

**FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS**

As required by the Provisions of the ASME Code Rules

1. Owner Duquesne Light Company, 435 Sixth Avenue, Pittsburgh, PA 15219  
 (Name and Address of Owner)
2. Plant Beaver Valley Power Station, P.O. Box 4, Shippingport, PA 15077-0004  
 (Name and Address of Plant)
3. Plant Unit 1-856 MW 4. Owner Certificate of Authorization (if required) 26-05000 \*
5. Commercial Service Date 09/30/76 6. National Board Number for Unit N/A
7. Components Inspected

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Reactor Vessel	Combustion Engineering	69103	B-105642	21011
Pressurizer	Westinghouse	1311	PA434676	68-50
Steam Generators	Westinghouse			
Loop 1		1301	434597	68-45
Loop 2		1302	434598	68-46
Loop 3		1303	434599	68-47
Reactor Coolant Pumps	Westinghouse			
Loop 1		1-618J931G01	N/A	N/A
Loop 2		2-618J931G01	N/A	N/A
Loop 3		3-618J931G01	N/A	N/A
Reactor Coolant Piping				
Loop 1, 2, & 3	S.W. Fabricating	N/A	N/A	N/A
Associated Auxiliary				
Piping Systems	Schneider Power Corp.	N/A	N/A	N/A
Excess Letdown Heat Exchanger	Atlas Manufacturing	1308	N/A	1127
Boron Injection Tank	Struthers Wells Corp.	N/A	434783	13347

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

\*Designates account number of arrangement with Authorized Inspection Agency to provide inspection services.

This form (E00029) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

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Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Residual Heat Exchangers	Joseph Oat & Sons	1832-1	434682	368
		1832-2	434683	369
Seal Water Heat Exchanger	Atlas	1233	434717	1056
Nonregenerative Heat Exchanger	Joseph Oat & Sons	1830-1	434718	361
Regenerative Heat Exchanger	Joseph Oat & Sons	1831-10		
Shell 1			434686	438
Volume Control Tank	Joseph Oat & Sons	1879-1	434716	457
Seal Water Inj. Filters	Commercial Filters	538-10	N/A	1398
		539-10	N/A	1399
Seal Water Return Filter	AMF, Cuno	102	43471	2615
Safety Inj. Accumulators	Delta Southern Co.			
1A		N/A	434630	2710
1B		N/A	434678	2711

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FORM NIS-1 (back)

- 8. Examination Dates 1/82 to 6/82 9. Inspection Interval from 9/30/76 to 9/30/86
- 10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. Reference Tab C of Final Report.
- 11. Abstract of Conditions Noted Reference Tab B of Final Report.
- 12. Abstract of Corrective Measures Recommended and Taken Reference Tab B of Final Report.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Date September 13 19 82 Signed Duquesne Light Co. By Wm S Lacey  
Owner for Station Superintendent

Certificate of Authorization No. (if applicable) 26-05000 Expiration Date N/A

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Pa. and employed by \* of 1/82 to 6/82 have inspected the components described in this Owners' Data Report during the period 1/82 to 6/82 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owners' Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9-10 19 82 Gractory Mutual System  
Gomuckee Commissions NB 8316 PA. 2248  
Inspector's Signature National Board, State, Province and No.

Arkwright - Boston Manufacturers Mutual Ins. Co.  
Waltham, Mass.

DUQUESNE LIGHT COMPANY  
BEAVER VALLEY UNIT ONE POWER STATION

INTERVAL 1 - PERIOD 2 - CORE OUTAGE II-III  
INSPECTION SERVICE EXAMINATION SUMMARY

INTRODUCTION

An inservice examination of Class 1, 2 and 3 components was conducted at the Beaver Valley Unit 1 from January, 1982 through June, 1982. The examinations were performed in accordance with the program plan located under Tab C of the Final Report.

The program plan for this outage was derived from the Inservice Ten Year Inspection Plan. This plan incorporates the ASME Code Section XI requirements defined in the 1974 Edition through the Summer 1975 Addenda and the Plant Technical Specification Section 4.0.5 requirements. Specific items for examination relief, modification and additional requirements are defined in Amendments 22 and 48 of the Plant Technical Specifications.

Selected main steam and feedwater postulated break points (high energy program) in the main steam valve house were examined as required by Appendix D, Section D 3.2 of the BVPS Unit 1 FSAR.

Following the replacement of two pressurizer relief valves, a baseline ultrasonic examination of the new welds was performed.

RESULTS

The examination data sheets recording all of the Class 1 and 2 volumetric, surface and visual results are located under Tab D of the Final Report. The various examinations produced recordable indications in accordance with the ISI procedure recording criteria, which are generally more restrictive than specified in the ASME Section XI Acceptance Standards. All indications were evaluated and dispositioned by EM (Engineering Memorandum), NCAR (Nonconformance and Corrective Action Report) or QCR (Quality Control Report) documents located under Tab F of the Final Report. An explanation

of the Summary of Recorded Indications is as follows:

CLASS 1

A. Ultrasonic Examination

One indication in weld #2 of the 4" pressurizer spray line (program item 28) was reported as a geometric reflector for information and was accepted with no corrective action.

