101
RANGE	5
REP. RATE	3K
JACK USED	R
TRANS MODE	NORMAL



PSEG INSPECTION SERVICES Reviewed and Approved WD 3/12/91 N.D.E. SUPERVISOR

45° Search Unit chosen for coverage using 1/4 3/4 7/4 5/4 nodes.

60° Search Unit chosen for coverage using 1/4 3/4 7/4 7/4 nodes.

NAME: [signature] SNT LEVEL: III

REVIEWED BY: [signature] SNT LEVEL: III DATE: 11 MAR 91

SWRI FORM No. NDTR 17-135 (REV. 6/90)

Sketch 25 10 of 10

204410

Sw.R.I. LIQUID PENETRANT EXAMINATION RECORD

PROJECT NO.	SITE:	DATE: (DAY-MON.-YR.)	W. LOCATION:	SHEET NO.:
17-3645	Salem Generating Station, Unit 1	16 FEB 91	C L of weld	110009
EXAMINATION AREA: (SYSTEM/COMPONENT) Safety Injection System	LINE/SUBASSEMBLY 2-SJ-1128	(IDENTIFICATION) 57	L. LOCATION: 1	WELD TYPE: (-FLOW→) coupling to pipe

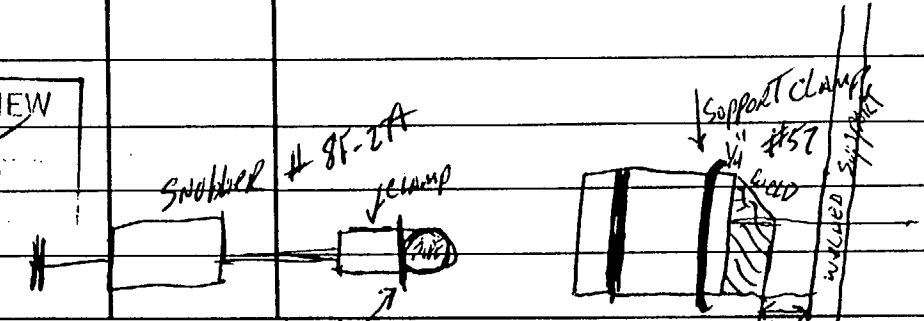
EXAMINER:	SNT LEVEL	PROCEDURE	SURFACE TEMPERATURE:	THERMOMETER SERIAL NUMBER
J. WARDWELL	II	NO. PSE-PT1 REV. 0 DEV. 0	61° °F	SWRI-176
EXAMINER:	**SNT LEVEL**		**SURFACE FINISH:**	**WELD LENGTH**
M. DelGADO	I-T		as welded	7 3/4 / socket weld 7/8" inside

PRE CLEANER		PENETRANT		REMOVER		DEVELOPER	
BRAND:	Spotcheck	BRAND:	Spotcheck	BRAND:	Spotcheck	BRAND:	Spotcheck
TYPE:	SKC-NF	TYPE:	SKL-HF/S	TYPE:	SKC-NF	TYPE:	SKD-NF
BATCH NO.:	90K08P	BATCH NO.:	886016	BATCH NO.:	90K08P	BATCH NO.:	90H04K
CLEANING COMPLETED	1040	TIME APPLIED:	10:49	REMOVAL COMPLETED	1115	TIME APPLIED:	1117
		TIME REMOVED	~~11:24~~ 11:10			TIME READ:	1124

IND. NO.	L	W	LOCATION UP OR DOWN STREAM	TYPE ROUND OR LINEAR	SIZE DIA. OR LENGTH	REMARKS	INI.
No recordable indications						penetrant Temp = 60°	

PSEG INSPECTION SERVICES
Reviewed and Approved
2/22/91
N.D.E. SUPERVISOR

ANI REVIEW
INITIAL
DATE 3-5-91



EXAMINATION AREA LIMITATION (IF NONE, SO STATE): NO EXAM ON COUPLING SIDE FROM 3 1/4 L TO 4 1/2 L DUE TO SUPPORT PLATE!
[illegible] coupling side 360° around to [illegible] of coupling due to support clamp

REVIEWED BY:	SNT LEVEL:	DATE:	PAGE	OF
[illegible]	16 FEB 91 III	16 FEB. 91	1	1

FORM NO. Sw.R.I NDTR 17-11 (REV. 1-3-79)

SKETCH #2 191

161100

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/14/01

Summary No.: 025900

Site: Salem Unit 1, RFO 14

Examination Method: UT

System: Pressure Relief System

Identification: 4-PR-1100-1

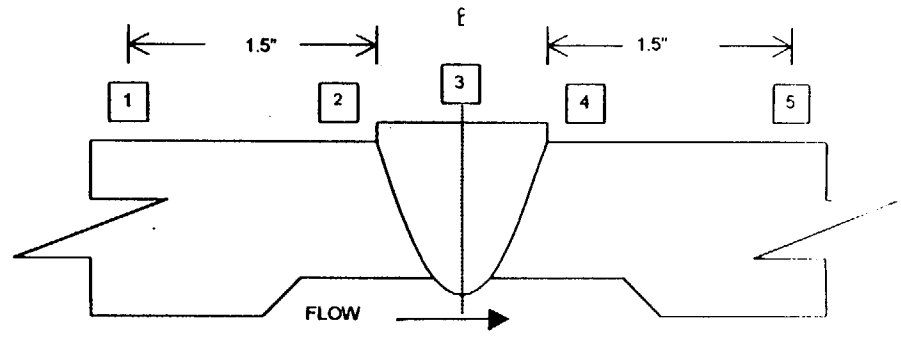
POSITION	0	90	180	270
1	N/A	N/A	N/A	N/A
2	0.625"	N/A	N/A	N/A
3	0.800"	N/A	N/A	N/A
4	0.625"	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A

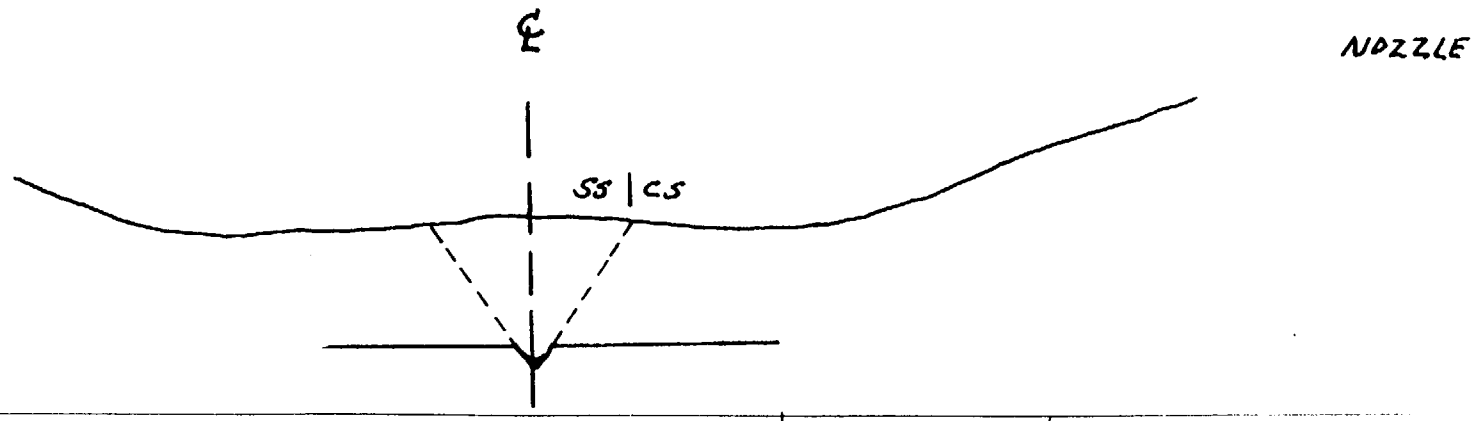
CROWN HEIGHT: Flush

CROWN WIDTH: 1.1"

NOM DIAMETER: 4.0"

WELD LENGTH: 15.5"





Sketch #27

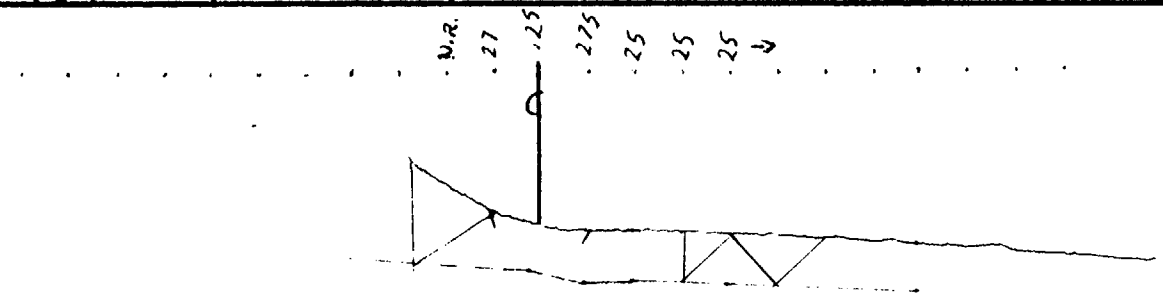
Prepared By	Date	Reviewed By	Date	Utility Review By	Date
K E Smith	4-14-01	Bob Kellerhall	4/18/01	Wayne Denlinger	4-24-01

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)		SHEET NO:
17-5858	Salem Generating Station, Unit 1	10 OCT 93	INT. 0324	FINAL 0446	135001

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE	INSTRUMENT:	SERIAL NO:	COMPONENT ID:
B. ROBERDS	II	No. VS1.SS-15.ZZ-0018 REV 1 PSE-UT 44	SONIC MARK I ☐ OTHER 136 ☒	655G	1-RCF-2
EXAMINER	**SNT LEVEL**	REV 1 CHG 0	**COUPLANT:**		**REFERENCE BLK NO:**
W. BYLER	II	ICN ☒ N/A	GLYCERINE ☐ WATER ☐ OTHER (SPECIFY) ULTRAGEL BATCH NO. 9092		SS DC-42

SEARCH UNITS	
BRAND	KBA
SERIAL NO	C12257
SIZE	.25
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	.5
DELAY	.397
MATL. CAL. VELOCITY	.220
RANGE	.500
REP. RATE	4 KHZ
JACK USED	RCV/XMT
TRANS MODE	DUAL



PROFILE TAKEN AT L = 2 DUE TO FLANGE BOLTING

FLANGE WELD WIDTH - 9/16"

5 INCH

45° Search Unit chosen for coverage using 4/8, 8/8, 12/8 nodes.

° Search Unit chosen for coverage using _____ nodes.

NAME: VICTOR MORTON SNT LEVEL: III

REVIEWED BY: Vic Morton SNT LEVEL: III DATE: 12 OCT 93

AIII INITIAL DWX DATE 10/26/93

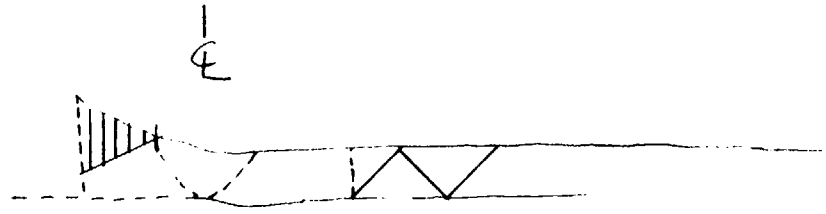
PSEG INSPECTION SERVICES Reviewed and Approved WD 10/14/93 N.D.E. SUPERVISOR

Sketch 2 of 18

SWRI FORM No. NDTR 17-135 (REV. 6/90)

205030

FLANGE SHELL



SALEM UNIT 1 17-5858

REACTOR COOLANT FILTER 1-RCF-2

VICTOR MORTON III 13 OCT 93

FOR LIMITATIONS ONLY.

NO EXAM FROM 17" TO 20¼"

PSEG
INSPECTION SERVICES
Reviewed and Approved
N.D.E. SUPERVISOR 10/14/93

ADM
INITIAL
DATE 10/26/93

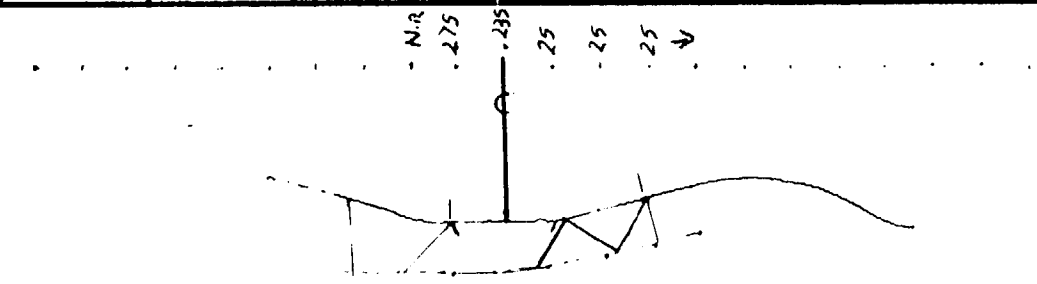
Sketch 28
28 SR

20 50 30

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO: 17-5858	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 10 OCT 93	TIME (24 HR. CLOCK) INT. 0324 FINAL 0446		SHEET NO: 35002
EXAMINER: B. ROBERDS	SNT LEVEL: II	THK. MEAS. REQ'D BY PROCEDURE REV 1 No VSI SS-15.22-0015 PSE-UT 49 REV 1 CHG 0 ICN ☐ N/A	INSTRUMENT: SONIC MARK I ☐ OTHER 136 ☒	SERIAL NO: 655G	COMPONENT ID: 1-RCF-1
EXAMINER: W. BYLER	SNT LEVEL: II		COUPLANT: GLYCERINE ☐ WATER ☐ OTHER (SPECIFY) ULTRAGEL BATCH NO. 9092		REFERENCE BLK NO: SS-DC-42

SEARCH UNITS	
BRAND	KBA
SERIAL NO	C 12257
SIZE	1/4
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	.5
DELAY	.397
MATL. CAL. VELOCITY	.220
RANGE	.500
REP. RATE	4KHZ
JACK USED	RCV/XMT
TRANS MODE	DUAL



PROFILE TAKEN AT L=2 DUE TO FLANGE BOLTING

FLANGE WELD WIDTH - 9/16

45 ° Search Unit chosen for coverage using 4/8, 8/8, 12/8 nodes.

___ ° Search Unit chosen for coverage using ___ nodes.

NAME: VICTOR MORTON

SNT LEVEL: III

LEAD

REVIEWED BY: [signature]

SNT LEVEL: III

DATE: 12 OCT 93

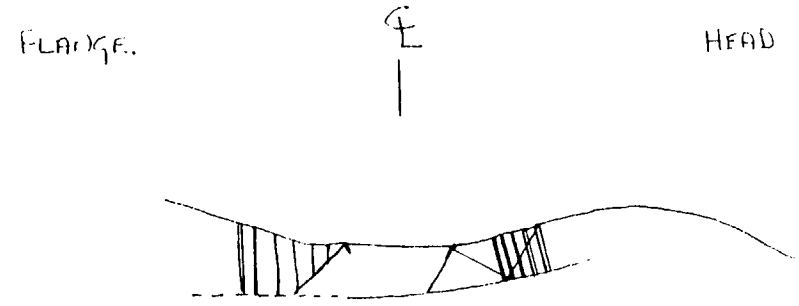
PSEG INSPECTION SERVICES Reviewed and Approved 10/14/93 N.D.E. SUPERVISOR

DUL 10/26/93

Sketch 28 3954

SWRI FO. o. NDTR 17-135 (REV. 6/90)

20520



= AREA NOT COVERED IN TWO DIRECTIONS.

SALEM UNIT 1 17-5858
REACTOR COOLANT FILTER-1-RCF-1
VICTOR MORTON III 12 OCT 93
FOR LIMITATIONS ONLY.

DuK 10/26/93

PSEG
INSPECTION SERVICES
Reviewed and Approved
WD 10/14/93
N.D.E. SUPERVISOR

Sketch 28
of 54

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/04/01

Summary No.: 205040

Site: Salem Unit 1, RFO 14

Examination Method: UT

System: RC Filter

Identification: 1-RCF-3

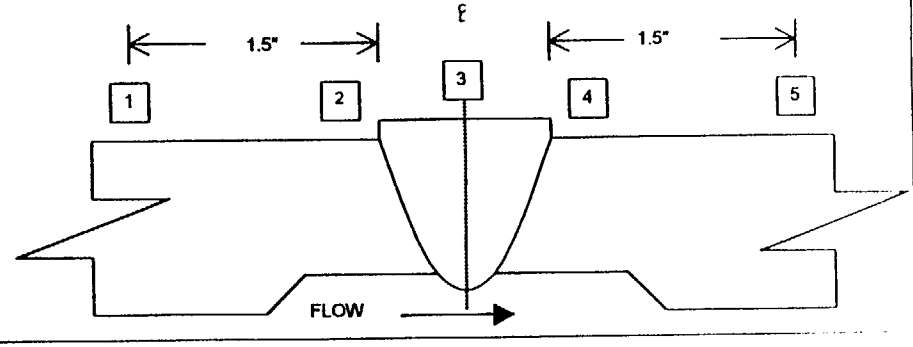
POSITION	0	90	180	270
1	N/A	.280"	N/A	N/A
2	N/A	.280"	N/A	N/A
3	N/A	.290"	N/A	N/A
4	N/A	.285"	N/A	N/A
5	N/A	.285"	N/A	N/A

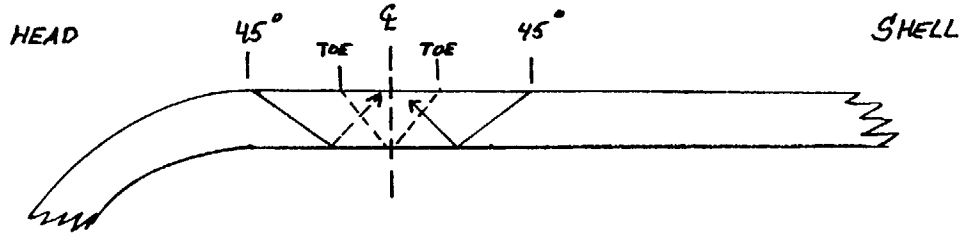
CROWN HEIGHT: Flush

CROWN WIDTH: .5"

NOM DIAMETER: 14"

WELD LENGTH: 44.25"





Sketch 28

SD 57A

WALL THICKNESS FROM PRIOR REPORT #180084
13-OCT-80

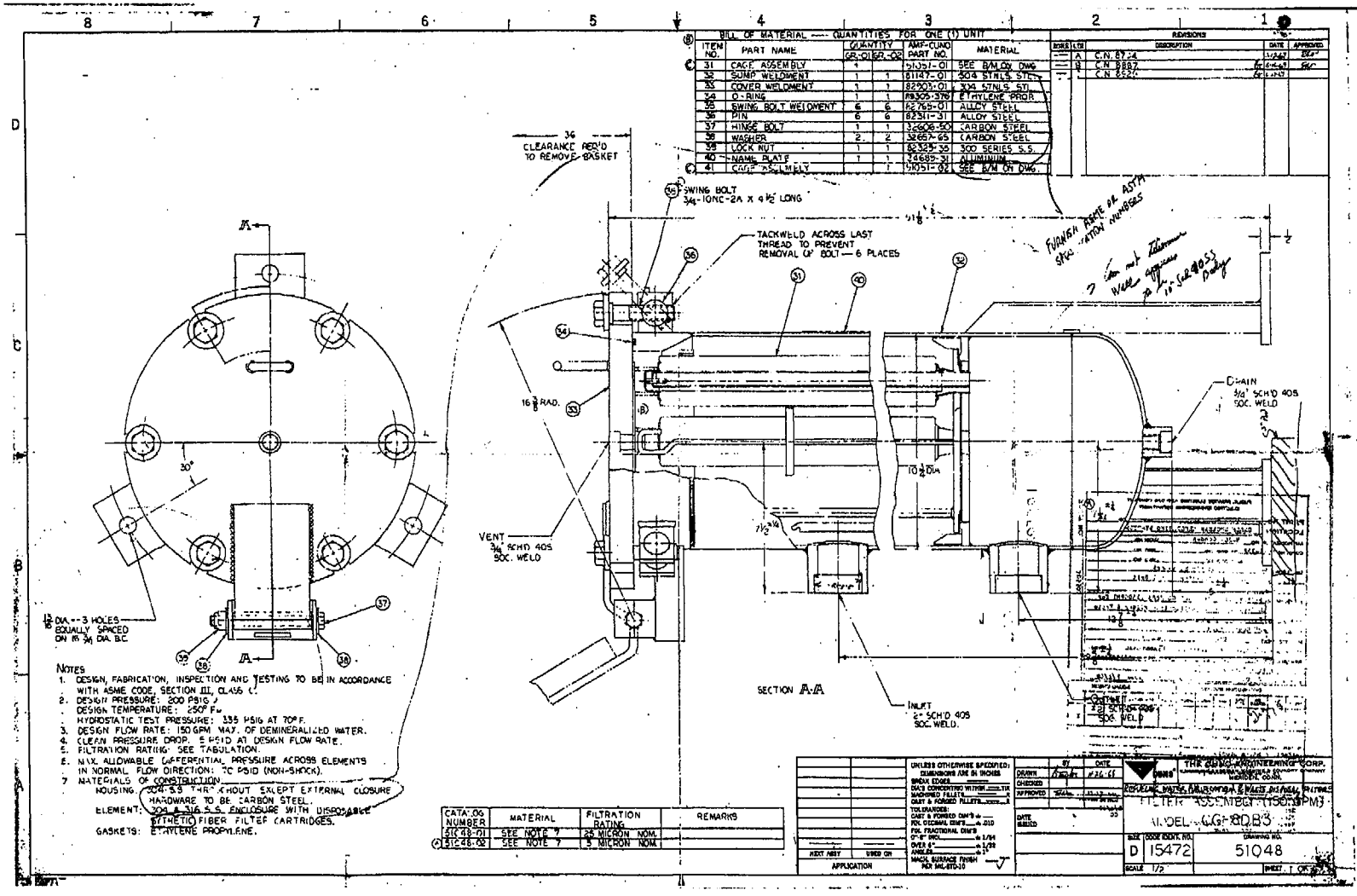
Pg. 4 of 4

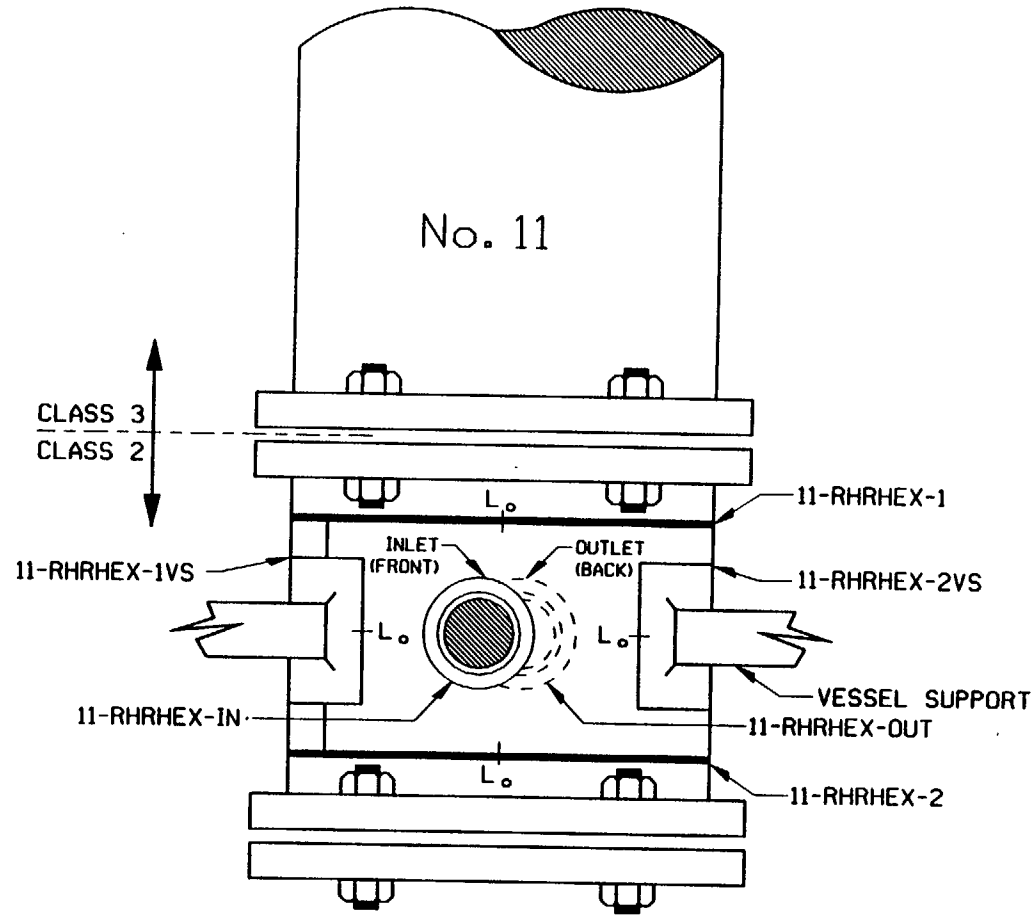
Prepared By: K.E. Smith Date: 4-2-01 4-5-01

Reviewed By: Bob Kellenbach Date: 4/7/01

Utility Review By: Wayne Denlinger Date: 4-12-01

OUTSTANDING CHANGES MUST BE ATTACHED FOR WORKING COPY
VTD 105502 000 2 Printed 20020710





Sketch 29
1 of 8

PL-SS-.750-85-SAM (VESSEL WELDS)
1.325-8-S-CS-99-SAM (STUDS)
1.325-8-N-CS-104-SAM (NUTS)

1⅜" - STUDS
1⅜" - NUTS

BUILDING:	LOCATION:	ELEVATIONS:
AUXILIARY	•11 RHR HEAT EXCHANGER ROOM	63'-8"

RHR HEAT EXCHANGER

ATTENTION: ANY REVISION TO THIS DRAWING SHALL BE MADE ONLY BY CAED

REV.	DATE	DESCRIPTION
1		REVISED PER ORDER No. 80008418.

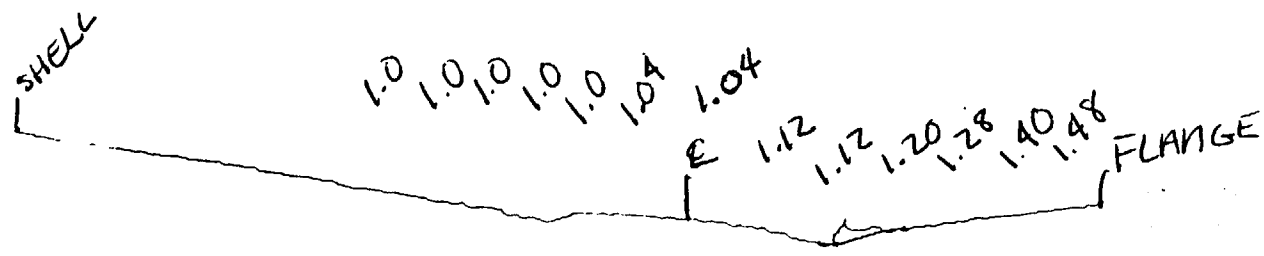
PSEG Nuclear, LLC
SALEM NUCLEAR GENERATING STATION
WELD IDENTIFICATION FIGURE

FIGURE: B-8 | REVISION: 1
SYSTEM: RHR HEAT EXCHANGER
LINE: N/A
THIRD 10 YEAR INSPECTION INTERVAL

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO.: 17-2735	SITE: Salem Generating Station, Unit 1	DATE: (DAY-MONTH-YEAR) 2 MAY 89	TIME (24 HR. CLOCK) INT. 1405 FINAL 1420		SHEET NO.: 135007
EXAMINER: L. DURAN	SNT LEVEL: II	THK. MEAS. REQ'D BY PROCEDURE No. 600-33 Rev. 11 Dev. 1	INSTRUMENT: SONIC MARK I ☒ OTHER ☐	SERIAL NO.: 774210	COMPONENT ID: 11-RHRHEX-1
EXAMINER: S. FREELAND	SNT LEVEL: I		COUPLANT: GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		REFERENCE BLK NO.: SS-DC-40

SEARCH UNITS	
BRAND	AEROTECH
SERIAL NO.	G21651
SIZE	.25"
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	2.0"
DELAY	126-1
MATL. CAL.	118
RANGE	2
REP. RATE	3K
JACK USED	R&T
TRANS. MODE	THRU



PSEG INSPECTION SERVICES
Reviewed and Approved
5/12/89
N.D.E. SUPERVISOR

45° Search Unit chosen for coverage using 2/8, 6/8, 10/8 nodes.
N/A° Search Unit chosen for coverage using N/A nodes.

NAME: Leroy Duran | SNT LEVEL: II

REVIEWED BY: [signature] | SNT LEVEL: III | DATE: 3 MAY 89

Sketch 29 28 8

SwRI Form No. NDTR 17-135 (03-24-88)

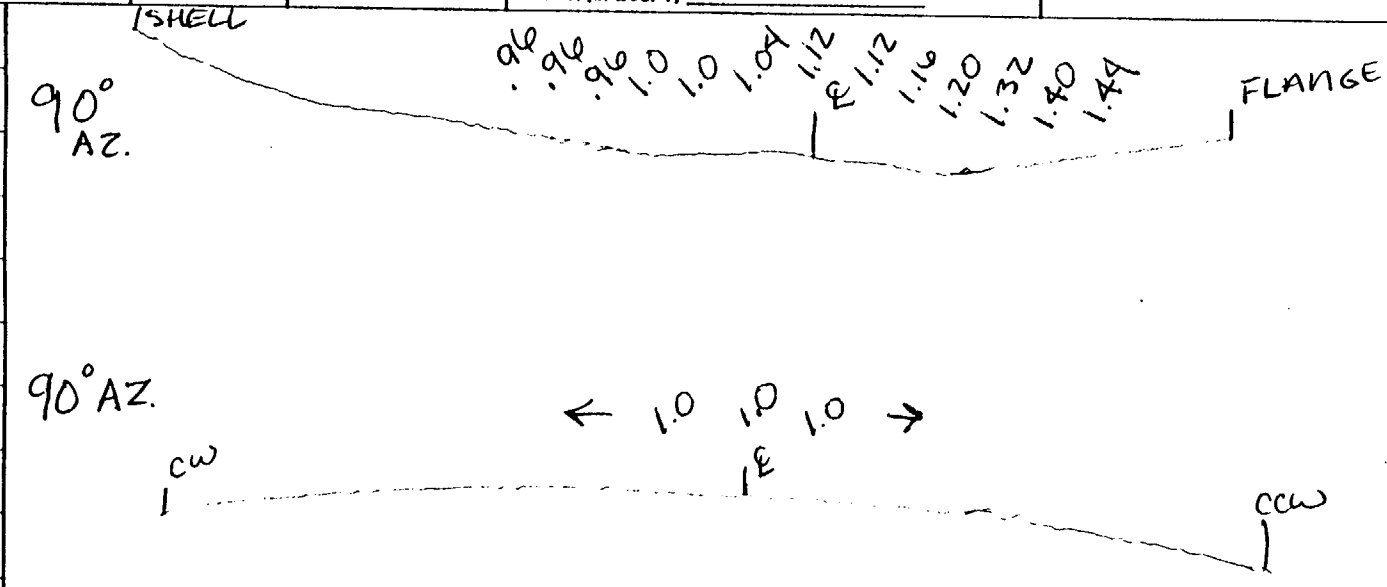
205150

SWRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO.: 17-2735	SITE: Salem Generating Station, Unit 1	DATE: (DAY-MONTH-YEAR) 2 MAY 89	TIME (24 HR. CLOCK) INT. 1405 FINAL 1420	SHEET NO.: 135008

EXAMINER: L. DURAN	SNT LEVEL: II	THK. MEAS. REQ'D BY PROCEDURE No. 600-33 Rev. 11 Dev. 1	INSTRUMENT: SONIC MARK I ☒ OTHER ☐	SERIAL NO.: 774210	COMPONENT ID: 11-RHRHEX-1
EXAMINER: S. FREELAND	SNT LEVEL: I		COUPLANT: GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		REFERENCE BLK NO.: SS-DC-90

SEARCH UNITS	
BRAND	AEROTECH
SERIAL NO.	G21651
SIZE	.25"
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	2.0"
DELAY	126-1
MATL. CAL.	118
RANGE	2
REP. RATE	3K
JACK USED	R&T
TRANS. MODE	THRU



45° Search Unit chosen for coverage using 3/6/8, 10/8 nodes.

N/A° Search Unit chosen for coverage using N/A nodes.

