DATA SHEET 1

The Nuclear Power QA Staff Baseline and Inservice Inspection Section representative shall sign-off the applicable portions of this data sheet when the examination requirements of Sections 6.0, 7.0, 8.0, and 9.0 of this program have been completed.

EXAMINATION SECTION	QA STAFF REPRESENTATIVE	DATE
Class A Components		
Reactor Vessel		
6.1.1.1		
6.1.1.2		
6.1.1.3		
6.1.1.4		
6.1.1.5		
6.1.2		
6.1.3		
6.1.4		
6.1.5		
6.1.7		
6.1.8		
6.1.9		
6.1.10		
Pressurizer		
6.2.1		
6.2.2		
6.2.3		
6.2.4		
6.2.5		
6.2.6		
6.2.7		
Steam Generators		
6.3.1		
6.3.2		
6.3.3		
6.3.4		
6.3.6		
6.3.7		

DATA SHEET 1 (Cont'd)

EXAMINATION SECTION	QA STAFF REPRESENTATIVE	DATE
Class A Components (Continued)		
Piping		
6.4.1		
6.4.2		
6.4.3		
6.4.4		
6.4.5		
6.4.6		
RCP		
6.5.1		
6.5.2		
6.5.3		
6.5.4		
6.5.5		
6.5.6		
Valves		
6.6.1		
6.6.2		
6.6.3		
6.6.5		
Class B Components		
Steam Generators		
7.1.1		
7.1.2		
RHRHX		
7.2.1		
7.2.2		
7.2.3		
RHX		
7.3.1		
7.3.3		
LHX		
7.4.1		
7.4.2		

DATA SHEET 1 (cont'd)

EXAMINATION SECTION	QA STAFF REPRESENTATIVE	DATE

Class B Components (Continued)

ELHX

7.5.1

BIT

7.6.1
7.6.2
7.6.3
7.6.4

WAT

7.7.1
7.7.2
7.7.3
7.7.4

AST

7.8.1
7.8.2

Piping

7.9.1
7.9.2
7.9.3
7.9.5
7.9.6

RHRP

7.10.4

PDP

7.11.3

CCP

7.12.3

DATA SHEET 1 (cont'd)

EXAMINATION SECTION	QA STAFF REPRESENTATIVE	DATE
Class B Components (Continued)		
SIP		
7.13.3		
Valves		
7.14.3		

All examinations required by the referenced sections of this data sheet have been performed and acceptance criteria has been satisfied.

_____ _____
Inspection Section Representative Date

Reviewed By: _____ _____
Inspection Section Supervisor, Date

Reviewed By: _____ _____
Supervisor, Programs and Procedures Date

Approved by: _____ _____
Supervisor, Baseline and Inservice Inspection Group Date

APPENDIX D

NOTIFICATION OF INDICATION
Part I - Findings

Examination Report No. _____ Plant/Unit _____

Weld Map Number _____ Examination Performed _____

Description of Indication: (Attach Sketch/Photograph)

_____

_____

_____

_____

_____

Signature of Examiner/Certif. Level _____ Date

Signature of Field Supervisor (Contractor) _____ Date

Inspection Section Representative _____ Date

PART II - Disposition

_____

_____

_____

_____

_____

_____

_____

Disposition Approved by TVA Level III Examiner _____ Date

Verification of Completed Corrective Action

_____

_____

Signature _____ Date _____
Inspection Section
Representative

TABLE C

LIST OF DRAWINGS -UNIT #1

REACTOR VESSEL

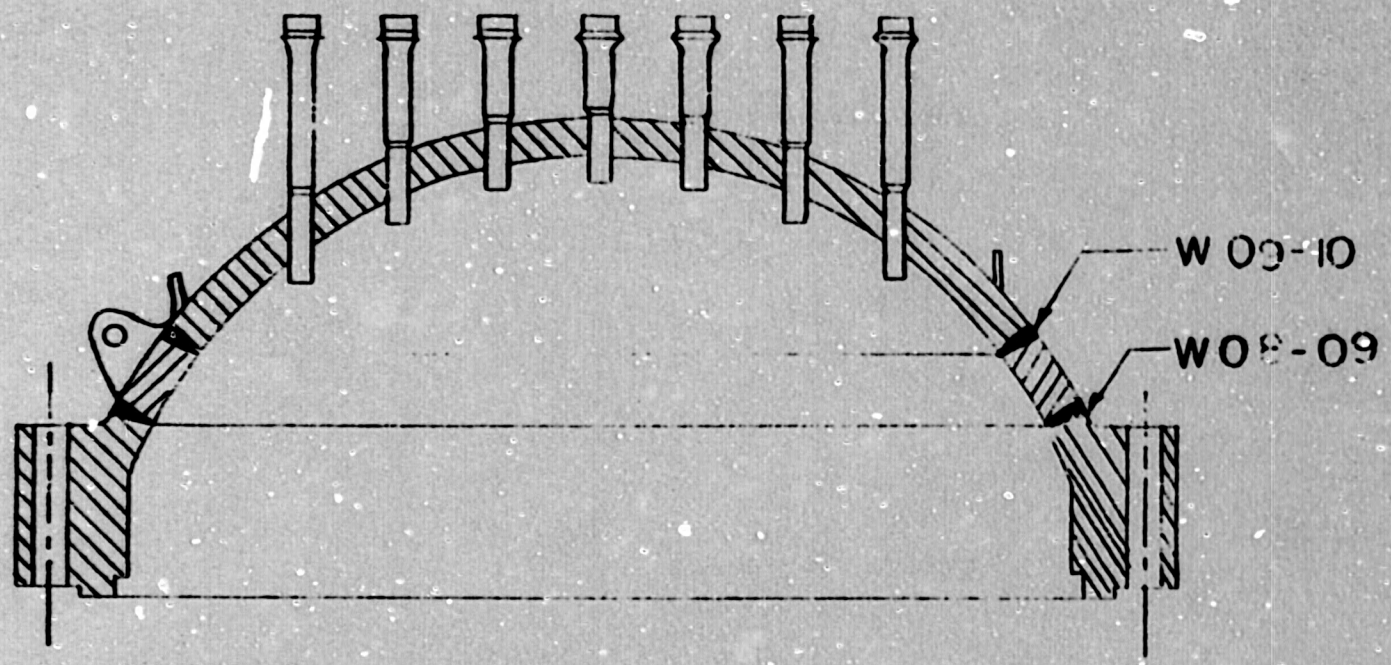
DRAWING NO.	TITLE	APPENDIX A PAGE NO.
CH-M-2549-A	Reactor Vessel Closure Head	2
CH-M-2551-A	Reactor Vessel	3-9
CH-M-2684-C	Upperhead Penetrations	10
CH-M-2685-B	Auxiliary Head Adapter	11
ISI-0012-A	Control Rod Drive Housing	12
	REACTOR COOLANT PUMPS	
ISI-0048-B	Reactor Coolant Pump Casing Weld Locations	
CHM-2672-B	RCP Main Flange Bolt Circle	
	PRESSURIZER	
CH-M-2570	Pressurizer	13-16
	STEAM GENERATORS	
CH-M-2660-B	Steam Generator	17-18
	RESIDUAL HEAT REMOVAL HEAT EXCHANGERS	
CH-M-2662	Residual Heat Removal Heat Exchanger Channel Welds	19
	BORON INJECTION TANK	
ISI-0053-B	Boron Injection Tank Weld Locations	
	ACCUMULATOR SURGE TANK	
ISI-0072-A	Accumulator Surge Tank Weld Locations	
	LETDOWN HEAT EXCHANGER	
ISI-0075-A	Letdown Heat Exchanger Weld Locations	
	EXCESS LETDOWN HEAT EXCHANGER	
ISI-0076-A	Excess Letdown Heat Exchanger Weld Location	

TABLE C

LIST OF DRAWINGS -UNIT #1

REACTOR VESSEL

DRAWING NO.	TITLE	APPENDIX A PAGE NO
*	**REGENERATIVE HEAT EXCHANGER**	
* ISI-0077-A	Regenerative Heat Exchanger Weld Locations	
	PIPING AND VALVE WELD MAPS	
CH-M-2547-B	Reactor Coolant Piping	20
CH-M-2636-C	Residual Heat Removal	21-27
CH-M-2669-C	Mainsteam	28-31
CH-M-2671-C	Feedwater	32-39
CH-M-2758-C	Safety Injection	40-49
ISI-0004-C	Upperhead Injection	50-53
ISI-0005-C	Chemical and Volume Control	54
ISI-0017-C	Reactor Coolant System	55-60
ISI-0050-C	CVCS Seal Water Injection	



TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
CLOSURE HEAD

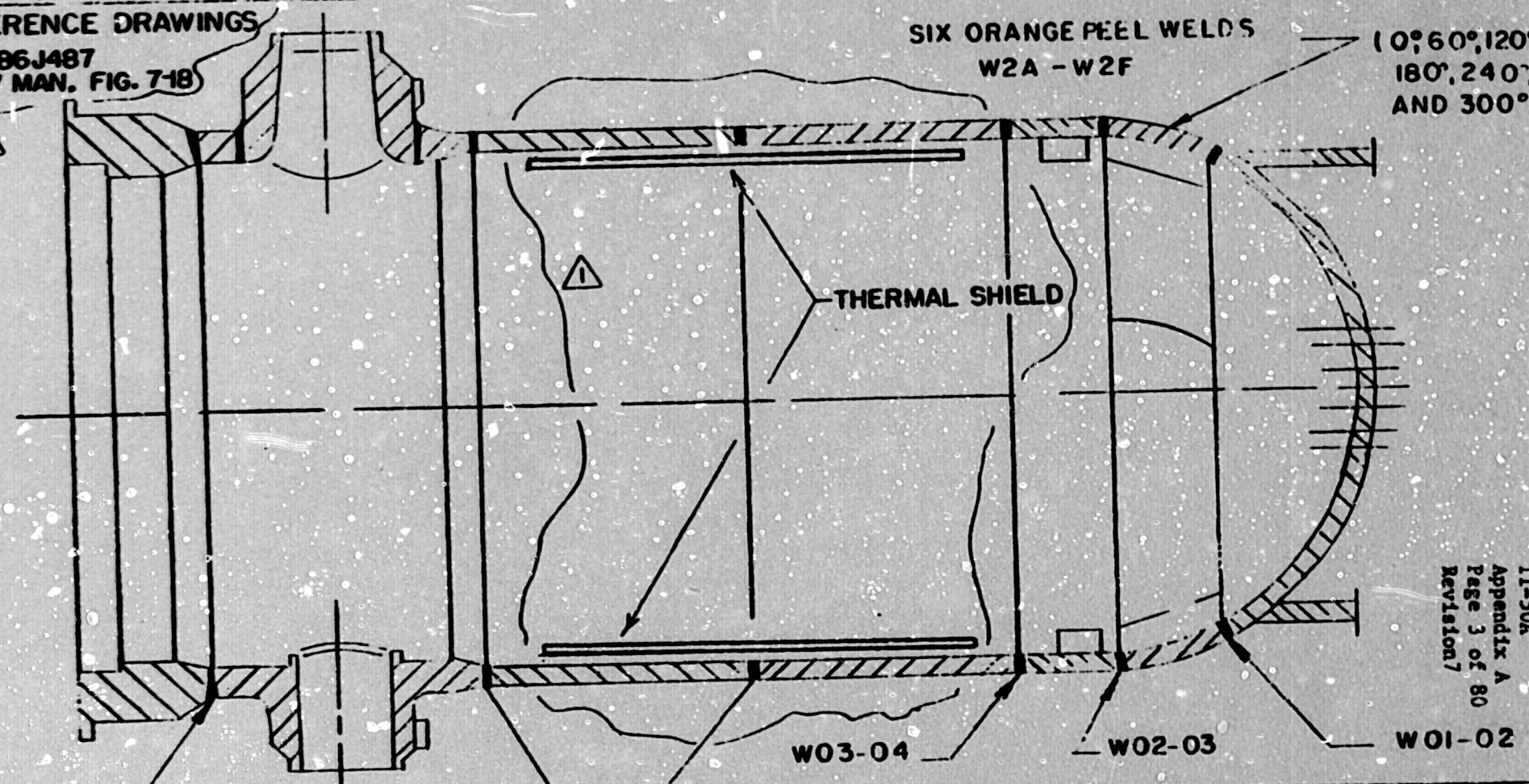
NTS
RAS

APPROVED
G S Belen

10-2-78
1 OF 1
chm 2549 A

VA 6630-A (REP 2-60)

REFERENCE DRAWINGS
W686J487
RPV MAN. FIG. 7-18



NO.	DATE	REVISIONS	CK'D	APP.
1	4-7-82	ADD THERMAL SHIELD AND REF. DWG	DAD	

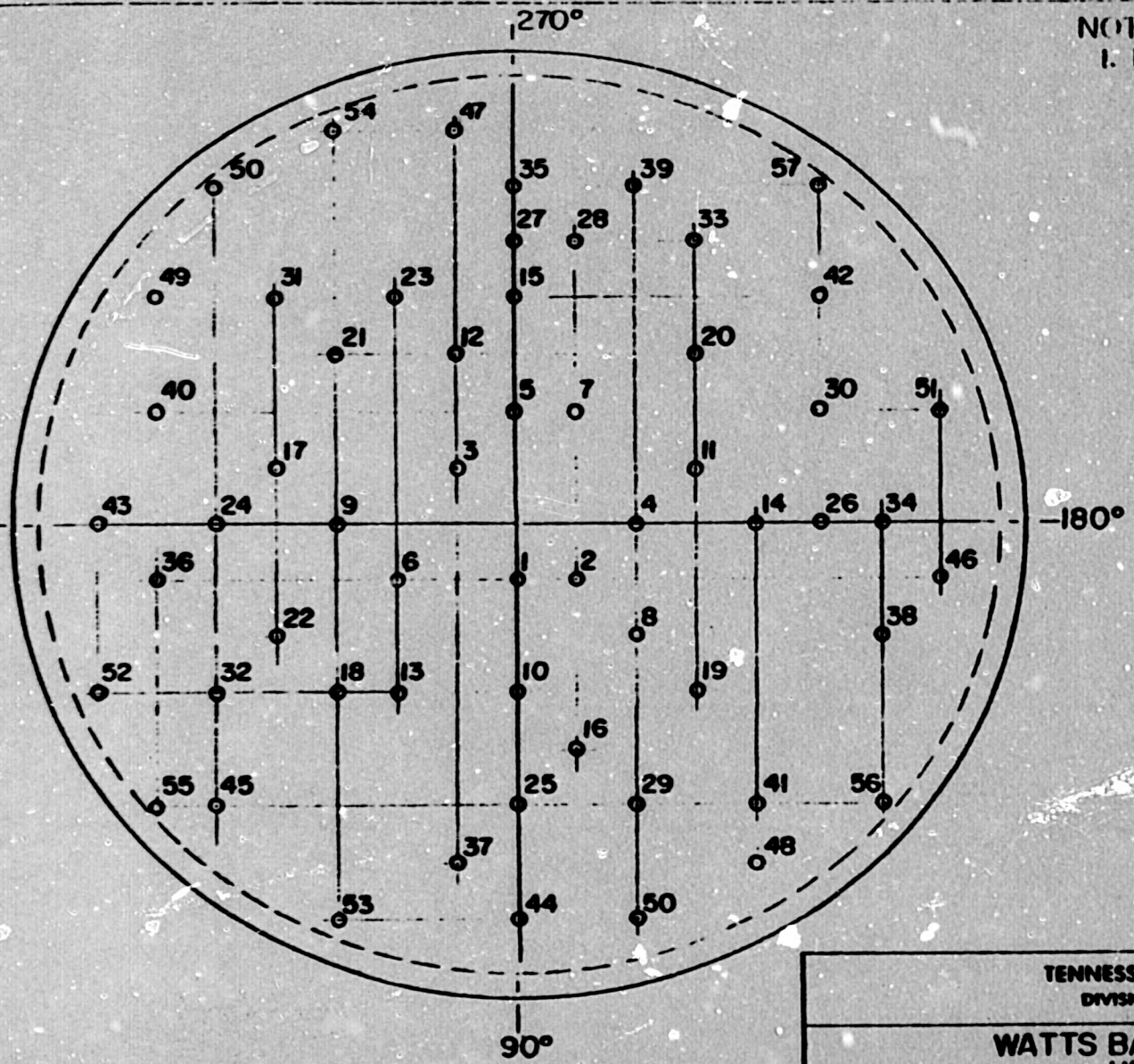
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(SEAM WELDS)

SCALE: NTS
DRAWN
TRACED RAS
CHECKED
SUBMITTED
APPROVED
DATE 10-3-78
SHEET 1 OF 7 SHEETS
CH-M 2551 A R1

WBNP
TI-50A
Appendix A
Page 3 of 80
Revision 7

NOTES:
1. FOR PENETRATION DETAIL SEE SHEET 3

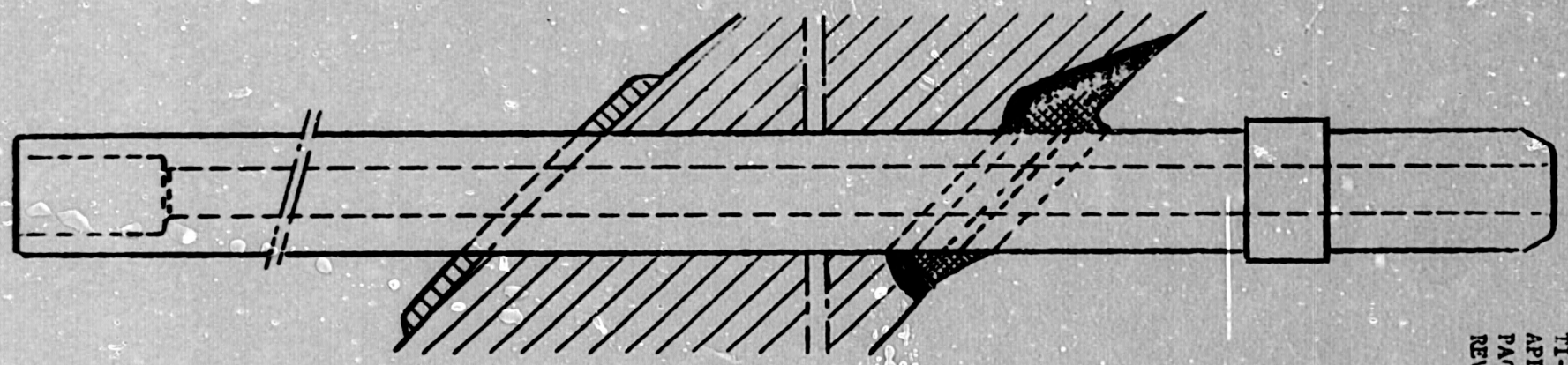


UBNP
TI-50A
APPENDIX A
PAGE 4 OF 80
REV. 7

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(BOTTOM HEAD PENETRATIONS)

SCALE: NTS	SUBMITTED	APPROVED	DATE 12/23/80
DRAWN RCV			SHEET 2 OF 7 SHEETS
TRACED			CH-M-2551-A
CHECKED			

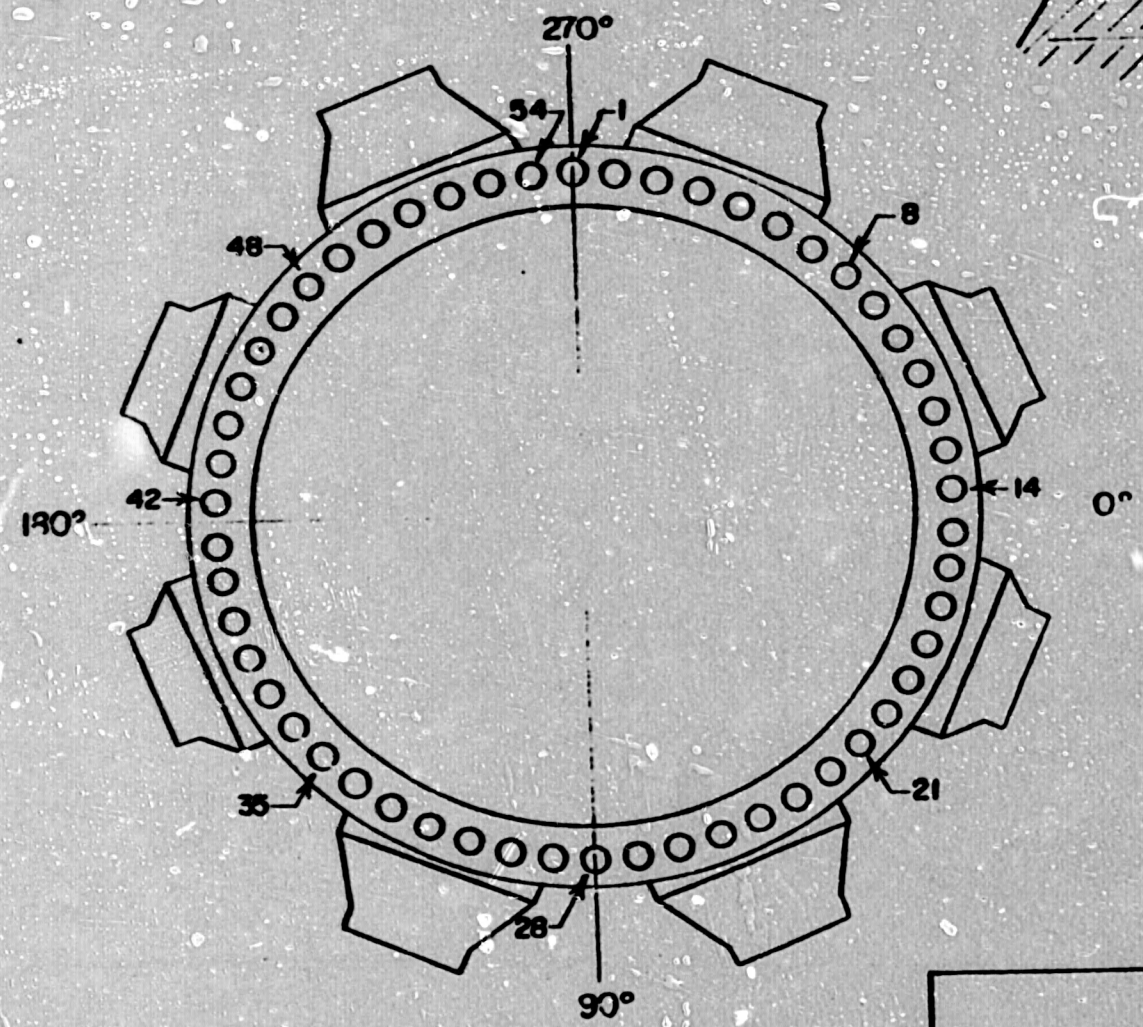


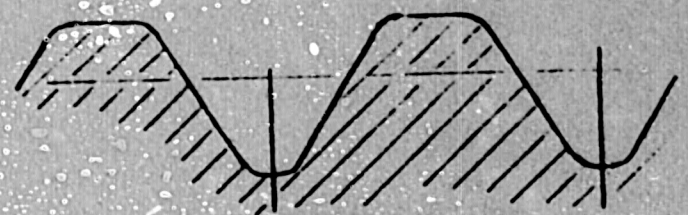
WBNP
TI-50A
APPENDIX A
PAGE 5 OF 80
REV. 7

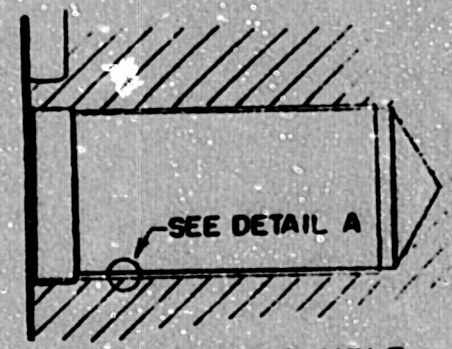
TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(BOTTOM HEAD PENETRATION DETAIL)

SCALE: NTS DRAWN TRACED KEV CHECKED	SUBMITTED	APPROVED	DATE 12/24/80 SHEET 5 OF 7 SHEETS CH-M-2551-A







DETAIL OF STUD HOLE

WBNP
TI-50A
APPENDIX A
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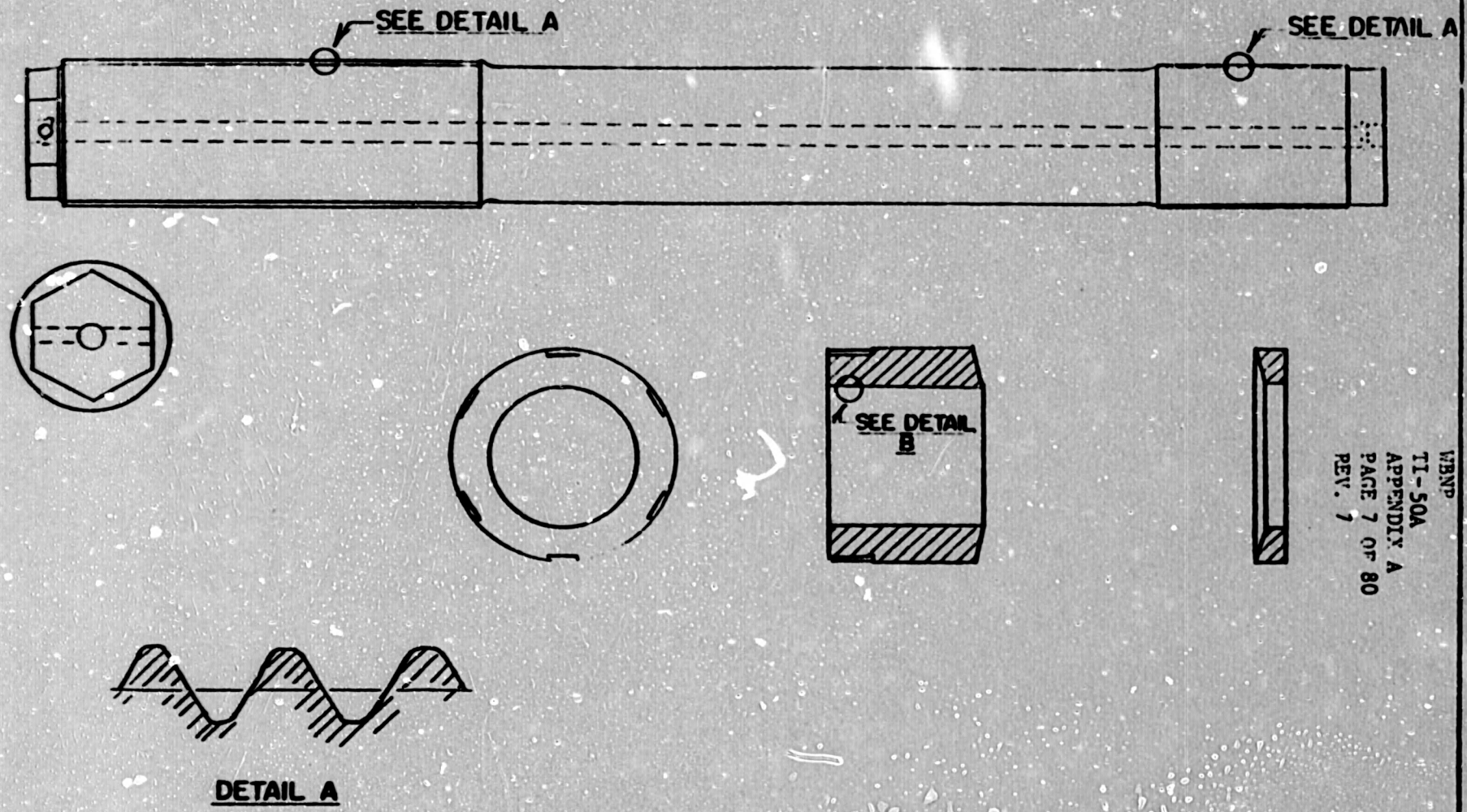
REV. 7

