

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8208200195 DOC. DATE: 82/08/17 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania 05000387
 AUTH. NAME AUTHOR AFFILIATION
 CURTIS, N.W. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Forwards Preservice Insp Relief Request 14 for exemption from ASME code requirement for volumetric exam of 100% of circumferential weld prior to initial startup. List of welds to be scanned encl.

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	NRR/DSI/RAB 22	1	1	NRR/DSI/RSB 23	1	1
	NRR/DST/LGB 33	1	1	<u>REG FILE</u> 04	1	1
	RGN1	2	2	RM/DDAMI/MIB	1	0
EXTERNAL:	ACRS 41	10	10	BNL (AMDTs ONLY)	1	1
	DMB/DSS (AMDTs)	1	1	FEMA-REP DIV 39	1	1
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Pennsylvania Power & Light Company

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Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215 / 770-5381

AUG 17 1982

Mr. A. Schwencer, Chief
Licensing Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
UNIT #1 PRESERVICE INSPECTION RELIEF REQUEST NO. 14
ER 100450 FILE 899, 899-M-191
PLA-1239

Docket No. 50-387

Dear Mr. Schwencer:

Att: 8208200195 820817 preservice Inspection Relief Request No. 14.
Acc: PDR ADDCK 05000387 l close an open Inspection and Enforcement
license-~~condition~~. ~~THIS LICENSE CONDITION~~ PDR must be closed prior to initial
criticality.

If you have any questions, please call.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

CTC/mks

Attachment

cc: R. Perch - NRC

Boo1



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PRESERVICE INSPECTION
RELIEF REQUEST #14

I. IDENTIFICATION OF COMPONENTS:

Recirculation system Class I Corrosion
Resistant Clad (CRC) pipe welds.

II. CODE REQUIREMENT:

Category BJ - Table IWB-2600, Item Number B4.5 - of the ASME Code, 1974 Edition to Summer 1975 Addenda requires volumetric examination of 100% of circumferential welds be performed completely as a preservice examination requirement prior to initial plant start-up.

ASME Appendix III, Winter 1975 Addenda, requires an angle beam examination of the weld and required volume (the lesser of $\frac{1}{2} t$ or 1") be performed scanning both normal and parallel to the weld.

III. BASIS FOR RELIEF:

Partial relief is required from the ASME Section XI examination requirements on the basis that an acceptable examination cannot be performed in areas of the examination volume due to metallurgical and geometric restraints using state of the art ultrasonic techniques.

IV. JUSTIFICATION:

1. The preservice integrity of the subject welds and corrosion resistant clad area has been established via extensive in-process NDE and satisfaction of ASME Section III requirements.
2. The obstructed areas are on the recirculation riser pipe sides of the joint where the corrosion resistant cladding (CRC), conforming to NUREG 0313, is the accepted method utilized to minimize susceptibility to IGSCC.
3. The heat affected zone (HAZ) on the sweepolet/reducer side of the joint does not conform to NUREG 0313 and requires future augmented inservice inspections. This area is able to be examined from the fitting side of the joint and is, therefore, not obstructed by metallurgical or geometric restraints. A preservice examination has been completed in this area.
4. A complete examination of the weld and required volume on the riser side of the joint has been performed scanning 45° circumferentially (i.e. parallel with the weld).
5. Visual examination of the weld during system pressure testing will be performed to detect for evidence of leakage.
6. The SSES leak detection system design conforms to NUREG - 0313.

7. A complete preservice examination has been performed on weld VRR-B31-2-FWB13. This weld may be routinely inspected to determine inservice integrity.

V. ALTERNATE PROVISIONS:

1. No alternate NDE methods are currently available to perform these inspections.
2. PP&L will continue to monitor state of the art techniques for their applicability to this inspection.
3. For inservice inspection purposes, automated ultrasonic "surveillance" of the joints is being pursued. That is, a track mechanism with ultrasonic scanning capability will be mounted on the pipe for the riser side axial inspection. The ultrasonic CRT screen presentation will be continuously recorded via videotape or other permanent method. Subsequent scans will be compared against the original scan to determine the relative change in status of the welds.