NAME: Leroy Duran | SNT LEVEL: II

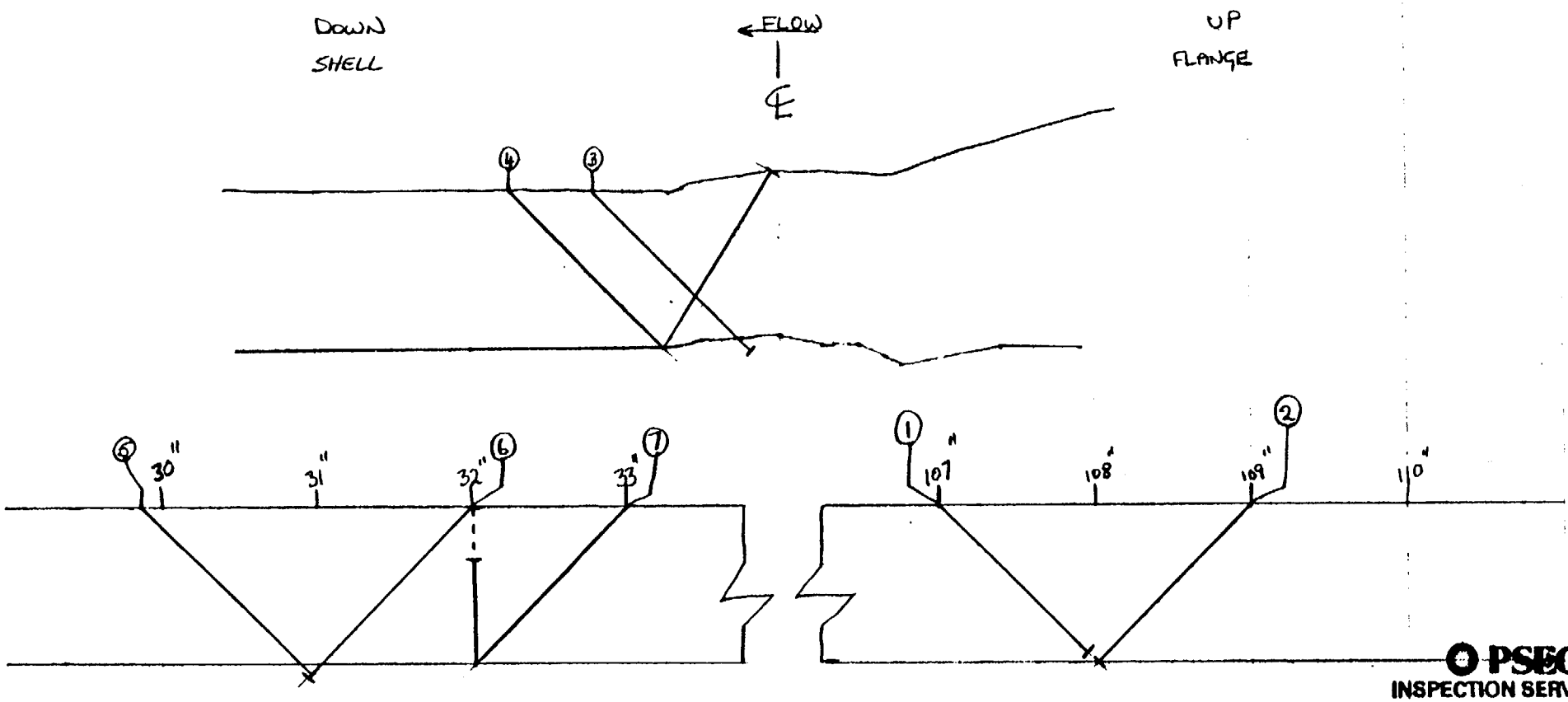
REVIEWED BY: [signature] | SNT LEVEL: III | DATE: 3 MAY 89

PSEG INSPECTION SERVICES
Reviewed and Approved
WD 5/11/89
N.D.E. SUPERVISOR

Sketch 29
3 of 8

SWRI Form No. NDTR 17-135 (03-24-88)

205150



PSEG
INSPECTION SERVICES
Reviewed and Approved
5/17/89
N.D.E. SUPERVISOR

SALEM UNIT 1 17-2735
R.H.R.- 11-RHRHEX-1
VICTOR MORTON III 3 MAY 89
GEOMETRIC

6, 5, 2 + 1 ROOT FROM LONG SEAMS
3 ROOT
4 CROWN
7 CROWN (REDIRECTED WITH MODE CONVERSION)

Sketch 25
4 of 8

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/02/01

Summary No.: 205160

Site: Salem Unit 1, RFO 14

Examination Method: UT

System: RHR Exchanger

Identification: 11-RHRHEX-2

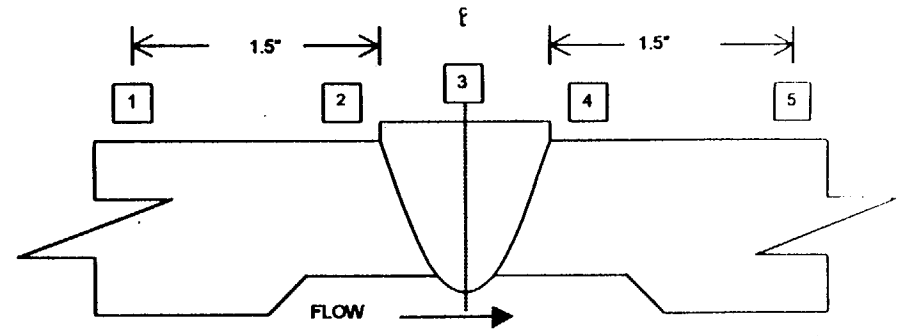
POSITION	0	90	180	270
1	1.0"	N/A	N/A	N/A
2	1.0"	N/A	N/A	N/A
3	1.07"	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A

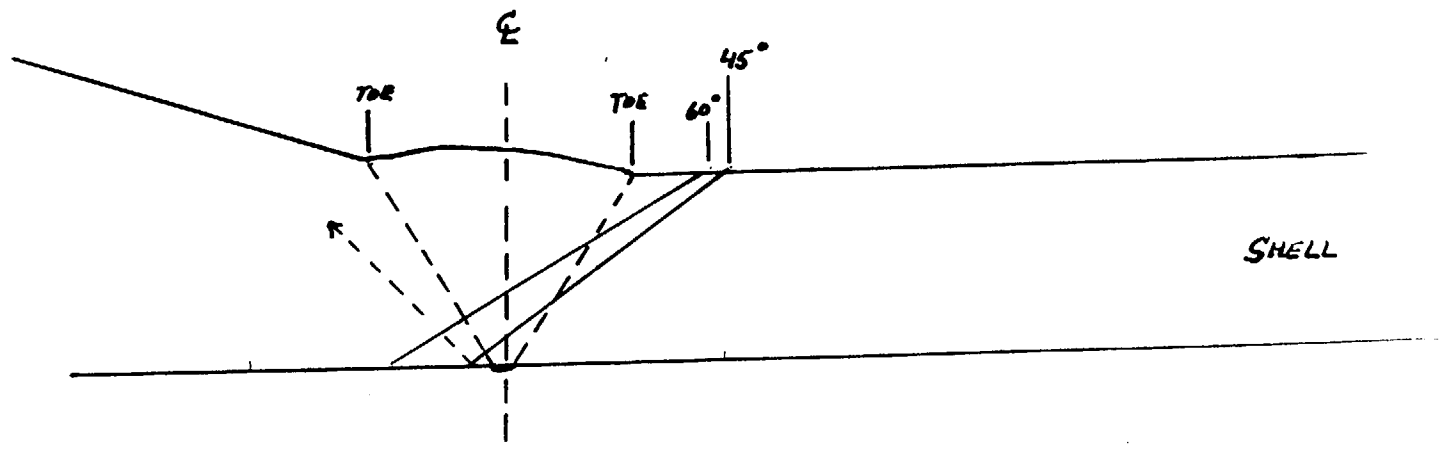
CROWN HEIGHT: .625"

CROWN WIDTH: 1.25"

NOM DIAMETER: 39"

WELD LENGTH: 122"





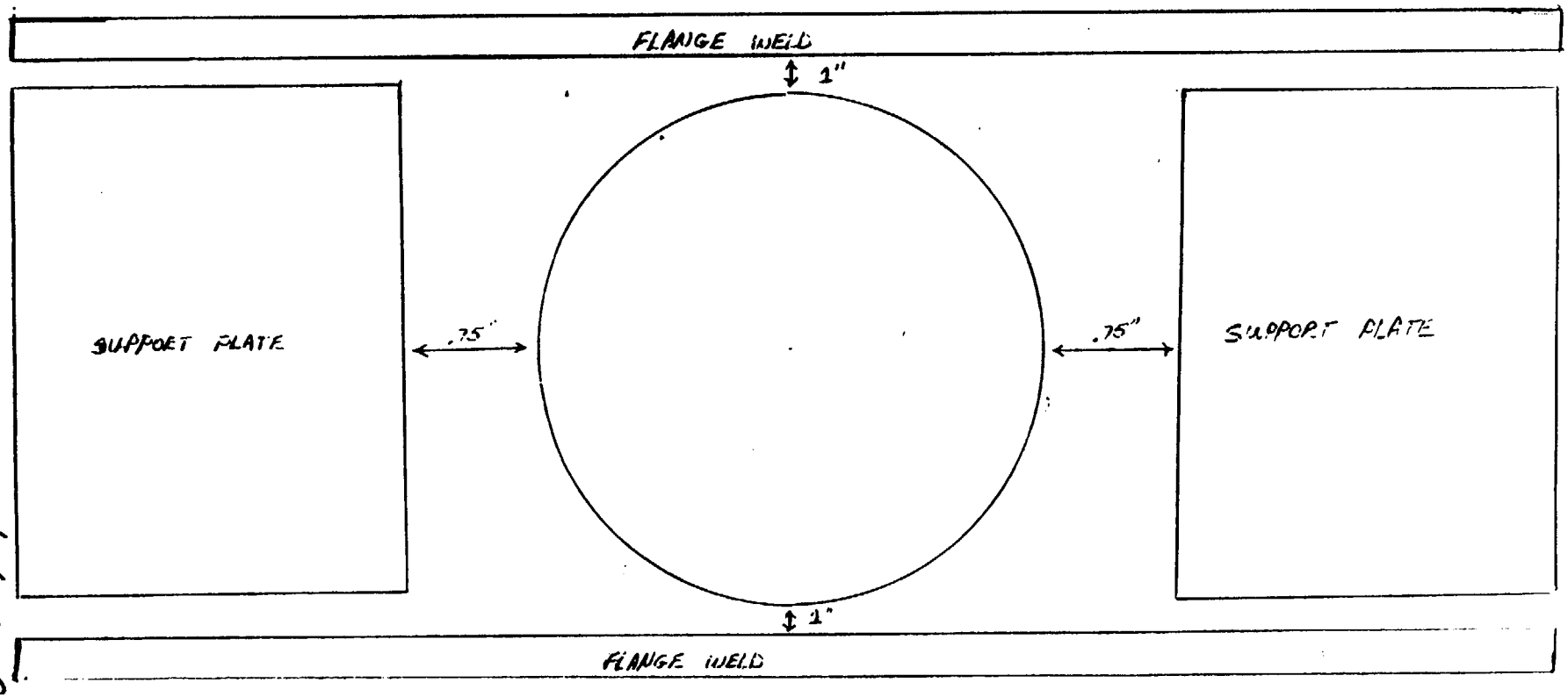
Sketch 25 S 48

K E Smith 4-2-01
Prepared By Date

Bob Kellenbach 4/13/01
Reviewed By Date

Wayne Denlinger 4/19-01 7/8
Utility Review By Date

FRAMATOME ANP	COVERAGE PLOT	
	Exam Date: 04/02/01	**Summary No.:** 205160
Site: Salem Unit 1, RFO 14		**Examination Method:** UT
System: RHR Exchanger		**Identification:** 11-RHRHEX-2

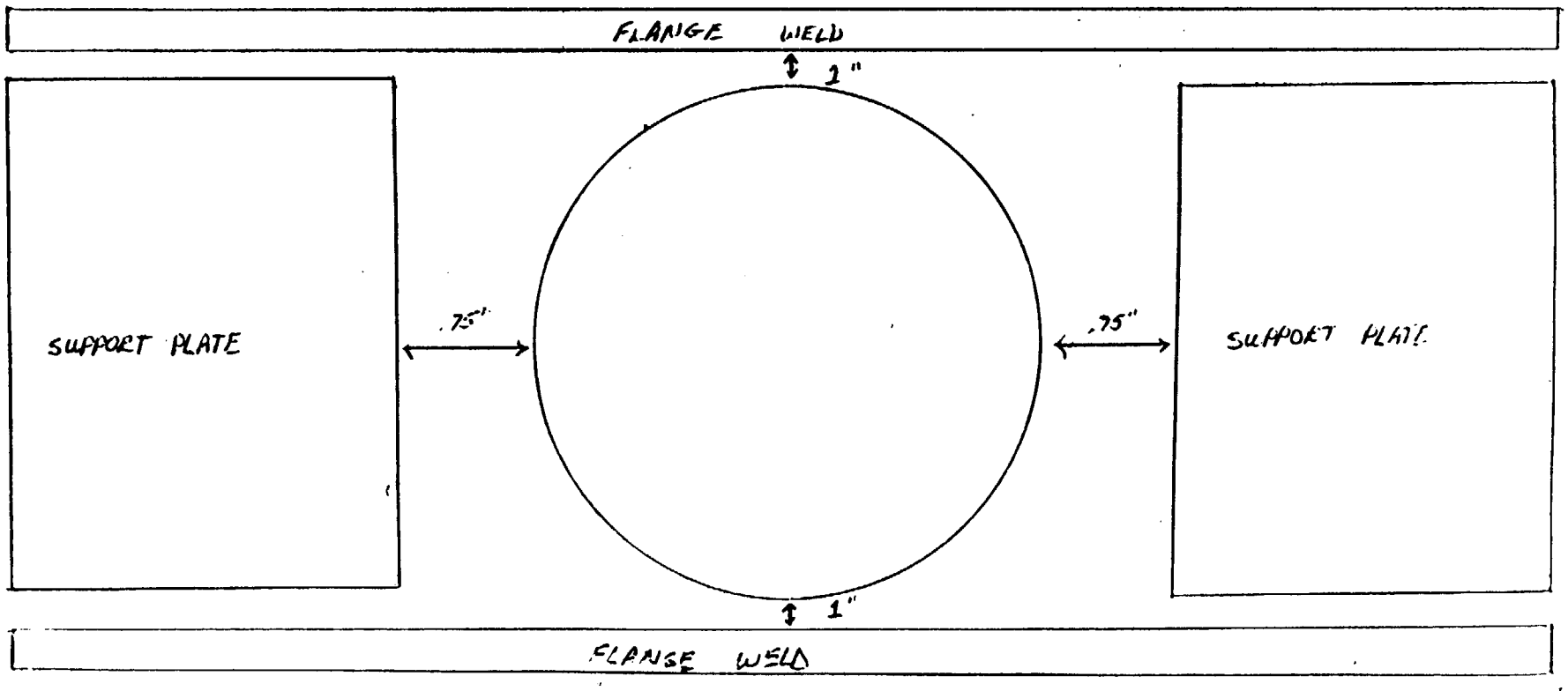


Sketch 25
6 of 8

Prepared By	Date	Reviewed By	Date	Utility Review By	Date
[illegible]	4-2-01	[illegible]	4/13/01	[illegible]	4-19-01

8/8

FRAMATOME ANP	COVERAGE PLOT	
	Exam Date: 04/02/01	**Summary No.:** 205168
Site: Salem Unit 1, RFO 14		**Examination Method:** UT
System: RHR Exchanger		**Identification:** 11-RHRHEX-OUT



Sketch 25 of 88

Form 41301 10/10 8/8

Prepared By	Date	Reviewed By	Date	Utility Review By	Date
[signature]	4-2-01	[signature]	4/12/01	[signature]	4-21-01

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/02/01

Summary No.: 205168

Site: Salem Unit 1, RFO 14

Examination Method: UT

System: RHR Exchanger

Identification: 11-RHRHEX-OUT

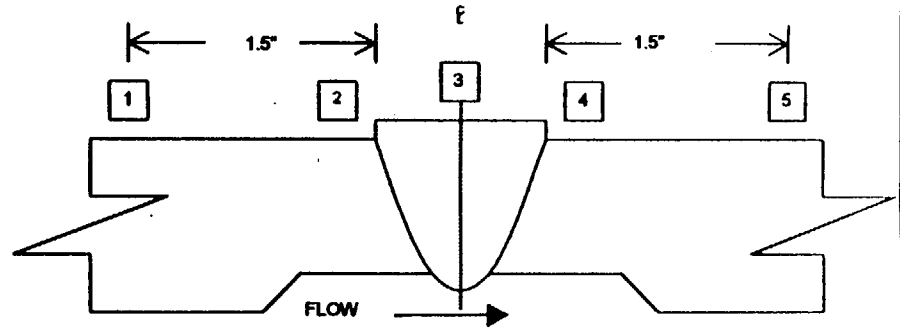
POSITION	0	90	180	270
1	N/A	N/A	N/A	.975"
2	N/A	N/A	N/A	.988"
3	N/A	N/A	N/A	1.125"
4	N/A	N/A	N/A	2.6"
5	N/A	N/A	N/A	2.6"

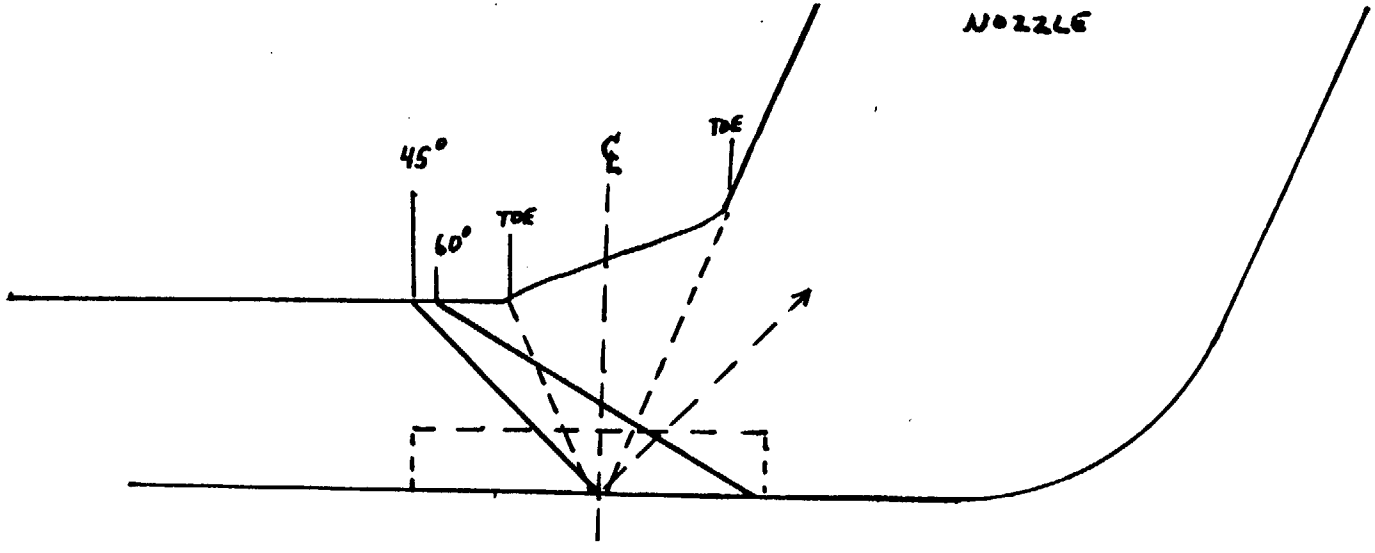
CROWN HEIGHT: Flush

CROWN WIDTH: 1.125"

NOM DIAMETER: 17"

WELD LENGTH: 57.75"





Sheet 25 of 88

9/00 Rev 11/01

Prepared By	Date	Reviewed By	Date	Utility Review By	Date
K.E. Smith	4-2-01	Bob Kellenwall	4/12/01	Wayne Denlinger	4-21-01

7/8

REV.	DATE	DESCRIPTION
1		REVISED PER ORDER No. 80008418.

ATTENTION: ANY REVISION TO THIS DRAWING SHALL BE MADE ONLY BY CAED

BUILDING: AUXILIARY

LOCATION: HEAT EXCHANGE ROOM

ELEVATIONS: 78'

PSEG Nuclear, LLC

SALEM NUCLEAR GENERATING STATION

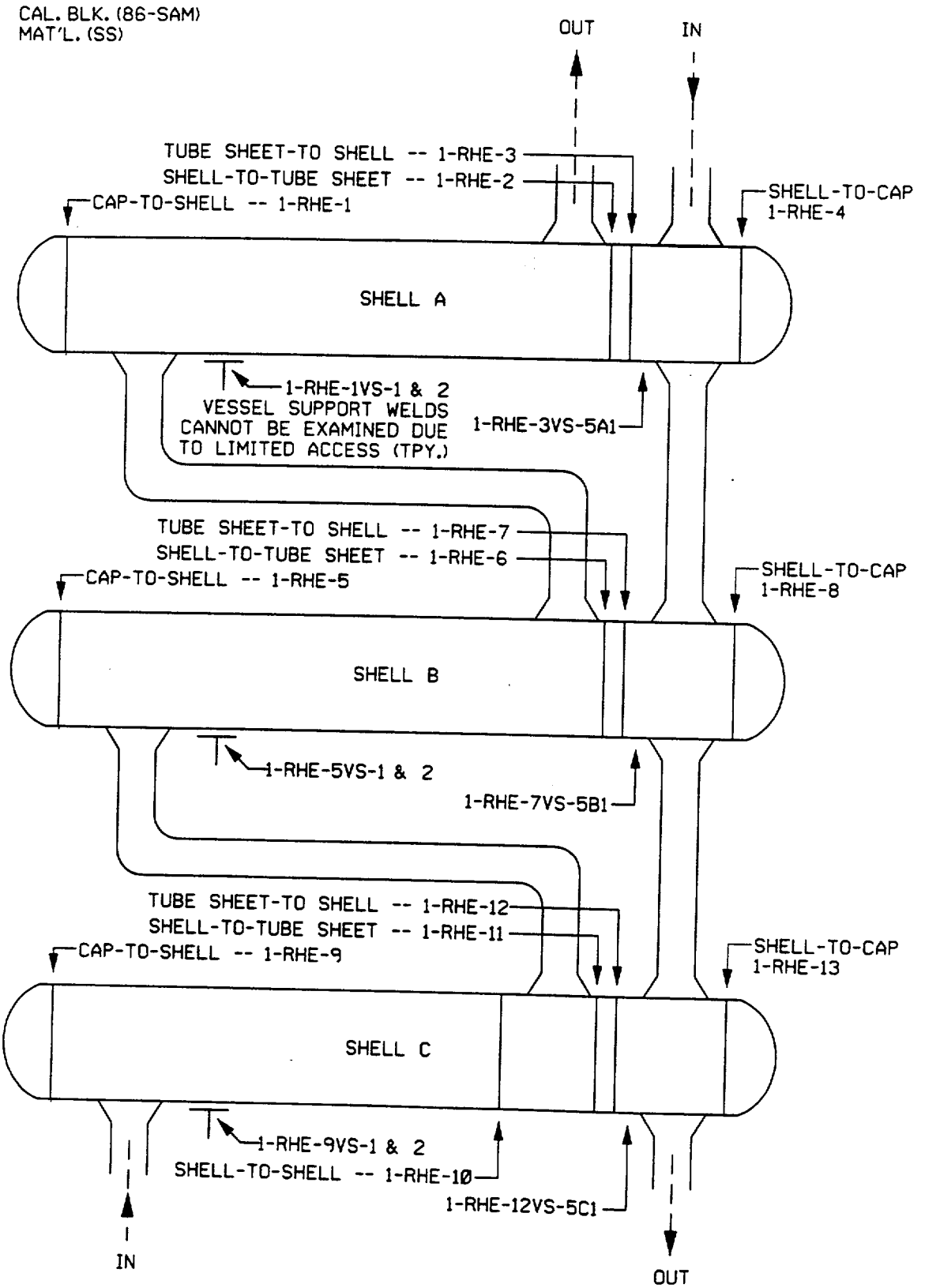
WELD IDENTIFICATION FIGURE

FIGURE: B-7

REVISION: 1

SYSTEM: REGENERATIVE HEAT EXCHANGER

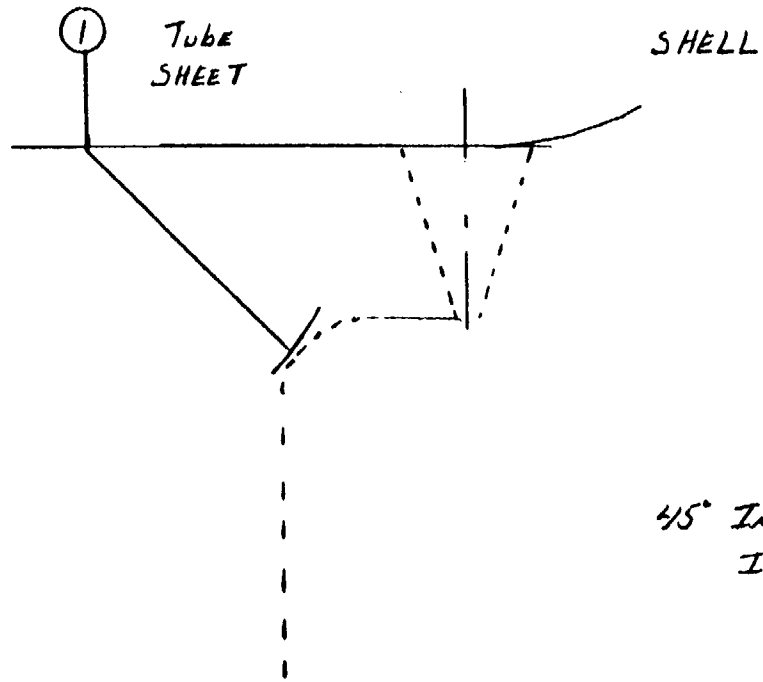
LINE: N/A



REGENERATIVE HEAT EXCHANGER

Sketch 30
1 of 4

1-RHE-3



45° INDICATION GEOMETRY from
INSIDE SURFACE

SALEM UNIT 1
17-3645
REGEN. HEAT EXC.
1-RHE-3
[illegible] Lv. III
26FEB 91

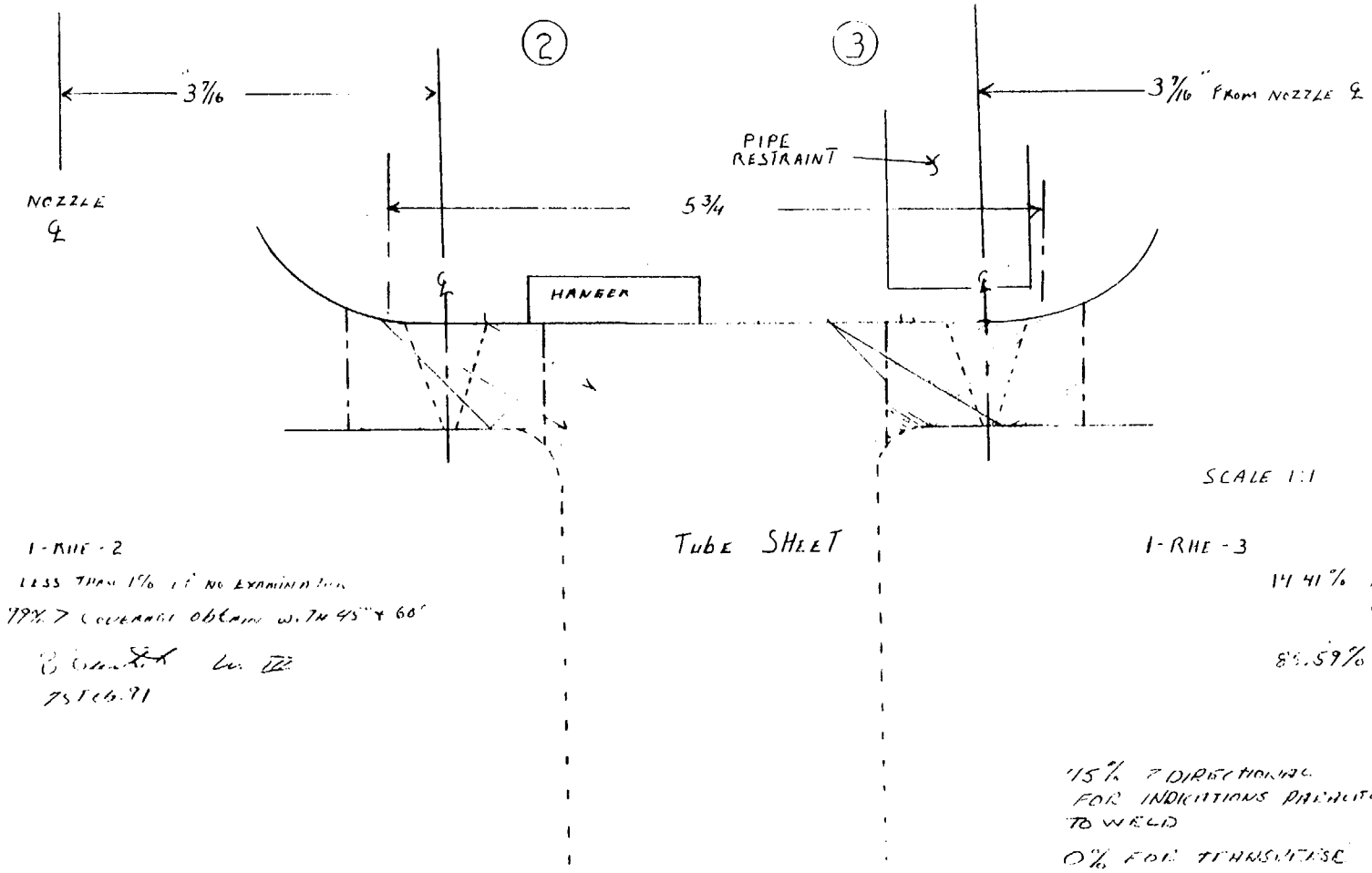
ANI REVIEW
INITIAL [illegible]
DATE 3-12-91

PSEG
INSPECTION SERVICES
Reviewed and Approved
[illegible] 3/6/91
N.D.E. SUPERVISOR

Sketch 30
2 of 44

20058

1-RHE-2 + 3



1-RHE-2

LESS THAN 1% DUE TO NO EXAMINATION

79% > COVERAGE obtain WITH 45° + 60°

[illegible]

25 Feb 91

1-RHE-3

14.41% NO EXAMINATION [illegible] DUE SCANNING [illegible]

85.59% COVERAGE [illegible] 45° + 60° ONE DIRECTION

[illegible]

25 FEB 91

15% > DIRECTIONAL FOR INDICATIONS PARALLEL TO WELD

0% FOR TRANSVERSE

REF DATA SHTS NO. 135015 + 135016

NOTE WELD LOCATION AND DIMENSIONS obtained FROM [illegible]

Sheet 30
3 of 4A

1- RHE-3

UT 0° WELD + 1/2"

TOT AREA 29" x 1.8" = 52.2

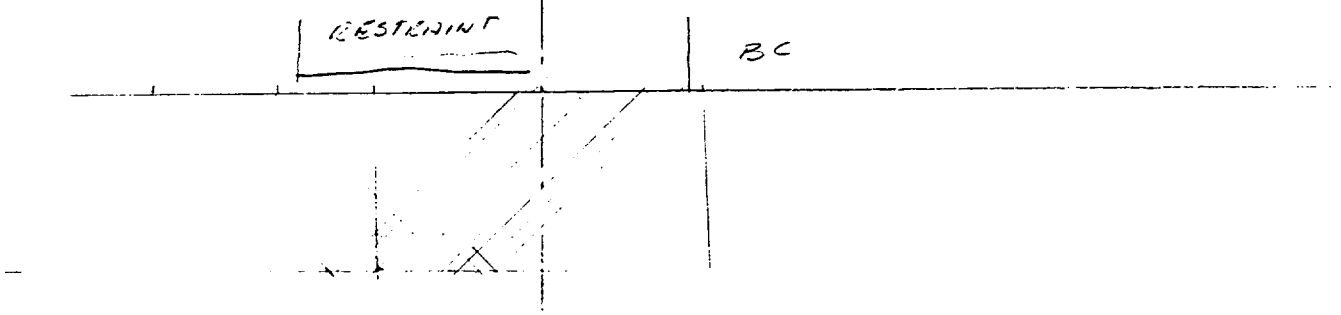
AREA EXAMINED 29 x 0.7 - 8 x 0.75 = 20.1 □'

0° 38% COVERAGE

UT 45

TOTAL VOLUME 1.7 x 0.94 x 29 = 46.342 cu in

CROSS SECTION = 1.7 x 0.94 = 1.598



2 directional COVERAGE AT BC

0.9 x .74 = .846 x 4.5" = 3.807 in³

2 directional Coverage all other

0.94 x 1/2 (1.7 + 1) x 24.5" = 31.070

TOT 45° 2 directional 34.9 in³

75%

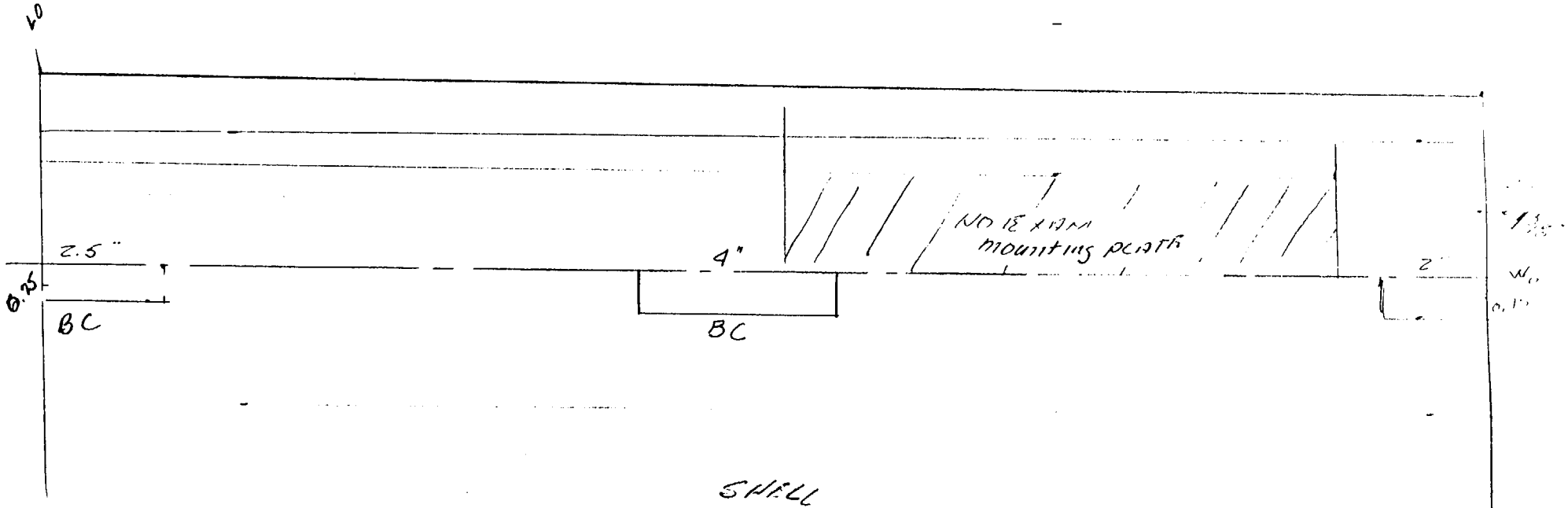
MCI

Sheet 30
4 of 4A

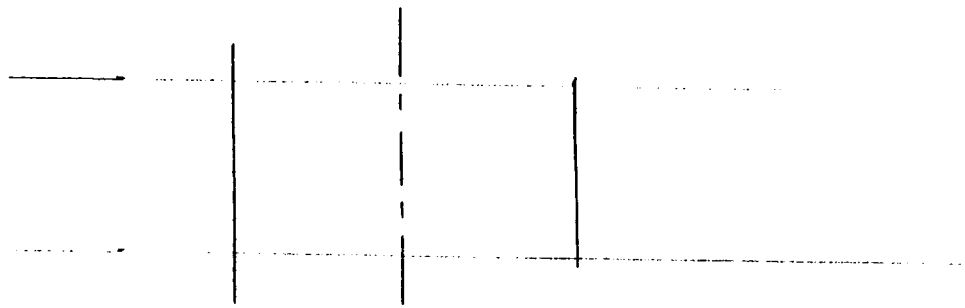
30 SCALE
HORIZ

T=0.9"