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(BOLTING PATTERN)

SCALE: NTS	SUBMITTED	APPROVED	DATE 12/24/80
DRAWN			SHEET 4 OF 7 SHEETS
TRACED KEV			CH-M-2551 A
CHECKED			

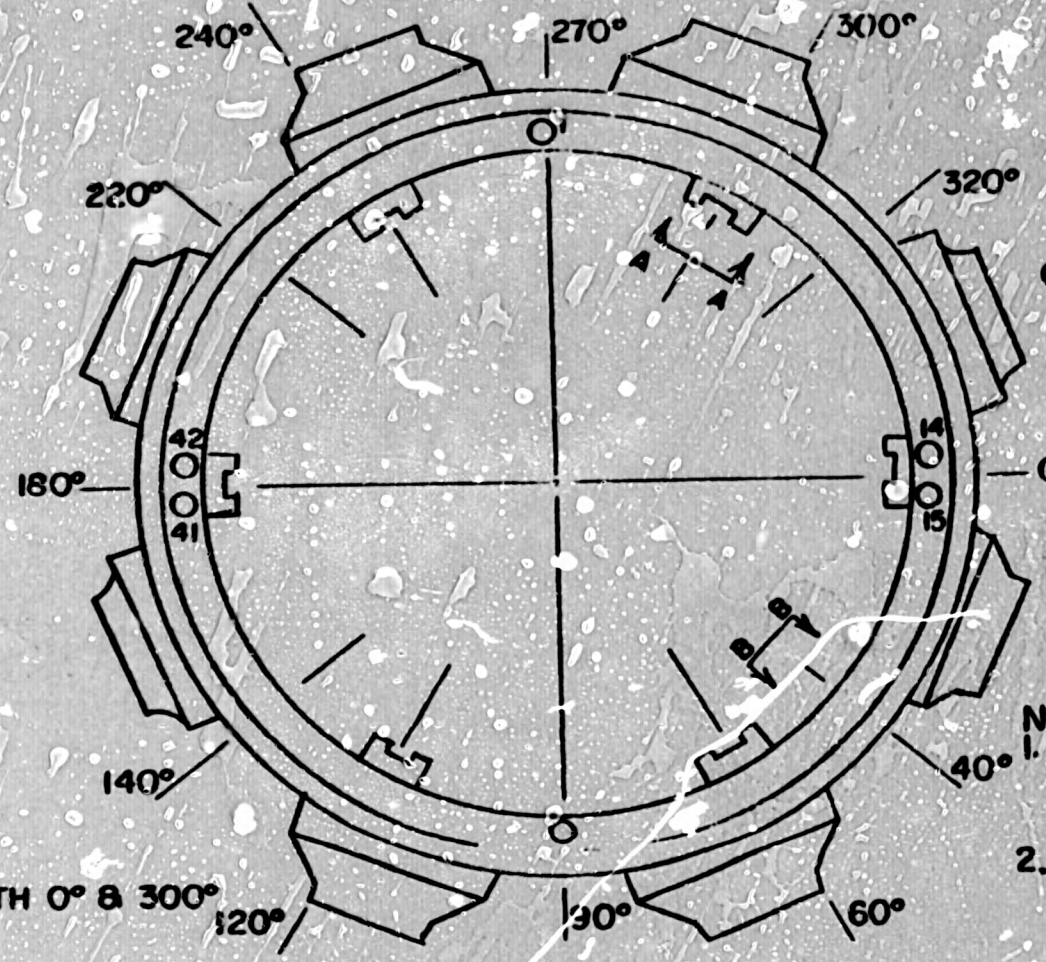


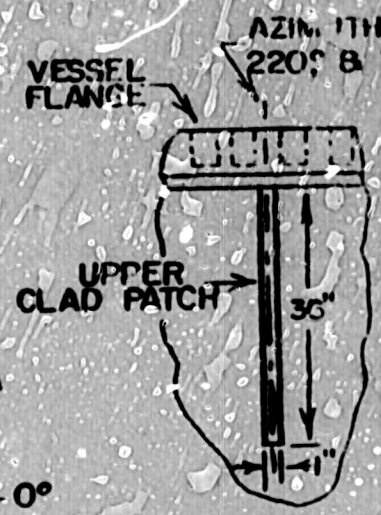
WBNP
TI-50A
APPENDIX A
PAGE 7 OF 80
REV. 7

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(CLOSURE STUDS,
NUTS, AND WASHERS)

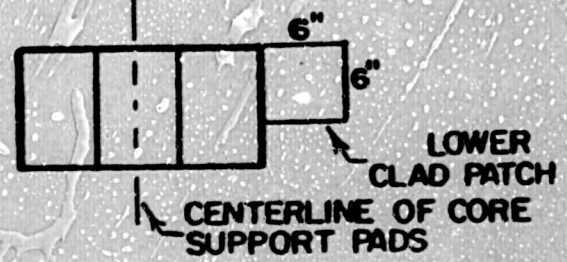
SCALE NTS DRAWN TRACED KLB CHECKED	SUBMITTED	APPROVED	DATE 12/24/80 SHEET 5 OF 7 SHEETS CH-M-2551-A





SECTION B-B

NOTES:
1. UPPER CLAD PATCH EXAMINATIONS SHALL BE DONE THROUGH THE RADIATION SPECIMEN ACCESS PORTS.
2. AZIMUTHS ARE TAKEN OFF OF REACTOR CENTERLINE.



SECTION A-A

WBNP
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APPENDIX A
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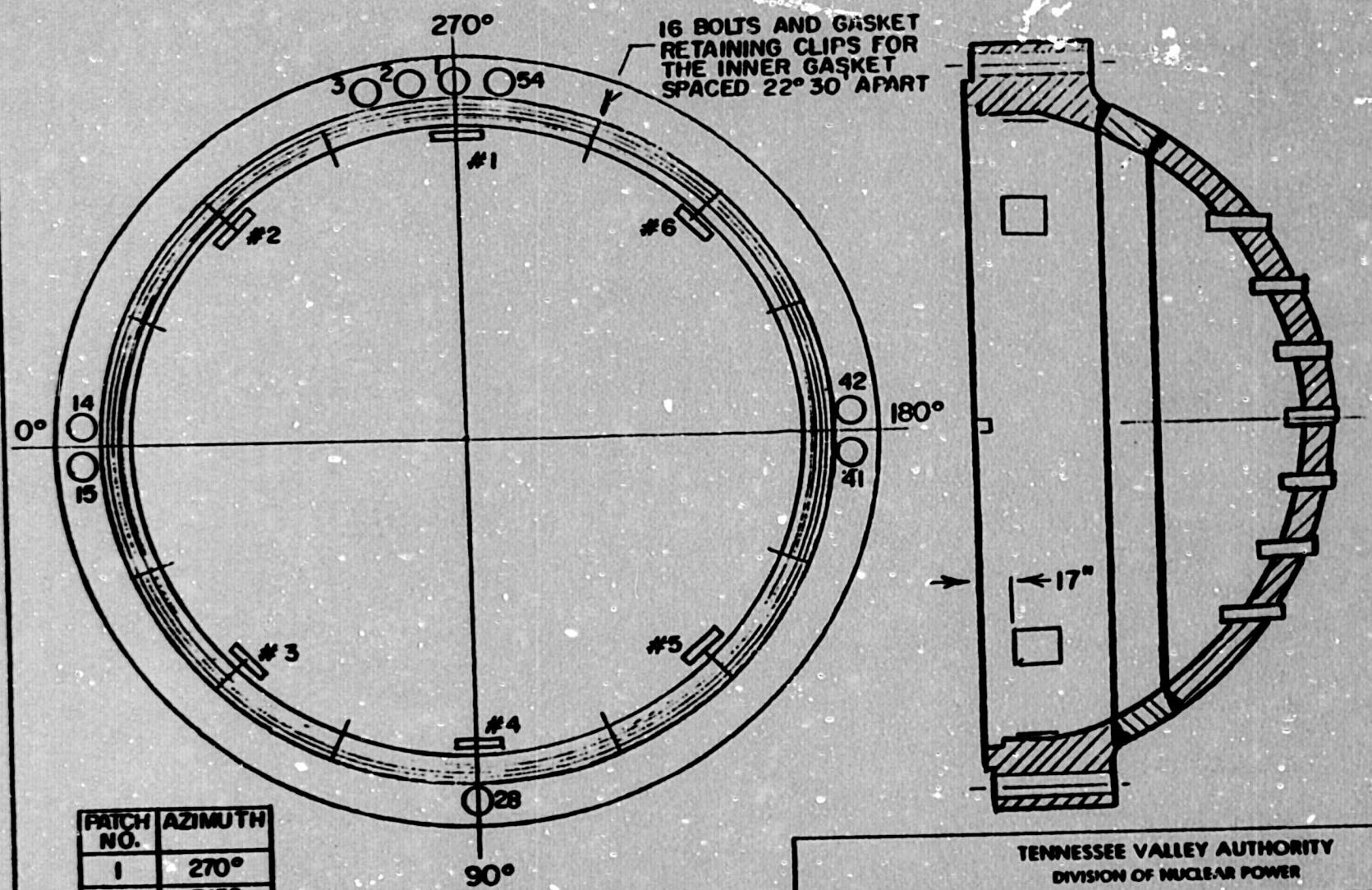
REV. 7

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(CLAD PATCHES)

SCALE: N/S DRAWN TRACED MCV CHECKED	SUBMITTED	APPROVED	DATE 12/24/80 SHEET 6 OF 7 SHEETS CH-M 2551-A

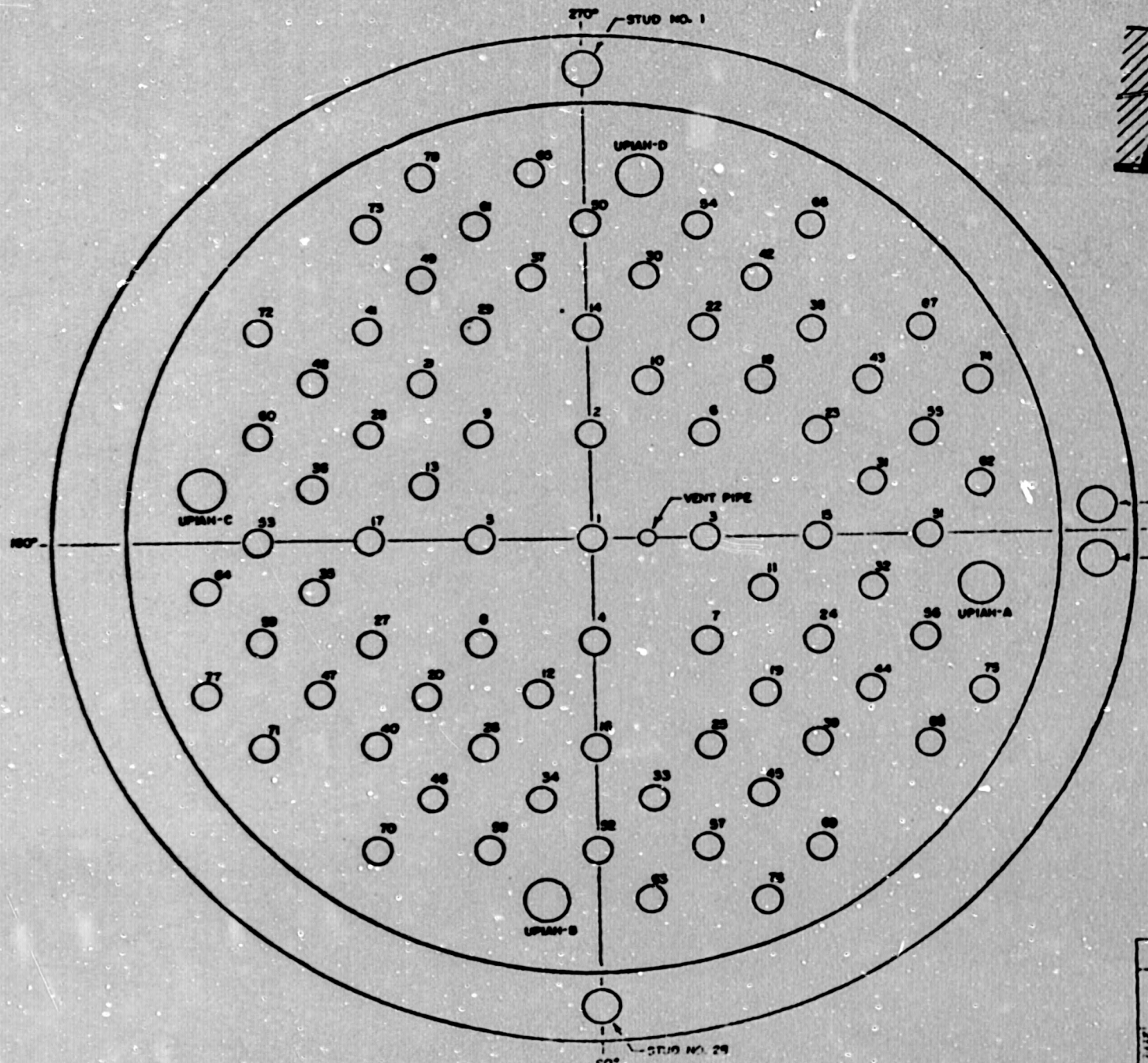


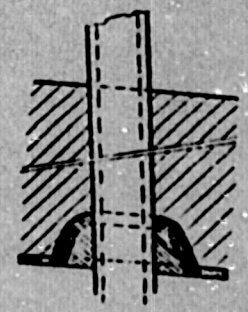
PATCH NO.	AZIMUTH
1	270°
2	315°
3	45°
4	90°
5	135°
6	225°

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
REACTOR VESSEL
(CLOSURE HEAD CLADDING PATCHES)

SCALE: NTS DRAWN TRACED KTV CHECKED	SUBMITTED	APPROVED	DATE 1/5/81 SHEET 7 OF 7 SHEETS CH-M-2551-A





VENT PIPE PENETRATION DETAIL

NOTES:
1. ALL CROW NUMBERS ARE PREFIXED BY CROW FOR THE WELD NUMBERS
2. FOR BOTTOM HEAD PENETRATIONS SEE DRAWING NO CN-M-2514-A
3. FOR AUXILIARY HEAD ADAPTER AND CONTROL ROD DRIVE PENETRATION DETAILS SEE DRAWING NOS CN-M-2585-B AND 151-0012-A RESPECTIVELY

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNIT #1
UPPER HEAD PENETRATIONS

WBNP
TI-50A
APPENDIX A
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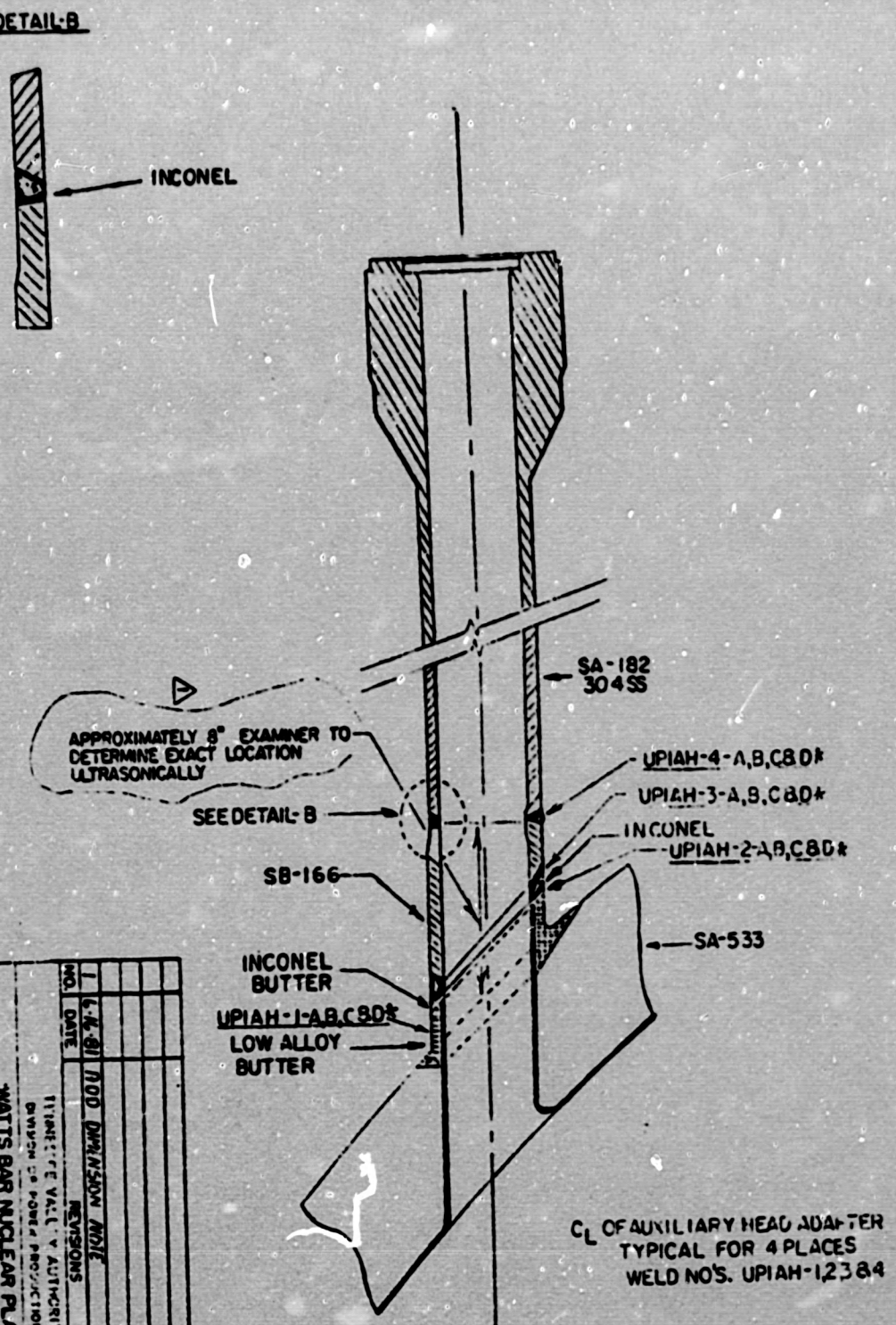
REV. 7



NO.	DATE	REVISIONS
1	6-14-81	ADD DIMENSION NOTE

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION
WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
AUXILIARY HEAD ADAPTER

CHM-2685B

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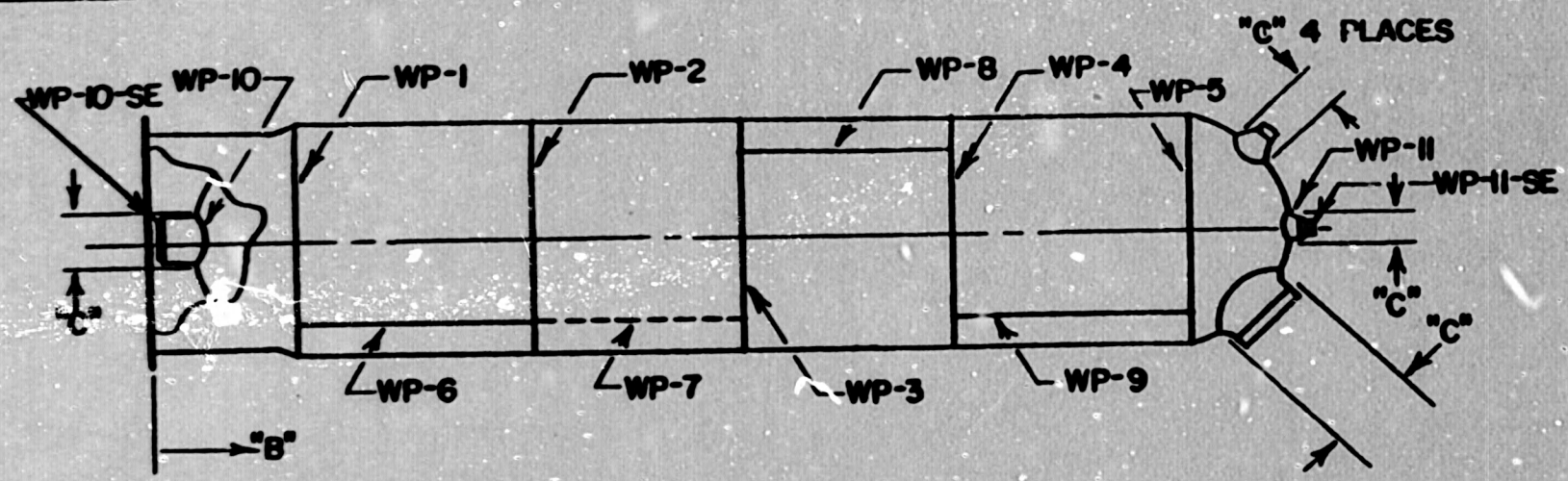
NTS

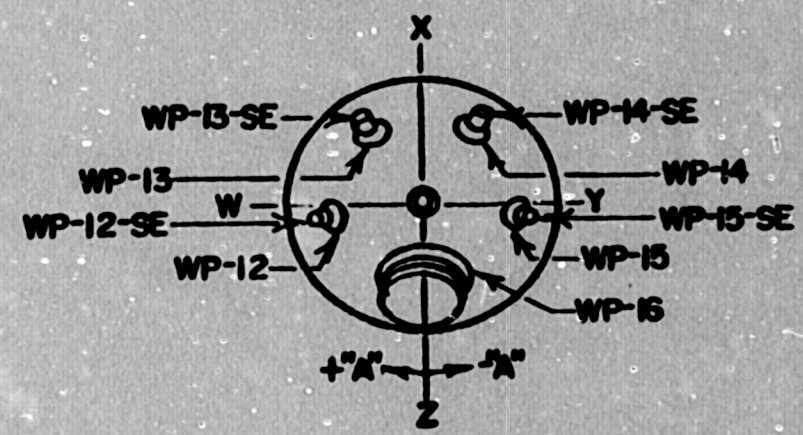
WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
CONTROL ROD
DRIVE HOUSING

12-22-80

V-2100-012-A



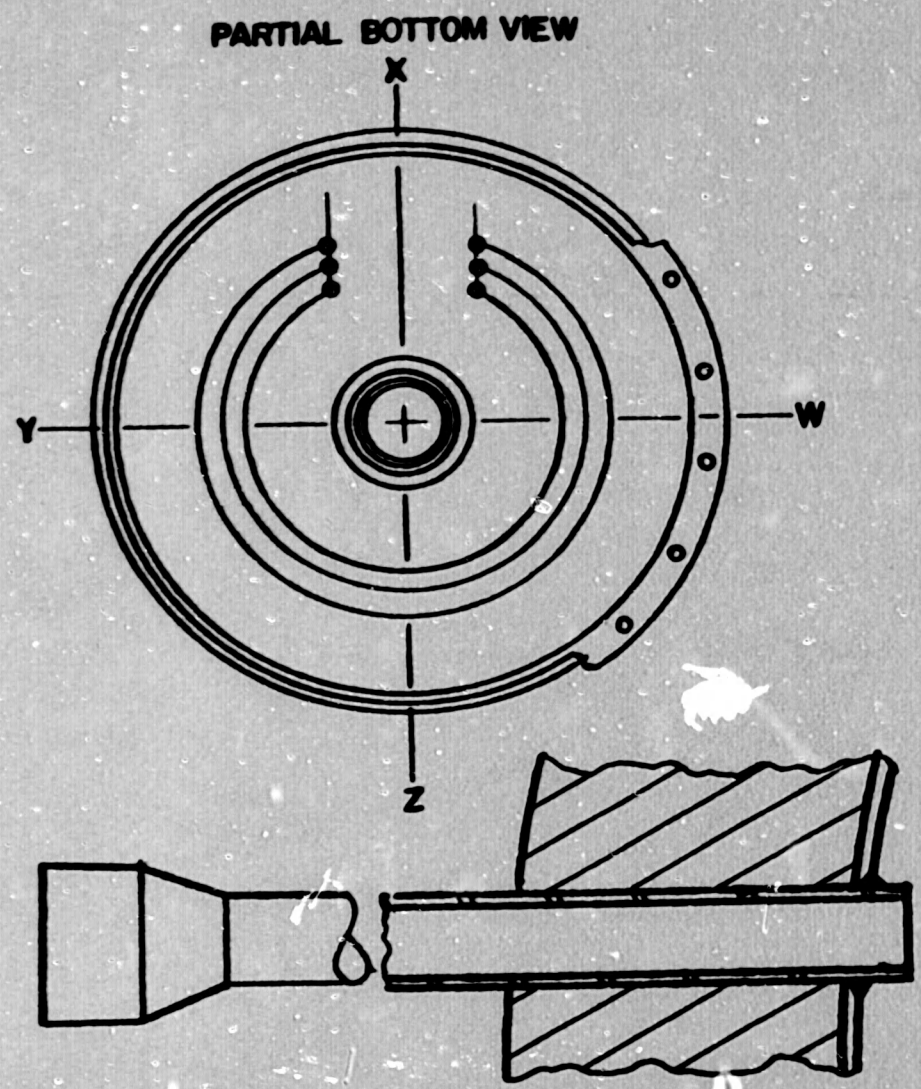
AS BUILT DIMENSIONS				
TITLE	SEAM NO.	"A"	"B"	"C"
GIRTH WELDS	1		56.44"	
	2		193.25"	
	3		322.12"	
	4		450.87"	
	5		588.12"	
LONGITUDINAL WELDS	6	+30°		
	7	-29°		
	8	+133°		
	9	+47°		
SURGE NOZ.	10	0°		24.50"
SPRAY NOZ.	11	0°		12.75"
SAFETY NOZ.	12	+61°		15.00"
SAFETY NOZ.	13	+146° 59'		15.00"
SAFETY NOZ.	14	-147° 7'		15.00"
RELIEF NOZ.	15	-82°		15.00"
MANWAY	16	-1°		32.50"

