

WATERF RD 3 STEAM ELECTRIC STATION
HIGHWAY 18
TAFT, LOUISIANA 70066

FOURTH REFUELING INSERVICE INSPECTION
SUMMARY REPORT

OWNER
LOUISIANA POWER & LIGHT
317 BARONNE STREET
NEW ORLEANS, LOUISIANA 70160

AGENT
ENTERGY OPERATIONS, INC.
1340 ECHELON PARKWAY
JACKSON, MISSISSIPPI 39213

AUTHORIZED INSPECTION AGENCY
ARKWRIGHT MUTUAL INSURANCE COMPANY
225 WYMAN STREET
WALTHAM MASSACHUSETTS 02154

COMMERCIAL SERVICE DATE: 09/24/85

Prepared By: Chris E. Fayard / 7/1/91
Inservice Inspection Date

Reviewed By: Steve R. / 7/1/91
Inservice Inspection Lead Date

Reviewed By: Debra Galvan FOR JEH / 8-6-91
Procurement/Programs Manager Date

Reviewed By: R. B. Gwath / 8/7/91
Director, Engineering Date

Reviewed By: Ray E. Griffin / 8/7/91
Authorized Nuclear Inservice Inspector Date

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

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FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

1.0

Introduction

In accordance with IWA-6000 of ASME Section XI, 1980 Edition thru Winter 81 Addenda, the following is the Inservice Inspection (ISI) Summary Report for the Fourth Refueling Outage of Waterford Steam Electric Station, Unit 3. Refuel 4 was the second outage of the second inspection period in the first ten year interval. Included in this report are summaries of examinations, abstracts of conditions found and corrective actions taken, repair/replacement activities and the "Owners Data Report for Inservice Inspection", Form NIS-1. The NIS-2 form, although not mandatory by the Winter 81 Addenda of Section XI, is being used to document repair/replacement activities.

This Summary Report covers Class 1, 2, and 3 components and their supports examined since the RCS Leakage Test at start-up from Third Refueling (11/15/89) up to the RCS Leakage Test at start-up from Fourth Refueling (5/21/91). The NIS-2 forms are included in Section 7.0 of this report and document Class 1 and 2 components and their supports which were repaired/replaced during this same time period.

The selection of items examined during Refuel 4 was based upon the requirements of the Waterford 3 Ten Year ISI Program. These items are listed by Code Item number in Sections 2.2, 3.2, 4.2 and 5.2 of this report. The items which received a limited exam during Refuel 4 have been identified by a note in the comments column. These items will be included in the applicable Relief Request (i.e., ISI-001, ISI-006, ISI-010) in the next revision of the Ten Year ISI Program.

There were four (4) methods of NDE utilized during the implementation of the program: ultrasonics (UT), penetrant (PT), magnetic particle (MT) and visual (VT). All procedures were developed by Entergy with the exception of the procedure used for ultrasonic detection of Intergranular Stress Corrosion Cracking (IGSCC), which was developed by Ebasco Services, Inc. All procedures were reviewed by Entergy and Factory Mutual (ANII) prior to use. Overall implementation and supervisory control of contractors involved with Inservice Inspection was accomplished with Entergy personnel. The calibration standards used during Refuel 4 are the same standards which were utilized during Preservice examinations with exception of the calibration standard used for Reactor Coolant Pump stud examinations. A new stud calibration standard was developed to facilitate examination from the bore hole. The UT equipment used were USK 6, USK 7 and USL 38 instruments manufactured by Krautkramer. The transducers used were manufactured by Aerotech, Megasonics, Sigma and RTD.

All NDE data, procedures, equipment certifications, material certifications and personnel certifications associated with the examination portion of this report are stored in Waterford 3 Plant Records under R-Type C4.02 (NDE data) and I1.15 (procedures/certifications). Steam Generator tube eddy current examination is being reported in accordance with Waterford 3 Technical Specifications and is not included in this report.

FORM NIS-1 OWNEILS' DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner Entergy Operations, Inc., 1340 Echelon Parkway, Jackson, Mississippi 39213
(Name and Address of Owner)
2. Plant Waterford Steam Electric Station, Highway 18, Taft, LA 70066
(Name and Address of Plant)
3. Plant Unit 3 4. Owner Certificate of Authorization (if required) N/A
5. Commercial Service Date 9/24/85 6. National Board Number for Unit See Below
7. Components Inspected

Component or Appearance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Steam Generator #2	Combustion Engineering	74270-2	N/A	22157
R. C. Pump 1A	Byron Jackson	711-N-0176	N/A	N/A
R. C. Pump 1B	Byron Jackson	711-N-0174	N/A	N/A
R. C. Pump 2A	Byron Jackson	711-N-0173	N/A	N/A
R. C. Pump 2B	Byron Jackson	711-N-0175	N/A	N/A
Class 1 Valve SI-142A	Anchor/Darling	40345820	N/A	N/A
Class 1 Piping & Supports	Dravo, Bergen-Paterson	*	N/A	N/A
Class 2 Piping & Supports	Dravo, Bergen-Paterson	*	N/A	N/A
CS Pump B Support	Babcock & Wilcox	71311	N/A	N/A

* Piping systems and component supports are too numerous to list. See Sections 2.0, 3.0 and 5.0 of this report for complete list of components examined.

FORM NIS-1 (back)

8. Examination Dates 3/16/91 to 5/21/91 9. Inspection Interval from 9/24/85 to 9/24/95
10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. See Fourth Refueling Outage Inservice Inspection Summary Report.
11. Abstract of Conditions Noted See Fourth Refueling Outage Inservice Inspection Summary Report.
12. Abstract of Corrective Measures Recommended and Taken See Fourth Refueling Outage Inservice Inspection Summary 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 7/1 19 91 Signed Energy Operations, Inc. By Chi E. Foyell
Owner

Certificate of Authorization No. (if applicable) N/A 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 Louisiana and employed by See Below * of Norwood, MA have inspected the components described in this Owners' Data Report during the period 3/16/91 to 5/21/91 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 8/10 19 91
[Signature] Commissions NB 7822, N, T, R, S, IS
Inspector's Signature National Board, State, Province and No.

* Arkwright Mutual Insurance Company
Factory Mutual System

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

2.0 Class 1 Examination Summary2.1 Class 1 Examination Completion Status
2nd Period, 4th Refueling

CODE ITEM NO.	TOTAL EXAMS SELECTED FOR INTERVAL	EXAMS COMPLETED FOURTH REFUELING	TOTAL EXAMS COMPLETED TO DATE	% EXAMS COMPLETED TO DATE	COMMENTS
B1.11	3	0	0	0	DEFERRED
B1.12	9	0	0	0	DEFERRED
B1.21	1	0	0	0	DEFERRED
B1.22	10	0	4	40	
B1.30	1	0	1/2	50	
B1.40	1	0	2/3	66	
B2.11	2	0	1	50	
B2.12	4	0	2	50	
B2.31	10	3	6	60	
B2.32	18	0	12	66	
B2.40	2	0	1	50	
B3.90	6	0	2	33	
B3.100	6	0	2	33	
B3.110	5	0	3	60	
B3.120	5	0	3	60	
B3.130	6	0	4	66	
B3.140	6	0	4	66	
B4.11	16	16	16	100*	
B4.12	91	91	91	100*	
B4.13	10	10	10	100*	
B4.20	30	30	30	100*	
B5.40	5	0	3	60	
B5.130	15	0	10	66	
B5.140	9	0	6	66	
B6.10	54	0	36	66	
B6.30	54	0	36	66	
B6.40	54	0	27	50	
B6.50	54	0	36	66	
B6.180	16	16	16	100	
B6.190	16	16	16	100	
B6.200	16	16	16	100	
B7.20	1	0	2/3	66	
B7.30	4	0	2	50	
B7.40	4	0	2	50	
B7.50	2	0	1	50	
B7.60	4	0	2	50	
B7.70	20	0	13	65	
B8.20	1	0	2/3	66	
B8.30	1	0	2/3	66	
B9.11	80	4	53	66	
B9.12	28	0	18	64	
B9.21	91	5	60	66	

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

2.1 Cont'd Class 1 Examination Completion Status
2nd Period, 4th Refueling

CODE ITEM NO.	TOTAL EXAMS SELECTED FOR INTERVAL	EXAMS COMPLETED FOURTH REFUELING	TOTAL EXAMS COMPLETED TO DATE	% EXAMS COMPLETED TO DATE	COMMENTS
B9.31	3	0	2	66	
B9.32	4	1	2	50	
B10.20	4	0	2	50	
B12.10	2	0	0	0	DEFERRED
B12.20	1	1	1	100	
B12.40	1	0	0	0	DEFERRED
B12.50	6	1	4	67	
B13.10	1	0	1	100**	
B13.30	6	0	0	0	DEFERRED
B13.31	16	0	0	0	DEFERRED
B13.32	1	0	0	0	DEFERRED
B14.10	8	0	0	0	DEFERRED
Cat. F-A	1	0	2/3	66	
Cat. F-C	137	3	90	66	
Flywheels	4	4	4	100**	REG. GUIDE 1.14

* 100% examined each refueling outage.
** 100% examined at approximately 3 year intervals.