B. Surface Examination

Linear and rounded liquid penetrant indications were recorded in five reactor coolant piping stainless steel welds, of which two were Loop B and two were Loop C dissimilar metal welds. In Loop B one rounded and one linear indication in nozzle to safe-end welds 1(DM) and 16(DM) respectively were eliminated by the minor removal of metal. Other linear and rounded indications in weld 16(DM) were not completely removed because of minimum wall restrictions. The results of the final liquid penetrant test were evaluated and accepted. A linear indication in weld 8 of Loop B reactor coolant piping was accepted without corrective action. In Loop C a linear indication in weld 1(DM) was eliminated by minor metal removal, and rounded indications in weld 16(DM) were accepted with no corrective action. Linear indications on welded support (H3) (program item 50) and drain header weld #39 (program item 48) were corrected with minor metal removal.

C. Visual Examination

Rust and white boric acid residue were recorded on the flange bolting of valve RH-720A (program item 71). The boric acid residue was removed and the rust was evaluated as acceptable with no corrective action. Rust was also recorded on the flange bolting threads of valve CH-310 (program item 75) and was evaluated as acceptable with no corrective action.

### C. Visual Examination (cont'd)

During Class 1 system leakage examinations, minor leakage and/or boric acid residues were identified on twenty-four (24) Class 1 valves. The leakage was evaluated as insignificant and within allowable station Technical Specification Limits. However, corrective maintenance was initiated on the affected areas.

### CLASS 2

The reported indications were predominantly visual observations of surface rust and white boric acid residue on the bolting of various components. The evaluation of the visual examinations concluded that no corrective action was required in the cases where surface rust was reported. Components on which boric acid residues were reported were cleaned, re-examined and found to be acceptable.

A linear liquid penetrant indication on welded support (H6) (program item 136) was removed by surface finishing.

One ultrasonic indication in Loop 3 main steam weld 19 (program item 114) was within Section XI acceptance criteria and no corrective action was required.

### EXAMINATIONS

Examinations were conducted to review as much of the examination zone as was practical, within geometric, metallurgical and physical limitations. When the required ultrasonic examination volume or area could not be examined 100%, the examination was considered to be a partial (PAR) and was so noted. Generally PAR's are noted as fitting-to-fitting assemblies (as explained under LIMITATIONS) and in areas where integrally welded supports, lugs, or hangers, etc., preclude access to some part of the examination area.

Ultrasonic examination that produced greater than reference level sensitivity from reflectors that are characteristic of metallurgical structure

or the I.D. and/or O.D. surfaces of an item were acknowledged only. Examples of areas that generally produce such geometric indications are as follows:

- (1) Inside diameter weld preparation or root configuration and the outside diameter crown overlay or toe.
- (2) The I.D. radius of the tube sheet on the channel head to tube sheet weld of steam generators, when examining from tube sheet side.
- (3) The metallurgical structure of the cast materials.
- (4) Responses from the thread areas of bolting.

LIMITATIONS

Some of the arrangements and details of the piping system and components were designed and fabricated before the access and examinations requirements of Section XI of the 1971 and/or 1974 Code could be applied; consequently, some examinations are limited or not practical due to geometric configuration or accessibility. Generally these limitations exist at all fitting-to-fitting joints such as elbow to tee, elbow to valve, reducer to valve, etc., where geometry and sometimes surface condition preclude ultrasonic coupling or access for the required scan length.

The limitations exist to a lesser degree at pipe to fitting assemblies, particularly where the weld is not ground flush with the pipe O.D. surface. At these joints examinations can be conducted from the pipe side; however, the fitting again limits or precludes examination from the opposite side. When the weld surface is flat, the fitting side examination is replaced by a calibrated straight beam examination on the weld.

In most cases, examinations in limited areas were accomplished as a best effort attempt to cover as much of the code required area or volume (generally, the weld and base metal for 1 "T" on each side) as possible.

However, the extent of examination coverage in the base metal of the fitting or component cannot be specifically quantified as being 100%. These areas where complete examination of 100% of the required volume of area could not be achieved were indicated by a PAR (partial) notation on the examiners' data sheet and the limiting cause noted.

The principal basis for PAR's is to identify the inability to examine 100% of the required base metal volume for the 1 T distance beyond the edge of the weld on a fitting or component. Examples are (1) ultrasonic examination of a pipe to elbow assembly, where scanning on the intrados of the elbow causes de-coupling of the sound beam and (2) a pipe to flange or valve assembly, where scanning the entire volume on the fitting or component side is limited by configuration. The resulting coverage is such that examination of the weld, heat affected zone and base metal for 1 "T" on the pipe side can be achieved by scanning from the pipe side of the weld. An indeterminate coverage of the base metal on the fitting or component side may be achieved during this pipe side scan depending on the calibrated sweep length, attenuation, joint configuration, etc. However, the volume on the fitting or component side additionally cannot be scanned completely for transverse indications as required by Code. In either case, 100% of this 1 "T" volume cannot be assured, thus a PAR is required as a disclaimer to having satisfied code requirements, albeit the intent is satisfied to the extent practical.