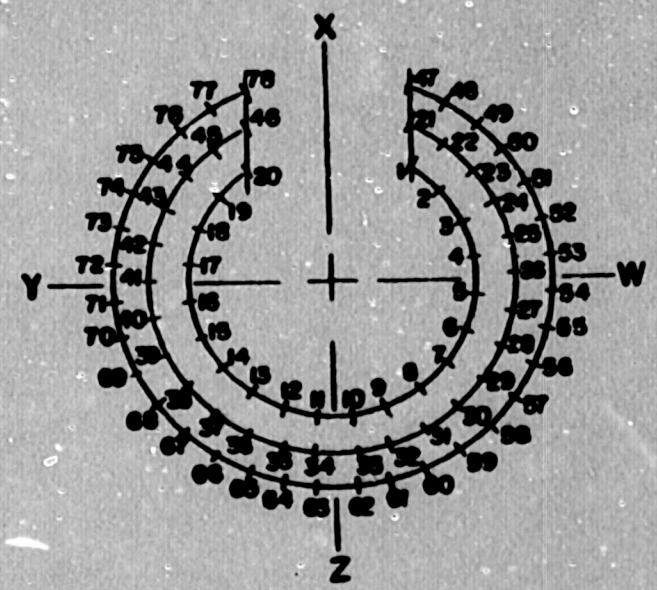


TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNIT #1
PRESSURIZER

SCALE: NTS DRAWN TRACED KEV CHECKED	SUBMITTED	APPROVED	DATE 12/9/80 SHEET 1 OF 4 SHEETS CH-M-2510-A





EBNP
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APPENDIX A
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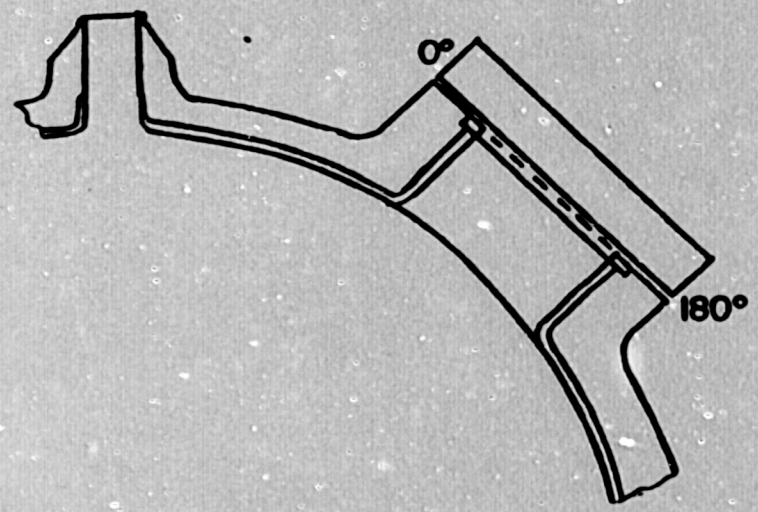
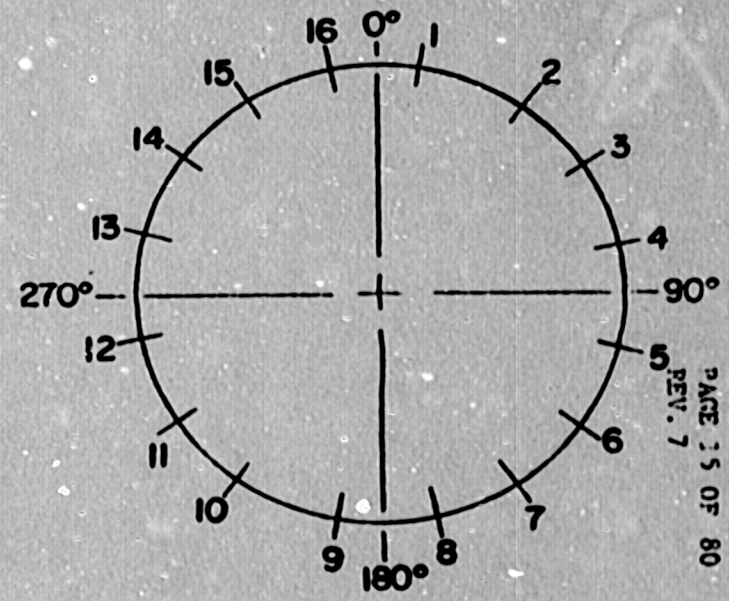
TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNIT #1
PRESSURIZER
(HEATER PENETRATIONS)

SCALE: NTS	SUBMITTED	APPROVED	DATE 12/5/80
DRAWN			SHEET 2 OF 4 SHEETS
TRACED KEV			CH-M-2570-A
CHECKED			



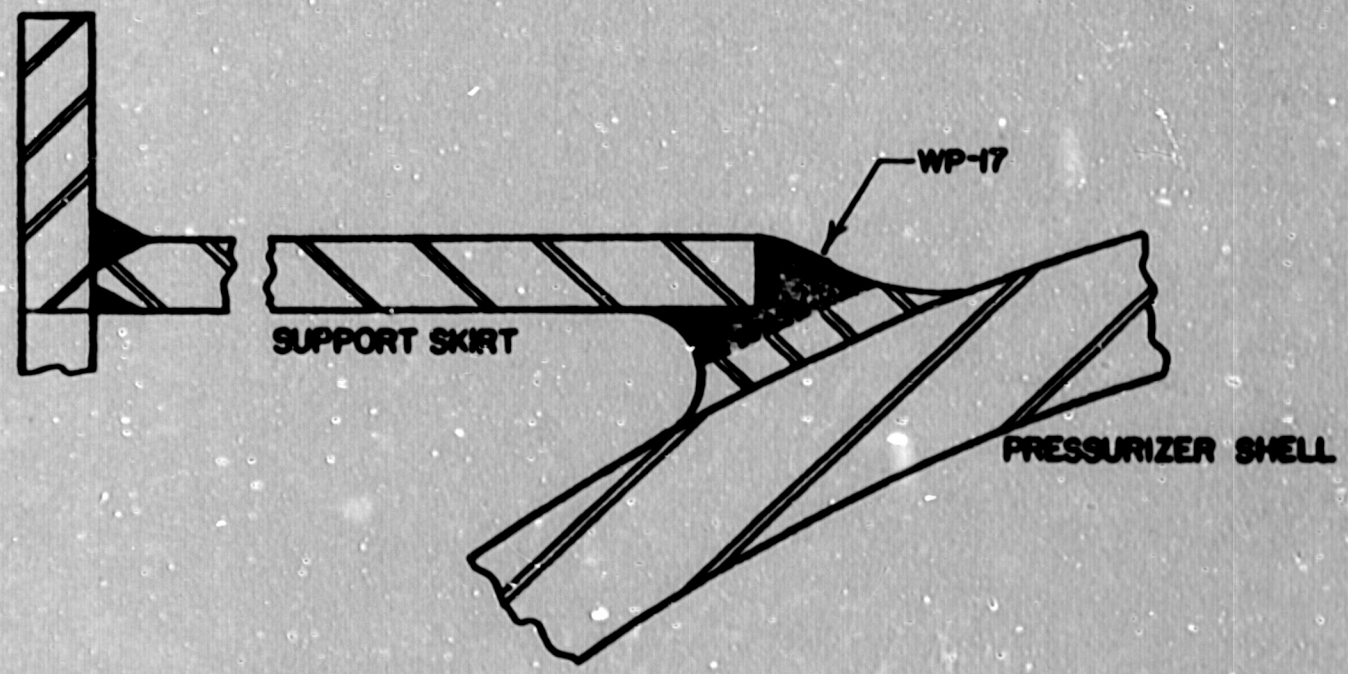


NOTE:
TO DO THE CLAD PATCH INSPECTION, PLACE THE CLAD PATCH FRAME (SEE DRAWING NO. CH-M-2525-A) ON STUDS #8 AND #9.

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNIT #1
PRESSURIZER
(MANWAY BOLT PATTERN)

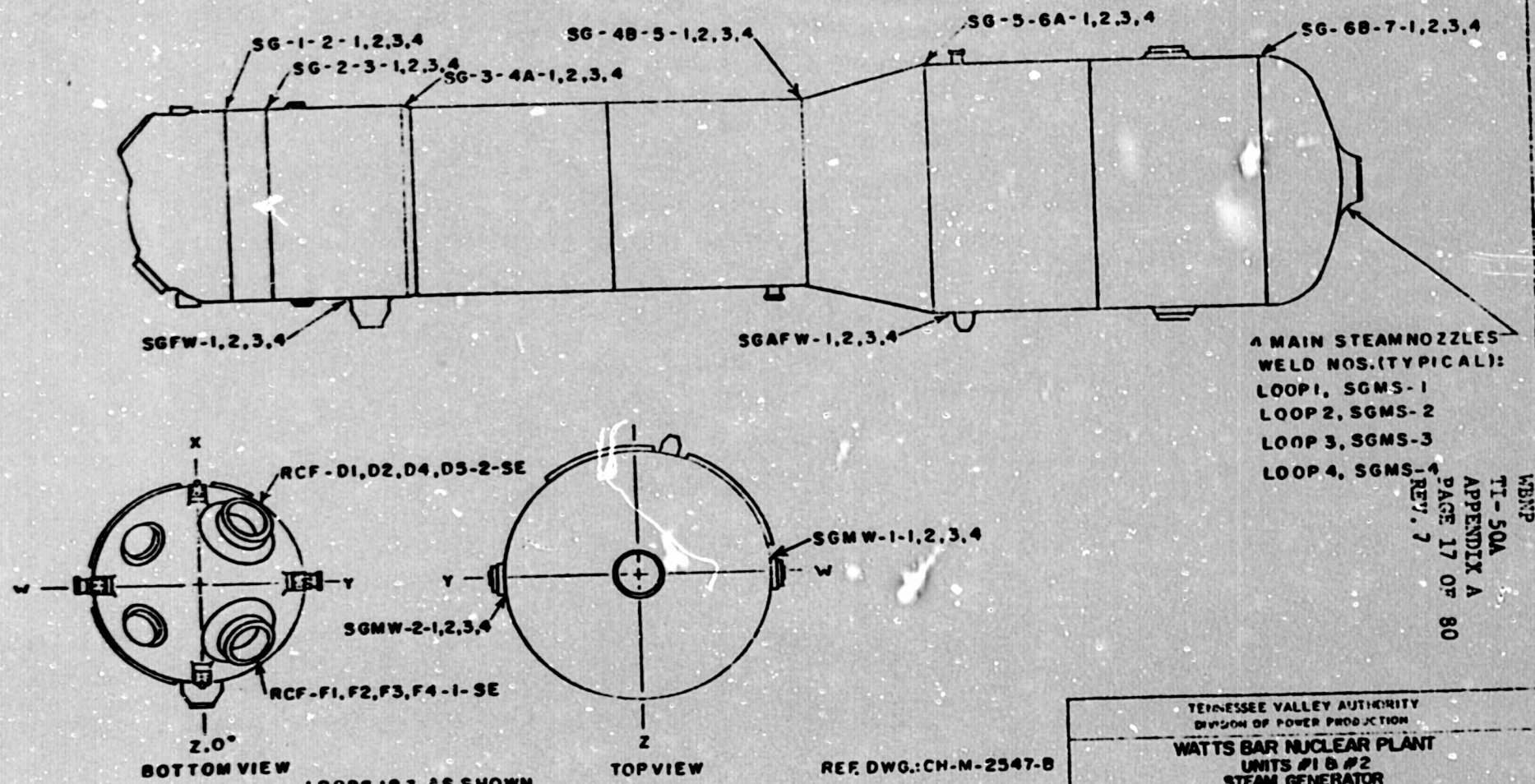
SCALE: NTS DRAWN TRACED RRV CHECKED	SUBMITTED	APPROVED G. L. Belew	DATE 12/9/80 SHEET 3 OF 4 SHEETS CH-M-2570-A



TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNIT #1
PRESSURIZER
(SUPPORT SKIRT WELD)

SCALE NTS	SUBMITTED	APPROVED	DATE 12/10/80
			CH-M-2570-A



WBNP
TI-50A
APPENDIX A
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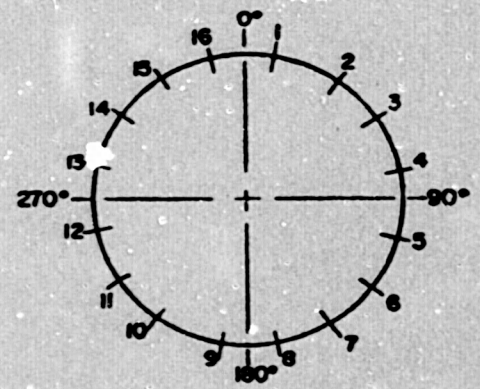
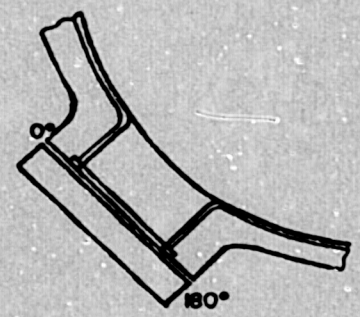


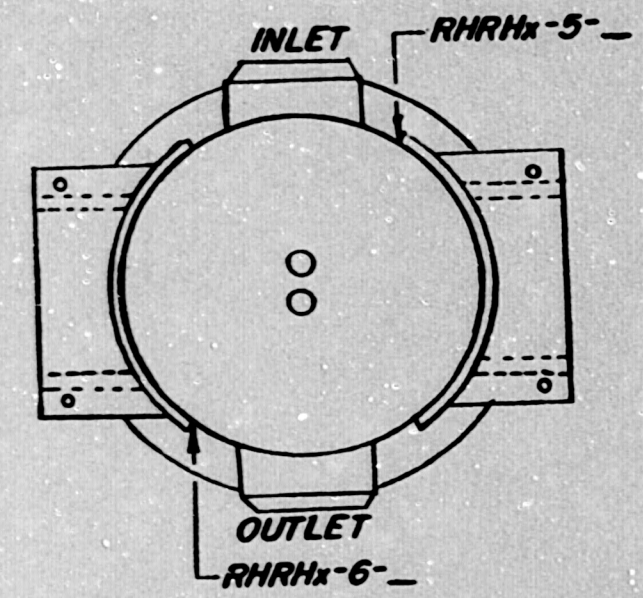


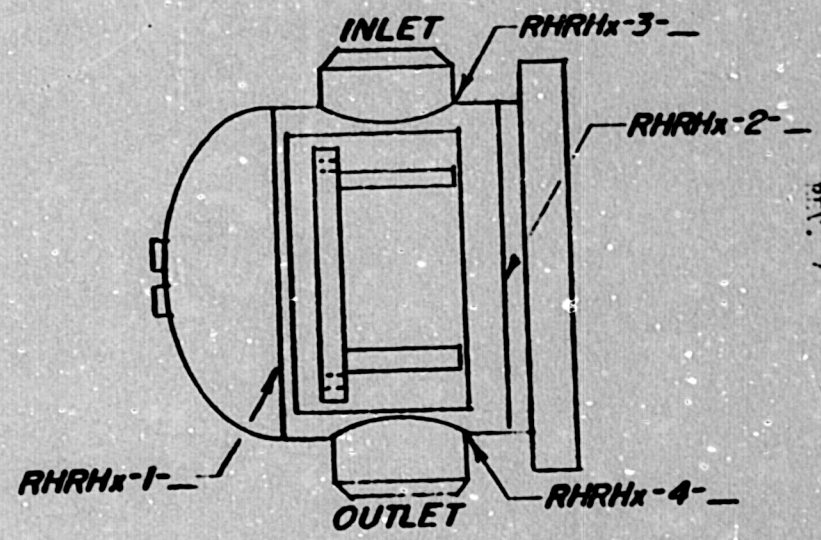
NOTE:
TO DO THE CLAD PATCH INSPECTION, PLACE CLAD PATCH FRAME (SEE DRAWING NO. CH-M-2525-A) ON STUDS #8 AND #9.

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
STEAM GENERATOR
(PRIMARY MANWAY BOLTING)

CH-M-2660-B





NOTE: PLACE HEAT EXCHANGER NUMBERS AT END OF WELD NUMBER

NBN
TI-50A
APPENDIX A
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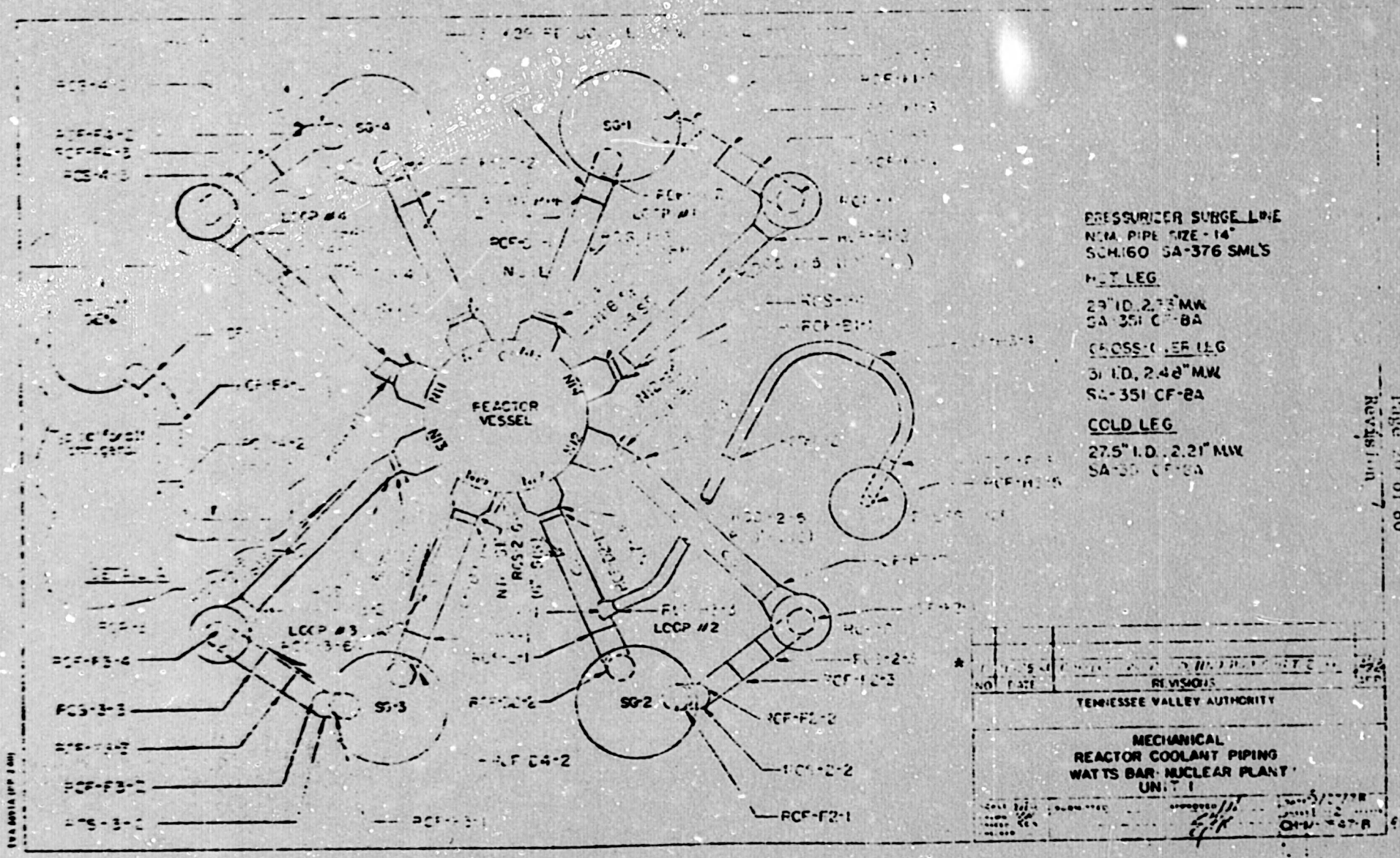
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

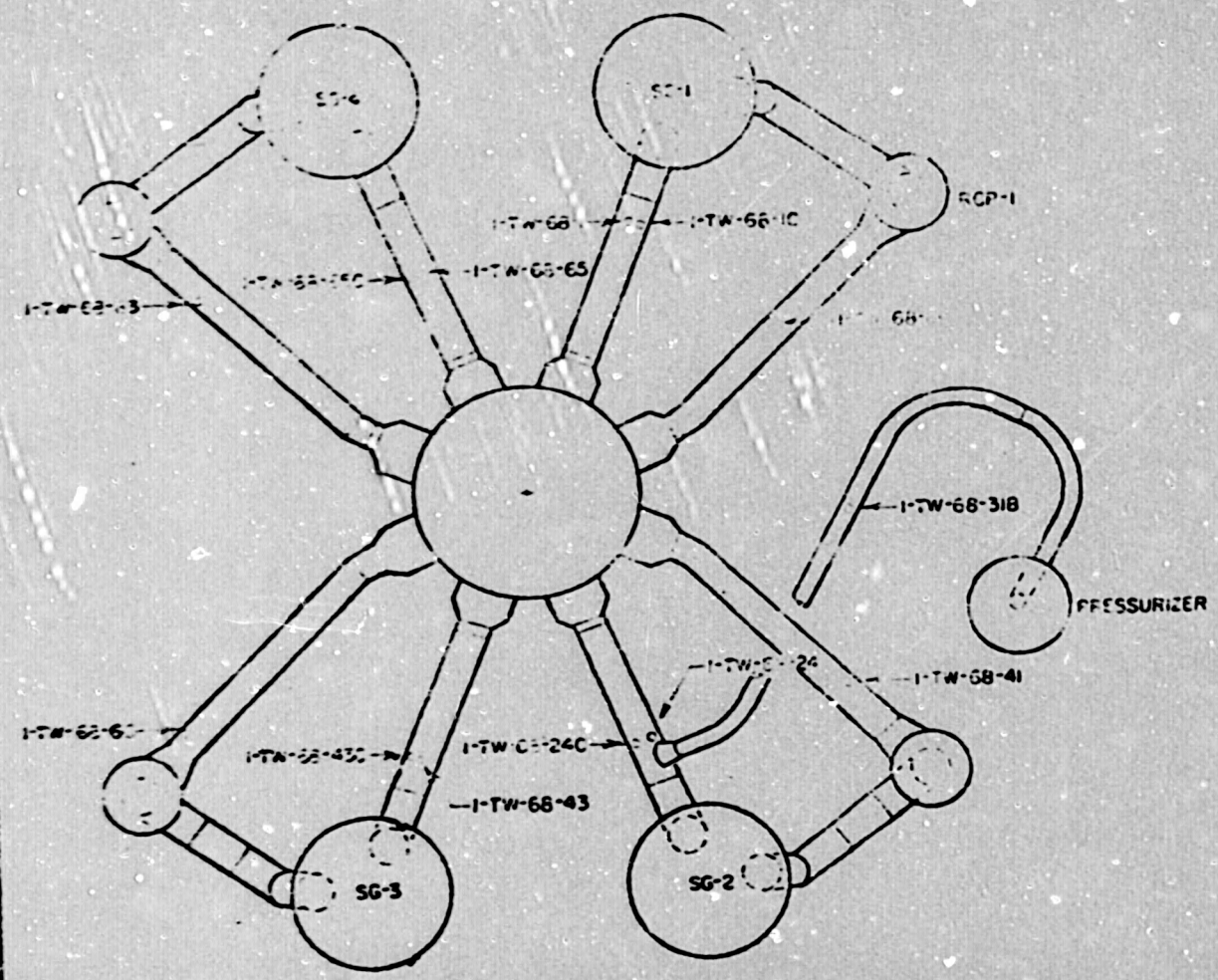
WATTS BAR NUCLEAR PLANT
UNITS #1 & #2
RESIDUAL HEAT REMOVAL
HEAT EXCHANGER
CHANNEL WELDS

NTS
KEV

DATE 5/3/79

CH-M-2000-0


REACTOR VESSEL
SG-1
SG-2
SG-3
SG-4
LOOP #1
LOOP #2
LOOP #3
LOOP #4
PRESSURIZER SURGE LINE
NOM. PIPE SIZE - 14"
SCH.160 SA-376 SML'S
HOT LEG
28" I.D. 2.75" MW
SA-351 CF-8A
CROSS-OVER LEG
31" I.D. 2.48" MW
SA-351 CF-8A
COLD LEG
27.5" I.D. 2.21" MW
SA-351 CF-8A
REVISIONS
TENNESSEE VALLEY AUTHORITY
MECHANICAL
REACTOR COOLANT PIPING
WATTS BAR NUCLEAR PLANT
UNIT 1



REFERENCE DRAWINGS

SK. 304-1 SH. 1 R2
SK. 304-1 SH. 2 R2
SK. 304-1 SH. 3 R2
SK. 304-1 SH. 4 R3
SK. 304-1 SH. 5 R3
SK. 304-1 SH. 6 R2
SK. 304-1 SH. 7 R2
SK. 304-1 SH. 8 R2

MATERIAL SPECIFICATIONS

CLASS A

TEMPERATURE WELLS

STAINLESS STEEL
SA 182 F 316

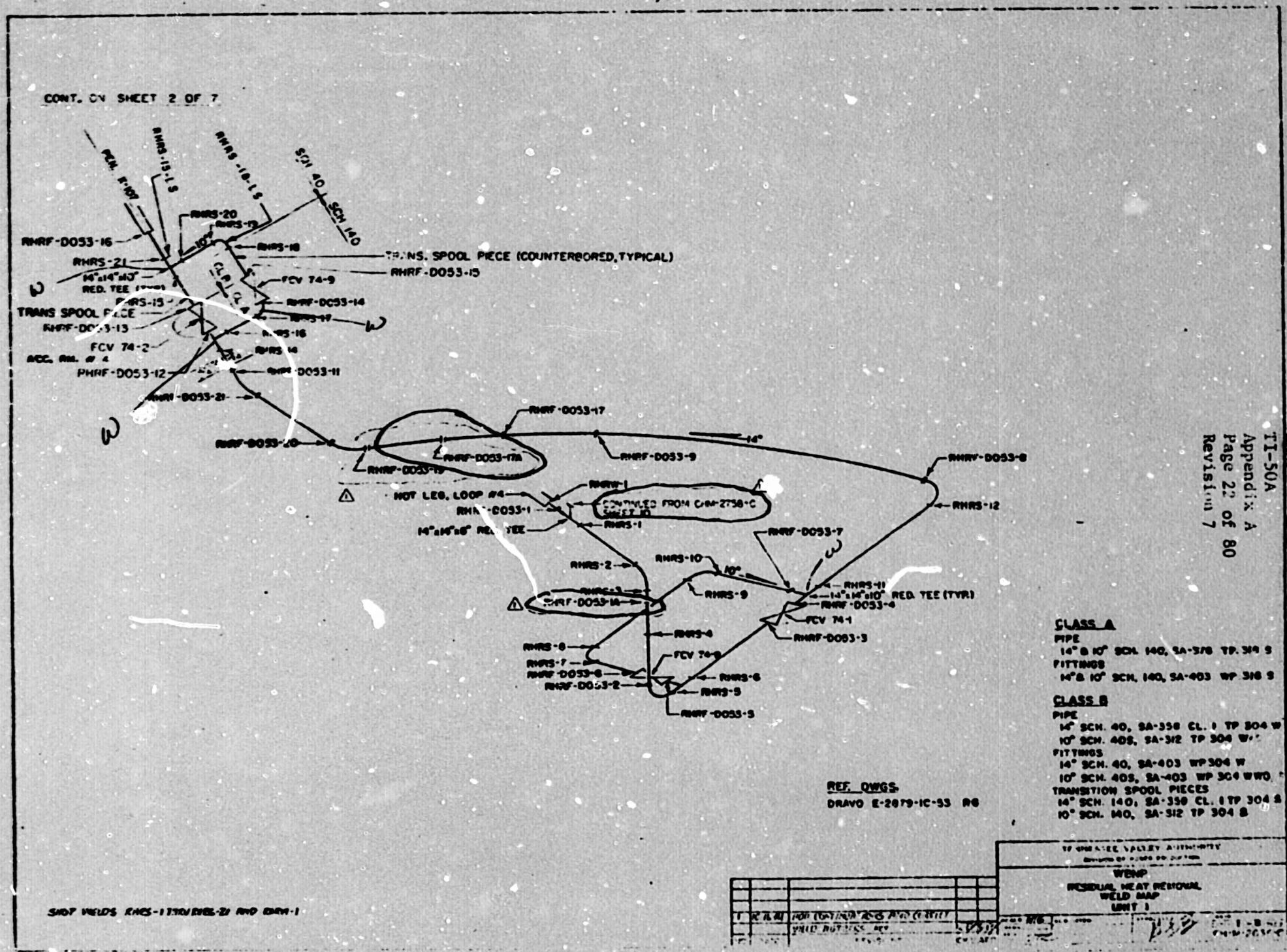
2½" O.D. BOSS

NO.	DATE	REVISIONS	APP.