Accessible welds will be scanned by this method using non-Susquehanna specific equipment prior to initial criticality. Final equipment design for greater accessibility is expected complete January, 1983.



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WELD IDENTIFICATION NUMBER	CONFIGURATION	SCAN OBSTRUCTED	NATURE OF OBSTRUCTION	% OF SCAN OBSTRUCTED
VRR-B31-1-FWA10	Riser to sweepolet	0°, 70° scan from the sweepolet side	Fitting configuration	7%
		45° axial scan from riser side	Metallurgical and geometric conditions	100% ¹
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWA11	Riser to sweepolet	0°, 70° scan from the sweepolet side	Fitting configuration	7%
		45° axial scan from the riser side	Metallurgical and geometric conditions	100%
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWA13	Riser to sweepolet	0°, 70° scan from the sweepolet side	Fitting configuration	7%
		45° axial scan from the riser side	Metallurgical and geometric conditions	100%

WELD IDENTIFICATION NUMBER	CONFIGURATION	SCAN OBSTRUCTED	NATURE OF OBSTRUCTION	% OF SCAN OBSTRUCTED
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWA14	Riser to sweepolet	0°, 70° scan from the sweepolet side	Fitting configuration	7%
		45° axial scan from the riser side	Metallurgical and geometric conditions	100% ²
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWB10	Riser to sweepolet	0°, 70° scan from the sweepolet side	Fitting configuration	7%
		45° axial scan from the riser side	Metallurgical and geometric conditions	100% ³
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWB11	Riser to sweepolet	0°, 70° scan from the sweepolet side	Fitting configuration	7%

WELD IDENTIFICATION NUMBER	CONFIGURATION	SCAN OBSTRUCTED	NATURE OF OBSTRUCTION	% OF SCAN OBSTRUCTED
		45° axial scan from the riser side	Metallurgical and geometric conditions	100%
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWB14	Riser to sweepolet	0°; 70° scan from the sweepolet side	Fitting to configuration	7%
		45° axial scan from the riser side	Metallurgical and geometric conditions	50% ⁴
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B31-1-FWA12	Riser to reducer	45° axial scan from the riser side	Metallurgical and geometric conditions	60% ⁵
		0° scan from the riser side	Fitting to pipe transition	8%
VRR-B13-2-FWB12	Riser to reducer	45° axial scan from the riser side	Metallurgical and geometric conditions	60% ⁵
		0° scan from the riser side	Fitting to pipe transition	8%