Specific limitations and restrictions for all examinations are as indicated on the report data sheets under Tab D of the Report.



INSERVICE EXAMINATION PROGRAM  
FOR  
DUQUESNE LIGHT COMPANY  
BEAVER VALLEY UNIT #1

Refueling Outage Core II-III

All items listed below were examined, as indicated, in accordance with the requirements of the Plant Technical Specifications Section 4.0.5 (including Amd. 22 and Amd. 48) and to the requirements of Section XI of the ASME Boiler and Pressure Vessel Code, to the extent practical with the access provided and the limitations of component geometry. Examinations were performed to the 1974 Edition of Section XI thru 1975 Summer Addenda.

PROGRAM ITEM	IWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	
		(See Program Note 1)				<u>DLW</u>
		<u>REACTOR VESSEL</u>				
1	B1.6	(3) outlet nozzles to safe-end welds #1DM 3 places. (Note 6)	205	11		1-4100 1-4200 1-4300
2	B1.6	(3) inlet nozzles to safe-end welds #16DM 3 places. (Note 6)	205	11		1-4100 1-4200 1-4300
3	B1.8	Closure studs and nuts #20 thru thru #38.	15	70		1-1400
4	B1.10	Closure head washers #20 thru #38.			8	1-1400
		<u>PRESSURIZER</u> (See Appendix 1)				
5	B2.1	Long. shell welds #1, 2 and 3.	47			1-2100
6	B2.1	Circ. shell welds #4, 5, 6 and 7.	47			1-2100
7	B2.2	Inside radii #2, 3 and 4.			8 <sup>(2)</sup>	1-2100
8	B2.4	6" safe nozzles to safe-end welds #1DM, 10DM and 19DM (See Item 16)		11		1-4501
9	B2.8	Support skirt weld #8.	205 <sup>(3)</sup>			1-2100

Numbers under Examination Procedure in ( ) refer to specific items under Program Notes on the last page.

PROGRAM ITEM	IWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	
10	B2.11	Manway bolts #6 thru #10.			8	1-2100
<u>STEAM GENERATORS</u>						
11	B3.1	Channel head to tube sheet welds #1-1, #2-1, #3-1. Examine 7.5" to 15" CW around circumference. 0 reference top centerline of hotleg manway.	47			1-3100
12	B3.3	Nozzle to safe-end welds 4DM and 5DM. (See Item 14)	205 <sup>(4)</sup>	11		1-4200
<u>PIPE TO SAFE-END WELDS</u>						
13	B4.1	Loop 1 R.C. pipe 1(DM) & 16(DM).	205	11		1-4100
14	B4.1	Loop 2 R.C. pipe DM's #1, 4, 5 & 16. (See Item 12)	205	11		1-4200
15	B4.1	Loop 3 R.C. pipe DM's #1 & #16	205	11		1-4300
16	B4.1	6" Press. safety 1, 10 & 19 (DM's) (See Item 8)		11		1-4501
<u>REACTOR COOLANT PIPE</u>						
17	B4.5	Loop 2 R.C. pipe welds #8 & #9.	205	11 <sup>(5)</sup>		1-4200
18	B4.5	Loop 3 R.C. pipe weld #3.	205	11 <sup>(5)</sup>		1-4300
<u>ASSOCIATED AUXILIARY PIPING WELDS</u>						
19	B4.5	Loop 1 hot leg 14" RHR weld #7.	205			1-4101
20	B4.5	14" Press. Surge Weld #2	205			1-4500
21		Deleted				
22	B4.5	Loop 3 cold leg acc. discharge and 10" RHR return weld #3.	205			1-4301
23	B4.5	Loop 2 8" Bypass Welds #5 and #6.	205			1-4202
24	B4.5	Loop 2 cold leg 6" SIS welds #3, 4, and 5.	205			1-4203