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER

WATTS BAR NUCLEAR PLANT
UNIT #1
REACTOR COOLANT PIPING
WELD LOCATIONS

CHM-2547-B



CLASS A

PIPE
14" & 10" SCH. 140, SA-376 TP. 316 S

FITTINGS
14" & 10" SCH. 140, SA-403 WP 316 S

CLASS B

PIPE
14" SCH. 40, SA-358 CL. 1 TP 304 W
10" SCH. 40S, SA-312 TP 304 W

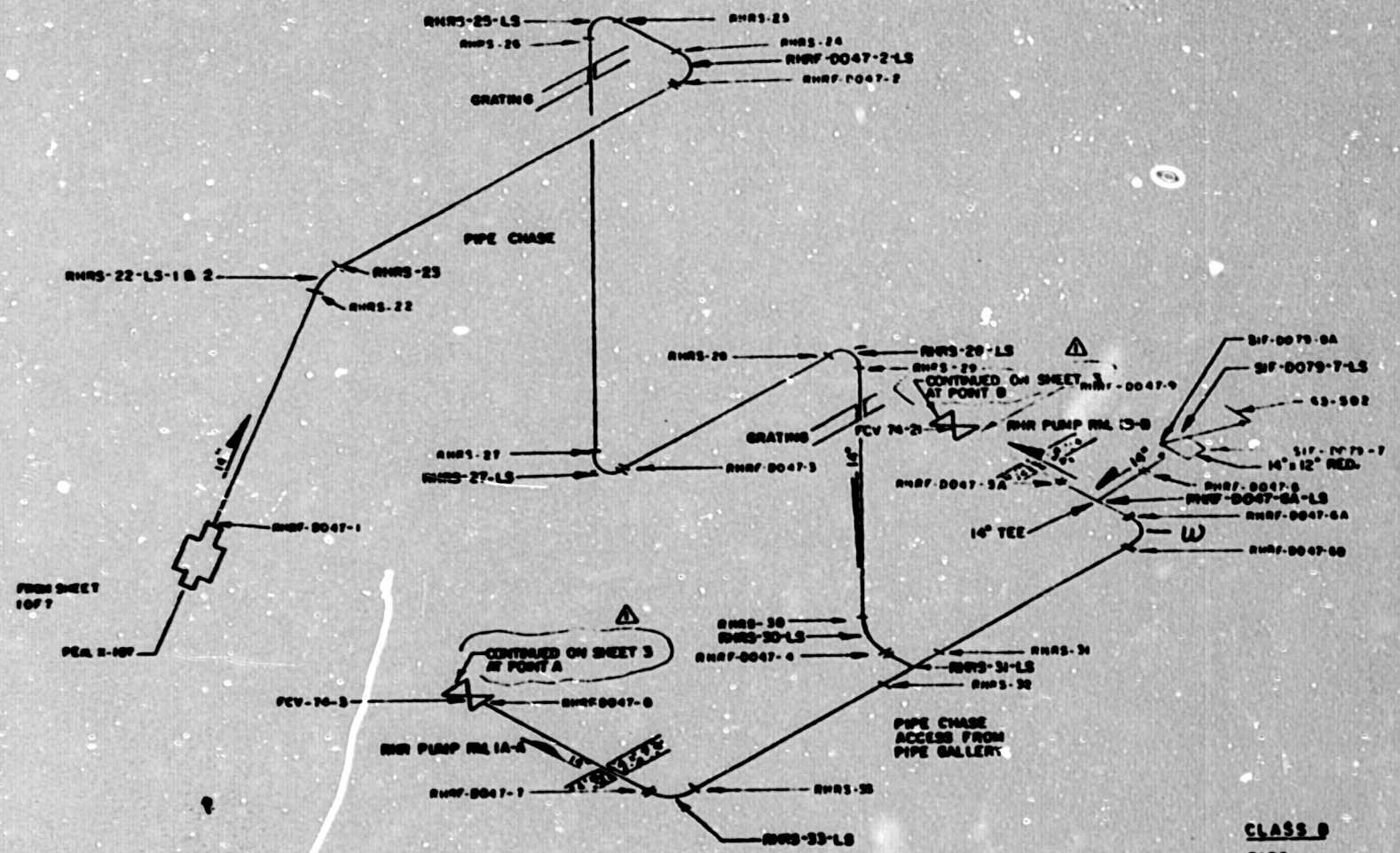
FITTINGS
14" SCH. 40, SA-403 WP 304 W
10" SCH. 40S, SA-403 WP 304 WWO

TRANSITION SPOOL PIECES
14" SCH. 140, SA-358 CL. 1 TP 304 B
10" SCH. 140, SA-312 TP 304 B

REF. DWGS.
DRAWO E-2879-IC-53 R6

TENNESSEE VALLEY AUTHORITY

WBNP
RESIDUAL HEAT REMOVAL
WELD MAP
UNIT 1



CLASS B

PIPE
14" SCH 40 SA 358 CL3TP 304 W

FITTINGS
14 & 12" SCH 40 SA-403 WP 304 W

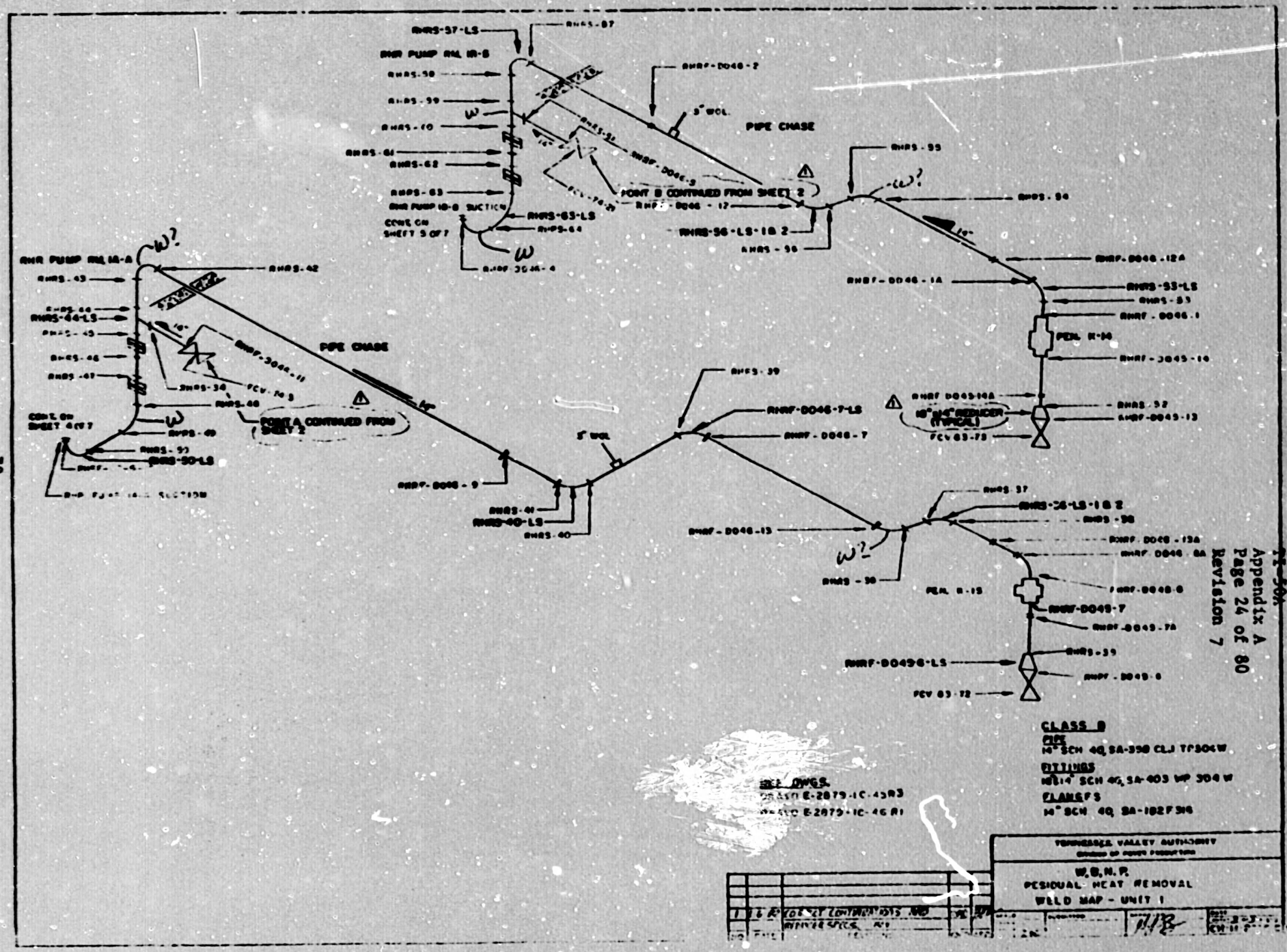
REF. DWGS.

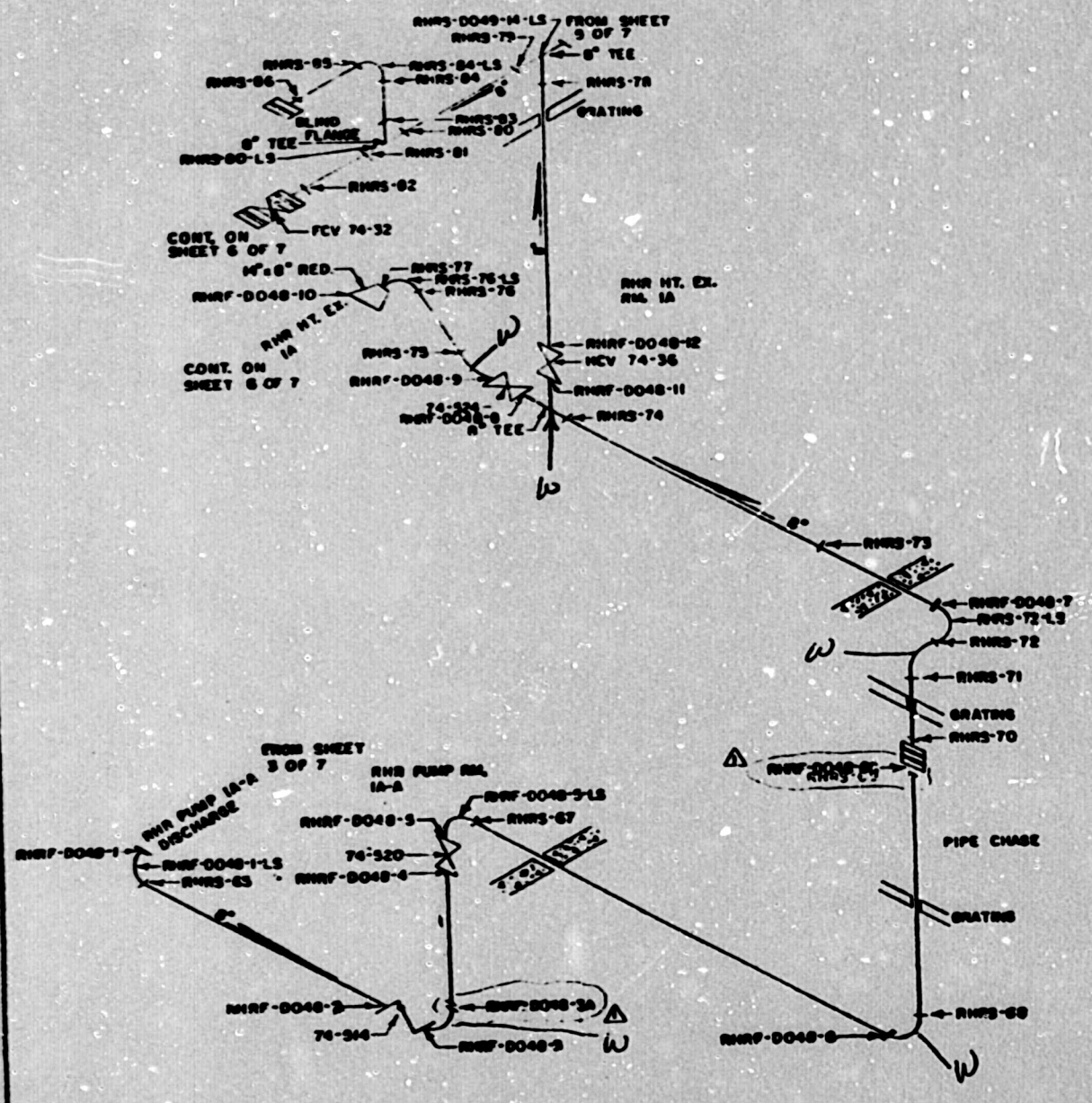
DRAWO E-2079-IC-47 R0
DRAWO E-2079-IC-79 R3

NO.	DATE	REVISIONS
1	6-17-80	[illegible]

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

W.B.N.P.
RESIDUAL HEAT REMOVAL
WELD MAP - UNIT 1

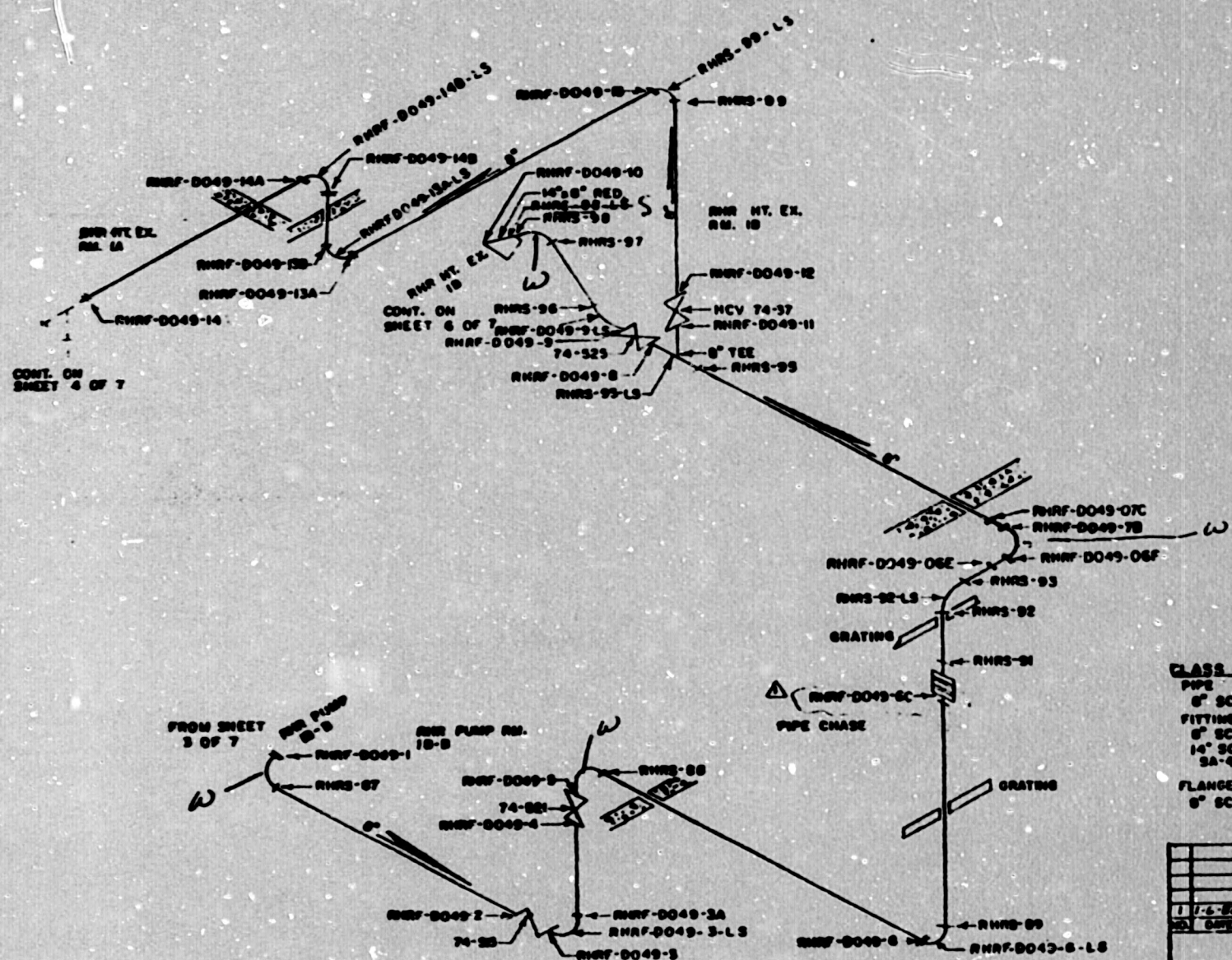

RHR PUMP RM. 1A-B
RHRS-57-LS
RHRS-87
RHRS-58
RHRS-59
RHRS-60
RHRS-61
RHRS-62
RHRS-63
RHR PUMP 1B-B SUCTION
CONT. ON SHEET 5 OF 7
RHRS-63-LS
RHRS-64
RHRF-D046-4
RHRF-D046-2
3" WOL.
PIPE CHASE
RHRS-51
RHRF-D046-3
POINT B CONTINUED FROM SHEET 2
RHRF-D046-12
RHRS-56-LS-1 & 2
RHRS-56
RHRS-55
RHRS-54
RHRF-D046-12A
RHRF-D046-1A
RHRS-53-LS
RHRS-53
RHRF-D046-1
PEN. K-14
RHRF-D045-14
RHRF-D045-14A
18"x14" REDUCER (TYPICAL)
RHRS-52
RHRF-D045-13
FCV 63-73
RHR PUMP RM. 1A-A
RHRS-43
RHRS-42
RHRS-44-LS
RHRS-45
RHRS-46
RHRS-47
RHRS-34
RHRS-48
RHRF-D046-11
FCV-74-3
POINT A CONTINUED FROM SHEET 2
CONT. ON SHEET 4 OF 7
RHRS-49
RHRS-50-LS
RHRF-D046-9
RHRS-41
RHRS-40-LS
RHRS-40
3" WOL
RHRS-39
RHRF-D046-7-LS
RHRF-D046-7
RHRF-D046-13
RHRS-37
RHRS-36-LS-1 & 2
RHRS-38
RHRF-D046-13A
RHRF-D046-8A
RHRS-30
PEN. K-15
RHRF-D046-8
RHRF-D045-7
RHRF-D045-7A
RHRS-39
RHRF-D045-6-LS
RHRF-D045-6
FCV 63-72
CLASS B
PIPE
14" SCH 40, SA-358 CL.1 TP304W
FITTINGS
18"x14" SCH 40, SA-403 WP 304 W
FLANGES
14" SCH 40, SA-182 F316
DWGS.
E-2879-1C-45R3
E-2879-1C-46 R1
TENNESSEE VALLEY AUTHORITY
W.B.N.P.
RESIDUAL HEAT REMOVAL
WELD MAP - UNIT 1



REF DWGS
DRAWG E-2879-1C-48 R4

CLASS B
PIPE
8" SCH. 40S, SA-312 TP 304 W
FITTINGS
8" SCH. 40S, SA-403 WP 304 WWO
14" SCH. 40 x 8" SCH. 40S RED., SA-403 WP 304 WWO
FLANGES
8" SCH. 40S, SA-182 F304