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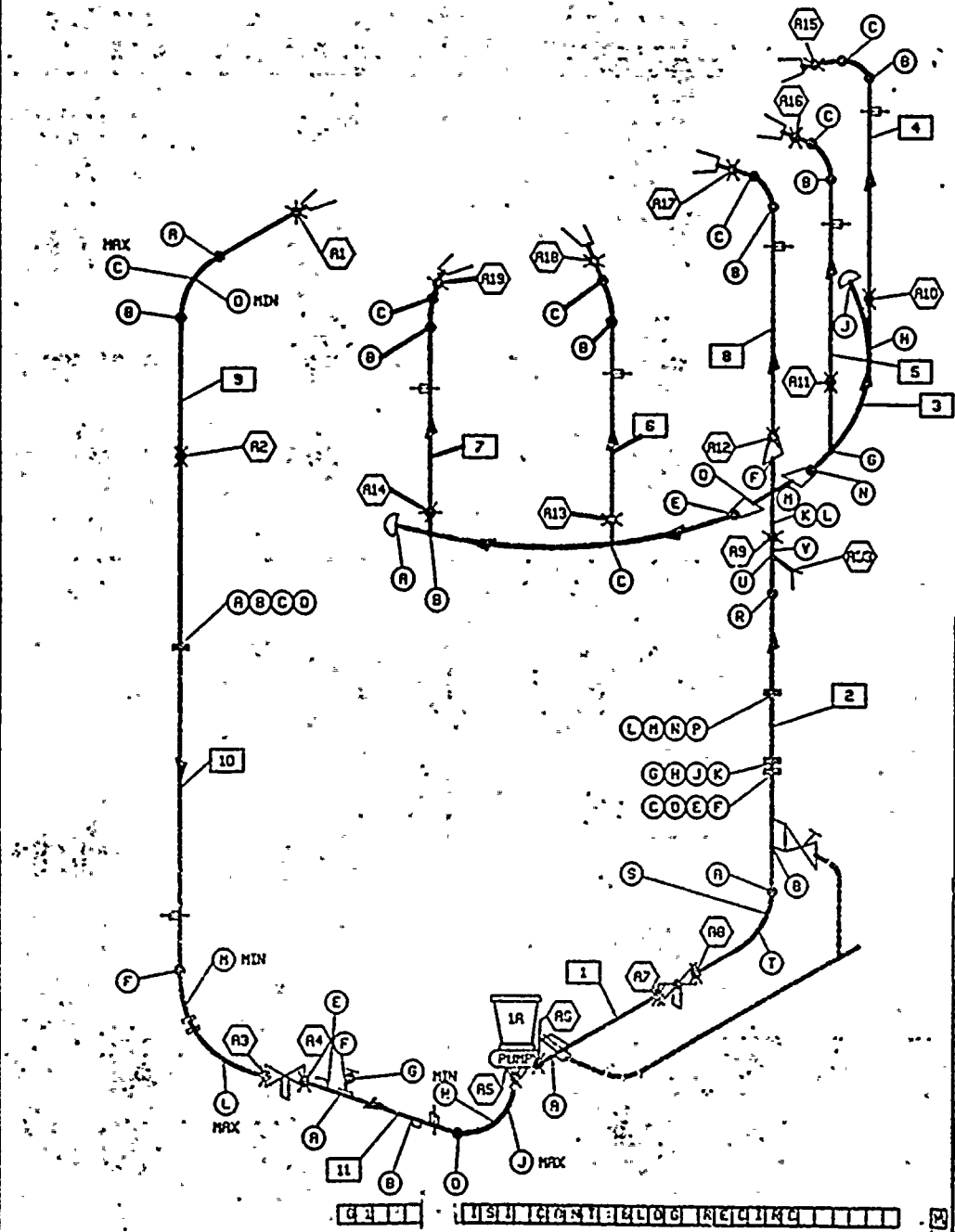
WELD IDENTIFICATION NUMBER	CONFIGURATION	SCAN OBSTRUCTED	NATURE OF OBSTRUCTION	% OF SCAN OBSTRUCTED
VRR-B31-1-FWA15				
VRR-B31-1-FWA16				
VRR-B31-1-FWA17				
VRR-B31-1-FWA18	Riser to nozzle safe ends	45° axial scan from the riser side	O. D. Contour	8% ⁶
VRR-B31-1-FWA19				
VRR-B31-2-FWB15		45° axial scan from the riser side	I. D. Geometry	Footnote 7
VRR-B31-2-FWB16				
VRR-B31-2-FWB17				
VRR-B31-2-FWB18				
VRR-B31-2-FWB19				

1. Examination completed. Numerous indications evaluated and attributed to i.d. geometry. One (1) indication unresolved.
2. O.D. contour conditions caused transducer contact difficulties making indications unresolvable.
3. Examination completed, however, numerous indications required extensive evaluation time.
4. Examination unresolvable scanning toward the weld. Examination completed scanning away from the weld.
5. Indications too extensive to evaluate for an area three (3) inches back from the fitting to pipe transition by 360°.
6. O.D. contour conditions cause a loss of transducer contact for 0.5 inches by 360°.
7. Examination completed. Numerous indications evaluated and attributed to i.d. geometry.