TUBE SHEET



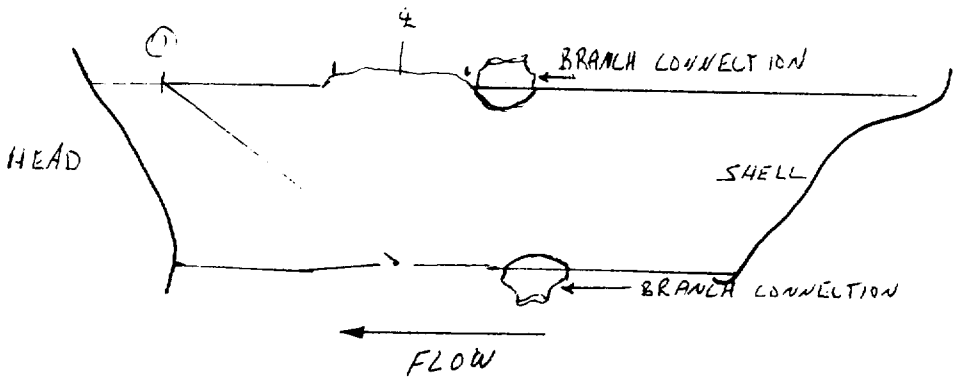
SHELL

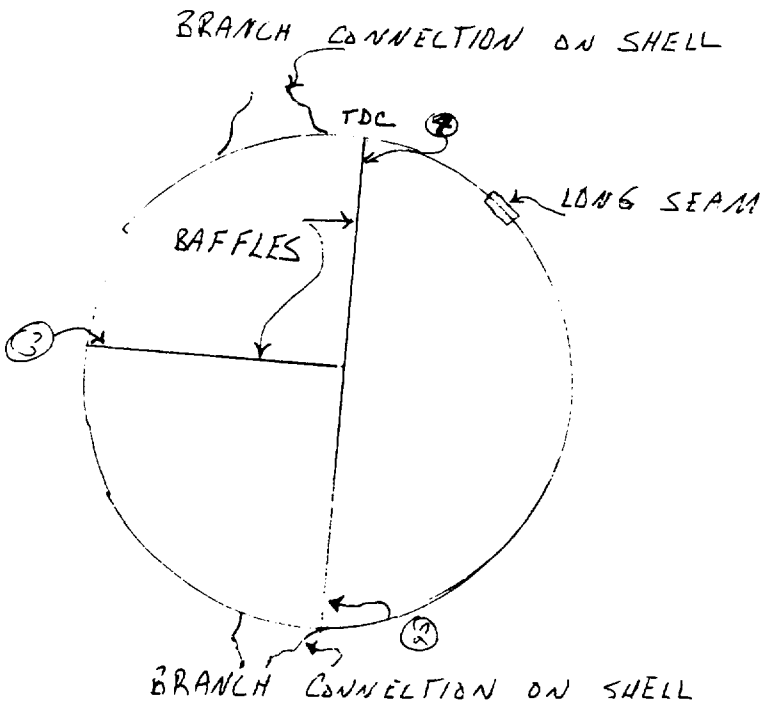


Sketch 30
4A & 4A

UT INDICATION PLOT

WITH COVERAGE PLOT

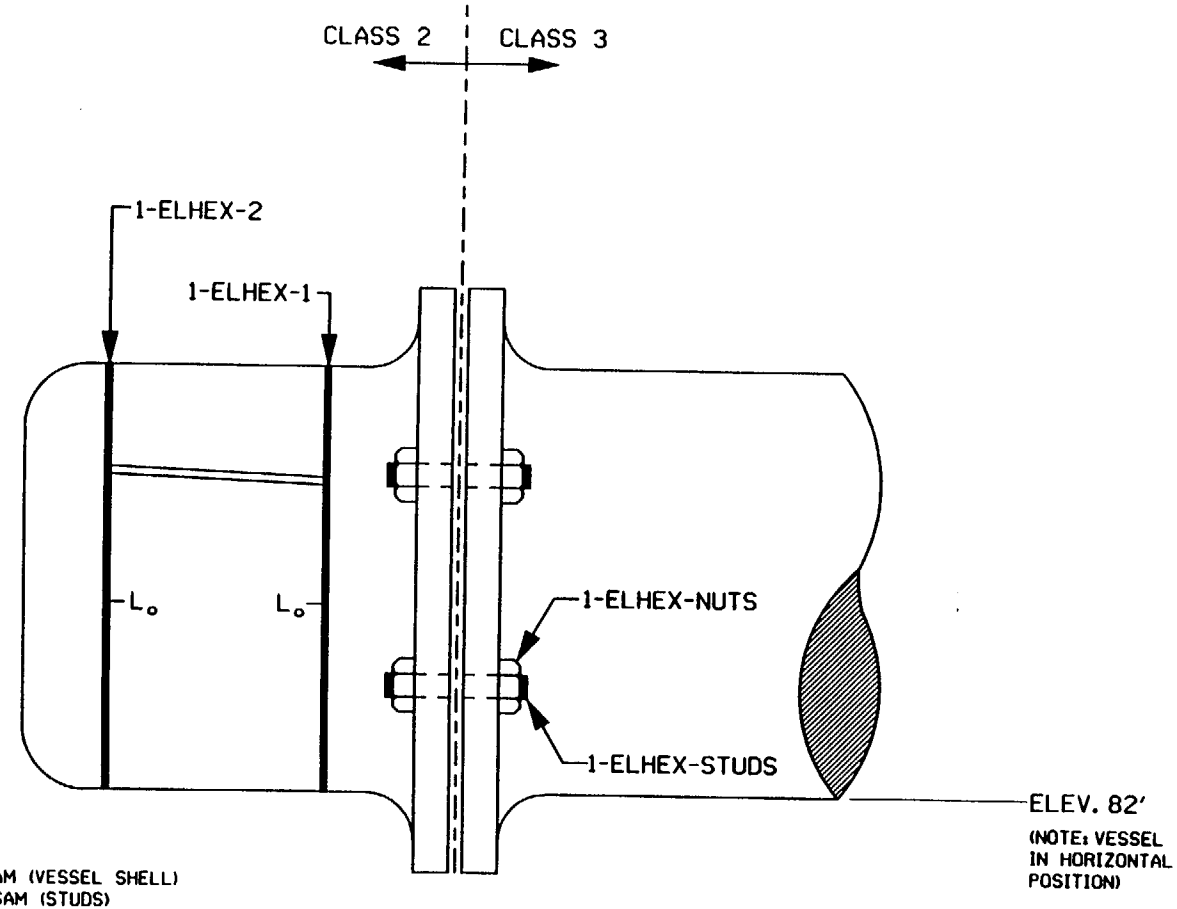




SUMMARY NO.: 204870

WELD: 1-ELHEX-2

Sketch# 31
132



9.5-SS-.750-86-SAM (VESSEL SHELL)
1.625-8-S-CS-98-SAM (STUDS)
1.625-8-N-CS-92-SAM (NUTS)

Sketch 31
2 of 2

BUILDING:	LOCATION:	ELEVATIONS:
AUXILIARY	EXCESS LETDOWN HEAT EXCHANGER ROOM	84'

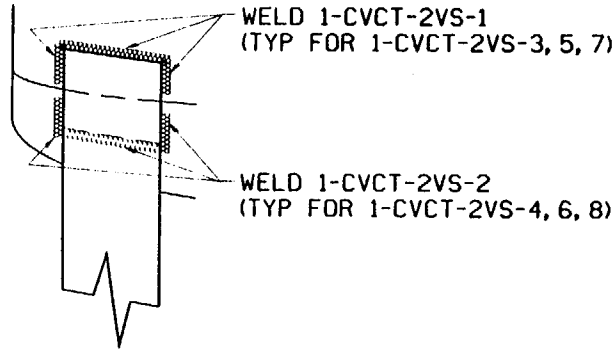
EXCESS LETDOWN HEAT EXCHANGER

ATTENTION: ANY REVISION TO THIS DRAWING SHALL BE MADE ONLY BY CAED

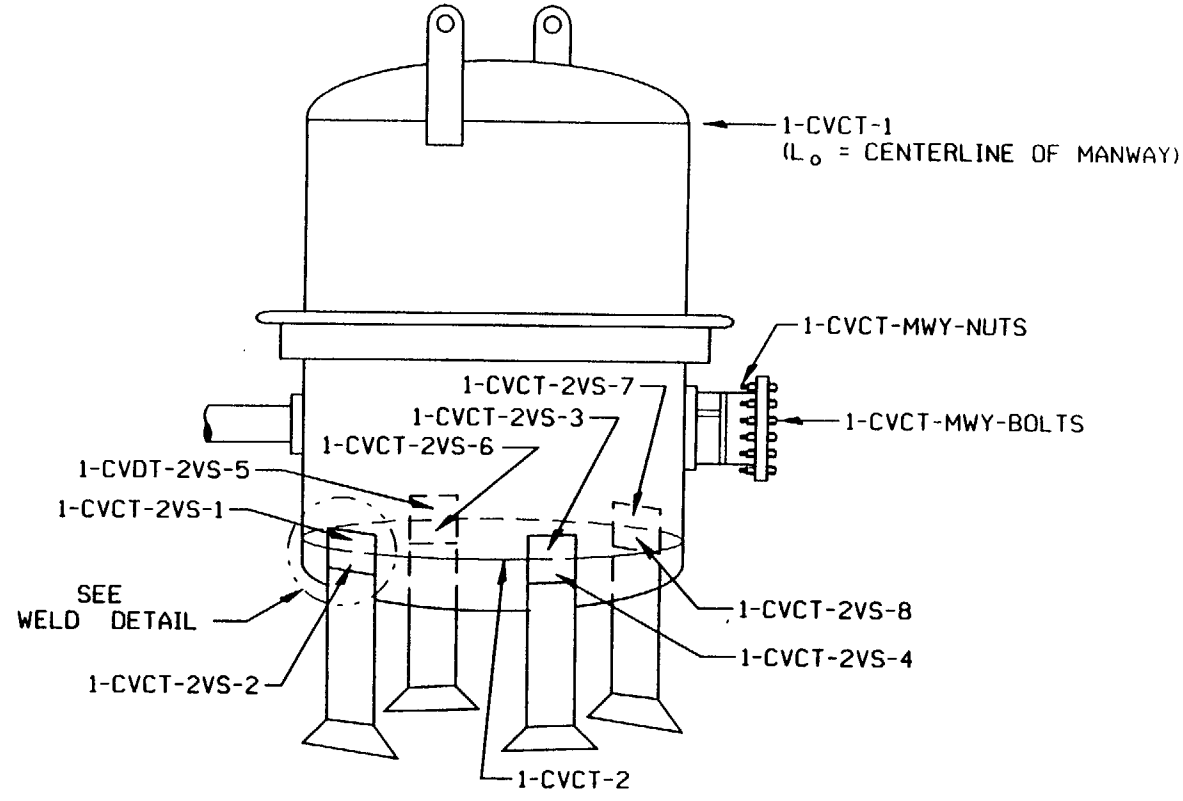
REV.	DATE	DESCRIPTION
1		REVISED PER ORDER No. 80008418.

PSEG Nuclear, LLC
SALEM NUCLEAR GENERATING STATION
WELD IDENTIFICATION FIGURE

FIGURE: B-3 | REVISION: 1
SYSTEM: EXCESS LETDOWN HEAT EXCHANGER
LINE: N/A



WELD DETAIL



Sketch 32
1B3

PL-SS-.250-97-SAM (VESSEL SHELL)
1.125-8-N-CS-101-SAM (NUTS)
1.125-8-B-CS-107-SAM (BOLTS)

CHEMICAL AND VOLUME CONTROL TANK

BUILDING:	LOCATION:	ELEVATIONS:
AUXILIARY	GVCT ROOM	122'

ATTENTION: ANY REVISION TO THIS DRAWING SHALL BE MADE ONLY BY CAED

REV.	DATE	DESCRIPTION
1		REVISED PER ORDER No. 80008418.

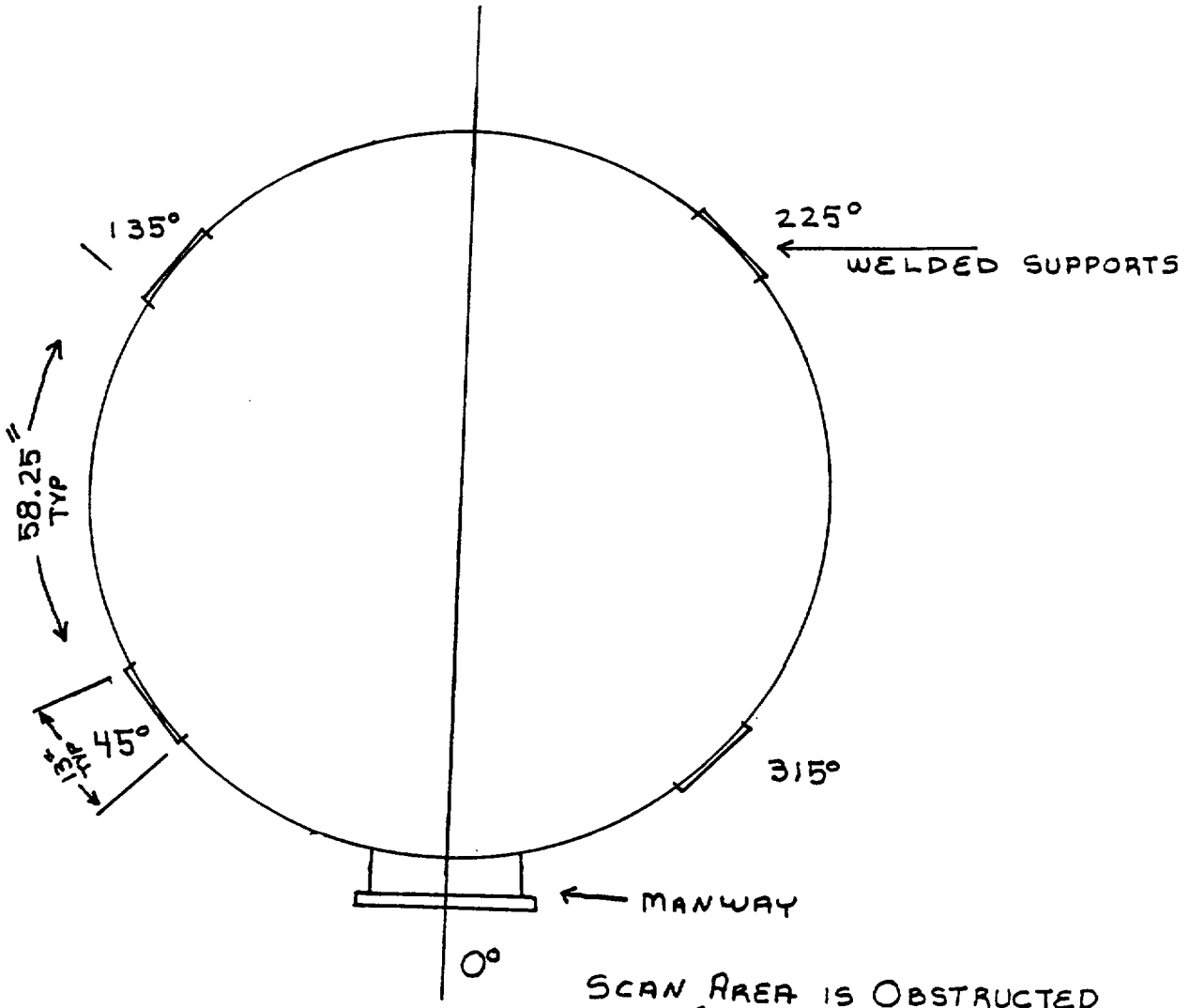
PSEG Nuclear, LLC
SALEM NUCLEAR GENERATING STATION
WELD IDENTIFICATION FIGURE

FIGURE: B-2 REVISION: 1
SYSTEM:
CHEMICAL AND VOLUME CONTROL TANK
LINE: N/A

UT COVERAGE PLOT

282.7" TOTAL CIRUMFERENCE
52.0" LIMITED

18.4% LIMITED
81.6% EXAMINED



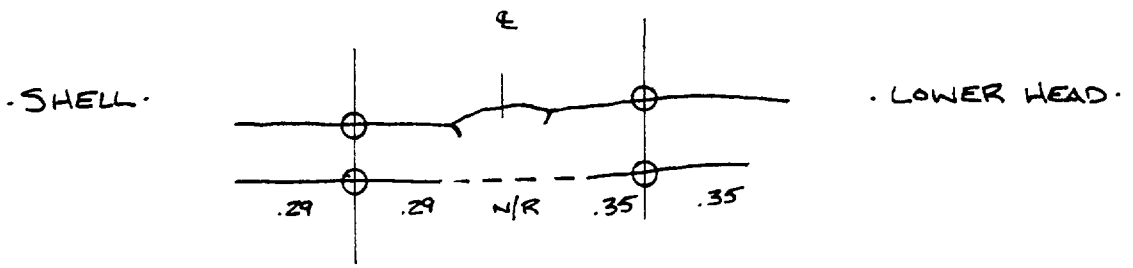
SCAN AREA IS OBSTRUCTED
FOR 13" AT 4 LOCATIONS
AS DEPICTED ABOVE
DUE TO WELDED SUPPORTS
REF. VENDOR PRINT (WESTINGHOUSE)
No. 110E019

SUMMARY NO.: 204800

WELD: 1-CVCT-2

Sketch 32
2 of 3

UT INDICATION PLOT



· TOTAL EXAM. VOLUME
= .3 × 1.5 × 282.7
OR
127.2 in^3

· CONTOUR @ DATUM - 0
· SCALE 1:1
· WELD WIDTH = .5"
· NO READINGS ON WELD CROWN DUE TO AS WELDED CONDITION.

S. Williams
9/30/99

ANI/AI REVIEW
INITIAL DKG
DATE 10-2-99

SUMMARY NO.: 204800

WELD: 1-CVCT-2

Sketch 32
3 of 3

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/20/01

Summary No.: 204001

Site: Salem Unit 1, RFO 14

Examination Method: MT

System: Steam Generator 11

Identification: 16-BFN-2111-1

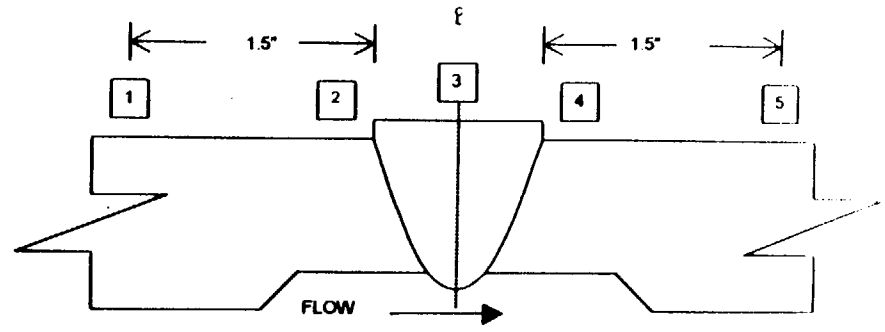
POSITION	0	90	180	270
1				
2				
3				
4				
5				

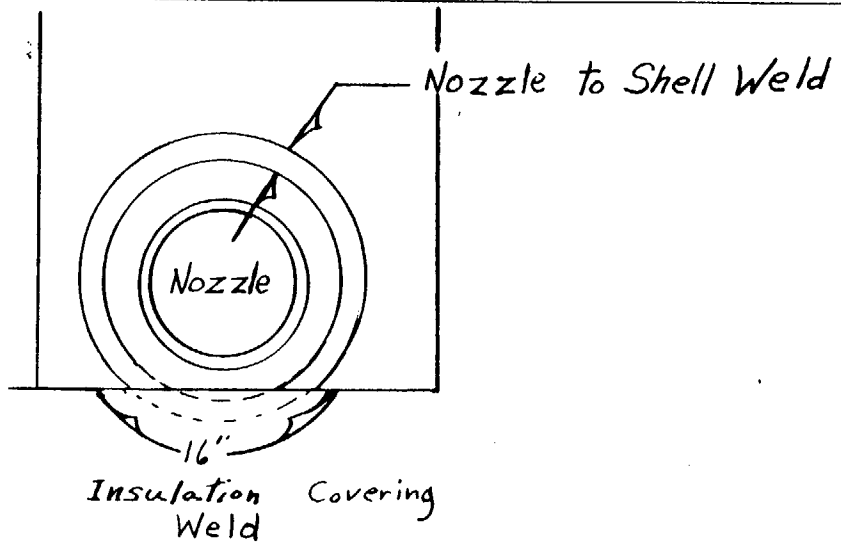
CROWN HEIGHT: _____

CROWN WIDTH: _____

NOM DIAMETER: _____

WELD LENGTH: _____





Sketch #33

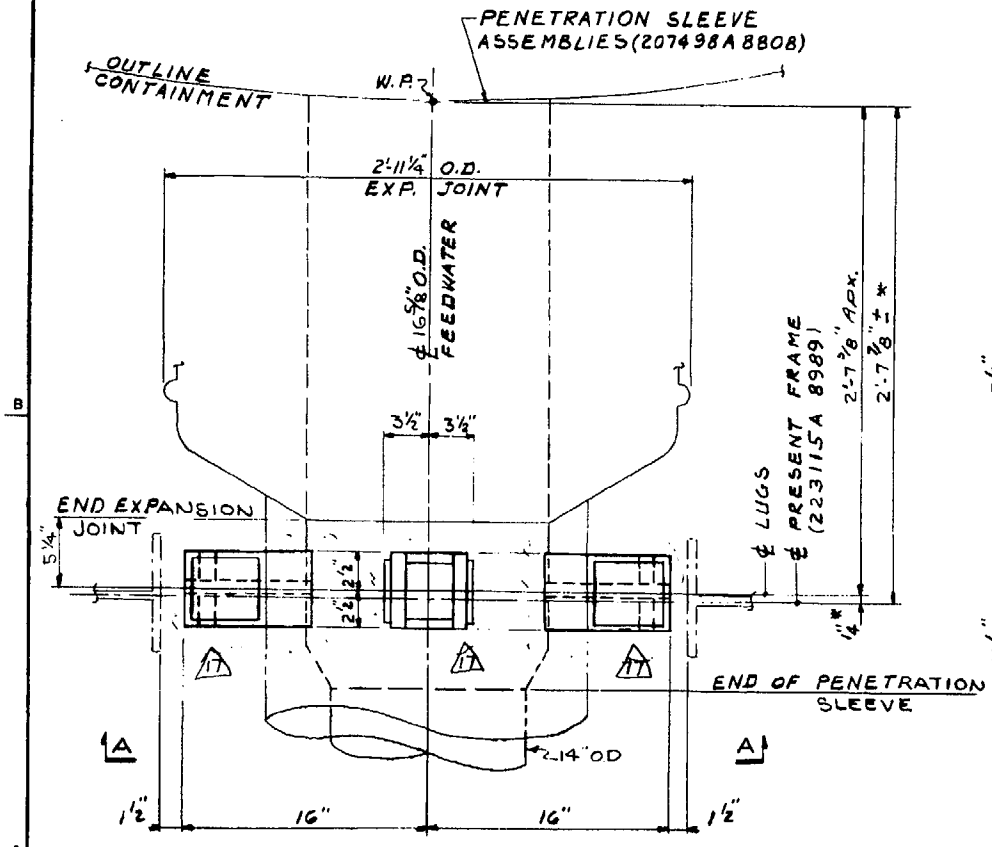
11/12 '01

Prepared By: Gary Chapman Date: 4-20-01

Reviewed By: Bob Kellenhall Date: 4/23/01

Utility Review By: [illegible] Date: 4-27-01

OUTSTANDING CHANGES MUST BE ATTACHED FOR WORKING COPY
DWG 206717 017 17 Printed 20020529



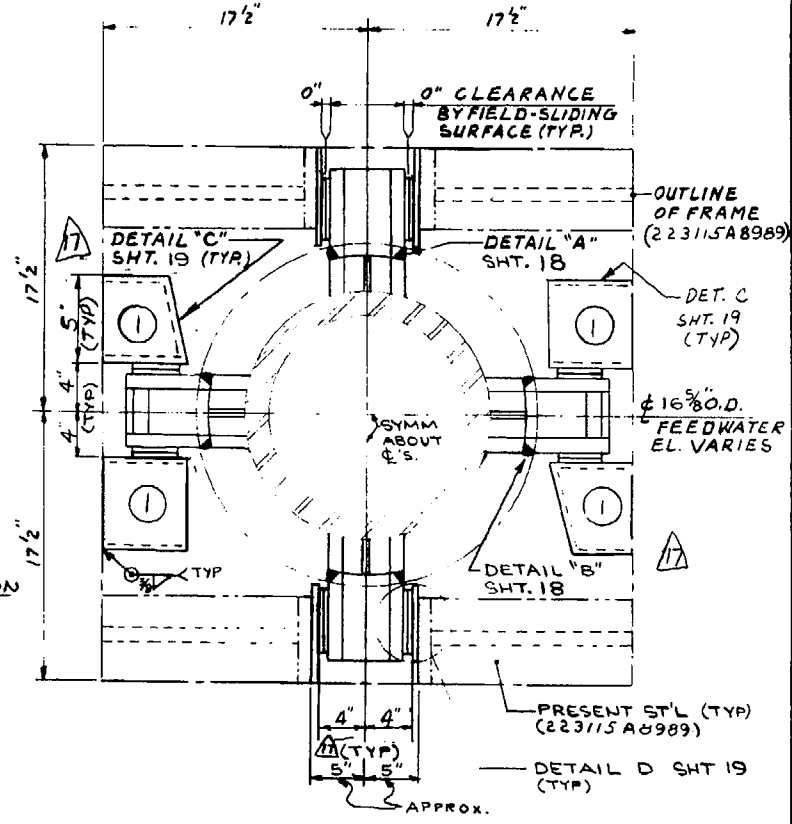
PLAN

FWG 11-15, 12-17 & 14-21, ONE(1) EACH REQ'D

FOR LOCATION PLAN SEE SHT. 13

(PAINT SRP)

* NOTE: FRAME TO BE LOCATED IN PLACE WHEN PIPE IS IN FINAL ERECTED POSITION AND DETAILS "A" & "B" ARE WELDED IN PLACE.



ELEVATION "A-A"

RE: 206767 A 8791

NO.	DESCRIPTION	DATE	DWG	CHK	EXD
17	REV'D PER IEC-1375, M45/3, M46/3, M47/3	8-5-85	RZ		
8	DELETED FWG-13-20	4-30-78	CRQ		

REVISION

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC ENGINEERING DEPARTMENT
NEWARK, NEW JERSEY

DATE 12-28-70 DRAWN JRS CHECKED PC EXAMINED

Salem Nuclear Generating Station
Unit 1 & 2 - Reactor Containment
Steam Generator Feedwater Piping
Hangers — Mechanical

206717 D 4101-17

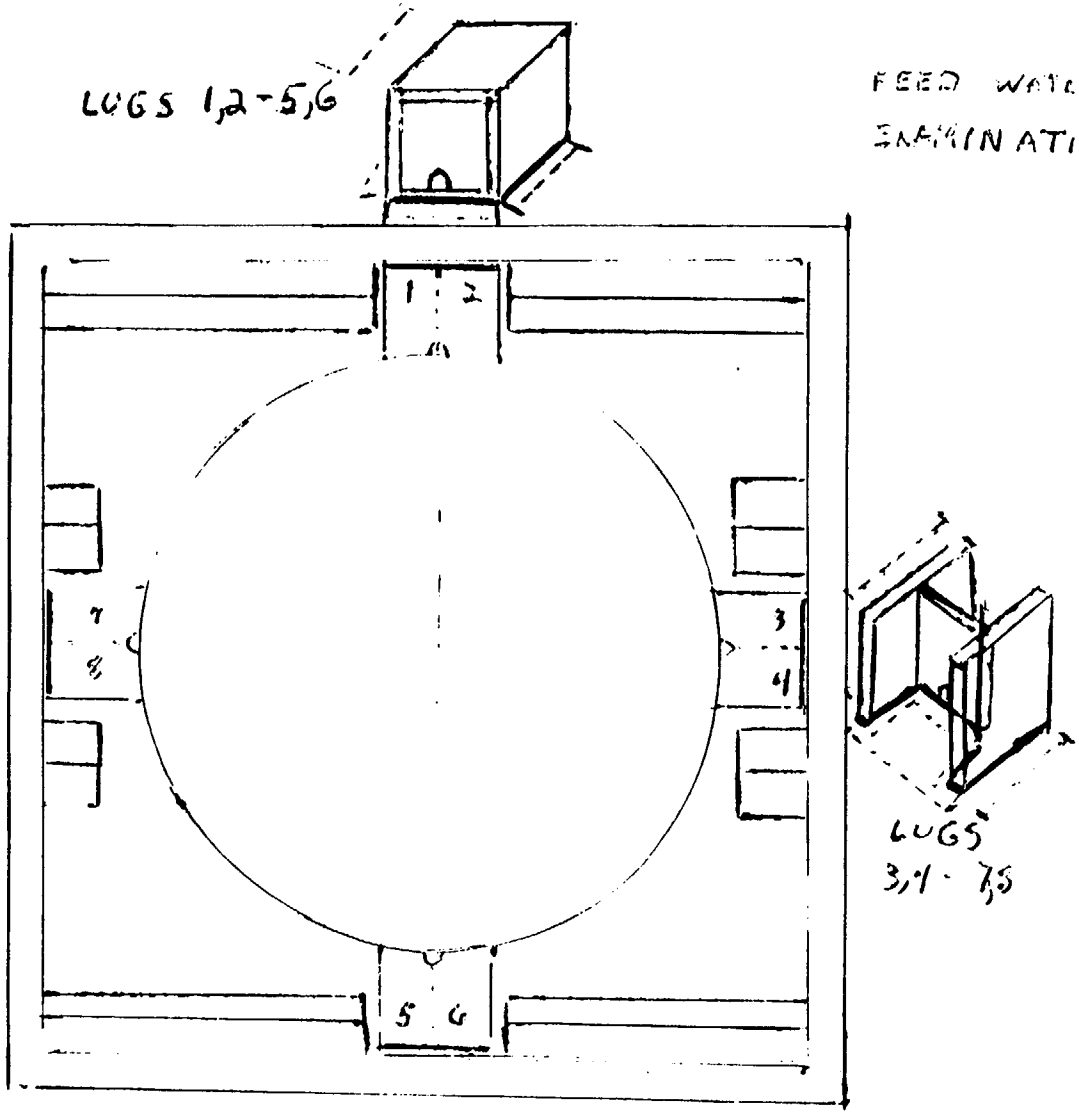
SHEET 17 OF 46

Sketch 34 174

MECH CK. | 17 ARCH CE ELEC CE | MECH CK STRU. CK. | 8 ARCH CE ELEC. CK | MECH. CK. STRU. CK. | 2 ARCH CE ELEC. CK. | MECH CK STRU. CK. | 1 ARCH. CK. ELEC. CK. | MECH. CK. STRU. CK. | 0 ARCH. CK. ELEC. CK. | MECH CK. STRU. CK.

480 9-81

FEED WATER 14-BF-211 LUGS 1 - 8
EXAMINATION AREA [illegible] ON MAIN RUN



PSEG
INSPECTION SERVICES
Reviewed and Approved
[illegible] 7/14/89
N.D.E. SUPERVISOR

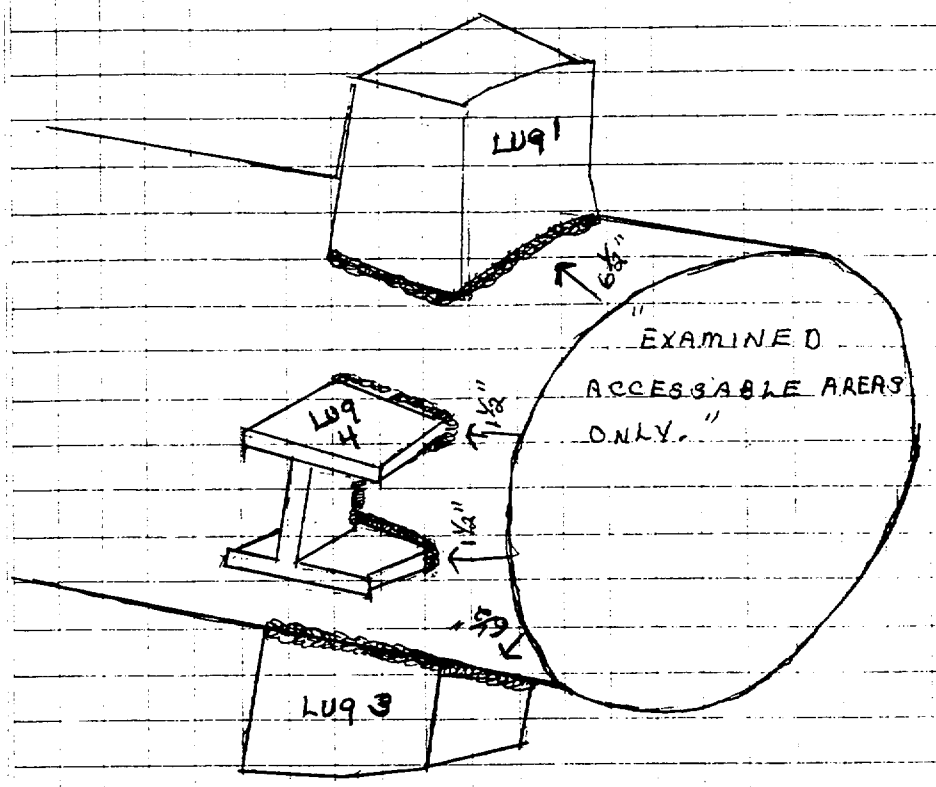
Sketch 34
28 of

SOUTHWEST RESEARCH INSTITUTE
DATA SHEET

SHEET NO ___ OF ___ SHEETS
PROJECT ___
DATE ___ MAY 92
BY R ROBERDS / N ROYLEC

SUBJECT FEEDWATER
1-RF-212-3PL-1 THRU 4

SHEET NO. 12000 5 A



LUG 1 EXAMINED ONLY 26.5%

C. Cristobal II
15 May 92

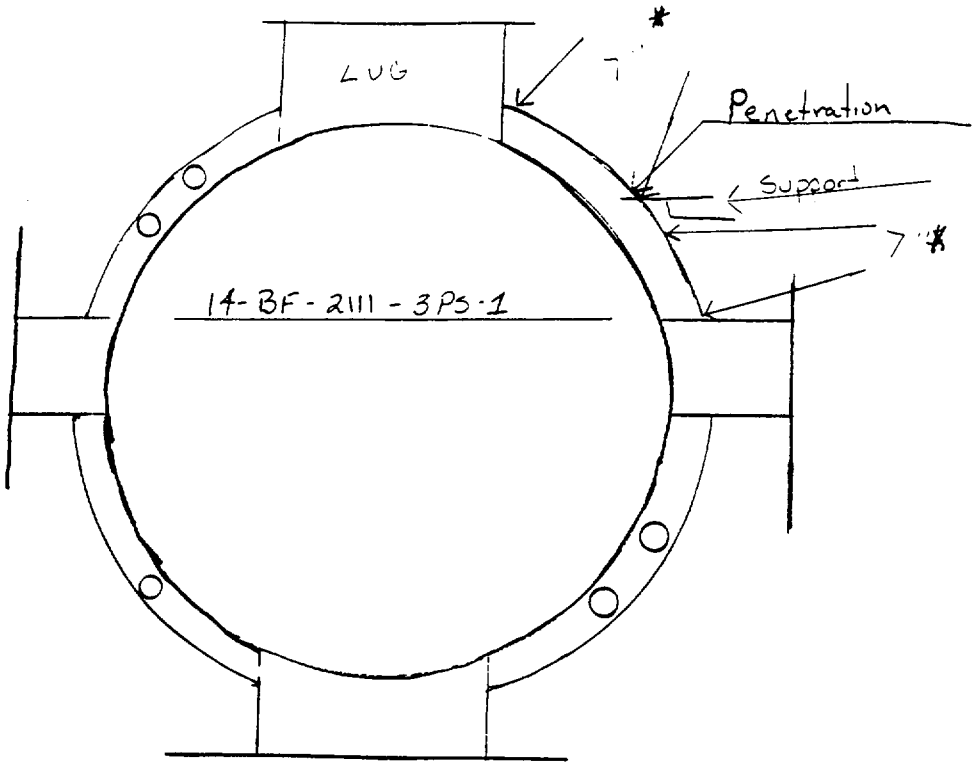
ANI REVIEW
INITIAL USA
DATE 5/19/92

PSEG
INSPECTION SERVICES
Reviewed and Approved
WD 5/16/92
N.D.E. SUPERVISOR

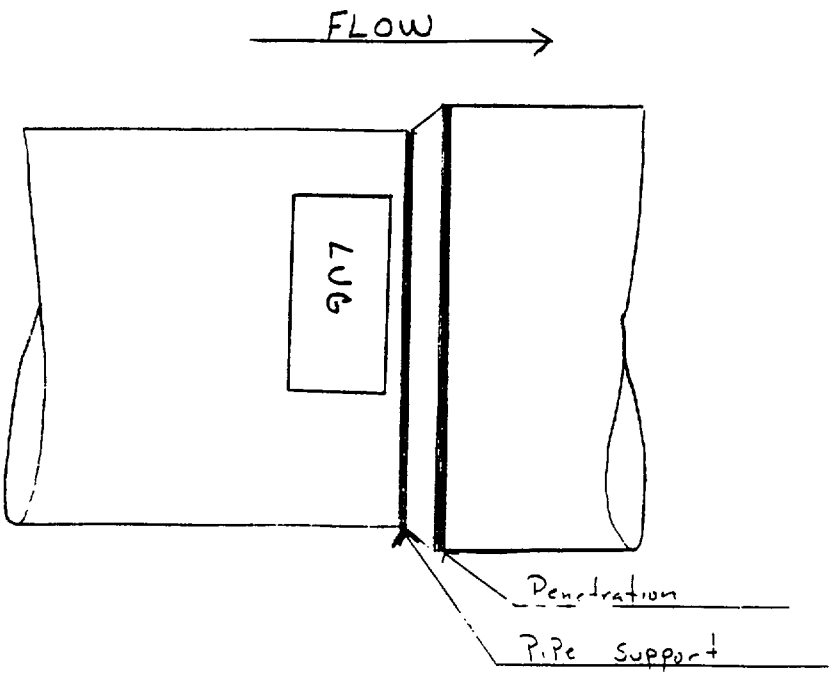
Sketch 34
3 of 4

PC-4

SURFACE EXAMINATION COVERAGE PLOT



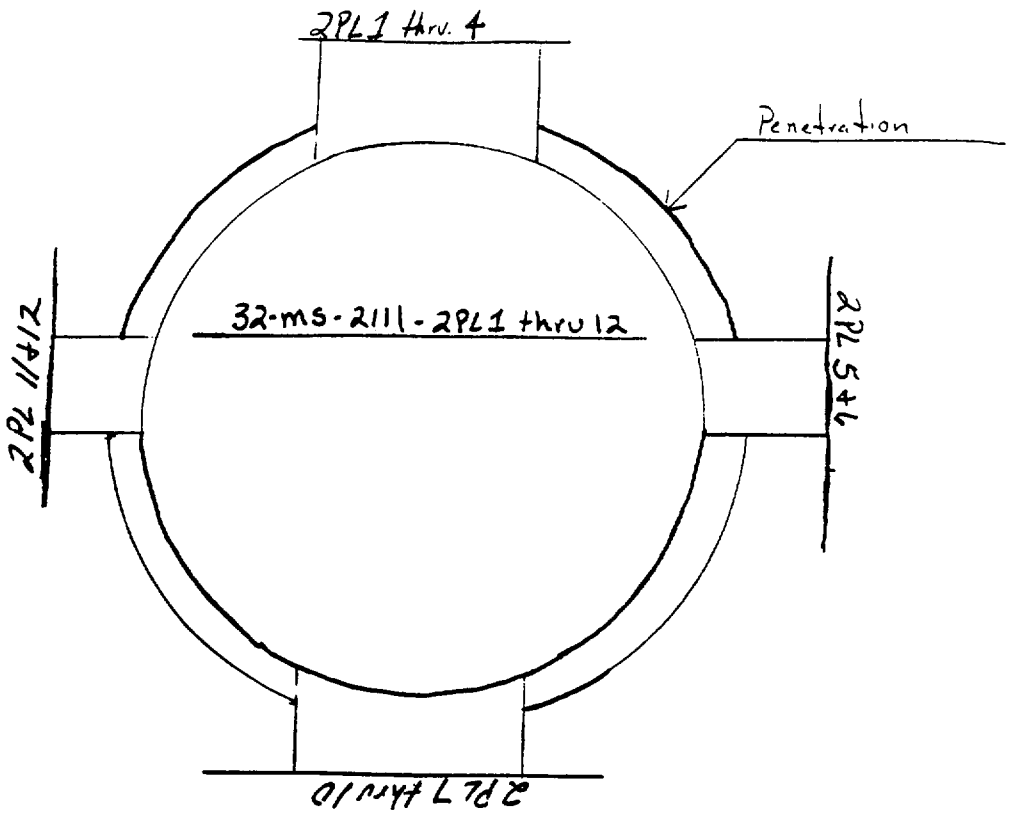
* = Denotes Area Examined



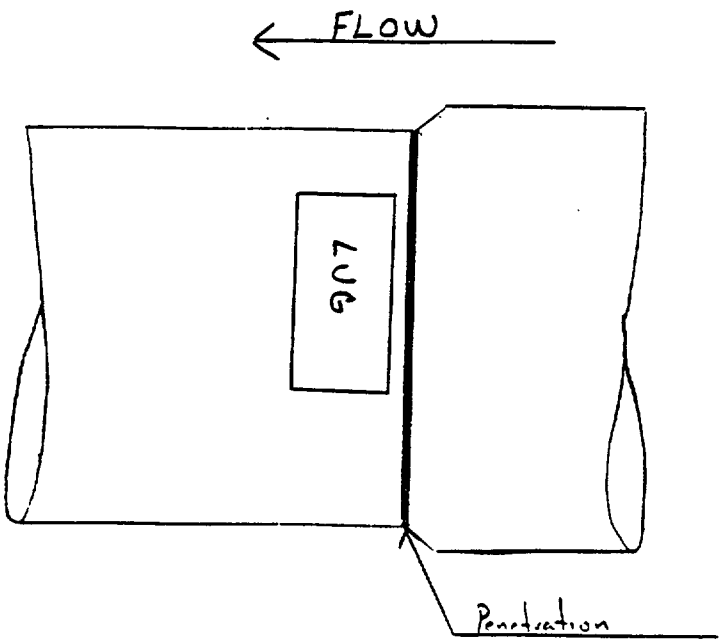
SUMMARY NO: 14-BF-2111-3PS-1
WELD: 218130