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION
WBNP
RESIDUAL HEAT REMOVAL
WELD MAP
UNIT 1



CLASS B

PIPE
8" SCH. 40S, SA-312 TP 304 WP

FITTINGS
8" SCH. 40S, SA-403 WP 304 WWO/S
14" SCH. 40 x 8" SCH. 40S RED.,
SA-403 WP 304 WWO/S

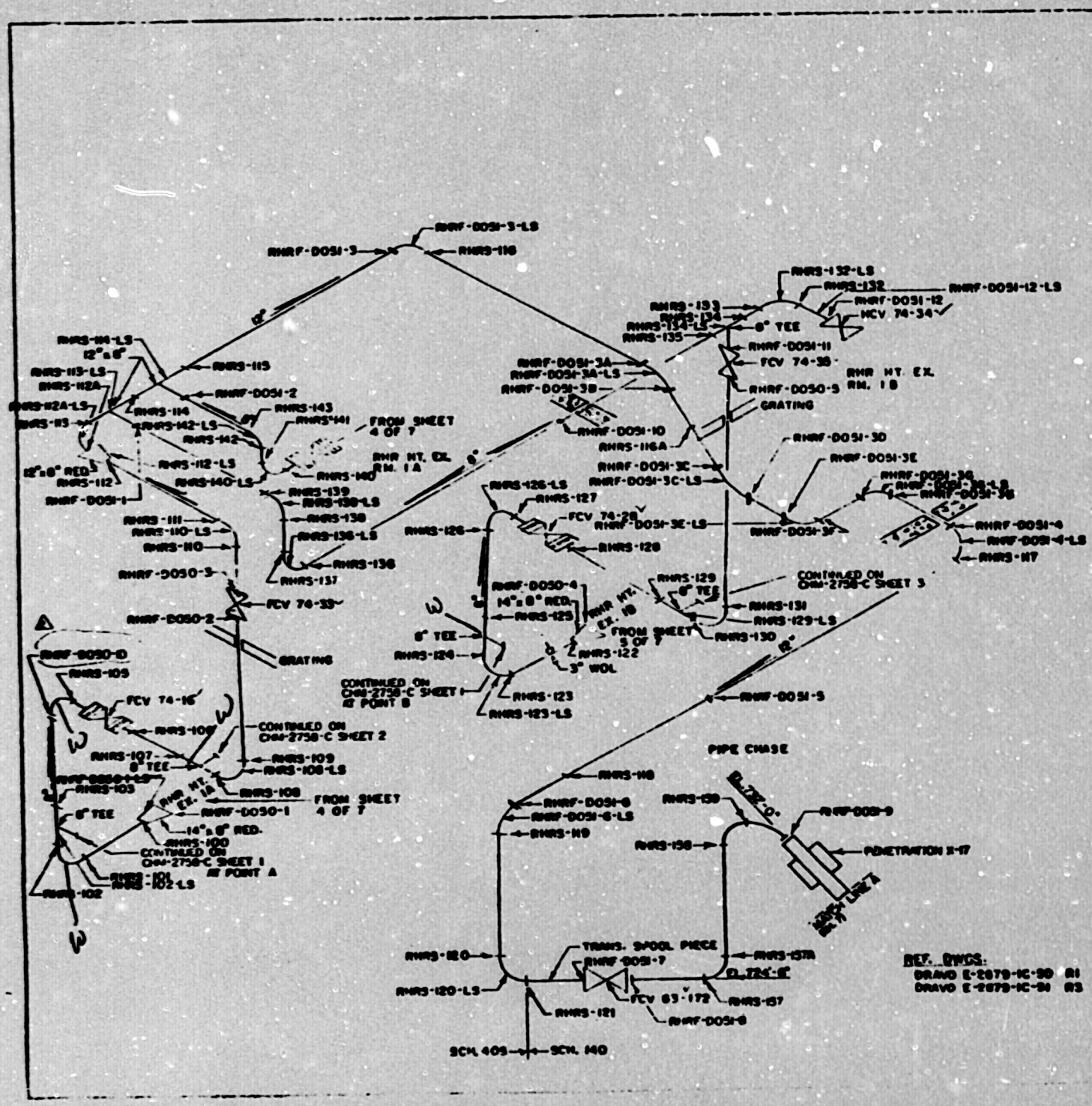
FLANGE
8" SCH. 40S, SA-182 F 304

REF. DWGS.
DRAWO E-2879-1C-49 R3

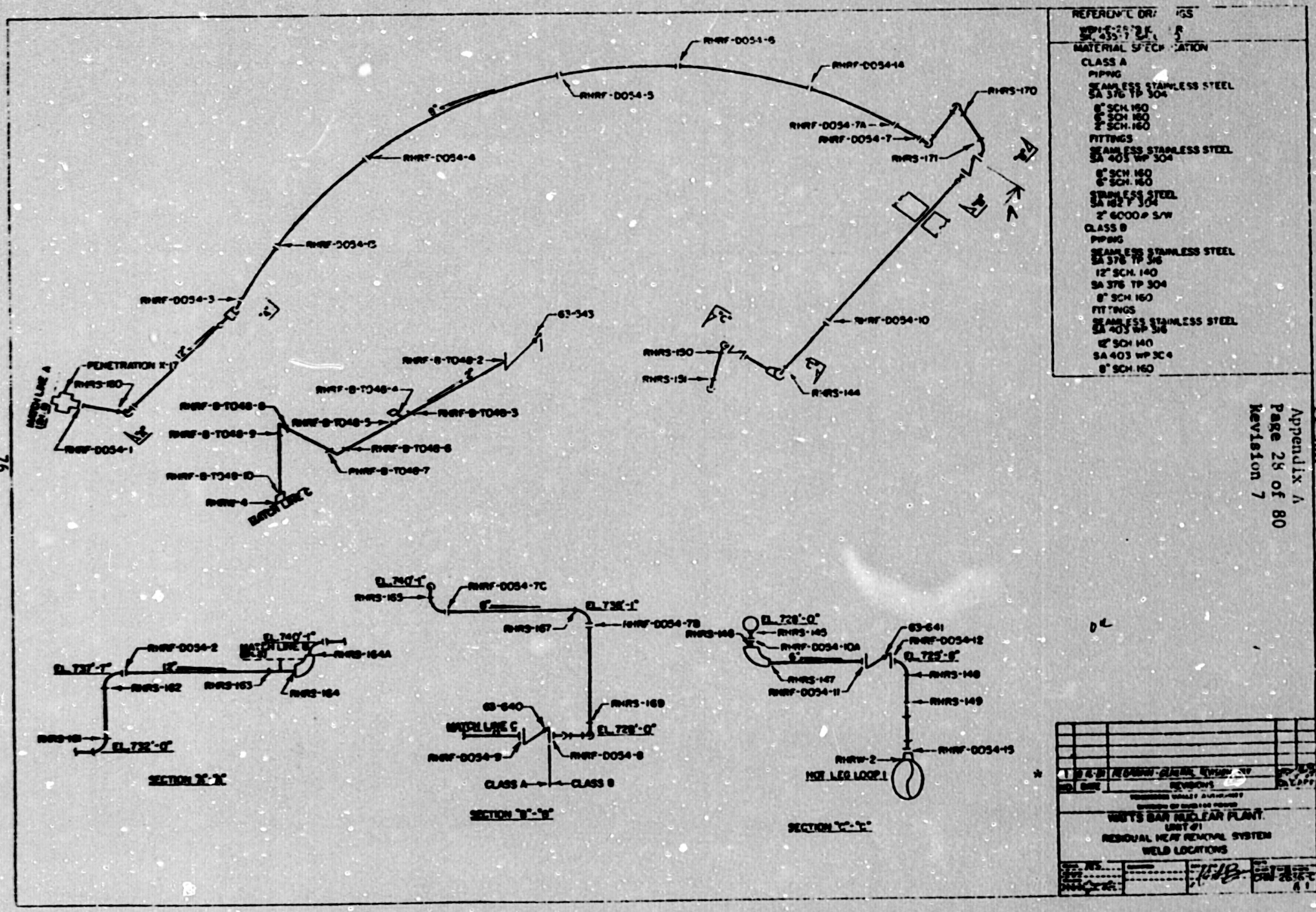
NO	DATE	REVISIONS
1	11-6-82	CORRECT WELD NUMBERS

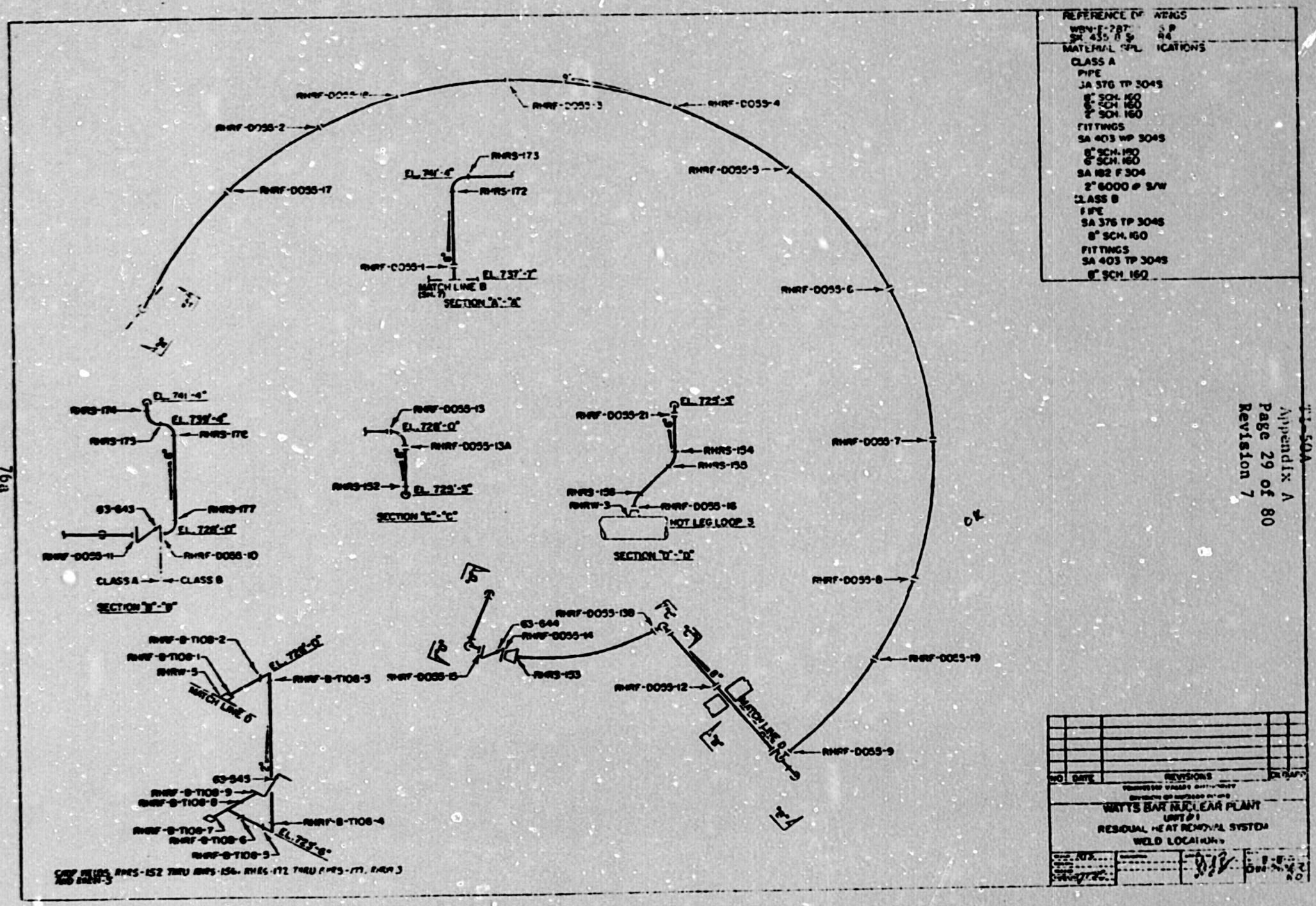
TENNESSEE VALLEY AUTHORITY

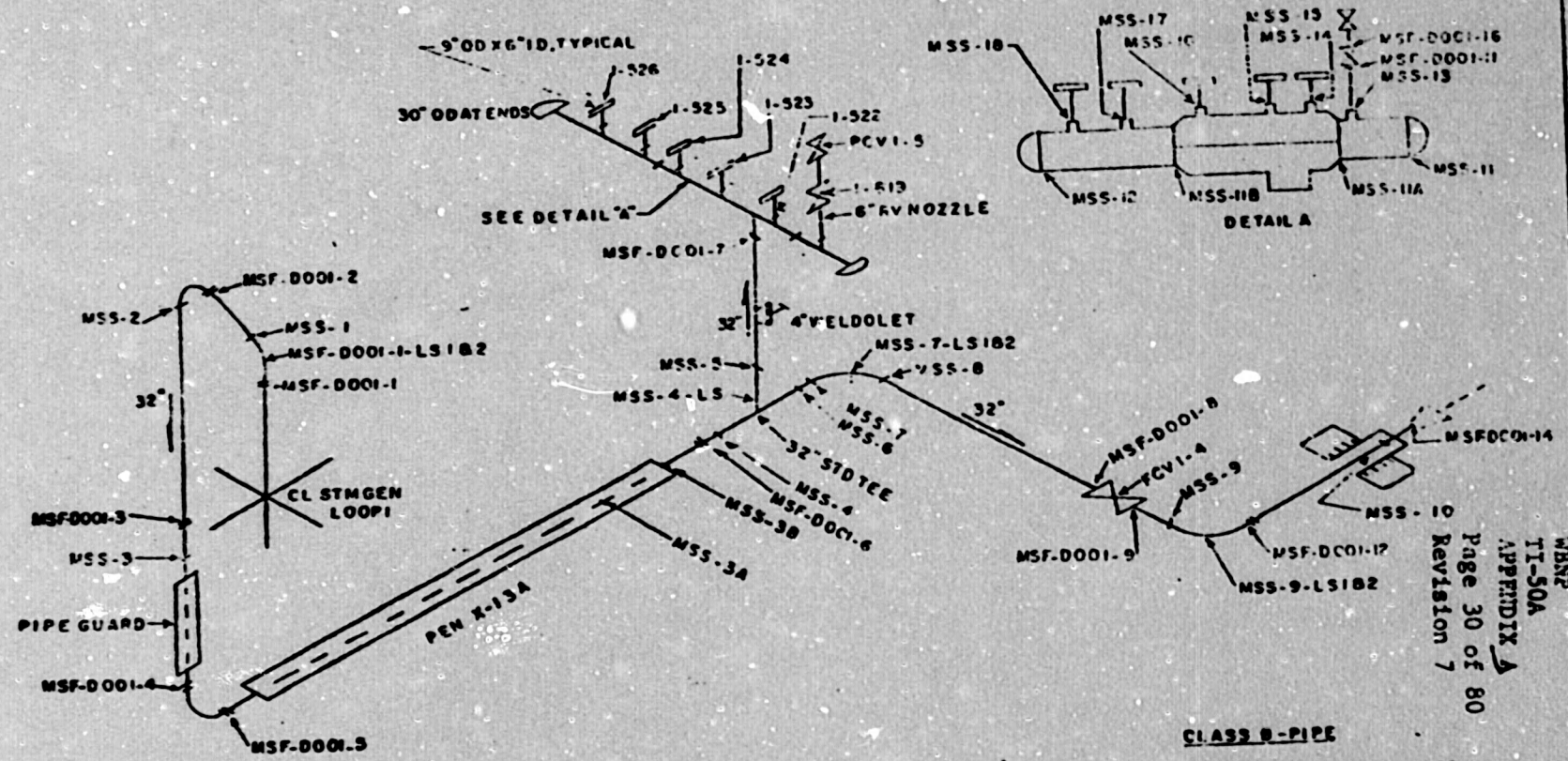
WBNP
RESIDUAL HEAT REMOVAL
WELD MAP
UNIT 1



WBNP
TI-50A
Appendix A
Pg. 27 of 8
Rev. 7


REFERENCE DRAWINGS
MATERIAL SPECIFICATION
CLASS A
PIPING
SEAMLESS STAINLESS STEEL
SA 376 TP 304
8" SCH. 160
6" SCH. 160
2" SCH. 160
FITTINGS
SEAMLESS STAINLESS STEEL
SA 403 WP 304
8" SCH. 160
6" SCH. 160
STAINLESS STEEL
SA 182 F 304
2" 6000# S/W
CLASS B
PIPING
SEAMLESS STAINLESS STEEL
SA 376 TP 316
12" SCH. 140
SA 376 TP 304
8" SCH. 160
FITTINGS
SEAMLESS STAINLESS STEEL
SA 403 WP 316
12" SCH. 140
SA 403 WP 304
8" SCH. 160
RHRF-0054-6
RHRF-0054-14
RHRF-0054-5
RHRF-0054-4
RHRF-0054-13
RHRF-0054-3
RHRS-170
RHRF-0054-7A
RHRF-0054-7
RHRS-171
RHRF-0054-10
RHRS-150
RHRS-151
RHRS-144
63-343
RHRF-8-T048-2
RHRF-8-T048-4
RHRF-8-T048-3
RHRF-8-T048-5
RHRF-8-T048-6
RHRF-8-T048-7
RHRF-8-T048-8
RHRF-8-T048-9
RHRF-8-T048-10
RHRF-4
PENETRATION X-17
RHRS-160
RHRF-0054-1
MATCH LINE A
MATCH LINE C
EL. 740'-1"
RHRF-0054-7C
RHRS-165
EL. 736'-1"
RHRS-167
RHRF-0054-7B
EL. 728'-0"
RHRS-145
RHRS-146
RHRF-0054-10A
RHRS-147
RHRF-0054-11
63-641
RHRF-0054-12
EL. 725'-8"
RHRS-148
RHRS-149
RHRF-0054-15
RHRW-2
HOT LEG LOOP 1
RHRF-0054-2
RHRS-164A
RHRS-162
RHRS-163
RHRS-164
EL. 732'-0"
63-640
RHRS-169
RHRF-0054-9
RHRF-0054-8
CLASS A
CLASS B
SECTION "A"-"A"
SECTION "B"-"B"
SECTION "C"-"C"
REVISIONS
WATTS BAR NUCLEAR PLANT
UNIT #1
RESIDUAL HEAT REMOVAL SYSTEM
WELD LOCATIONS


REFERENCE DRAWINGS
MATERIAL SPECIFICATIONS
CLASS A
PIPE
SA 376 TP 304S
8" SCH. 160
6" SCH. 160
2" SCH. 160
FITTINGS
SA 403 WP 304S
8" SCH. 160
6" SCH. 160
SA 182 F 304
2" 6000 # S/W
CLASS B
PIPE
SA 376 TP 304S
8" SCH. 160
FITTINGS
SA 403 TP 304S
8" SCH. 160
RHRF-D055-2
RHRF-D055-3
RHRF-D055-4
RHRF-D055-5
RHRF-D055-6
RHRF-D055-7
RHRF-D055-8
RHRF-D055-9
RHRF-D055-17
RHRS-173
RHRS-172
EL. 741'-4"
EL. 737'-7"
MATCH LINE B
SECTION "A"-"A"
EL. 741'-4"
RHRS-174
EL. 739'-4"
RHRS-175
RHRS-176
63-643
RHRS-177
EL. 728'-0"
RHRF-D055-11
RHRF-D055-10
CLASS A
CLASS B
SECTION "B"-"B"
RHRF-D055-13
EL. 728'-0"
RHRF-D055-13A
RHRS-152
EL. 725'-5"
SECTION "C"-"C"
EL. 725'-5"
RHRF-D055-21
RHRS-154
RHRS-155
RHRS-156
RHRW-3
RHRF-D055-16
HOT LEG LOOP 3
SECTION "D"-"D"
RHRF-D055-13B
63-644
RHRF-D055-14
RHRS-153
RHRF-D055-15
RHRF-D055-12
MATCH LINE D
RHRF-D055-19
RHRF-B-T108-2
RHRF-B-T108-1
RHRW-5
EL. 728'-0"
RHRF-B-T108-3
MATCH LINE D
63-545
RHRF-B-T108-9
RHRF-B-T108-8
RHRF-B-T108-7
RHRF-B-T108-6
RHRF-B-T108-5
RHRF-B-T108-4
EL. 725'-6"
CHIP WELDS RHRS-152 THRU RHRS-156, RHRS-172 THRU RHRS-177, RHRW-3 AND RHRW-5
NO
DATE
REVISIONS
WATTS BAR NUCLEAR PLANT
UNIT #1
RESIDUAL HEAT REMOVAL SYSTEM
WELD LOCATIONS



CLASS B-PIPE

32" X 1.175" KCF 70 CL PLATE

30" X 1.109" MW, SA-106B

6" XXS SMLS, SA-106B

FITTINGS

32" X 1.175" MW, SA-234 WPB-W

30" X 1.109" MW, SA-234 WPB

FLANGES

9" OD X 6" ID, SA-105

REF DWG

DRA[illegible]78 IC-1

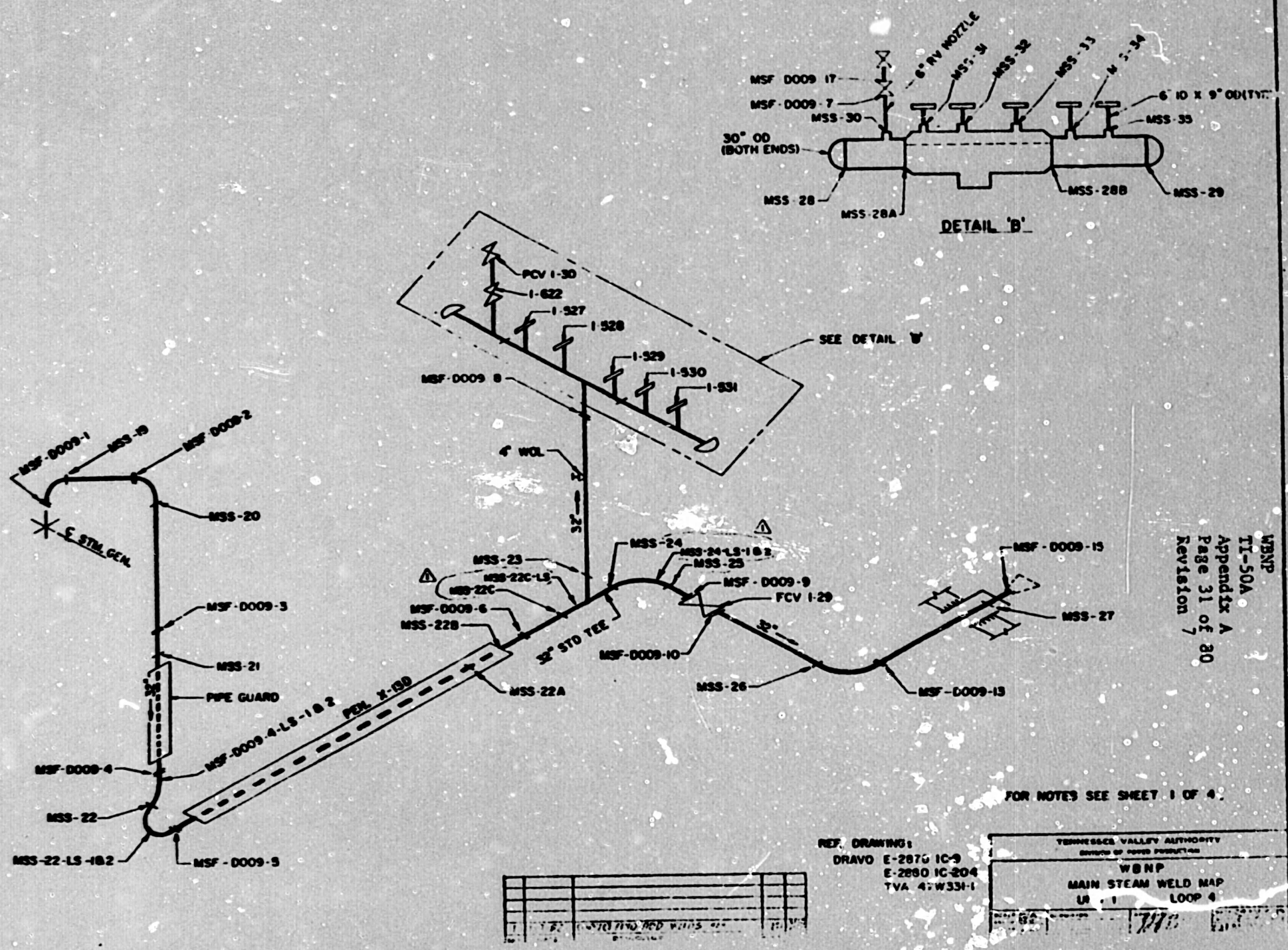
[illegible] IC-203

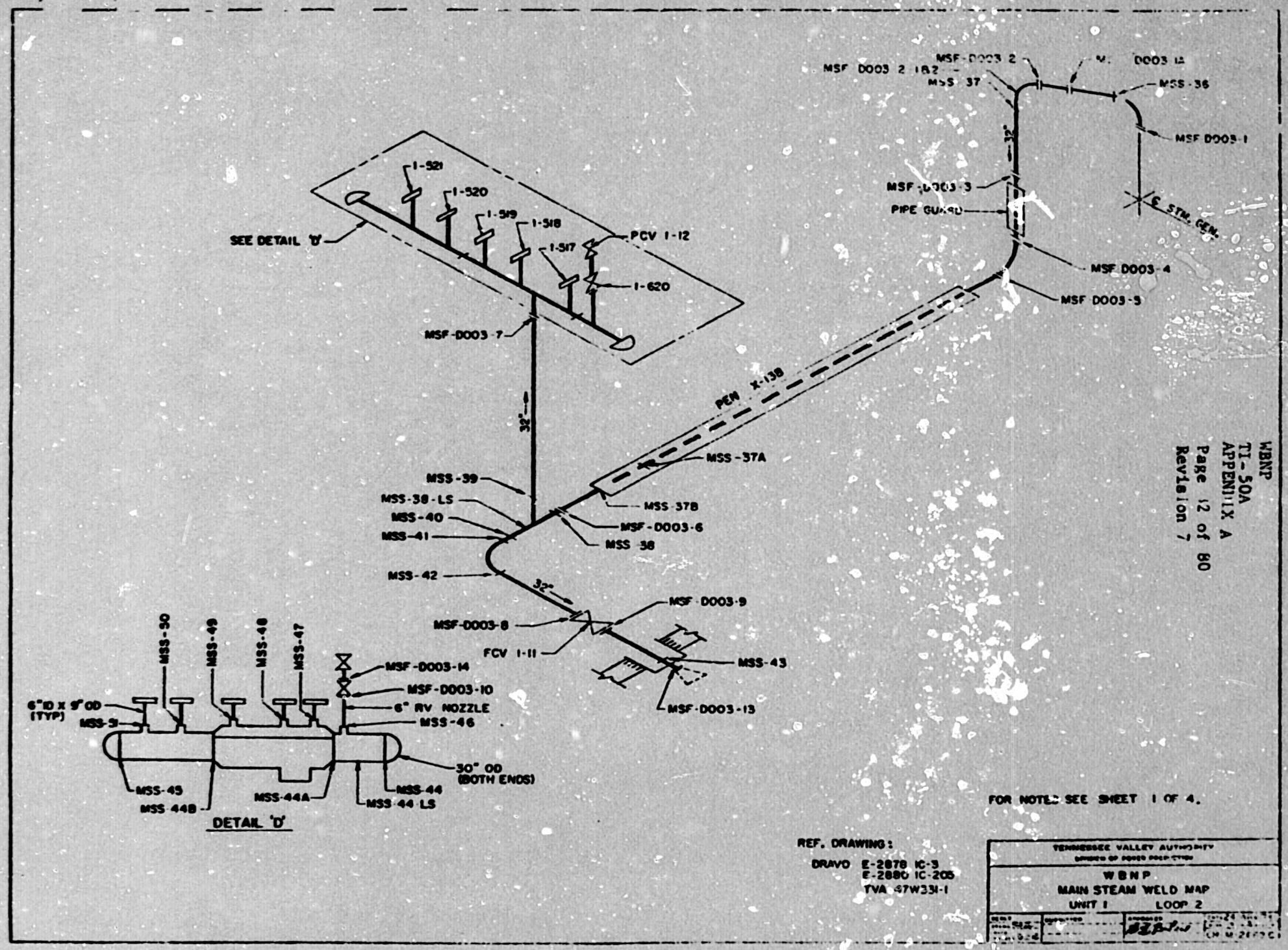
TVA 47W331-1

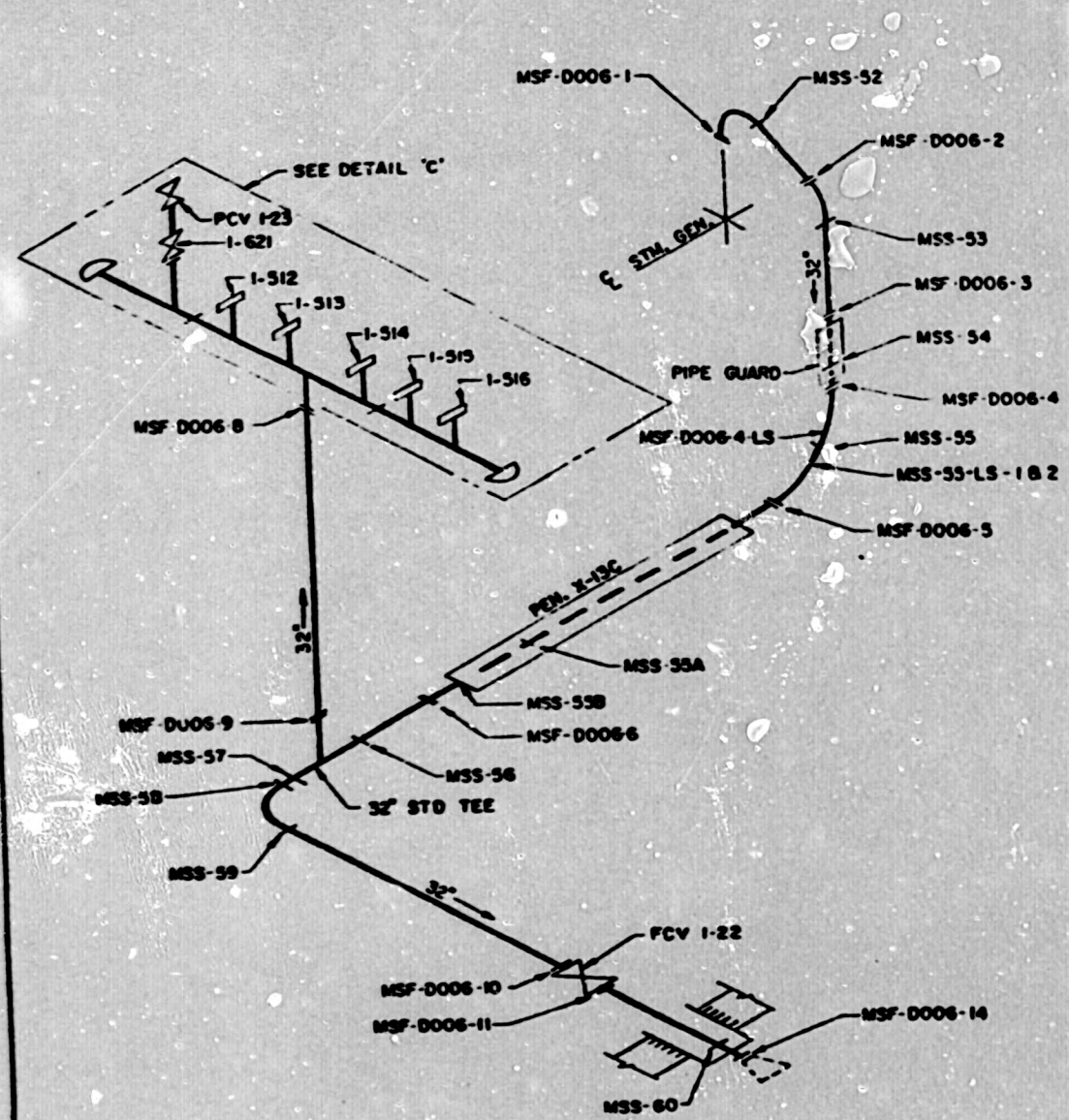
NOTE:
L.S. INDICATES
LONGITUDINAL SEAM WELD