PROGRAM ITEM	IWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
25	B4.5	Loop 2 hot leg 6" SIS welds #1, 2, 3, 4 and 5	205			1-4204
26	B4.5	6" press. relief welds #9 and 10. (PT for #10 only)	205	11		1-4502
27	B4.5	4" Loop 1 cold leg press. spray welds #40, 41, 42 and 43.	205			1-4503
28	B4.5	4" Loop 3 cold leg press. spray welds #2, 3, 4, 8 and 36*.	205	11	(5)	1-4504
29	B4.5	Loop 2 3" charging line welds #1, 2, 3, 4.	205			1-4205
30	B4.5	Loop 2 3" RTD Return welds #11 12*, 13 and 14.	205	11	(5)	1-4206
31	B4.5	6" and 3" press. relief welds #20, 21 and 22*.	205	11	(5)	1-4502
32	B4.5	Loop 2 cold leg 1-1/2" and 2" RTD take-off weld 25 (BW)	205			1-4208
33	B4.5	1 1/2 Press. spray line weld #14(BW).	205			1-4506
*See Program Note 5						
<u>BRANCH PIPE CONNECTIONS &gt; 6"</u>						
34	B4.6	Loop 2 cold leg 12" acc. discharge weld #34(BC).	205	11	(7)	1-4201
<u>BRANCH PIPE CONNECTIONS 6" AND LESS</u>						
35	B4.7	Loop #2 hot leg 6" low head SIS weld #22(BC).		11		1-4204
36	B4.7	Loop #2 3" charging weld #26(BC)		11		1-4205
37	B4.7	Loop #2 cold leg 1-1/2" x 2" RTD take-off weld 1(BC).		11		1-4208
38	B4.7	Loop #2 2" fill line weld #27(BC).		11		1-4210

PROGRAM ITEM	IWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
39	B4.7	Loop #3 cold leg 4" pressurizer spray weld #1(BC).		11		1-4504
<u>SOCKET WELDS</u>						
40	B4.8	Loop #2 cold leg 2" low head SIS weld #1		11		1-4203
41	B4.8	Loop #2 hot leg high head SIS welds #7, 8, 9, 10 and 11.		11		1-4207
42	B4.8	Loop #2 cold leg 1-1/2 x 2" RTD take-off welds #2, 3, 4, 5 and 6.		11		1-4208
43	B4.8	Loop #2 hot leg 2" RTD take-off welds #2, 3, 5, 6, 7 and 8.		11		1-4209
44	B4.8	Loop #2 2" fill line welds #14, 15, 16, 17, 18 and 19.		11		1-4210
45	B4.8	Loop #2 2" drain line welds #3, 4, 5 and 6.		11		1-4211
46	B4.8	Loop #2 2" x 1-1/2" seal injection welds #37, 38, 39, 40, 41, 42, 43, 45, 46, 47 and 48.		11		1-4212
47	B4.8	2" fill header welds #10, 11, 12, 13, 14, 15, 16 and 17.		11		1-4601
48	B4.8	2" drain header welds #32, 33, 34, 35, 36, 37, 38, 39, 40 and 41.		11		1-4602
49	B4.8	Loop #2 2" pressure equalization welds #32, 33, 34 and 35.		11		1-4603
<u>*INTEGRALLY WELDED SUPPORTS</u>						
50	B4.9	Loop #2 cold leg 12" accum. discharge and 10" RHR return (H1), (H2), (H3).		11		1-4201
51	B4.9	Loop #3 cold leg 6" x 2" low head SIS (H1), (H2).	205	11		1-4303

PROGRAM ITEM	IWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
52	B4.9	Loop #2 3" charging (H1).	205	11		1-4205
53	B4.9	Loop #2 2" drain line (H1).	205	11		1-4211
54	B4.9	Loop #3 cold leg 4" pressurizer spray (H1), (H2), (H3), (H4), (H13).	205	11		1-4504
55	B4.9	6" pressurizer safety: (H2).		11		1-4501
56	B4.9	6" and 3" pressurizer relief: (H7). *See Program Note 8.	205	11		1-4502
<u>PIPING SYSTEM SUPPORTS (Reported to DLW-1-4800)</u>						
57	B4.10	Loop #2 hot leg 6" low head SIS: H2, (H5).			8	1-4204
58	B4.10	Loop #2 2" hot leg high head SIS: H2 & H3.			8	1-4207
59	B4.10	Loop #2 2" fill line: H3 & H4 (See Item 70).			8	1-4210
60	B4.10	Loop #2 2" and 1-1/2" seal injection: H1 (H3), H6, H7			8	1-4212
61	B4.10	2" fill header: H3, (H7), H8, H9, H10, H11, (H12), H13, H14, H15, (H16), H17, H18, H19, H20, H21, (H22), (H23)			8	1-4601
62	B4.10	3" high head hot leg SIS: H1			8	1-4600
<u>PRESSURE RETAINING BOLTING</u>						
63	B4.12	Loop #2 2" x 1-1/2 seal injection, item 9.			8	1-4700
64	B4.12	6" pressurizer safety valve 551B valve mounting flange, item 17.			8	1-4700