Sketch 34
4 of 4

SURFACE EXAMINATION COVERAGE PLOT



*: the upstream side of each lug could not be examined due to penetration

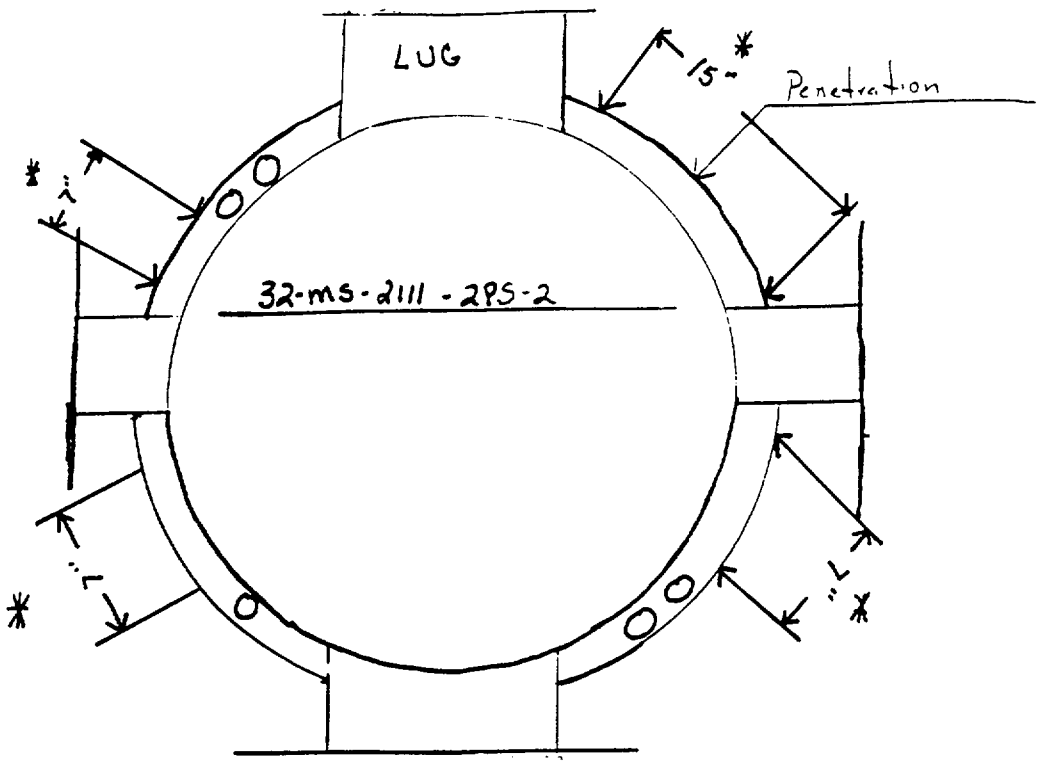


SUMMARY NO: 231300
WELD: 32-MS-2111-2PL1-12

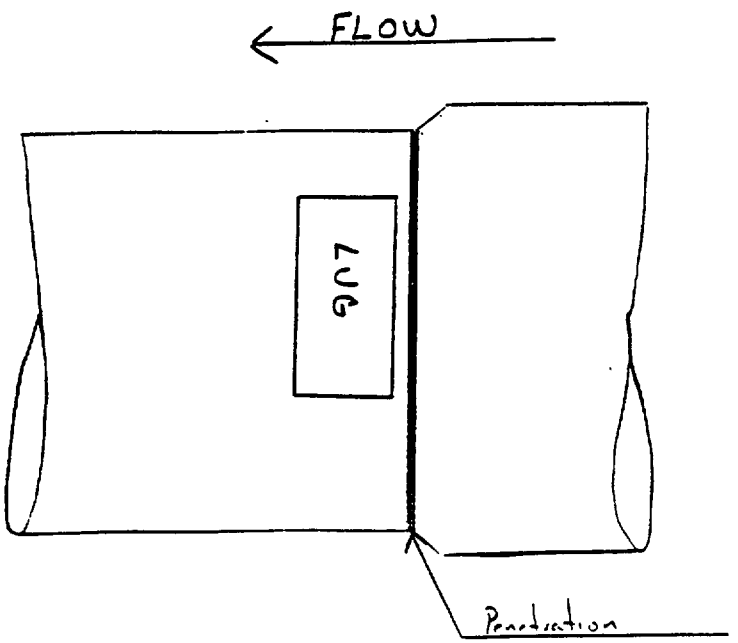
Sketch 35
1 of 5

TYPICAL

SURFACE EXAMINATION COVERAGE PLOT



* Denotes Areas Examined

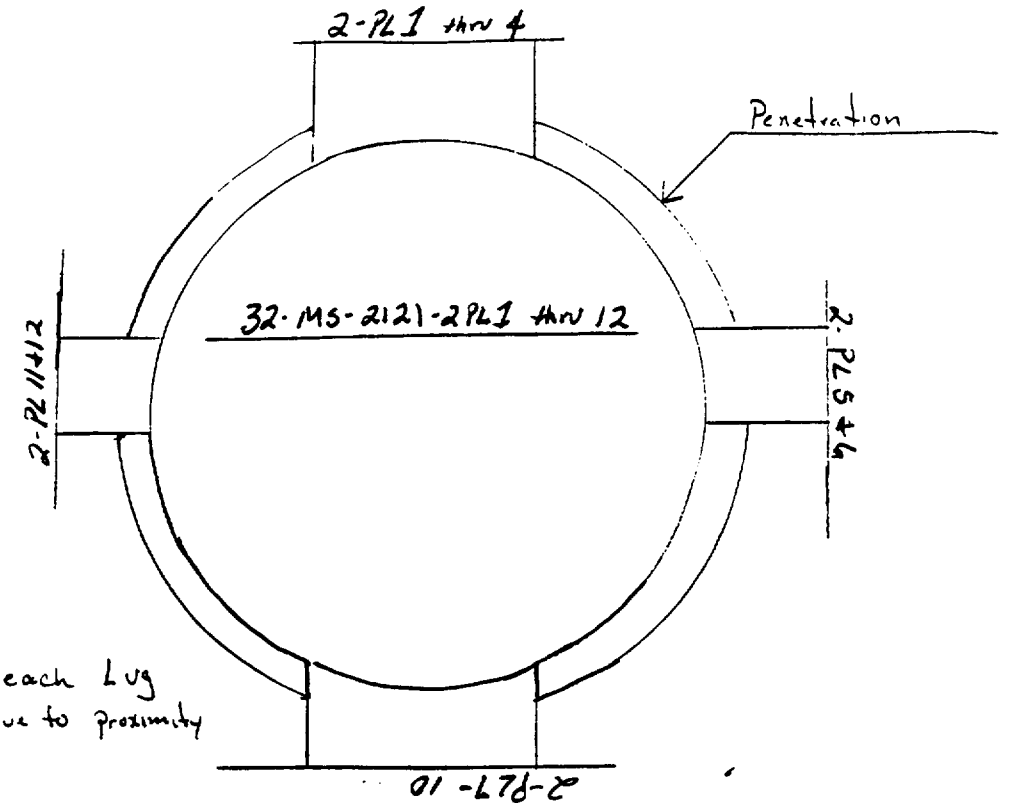


Sketch 35
2 of 5

SUMMARY NO: 231200
WELD: 32-MS-2111-2PS-2

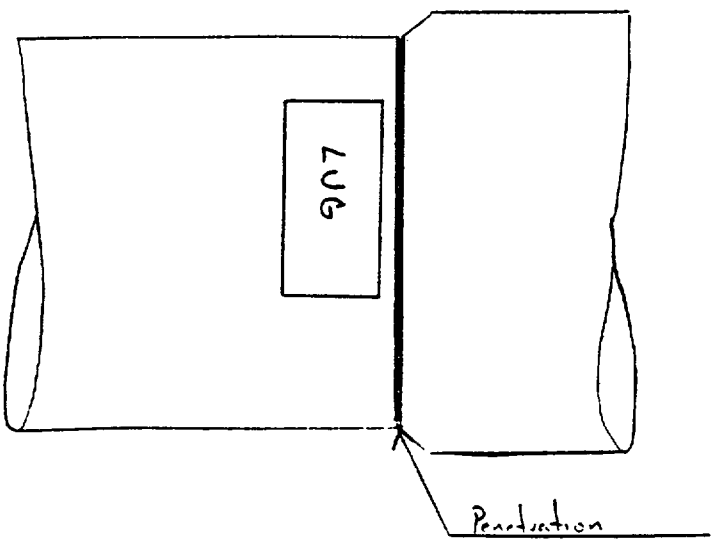
TYPICAL

SURFACE EXAMINATION COVERAGE PLOT



* upstream side of each Lug was not examined due to proximity of penetration

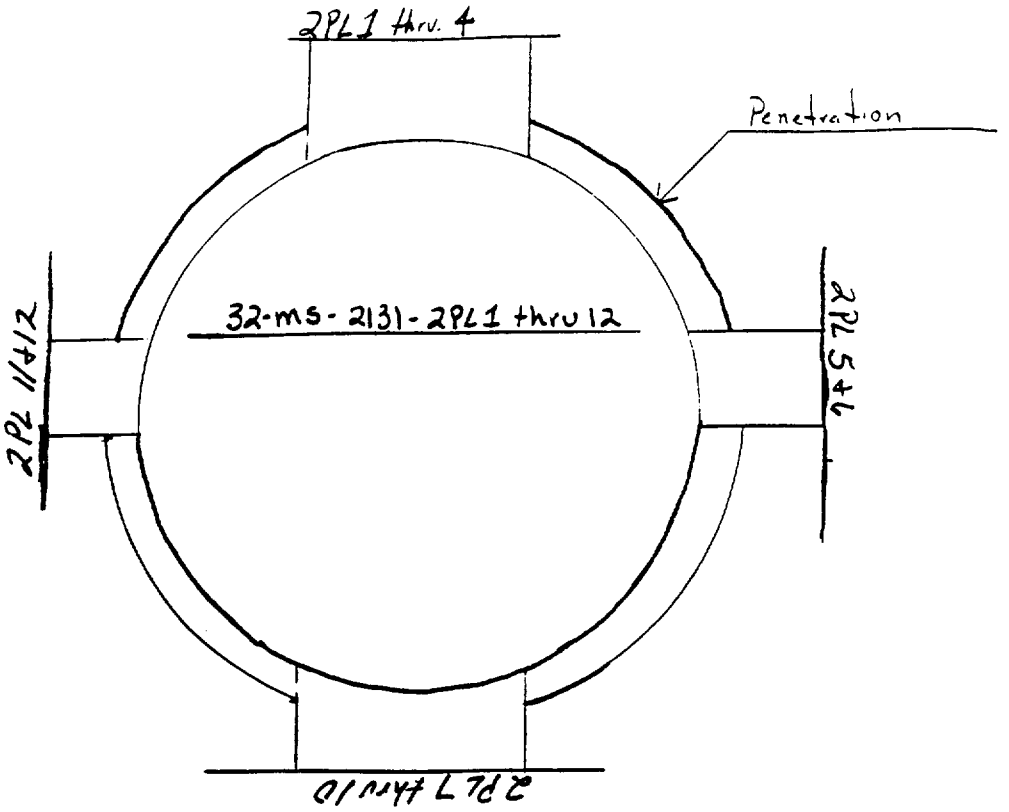
FLOW



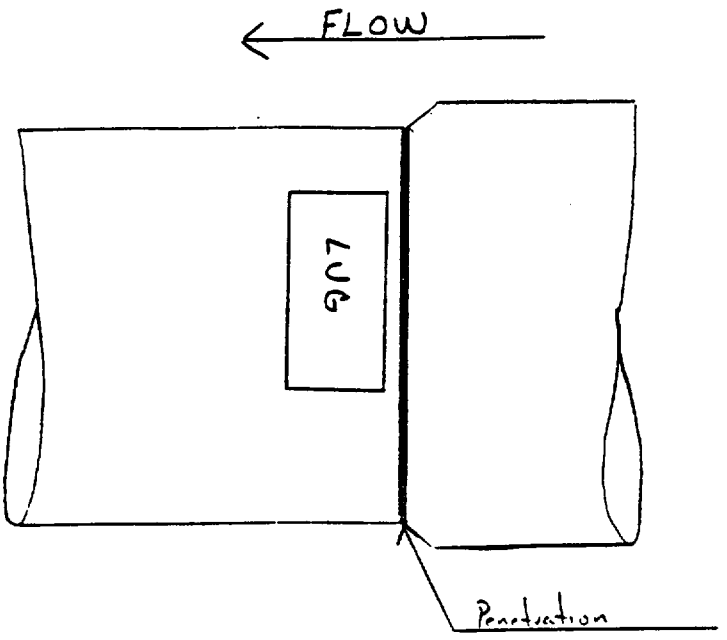
Sketch 35
3 of 5
Typical

SUMMARY NO: 230-100 ~~0~~ 08J 10-8-99
WELD: 32-MS-2121-2PL1-12

SURFACE EXAMINATION COVERAGE PLOT



* The upstream side of each lug could not be examined due to penetration

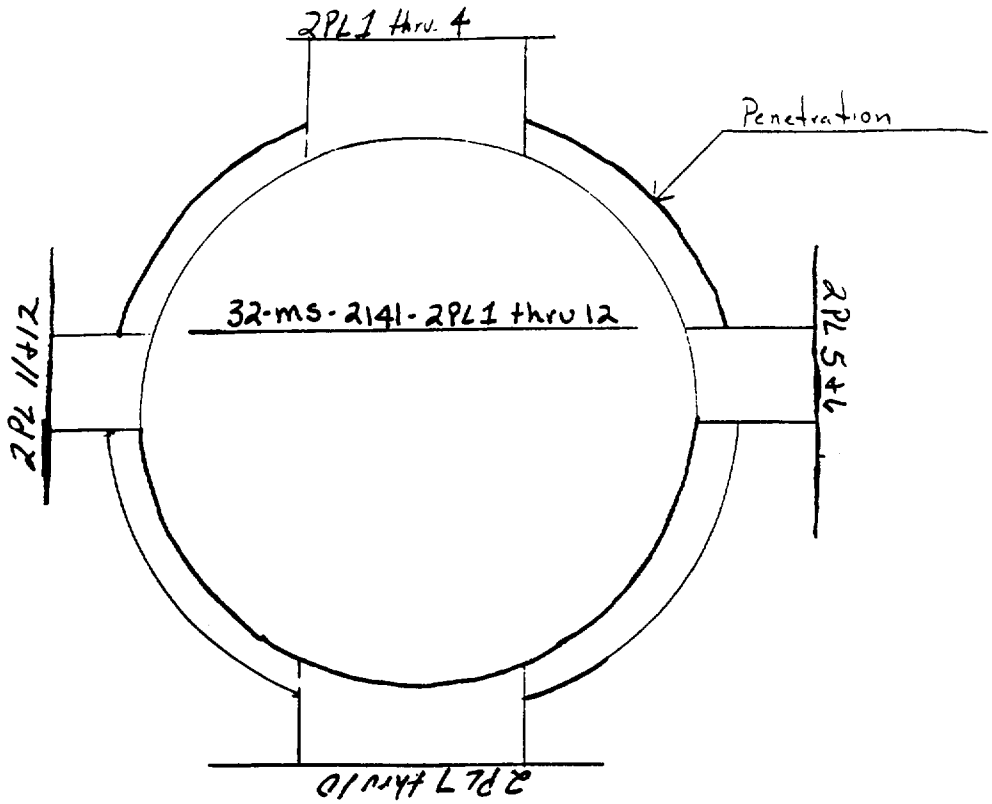


SUMMARY NO: 229000
WELD: 32-MS-2131-2PL-1-12

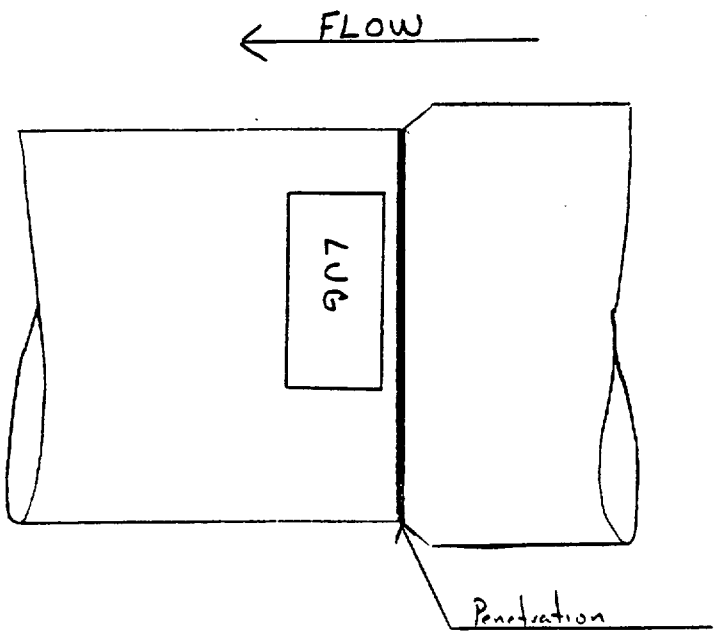
Sketch 35
485

Typical

SURFACE EXAMINATION COVERAGE PLOT



*= upstream side of each weld was not examined due to proximity of penetration



Sketch 35
5 of 5
Typical

SUMMARY NO: 228000
WELD: 32-MS-2141-2PL1-12

SwRI MAGNETIC PARTICLE EXAMINATION RECORD

PROJECT No: 17-4823	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 04 MAY 92	TIME (24 HR. CLOCK) EXAM STARTED: 1026 EXAM ENDED: 1125	SHEET No.: 120047
EXAMINATION AREA: (SYST/COMP) MAIN STEAM	LINE/SUBASSEMBLY: 34-MS-2131-1PL	IDENTIFICATION: 3 THUR 6	L_0 LOCATION: SEE DRAWING RULE 5	W_0 LOCATION: FUSION LINE OF WELD PIPE SIDE.
EXAMINER: D.R. KLEINJAN	SNT LEVEL II	PROCEDURE No PSE-MT-1 REV 0 CHG 0 ICN ☒ N/A	SURFACE FINISH: AS WELDED	WELD TYPE (—FLOW—) PIPE LUG
EXAMINER: H. SOLAR	SNT LEVEL II			YOKE SPACING: 5 1/2 IN YOKE BRAND: PARKER SERIAL No.: 812

MATERIAL: BRAND: MAGNAFLUX; BATCH No.: 890086; TYPE: 1; COLOR: GRAY; WET ☐ DRY ☒; FLOURESCENT ☐; MIXED NO ☒ YES ☐; MIXED WITH N/A

CALIBRATION BLOCK SERIAL No.: B7019820 WEIGHT: 113	CALIBRATION VERIFICATION			DISTANCE FROM BLACK LIGHT TO SENSOR CELL N/A IN
	TIME:	1026	1126	
	INITIALS:	R	R	

SURFACE TEMP. N/A °F; THERMOMETER SERIAL No.: N/A

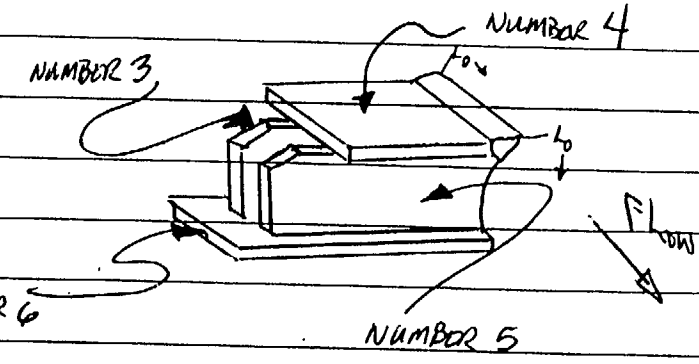
BLACK LIGHT BRAND: N/A SERIAL No.:	INTENSITY METER BRAND: N/A SERIAL No.:	BLACK LIGHT OUTPUT N/A $\mu w/cm^2$

BLACK LIGHT OUTPUT VERIFICATION			
TIME:	N	A	
INITIALS:			

MATERIAL APPLICATION: DUSTING ☒ FLOODING ☐ SPRAYING ☐

IND No.	L	W	LOCATION	ROUND OR LINEAR	SIZE DIA. OR LENGTH
NO RECORDABLE INDICATIONS					

REMARKS: INITIALS: R



ANI REVIEW INITIAL NSA DATE 5/11/92

PSEG INSPECTION SERVICES Reviewed and Approved 5/11/92 N.D.E. SUPERVISOR

Sketch 36

EXAMINATION AREA LIMITATION: (IF NONE, SO STATE) NO EXAM ON NUMBER 6 DUE TO THE INACCESSIBILITY OF THE SUPPORT BEAMS ON THE HEADER R

REVIEWED BY:	SNT LEVEL	DATE	PAGE
	II	6 MAY 92	1 OF 1

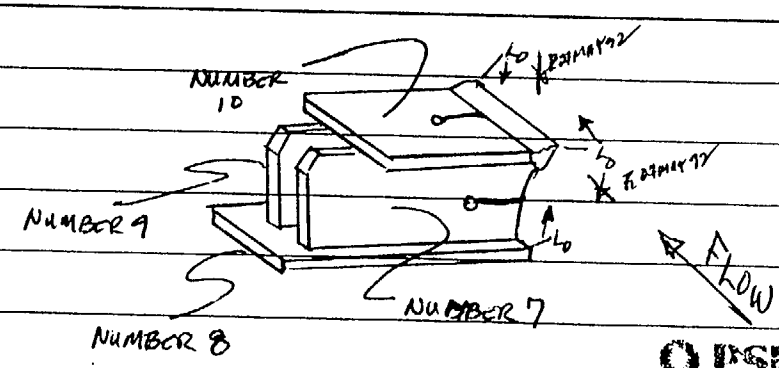
SWRI FORM No. NDTR 17-12 (REV. 6/90)

SwRI MAGNETIC PARTICLE EXAMINATION RECORD

PROJECT No: 17-4823	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 04 MAY 92	TIME (24 HR. CLOCK) EXAM STARTED: 0927 EXAM ENDED: 1025	SHEET No.: 120048
EXAMINATION AREA: (SYST/COMP) MAIN STEAM	LINE/SUBASSEMBLY: 34-MS-2131-1AL	IDENTIFICATION: 7 THUR 10	L_0 LOCATION: SEE DRAWING RULE 5	W_0 LOCATION: FUSION LINE OF WELD PIPE SIDE
EXAMINER: D. R. KLEINJAN	SNT LEVEL II	PROCEDURE No PSE-1HIT-1 REV 0 CHG 0 ICN ☒ N/A	SURFACE FINISH: AS WELDED	WELD TYPE (——FLOW——→) PIPE LUG
EXAMINER: H. SOLAR	SNT LEVEL II		MATERIAL BRAND: MAGNAFLUX BATCH No.: 89D086 TYPE: 1 COLOR: GRAY	WET ☐ DRY ☒ FLOURESCENT ☐ MIXED NO ☒ YES ☐ MIXED WITH N/A
CALIBRATION BLOCK SERIAL No.: B7019820 WEIGHT: 11.3	CALIBRATION VERIFICATION TIME: 0927 1026 INITIALS: R R	DISTANCE FROM BLACK LIGHT TO SENSOR CELL N/A IN		YOKE SPACING: 5 1/2 IN YOKE BRAND: PARKER SERIAL No.: 812
BLACK LIGHT BRAND: N/A SERIAL No.:	INTENSITY METER BRAND: N/A SERIAL No.:	BLACK LIGHT OUTPUT N/A $\mu w/cm^2$	BLACK LIGHT OUTPUT VERIFICATION TIME: N/A INITIALS:	SURFACE TEMP N/A °F THERMOMETER SERIAL No.:
				MATERIAL APPLICATION: DUSTING ☒ FLOODING ☐ SPRAYING ☐

IND No.	L	W	LOCATION	ROUND OR LINEAR	SIZE DIA. OR LENGTH
NO RECORDABLE INDICATIONS					

REMARKS: INITIALS



Sketch 36

ANI REVIEW
INITIAL N/A
DATE 5/14/92

OPSEG INSPECTION SERVICES
Reviewed and Approved
NDE SUPERVISOR 5/14/92

EXAMINATION AREA LIMITATION: (IF NONE, SO STATE) NO EXAM ON NUMBERS ~~6 AND~~ 8 DUE TO THE INACCESSIBILITY OF THE SUPPORT BEAMS ON THE HEADERS. R 04MAY92

REVIEWED BY:	SNT LEVEL	DATE	PAGE
	II	6 MAY 92	1 OF 1

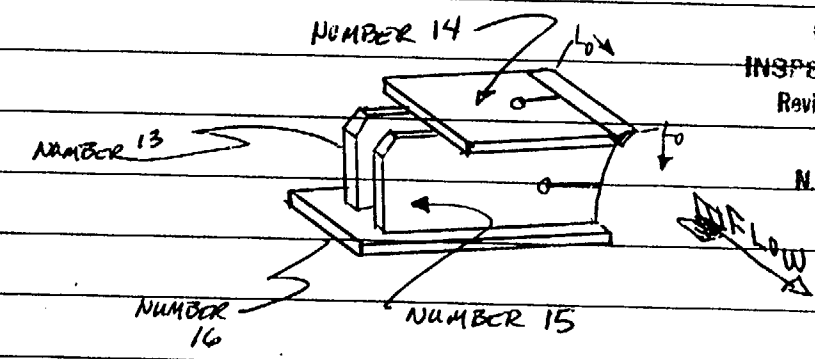
SWRI FORM No. NDTR 17-12 (REV. 6/90)

297

SwRI MAGNETIC PARTICLE EXAMINATION RECORD

PROJECT No: 17-4823	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 04 MAY 92	TIME (24 HR. CLOCK) EXAM STARTED: 0825 EXAM ENDED: 0925	SHEET No.: 120049
EXAMINATION AREA: (SYST/COMP) MAIN STEAM	LINE/SUBASSEMBLY: 34-MS-2131-1PL	IDENTIFICATION: 13-16	L_o LOCATION: SEE DRAWING RULE 5	W_o LOCATION: FUSION LINE OF WELD PIPE SIDE
EXAMINER: D. R. KLEINJAN	SNT LEVEL II	PROCEDURE No PSE-MT-1 REV 0 CHG 0 ICN ☒ N/A	SURFACE FINISH: AS WELDED	WELD TYPE (——FLOW——) PIPE LUG
EXAMINER: H. SOLAR	SNT LEVEL II		MATERIAL BRAND: MAGNAFLUX WET ☐ DRY ☒ BATCH No.: 890086 FLOURESCENT ☐ TYPE: 1 MIXED NO ☒ YES ☐ COLOR: GRAY MIXED WITH N/A	YOKE SPACING: 5 1/2 IN YOKE BRAND: PARKER SERIAL No.: 812
CALIBRATION BLOCK SERIAL No.: B7019820 WEIGHT: 11.3	CALIBRATION VERIFICATION TIME: 0746 0926 INITIALS: R R	DISTANCE FROM BLACK LIGHT TO SENSOR/CELL N/A IN		SURFACE TEMP N/A °F THERMOMETER SERIAL No.:
BLACK LIGHT BRAND: N/A SERIAL No.:	INTENSITY METER BRAND: N/A SERIAL No.:	BLACK LIGHT OUTPUT N/A $\mu w/cm^2$	BLACK LIGHT OUTPUT VERIFICATION TIME: N/A INITIALS:	MATERIAL APPLICATION: DUSTING ☒ FLOODING ☐ SPRAYING ☐

IND No.	L	W	LOCATION	ROUND OR LINEAR	SIZE DIA. OR LENGTH	REMARKS:	INITIALS
NO RECORDABLE INDICATIONS							R



ANI REVIEW
INITIAL NJA
DATE 5/14/92

PSEG INSPECTION SERVICES Reviewed and Approved 5/14/92 N.D.E. SUPERVISOR

Sheet 3C 3 of 4

EXAMINATION AREA LIMITATION: (IF NONE, SO STATE) NO EXAM ON NUMBER 16 DUE TO THE INACCESSIBILITY OF THE SUPPORT BEAMS ON THE HEADER R

REVIEWED BY:	SNT LEVEL	DATE	PAGE
E. N. Eustatio	II	6 MAY 92	1 OF 1

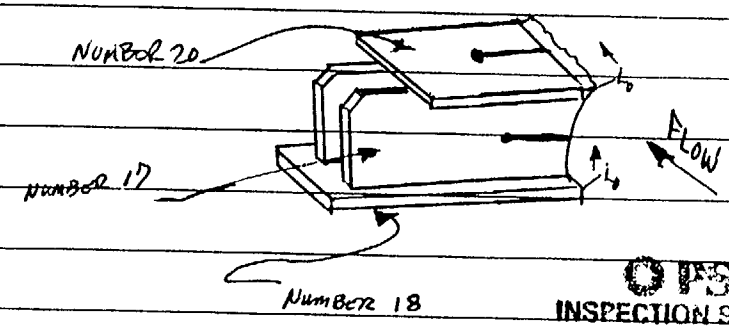
SWRI FORM No. NDTR 17-12 (REV. 6/90)

SwRI MAGNETIC PARTICLE EXAMINATION RECORD

PROJECT No: 17-4823	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 04 MAY 92	TIME (24 HR. CLOCK) EXAM STARTED: 0746 EXAM ENDED: 0824	SHEET No.: 120060
EXAMINATION AREA: (SYST/COMP) MAIN STEAM	LINE/SUBASSEMBLY: 34-1115-2131-1P2	IDENTIFICATION: 17,18,20	L_o LOCATION: SEE DRAWING RULE 5	W_o LOCATION: FUSION LINE OF WELD PIPE SIDE
EXAMINER: D.R. KLEINJAN	SNT LEVEL II	PROCEDURE No ASE-MT-1 REV 0 CHG 0 ICN ☒ N/A	SURFACE FINISH: AS WELDED	WELD TYPE ⊢—FLOW—⊣ PIPE LUG
EXAMINER: H. SOLAR	SNT LEVEL II		MATERIAL BRAND: MAGNAFLUX BATCH No.: 890086 TYPE: 1 COLOR: GRAY	WET ☐ DRY ☒ FLOURESCENT ☐ MIXED NO ☒ YES ☐ MIXED WITH N/A
CALIBRATION BLOCK SERIAL No.: B7019820 WEIGHT: 11.3	CALIBRATION VERIFICATION TIME: 0746 0825 INITIALS: R R	DISTANCE FROM BLACK LIGHT TO SENSOR CELL N/A IN		YOKE SPACING: 5 1/2 IN YOKE BRAND: PARKER SERIAL No.: 812
BLACK LIGHT BRAND: N/A SERIAL No.:	INTENSITY METER BRAND: N/A SERIAL No.:	BLACK LIGHT OUTPUT N/A $\mu w/cm^2$	BLACK LIGHT OUTPUT VERIFICATION TIME: N/A INITIALS:	SURFACE TEMP N/A °F THERMOMETER SERIAL No.:
				MATERIAL APPLICATION: DUSTING ☒ FLOODING ☐ SPRAYING ☐

IND No.	L	W	LOCATION	ROUND OR LINEAR	SIZE DIA. OR LENGTH
NO RECORDABLE INDICATIONS					

REMARKS: INITIALS



ANI REVIEW
INITIAL N/A
DATE 5/14/92

OPSIG INSPECTION SERVICES
Reviewed and Approved
N.D.E. SUPERVISOR 5/11/92

EXAMINATION AREA LIMITATION: (IF NONE, SO STATE) NO EXAM ON NUMBER 18 DUE TO THE INACCESSIBILITY OF THE SUPPORT BEAMS ON THE HEADER.