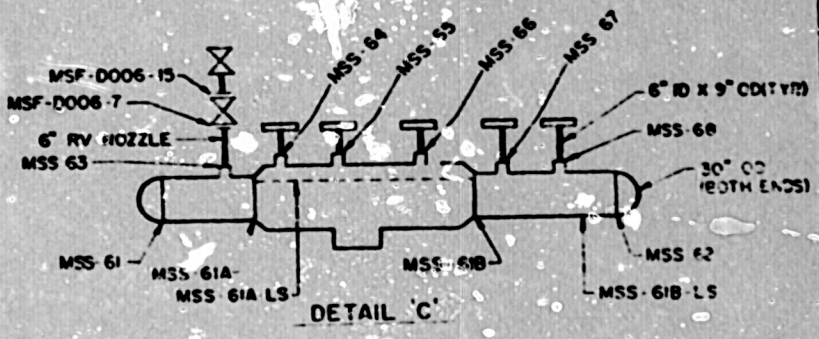
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
MAIN STEAM WELD MAP
UNIT 1 LOOP 1


DETAIL 'B'
MSF D009 17
MSF-D009-7
MSS-30
6" RV NOZZLE
MSS-31
MSS-32
MSS-33
MSS-34
MSS-35
6" ID X 9" OD (TYP.)
30" OD (BOTH ENDS)
MSS-28
MSS-28A
MSS-28B
MSS-29
PCV 1-30
1-622
1-527
1-528
1-529
1-530
1-531
SEE DETAIL 'B'
MSF-D009 8
4" WOL
32"
MSF-D009-1
MSS-19
MSF-D009-2
MSS-20
℄ STM. GEN.
MSF-D009-3
MSS-21
PIPE GUARD
MSF-D009-4-LS-1&2
MSF-D009-4
MSS-22
MSS-22-LS-1&2
MSF-D009-5
PEN. X-100
MSS-23
MSS-22C-LS
MSS-22C
MSF-D009-6
MSS-22B
MSS-22A
32" STD TEE
MSS-24
MSS-24-LS-1&2
MSS-25
MSF-D009-9
FCV 1-29
MSF-D009-10
MSS-26
MSF-D009-13
MSF-D009-15
MSS-27
FOR NOTES SEE SHEET 1 OF 4.
REF. DRAWING:
DRAWO E-2870 IC-9
E-2880 IC-204
TVA 47W331-1
TENNESSEE VALLEY AUTHORITY
WBNP
MAIN STEAM WELD MAP
UNIT 1
LOOP 4


MSF-D003-2
MSF D003-2 1&2
MSS-37
MSS-36
MSF D003-1
32"
MSF-D003-3
PIPE GUARD
℄ STM. GEN.
MSF D003-4
MSF D003-5
1-521
1-520
1-519
1-518
1-517
PCV 1-12
1-620
SEE DETAIL 'D'
MSF-D003-7
32"
PEN X-13B
MSS-37A
MSS-39
MSS-38-LS
MSS-40
MSS-41
MSS-37B
MSF-D003-6
MSS-38
MSS-42
32"
MSF-D003-9
MSF-D003-8
FCV 1-11
MSS-43
MSF-D003-13
MSS-50
MSS-49
MSS-48
MSS-47
MSF-D003-14
MSF-D003-10
6" RV NOZZLE
MSS-46
6" ID X 9" OD (TYP)
MSS-51
30" OD (BOTH ENDS)
MSS-45
MSS-44B
MSS-44A
MSS-44
MSS-44 LS
DETAIL 'D'
FOR NOTES SEE SHEET 1 OF 4.
REF. DRAWING:
DRAVO E-2878 IC-3
E-2880 IC-205
TVA 47W331-1
TENNESSEE VALLEY AUTHORITY
WBNP
MAIN STEAM WELD MAP
UNIT 1 LOOP 2



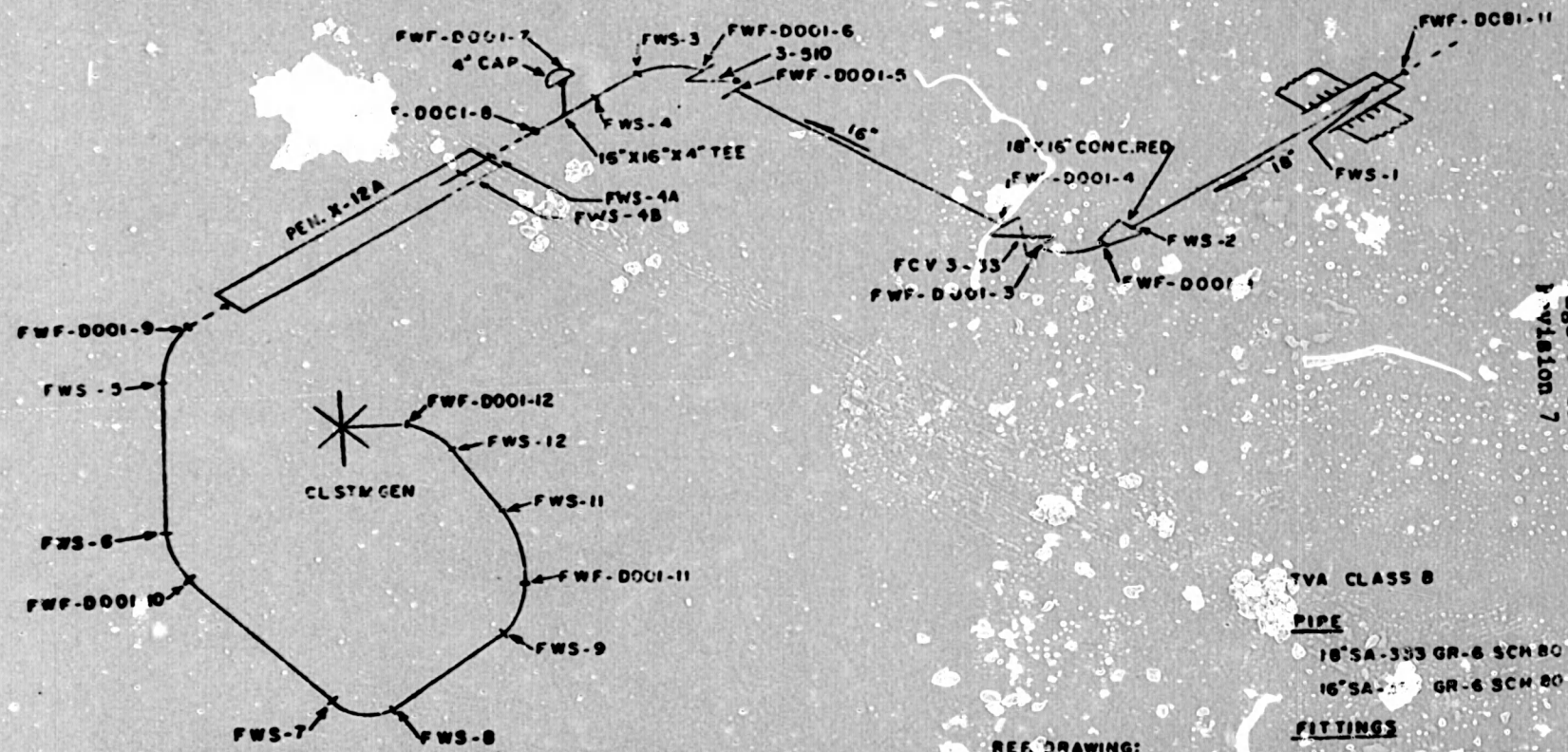


FOR NOTES SEE SHEET 1 OF 4.

REF. DRAWING:
DRAWO E-2878 IC-6
E-2880 IC-206
TVA 47W331-1

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION
WBNP
MAIN STEAM WELD MAP
UNIT 1 LOOP 3

WBNP
TI-50A
APPENDIX A
Page 33 of 80
Revision 7



REF. DRAWING:
DRAWOE-2879 IC-1
4TW401-1 & 2

TVA CLASS B

PIPE

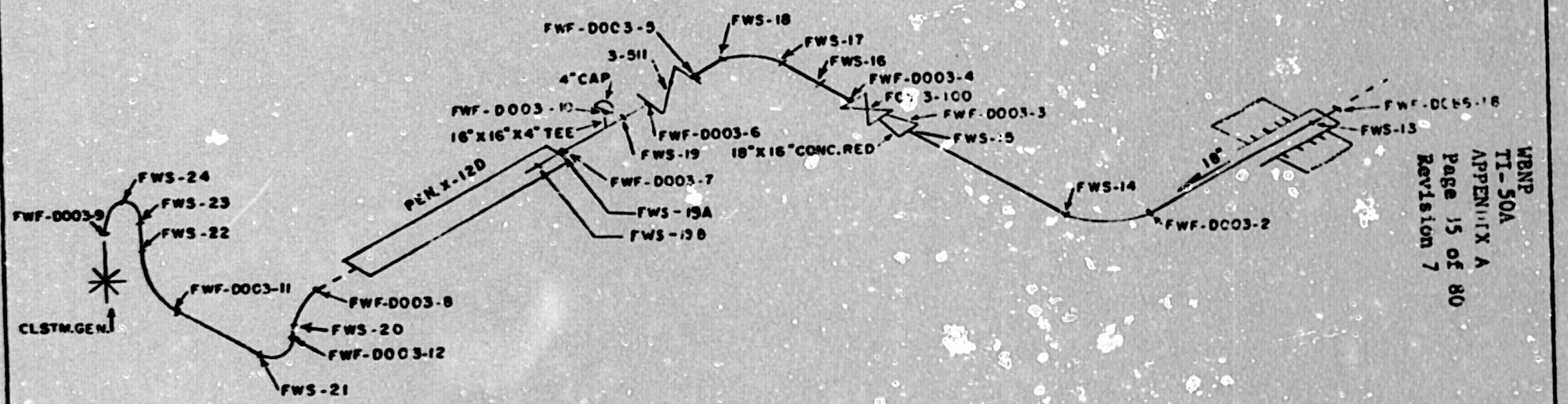
18" SA-333 GR-6 SCH 80
16" SA-[illegible] GR-6 SCH 80

FITTINGS

18"X16" SA-420 WPL6 SCH 80, SMLS
16" 90° ELL SA-420 WPL6 SCH 80, SMLS

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
FEEDWATER WELD MAP
UNIT I LOOP I

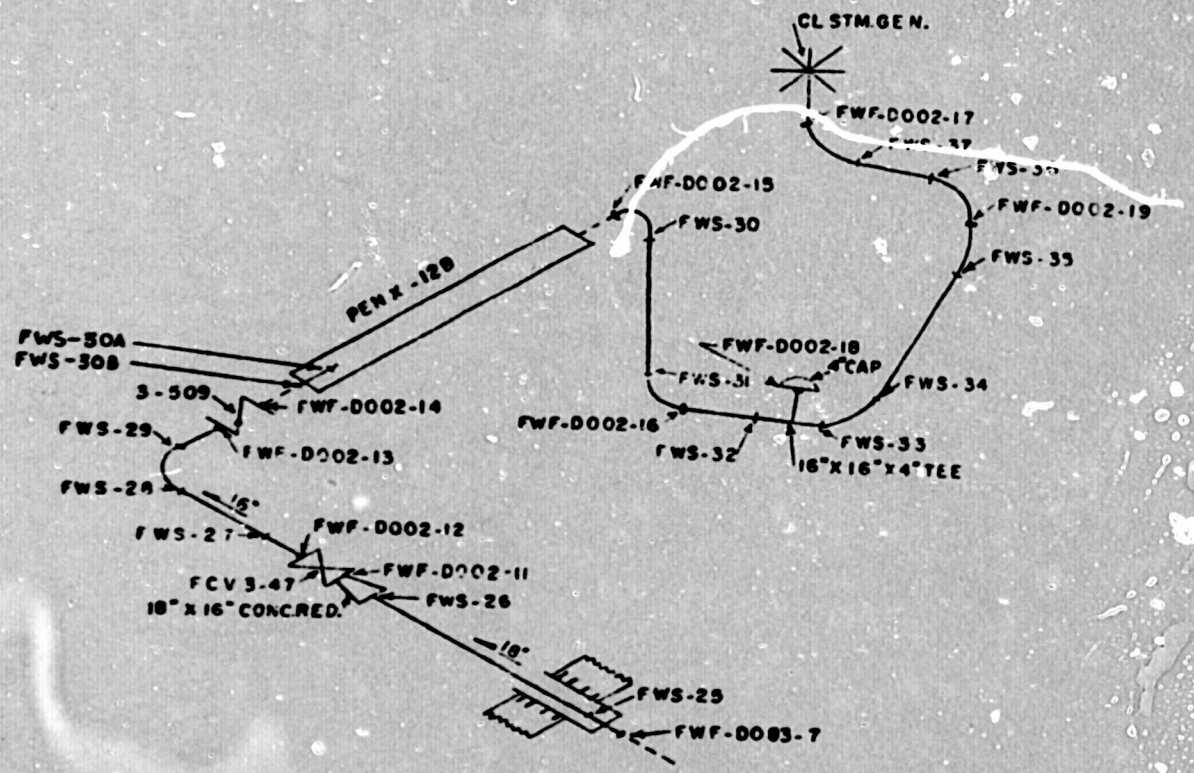


SEE SHEET ONE FOR NOTES

REF DRAWING
DRAWO E-2879 IC-3
47W401-182

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
FEEDWATER WELD MAP
UNIT 1 LOOP 4



SEE SHEET ONE FOR NOTES

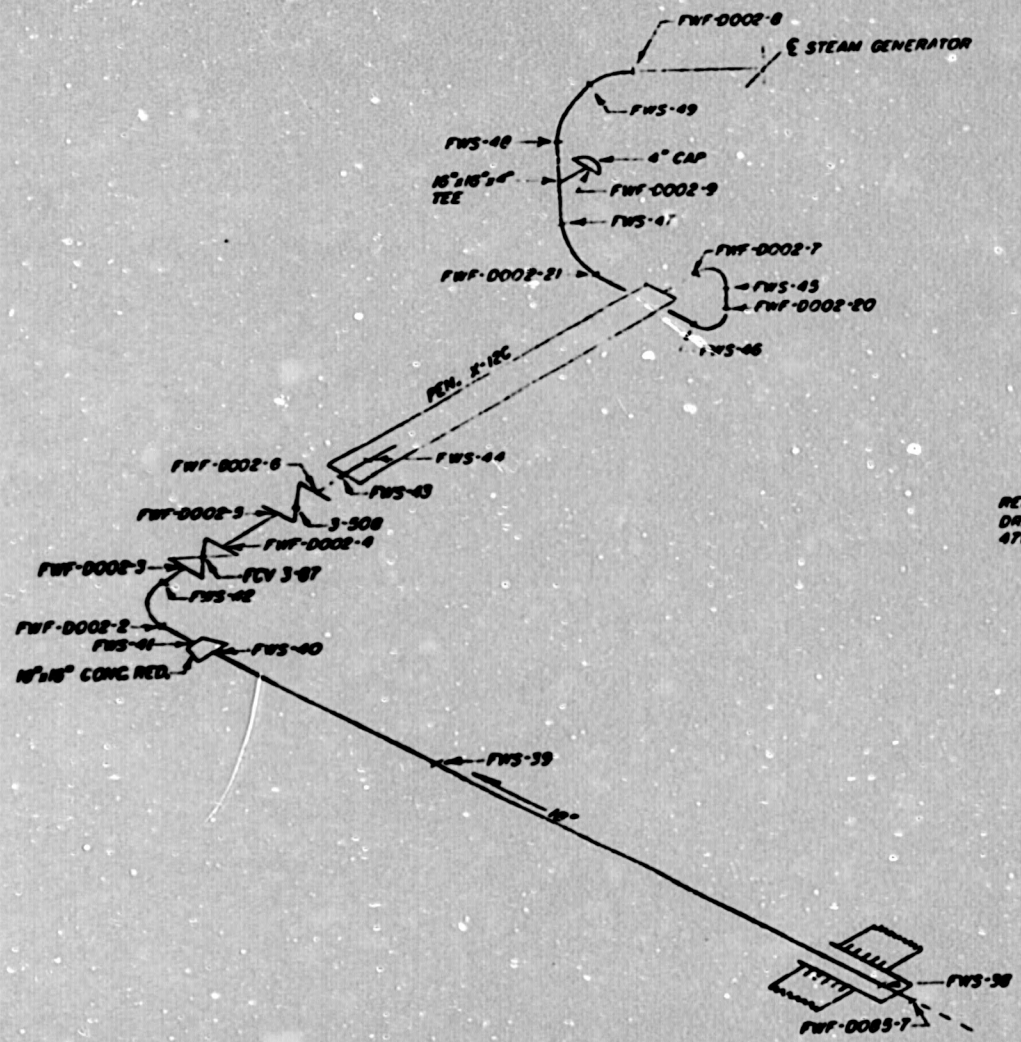
REF DRAWINGS

DRAWO E-2679 IC-2

47W401-18 4

TENNESSEE VALLEY AUTHORITY
DIVISION OF DESIGN CONSTRUCTION

WBNP
FEEDWATER WELD MAP
UNIT 1 LOOP 2

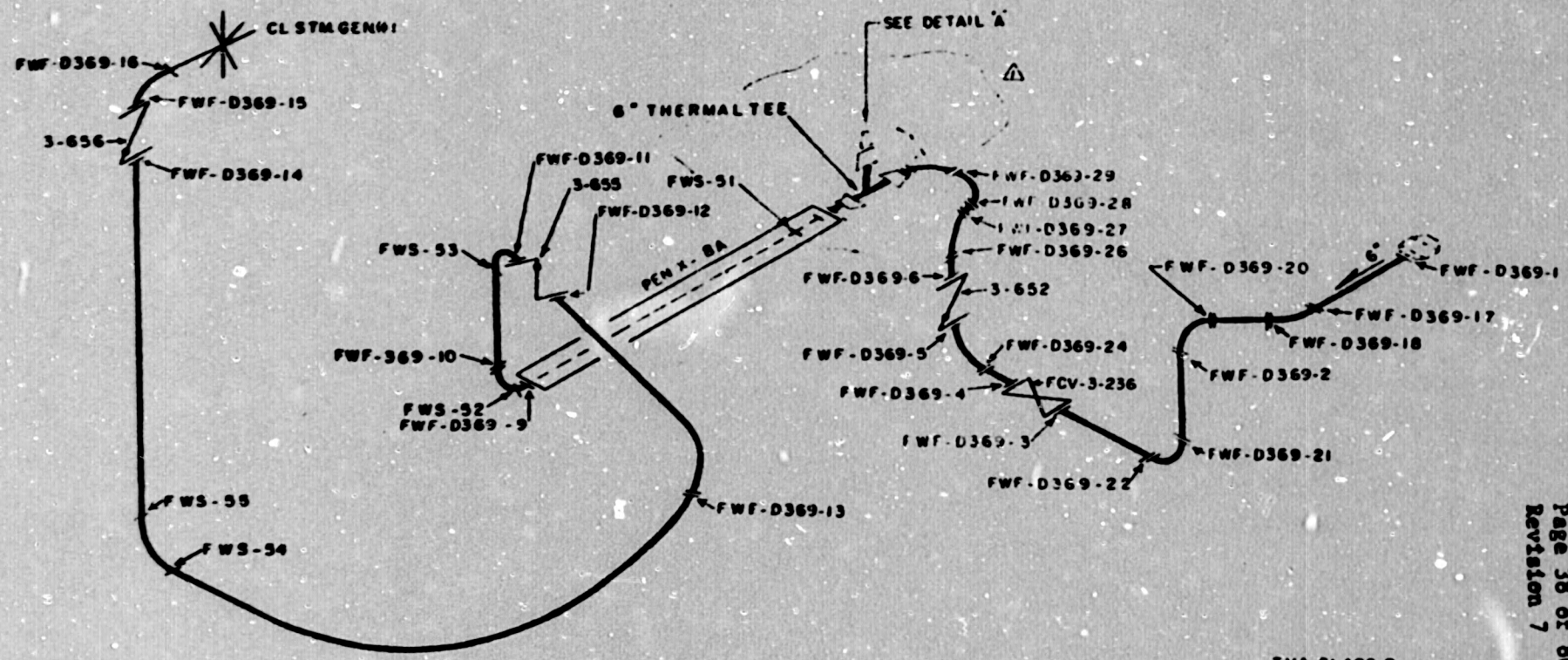


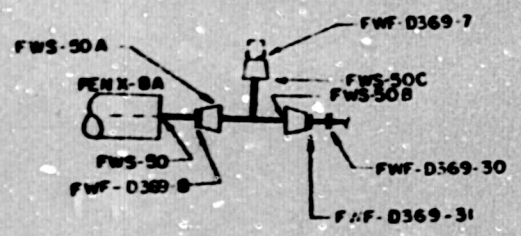
REF. DRAWING
DRAWO E-2879 IC-2
47W401-1 & 4

SEE SHEET 1 FOR NOTES

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WATTS BAR NUCLEAR PLANT
UNIT 1
FEEDWATER
WELD MAP LOOP 3





DETAIL 'A'