2.2 Class 1 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENT
B-B	B2.31	04-032	1-3200	24" DIA.	CS CLAD	LIMITED EXAM
		04-033	1-3200	24" DIA.	CS CLAD	
		04-034	1-3200	24" DIA.	CS CLAD	
B-E	B4.11	02-S-01	1-1300	3/4" DIA.	INCONEL	SEE PARA. 6.2
		05-A-01	1-2100	3/4" DIA.	SS	SEE PARA. 6.2
		05-A-02	1-2100	3/4" DIA.	SS	SEE PARA. 6.2
		05-B-01	1-2100	3/4" DIA.	SS	SEE PARA. 6.2
		thru 05-B-04				
		05-C-01	1-2100	1" DIA.	SS	SEE PARA. 6.2

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

2.2 Cont'd Class 1 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENT
B-E	B4.11	03-N-01 thru 03-N-04	1-3100	3/4" DIA.	SS	SEE PARA. 6.2
		04-N-01 thru 04-N-04	1-3200	3/4" DIA.	SS	SEE PARA. 6.2
	B4.12	02-V-01 thru 02-V-91	1-1300	4" DIA.	INCONEL	SEE PARA. 6.2
	B4.13	02-U-92 thru 02-U-101	1-1300	1/2" DIA.	INCONEL	SEE PARA. 6.2
	B4.20	05-H-01 thru 05-H-30	1-2100	1-1/2" DIA.	SS	SEE PARA. 6.2
B-F	B5.40	16-017	1-4500	12" DIA.	CS CLAD & CAST SS	SEE NOTE 1
B-G-1	B6.180	38-S-01 THRU 38-S-16	1-5200	4-3/4" STUDS	CS	
		39-S-01 THRU 39-S-16	1-5300	4-3/4" STUDS	CS	BASELINE - NO CREDIT TAKEN
	B6.190	39-L-01 THRU 39-L-16	1-5300	4-3/4" LIGAMENTS	CS	
	B6.200	38-N-01 THRU 38-N-16	1-5200	4-3/4" NUTS	CS	
		39-N-01 THRU 39-N-16	1-5300	4-3/4" NUTS	CS	BASELINE - NO CREDIT TAKEN
B-J	B9.11	18-015	1-4104	12" DIA.	SS	SEE NOTE 1
		18-019	1-4104	12" DIA.	SS	SEE NOTE 1
		18-020	1-4104	12" DIA.	SS	SEE NOTE 1
		18-022	1-4104	12" DIA.	SS	LIMITED EXAM

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

2.2 Cont'd Class 1 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENT
B-J	B9.11	18-027	1-4104	8" DIA.	SS	LIMITED EXAM
		18-029	1-4104	8" DIA.	SS	
		20-027	1-4204	12" DIA.	SS	SEE NOTE 1
		20-029	1-4204	12" DIA.	SS	SEE NOTE 1
		20-030	1-4104	12" DIA.	SS	
		20-034	1-4104	12" DIA.	SS	SEE NOTE 1
	B9.21	20-061	1-4204	3" DIA.	SS	
		22-047	1-4205	3" DIA.	SS	
		22-048	1-4205	3" DIA.	SS	
		30-013	1-4207	3" DIA.	SS	
		30-014	1-4207	3" DIA.	SS	
	B9.32	21-030	1-4102	3" DIA.	SS	
B-L-2	B12.20	39-005	1-5300	72" DIA.	CAST SS	LIMITED EXAM
B-M-2	B12.50	SI-142A	1-4204	8" DIA.	CAST SS	
F-C	N/A	RCRR-0022	1-4505	2" DIA.	CS	
		RCRR-0031	1-4506	2" DIA.	CS	
		RCSH-0103	1-5100	4" DIA.	CS	
N/A	N/A	37-007	1-5100	78" DIA.	CS	RCP FLYWHEEL
		38-007	1-5200	78" DIA.	CS	RCP FLYWHEEL
		39-007	1-5300	78" DIA.	CS	RCP FLYWHEEL
		40-007	1-5400	78" DIA.	CS	RCP FLYWHEEL

NOTE 1: These high alloy stainless steel welds were ultrasonically examined without a scan to detect transverse reflectors during Refuel 3. This scan has been performed on each of these welds during Refuel 4. Credit towards Table IWB-2412-1 of ASME Section XI was taken during Refuel 3.

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

2.3 Abstract of Conditions Noted and Corrective Actions Taken

2.3.1 ISI examinations did not identify any conditions on Class 1 items which exceeded the allowable standards in IWB/IWF-3000.

2.4 Additional Examinations

2.4.1 Additional examinations were not required on Class 1 items per IWB/IWF-2430.

2.5 Successive Examinations

2.5.1 There were no successive examinations performed per IWB/IWF-2420(b) on Class 1 items during Refuel 4.

2.5.2 There were no Class 1 items which met the criteria of IWB/IWF-2420(b) during Refuel 4. Therefore, no successive examinations will be required in future refueling outages.

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

3.0 Class 2 Examination Summary

3.1 Class 2 Examination Completion Status
2nd Period, 4th Refueling

CODE ITEM NO.	TOTAL EXAMS SELECTED FOR INTERVAL	EXAMS COMPLETED FOURTH REFUELING	TOTAL EXAMS COMPLETED TO DATE	% EXAMS COMPLETED TO DATE	COMMENTS
C1.10	5	1	3	60	
C1.20	2	0	1	50	
C1.30	2	0	1	50	
C2.21	2	0	1	50	
C2.22	2	2	2	100	RELIEF REQ. ISI-011
C2.31	4	0	2	50	
C2.32	2	0	2	100	EXAMINED EACH PERIOD
C3.10	4	0	2	50	
C3.20	25	0	16	66	
C3.30	6	0	3	66	
C5.11	70	3	47	67	
C5.12	5	0	3	60	
C5.21	48	0	30	63	
C5.22	10	0	6	60	
C5.31	1	0	2/3	66	
C6.20	2	0	1	50	
Cat. F-A	4	1	2	50	
Cat. F-C	157	2	104	66	

3.2 Class 2 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
C-A	C1.10	04-035	2-3200	24" DIA.	CS	
C-B	C2.22	04-063	2-3200	34" DIA.	CS	
		04-064	2-3200	18" DIA.	CS	
C-F	C5.11	43-064	2-4101	8" DIA.	CS	
		44-070	2-4201	8" DIA.	CS	
		56-001	2-4209	10" DIA.	CS	
	C5.21	45-023	2-4102	18" DIA.	CS	SEE NOTE 1
		51-003	2-4106	14" DIA.	SS	SEE NOTE 2
		55-038	2-4111	6" DIA.	SS	LIMITED EXAM BASELINE - NO CREDIT TAKEN

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

3.2 Cont'd Class 2 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
C-F	C1.10	55-066	2-4113	6" DIA.	SS	LIMITED EXAM BASELINE - NO CREDIT TAKEN
		56-038	2-4211	6" DIA.	SS	LIMITED EXAM BASELINE - NO CREDIT TAKEN
		56-068	2-4212	6" DIA.	SS	LIMITED EXAM BASELINE - NO CREDIT TAKEN
F-A	N/A	62-104	2-5200	N/A	CS	
F-C	N/A	CSRR-0350	2-4109	10" DIA.	CS	
		CSRR-3010	2-4110	10" DIA.	CS	

NOTE 1: This weld received a magnetic particle (MT) examination only. The required volumetric examination was performed during Refuel 3. Credit towards Table IWC-2412-1 of ASME Section XI was taken during Refuel 3.

NOTE 2: This high alloy stainless steel weld was ultrasonically examined without a scan to detect transverse reflectors during Refuel 3. This scan has been performed on this weld during Refuel 4. Credit towards Table IWC-2412-1 of ASME Section XI was taken during Refuel 3.

3.3 Abstract of Conditions Noted and Corrective Actions Taken

3.3.1 ISI examinations did not identify any conditions on Class 2 items which exceeded the allowable standards in IWB/IWF-3000.