REVIEWED BY:	SNT LEVEL	DATE	PAGE
	II	6 MAY 92	1 OF 1

SWRI FORM No. NDTR 17-12 (REV. 6/90)

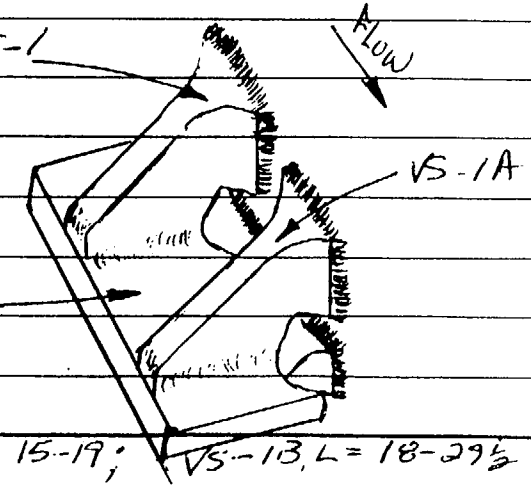
Sketch 3L

4 of 4

SwRI MAGNETIC PARTICLE EXAMINATION RECORD

PROJECT No: 17-4823	SITE: Salem Generating Station, Unit 1	DATE: (DAY - MONTH - YEAR) 07 MAY 92	TIME (24 HR. CLOCK) EXAM STARTED: 1240 EXAM ENDED: 1319	SHEET No.: 120068
EXAMINATION AREA: (SYST/COMP) VALVES WELDED SUPPORT	LINE/SUBASSEMBLY: 12-MS-167	IDENTIFICATION: VS-1, VS-1A, VS-1B	L_o LOCATION: RULE # 6	W_o LOCATION: Fusion line MAIN RUN Pipe
EXAMINER: D.R. KLEINJAN	SNT LEVEL II	PROCEDURE No PSE-MT1 REV 0 CHG 0 ICN ☒ N/A	SURFACE FINISH: GROUND	WELD TYPE (——FLOW——) VALVE SUPPORT
EXAMINER: H. SOLAR	SNT LEVEL IT		MATERIAL BRAND: MAGNAFLUX BATCH No.: 89D086 TYPE: 1 COLOR: GRAY	WET ☐ DRY ☒ FLOURESCENT ☐ MIXED NO ☒ YES ☐ MIXED WITH N/A
				YOKE SPACING: 5½ IN YOKE BRAND: PARKER SERIAL No.: 812
CALIBRATION BLOCK SERIAL No.: B70198 20 WEIGHT: 11.3 LBS	CALIBRATION VERIFICATION TIME: 1239 ~~1302~~ 1340 INITIALS: R ~~Ronald~~ R	DISTANCE FROM BLACK LIGHT TO SENSOR CELL N/A IN		SURFACE TEMP N/A °F THERMOMETER A SERIAL No.:
BLACK LIGHT BRAND: N/A SERIAL No.:	INTENSITY METER BRAND: N/A SERIAL No.:	BLACK LIGHT OUTPUT N/A $\mu w/cm^2$	BLACK LIGHT OUTPUT VERIFICATION TIME: N/A INITIALS: A	MATERIAL APPLICATION: DUSTING ☒ FLOODING ☐ SPRAYING ☐

IND No.	L	W	LOCATION	ROUND OR LINEAR	SIZE DIA. OR LENGTH	REMARKS:	INITIALS
NO RECORDABLE INDICATION							R



ANI REVIEW INITIAL MS DATE 5/20/92

PSEG INSPECTION SERVICES Reviewed and Approved 5-20-92 N.D.E. SUPERVISOR

Sheet 37

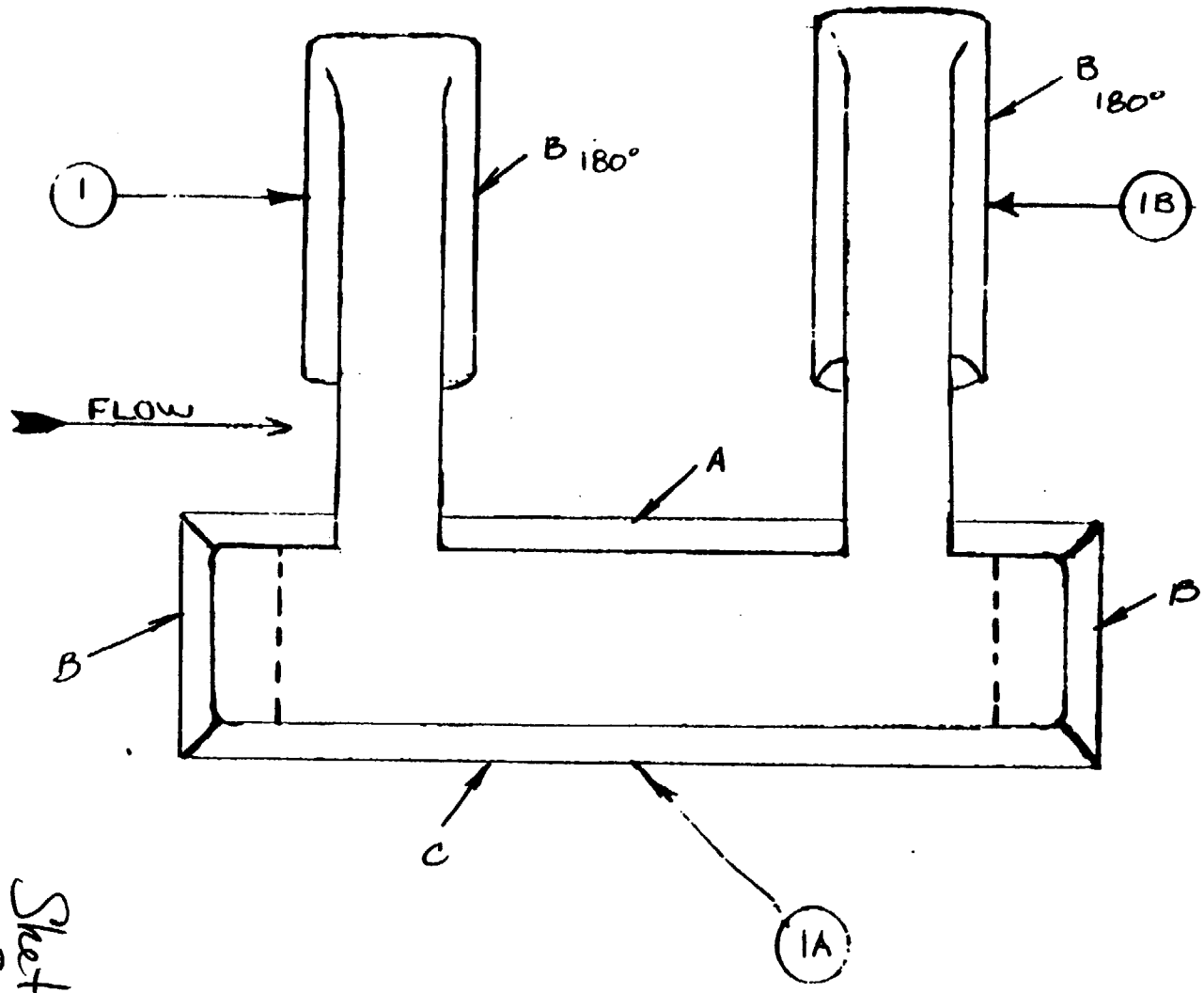
EXAMINATION AREA LIMITATION: (IF NONE, SO STATE) NO EXAM ON VS-1, L= 15-19; VS-1A, L= 15-19; VS-1B, L= 18-29½ DUE TO SURROUNDING SUPPORT STRUCTURES

REVIEWED BY:	SNT LEVEL	DATE	PAGE
E.R. Everett	II	14 May 92	1 OF

SWRI FORM No. NDTR 17-12 (REV. 6/90)

185

MAIN STEAM 13-MS-167-US-1A



(A) EXAMINED IN ONE DIRECTION ONLY

(B) EXAMINED IN TWO DIRECTIONS.

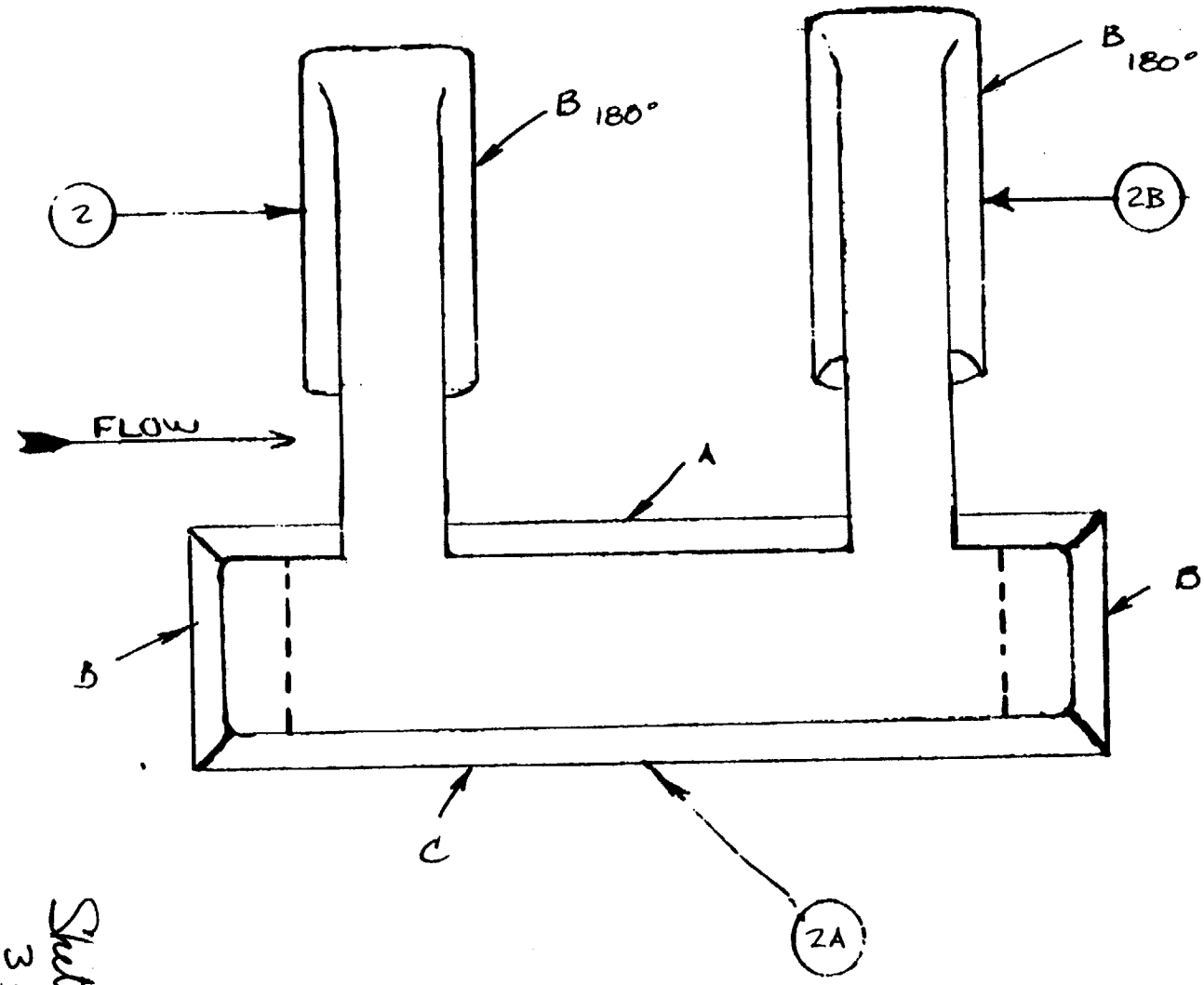
(C) NO EXAMINATION

PSEG
INSPECTION SERVICES
Reviewed and Approved
5/12/88
N.D.E. SUPERVISOR

Sketch 37
2 of 5
PAGE 2 OF 2

278140

MAIN STEAM 13-MS-167-VS-2A



(A) EXAMINED IN ONE DIRECTION ONLY

(B) EXAMINED IN TWO DIRECTIONS.

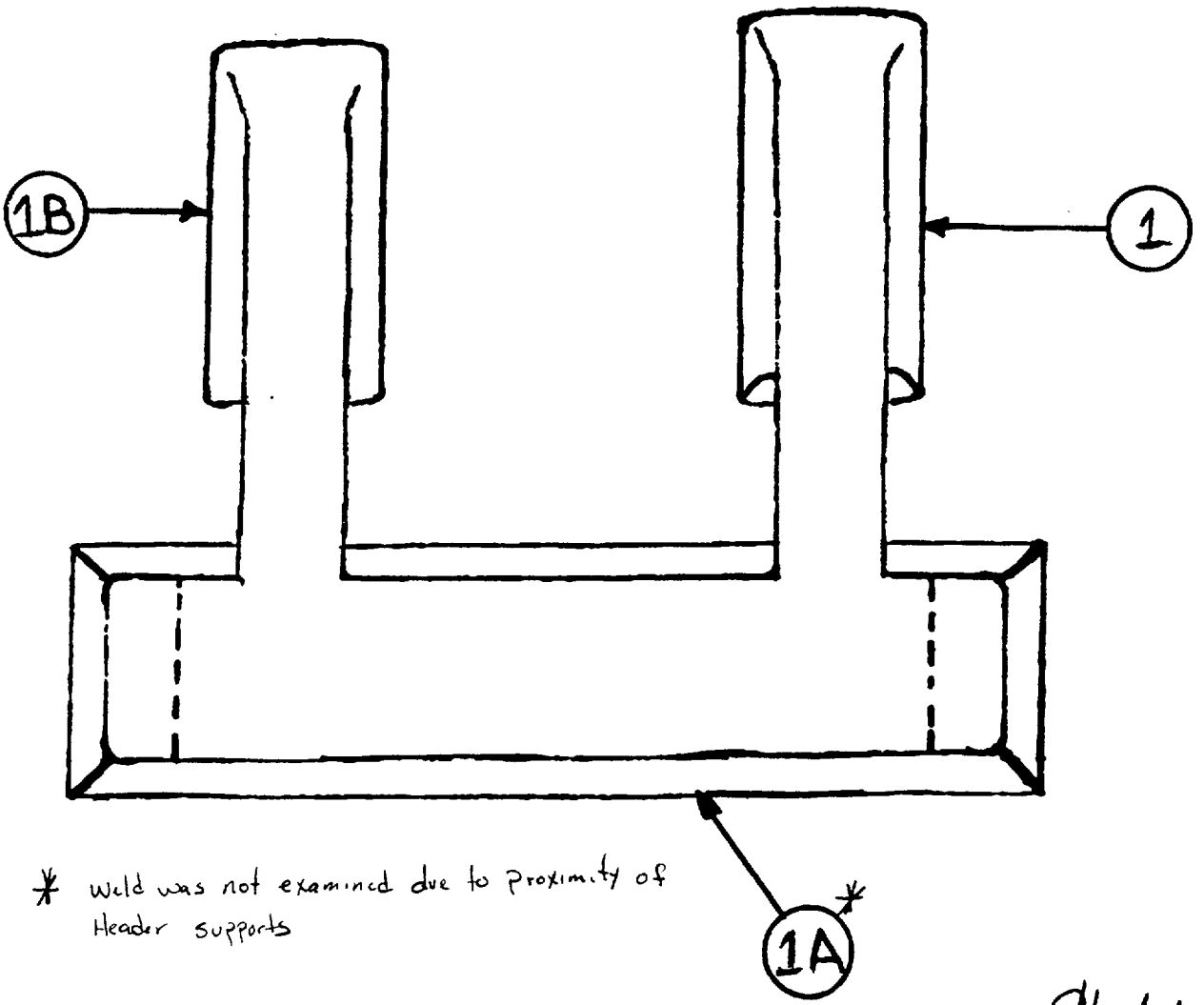
(C) NO EXAMINATION

PSEG
INSPECTION SERVICES
Reviewed and Approved
WD 5/2/89
N.D.E. SUPERVISOR

Sketch 37
3 of 5
PAGE 2 OF 2

278240

SURFACE EXAMINATION COVERAGE PLOT

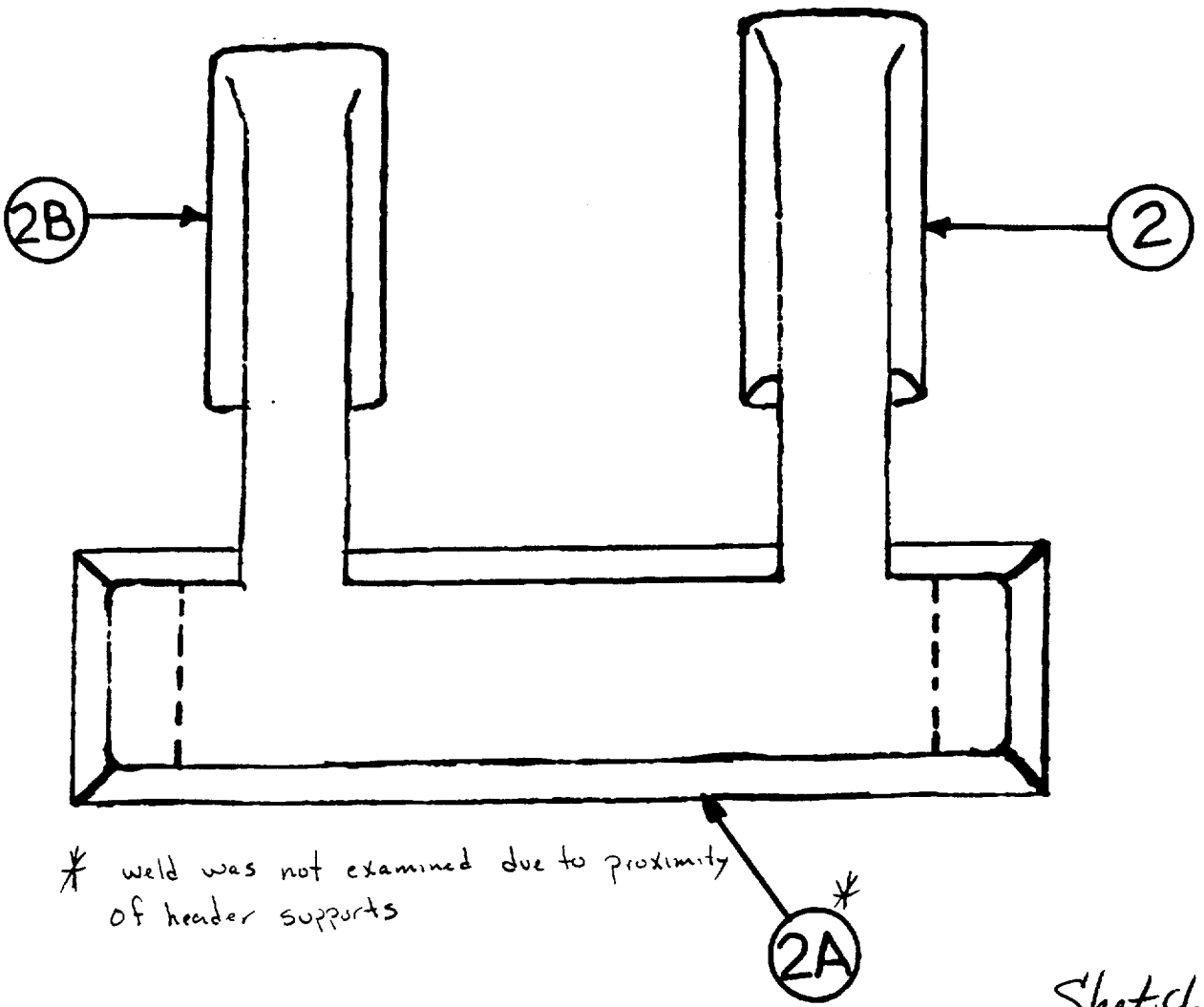


* Weld was not examined due to proximity of Header supports

SUMMARY NO: 278340
WELD: 14-MS-167-VS-2A

Sheet 37 of 45

SURFACE EXAMINATION COVERAGE PLOT



* weld was not examined due to proximity of header supports

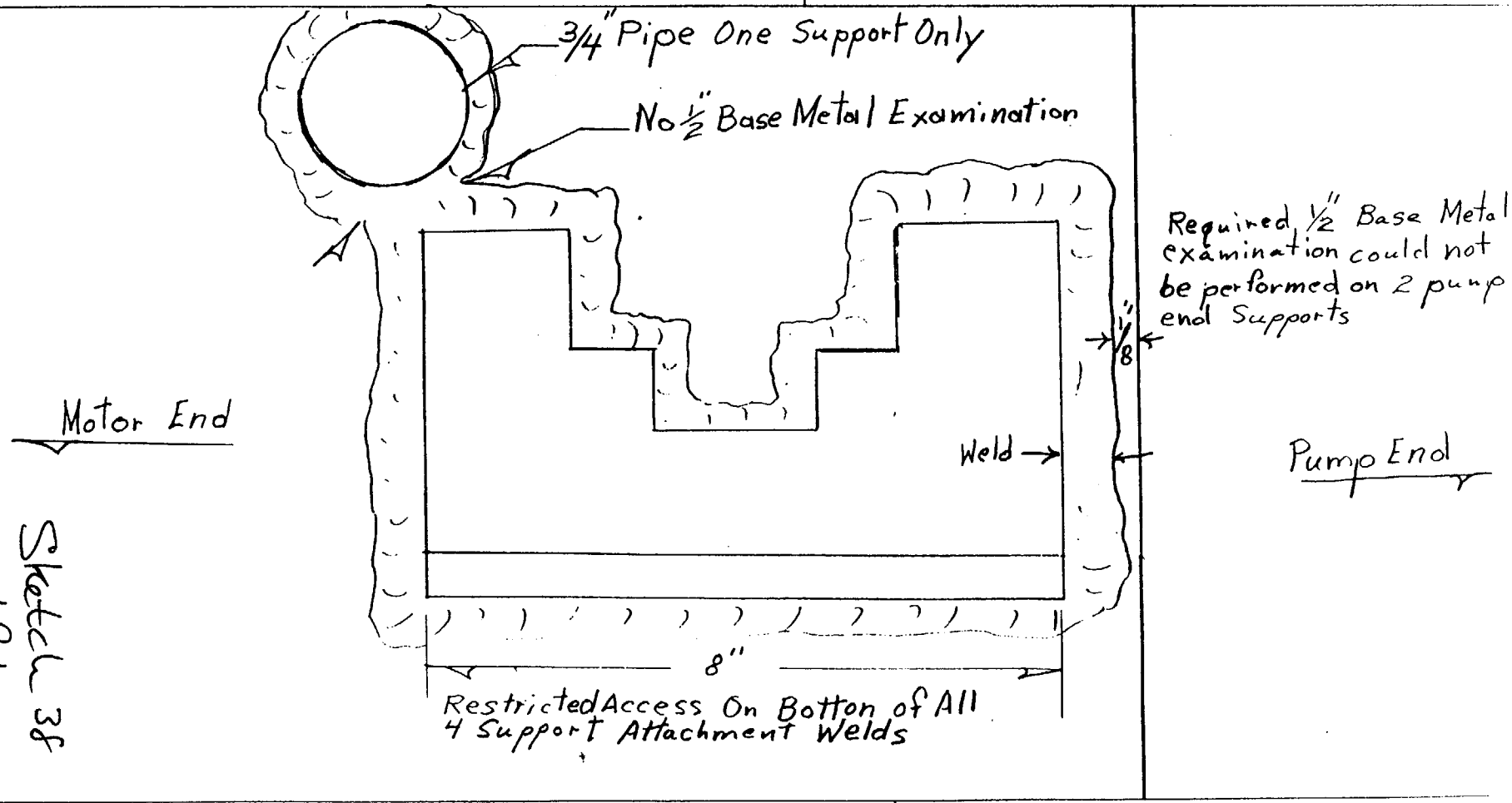
Sketch 37
5 of 5

SUMMARY NO: 278440
WELD: 14-MS-167-VS-2A

FRAMATOME TECHNOLOGIES

COVERAGE PLOT

Exam Date: 04/05/01	**Summary No.:** 205280
Site: Salem Unit 1, RFO 14	**Examination Method:** PT
System: CVCS, PUMP SUPPORT	**Identification:** 11-CHG/SI-PMP-IA (1-4)



Sketch 38
1 of 1

L. L. O'Kelley	Bob Vellucci 4/9/01	Wayne Deanger 4-12-01
Prepared By Date	Reviewed By Date	Utility Review By Date

Summary . .: 263620

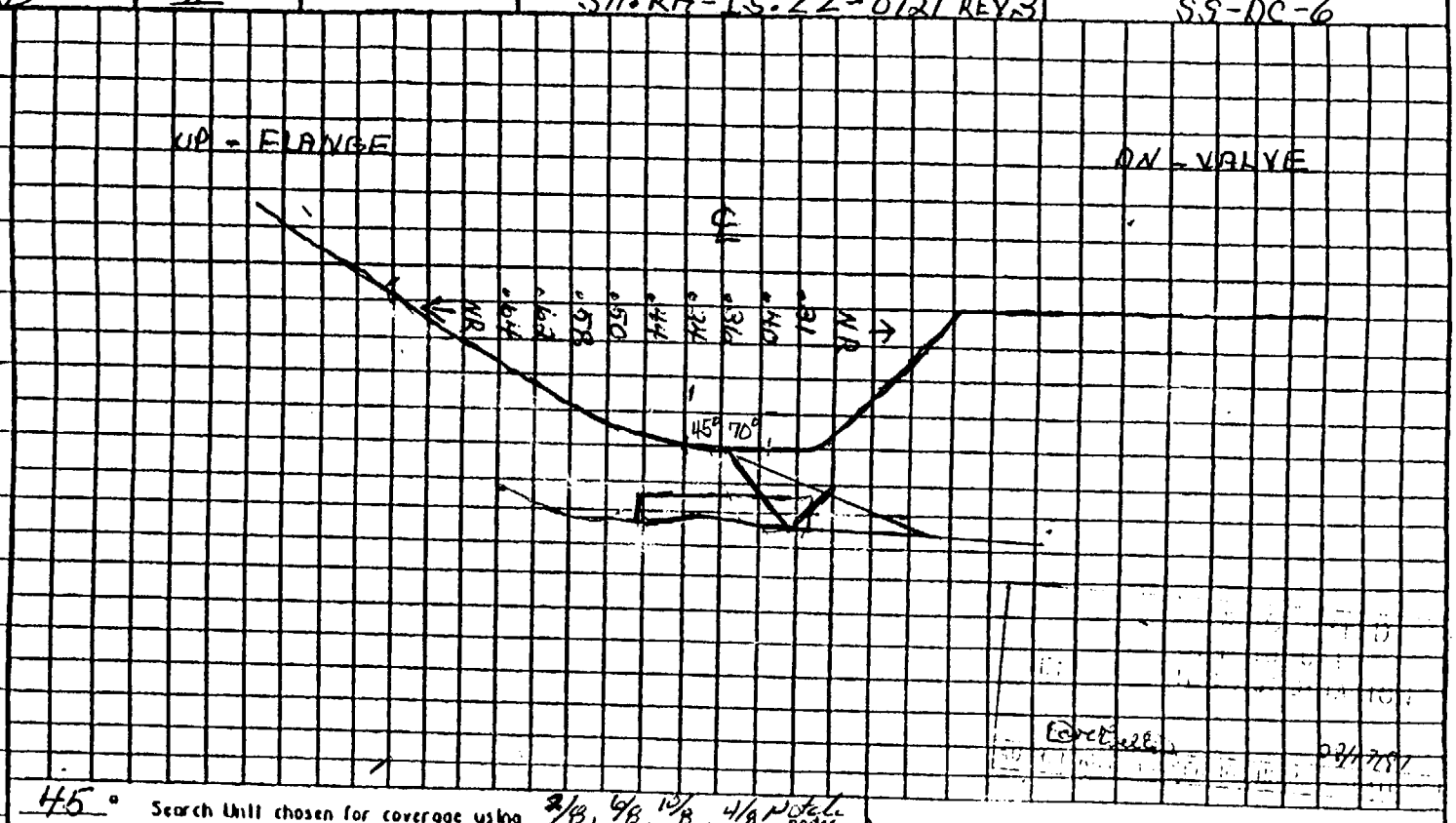
NDE Lab: SwRI	SITE: SALEM UNIT 1	DATE: 3 April 1997	TIME (24 HR. CLOCK) INT. 1413 FINAL 1500	SHEET NO: 182101	
Examiner (Signature) [signature]	SNT Level: II	Couplant, Specify Type: SONOTRACE 40 BATCH 96243	Instrument Model: S/N: 659G	COMPONENT ID: 8-RH-2116-4R1	
Examiner (Signature) B. Roberds	SNT Level: II		Procedure No. & Rev: SH.RA-IS.ZZ-0121 REV.3	REFERENCE BLK NO: SS-DC-6	

SEARCH UNITS

BRAND	KBA
SERIAL NO	C31269
SIZE	1/4
FREQ. (MHz)	5.0

INSTRUMENT SETTINGS

SCREEN SIZE	1
DELAY ZERO OFFSET	.424
MATL. CAL.	.228
RANGE	1
REP. RATE	.500
JACK USED	RCV/XMT
Trans Mode	DUAL



45° Search Unit chosen for coverage using 2/8, 6/8, 10/8, 4/8 Notch nodes.

70° Search Unit chosen for coverage using 2/8, 6/8 4/8 Notch nodes.

Reviewed By: Wayne Denlinger SNT Level: III Date: 4-7-97

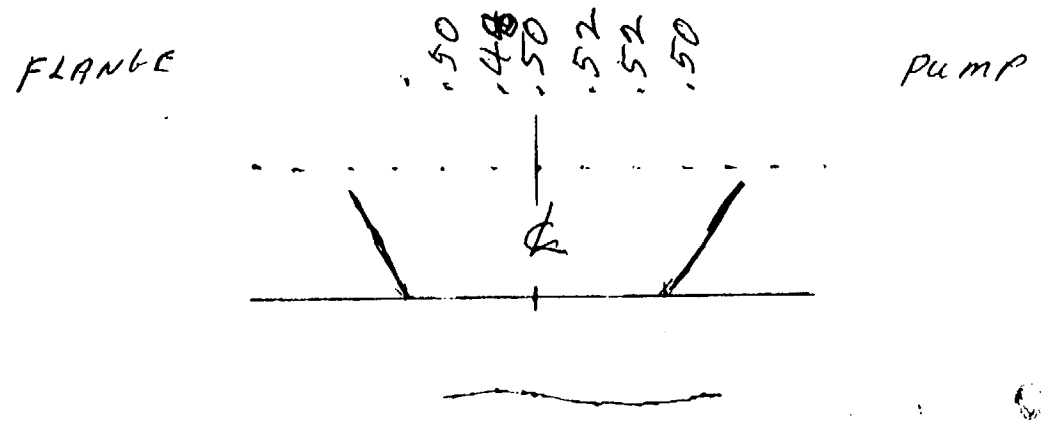
Sketch 39 181

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)		SHEET NO:
17-5858	Salem Generating Station, Unit 1	15 OCT 93	INT. 1218	FINAL 1536	135030

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE *	INSTRUMENT:	SERIAL NO:	COMPONENT ID:
T. JACKSON	II	No. PSE-UT31 REV 2 CHG 0 ICN ☒ N/A	SONIC MARK I ☐ OTHER 136 ☒	136-555G	14-RH-2114-18
EXAMINER: F. BRAUN	SNT LEVEL: IT		COUPLANT: GLYCERINE ☐ WATER ☐ OTHER (SPECIFY) ULTRAGEL		REFERENCE BLK NO: 55-DC-42

SEARCH UNITS	
BRAND	SWRI
SERIAL NO	3008
SIZE	3/8
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	1.00
DELAY	0.414
MATL. CAL. VEL	0.215
RANGE	1.00
REP. RATE	4K HZ
JACK USED	RAV/XMT
TRANS MODE	DUAL



NO ACTUAL PROFILE AVAILABLE DUE TO CONFIGURATION OF FLANGE AND PUMP.

DISTANCE FROM BASE OF FLANGE TAPER AND BASE OF PUMP TAPER = 1 3/8"

7/8"

* PSE-G VS1.55-I5.ZZ0014 REV4 WELD WIDTH ~~1 3/4"~~ 15 OCT 93

N/ ° Search Unit chosen for coverage using N/ nodes.	NAME: VICTOR MORTON	SNT LEVEL: III
N/A ° Search Unit chosen for coverage using N/A nodes.		
REVIEWED BY: Vic	SNT LEVEL: III	DATE: 16 OCT 93

INSPECTION SERVICES
Reviewed and Approved
10-19-93
N.D.E. SUPERVISOR

10/22/93

Sketch 1 of 1

WELD PROFILE INFORMATION SHEET

R.L. May
27-APR-89

WELD # 4-SJ-2113-19
DATA SHEET # 180055

FLOW

VALVE TEE

WELD CROWN WIDTH ≈ 1"
" " LENGTH ≈ 13 3/4"

1.10 1.04 .96 .88 .76 .60 .52 .48 .52 .58 .70 .72 .74 .74 .74 .72

℄

45° AND 60° 2/3 1/8

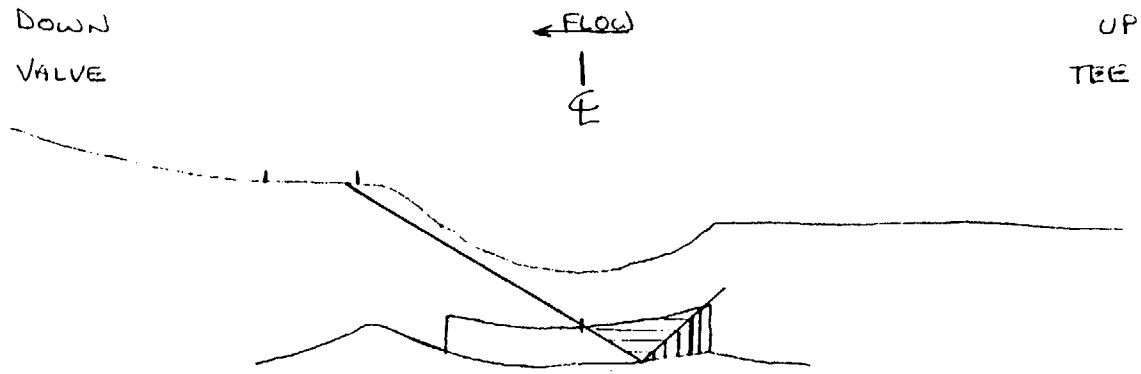
WELDER MONITOR TIE

PSEG
INSPECTION SERVICES
Reviewed and Approved
WD 5/5/89
N.D.E. SUPERVISOR

CAN/~~CANNOT~~ SCRUB ON WELD

NOTE: THICKNESSES TAKEN AT 1/4 INCH INCREMENTS

Sketch 41
1 of 2



SALEM UNIT 1 17-2735
SAFETY INJECTION - 4-SJ-2113-19
VICTOR MORTON III 29 APR 89
PLOT SHOWING EXTENT OF ANGLE BEAM
COVERAGE IN AREA OF LIMITATIONS

LEGEND = COVERAGE FROM ONE DIRECTION ONLY

= NO COVERAGE

NOTE: 0° LONGITUDINAL WAVE [illegible]
ALONG ENTIRE [illegible] LENGTH.