REF DRAWING
DRAWO E-2879 IC 369
47W401-7 & 8

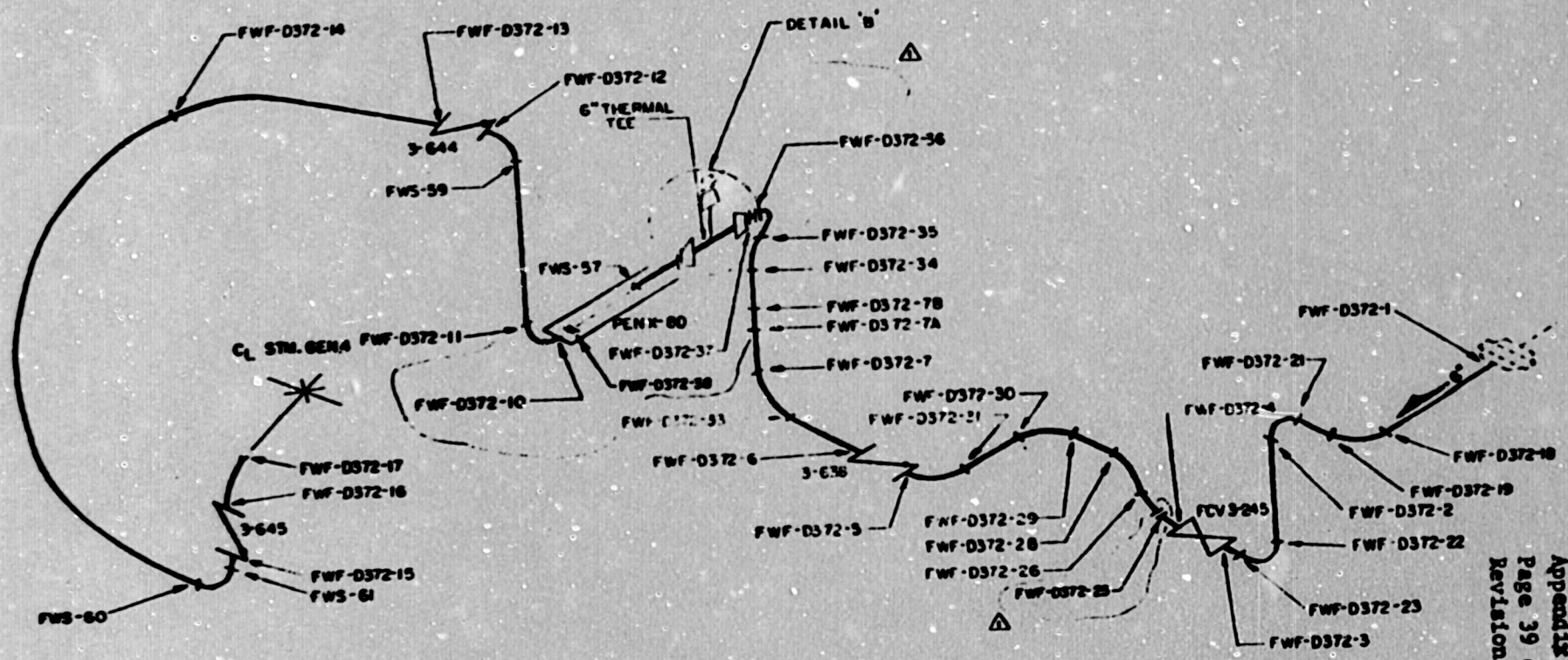
TVA CLASS B

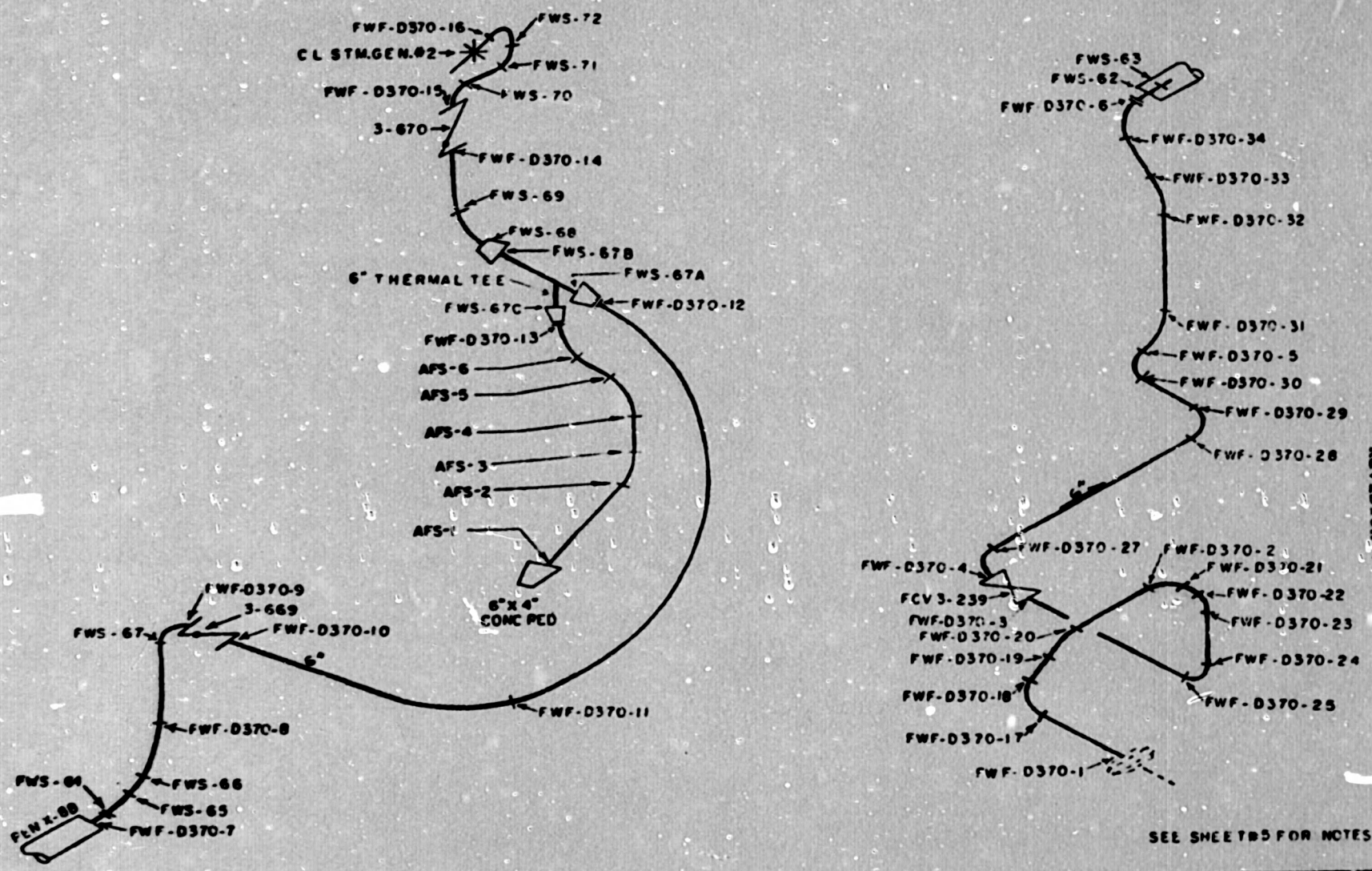
PIPE
6" SA-333 GR6 SCH 80

FITTINGS
6" SA-420 WPL6 SCH80

TENNESSEE VALLEY AUTHORITY

WBNP
6" FEEDWATER WELD MAP
UNIT 1 LOOP 1


FWF-D372-14
FWF-D372-13
FWF-D372-12
DETAIL 'B'
6" THERMAL TEE
FWF-D372-56
3-644
FWS-59
FWF-D372-35
FWF-D372-34
FWS-57
FWF-D372-7B
FWF-D372-7A
FWF-D372-7
PEN X-80
FWF-D372-37
FWF-D372-38
FWF-D372-11
CL STM. GEN. A
FWF-D372-10
FWF-D372-33
FWF-D372-6
3-638
FWF-D372-5
FWF-D372-30
FWF-D372-31
FWF-D372-29
FWF-D372-28
FWF-D372-26
FWF-D372-25
FCV 3-245
FWF-D372-1
FWF-D372-21
FWF-D372-4
FWF-D372-18
FWF-D372-19
FWF-D372-2
FWF-D372-22
FWF-D372-23
FWF-D372-3
FWF-D372-17
FWF-D372-16
3-645
FWF-D372-15
FWS-61
FWS-60
FWS-56C
FWF-D372-8
FWS-56B
FWS-56A
PEN X-80
FWF-D372-37
FWF-D372-9
FWS-56
DETAIL 'B'
REF. DRAWING
DRAVO E 2879 IC-372
47W401-788
SEE SHEET #3 FOR NOTES
TENNESSEE VALLEY AUTHORITY
WBNP
6" FEEDWATER WELD MAP
UNIT 1
LOOP 4

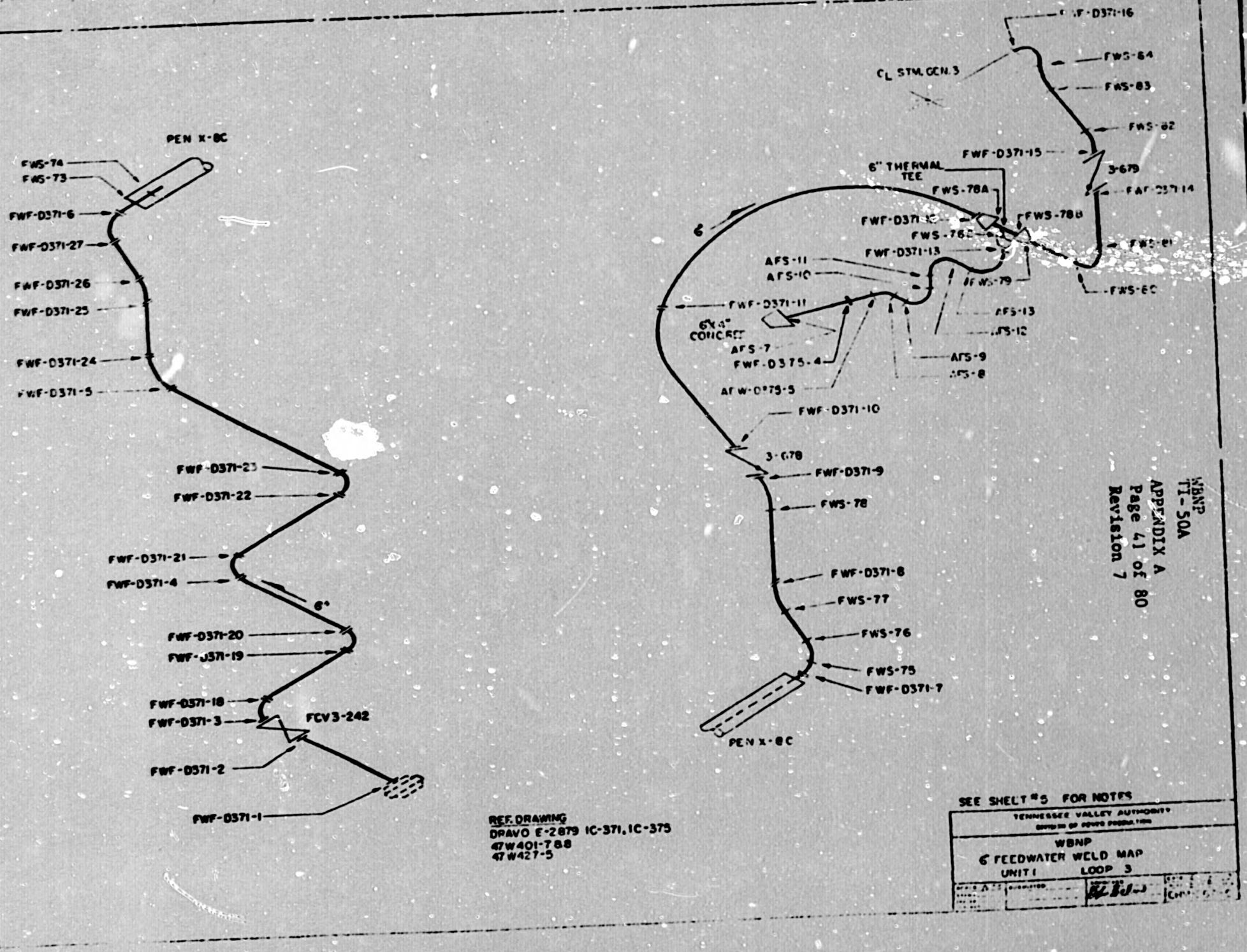


SEE SHEET 5 FOR NOTES

REF DRAWING
DRAWO E-2679 IC-370
IC-374
47W401-788
47W427-5

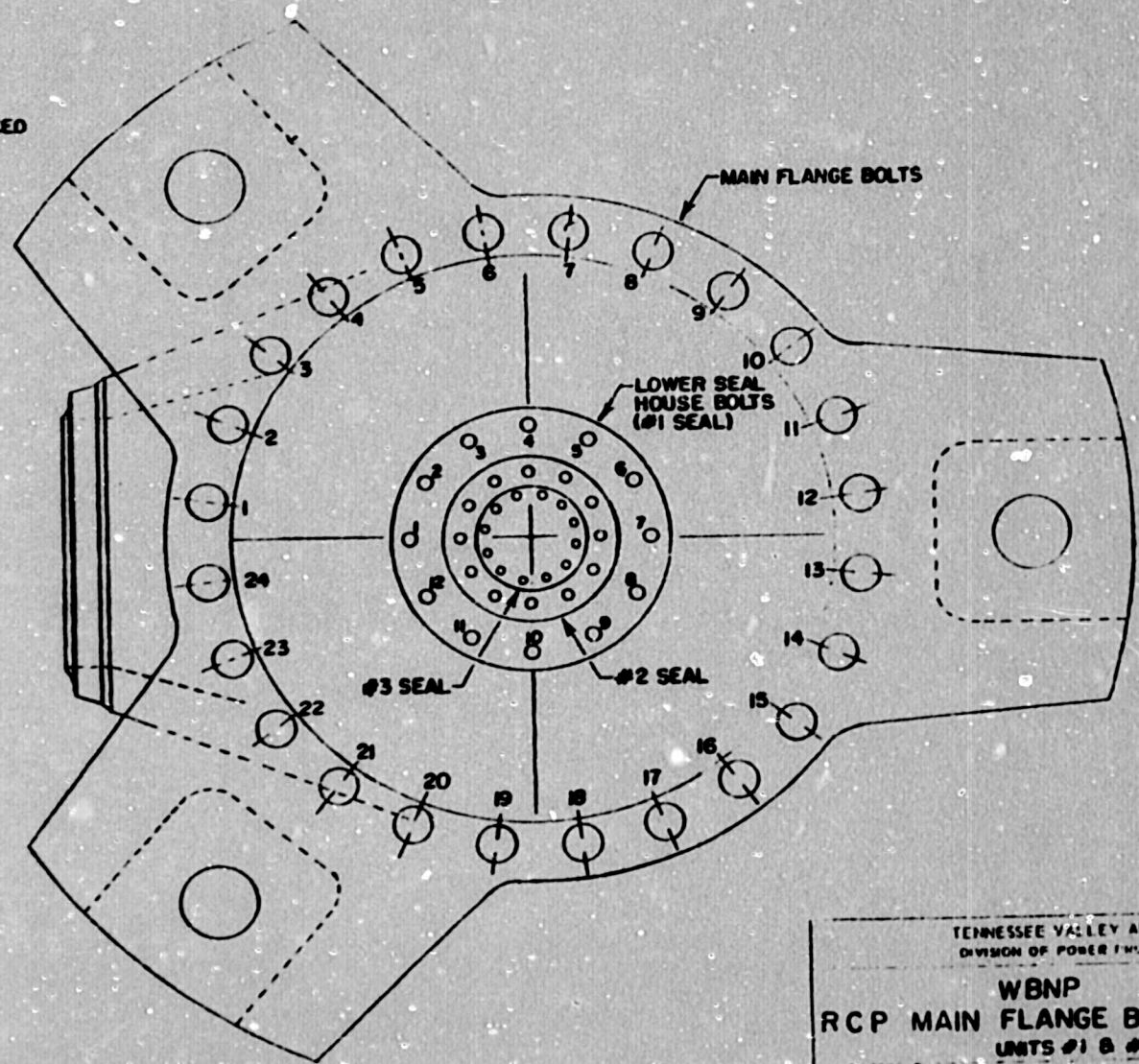
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER OPERATIONS

WBNP
6" FEEDWATER WELD MAP
UNIT 1 LOOP 2


PEN X-8C
FWS-74
FWS-73
FWF-D371-6
FWF-D371-27
FWF-D371-26
FWF-D371-25
FWF-D371-24
FWF-D371-5
FWF-D371-23
FWF-D371-22
FWF-D371-21
FWF-D371-4
6"
FWF-D371-20
FWF-D371-19
FWF-D371-18
FWF-D371-3
FCV 3-242
FWF-D371-2
FWF-D371-1
REF. DRAWING
DRAWO E-2879 IC-371, IC-375
47W401-788
47W427-5
CL STM. GEN. 3
FWF-D371-16
FWS-84
FWS-83
FWS-82
FWF-D371-15
6" THERMAL TEE
3-679
FWS-78A
FWS-78B
FWS-81
FWS-80
FWF-D371-13
AFS-11
AFS-10
FWS-79
FWF-D371-11
AFS-13
AFS-12
6"x4" CONCENTRIC
AFS-7
FWF-D375-4
AFS-9
AFS-8
AFW-D375-5
FWF-D371-10
3-678
FWF-D371-9
FWS-78
FWF-D371-8
FWS-77
FWS-76
FWS-75
FWF-D371-7
PEN X-8C
SEE SHEET #5 FOR NOTES
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION
WBNP
6" FEEDWATER WELD MAP
UNIT 1 LOOP 3

NOTES

1. ALL MAIN FLANGE BOLTS ARE PRECEDED BY RCP-X-Y-_, WHERE X IS REPLACED BY THE UNIT NUMBER AND Y IS REPLACED BY THE PUMP NUMBER.
2. THE LOWER SEAL HOUSE CAP SCREWS ARE PRECEDED BY LSH-X-Y-_, WHERE X IS REPLACED BY THE UNIT NUMBER AND Y IS REPLACED BY THE PUMP NUMBER.



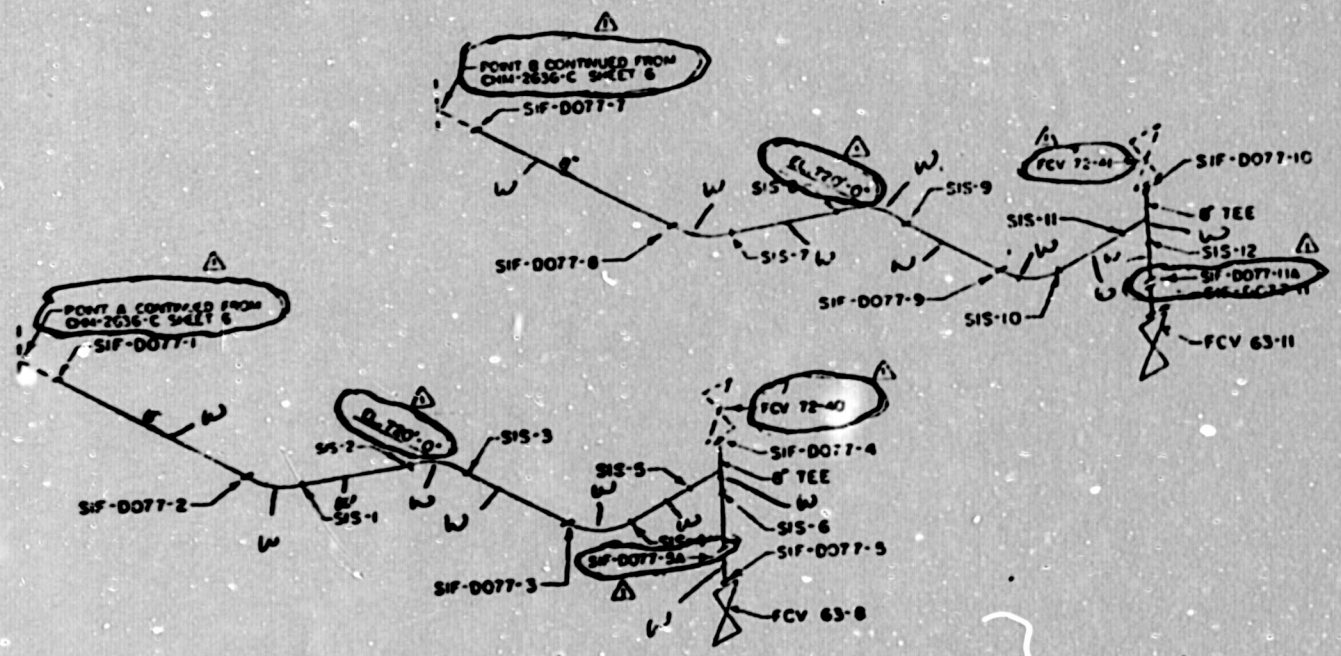
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
RCP MAIN FLANGE BOLT CIRCLE
UNITS #1 & #2

SUBMITTED

5-25-1979
CHM-2672-B

TVA 60914 (PP-2-60)