3.4 Additional Examinations

3.4.1 Additional examinations per IWC/IWF-2430 were not required on Class 2 items.

3.5 Successive Examinations

3.5.1 There were no successive examinations performed per IWC/IWF-2420(b) on Class 2 items during Refuel 4.

3.5.2 There were no Class 2 items which met the criteria of IWC/IWF-2420(b) during Refuel 4. Therefore, no successive examinations will be required in future refueling outages.

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

4.0 Class 3 Examination Summary4.1 Class 3 Examination Completion Status
2nd Period, 4th Refueling

ITEM NO.	TOTAL EXAMS SELECTED FOR INTERVAL	EXAMS COMPLETED FOURTH REFUELING	TOTAL EXAMS COMPLETED TO DATE	% EXAMS COMPLETED TO DATE
Cat. F-A	10	0	6	60
Cat. F-C	591	40	384	65

4.2 Class 3 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
F-C	N/A	ACH-0434	8469-315	6" DIA.	CS	
		ACH-0609	8469-202	6" DIA.	CS	
		ACR-0406	8469-195	6" DIA.	CS	LIMITED EXAM
		ACR-0407	8469-195	6" DIA.	CS	LIMITED EXAM
		ACR-0409	8469-195	6" DIA.	CS	LIMITED EXAM
		ACR-0417	8469-195	6" DIA.	CS	LIMITED EXAM
		ACR-0421	8469-315	6" DIA.	CS	LIMITED EXAM
		ACR-0422	8469-315	6" DIA.	CS	LIMITED EXAM
		ACR-0430	8469-315	6" DIA.	CS	LIMITED EXAM
		ACR-0443	8469-346	6" DIA.	CS	LIMITED EXAM
		ACR-0444	8469-191	6" DIA.	CS	LIMITED EXAM
		ACR-0450	8469-191	6" DIA.	CS	LIMITED EXAM
		ACR-0452	8469-191	6" DIA.	CS	LIMITED EXAM
		ACR-0457	8469-191	6" DIA.	CS	LIMITED EXAM
		ACR-0480	8469-346	6" DIA.	CS	LIMITED EXAM

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

4.2 Cont'd Class 3 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
F-C	N/A	ACR-0564	8469-318	6" DIA.	CS	LIMITED EXAM
		ACR-0565	8469-318	6" DIA.	CS	LIMITED EXAM
		ACR-0566	8469-318	6" DIA.	CS	LIMITED EXAM
		ACR-0588	8469-202	6" DIA.	CS	LIMITED EXAM
		ACR-0589	8469-202	6" DIA.	CS	LIMITED EXAM
		ACR-0607	8469-202	6" DIA.	CS	LIMITED EXAM
		ACR-0612	8469-324	6" DIA.	CS	LIMITED EXAM
		ACR-1037	8469-315	6" DIA.	CS	LIMITED EXAM
		ACR-1040	8469-328	10" DIA.	CS	
		ACR-1042	8469-352	10" DIA.	CS	
		ACR-1064	8469-352	10" DIA.	CS	LIMITED EXAM SEE PARA. 4.3.1
		ACR-1093	8469-216	6" DIA.	CS	LIMITED EXAM
		ACV-0451	8469-376	6" DIA.	CS	LIMITED EXAM ADDITIONAL EXAM SEE PARA. 4.4.1
		ACV-0472	8469-346	6" DIA.	CS	LIMITED EXAM SEE PARA. 4.3.3
		CCRR-0321	4305-6251	20" DIA.	CS	
		CCRR-0322	4305-6251	20" DIA.	CS	SEE PARA. 4.3.4
		CCRR-0359	4305-6254	30" DIA.	CS	
		CCRR-0389	4305-6251	20" DIA.	CS	
		CCRR-0444	4305-5685	20" DIA.	CS	
		CCRP-0529	4305-6264	6" DIA.	CS	LIMITED EXAM
		CCRR-0530	4305-6264	6" DIA.	CS	LIMITED EXAM

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

4.2 Cont'd Class 3 Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
F-C	N/A	CCRR-0531	4305-6264	6" DIA.	CS	LIMITED EXAM
		CCSH-1166	4305-6377	20" DIA.	CS	SEE NOTE 1
		MSRR-0284	4305-6912	8" DIA.	CS	
		MSRR-0286	4305-6912	8" DIA.	CS	SEE PARA. 4.3.5
		MSRR-3085	ESSE-MS-103	1" DIA.	CS	
		MSSH-3084	4305-6912	4" DIA.	CS	

NOTE 1: This variable spring hanger was examined during Refuel 3 and rejected by the examiner due to corrosion on spring and interior of spring can. Engineering analysis determined the condition to be acceptable as is but recommended reexamination of the support during Refuel 4 to determine whether repainting is required. The support was determined to be acceptable during the Refuel 4 examination. Credit for this support was taken during Refuel 3.

4.3 Abstract of Conditions Noted and Corrective Actions Taken

- 4.3.1 Support No. ACR-1064: Visual examination (VT-3) revealed rust build-up on the spherical bearings. The film thickness of the rust build-up was reported as less than 1/16" thick and therefore was determined acceptable as is by Engineering. However, the support was disassembled, cleaned, repainted and reexamined.
- 4.3.2 Support No. ACV-0451: Visual examination (VT-3) revealed that both spring cans were binding against insulation and one indicator bar was protruding into the insulation. Engineering analysis determined that the functional capability of the springs was not impacted and the support was determined acceptable as is. This support was examined as an additional exam in accordance with IWF-2430(a), see paragraph 4.4.1 for details.
- 4.3.3 Support No. ACV-0472: Visual examination (VT-3) revealed a loose locknut and corrosion on the support. The locknut was tightened and the corrosion was removed. The support was repainted and reexamined. See paragraph 4.4.1 for additional examinations required per IWF-2430(a).

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

- 4.3.4 Support No. CCRR-0322: Visual examination (VT-3) revealed a corroded base plate and embed plate. Engineering analysis determined that the support could perform its intended function and therefore was acceptable as is. However, the corrosion was removed and the support was repainted.
- 4.3.5 Support No. MSRR-0286: Visual examination (VT-3) revealed an anchor bolt which was installed at an angle. Engineering analysis determined the angle to be 5.7° which is within the design tolerance of 6° . Therefore, the support was determined acceptable as is.

4.4 Additional Examinations

As required by IWF-2430(a), additional examinations were performed when component supports which required corrective measures in accordance with the provisions of IWF-3000 were discovered. Details of the selection process and additional examinations performed are discussed below. No credit toward completion is taken for additional exams.

- 4.4.1 Support No. ACV-0472: Examination results required tightening of a locknut, therefore IWF-2430 applies. The downstream adjacent support (ACR-0443) was examined and accepted as part of the original outage scope. There are no upstream supports.

Support No. ACV-0472 is a variable spring hanger which supports a Chilled Water pump discharge line to Water Chiller A. No other supports similar in type, design and function were examined during Refuel 4. Therefore, 1 additional support was selected for examination in accordance with IWF-2430. Examination of this support (ACV-0451) revealed both spring cans binding against the insulation. However, engineering analysis determined that the condition would not affect the function of the support (see paragraph 4.3.2). Therefore, no further examinations were required.

4.5 Successive Examinations

- 4.5.1 There were no successive examinations performed per IWF-2420(b) on Class 3 items during Refuel 4.
- 4.5.2 Successive examinations will be performed on ACV-0472 which required corrective measures in accordance with the provisions of IWF-3000. This component support will be reexamined during the third inspection period as required by IWF-2420(b).