PSEG
INSPECTION SERVICES
Reviewed and Approved
WD 5/5/89
N.D.E. SUPERVISOR

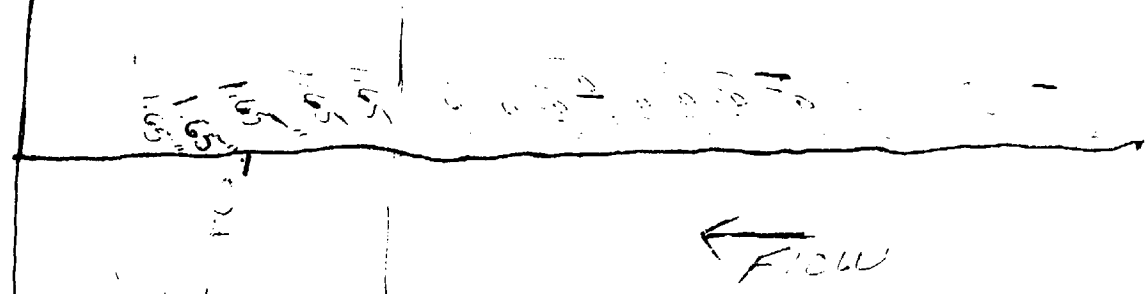
Sketch 41
2 of 2

231800

NDE Lab: VCR	SITE: SALEM I	DATE: 10/12/95	TIME (24 HR. CLOCK) INT. 0710 FINAL 1110	SHEET NO: 120136
EXAMINER [illegible]	SNT LEVEL [illegible]	Procedure No. & Rev: SH.RA-15 22 0137(Q) REV. 0	INSTRUMENT: SONIC MARK I ☐ OTHER SONIC 136 ☑	SERIAL NO: 136-158
EXAMINER [illegible]	SNT LEVEL II		Couplant, Specify Type: SONOTRACE 40	COMPONENT ID: [illegible] 111
				REFERENCE BLK NO: 785276

SEARCH UNITS	
BRAND	KBA
SERIAL NO	06545
SIZE	.5"
FREQ. (MHz)	4MHz
INSTRUMENT SETTINGS	
SCREEN SIZE	3.33"
DELAY	.476"
MATL. CAL.	.232"/μs
RANGE	.33"/SCREEN
REP. RATE	4KHz
JACK USED	N/A
TRANS MODE	N/A

Re-Paint 360° 1/2 - 1/2 From Weld



N/A ° Search Unit chosen for coverage using N/A nodes. PSI

N/A ° Search Unit chosen for coverage using N/A nodes.

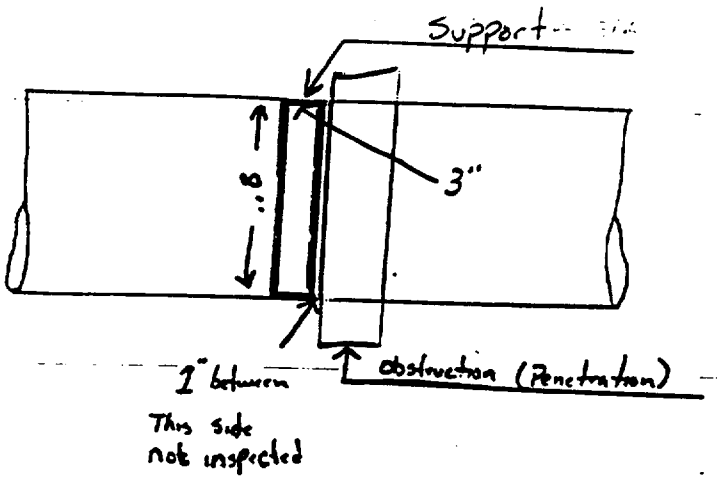
REVIEWED & ACCEPTED
FACTORY MUTUAL
ENGINEERING ASSOCIATION
AUTH. NUCLEAR INSERVICE INSP. — DATE 11-13-95

Reviewed By: [signature] | SNT LEVEL: III | DATE: 10-26-95

Sketch 42 191

WD 4/4/95
N.D.E. SUPERVISOR

SURFACE EXAMINATION COVERAGE PLOT

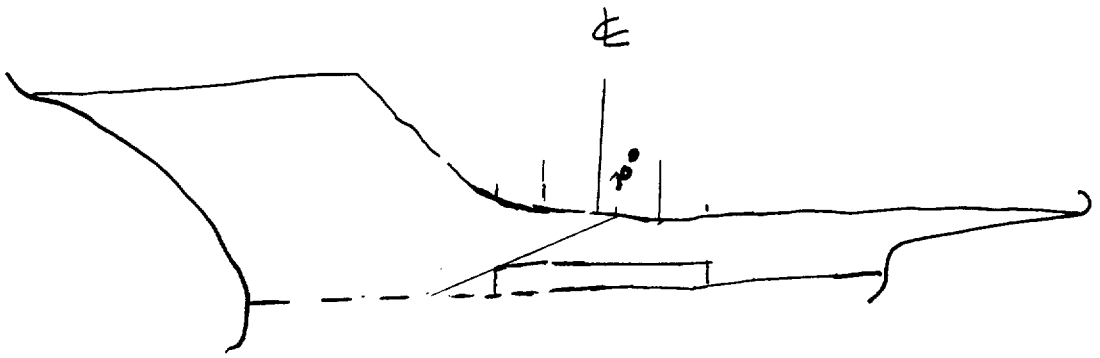


Sketch 43
1 of 1

SUMMARY NO: 263 334
WELD: 14-RH-2112-TPS-4

UT COVERAGE PLOT

VALVE → ELBOW



COVERAGE FOR AXIAL SCAN

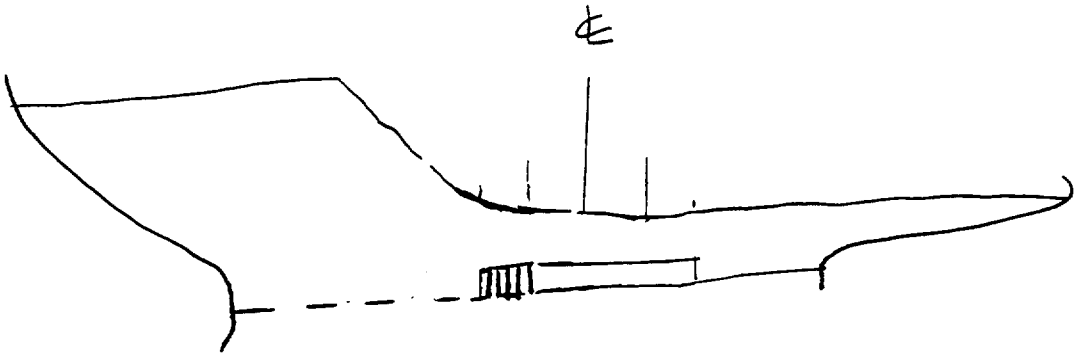
SUMMARY NO.: 263422

WELD: 8-RH-2173-2

Sketch 44
1 of 2

UT COVERAGE PLOT

VALVE → ELBOW



▥ AREA NOT COVERED FOR CIRCUMFERENTIAL SCANS CW / CCW

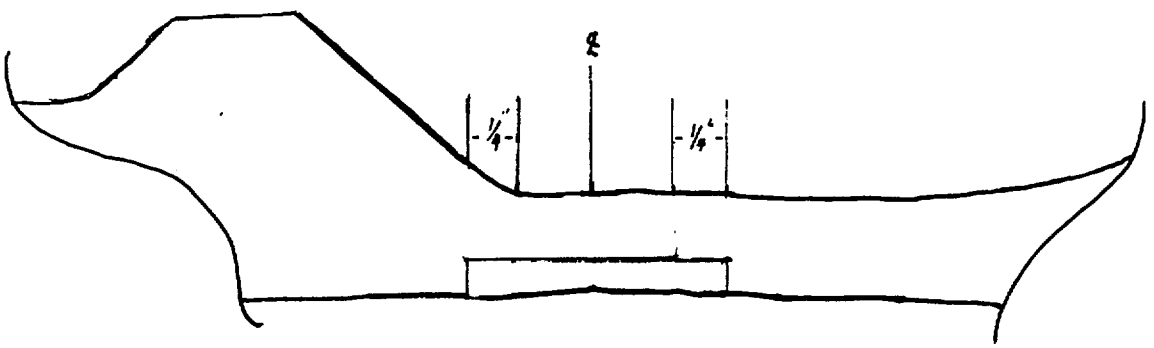
Sketch 44
2 of 2

SUMMARY NO.: 263422

WELD: 8-RH-2173-2

UT COVERAGE PLOT

PUMP ——— FLOW ——→ VALVE



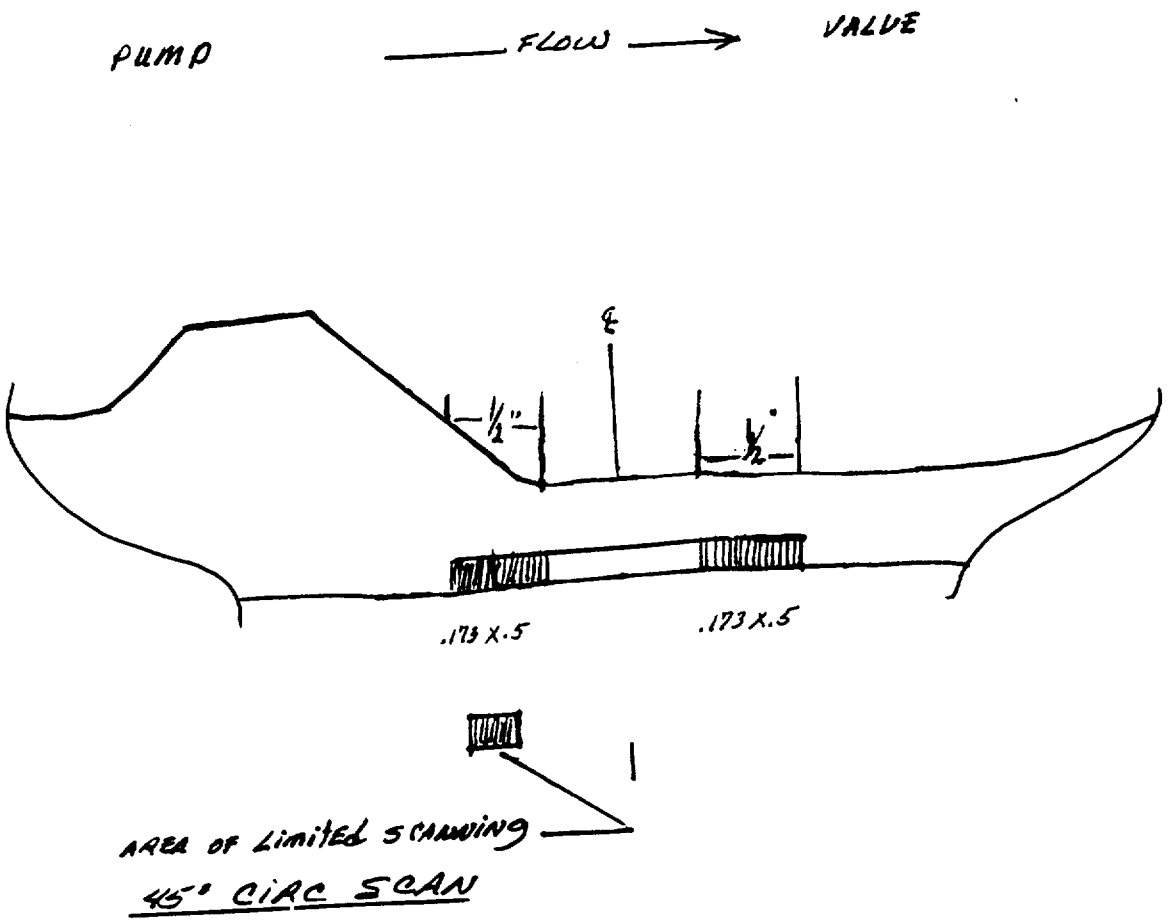
NO AXIAL SCANNING 100% LIMITATION
DUE TO PUMP AND VALVE CONFIGURATION

SUMMARY NO.: 263614

WELD: 8-RH-2116-1

Sketch 45
1 of 2

UT COVERAGE PLOT



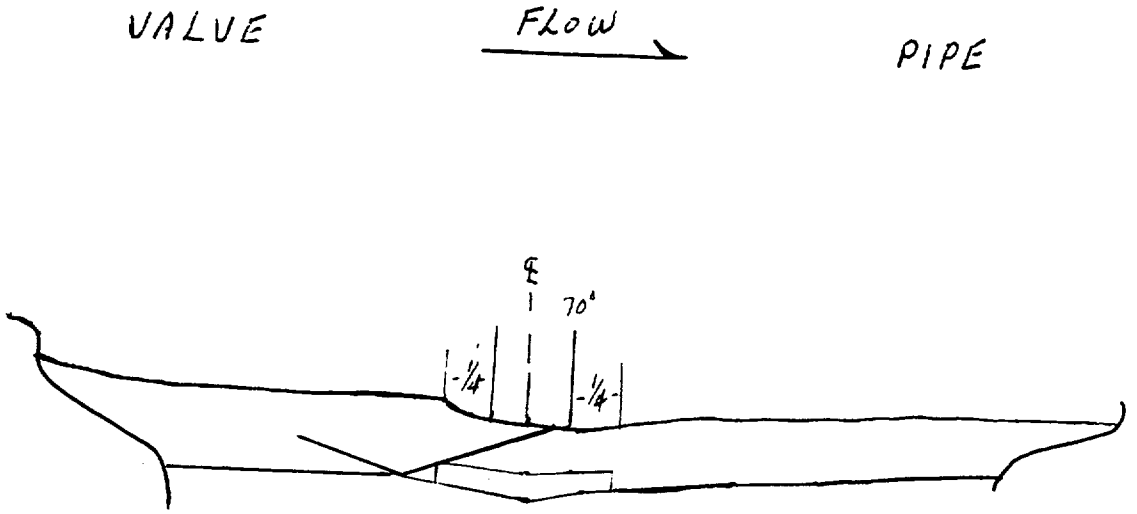
SUMMARY NO.: 263614

WELD: 8-RH-2116-1

Sketch 45
2 of 2

PAGE 6 OF 7

UT COVERAGE PLOT



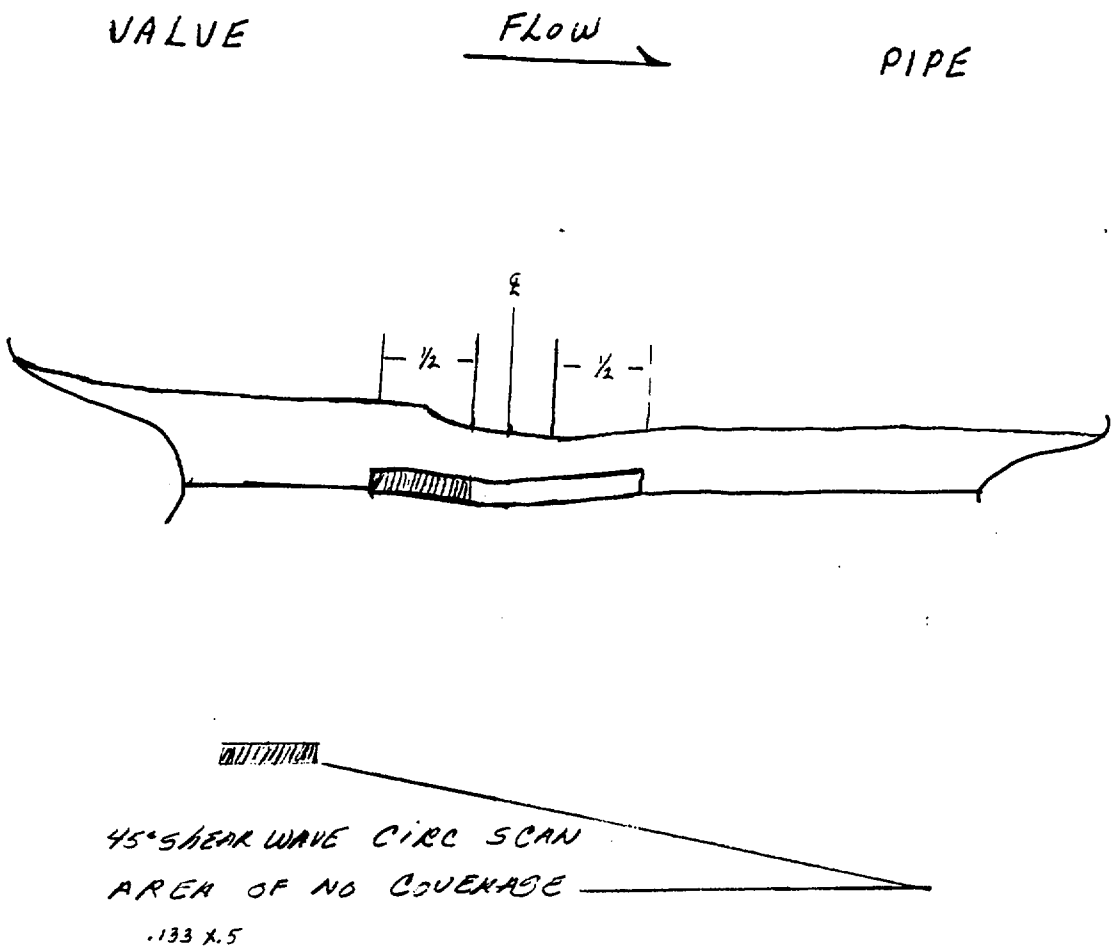
AXIAL SCANS 70° SHEAR

Sketch 46
1 of 2

SUMMARY NO.: 263616

WELD: 8-RH-2116-2

UT COVERAGE PLOT

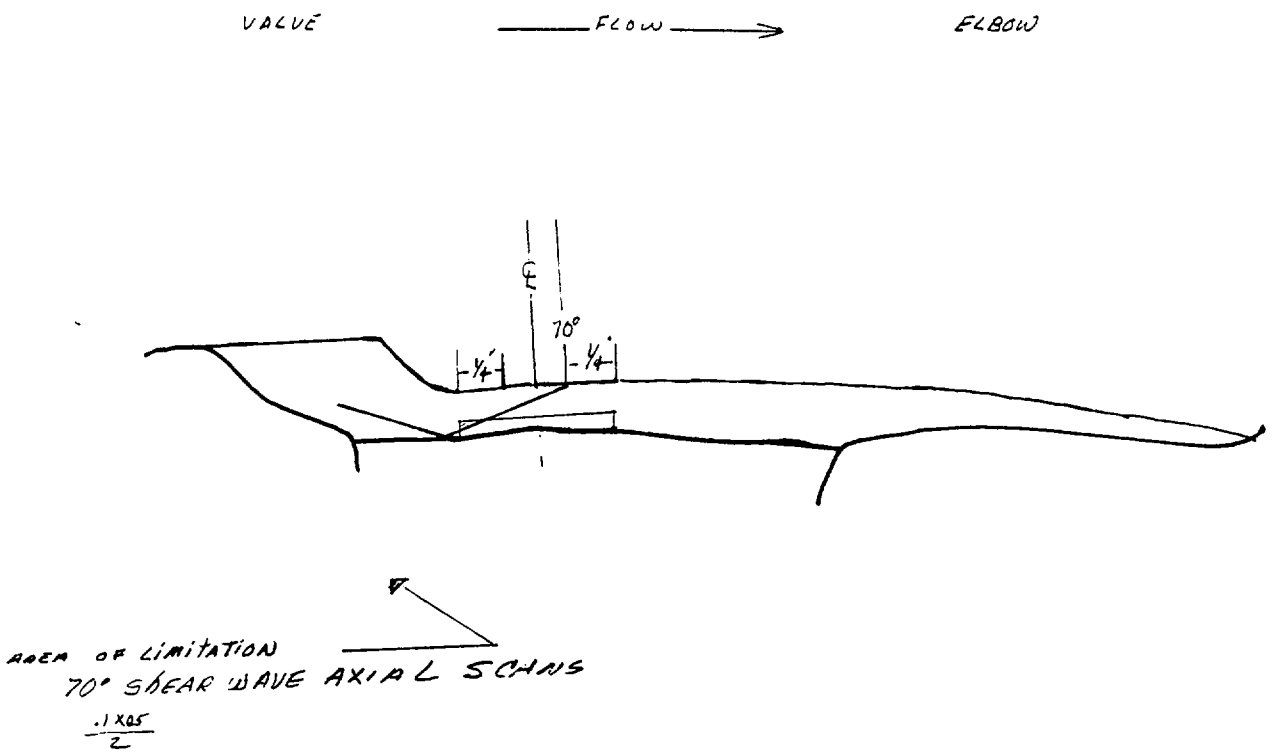


Sketch 46
2 of 2

SUMMARY NO.: 263616

WELD: 8-RH-2116-2

UT COVERAGE PLOT

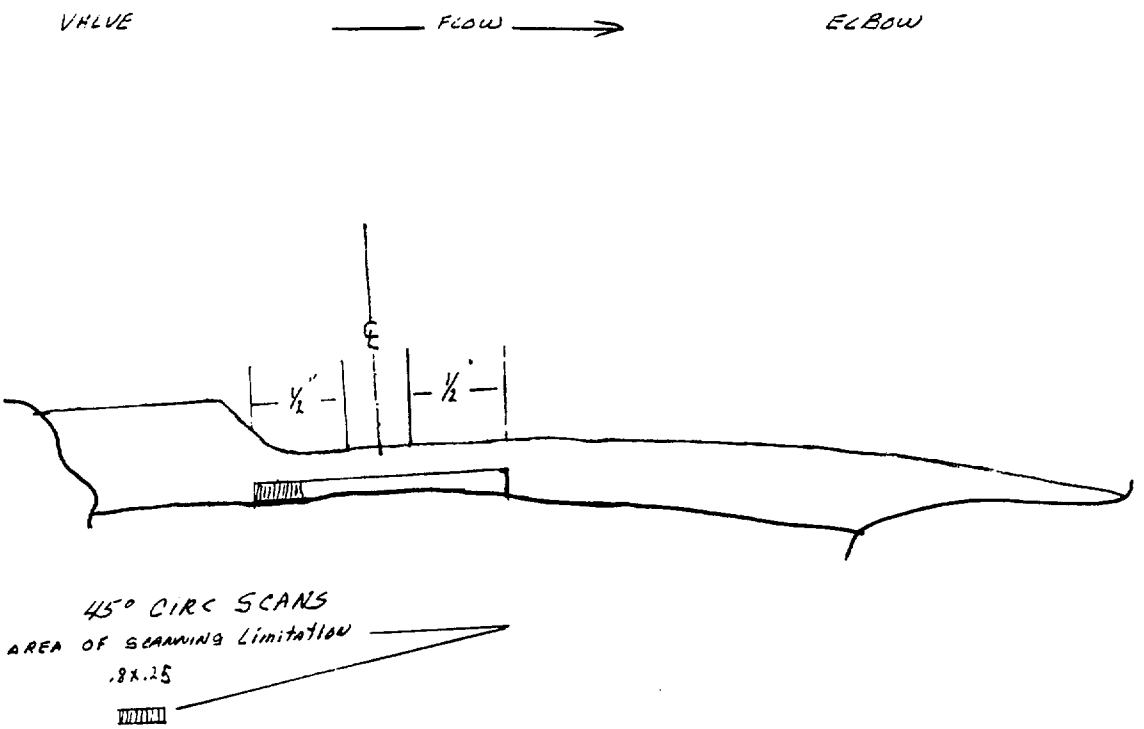


SUMMARY NO.: 354640

WELD: 8-CS-2123-46

Sketch 47
1 of 2

UT COVERAGE PLOT

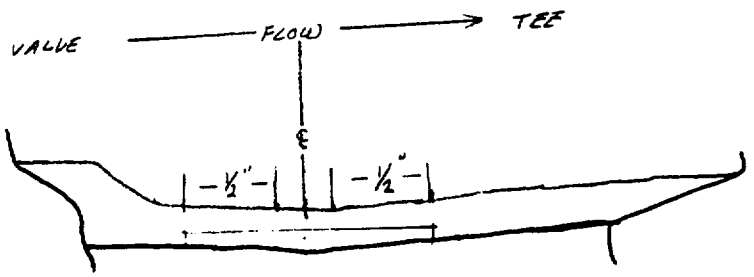


SUMMARY NO.: 354640

WELD: 8-CS-2123-46

Sketch 47
2 of

UT COVERAGE PLOT



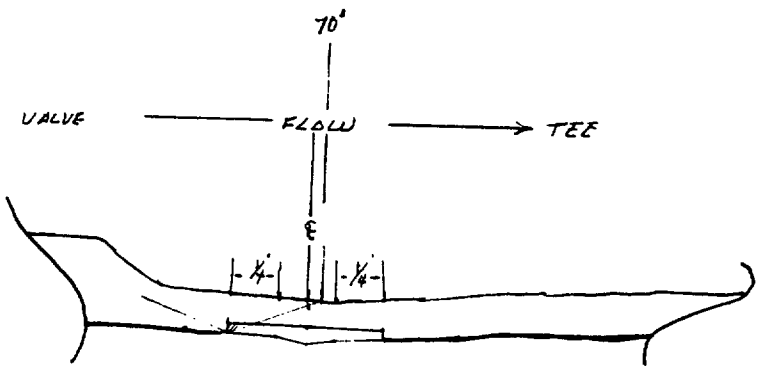
45° CIRC SCANS NO LIMITATIONS

Sketch 48
1 of 2

SUMMARY NO.: 356360

WELD: P-C5-2114-46

UT COVERAGE PLOT



$\frac{.1 \times .06}{2} =$

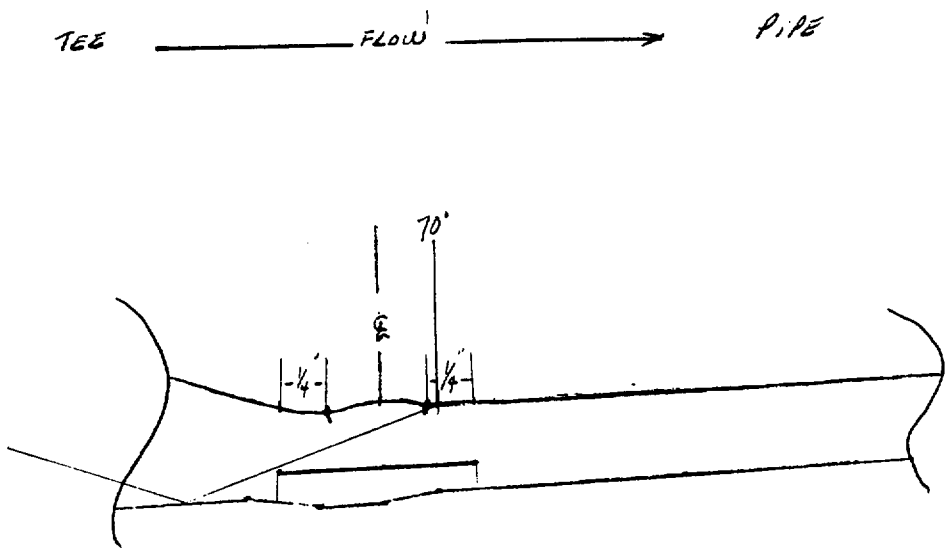
AREA OF SCANNING LIMITATION
70° AXIAL SCANS

SUMMARY NO.: 356360

WELD: 8-CS-2114-46

Sketch 48
2 of 2

UT COVERAGE PLOT



AXIAL SCANS

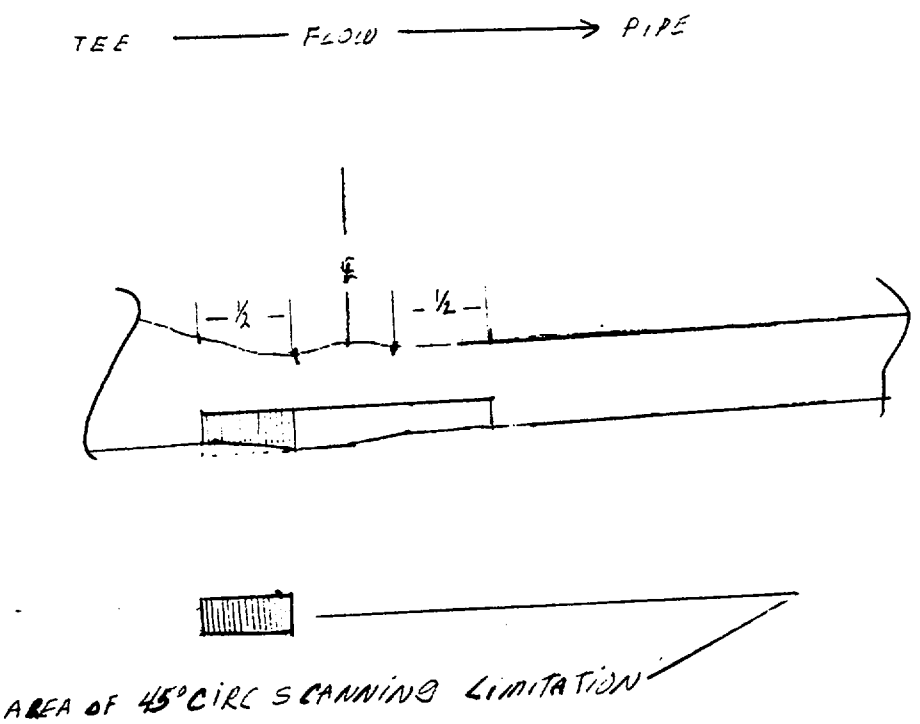
70° SHEAR WAVE

SUMMARY NO.: 360500

WELD: 3-CV-2156-1

Sketch 49
1 of 2

UT COVERAGE PLOT

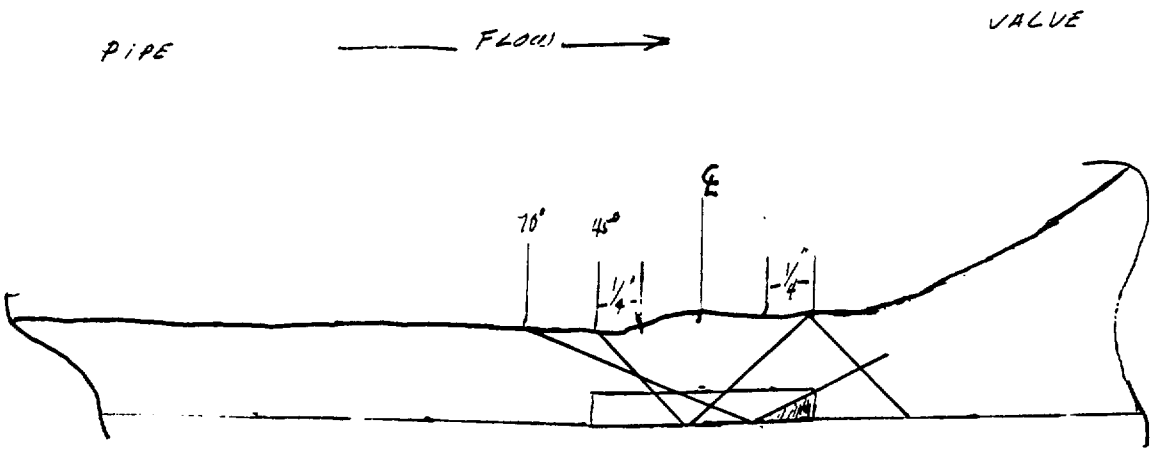


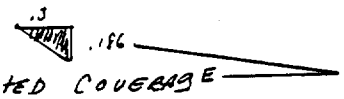
SUMMARY NO.: 360500

WELD: 3-CV-2156-1

Sketch 49
2 of 2

UT COVERAGE PLOT





AREA OF LIMITED COVERAGE

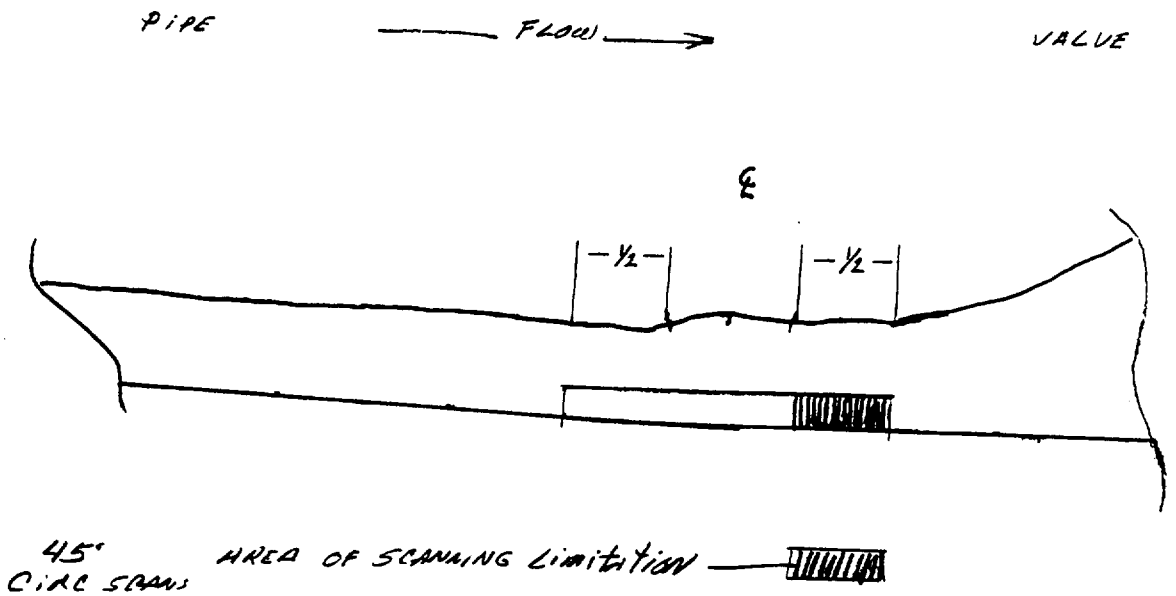
AXIAL SCANS

Sketch 50
1 of 2

SUMMARY NO.: 385020

WELD: 3-SJ-2121-2

UT COVERAGE PLOT



SUMMARY NO.: 385020

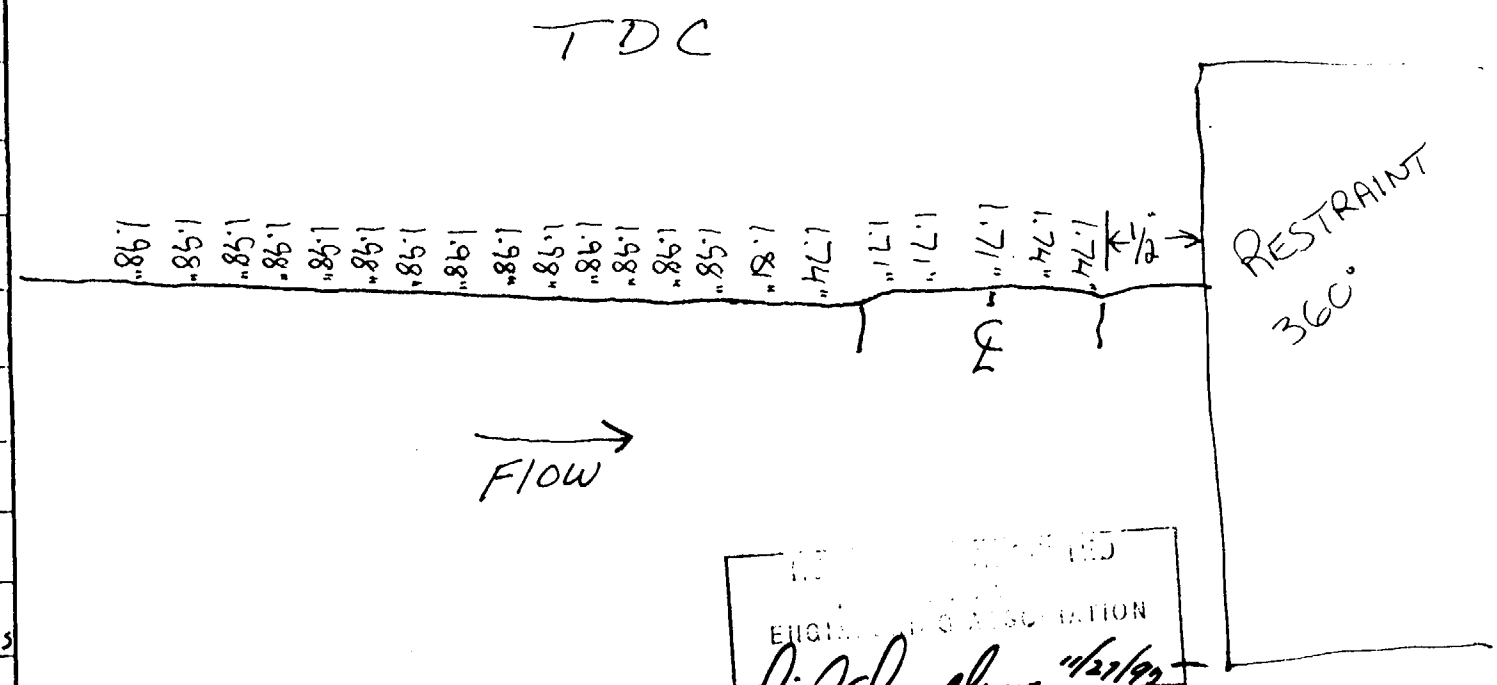
WELD: 3-SJ-2121-2

Sketch SD 2 of 2

230600

NDE Lab: VCR	SITE: Salem I	DATE: 10/13/95	TIME (24 HR. CLOCK) INT. 8:00 FINAL 12:00		SHEET NO: 12 0162
EXAMINER: [signature]	SNT LEVEL: II	Procedure No. & Rev: SH-RA-IS-22 0137Q Rev-0	INSTRUMENT: SONIC MARK I ☐ OTHER Sonic 136 ☑	SERIAL NO: 136-158	COMPONENT ID: 32-MS-2121-4
EXAMINER: Donald Yankill	SNT LEVEL: II		Couplant, Specify Type: SONOTRACE-40 BATCH II 94-014		REFERENCE BLK NO: 788176

SEARCH UNITS	
BRAND	KBA
SERIAL NO	06545
SIZE	1/2"
FREQ. (MHZ)	4MHZ
INSTRUMENT SETTINGS	
SCREEN SIZE	3.33"
DELAY	.990"
MATL. CAL.	.232"/us
RANGE	.033"
REP. RATE	4KHZ
JACK USED	N/A
TRANS MODE	DUAL



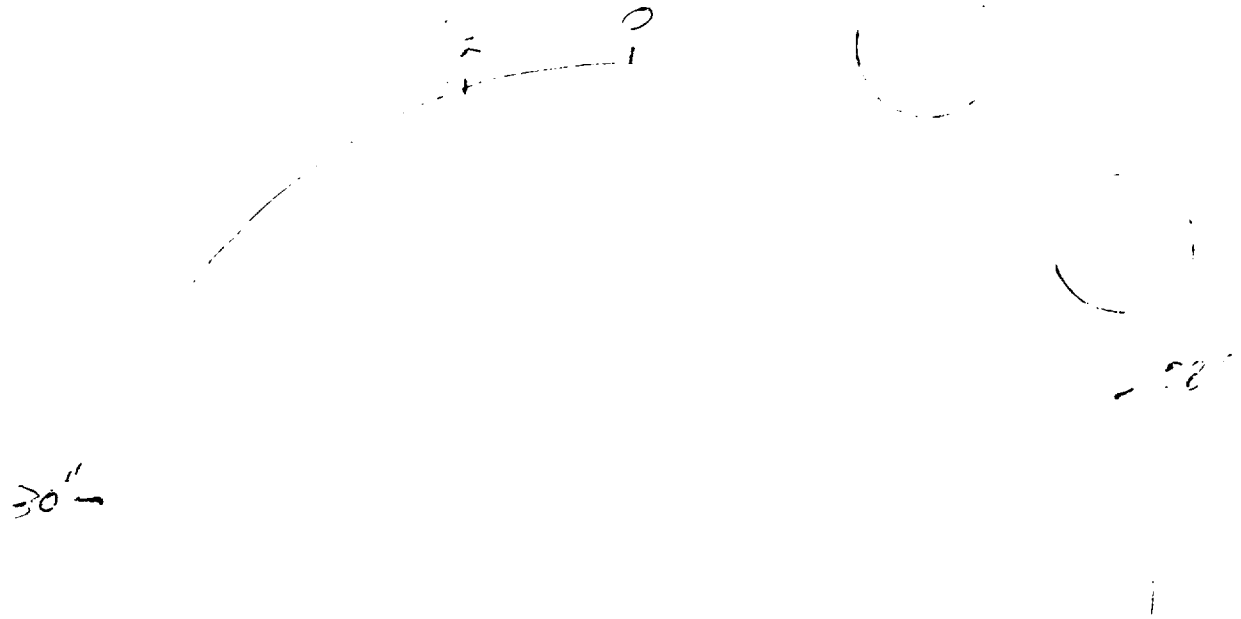
N/A ° Search Unit chosen for coverage using N/A nodes.