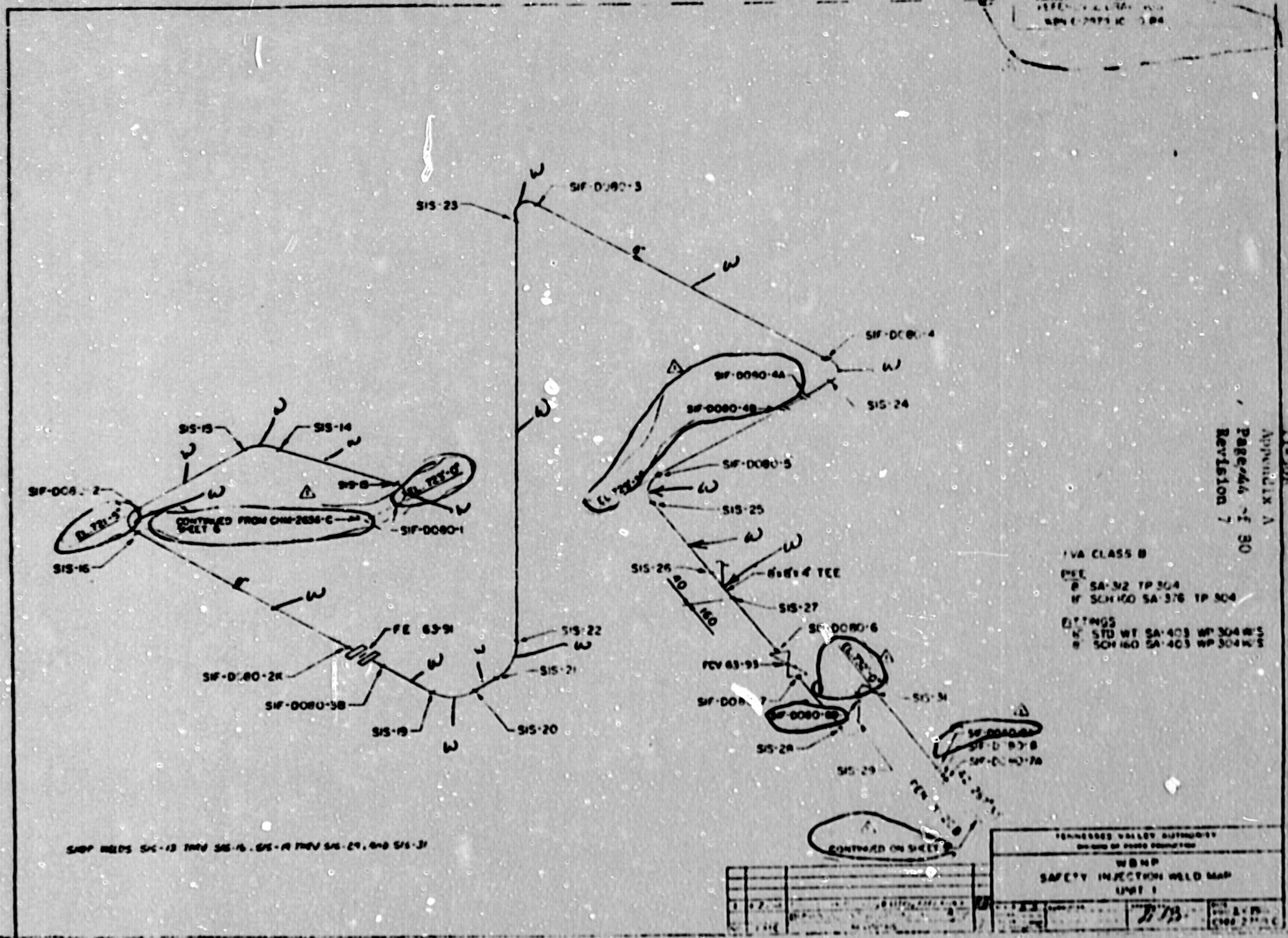
SHOP WELDS SIS-1 THRU SIS-12

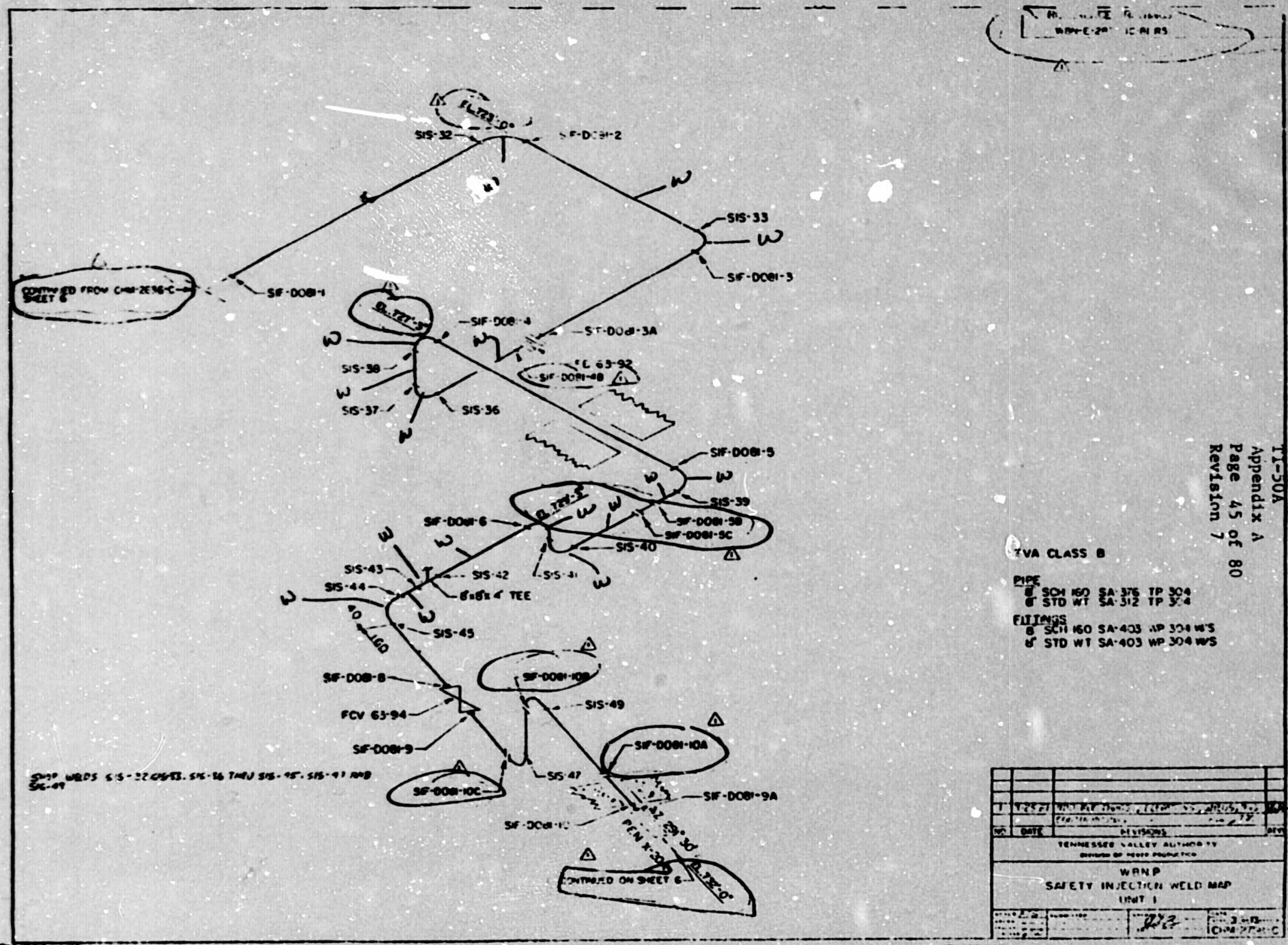
TVA CLASS B

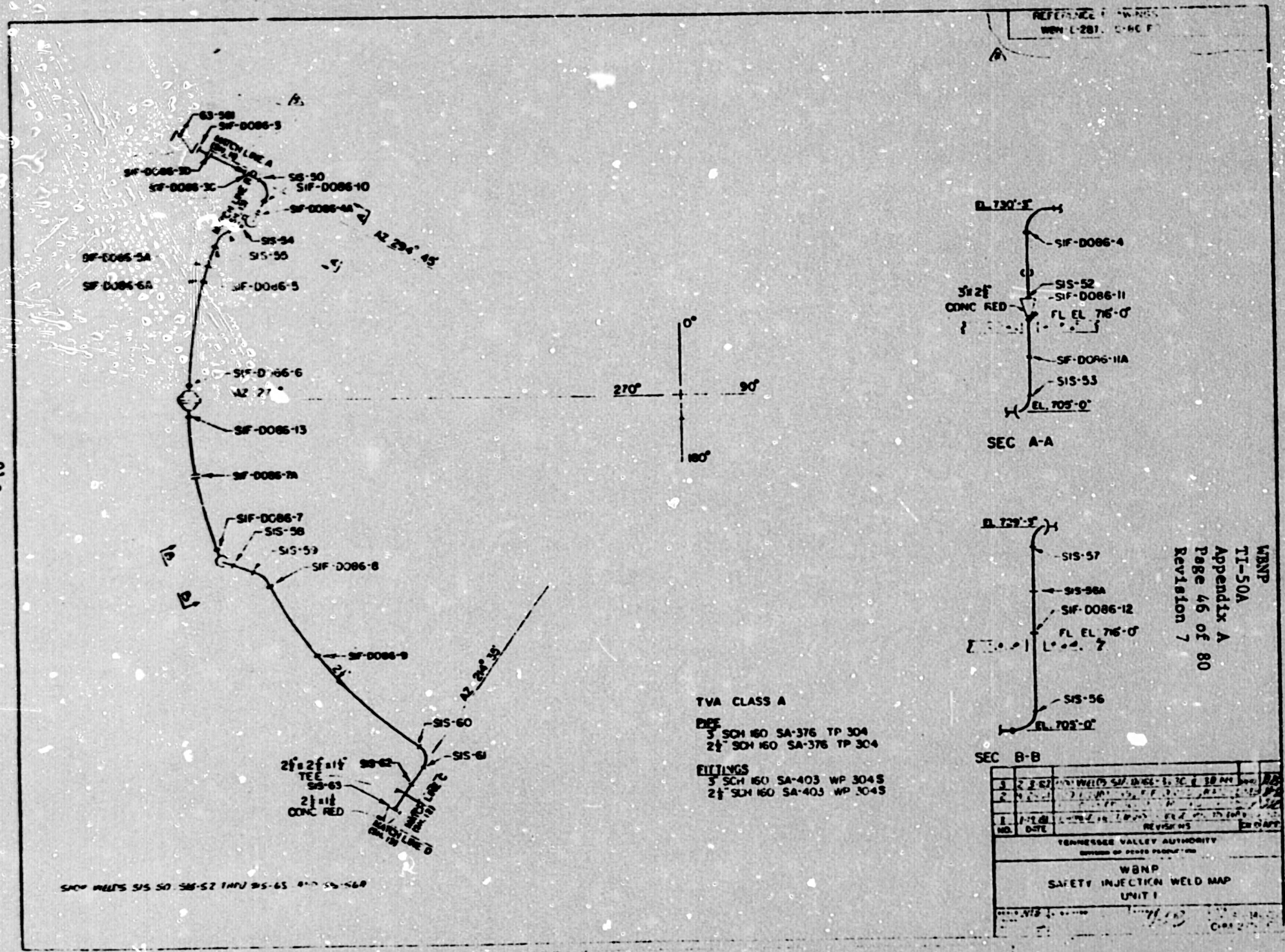
PIPE
8" SA-312 TP 304

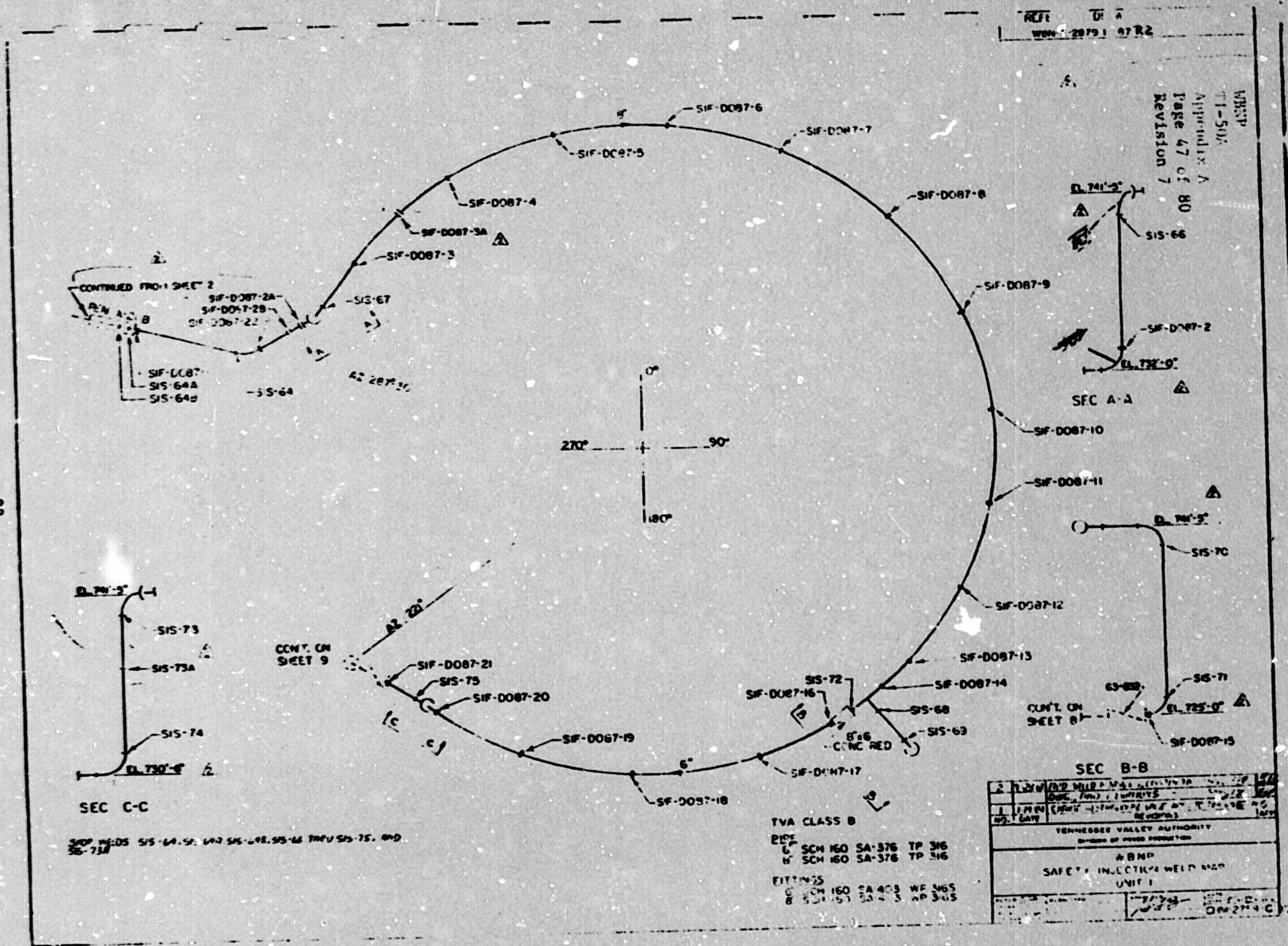
FITTINGS
8" STD. WT. SA-403 WP 304 W/S

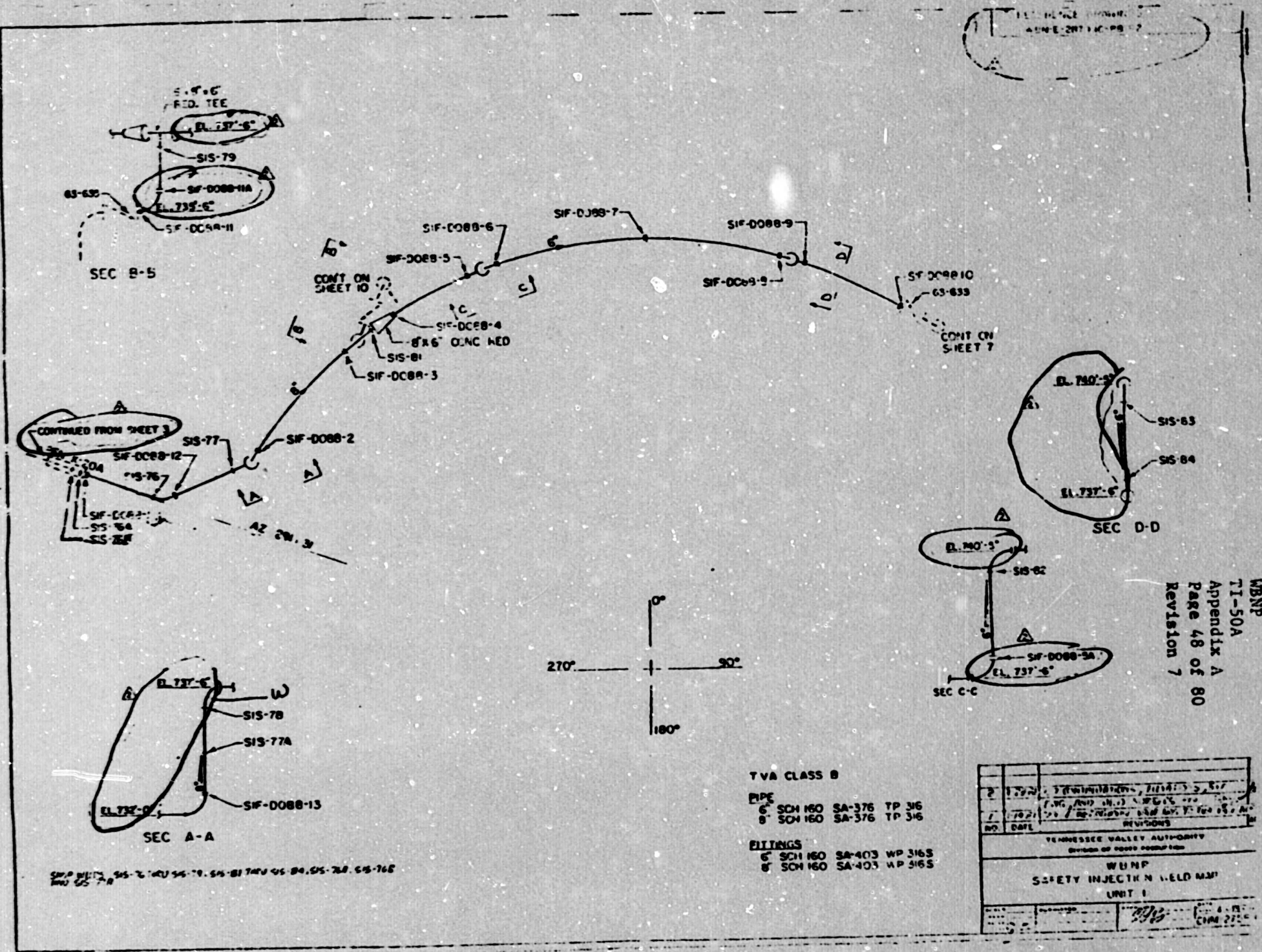
WBNP
SAFETY INJECTION WELD MAP
UNIT 1


SIS-23
SIF-DC80-3
SIF-DC80-4
SIF-DC80-4A
SIF-DC80-4B
SIS-24
SIF-DC80-5
SIS-25
SIS-26
SIS-27
SIF-DC80-6
FCV 63-93
SIS-31
SIS-28
SIS-29
SIS-15
SIS-14
SIS-13
SIF-DC80-2
SIF-DC80-1
SIS-16
CONTINUED FROM CHM-2636-C SHEET 6
FE 63-91
SIF-DC80-2R
SIF-DC80-3B
SIS-19
SIS-20
SIS-21
SIS-22
CONTINUED ON SHEET 8
TVA CLASS B
PIPE
B SA-312 TP 304
W SCH 160 SA-376 TP 304
FITTINGS
W STD WT SA-403 WP 304 W/S
B SCH 160 SA-403 WP 304 W/S
SHOP WELDS SIS-13 THRU SIS-16, SIS-18 THRU SIS-29, AND SIS-31
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER CONSTRUCTION
WBNP
SAFETY INJECTION WELD MAP
UNIT 1


SIS-32
SIF-D081-2
SIS-33
SIF-D081-3
CONTINUED FROM CHM-2E36-C SHEET 6
SIF-D081-1
SIF-D081-4
SIF-D081-3A
SIS-38
SIS-37
SIS-36
SIF-D081-4B
SIF-D081-5
SIS-39
SIF-D081-5B
SIF-D081-5C
SIF-D081-6
SIS-40
SIS-43
SIS-42
SIS-41
SIS-44
8"x8"x4" TEE
SIS-45
SIF-D081-8
SIF-D081-10B
SIS-49
FCV 63-94
SIF-D081-9
SIF-D081-10A
SIS-47
SIF-D081-10C
SIF-D081-9A
SIF-D081-10
CONTINUED ON SHEET 6
TVA CLASS B
PIPE
8" SCH 160 SA-376 TP 304
8" STD WT SA-312 TP 304
FITTINGS
8" SCH 160 SA-403 WP 304 W/S
8" STD WT SA-403 WP 304 W/S
NO
DATE
REVISIONS
TENNESSEE VALLEY AUTHORITY
WBNP
SAFETY INJECTION WELD MAP
UNIT 1


SIF-D086-3
SIF-D086-3D
SIF-D086-3C
SIS-50
SIF-D086-10
SIF-D086-4A
AZ 294° 45'
SIS-54
SIS-55
SIF-D086-5A
SIF-D086-6A
SIF-D086-5
SIF-D086-6
SIF-D086-13
SIF-D086-7A
SIF-D086-7
SIS-58
SIS-59
SIF-D086-8
SIF-D086-9
AZ 214° 35'
SIS-60
SIS-61
SIS-62
TEE
SIS-63
CONC RED
0°
90°
180°
270°
EL. 730'-3"
SIF-D086-4
SIS-52
SIF-D086-11
CONC RED
FL EL 716'-0"
SIF-D086-11A
SIS-53
EL. 705'-0"
SEC A-A
EL. 729'-3"
SIS-57
SIS-56A
SIF-D086-12
FL EL 716'-0"
SIS-56
EL. 705'-0"
SEC B-B
TVA CLASS A
PIPE
3" SCH 160 SA-376 TP 304
2½" SCH 160 SA-376 TP 304
FITTINGS
3" SCH 160 SA-403 WP 304S
2½" SCH 160 SA-403 WP 304S
NO.
DATE
REVISIONS
TENNESSEE VALLEY AUTHORITY
WBNP
SAFETY INJECTION WELD MAP
UNIT 1


SIF-D087-6
SIF-D087-7
SIF-D087-5
SIF-D087-4
SIF-D087-8
SIF-D087-3A
SIF-D087-3
SIF-D087-9
CONTINUED FROM SHEET 2
SIF-D087-2A
SIF-D087-2B
SIF-D087-22
SIS-67
SIF-D087-
SIS-64A
SIS-64B
SIS-64
AZ 287°30'
0°
270°
90°
180°
SIF-D087-10
SIF-D087-11
SIF-D087-12
SIF-D087-13
SIF-D087-14
SIS-72
SIF-D087-16
SIS-68
SIS-69
8"x6 CONC RED
SIF-D087-17
SIF-D087-18
6°
SIF-D087-19
SIF-D087-20
SIF-D087-21
SIS-75
AZ 221°
CONT. ON SHEET 9
SIS-73
SIS-73A
SIS-74
EL. 730'-6"
SEC C-C
EL. 741'-5"
SIS-66
SIF-D087-2
EL. 732'-0"
SEC A-A
EL. 741'-5"
SIS-70
SIS-71
EL. 725'-0"
CONT. ON SHEET 8
SIF-D087-15
SEC B-B
TVA CLASS B
PIPE
6" SCH 160 SA-376 TP 316
8" SCH 160 SA-376 TP 316
FITTINGS
6" SCH 160 SA-403 WP 316S
8" SCH 160 SA-403 WP 316S
TENNESSEE VALLEY AUTHORITY
WBNP
SAFETY INJECTION WELD MAP
UNIT 1



WBNP
TI-50A
Appendix A
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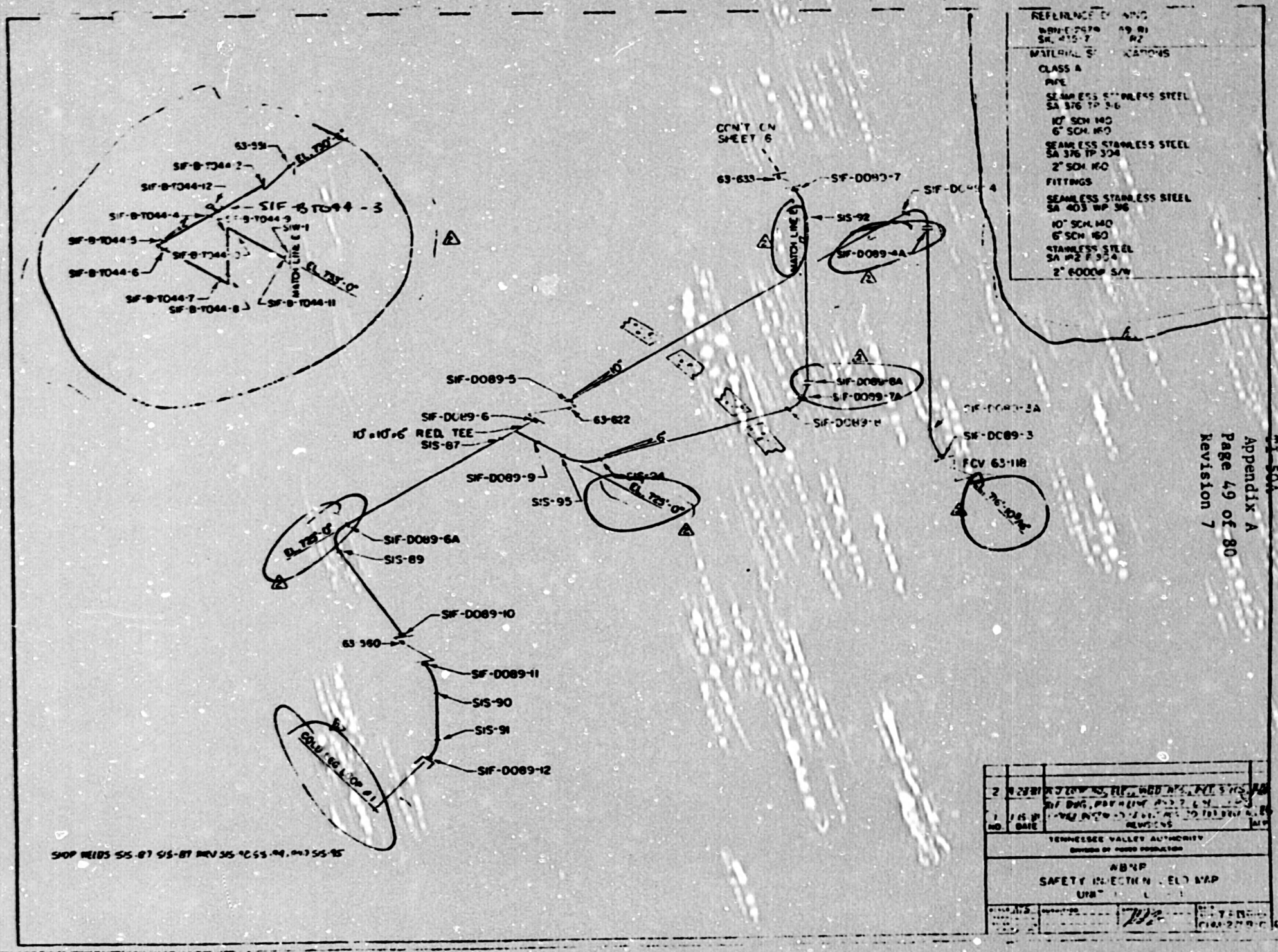
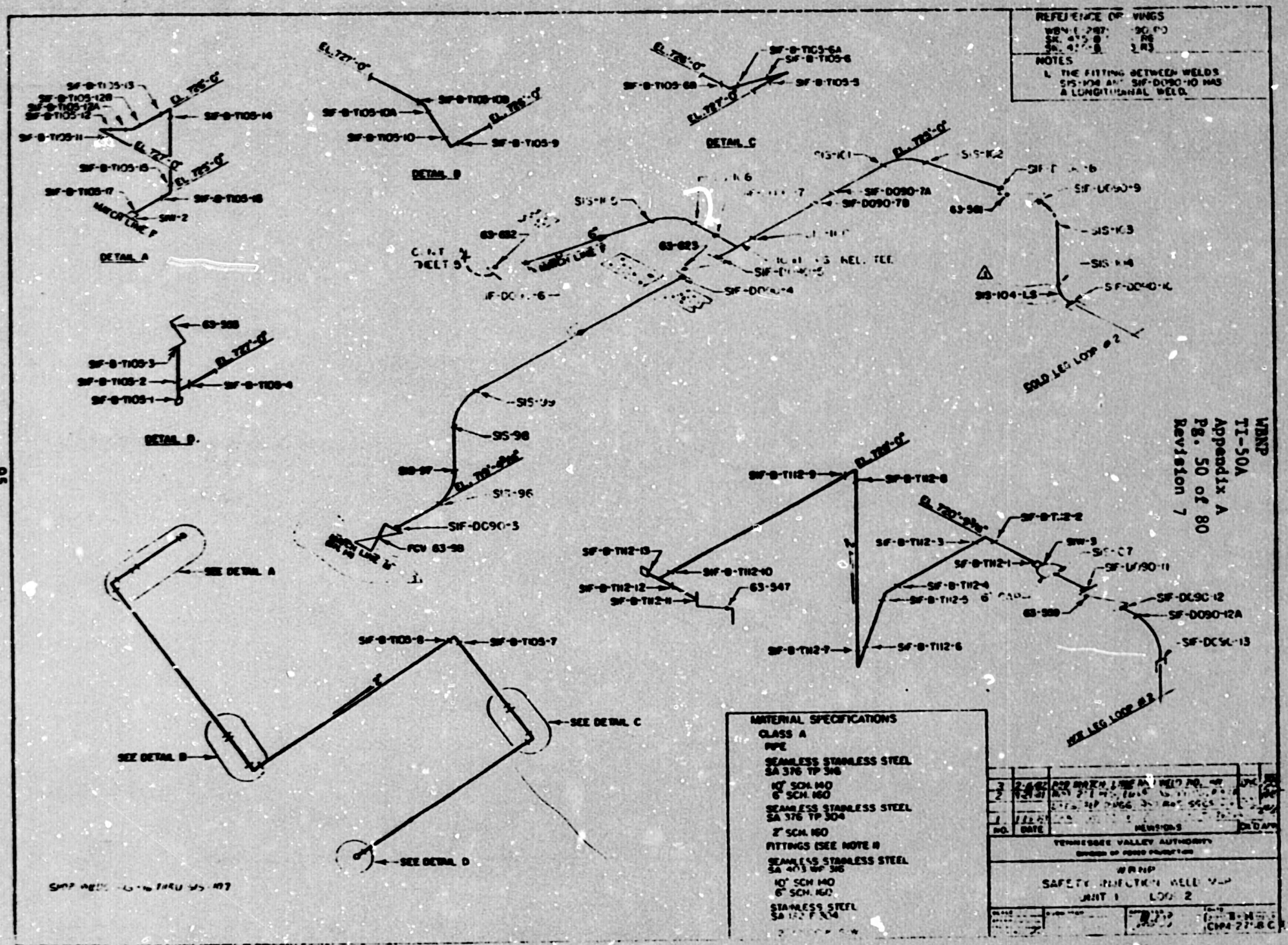
Revision 7


CLASS A
PIPE
SEAMLESS STAINLESS STEEL
SA 376 TP 316
10" SCH 140
6" SCH 160
SEAMLESS STAINLESS STEEL
SA 376 TP 304
2" SCH 160
FITTINGS
SEAMLESS STAINLESS STEEL
SA 403 WP 316
10" SCH 140
6" SCH 160
STAINLESS STEEL
2" 6000# S/W
CON'T ON SHEET 6
63-633
SIF-D089-7
SIS-92
SIF-D089-4A
MATCH LINE E
SIF-D089-5
63-622
SIF-D089-6
10"x10"x6" RED. TEE
SIS-87
SIF-D089-9
SIS-95
SIF-D089-8A
SIF-D089-7A
SIF-D089-8
SIF-D089-3A
SIF-D089-3
FCV 63-118
SIF-D089-6A
SIS-89
SIF-D089-10
63-560
SIF-D089-11
SIS-90
SIS-91
SIF-D089-12
SIF-B-T044-3
SIF-B-T044-2
SIF-B-T044-12
SIF-B-T044-4
SIF-B-T044-5
SIF-B-T044-6
SIF-B-T044-7
SIF-B-T044-8
SIF-B-T044-11
SIW-1
MATCH LINE E
EL. 730'-0"
EL. 735'-0"
EL. 725'-0"
EL. 716'-10 3/16"
SHOP WELDS SIS-87 SIS-87 PREV SIS-90 SIS-94 AND SIS-95
NO.
DATE
REVISIONS
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION
WBNP
SAFETY INJECTION FIELD MAP


REFERENCE DRAWINGS
NOTES
1. THE FITTING BETWEEN WELDS SIS-104 AND SIF-DC90-10 HAS A LONGITUDINAL WELD.
DETAIL A
DETAIL B
DETAIL C
DETAIL D
SEE DETAIL A
SEE DETAIL B
SEE DETAIL C
SEE DETAIL D
COLD LEG LOOP #2
HOT LEG LOOP #2
MATERIAL SPECIFICATIONS
CLASS A
PIPE
SEAMLESS STAINLESS STEEL
SA 376 TP 316
10" SCH. 140
6" SCH. 160
SEAMLESS STAINLESS STEEL
SA 376 TP 304
2" SCH. 160
FITTINGS (SEE NOTE 1)
SEAMLESS STAINLESS STEEL
SA 403 WP 316
10" SCH. 140
6" SCH. 160
STAINLESS STEEL
NO. DATE REVISIONS
TENNESSEE VALLEY AUTHORITY
WBNP
SAFETY INJECTION WELD MAP
UNIT 1 LOOP 2