PROGRAM ITEM	JWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	
<u>REACTOR COOLANT PUMPS</u>						
65	B5.1	Flange bolting 3-B1 thru 3-B24 (in place).	15			1-5100
66	B5.2 and B5.3	*Seal housing bolting 2-B1 thru 2-B12 and 3-B1 thru 3-B12 (disassembled).  *See Program Note 9.	15	70	8	1-5100
<u>FLYWHEELS</u>						
67	Reg. Guide 1.14	R. C. Pump Flywheel (Loop A).	41		8	1-5100
<u>LOOP STOP VALVE BOLTING</u>						
68	B6.1	Loop #2: Valve 592, examine bolts 2-1 thru 2-24.	15			1-6100
69	B6.1	Loop #2: Valve 593, examine bolts 2-25 thru 2-48.	15			1-6100
<u>VALVE SUPPORTS AND HANGERS</u>						
70	B6.5	Loop #2 2" fill line support H4 (See Item 59).			8	1-4210
<u>VALVE BONNET BOLTING (Items reported to DLW-1-6300)</u>						
			<u>ITEMS</u>			
71	B6.9	Loop #2 cold leg 12" accum. discharge and 10" RHR return SI-49, and 720A (16 each).	11 13		8	1-4201
72	B6.9	Loop #2 cold leg 6" and 2" low head SIS SI-11 (12).	15		8	1-4203
73	B6.9	Loop #2 hot leg 6" low head SIS SI-16 (12).	17		8	1-4204
74	B6.9	6" pressurizer safety RC-551B (8)	32		8	1-4501
75	B6.9	Loop #2 3" charging CH-310 (16)	20		8	1-4205

PROGRAM ITEM	IWC-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	
<u>STEAM GENERATORS</u>						
76	C1.1	Stub barrel to upper tubesheet weld Loop 1 weld #1-2; 142.3" to 149.5" = 7.2".	47			2-1100
77	C1.1	Lower shell to stub barrel weld Loop 1 weld #1-3; 141.4" to 148.5" = 7.1".	47			2-1100
78	C1.1	Transition cone to lower shell weld Loop 2 weld #2-5; 141.4" to 148.5" = 7.1".	47			2-1100
79	C1.1	Upper shell to transition cone weld Loop 2 weld #2-6; 184.1" to 193.3" = 9.2".	47			2-1100
80	C1.1	Upper head to shell weld Loop 3 Weld #3-8; 184.1" to 193.3" = 9.2".	47			2-1100
NOTE: Datum = Centerline Feedwater Nozzles						
<u>EXCESS LETDOWN HEAT EXCHANGER</u>						
81	C1.1	Head to flange weld #1; examine 9.950" to 10.45" CW from 0 reference.	205			2-1110
<u>RESIDUAL HEAT EXCHANGERS</u>						
82	C1.1	Head to shell weld 1-1; examine 41.62" to 43.62" CW from 0 reference.	205			2-1120
83	C1.1	Shell to tubesheet weld 2-2; examine 41.62" to 43.62" CW from 0 reference.	205			2-1120
84	C1.4	Flange bolting 1-B17 thru 1-B32	15		8	2-1120

PROGRAM ITEM	IWC-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			<u>VOL</u>	<u>SUR</u>	<u>VIS</u>	
<u>SEAL WATER HEAT EXCHANGER</u>						
85	C1.1	Head to shell weld #1; examine 16.66" to 17.41" CW from 0 reference.			11 <sup>(11)</sup> 8	2-1130
86	C1.1	Shell to flange weld #2; examine 16.66" to 17.41" CW from 0 reference.			11 <sup>(11)</sup> 8	2-1130
<u>NON-REGENERATIVE HEAT EXCHANGER</u>						
87	C1.1	Head to shell weld #1; examine 43" to 45" CW from 0 reference.	205			2-1140
88	C1.1	Shell to flange weld #2; examine 48" to 50" CW from 0 reference.	205			2-1140
<u>REGENERATIVE HEAT EXCHANGER</u>						
89	C1.1	*Head to shell weld #2; examine 3" from 0" ref. datum CW.	205			2-1150
90	C1.1	*Shell to tubesheet weld #8; examine 3" from 0" ref. datum CW.  *See Program Note 12	205			2-1150
<u>VOLUME CONTROL TANK</u>						
91	C1.1	Lower head to shell weld #1; examine 87.79" to 92.29" CW from 0 reference.	205			2-1200
92	C1.1	Upper head to shell weld #2; examine 87.79" to 92.29" CW from 0 reference.	205			2-1200
93	C1.4	Manway bolts B6 thru B10.			8	2-1200
<u>SIS ACCUMULATORS</u>						
94	C1.1	Head to shell welds 1-2 & 2-2; examine 0" to 7.0" CW from 0 reference.	RT 400		(15)	2-1210