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WELD IDENTITY				SIZE	TYPE OF JOE	ISI REQ'D (YEARS)
ISO	# JOE	WELD NO.	WELD TYPE			
VRR-B31-1	9	A1	B	28"	SUR	
	9	A	B	28"	VOL	
	9	B	B	28"	VOL	
	J	C.O	L	-	VOL	
	9-10	A2	B	28"	VOL	
	10	A.B	F	-	VOL	
	10	C.O	F	28"	VOL	
	10	L.H	L	-	VOL	
	10	A3	B	28"	VOL	
	11	A4	B	28"	VOL	
	11	A	B	4"	SUR	
	11	B	B	4"	SUR	
	11	D	B	28"	VOL	
	11	E	F	1 1/4"	SUR	
	11	F	B	4"	VOL	
	11	G	B	4"	VOL	
	11	H	L	-	VOL	
	11	AS	B	28"	VOL	
	1	AG	B	28"	VOL	
	1	A	B	4"	SUR	
	1	A7	B	28"	VOL	
	2	A8	B	28"	VOL	
	2	A	B	28"	VOL	
	2	B	B	4"	SUR	
	2	C.O	F	-	VOL	
	2	E.F	F	-	VOL	
	2	C.K	F	-	VOL	
	2	L.N	F	-	VOL	
	2	K.P	F	-	VOL	
	2	R	B	28"	VOL	
	2	S.1	-	-	VOL	
	2	U.V	L	-	VOL	
	2	A9	B	28"	VOL	
	2	A3	B	24"	VOL	
	3	A	B	22"	VOL	
	3	B	B	24 1/2"	VOL	
	3	C	B	24 1/2"	VOL	
	3	D	B	28"	VOL	
	3	E	B	22"	VOL	
	3	F	B	28"	VOL	
	3	G	B	24 1/2"	VOL	
	3	H	B	24 1/2"	VOL	
	3	J	B	22"	VOL	
	3	KL	F	-	VOL	
	3	H	B	28"	VOL	
	3	N	B	22"	VOL	
	3-4	A10	B	12"	VOL	
	4	B	B	12"	VOL	
	4	C	B	12"	VOL	
	4	A15	B	12"	VOL	
	3-5	A11	B	12"	VOL	
	5	B	B	12"	VOL	
	5	C	B	12"	VOL	
	5	A16	B	12"	VOL	
	3-8	A12	B	12"	VOL	
	8	B	B	12"	VOL	
	8	C	B	12"	VOL	
	8	A17	B	12"	VOL	
	3-6	A18	B	12"	VOL	
	6	B	B	12"	VOL	
	6	C	B	12"	VOL	

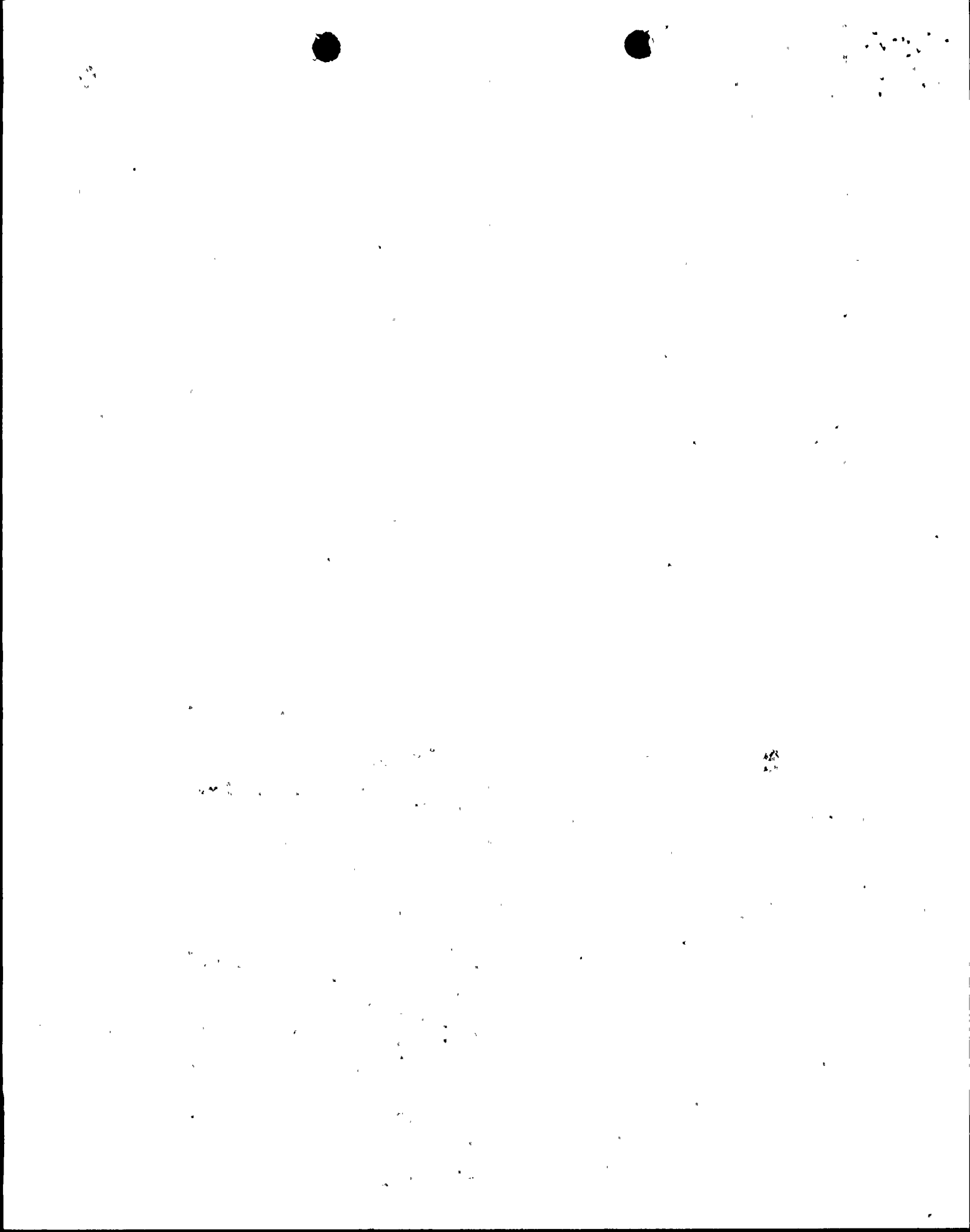
WELD IDENTITY				SIZE	TYPE OF JOE	ISI REQ'D (YEARS)
ISO	# JOE	WELD NO.	WELD TYPE			
VRR-B31-1	6	A18	B	12"	VOL	
	3-7	A14	B	12"	VOL	
	7	B	B	12"	VOL	
	7	C	B	12"	VOL	
	7	A19	B	12"	VOL	