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

5.0 Supplemental/Augmented Examination Summary5.1 Supplemental/Augmented Examination Completion Status
2nd Period, 4th Refueling

ITEM NO.	TOTAL EXAMS		TOTAL EXAMS COMPLETED TO DATE	% EXAMS COMPLETED TO DATE	COMMENTS
	SELECTED FOR INTERVAL	EXAMS COMPLETED FOURTH REFUELING			
C5.11 Sup.	87	73	79	91	
C5.11 Aug.	4	0	2	50	
C5.21 Aug.	110	3	73	66	
C5.22 Aug.	20	0	13	65	
Cat. 5 Aug.	4	0	2	50	

5.2 Supplemental/Augmented Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
C-F (AUGMENTED)	C5.11	51-002	2-4106	14" DIA.	SS	SEE NOTE 1
C-F (SUPPLEMENTAL)	C5.11	49-020	2-4104	14" DIA.	SS	
		49-029	2-4104	20" DIA.	SS	
		49-033	2-4104	20" DIA.	SS	
		49-039	2-4104	20" DIA.	SS	
		49-041	2-4104	20" DIA.	SS	
		50-023	2-4204	14" DIA.	SS	LIMITED EXAM
		50-040	2-4204	14" DIA.	SS	
		50-045	2-4204	14" DIA.	SS	
		50-048	2-4204	20" DIA.	SS	
		50-052	2-4204	20" DIA.	SS	
		51-005	2-4106	6" DIA.	SS	LIMITED EXAM
		51-033	2-4105	8" DIA.	SS	LIMITED EXAM
		51-036	2-4105	8" DIA.	SS	

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

5.2 Cont'd Supplemental/Augmented Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
C-F (SUPPLEMENTAL)	C5.11	51-048	2-4105	14" DIA.	SS	
		51-052	2-4105	14" DIA.	SS	
		52-005	2-4206	6" DIA.	SS	LIMITED EXAM
		52-027	2-4205	8" DIA.	SS	LIMITED EXAM
		52-031	2-4205	8" DIA.	SS	
		53-007	2-4109	8" DIA.	SS	
		53-043	2-4109	10" DIA.	SS	
		53-047	2-4109	10" DIA.	SS	
		53-052	2-4109	10" DIA.	SS	
		53-068	2-4109	10" DIA.	SS	
		54-020	2-4209	8" DIA.	SS	
		54-039	2-4209	10" DIA.	SS	
		54-050	2-4209	10" DIA.	SS	
		54-066	2-4209	10" DIA.	SS	
		55-018	2-4112	10" DIA.	SS	
		55-019	2-4112	10" DIA.	SS	
		55-023	2-4111	8" DIA.	SS	
		55-054	2-4113	8" DIA.	SS	
		55-063	2-4113	8" DIA.	SS	
		56-021	2-4212	10" DIA.	SS	
		56-025	2-4212	10" DIA.	SS	
		56-030	2-4211	8" DIA.	SS	
		56-035	2-4211	8" DIA.	SS	
56-064	2-4212	8" DIA.	SS			

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

5.2 Cont'd Supplemental/Augmented Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS
C-F (SUPPLEMENTAL)	C5.11	57-022	2-4110	10" DIA.	SS	
		57-033	2-4109	10" DIA.	SS	
		57-037	2-4109	5" DIA.	SS	
		57-039	2-4109	6" DIA.	SS	
		57-049	2-4109	10" DIA.	SS	
		58-005	2-4210	10" DIA.	SS	
		58-025	2-4210	10" DIA.	SS	
		58-034	2-4209	6" DIA.	SS	
		60-003	2-4116	4" DIA.	SS	
		60-019	2-4116	4" DIA.	SS	
		60-025	2-4116	4" DIA.	SS	
		60-026	2-4116	4" DIA.	SS	
		60-070	2-4217	4" DIA.	SS	LIMITED EXAM
		60-072	2-4217	4" DIA.	SS	
		60-074	2-4217	4" DIA.	SS	
		60-080	2-4217	4" DIA.	SS	
		60-089	2-4217	4" DIA.	SS	
		60-098	2-4216	4" DIA.	SS	LIMITED EXAM
		60-100	2-4216	4" DIA.	SS	
		60-109	2-4216	4" DIA.	SS	
		60-115	2-4216	4" DIA.	SS	
		60-117	2-4216	4" DIA.	SS	
		60-131	2-4216	4" DIA.	SS	LIMITED EXAM
61-111	2-4213	10" DIA.	SS			

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

5.2 Cont'd Supplemental/Augmented Items Examined 4th Refueling

CODE CATEGORY	CODE ITEM #	WELD/ ITEM #	DRAWING	SIZE	MATERIAL	COMMENTS		
C-F (SUPPLEMENTAL)	C5.11	62-075	2-4208	14" DIA.	SS			
		62-076	2-4208	14" DIA.	SS			
		62-078	2-4208	14" DIA.	SS	LIMITED EXAM		
		62-088	2-4208	14" DIA.	SS			
		62-089	2-4208	14" DIA.	SS	LIMITED EXAM		
		62-094	2-4208	14" DIA.	SS	LIMITED EXAM		
		64-008	2-4110	10" DIA.	SS			
		64-010	2-4110	10" DIA.	SS			
		64-014	2-4110	10" DIA.	SS			
		64-033	2-4110	10" DIA.	SS			
		65-011	2-4210	10" DIA.	SS			
		65-021	2-4210	10" DIA.	SS			
		C-F (AUGMENTED)	C5.21	45-002	2-4102	18" DIA.	CS	
				51-012	2-4106	14" DIA.	SS	
51-013	2-4106			14" DIA.	SS			
51-014-900	2-4106			14" DIA.	SS	SEE NOTE 1		
55-040	2-4111			8" DIA.	SS	SEE NOTE 1		
55-042	2-4111			8" DIA.	SS	SEE NOTE 1		
55-043	2-4111			8" DIA.	SS	SEE NOTE 1		
56-070	2-4212			8" DIA.	SS	SEE NOTE 1		
56-072	2-4212			8" DIA.	SS	SEE NOTE 1		
56-073	2-4212			8" DIA.	SS	SEE NOTE 1		

NOTE 1: These high alloy stainless steel welds were ultrasonically examined without a scan to detect transverse reflectors during Refuel 3. This scan has been performed on each of these welds during Refuel 4. Credit for these welds was taken during Refuel 3.

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

5.3 Abstract of conditions Noted and Corrective Actions Taken

5.3.1 ISI examinations did not identify any conditions on Supplemental/Augmented items which exceeded the allowable standards in IWB-3000.

5.4 Additional Examinations

5.4.1 Additional examinations were not required on Supplemental/Augmented items.

5.5 Successive Examinations

5.5.1 There were no successive examinations performed per IWC-2420(b) on Supplemental/Augmented items during Refuel 4.

5.5.2 There were no Supplemental/Augmented items which met the criteria of IWC-2420(b) during Refuel 4. Therefore, no successive examinations will be required in future refueling outages.

6.0 Pressure Testing Summary

As required by ASME Section XI (Code Category B-E, B-P, and C-H), and Section 2.2 and 3.2 of the Waterford 3 Ten Year Inservice Inspection Program, system pressure tests were performed during Refuel 4. No through-wall pressure boundary leakage was identified. Other leakage (packing, gaskets, etc.) and boric acid residue was documented on Condition Identifications (CI's) for evaluation and/or corrective action.

6.1 Hydrostatic Testing

The following components/subsystems were hydrostatically tested during Refuel 4:

EDG Starting Air A1 and A2 Receiver/Header (Pneumatic)

EDG Starting Air B1 and B2 Receiver/Header (Pneumatic)

EDG Fuel Oil Storage Tank to Feed Tank - 'A'

EDG Fuel Oil Storage Tank to Feed Tank - 'B'

Fuel Oil Feed Tank to EDG - 'A'

Fuel Oil Feed Tank to EDG - 'B'

Boric Acid Management/Chemical Volume Control Supply to Charging Pumps

Main Steam Supply Header to Turbine Driven EFW Pump Turbine

EFW Pump Suction Headers

EFW Pump Discharge Headers

Auxiliary Component Cooling Water Thru to CCW Heater Exchanger Outlet Isolation - 'A'

Auxiliary Component Cooling Water System Thru to CCW Heat Exchanger Outlet Isolation - 'B'

CCW Trains A and A/B

6.2 Normal Operating Pressure Testing

The Class 1 System Leakage Test which is required at start-up following each refueling outage was completed. The exam boundary included the Class 1 Reactor Coolant System with all valves in the normal position required for reactor start-up.

All forty-month examinations (Class 2 and 3) which are required to be performed during plant shutdown due to accessibility or system availability were completed during Refuel 3. No other forty-month examinations (Class 2 and 3) have yet been performed during this reporting period.