PROGRAM ITEM	IWC-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
95	C1.1	Head to shell weld 2-1; examine 0" to 7.5" CW from 0 reference.	205			2-1210
96	C1.3	Support skirt weld 2-4; examine 0" to 37" CW from 0 reference.		11		2-1210
<u>BORON INJECTION TANK</u>						
97	C1.1	Head to shell welds #1 & 2; examine 53.3" to 56.3" CW from 0 reference.	205			2-1220
98	C1.4	Manway bolts B6 thru B10.			8	2-1220
<u>SEAL WATER INJECTION FILTERS.</u>						
99	C1.1	Head to shell weld 1-1; examine 11.25" to 11.82" CW from 0 reference.		11 <sup>(13)</sup>	8	2-1300
100	C1.1	Shell to flange weld 2-2; examine 11.25" to 11.82" CW from 0 reference.		11 <sup>(13)</sup>	8	2-1300
<u>SEAL WATER RETURN FILTER</u>						
101	C1.1	*Head to shell weld #1; examine 16.75" to 17.60" CW from 0 reference.		11 <sup>(13)</sup>	8	2-1320
102	C1.1	*Cover weldment to shell weld #2; examine 16.75" to 17.60" CW from 0 reference.  *See Program Note 14		11 <sup>(13)</sup>	8	2-1320
<u>ASSOCIATED AUXILIARY PIPING</u>						
103	C2.1	Loop 1 32" SHP-56: Weld 1	205 <sup>(10)</sup>			2-2111
104	C2.1	Loop 1 32" SHP-56: Weld 2B		70 <sup>(10)</sup>		2-2111
105	C2.1	Loop 1 32" SHP-22: Welds 2A, 3A		70 <sup>(10)</sup>		2-2111

PROGRAM ITEM	IWC-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
106	C2.1	Loop 1 32" SHP-22: Weld 19	205		<sup>(10)</sup>	2-2111
107	C2.1	Loop 2 32" SHP-57: Weld 9	205			2-2120
108	C2.1	Loop 2 32" SHP-57: Weld 1	205		<sup>(10)</sup>	2-2121
109	C2.1	Loop 2 32" SHP-57: Weld 2B			70 <sup>(10)</sup>	2-2121
110	C2.1	Loop 2 32" SHP-23: Welds 2A, 3A			70 <sup>(10)</sup>	2-2121
111	C2.1	Loop 3 32" SHP-58: Weld 1	205		<sup>(10)</sup>	2-2131
112	C2.1	Loop 3 32" SHP-58: Weld 2B			70 <sup>(10)</sup>	2-2131
113	C2.1	Loop 3 32" SHP-24: Welds 2A, 3A			70 <sup>(10)</sup>	2-2131
114	C2.1	Loop 3 32" SHP-24: Weld 19	205		<sup>(10)</sup>	2-2131
115	C2.1	Loop 1 16" WFPD-22: Weld 2	205		<sup>(10)</sup>	2-2210
116	C2.1	Loop 2 16" WFPD-23: Weld 4	205			2-2220
117	C2.1	Loop 3 16" WFPD-24: Weld 2	205		<sup>(10)</sup>	2-2230
118	C2.1	14" RHR: Welds 5 and 6	205			2-2310
119	C2.1	12"-RH-9 Welds 15, 16 & 17	205			2-2311
120	C2.1	Loop 2 12" Accum. Disch.: Weld 2	205			2-2509
121	C2.1	Loop 3 12" Accum. Disch.: Weld 5	205			2-2510
122	C2.1	12" L.H. Safety Inj. Pump: Weld 12	205			2-2521
123	C2.1	10" RHR: Weld 22	205			2-2310
124	C2.1	10" Recirc. Spray: Weld 4			11 <sup>(14)</sup> 8	2-2513
125	C2.1	10" Recirc. Spray: Weld 17			11 <sup>(14)</sup> 8	2-2514
126	C2.1	10" Recirc. Spray: Welds 12, 13			11 <sup>(14)</sup>	2-2515
127	C2.1	8"-SI-2: Welds 69, 70			11 <sup>(14)</sup>	2-2410

PROGRAM ITEM	IWC-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
128	C2.1	6"-CH-67: Welds 20, 21			11 <sup>(14)</sup>	2-2410
129	C2.1	6"-SI-42: Weld 21	205		11	2-2411
130	C2.1	6"-SI-44: Welds 2,3,4			11 <sup>(14)</sup>	2-2412
131	C2.1	6"-SI-40: Welds 6,7			11 <sup>(14)</sup>	2-2413
<u>LONGITUDINAL WELDS IN FITTINGS</u>						
132	C2.2	Loop 2 32"-SHP-57; Weld #8 L. S.	205			2-2120
<u>PIPING PRESSURE RETAINING BOLTING</u> (Reported to DLW-2-2600)						
133	C2.4	Item #4 - Flange #4	15		8	2-2310
134	C2.4	Items #5 & 6 - Flanges #1 & 2	15		8	2-2311
<u>INTEGRALLY WELDED SUPPORTS</u> (Reported to DLW-2-2700)*						
135	C2.5	*Items #29- Loop 2 Feedwater: (H2)			11	2-2220
136	C2.5	*Items #38, 40, 48 & 50 - RHR: (H4), (H6), (H14) & (H16)			11	2-2310
137	C2.5	*Items #65 & 69 - RHR: (H1), (H5)			11	2-2312
138	C2.5	*Item #113 - CVCS: (H9)			11	2-2411
139	C2.5	Items #122 & 133 - CVCS: (H4), (H15)*			11	2-2412
<u>PIPING SUPPORT COMPONENTS</u> (Reported to DLW-2-2700)						
140	C2.6	Items #28 & 30 - Feedwater, H1, H3			8	2-2220
141	C2.6	Items #39 - RHR: H5			8	2-2310
142	C2.6	Item #63 - RHR: H10			8	2-2311
143	C2.6	Items #66,68,73 - RHR: H2,H4,H9			8	2-2312
144	C2.6	Items #90,95,97,98,99 - CVCS: H6, H11,H13,H14,H15			8	2-2410