N/A ° Search Unit chosen for coverage using N/A nodes.

Reviewed By: [signature] SNT LEVEL: III DATE: 11-1-95

Sketch S-1 184

11/16/95



SUM 230600

32-MS-2121-4

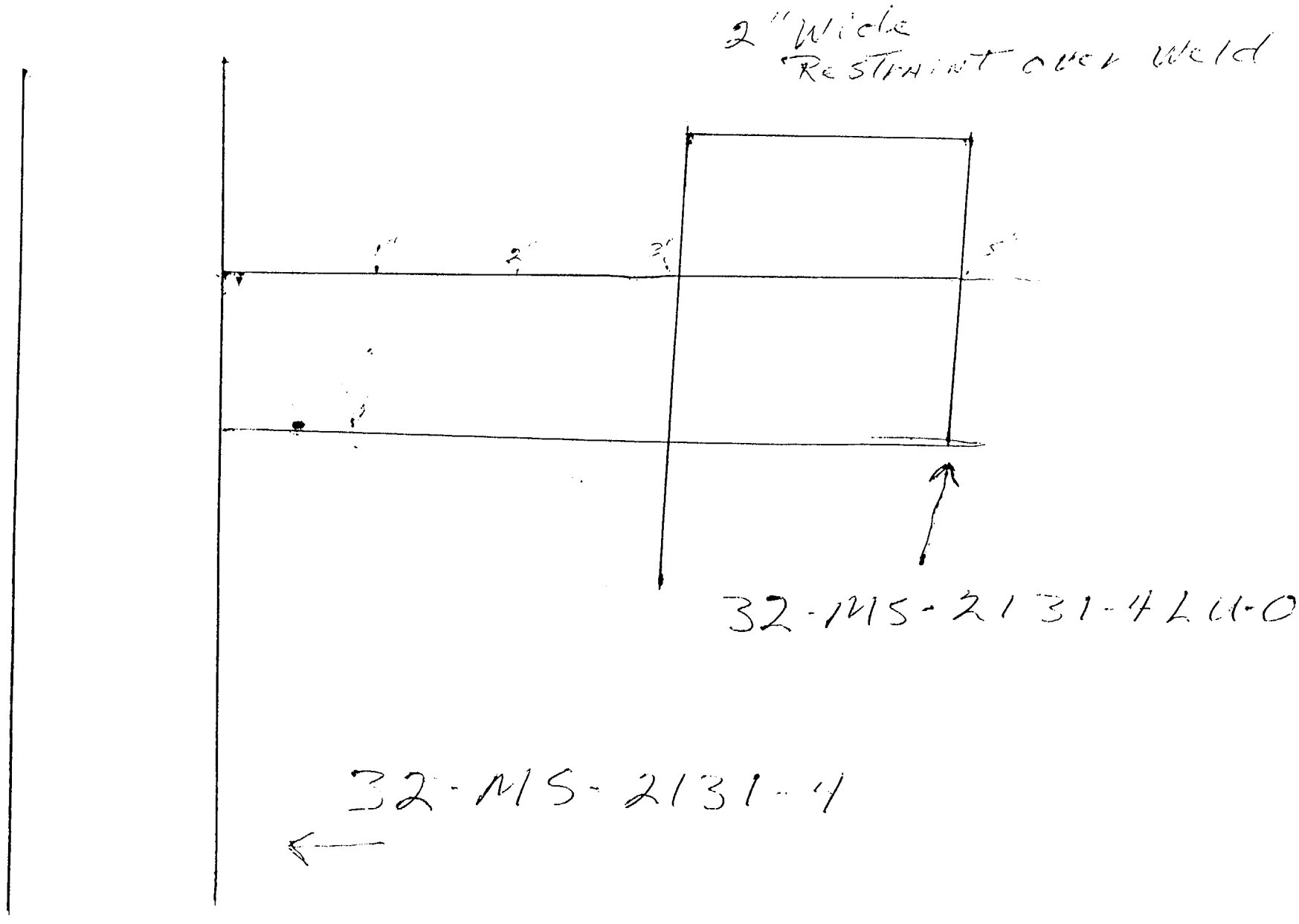
LIMITATIONS

#1 0-12" & 78"-0" MT in 1 Direction
INSULATION (2) 6" Pipe & Frame Support

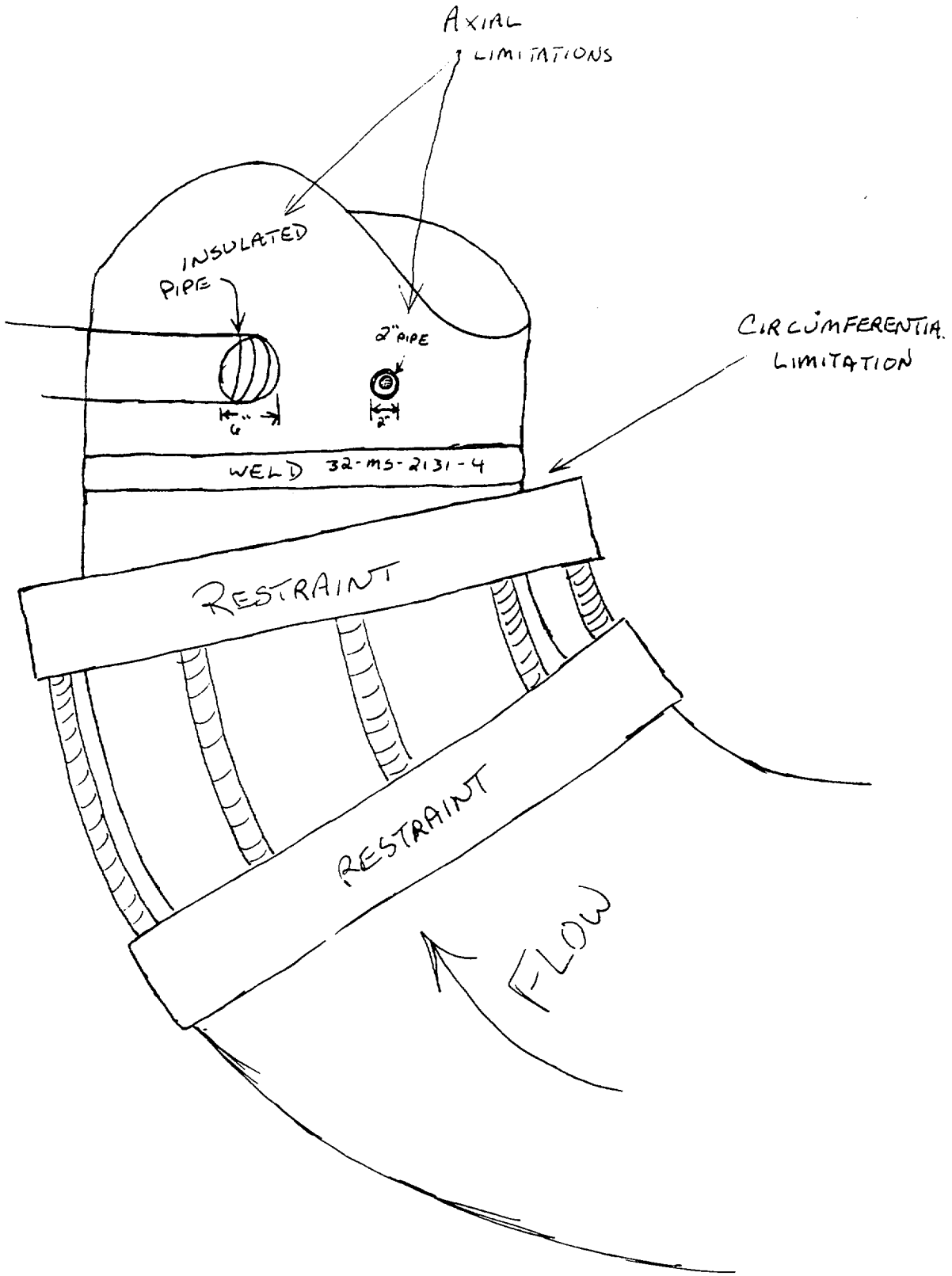
#2 12"-30" NO MT - INACCESIBLE

#3 RESTRAINT 360° Around 1/2" From Weld

Sketch 51
2 of 4



Sketch 51
3 of 4

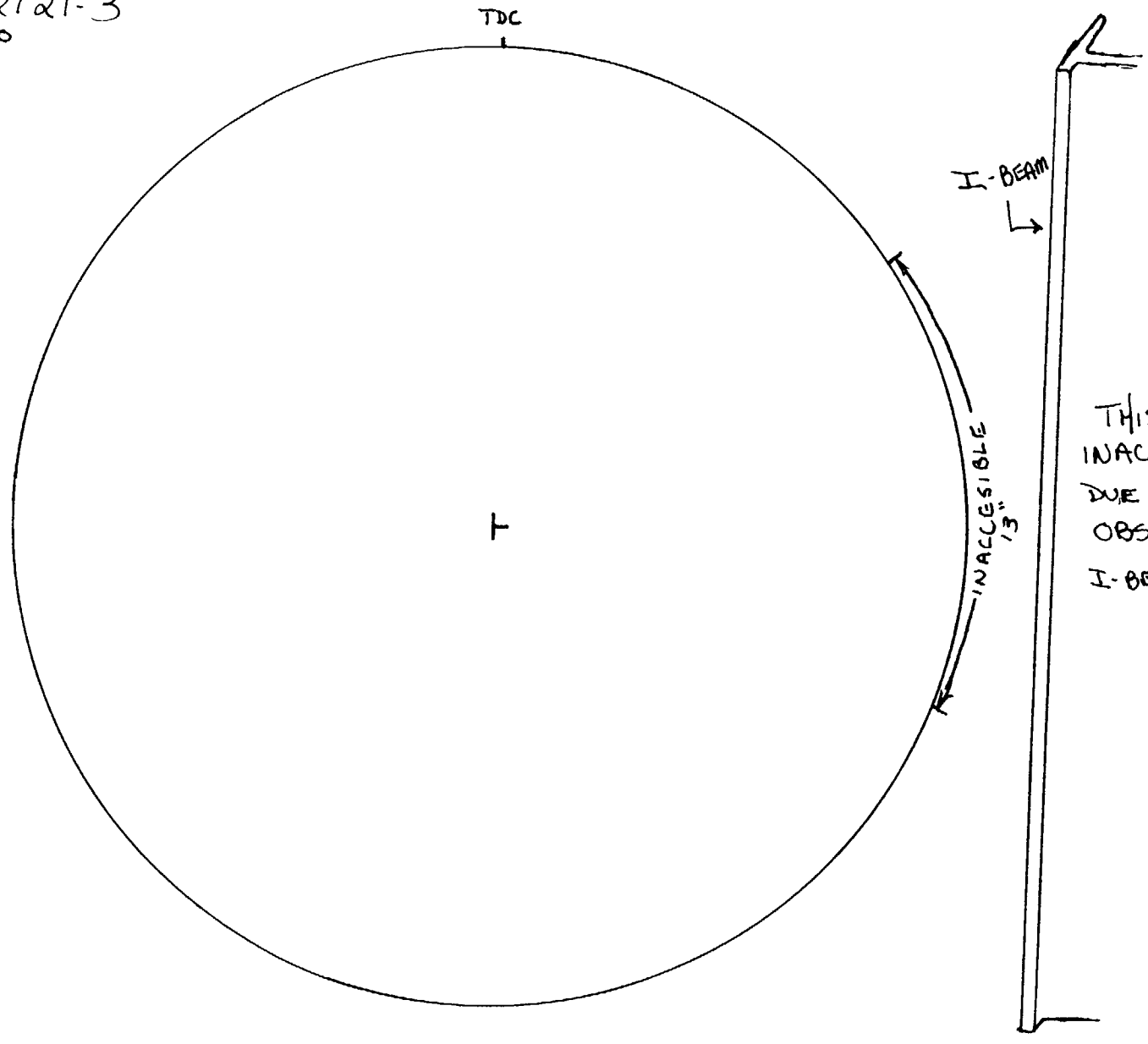


Sketch 51
4 of 4

ITEM I

WELD # 32-MS-2121-3

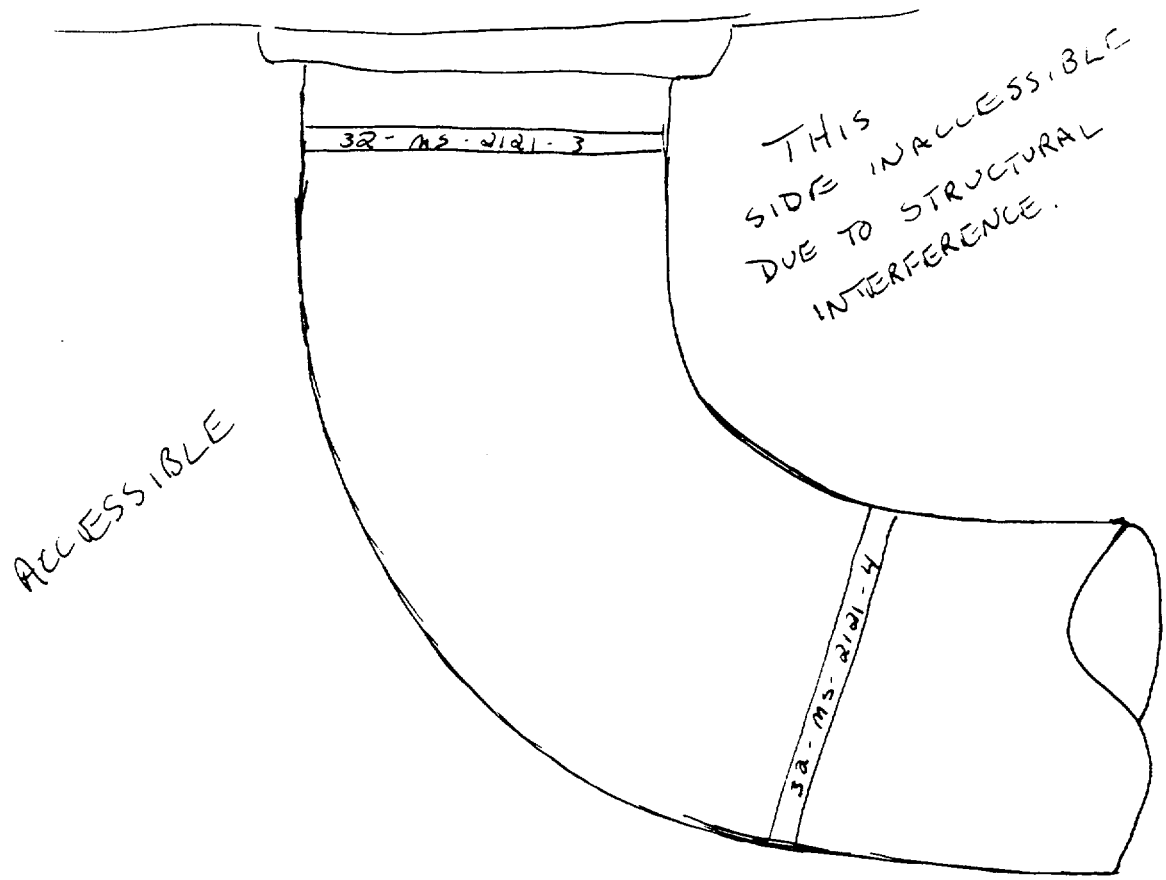
SUM # 230500



THIS AREA INACCESIBLE DUE TO STRUCTURAL OBSTRUCTIONS, I-BEAMS, PIPES, ETC.

Sketch 52
'83

TWL
11-1-95

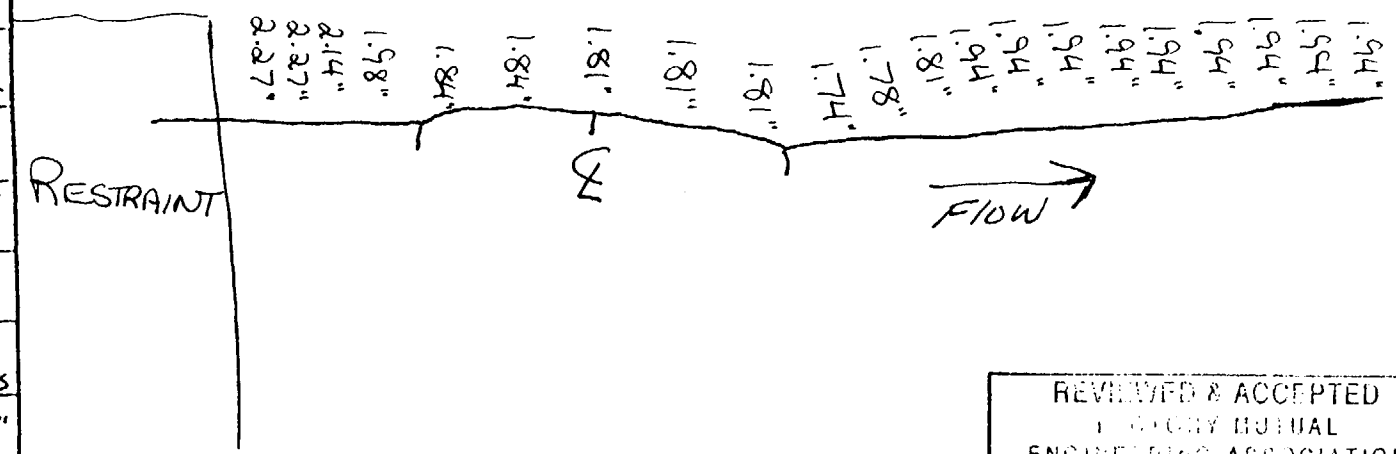


Sketch 52
2 of 3

NDE Lab: VCR	SITE: Salem I	DATE: 10/13/95	TIME (24 HR. CLOCK) INIT. 08:00 FINAL 12:00		SHEET NO: 120161
EXAMINER: Paul J. [illegible]	SNT LEVEL: II	Procedure No. & Rev: SH-RA-IS-22 0137Q Rev-0	INSTRUMENT: SONIC MARK I ☐ OTHER SONIC 136 ☑	SERIAL NO: 136-158	COMPONENT ID: 32-MS-2121-3
EXAMINER: Donald Gaskill	SNT LEVEL: II		Couplant, Specify Type: SONOTRACE-40 Batch II 94-014		REFERENCE BLK NO: 788176

SEARCH UNITS	
BRAND	KBA
SERIAL NO	06545
SIZE	1/2"
FREQ. (MHZ)	4MHZ

INSTRUMENT SETTINGS	
SCREEN SIZE	3.33"
DELAY	.990"
MATL. CAL.	.232"/us
RANGE	.033"
REP. RATE	4KHZ
JACK USED	N/A
TRANS MODE	DUAL



N/A ° Search Unit chosen for coverage using N/A nodes.

N/A ° Search Unit chosen for coverage using N/A nodes.

REVIEWED & ACCEPTED
[illegible] MUTUAL
ENGINEERING ASSOCIATION
AUTH. NUCLEAR INSERVICE INSP. 11/29/95 DATE

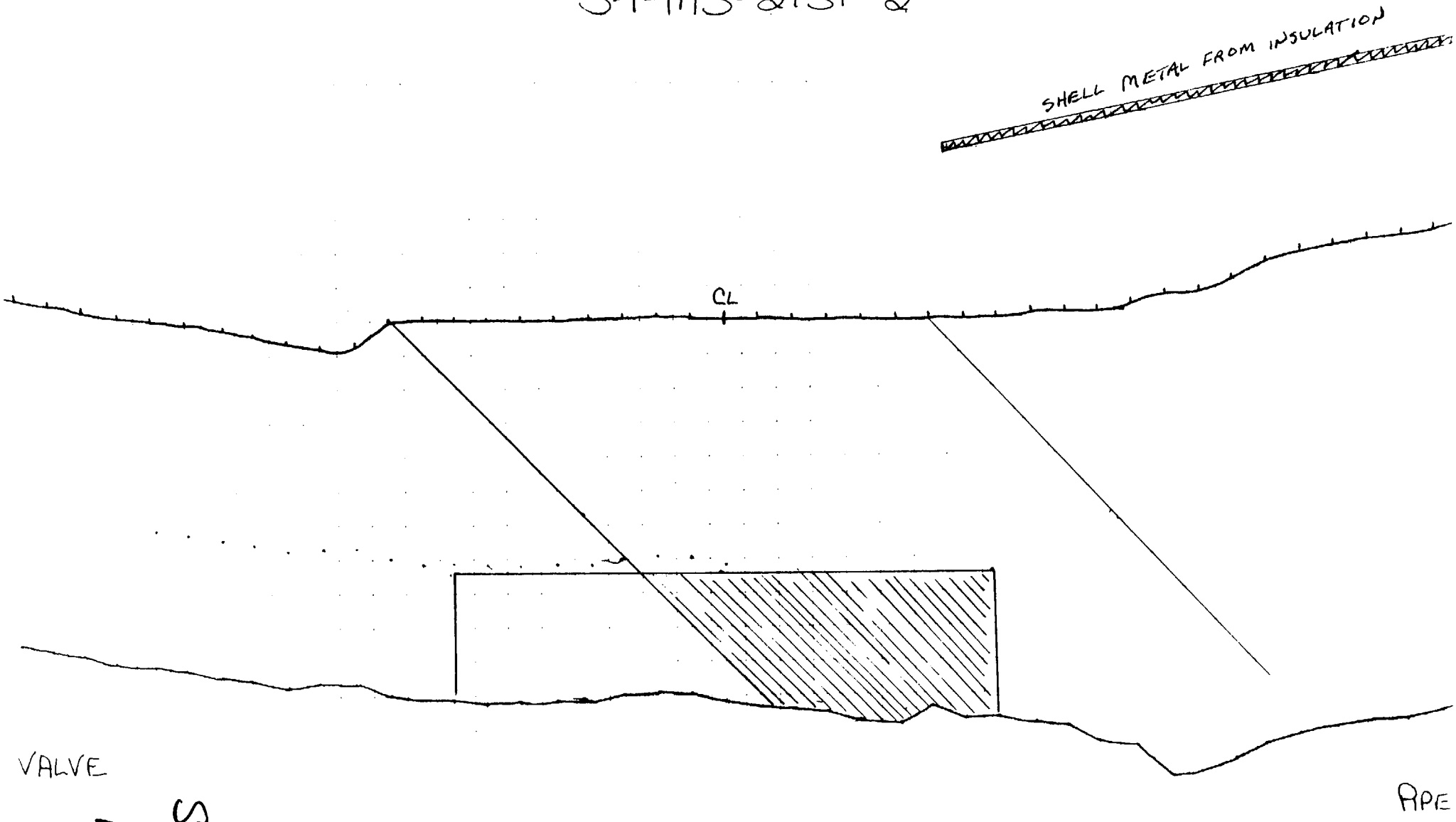
PSI

Reviewed By: L W Lay | SNT LEVEL: III | DATE: 11-1-95

Sketch 52
3 of 3

WD 11/16/95

224100
34-MS-2131-2

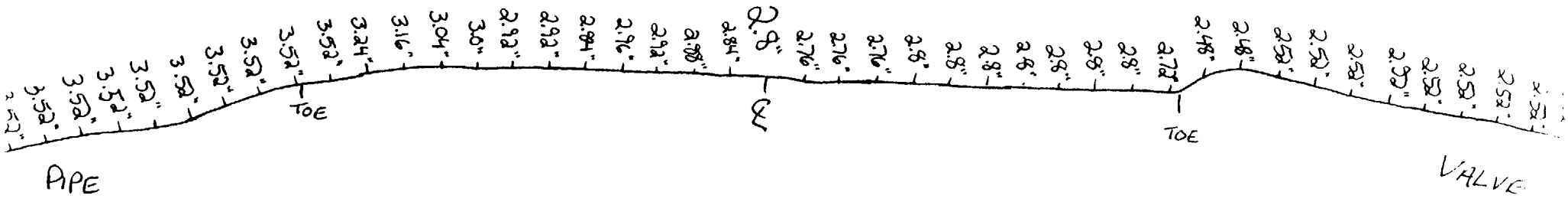


Sketch 53
1 of 2

LWG LVIII
11-4-95

22410

34-MS-2131-2



FLOW

PROFILE FROM BDC OF WELD

REVIEWED & ACCEPTED
FACTORY MUTUAL
ENGINEERING ASSOCIATION
AUTH. NUCLEAR INSERVICE INSP.
11/29/95
DATE

IPSEG
INSPECTION SERVICES
Reviewed and Approved
11/4/95
N.D.E. SUPERVISOR

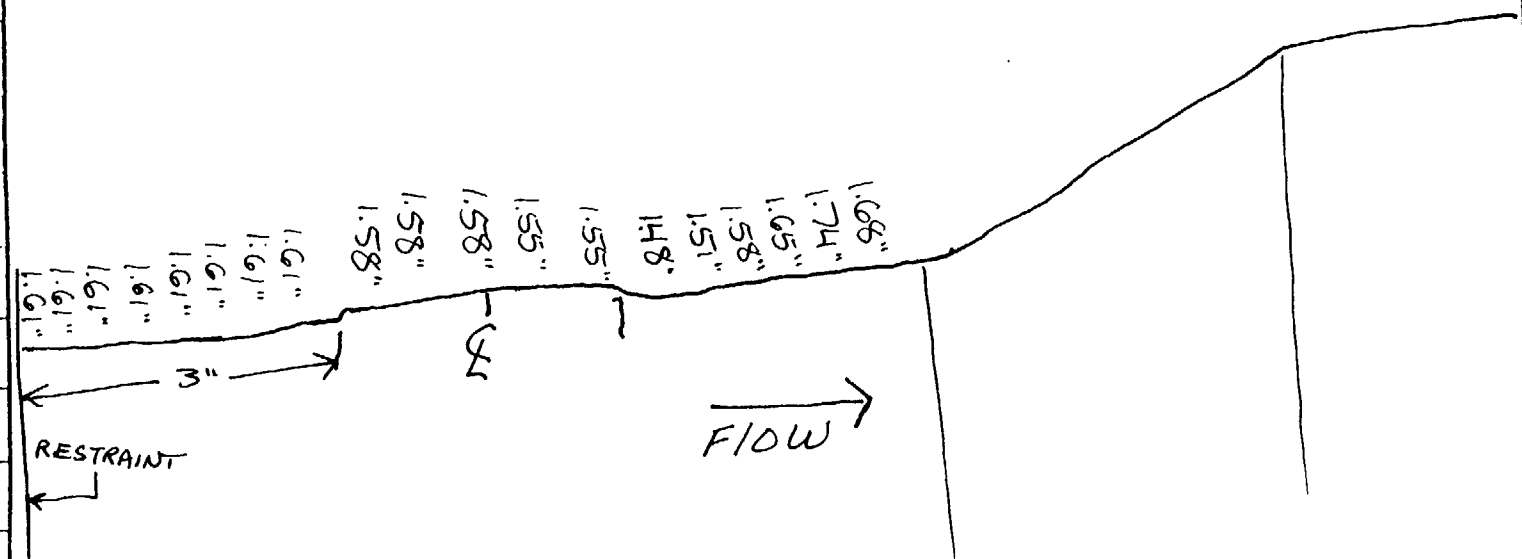
Sheet 53
2 of 2

LVIII
11-4-95

224200

NDE Lab: VCR	SITE: Salem 1	DATE: 10/13/95	TIME (24 HR. CLOCK) INIT. 8:00 FINAL 12:00		SHEET NO: 120159
EXAMINER: [signature]	SNT LEVEL: II	Procedure No. & Rev: SH-RA-IS-22 0137Q Rev-0	INSTRUMENT: SONIC MARK I ☐ OTHER Sonic 136 ☑	SERIAL NO: 136-158	COMPONENT ID: 34-MS-2121-1
EXAMINER: Donald Gaskill	SNT LEVEL: II		Couplant, Specify Type: SONOTRACE 40 Batch II 94-014		REFERENCE BLK NO: 788176

SEARCH UNITS	
BRAND	KBA
SERIAL NO	06545
SIZE	½"
FREQ. (MHz)	4 MHZ
INSTRUMENT SETTINGS	
SCREEN SIZE	3.33"
DELAY	.990"
MATL. CAL.	.232 in/us
RANGE	.033"
REP. RATE	4KHZ
JACK USED	N/A
TRANS MODE	DUAL



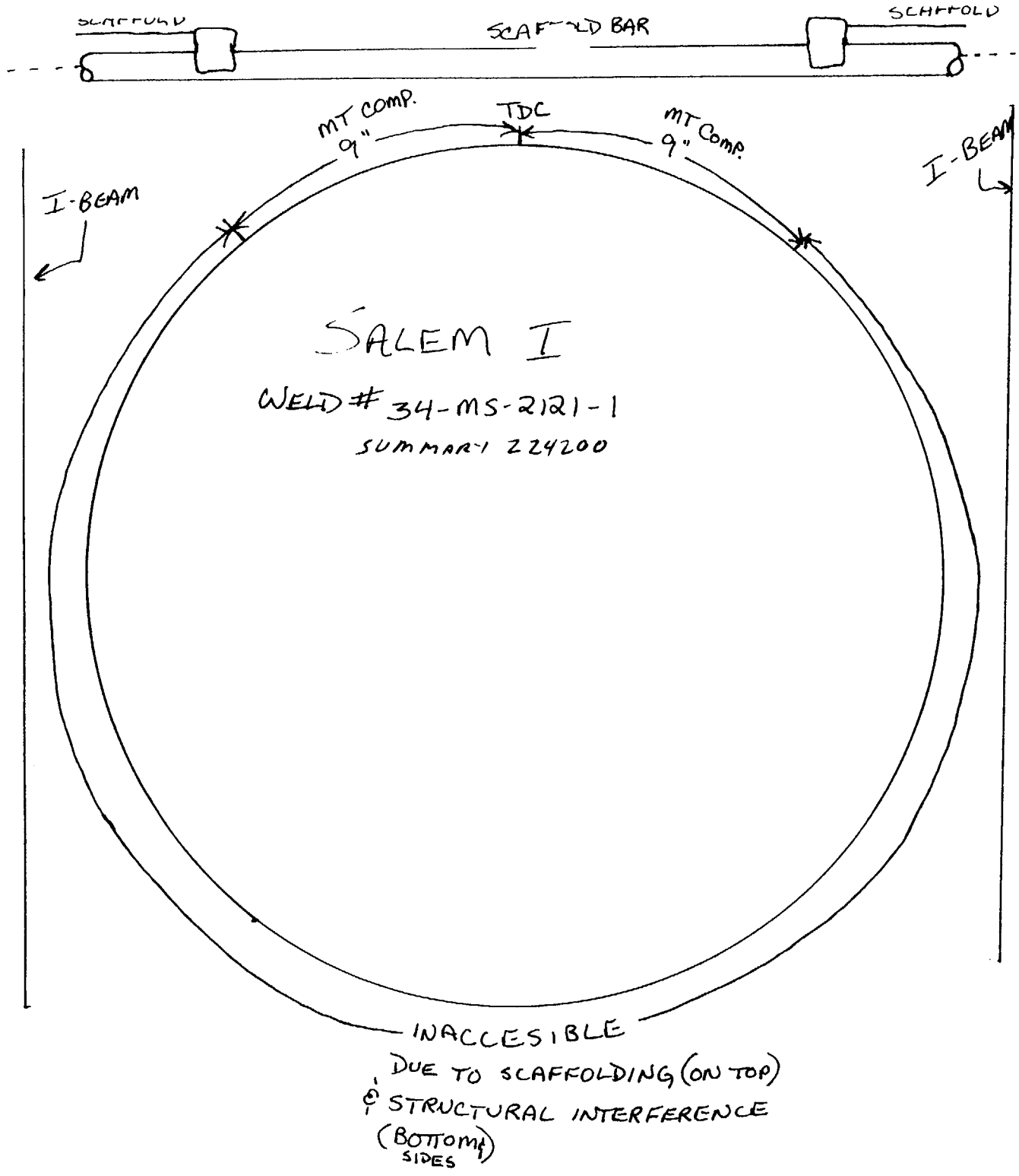
N/A ° Search Unit chosen for coverage using N/A nodes.