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

7.0 NIS-2 Forms

The following NIS-2 forms document the ASME Class 1 and 2 repair and replacement activities performed between 11/15/89 and 05/21/91:

<u>NIS-2 No.</u>	<u>WA No.</u>	<u>CI No.</u>	<u>Description</u>
91-001	01053699 01064060	267864 271039	Partial replacement CVC-192A
91-002	01043574 01046799	260916 265614	Partial replacement CVC-192AB
91-003	01046510 01046718	265503 265526	Replacement FP-602A & FP 602B
91-004	01077999	275736	Repair RC-303
91-005	01076825	275136	Partial replacement MS-119A
91-006	01073160	273058	Partial replacement MS-119B
91-007	01052806	267957	Partial replacement RC-303
91-008	01059071 01059078 01060383	269673 269680 270090	Replacement CVC-115
91-009	01056121	268643	Partial replacement CS-125A
91-010	01007431 01031747 01048696	252327 261138 266412	Partial replacement CVC pump 1A, CVC-126 & SI-107A
91-011	01058269	267714	Partial replacement SI-512B
91-012	01059571	267525	Partial replacement pressurizer heaters 72A2, 72A3, 73B1, 73B4, 76B1, 76B2, & 76B3
91-013	01072955	019051	Repair CVC-194AB
91-014	01076000 01076278	274885 274996	Replacement SI-108A & SI-108B
91-015	01050437	267222	Partial replacement CS-127A
91-016	01071658 01074741	018816 274421	Partial replacement SG no. 1
91-017	01071582 01071659 01075129	000297 018817 274633	Partial replacement SG no. 2

FOURTH REFUELING INSERVICE INSPECTION SUMMARY REPORT

7.0 NIS-2 Forms (cont.)

NIS-2 No.	WA No.	CI No.	Description
91-018	01061831	269570	Partial replacement SI-301
91-019	01049168	266769	Partial replacement HVSH-4028
91-020	01059064	269675	Partial replacement HVRR-4029
91-021	99000352	274482	Partial replacement MSRR-2
91-022	01054796 01056125	000947 268089	Replacement RC-317A
91-023	01054797 01064718	000948 271266	Replacement RC-317B
91-024	99000399 99000399	273474 273886	Repair RCP-2A
91-025	99003340 99003340	273702 273705	Repair RCP-1A, RCP-1B & RCP-2B
91-026	01076557	274685	Repair 2FW20-12A-6
91-027	99000404	273576	Repair 1RC2-50A/B-1

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01053699 & WA 01064060
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CVC (Chemical and Volume Control)

5. (a) Applicable Construction Code Sec III NC 1974 Edition, S74 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CVC-192A	Crosby	N60643-00-0001	NA	Valve 2CH-R1526A	1978	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2485 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
 repair or replacement

Type Code Symbol Stamp NoneCertificate of Authorization No. Not Applicable Expiration Date Not ApplicableSigned Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of
 Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana
 and employed by Awkright Mutual Insurance Co.* of Norwood, MA have
 inspected the components described in this Owner's Report during the period
November 1989 to May 1991, and state that to the best of my knowledge
 and belief, the Owner has performed examinations and taken corrective measures
 described in this Owner's 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 Owner's 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.

Ray E. Dwyer
 Inspector's Signature

Commissions 7822 N B I S IS
 National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During operation of positive displacement Charging Pump 1A in the Chemical and Volume Control (CVC) system, the discharge relief valve, CVC-192A, is subject to constant pressure pulses from the pump. The valve is close to the discharge to the pump causing the disc insert to develop leaks over time.

Valve CVC-192A developed a seat leak. Under WA 01053699, the valve was disassembled and inspected. The disc insert was replaced. The valve relief pressure was set and tested satisfactorily.

Several months later, valve CVC-192A again developed a seat leak. Under WA 01064060, the valve was disassembled and inspected. The disc insert was replaced. The valve relief pressure was set and tested satisfactorily.

Upon return to service, the replacements were examined using the VT-2 method. The results were acceptable.

The certifications for the replacement disc inserts are filed in the following record:

P.O. W-11796 MRIR 9780-87

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address
2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01043574 & WA 01046799
Address Repair Organization P.O. No., Job No
3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Expiration Date Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066
Address
4. Identification of System CVC (Chemical and Volume Control)
5. (a) Applicable Construction Code Sec III NC, 1974 Edition, S74 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CVC-192AB	Crosby	N60643-00-0002	NA	Valve 2CH-R1527A/B	1978	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)
8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2485 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Hilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During operation of positive displacement Charging Pump LAB in the Chemical and Volume Control (CVC) system, the discharge relief valve, CVC-192AB, is subject to constant pressure pulses from the pump. The valve is close to the discharge to the pump causing the disc insert to develop leaks over time.

Valve CVC-192AB developed a seat leak. Under WA 01043574, the valve was disassembled and inspected. The disc insert, spring and spring washers were replaced. The valve relief pressure was set and tested satisfactorily.

Several months later, valve CVC-192AB again developed a seat leak. Under WA 01046799, the valve was disassembled and inspected. The disc insert and spindle were replaced. The valve relief pressure was set and tested satisfactorily.

Upon return to service, the replacements were examined using the VT-2 method. The results were acceptable.

The certifications for the replacements are filed in the following records:

P.O.	L-97725	MRIR 8336-87
	W-10570	MRIR 8715-87
	W-11796	MRIR 9780-87
	WPO29054	MIR M08111

FORM NIS-2 (OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 11
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01046510 & WA 01046718
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System FP (Fire Protection)

5. (a) Applicable Construction Code Sec III NC 1974 Edition, S76 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
FP-602A	C&S Valve	87-5000-01(N)01	NA	Valve 2FP-V129	1987	Replaced	No
FP-602A	C&S Valve	89-0903-01(N)04	NA	Valve 2FP-V129	1989	Replacement	No
FP-602B	C&S Valve	87-5000-01(N)02	NA	Valve 2FP-V130	1987	Replaced	No
FP-602B	C&S Valve	89-0903-01(N)02	NA	Valve 2FP-V130	1989	Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 130 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9 Remarks See Attachment 2 (8 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S IS
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

The as-found local leak rate test (LLRT) results for the fire protection header inside containment check valves, FP-602A and FP-602B, were unacceptable. New valves were previously procured as replacements for these valves. The replacement valves were installed. A design change for alternate valves is in development for implementation in a future outage.

The replacement valves were local leak rate tested and found acceptable.

Copies of the Code Data Reports for the original and replacement valves are presented in Attachment 2. The certifications for the replacement valves are filed in the following record:

P.O. WPO28857

MIR M05877

Attachment 2
Code Data Reports
(Page 2 of 8)

FORM NPV-1 (Rev. 1)

Mark No.	Material Spec. No.	Manufacturer	Remarks
c) Bolting			
306	SA 479 - 410	Jorgensen	Hinge Pin Retainers
306	SA 479 - 410	Jorgensen	Stop Pin Retainers
d) Other Parts			
ABE	SA 479 - 1316	Jorgensen	Body
ABE (Both)	SA 479 - 1316	Jorgensen	Plates

Hydraulic test 355 psi. Disk Differential test pressure 260 psi. *Air seat test at 45 psig

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1974.

Address winter 1974 Code Case No. N/A Date N/A

Signed CAS Valve Company, Tricentric Division by [Signature] 2/5/87
(If Certificate Holder)

Our ASME Certificate of Authorization No. N-2723 to use the N symbol expires 6/30/89
(Date)

CERTIFICATION OF DESIGN

Design information on file at Site

Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) (Ebasco) Charles S. Rogovin

PE State IA Reg. No. 11987

Stress analysis certified by (1) TRW Mission Valves (Originally furnished on Ebasco order # 403505)

PE State: _____ Reg. No. _____

Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Illinois and employed by * Allendale Mutual Ins. Co. of NORWOOD, MASSACHUSETTS have inspected the pump, or valve, described in this Data Report on FEBRUARY 5th 1987 and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III. * Factory Mutual System

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 2-15-87 19 87

[Signature] Commission Illinois #556
(Inspector) (Not B.E. State, Prov. and No.)