PROGRAM ITEM	IWC-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW
145	C2.6	Items #119,120,121 - CVCS: H1, H2, H3  <u>RHR PUMPS</u>			8	2-2412
146	C3.2	Bolting; 1-B1 thru 1-B16			8	2-3100
147	C3.4	Support Components 1-1SC & 1-2SC  <u>CENTRIFUGAL CHARGING PUMPS</u>			8	2-3100
148	C3.2	Pressure retaining bolting 1-B1 thru 1-B16	15			2-3110
149	C3.2	Bolting; 1-B1 thru 1-B10			8	2-3110
150	C3.3	Integrally welded supports 1-1WS, 1-2WS		11		2-3110
151	C3.4	Support components 1-1WS, 1-2WS, 2-3WS  <u>VALVE PRESS. RETAINING BOLTING (Reported to DLW-2-4110)</u>			8	2-3110
152	C4.2	Items #28, 29, 30 and 32 thru 36 - RHR: Valves #V-1 thru V-8			8	2-2310
153	C4.2	Items #37 thru 40 - RHR; Valves #V-9, V-10, V-605, V-758			8	2-2311
154	C4.2	Items #28, 29 - RHR; Valves V1 & V2	15			2-2310

ADDITIONAL EXAMINATIONS PERFORMED BY DUQUESNE LIGHT COMPANY (See Tab E)

PROGRAM ITEM	IWB-2600 REFERENCE	AREA AND EXTENT OF EXAMINATION	EXAMINATION PROCEDURE			SKETCH REFERENCE
			VOL	SUR	VIS	DLW

155	B4.5	3" Pressurizer Relief Welds #22, 23, 28, 29	205	--	--	1-4502
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The baseline examination of the welds was performed after the replacement of pressurizer relief valves MOV-RC-535 and 536.

156		A system leakage test at system operating pressure and temperature was performed on 100% of the Class 1 components prior to startup following the second reactor refueling outage. The examinations were performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, 1974 edition through the summer 1975 addenda, and the plant Technical Specifications, to the extent practical and with the access provided and the limitations of component geometry.				
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The following is a list of the isometric drawings on which examinations were performed:

DLW-1-1100	Reactor Vessel
DLW-1-1300	R.V. Closure Head
DLW-1-2100	Pressurizer
DLW-1-3100	Steam Generators
DLW-1-4100 to DLW-1-4113	Loop #1 Piping
DLW-1-4200 to DLW-1-4212	Loop #2 Piping
DLW-1-4300 to DLW-1-4311	Loop #3 Piping
DLW-1-4500 to DLW-1-4506	Pressurizer Piping
DLW-1-4600 to DLW-1-4603	Auxiliary Piping
DLW-1-5100	R.C. Pumps

Visual examination for evidence of leakage was conducted in accordance with Procedure ISI 11.0, Rev. 0.

ADDITIONAL EXAMINATIONS PERFORMED BY DUQUESNE LIGHT COMPANY (See Tab E)