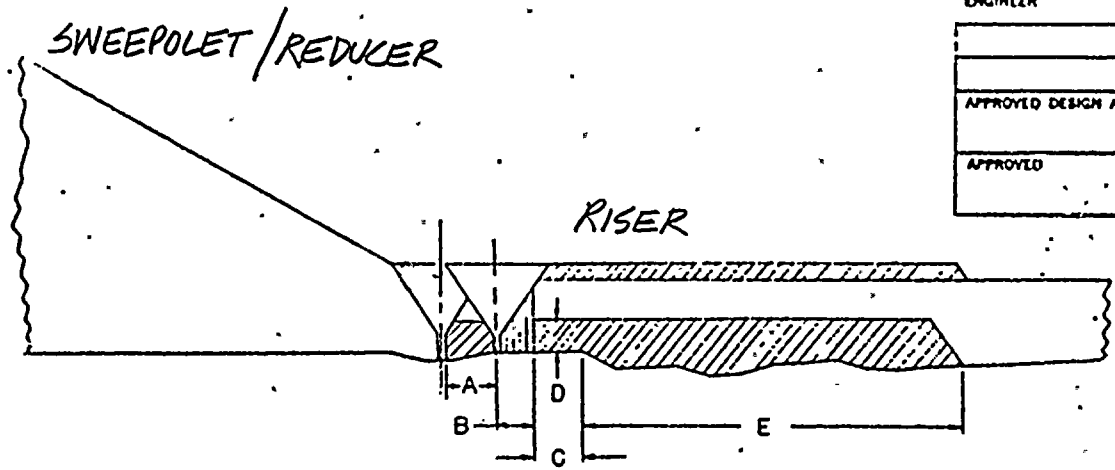
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DATE	REV	BY	CHK	DATE	APP																
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SCALE	DESIGNED	DRAWN																			
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PENNSYLVANIA POWER & LIGHT COMPANY ALL EDITIONS PENNSYLVANIA BROADHURST STEAM ELECTRIC STATION - UNIT 1, UNIT 2																					
BECHTEL - SAN FRANCISCO																					
INSERVICE INSPECTION ISOMETRIC WELD IDENTIFICATION ISI-VRR-B31-1																					
<table border="1"> <tr> <td>FIG. NO.</td> <td>DRAWING NO.</td> <td>REV.</td> </tr> <tr> <td>8358</td> <td>ISI-VRR-B31-1</td> <td>0</td> </tr> </table>										FIG. NO.	DRAWING NO.	REV.	8358	ISI-VRR-B31-1	0						
FIG. NO.	DRAWING NO.	REV.																			
8358	ISI-VRR-B31-1	0																			