Attachment 2
Code Data Reports
(Page 3 of 8)

FORM NPV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Div. 1

1. Manufactured by CAS Valve Company, Tricentric Division, 40 Chestnut Ave., Westport, IL 60552-1198
Name and Address of N Certificate Holder
 2. Manufactured for Louisiana Power & Light, Waterford #3 Nuclear, P.O. Box 8, Killona, LA 70066
Name and Address of Purchaser or Owner
 3. Location of installation Louisiana Power & Light, Waterford #3, Hwy. 18, Tefft, LA 70066
Name and Address
 4. Pump or valve VALVE Nominal inlet Size 3 inch Outlet Size 3 inch
(INCH) (INCH)

(1) Series No. or Type	(2) N Certificate Holder's Serial No.	(3) Canadian Registration No.	(4) Drawing No.	(5) Class	(6) NPTB S.S. No.	(7) Year Built
(1) Check	87-5000-01(N)-02	N/A	87-5000-01(N) REV. ORIG.	2	N/A	1987
(2)						
(3)						
(4)						
(5)						
(6)						
(7)						
(8)						
(9)						
(10)						

5. Air (Fire Protection System)
Brief description of service for which equipment was designed

6. Design Conditions 235 psi 100° F or Valve Pressure Class 150 (1)
Pressure Temperature

7. Cold Working Pressure 235 psi at 100° F.

8. Pressure Retaining Pieces

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
(b) Forgings			

(1) For manually operated valves only.
 * Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 6 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Attachment 2
Code Data Reports
(Page 4 of 8)

FORM NPT-1 (Back)

Part No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
308	SA 479 - 410	Jorgensen	Minge Pin Retainers
308	SA 479 - 410	Jorgensen	Stop Pin Retainers
(d) Other Parts			
ABE	SA 479 - 1316	Jorgensen	Body
ABE (Both)	SA 479 - 1316	Jorgensen	Plates

9. Hydrostatic test 350 psi. Duct Differential test pressure 250 psi. *Air tight test at 45 psig

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1974
 Addenda Winter 1974, Code Case No. N/A, Date N/A
 Signed C&S Valve Company, Tricentric Division by David J. Jackson 2/27/97
(N Certificate Holder)
 Our ASME Certificate of Authorization No. N-2723 to use the N symbol expires 5/20/99
(Date)

CERTIFICATION OF DESIGN

Design information on file at Site
 Stress analysis report (Class 1 only) on file at N/A
 Design specifications verified by (1) (Resco) Charles S. Rozekin
 PE State LA Reg. No. 11997
 Stress analysis verified by (1) The Mission Valves (Originally furnished on Resco order # 403508)
 PE State MISSISSIPPI Reg. No. MISSISSIPPI
 (1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Illinois and employed by *Allendale Mutual Ins. Co. of Northwood, Massachusetts have inspected the pump or valve described in the Data Report on February 27th 1997 and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump or valve in accordance with the ASME Code, Section III. * Factory Mutual System
 By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 2/27/97 1997
James A. Lane Commission 1811003 * 556
(Inspector) (Nat'l Bd. Boiler and Press.)

Attachment 2
Code Data Reports
(Page 6 of 8)

FORM NPV-1 (Rev.)

89-0903-01(N)-04

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
(d) Other Parts			
YCE	SA 479 TYPE 316	Colt/Crucible	Body
YCE	SA 479 TYPE 316	Colt/Crucible	Plates
RPI	SA 479 TYPE 316	Colt/Crucible	Stop Pin Retainers
RPI	SA 479 TYPE 316	Colt/Crucible	Hinge Pin Retainers

8. Inlet/Outlet Size 265 psi. Disk Differential Set Pressure 260 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1988, Addenda M/UCR 1994, Code Case No. N/A, Date N/A.

Signed CBS Valve Company, Tricentric Division by Gregg P. ... 11/1/89
or Certificate Holder

Our ASME Certificate of Authorization No. N-2723 is used for N (N) (symbol expires 5/20/92)
or (Class)

CERTIFICATION OF DESIGN

Design information on file at CBS Valve Company, Tricentric Division
 Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) Charles E. ...
 PE State ILLINOIS Reg. No. 1180
 Stress analysis certified by (1) N/A
 PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of ILLINOIS and employed by Altondale Nuclear, Inc. Co.
 at Altondale, Illinois have inspected the pump, or valve, described in this Data Report on November 3, 1989 and state that to the best of my knowledge and belief, the N Certificate-holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Factory Mutual System.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 associated with this inspection.

Date 11/3/89 to EE
J. ... Inspector Commission No. 11610015 0556
(Print Ed., State, Firm and No.)

Attachment 2
Code Data Reports
(Page 8 of 8)

FORM NPV-1 (Rev.)

BB-0902-01(K)-02

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Boring			
(d) Other Parts			
YCE	SA 479 Type 316	Colt/Crucible	Body
YCE	SA 479 Type 316	Colt/Crucible	Plates
RPB	SA 479 Type 316	Colt/Crucible	Stop Pin Retainers
RPB	SA 479 Type 316	Colt/Crucible	Hinge Pin Retainers

9. Hydrostatic test 355 psi. Disk Differential test pressure 250 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1974
 Addenda Winter 1974 Code Case No. N/A Date N/A
 Signed C&S Valve Company, Tricentric Division by [Signature] 11/3/87
 (N Certificate Holder)
 Our ASME Certificate of Authorization No. N-2723 to use the N symbol expires 6/20/92
 (Date)

CERTIFICATION OF DESIGN

Design information on file at C&S Valve Company, Tricentric Division
 Stress analysis report (Class 1 only) on file at N/A
 Design specifications certified by (1) Charles S. Roovin
 PE State Louisiana Reg. No. 11597
 Stress analysis certified by (1) N/A
 PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Illinois and employed by Allendale Mutual Ins. Co. * of Norwood, Massachusetts have inspected the pump, or valve, described in this Data Report on NOVEMBER 2, 1987 and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III. * Factory Mutual System
 By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 11/3/87
[Signature] (Inspector) Commission ILLINOIS #556
 (Not Ed. State Prov. or No.)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01977999, CI 275736
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System RC (Reactor Coolant)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W72 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda.

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RC-303	Anchor Darling	1N350	NA	Valve IRC-V2516	1978	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

repair conforms to the rules of the ASME Code, Section XI,
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During Refuel 4, the pressure seal gasket on the pressurizer spray line check valve, RC-303, was replaced. The bonnet leaked when the system was pressurized. Subsequently, the system was drained, and the valve was disassembled.

It was discovered that the upper retaining ring had slid down and that the bonnet was actually pressed against the retaining ring. The pressure seal gasket was not compressed. The edge of the retaining ring was upset. The upset metal was removed, and the inner edge was filed to allow the bonnet to pass through the retaining rings.

The filed area on the retaining rings was examined using the dye penetrant method and found acceptable.

Upon return to service, the valve was examined at normal operating pressure using the VT-2 method. The results were acceptable.

The certifications for the replacement disc inserts are filed in the following record:

P.O. W-11796 MRIR 9780-87

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Energy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 5
Address

2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01076825, CI 275136
Address Repair Organization P.O. No., Job No

3. Work Performed by Energy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System MS (Main Steam)

5. (a) Applicable Construction Code Sec III NC 1971 edition, W73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
MS-119A	Velan	58-1	NA	Valve 2MS-V671	1976	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 985 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (2 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Alley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

The main steam isolation valve start-up upstream drain valve no. 1, MS-119A, was disassembled and inspected due to overthrusting discovered during motor operated valve testing. Inspection of the disassembled components revealed a damaged back seat on the valve stem and improper disc contact.

The stem and disc were replaced with spares from stores. The serial number for the replacement disc is 376-3. A copy of the Code Data Report for the replacement disc is presented in Attachment 2.

No pressure retaining welds were performed.

The valve was operationally tested in accordance with the Inservice Test Plan. A pressure test was performed at normal operating pressure. The VT-2 examination results were satisfactory.

The certifications for the replacement stem and disc are filed in the following records:

WPO33597	MRIR 4572-91
WPO40224	MIR M09924

Attachment 2
Code Data Report
(Page 1 of 2)

FORM N-2 CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES*
As Required by the Provisions of the ASME Code, Section III
Not to Exceed One Day's Production

1. Manufactured and certified by VELAN INC. 2125 WARD AVE, QUEBEC CANADA
(Name and address of NPT Certificate holder)

2. Manufactured for ENERGY OPERATIONS INC LOUISIANA 70066 U.S.A.
(Name and address of Purchaser)

3. Location of installation WATERFORD #3 NUCLEAR TAFT LOUISIANA USA
(Name and address)

4. Type: PI-4560-N-1 AMS-5387 N/A N/A 1991
(Drawing no.) (Mat'l spec. no.) (Tensile strength) (CRN) (Year built)

5. ASME Code, Section III, Division 1: * 1971 WINTER 1973 2 N/A
(Edition) (Addenda date) (Class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only): N/A Revision N/A Date N/A
(No.)