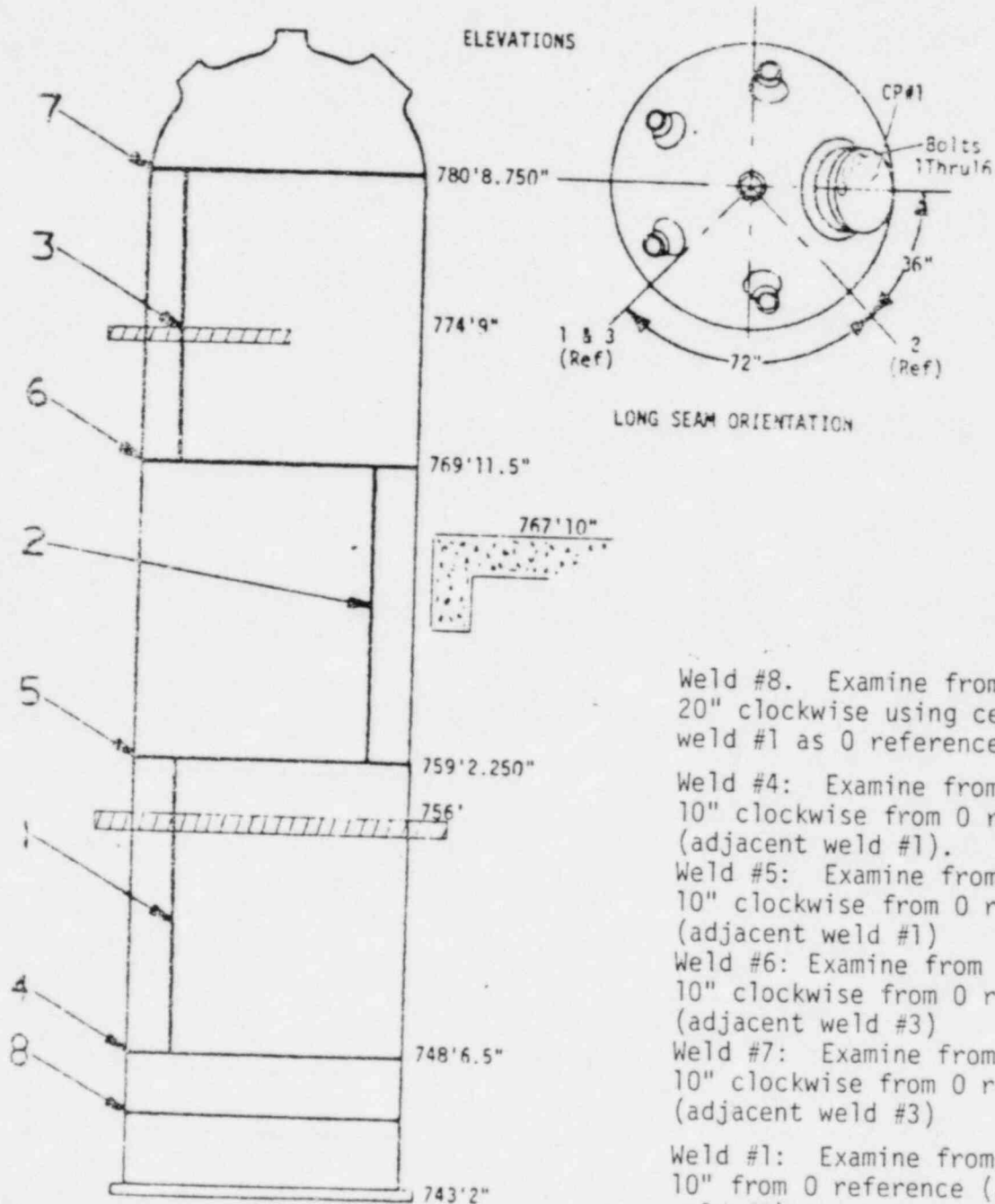
157

A system pressure test at system operating pressure and temperature was performed on the buried portions of the Class 3 'A' reactor plant river water header--line number 24"WR-101-301-Q3. The examination was performed in accordance with subarticle IWD-2600(b) of Section XI of the ASME Boiler and Pressure Vessel Code, 1974 Edition through the summer 1975 addenda. The pressure test was conducted in accordance with Temporary Operating Procedure 81-41.

## PROGRAM NOTES

1. The examination areas shown in this program were conducted in accordance with the Ten Year Inspection Plan. Examinations that were deferred during this outage will be performed during future outages.
2. Substitute V.T. for U.T. as specified by Amendment 22, A.2.
3. Examination shall include the weld and 2T base metal on the support side of the weld in compliance with the Code.
4. Relief from 100% volumetric examination in compliance with Amendment 22, A.3.
5. UT will be supplemented by PT as required by Amendment 22, A.4.
6. Augmented examinations on reactor vessel nozzle to safe-end welds in compliance with Amendment 48.
7. UT will be supplemented by PT on this weld as required by Amendment 22, A.5.
8. UT the base metal and PT the weld metal as required by Amendment 22, A.6.
9. Examination when disassembled as required by Amendment 22, A.7.
10. Selected main steam and feedwater postulated break points in the main steam valve house examined in accordance with Appendix D, Section D3.2 of the BVPS Unit 1 FSAR.
11. Substitute P.T. and V.T. for U.T. because the material is too thin for meaningful U.T. examination. Reference Amendment 22, B.5.
12. Examine 10% of the respective one weld total length rather than 100% during each 40-month period. Reference Amendment 22, B.2.
13. Substitute P.T. for U.T. as specified by Amendment 22, B.4.
14. P.T. and V.T. substituted for U.T. because the material is too thin for meaningful U.T. examination as specified by Safety Evaluation Report dated 2/25/82.
15. Substitute RT because weld inaccessible for UT examination.

## PRESSURIZER



Weld #8. Examine from 10" to 20" clockwise using centerline weld #1 as 0 reference.

Weld #4: Examine from 5" to 10" clockwise from 0 reference (adjacent weld #1).

Weld #5: Examine from 5" to 10" clockwise from 0 reference (adjacent weld #1)

Weld #6: Examine from 5" to 10" clockwise from 0 reference (adjacent weld #3)

Weld #7: Examine from 5" to 10" clockwise from 0 reference (adjacent weld #3)

Weld #1: Examine from 5" to 10" from 0 reference (adjacent weld #5)

Weld #2: Examine from 15" to 20" from 0 reference (adjacent weld #5)

Weld #3: Examine from 31" to 36" from 0 reference (adjacent weld #7)