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WELD IDENTITY				SIZE	TYPE OF JOINT	ISI REC'D (YEARS)
ISO	S ₁₀	WELD NO.	WELD TYPE			
VRR-B31-2	9	B1	B	28"	SUR	
	9	A	B	28"	YOL	
	9	B	B	28"	YOL	
	9	C	L	-	YOL	
	9	O	L	-	YOL	
	9-10	B2	B	28"	YOL	
	10	A	B	28"	YOL	
	10	B,C	F	-	YOL	
	10	D,E	N	28"	YOL	
	10	P,Q	L	-	YOL	
	10	S,R	L	-	YOL	
	10	B3	B	28"	YOL	
	11	B4	B	28"	YOL	
	11	A	B	4"	SUR	
	11	B	B	4"	SUR	
	11	D	B	28"	YOL	
	11	E	F	11"	SUR	
	11	F	B	4"	YOL	
	11	G	B	4"	YOL	
	11	H,J	L	-	YOL	
	11	B5	B	28"	YOL	
	11	B6	B	28"	YOL	
	11	A	B	4"	SUR	
	11	B7	B	28"	YOL	
	11	B8	B	28"	YOL	
	11	A	B	28"	YOL	
	11	B	B	4"	SUR	
	11	C,D	F	-	YOL	
	11	E,F	-	-	YOL	
	11	G,H	-	-	YOL	
	11	I,J	-	-	YOL	
	11	K,L	-	-	YOL	
	11	M,N	-	-	YOL	
	11	P	B	28"	YOL	
	11	Q	L	-	YOL	
	11	R	L	-	YOL	
	11	S	L	-	YOL	
	11	T	B	28"	YOL	
	11	U	B	24"	YOL	
	11	V	B	22"	YOL	
	11	W	B	24"	YOL	
	11	X	B	24"	YOL	
	11	Y	B	22"	YOL	
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	11	FD	B	22"	YOL	
	11	FE	B	22"	YOL	
	11	FF	B	22"	YOL	
	11	FG	B	22"	YOL	
	11	FH	B	22"	YOL	
	11	FI	B	22"	YOL	
	11	FJ	B	22"	YOL	
	11	FK	B	22"	YOL	
	11	FL	B	22"	YOL	
	11	FM	B	22"	YOL	
	11	FN	B	22"	YOL	
	11	FO	B	22"	YOL	
	11	FP	B	22"	YOL	
	11	FQ	B	22"	YOL	
	11	FR	B	22"	YOL	
	11	FS	B	22"	YOL	
	11	FT	B	22"	YOL	
	11	FU	B	22"	YOL	
	11	FV	B	22"	YOL	
	11	FW	B	22"	YOL	
	11	FX	B	22"	YOL	
	11	FY	B	22"	YOL	
	11	FZ	B	22"	YOL	
	11	GA	B	22"	YOL	
	11	GB	B	22"	YOL	
	11	GC	B	22"	YOL	
	11	GD	B	22"	YOL	
	11	GE	B	22"	YOL	
	11	GF	B	22"	YOL	
	11	GG	B	22"	YOL	
	11	GH	B	22"	YOL	
	11	GI	B	22"	YOL	
	11	GJ	B	22"	YOL	
	11	GK	B	22"	YOL	
	11	GL	B	22"	YOL	
	11	GM	B	22"	YOL	
	11	GN	B	22"	YOL	
	11	GO	B	22"	YOL	
	11	GP	B	22"	YOL	
	11	GQ	B	22"	YOL	
	11	GR	B	22"	YOL	
	11	GS	B	22"	YOL	
	11	GT	B	22"	YOL	
	11	GU	B	22"	YOL	
	11	GV	B	22"	YOL	
	11	GW	B	22"	YOL	
	11	GX	B	22"	YOL	
	11	GY	B	22"	YOL	
	11	GZ	B	22"	YOL	
	11	HA	B	22"	YOL	
	11	HB	B	22"	YOL	
	11	HC	B	22"	YOL	
	11	HD	B	22"	YOL	
	11	HE	B	22"	YOL	
	11	HF	B	22"	YOL	
	11	HG	B	22"	YOL	
	11	HH	B	22"	YOL	
	11	HI	B	22"	YOL	
	11	HJ	B	22"	YOL	
	11	HK	B	22"	YOL	
	11	HL	B	22"	YOL	
	11	HM	B	22"	YOL	
	11	HN	B	22"	YOL	
	11	HO	B	22"	YOL	
	11	HP	B	22"	YOL	
	11	HQ	B	22"	YOL	
	11	HR	B	22"	YOL	
	11	HS	B	22"	YOL	
	11	HT	B	22"	YOL	
	11	HU	B	22"	YOL	
	11	HV	B	22"	YOL	
	11	HW	B	22"	YOL	
	11	HX	B	22"	YOL	
	11	HY	B	22"	YOL	
	11	HZ	B	22"	YOL	
	11	IA	B	22"	YOL	
	11	IB	B	22"	YOL	
	11	IC	B	22"	YOL	
	11	ID	B	22"	YOL	
	11	IE	B	22"	YOL	
	11	IF	B	22"	YOL	
	11	IG	B	22"	YOL	
	11	IH	B	22"	YOL	
	11	II	B	22"	YOL	
	11	IJ	B	22"	YOL	
	11	IK	B	22"	YOL	
	11	IL	B	22"	YOL	
	11	IM	B	22"	YOL	
	11	IN	B	22"	YOL	
	11	IO	B	22"	YOL	
	11	IP	B	22"	YOL	
	11	IQ	B	22"	YOL	
	11	IR	B	22"	YOL	
	11	IS	B	22"	YOL	