N/A ° Search Unit chosen for coverage using N/A nodes.

Reviewed By: [signature] SNT LEVEL: III DATE: 10-31-95

INSPECTION SERVICES
Reviewed and Approved
[signature] 11/16/95
NDE Supervisor

Sketch 54
192

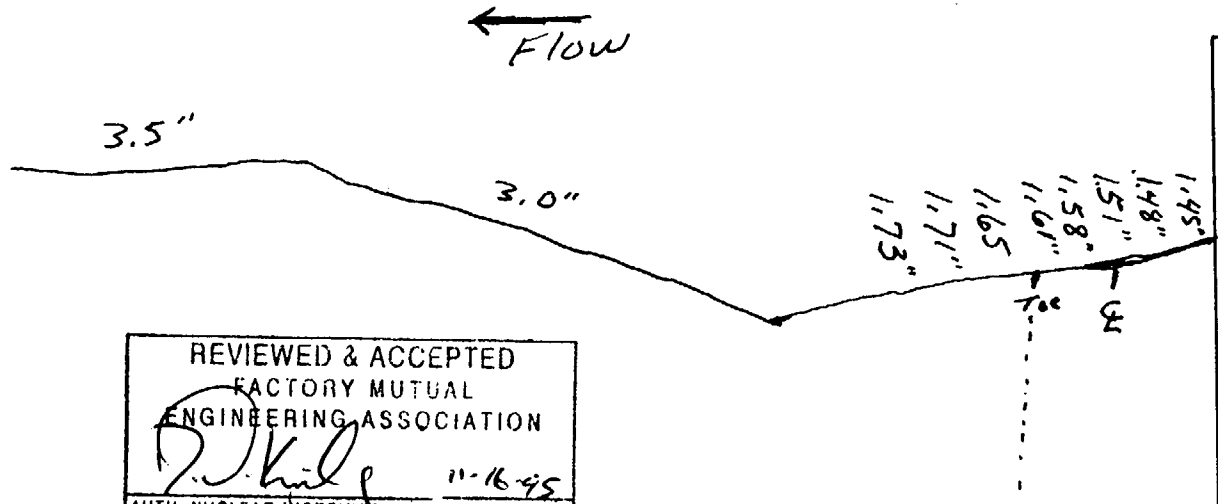


Sketch 54
282

25800

NDE Lab: VCR	SITE: Salem	DATE: 10/12/95	TIME (24 HR. CLOCK) INT. 07:10 FINAL 11:10		SHEET NO: 120158
EXAMINER: Donald Gaskill	SNT LEVEL II	Procedure No. & Rev: SH-RA-IS-ZZ 0137Q Rev-0	INSTRUMENT: SONIC MARK I ☐ OTHER SONIC 136 ☑	SERIAL NO: 136-158	COMPONENT ID: 34-MS-2111-1
EXAMINER: [signature]	SNT LEVEL II		Couplant, Specify Type: SONOTRACE 40 BATCH # 94-014		REFERENCE BLK NO: 788176

SEARCH UNITS	
BRAND	KBA
SERIAL NO	06545
SIZE	.5"
FREQ (MHZ)	4MHZ
INSTRUMENT SETTINGS	
SCREEN SIZE	3.33
DELAY	.976
MATL. CAL.	.232/μs
RANGE	.33/Scr Div.
REP. RATE	4KHZ
JACK USED	N/A
TRANS MODE	DUAL



Restraint 360°
1/4"-1/2" of weld Covered by Restraint

REVIEWED & ACCEPTED
FACTORY MUTUAL ENGINEERING ASSOCIATION
AUTH. NUCLEAR INSERVICE INSP. — DATE 11-16-95

N/A° Search Unit chosen for coverage using N/A nodes.
N/A° Search Unit chosen for coverage using N/A nodes.

PSI

Sketch 55 R2

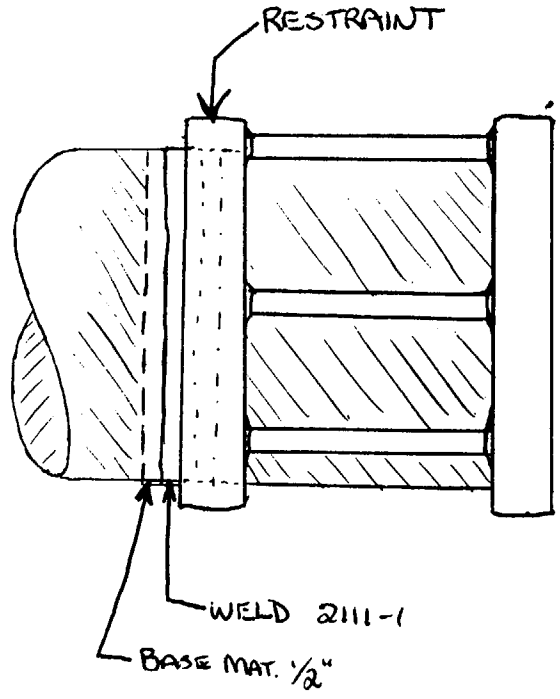
Reviewed By: [signature]	SNT LEVEL: III	DATE: 11-3-95

PSEG INSPECTION SERVICES Reviewed and Approved WD 11/9/95 NDE SUPERVISOR

SALEM UNIT #1

WELD # 34-MS-2111-1

SUM 225800

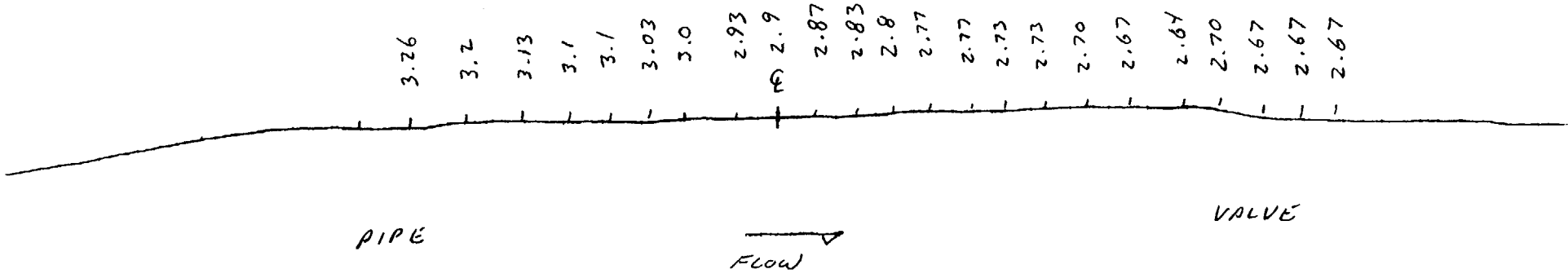


1/4" - 1/2" OF ENTIRE CIRCUMFERENCE OF WELD IS COVERED BY RESTRAINT, INCLUDING 1/2" OF ADJACENT BASE MATERIAL.

Sketch 55
272

34-MS-2111-2
SHEET № 120126

TAKEN
BOTTOM DEAD CENTER



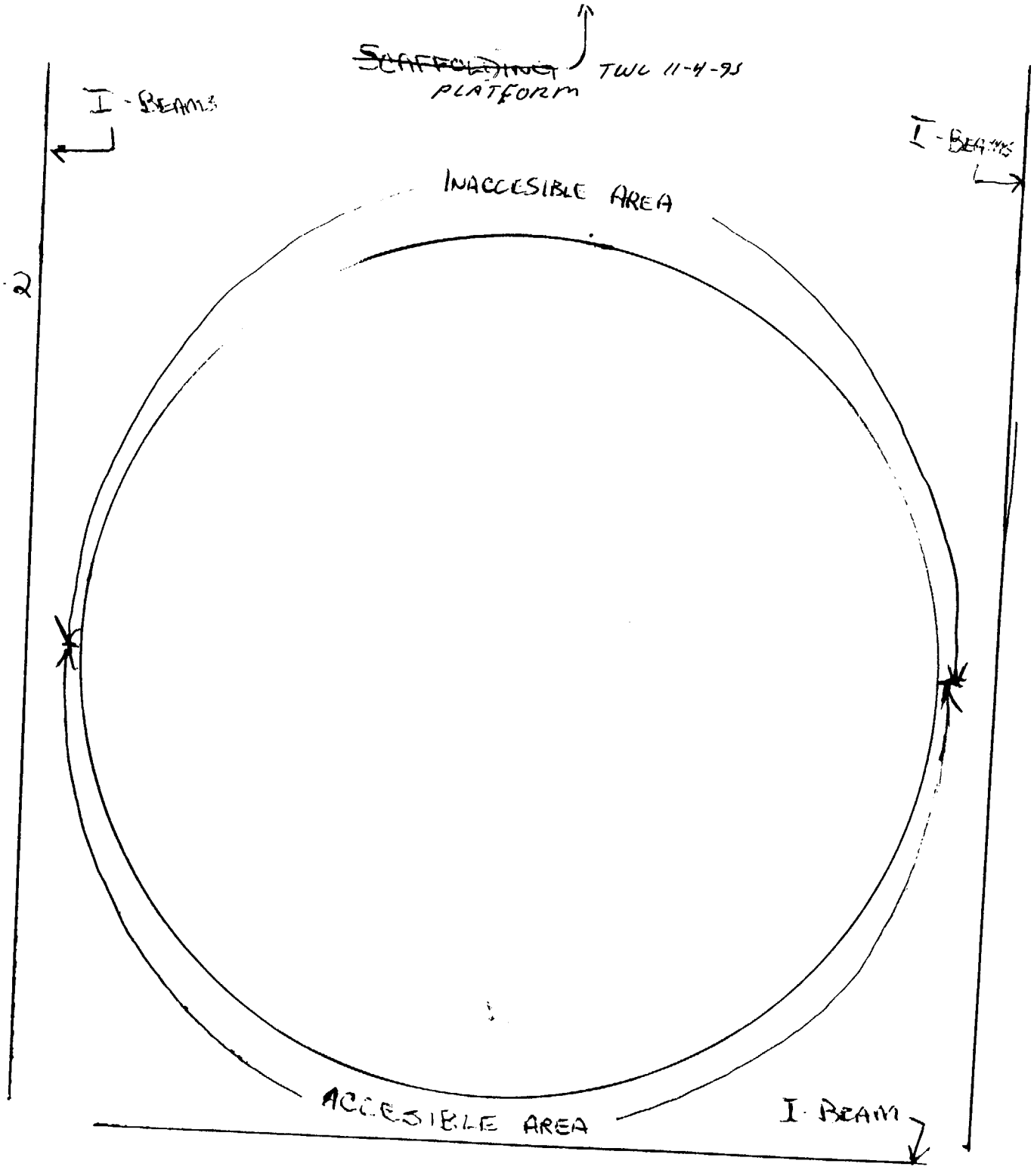
L W by LV III 11-4-95

Sketch 56
1 of 2

DD 11/4/95

SALEM
UNIT I

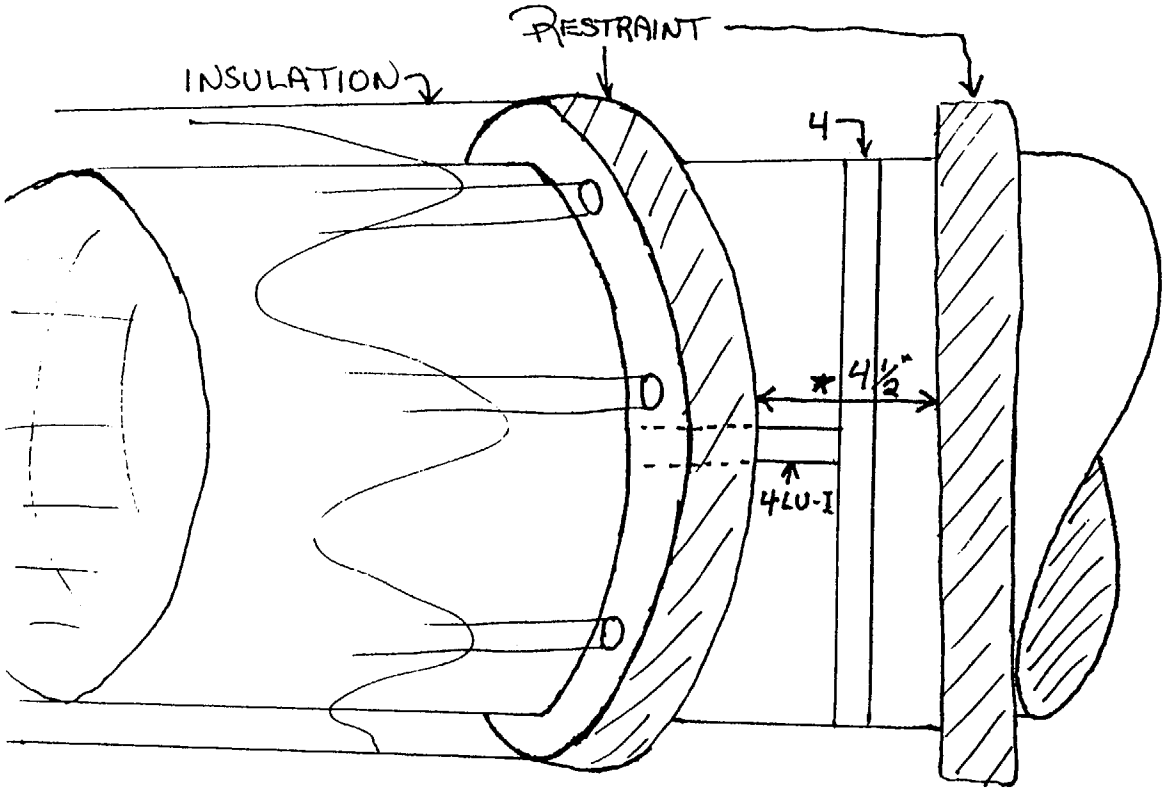
WELD
#34-MS-2111-2



Sketch 56
292

SALEM UNIT I

WELD # 32-MS-2111-4-LU-I



* REASON FOR ONE DIRECTION MT, THIS SPACE TO NARROW TO GET YOKE IN HORIZONTAL POSITION, THERE WAS OBSTRUCTING PIPING IN FRONT OF THIS AREA ALSO.

Sketch 57
181

FRAMATOME ANP

PROFILE AND THICKNESS

Exam Date: 04/17/01

Summary No.: 263110

Site: Salem Unit 1, RFO 14

Examination Method: UT

System: Pressure Relief System

Identification: 6-PR-2101-13

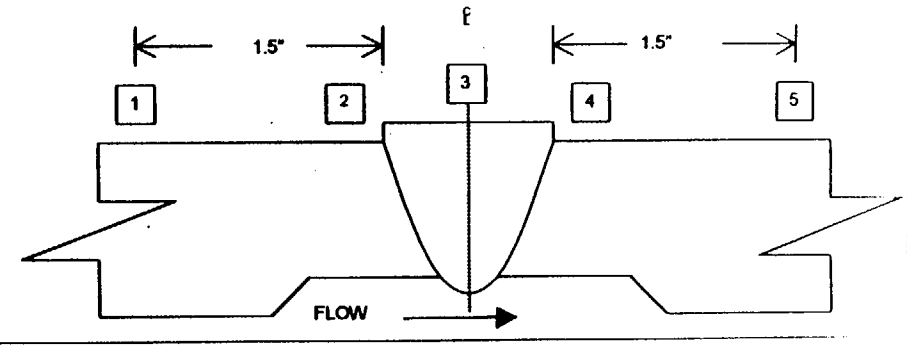
POSITION	0	90	180	270
1	0.390"	N/A	N/A	N/A
2	0.390"	N/A	N/A	N/A
3	0.440"	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A

CROWN HEIGHT: 0.125"

CROWN WIDTH: 0.600"

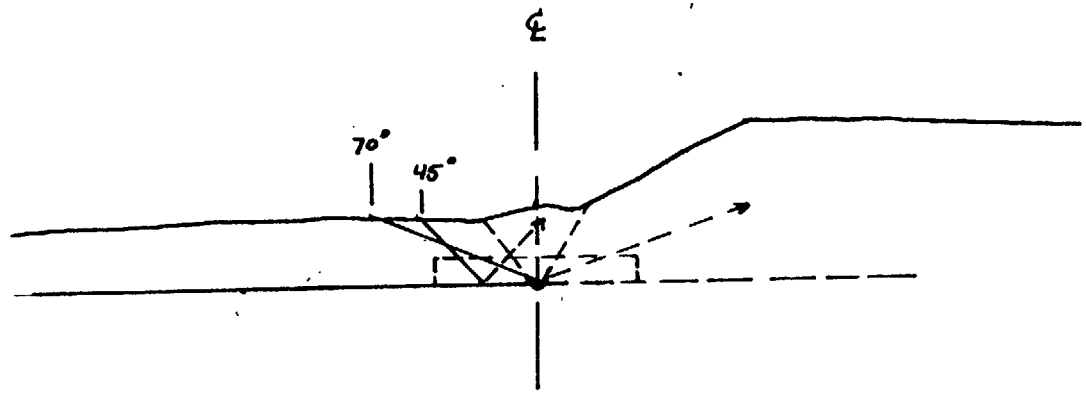
NOM DIAMETER: 6.0"

WELD LENGTH: 21.0"



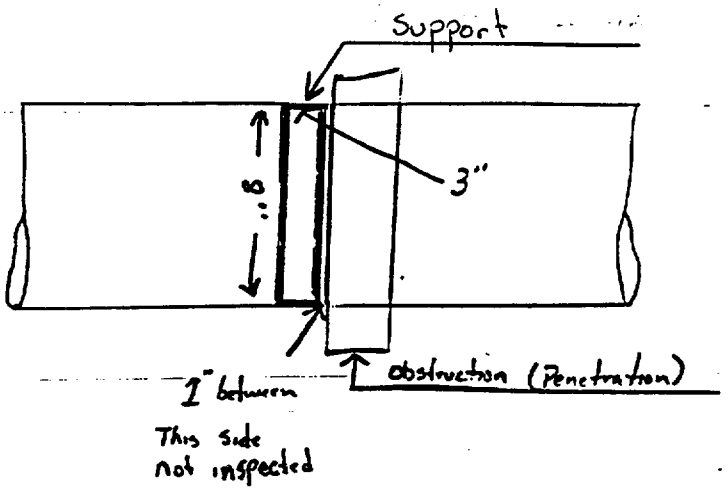
Sketch 58

1 of 1



Prepared By	Date	Reviewed By	Date	Utility Review By	Date
[signature]	4-17-01	[signature]	4/19/01	[signature]	4-23-01

SURFACE EXAMINATION COVERAGE PLOT



Sketch 59
1 of 1

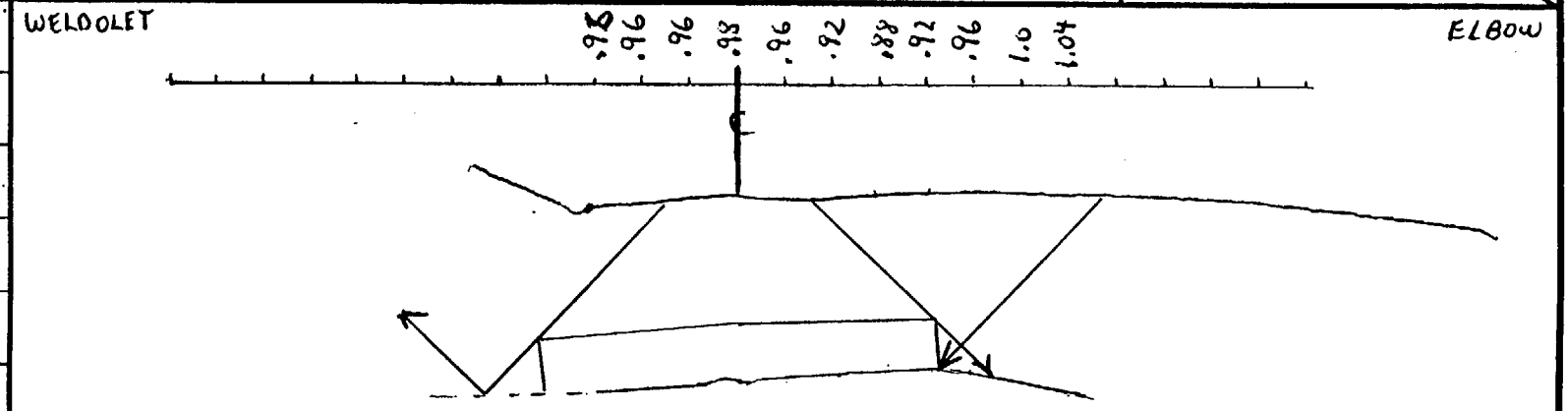
SUMMARY NO: 263332
WELD: 14-RH-2112-TP5-3

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)		SHEET NO:
17-4823	Salem Generating Station, Unit 1	08 MAY 92	INT. 1055	FINAL 1326	135118

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE No. PSE-UT49 REV 1 CHG 0 ICN ☒ N/A	INSTRUMENT: SONIC MARK I ☐ OTHER SONIC 136 ☐	SERIAL NO:	COMPONENT ID:
B. ROBERDS	II			5576	8-MS-2141-1
EXAMINER	**SNT LEVEL**		**COUPLANT:** GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		**REFERENCE BLK NO:**
W. BYLER	II				CS 100

SEARCH UNITS	
BRAND	SWRI
SERIAL NO	3129
SIZE	3/8
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	2.00
DELAY	.467
MATL. CAL. VELOCITY	.232
RANGE	2.00
REP. RATE	4 kHz
JACK USED	RCV/XMT
TRANS MODE	DUAL



ANI I REVIEW
INITIAL NJS
DATE 5/20/92

PSEG
INSPECTION SERVICES
Reviewed and Approved
MAO 5-19-92
N.D.E. SUPERVISOR

PROFILE AT 180° FROM RULE 1 (outside Radius of ELBOW)

FLOW →

PROGRAM 2

100% COVERAGE.

45° Search Unit chosen for coverage using 1/8 2/8 3/8 5/8 nodes.

N/A° Search Unit chosen for coverage using N/A nodes.

NAME: [signature] SNT LEVEL: III

REVIEWED BY: [signature] SNT LEVEL: III DATE: 13 MAY 92

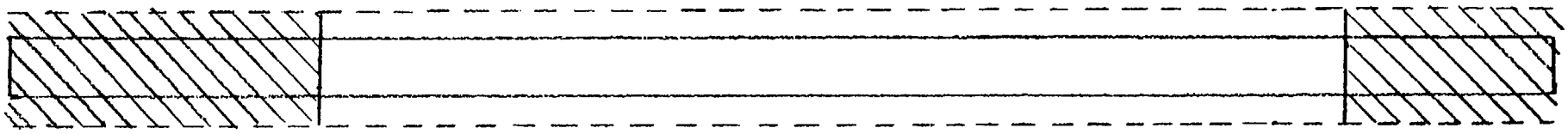
SWRI FORM No. NDTR 17-135 (REV. 6/90)

Sketch 60
PS 182

MAIN STEAM
8-MS-2141-1

8-MS-2141-1

5½ 24 27¾



SALEM UNIT 1
17-4823
Robert H. Crawford Lv. III
19 MAY 92

TOTAL EXAM AREA - 55.5
TOTAL LIMITATION AREA - 19.0
PERCENT OF AREA EXAMINE - 65.8% MT

SCALE 1/3

ANI I REVIEW
INITIAL NSA
DATE 5/20/92

PSEG
INSPECTION SERVICES
Reviewed and Approved
MAO 5-19-92
N.D.E. SUPERVISOR

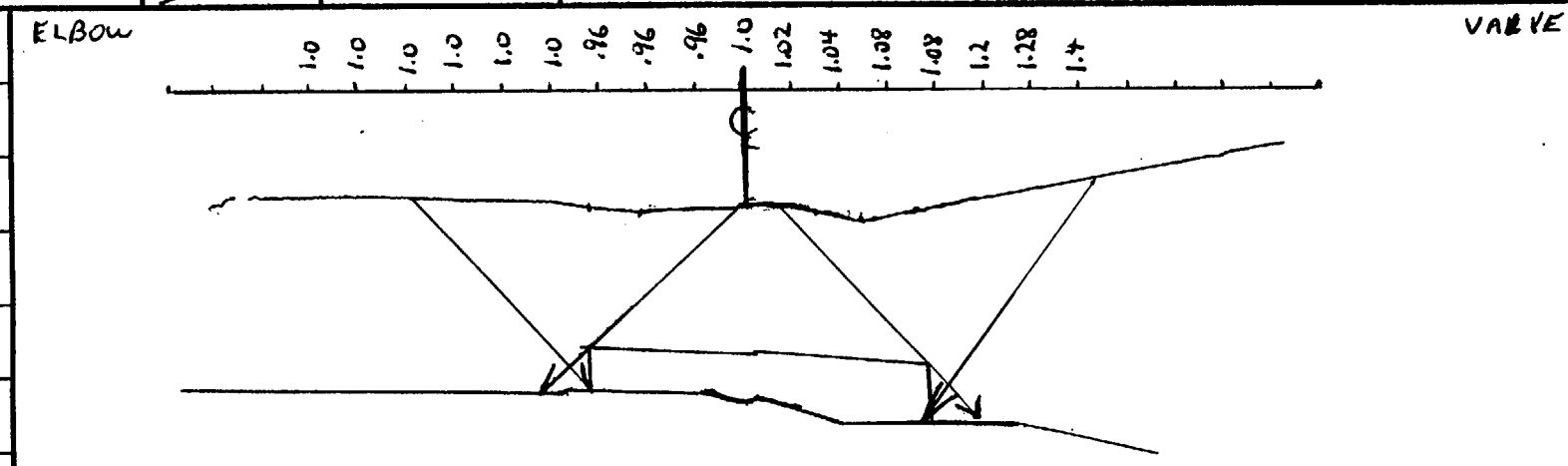
Sketch 60
Pg 2 of 2

SwRI PROFILE AND THICKNESS INFORMATION RECORD

PROJECT NO:	SITE:	DATE: (DAY - MONTH - YEAR)	TIME (24 HR. CLOCK)		SHEET NO:
17-4823	Salem Generating Station, Unit 1	08 MAY 92	INT. 1055	FINAL 1326	135119

EXAMINER	SNT LEVEL	THK. MEAS. REQ'D BY PROCEDURE No. PSE-UT49 REV 1 CHG 0 ICN ☒ N/A	INSTRUMENT: SONIC MARK I ☐ OTHER SONIC 136 ☐	SERIAL NO:	COMPONENT ID:
B. ROBERDS	II			557G	8-MS-2124-2
EXAMINER	**SNT LEVEL**		**COUPLANT:** GLYCERINE ☒ WATER ☐ OTHER (SPECIFY)		**REFERENCE BLK NO:**
W. BYLER	II				CS 100

SEARCH UNITS	
BRAND	SWRI
SERIAL NO	3129
SIZE	3/8
FREQ. (MHz)	2.25
INSTRUMENT SETTINGS	
SCREEN SIZE	2.00
DELAY	.467
MATL. CAL. VELOCITY	.232
RANGE	2.00
REP. RATE	4 kHz
JACK USED	RCV/XMT
TRANS MODE	DUAL



ANI I REVIEW
INITIAL MSA
DATE 5/20/92

PSEG
INSPECTION SERVICES
Reviewed and Approved
MAO 5-19-92
N.D.E. SUPERVISOR

PROGRAM 2 → FLOW 100% COVERAGE

45 ° Search Unit chosen for coverage using 1/8 2/8 3/8 5/8 nodes.
N/A ° Search Unit chosen for coverage using N/A nodes.

NAME: C. N. Crawford SNT LEVEL: III

REVIEWED BY: C. N. Crawford SNT LEVEL: III DATE: 13 MAY 92

Sketch 1 of 2

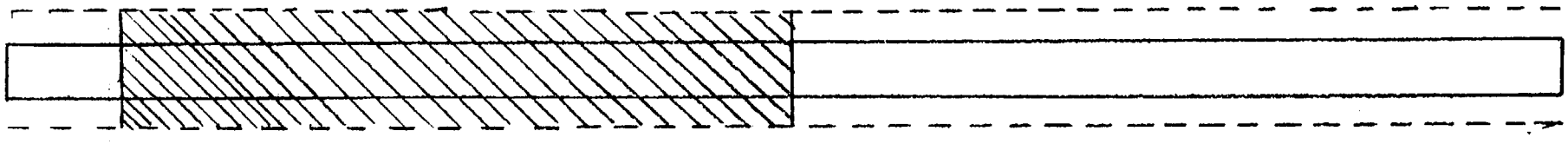
SWRI FORM No. NDTR 17-135 (REV. 6/90)

243500

MAINSTEAM
8-MS-2124-2

8-MS-2124-2

0 2 14 27¾



SCALE 1 X 3

TOTAL EXAM AREA = 55.5
TOTAL LIMITATION AREA = 24
PERCENT OF AREA EXAMINE = 56.8% M.T.

SALEM UNIT 1
17-4823
[illegible] Co. ~~III~~ II
19 MAY 92

SCALE 1/3

ANI I REVIEW
INITIAL [illegible]
DATE 5/20/92

PSEG
INSPECTION SERVICES
Reviewed and Approved
MAO 5/19-92
N.D.E. SUPERVISOR

Sketch 61
282

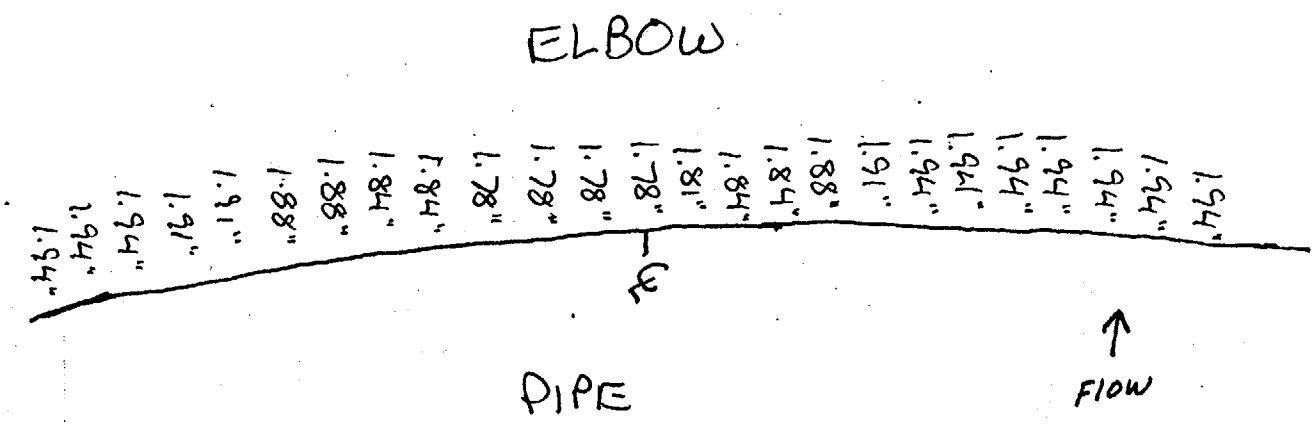
ULTRASONIC WELD PROFILE AND THICKNESS EXAMINATION RECORD

SH.RA-AP.ZZ-0101(Q) FORM 11

231720

NDE Lab: VCR	SITE: SALEM I	DATE: 10/13/95	TIME (24 HR. CLOCK) INT. 0800 FINAL 1200		SHEET NO: 120133
EXAMINER: [signature]	SNT LEVEL: II	Procedure No. & Rev: SH.RA-15.ZZ 0137(Q) REV. 0	INSTRUMENT: SONIC MARK I ☐ OTHER SONIC-136 ☑	SERIAL NO: 136-158	COMPONENT ID: 32-MS-2111-3LD1
EXAMINER: Donald Hackill	SNT LEVEL: II		Couplant, Specify Type: SONOTRACE 40 BATCH II 94-014		REFERENCE BLK NO: 788176

SEARCH UNITS	
BRAND	KBA
SERIAL NO	06545
SIZE	1/2"
FREQ. (MHz)	4 MHZ
INSTRUMENT SETTINGS	
SCREEN SIZE	3.33"
DELAY	.990"
MATL. CAL.	.232 IN/NS
RANGE	.033"/SC.DIV
REP. RATE	4 KHZ
JACK USED	N/A
TRANS MODE	DUAL



Sketch 62
192

REVIEWED & ACCEPTED
FACTORY MUTUAL
ENGINEERING ASSOCIATION
[signature] 11/15/95
AUTH. NUCLEAR INSERVICE INSP. DATE

N/A ° Search Unit chosen for coverage using N/A nodes.
N/A ° Search Unit chosen for coverage using N/A nodes.

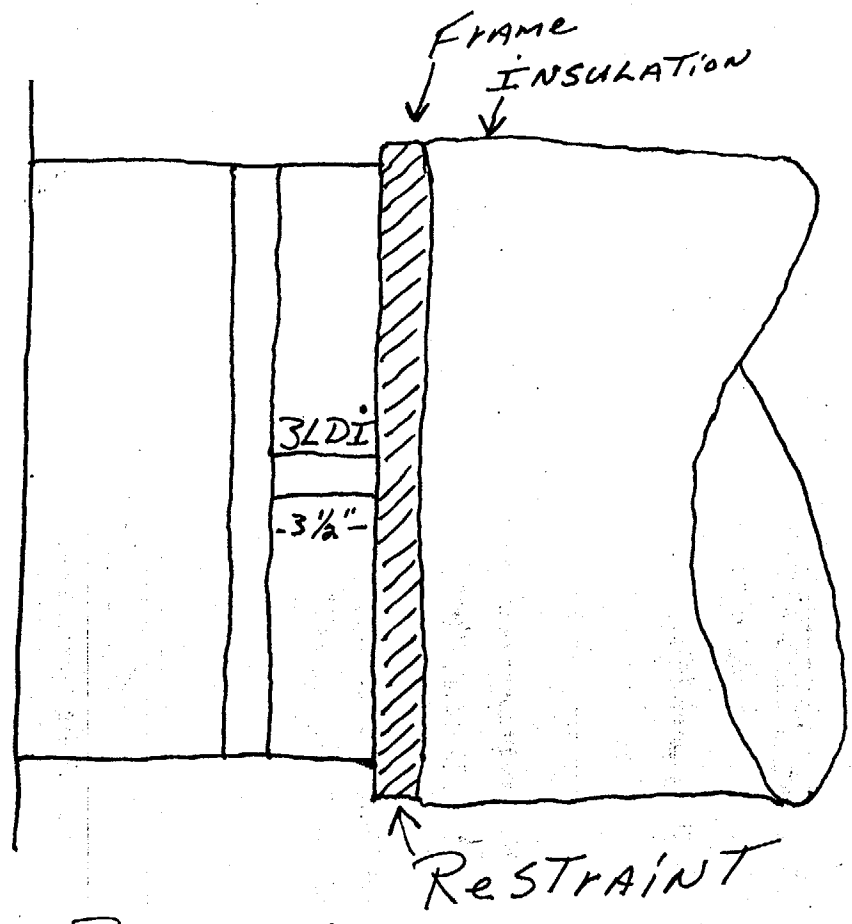
PSI

Reviewed By: [signature] SNT LEVEL: III DATE: 10-27-95

PSEG
INSPECTION SERVICES
Reviewed and Approved
[signature] 11/4/95

Rev. 3

Salem Unit I
Weld # 32-MS-2111-3LDI



Required 5" of Length

Sketch G2
2-82

Tim Wly CVIII
11-1-92