7. Remarks: * MEETS ASME SECTION II EDITION: 1986 ADDENDA NONE
2" DISCS FOR W08-2074X-02TN FOR PI-76343-NSP
TRACE CODES: V8308 & V8221

8. Num. thickness (in.) N/A Min. design thickness (in.) N/A Dia. ID (ft & in.) N/A Length overall (ft & in.) N/A

9. When applicable, Certificate Holders' Data Reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. in Numerical Order
(1) <u>376-1</u>	
(2) <u>376-2</u>	
(3) <u>376-3</u>	
(4) <u>376-4</u>	
(5)	
(6)	
(7)	
(8)	
(9)	
(10)	
(11)	
(12)	
(13)	
(14)	
(15)	
(16)	
(17)	
(18)	
(19)	
(20)	
(21)	
(22)	
(23)	
(24)	
(25)	

Part or Appurtenance Serial Number	National Board No. in Numerical Order
(26)	
(27)	
(28)	
(29)	
(30)	
(31)	
(32)	
(33)	
(34)	
(35)	
(36)	
(37)	
(38)	
(39)	
(40)	
(41)	
(42)	
(43)	
(44)	
(45)	
(46)	
(47)	
(48)	
(49)	
(50)	

10. Design pressure N/A psi. Temp. N/A °F. Hydro. test pressure N/A at temp. °F
(When applicable)

* Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 2 and 3 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.
(12/88) This form (E00040) may be obtained from the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

Attachment 2
Code Data Report
(Page 2 of 2)

FORM N-2 (Back - Pg. 2 of 2)

Certificate Holder's Serial Nos. 376-1 through 376-4

CERTIFICATION OF DESIGN

Design specifications certified by J. RUGIERI P.E. State CONN. Reg. no. 12453
(What applicable)

Design report* certified by N/A P.E. State N/A Reg. no. N/A
(What applicable)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this (these) 2" DISC
conforms to the rules of construction of the ASME Code, Section III, Division 1.

NPT Certificate of Authorization No. N-2798-1 Expires MAY 2, 1992

Date MAY 6, 1991 Name VELAN INC. Signed [Signature]
(NPT Certificate Holder) (Authorized Representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Quebec and employed by Perminis of Quebec have inspected these items described in this Data Report on May 6 1991 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III, Division 1. Each part listed has been authorized for stamping on the date shown above.

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

Date 91-05-6 Signed [Signature] Commissions (11)
(Authorized Inspector) (Nat'l Bd. Incl. endorsements and state or prov. and no.)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisors of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 5
Address

2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01073160, CI 273058
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System MS (Main Steam)

5. (a) Applicable Construction Code Sec III NC '91 Edition, W73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
MS-119B	Velan	460-1	NA	Valve 2MS-V664	1976	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 985 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (2 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

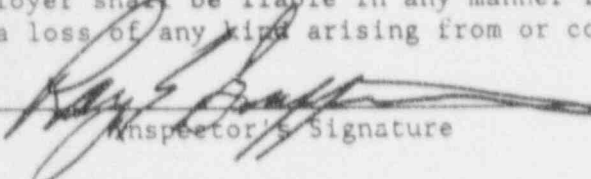
Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.


Inspector's Signature

Commissions 7822 N 3 I S IS
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

The main steam isolation valve start-up upstream drain valve no. 2, MS-119B, was disassembled and inspected due to overthrusting discovered during motor operated valve testing. Inspection of the disassembled components revealed a damaged back seat on the valve stem and improper disc contact.

The stem and disc were replaced with spares from stores. The serial number for the replacement disc is 376-1. A copy of the Code Data Report for the replacement disc is presented in Attachment 2.

No pressure retaining welds were performed.

The valve was operationally tested in accordance with the Inservice Test Plan. A pressure test was performed at normal operating pressure. The VT-2 examination results were satisfactory.

The certifications for the replacement stem and disc are filed in the following records:

L-48866	MRIR 0546-85
WP040224	MIR M09924

Attachment 2
Code Data Report
(Page 1 of 2)

FORM N-2 CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES*

As Required by the Provisions of the ASME Code, Section III
Not to Exceed One Day's Production

Pg. 1 of 2

1 Manufactured and certified by VELAN INC. 2125 WARD AVE. QUEBEC CANADA
(Name and address of NPT Certificate Holder)

2 Manufactured for ENERGY OPERATIONS INC LOUISIANA 70066 U.S.A.
(Name and address of Purchaser)

3 Location of installation WATERFORD #3 NUCLEAR TAFI LOUISIANA USA
(Name and address)

4 Type PI-4560-N-1 AMS-5387 N/A N/A 1991
(Drawing No.) (Mat'l. Spec. No.) (Service Strength) (CRN) (Year Built)

5 ASME Code, Section III, Division 1: * 1971 WINTER 1973 2 N/A
(Edition) (Addenda Date) (Class) (Code Case No.)

6 Fabricated in accordance with Const. Spec. (Div. 2 only): N/A Revision N/A Date N/A
(Div. 2 only) (Date)

7 Remarks: * MEETS ASME SECTION II EDITION: 1986 ADDENDA NONE
2" DISCS FOR W08-2074X-02TN FOR PI-76343-NSP
TRACE CODES: V8308 & V8221

8 Nom. thickness (in.) N/A Min. design thickness (in.) N/A Dia. ID (ft & in.) N/A Length overall (ft & in.) N/A

9 When applicable, Certificate Holders' Data Reports are attached for each item of this report:

Part or Appurtenance Serial Number	National * No. in Numerical Order	Part or Appurtenance Serial Number	National Board No. in Numerical Order
(1) 376-1		(26)	
(2) 376-2		(27)	
(3) 376-3		(28)	
(4) 376-4		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10 Design pressure N/A psi. Temp. N/A °F. Hydro. test pressure N/A at temp. °F
(when applicable)

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

Attachment 2
Code Data Report
(Page 2 of 2)

FORM N-2 (Back - Pg. 2 of 2)

Certificate Holder's Serial Nos. 376-1 through 376-4

CERTIFICATION OF DESIGN

Design specifications certified by J. RUGIERI P.E. State CONN. Reg. no. 12452
(When applicable)
Design report* certified by N/A P.E. State N/A Reg. no. N/A
(When applicable)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this (these) 2" DISC
conforms to the rules of construction of the ASME Code, Section III, Division 1.
NPT Certificate of Authorization No. N-2798-1 Expires MAY 2, 1992
Date MAY 6, 1991 Name VELAN INC. Signed [Signature]
(NPT Certificate Holder) (Authorized Representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Ill. Ill. and employed by Perkins
of Perkins have inspected these items described in this Data Report on May 6, 1991 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III, Division 1. Each part listed has been authorized for stamping on the date shown above.
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.
Date 91-25-6 Signed [Signature] Commissions 11
(Authorized Inspector) (Net. Bd. limit, endorsements and state or prov. and no.)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1360 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01052806, CI 267957
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System RC (Reactor Coolant)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W72 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RC-303	Anchor Darling	1N350	NA	Valve 1RC-V2516	1978	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, the pressurizer spray line check valve, RC-303, developed a leak at the hinge pin cover gaskets. The hinge pin cover studs were retorqued but the leak was not stopped. The hinge pin covers were disassembled. To enhance seating of the pressure seal gaskets, the studs and nuts were replaced with a higher strength material per SPEER 90-533.

Upon return to service, the valve was examined for leakage at normal operating pressure. The VT-2 examination results were acceptable.

The certifications for the replacement materials are filed in the following records:

PO W-12713	MRIR 0269-87 (studs)
W-14630	MIR M05612 (nuts)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 19⁰¹
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 9
Address

2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01059071, WA01059078 & WA 01060383
Address Repair Organization P.J. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CVC (Chemical and Volume Control System)

5. (a) Applicable Construction Code Sec III NC 1974 Edition, S76 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CVC-115	Crosby	N59356-00-0001	NA	Valve 2CH-R626A/B	1978	Replaced	Yes
CVC-115	Crosby	N59356-00-0002	NA	Valve 2CH-R626A/B	1984	Replacement	No
CVC-115	Crosby	N59356-00-0002	NA	Valve 2CH-R626A/B	1984	Replaced	No
CVC-115	Crosby	N59356-00-0001	NA	Valve 2CH-R526A/B	1978	Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 820 psi Test Temp. 70 F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (6 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, the letdown heat exchanger inlet bypass line relief valve, CVC-115, started lifting at system pressure of 450 psig. The valve lift pressure had drifted down from 600 psig.

Under WA 01059078 CI 269680, a replacement valve assembly was fabricated and tested. Short inlet and outlet piping sections and flanges were welded to a spare valve to produce the replacement assembly. The spare valve was disassembled. The spindle sub-assembly was damaged and was replaced with a spare sub-assembly with serial no. K57232-01-0075.

The welds were examined using the visual and dye penetrant methods and found acceptable. The assembly was hydrostatically tested. The visual examination VT-2 results were acceptable. A leak developed at the nozzle to body joint during the hydrostatic test. The leak was contributed to pressure at the joint being higher than operating pressure during the hydrostatic test.

Under WA 01059071 CI 269673, the spare valve assembly was installed. Upon return to operating pressure, the valve was visually examined. The VT-2 examination results were unsatisfactory. The valve leaked at the inlet flange gasket and at the nozzle to body joint.