INFORMATION IN ACCEPTING THE DRAWING, THE USER THAT IT IS FOR THE USER'S SOLE USE, THAT IT WILL NOT BE REPRODUCED OR DISTRIBUTED TO OTHERS, AND THAT THE DRAWING OR INFORMATION CONTAINED THEREIN WILL NOT BE USED IN ANY MANNER UNRELATED TO AUTOMATION INDUSTRIES, INC.



DRAWN (Vertical Form) 2-13-61		TITLE	
CHECKED		SWEEPOLET-TO-RISER WELD MEASUREMENTS	
APPROVED			
ENGINEER			
APPROVED DESIGN ACTIVITY		SIZE	CODE IDENT NO.
APPROVED		C	78446
		DRAWING NO.	
		SCALE	SHEET

SPOOL PIECE NO.	WELD NO.	DUTCHMAN LENGTH "A"	REMAINING BUILDUP "B"	COUNTERBORE LENGTH "C"	CLAD THICKNESS "D"	CLADDING TO INBOARD BREAK "E"
RD-1-A4	FWA10	23/32	11/64	26/64	6/32	2-15/64
RD-1-A5	FWA11	19/32	18/64	45/64	7/32	2-5/64
RD-1-A3	FWA12	16/32	31/64	58/64	7/32	2-18/64
RD-1-A6	FWA13	18/32	11/64	52/64	7/32	2-5/64
RD-1-A7	FWA14	21/32	2/64	40/64	6/32	2-24/64
RD-1-B4	FWB10	18/32	21/64	54/64	6/32	3-8/64
RD-1-B5	FWB11	14/32	23/64	52/64	6/32	2-35/64
RD-1-B8	FWB12	17/32	31/64	1-3/64	7/32	2-19/64
RD-1-B6	FWB13	18/32	22/64	53/64	6/32	2-26/64
RD-1-B7	FWB14	19/32	9/64	45/64	7/32	2-12/64

INFORMATION COMPILED FROM CORRESPONDENCE AND FIELD MEASUREMENTS.