Under WA 01059630 CI 269859, the original valve was bench tested. The lift pressure test and seat leakage tests were performed with acceptable results.

Under WA 01060383 CI 270090, the original valve was reinstalled. The valve was visually examined at operating pressure. The VT-2 examination results were acceptable.

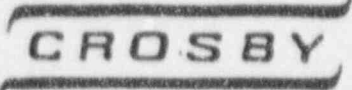
A copy of the Code Data Reports for the original valve, spare valve and the replacement spindle sub-assembly are presented in Attachment 2.

The certifications for the replacements are filed in the following records:

PO	L-13295	MRIR 6290-81	
	L-46359	MRIR 5965-84	
	WPO14732	MIR M03014	
	WPO33387	MIR M08677	
	W23-7635	MRIR 82-00926	(TR-5774, MRIR 9509-87)

Attachment 2
Code Data Reports
(Page 1 of 6)

DOC. PR. 21912
REV. 11/17



CROSBY VALVE & GAGE COMPANY
WRENTHAM, MASS

FORM MV-1 FOR SAFETY AND SAFETY RELIEF VALVES
As required by the Provisions of the ASME Code Rules

QC-94C

DATA REPORT
Safety and Safety Relief Valves

1. Manufactured By Crosby Valve & Gage Co., 43 Kendrick St., Wrentham, MA 02093
Name and Address
Model No. JO-46-WB Order No. N41558 Contract Date 4/6/74 National Board No. ---
Louisiana Power & Light Co. - Ebasco Services Inc.
2. Manufactured For 21 West St. 10th Floor - NY, NY 10006 Order No. NY-403511
Name and Address
3. Owner Waterford Steam Electric Station - Unit #3
Name and Address

4. Location of Plant Taft, Louisiana

5. Valve Identification CH-345/2CH-R626-A/B Serial No. N59356-00-0001 Drawing No. DS-C-59356 Rev. A

Type Relief Orifice Size G Pipe Size - Inlet 2 Outlet 3
Safety Safety Relief, Pilot Power Actuated Inlet Inlet Inlet Inlet

6. Set Pressure (PSIG) 600 550
Rated Temperature

Stamped Capacity 175 GPM Water @ 10 % Overpressure Blowdown (PSIG) 10% of S.P.

Hydrostatic Test (PSIG) Inlet 900 Outlet 225

7. The material, design, construction and workmanship comply with ASME Code, Section III.
Class 2 Edition 1974, Addenda Date SUMMER 1974, Case No. ---

Pressure Containing or Pressure Retaining Components

a. Castings	Serial No. Identification	Material Specification (including Type or Grade)
Body	<u>N91369-31-0001</u>	<u>ASME SA351 Gr. CFB</u>
Nuts	<u>N91371-31-0001</u>	<u>ASME SA351 Gr. CFB</u>
b. Bar Stock and Forgings		
Support Rods		
Nozzle	<u>N91370-31-0001</u>	<u>ASTM A479-71 Type 304</u>
Disc <u>K57240-33-0003</u>	<u>N90634-33-0003</u>	<u>ASME SA479 Type 304</u>
Spring Washers	<u>N91022-33-0389</u>	<u>ASME SA479 Type 304</u>
Adjusting Bolt	<u>N88753-40-0053</u>	<u>ASME SA479 Type 410 #1</u>
Spindle <u>K57232-35-0040</u>	<u>N90278-43-0056</u>	<u>ASME SA193 Gr. B6</u>
		<u>ASME SA193 Gr. B6</u>
		<u>ASME SA193 Gr. B6</u>
		<u>ASME SA193 Gr. B6</u>

REVIEWED BY
.....
EBASCO VQA REP.

Attachment 2
Code Data Reports
(Page 2 of 6)

DOC. PR. 12/9/12
REV. 12 DE 14

	Serial No. or Notification	Material Specification Including Type or Grade
c. Spring	<u>NX3047-0001</u>	<u>ASTM A638-70 Gr. 660</u>
d. Bolting		
e. Other Parts such as Pilot Components		
Stud	<u>82039</u>	<u>ASME SA193 Gr. B7</u>
Nut	<u>2356</u>	<u>ASME SA194 Gr. 2H</u>

023281320

We certify that the statements made in this report are correct.

Date 5-9 19 78 Signed Crosby Valve & Gage Co. by [Signature]
Manufacturer

Certificate of Authorization No. 1878 expires September 30, 1980

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of MASS. and employed by Factory Mutual Systems, Norwood, Mass. have inspected the equipment described in this Data Report on 5/9 19 78 and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Section III.

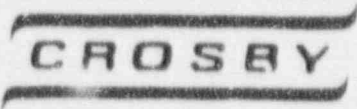
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss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

Date 5/11 19 78
[Signature] Commissioner Year-807
(Inspector) National Board, State, Province and No.:

*Arkwright-Boston Manufacturers Mutual Insurance Company - Mutual Boiler & Machinery Division.

REVISION
EBASCO VQA R.I.P.

Attachment 2
Code Data Reports
(Page 3 of 6)



CROSBY VALVE & GAGE COMPANY
WRENTHAM, MASS

FORM NV-1 FOR SAFETY AND SAFETY RELIEF VALVES
As required by the Provisions of the ASME Code Rules

QC-44C-1

DATA REPORT
Safety and Safety Relief Valves

1. Manufactured By: Crosby Valve & Gage Co., 43 Kendrick St., Wrentham, MA 02093
Name and Address

Model No. 30-4A-WR Order No. N25644 Contract Date 5/14/84 National Board No. --
Louisiana Power & Light Company

Manufactured For: 142 Delaronde Street, New Orleans, LA 70114 Order No. 113295
Name and Address

1. Owner: Waterford Steam Electric Station - Unit 3
Name and Address

1. Location of Plant: 1st, Louisiana

Spare for CH-145/2CH-R626A/B
2. Valve Identification: Serial No. N59356-00-0002 Drawing No. DS-C-59356 Rev. A

Type: Relief Orifice Size 0 Pipe Size -- Inlet 2 Outlet 3
Narrow Safety Relief Pilot Power Actuated Inch Inch Inch Inch

3. Set Pressure (PSIG): 600 550
Rated Temperature

Stamped Capacity: 175 GPM Water @ 70°F 10% Overpressure -- Blowdown (PSIG): 10% of S.P.

Hydrostatic Test (PSIG) Inlet: 900 Complete Valve 225

7. The design, design, construction and workmanship comply with ASME Code Section III

Code: 2 Edition: 1974 Addenda Date: Summer 1974 Case No. --

Details of Containing or Pressure Retaining Component:

a. Castings	Serial No. Identification	Material Specification including Type or Grade
Bowl	<u>N91369-33-0003</u>	<u>ASME SA351 Gr. CFB</u>
Pinnet	<u>N91371-33-0002</u>	<u>ASME SA351 Gr. CFB</u>
b. Bar Stock and Forgings		
Support Rods		
Nozzle	<u>N91370-34-0004</u>	<u>ASME SA479 Type 304</u>
Tie: <u>K57240-37-0010</u>	<u>N90634-40-0015</u>	<u>ASME SA479 Type 304</u>
Spring Washers	<u>N91025-89-2526</u> <u>N91025-87-2441</u>	<u>ASME SA479 Type 410</u>
Adjusting Bolt	<u>N88793-39-0181</u>	<u>ASME SA193 Gr. B6</u>
Support Point	<u>N90278-55-0093</u>	<u>ASME SA193 Gr. B6</u>
<u>K57232-40-0066</u>		

MRIR 6290-84



Attachment 2
Code Data Reports
(Page 4 of 6)

	Serial Number Identification	Marking Specification Including Type of Grade
Equipment	<u>NX3047-0005</u>	<u>ASTM A618 Gr. A60</u>
Inspection		
Other Parts such as Flange Components		
Bonnet Stud	<u>82039</u>	<u>ASME SA193 Gr. B7</u>
Bonnet Nut	<u>2356</u>	<u>ASME SA194 Gr. 2H</u>

All markings and the test results made in this report are correct.

Date 4/2 1984 Signed Crosby Valve & Gage Co. By R. H. Moore
Manufacturer

Code No. 1878 Expires September 30, 1986

CERTIFICATE OF SHIP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Mass. and employed by Arkwright-Boston Manufacturers Mutual Insurance Company have inspected the equipment described in this Data Report on April 2, 1984 and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 April 2, 1984 Factory Mutual System
Donald G. Chinn Commissioner CLASS 1090
National Board State-Province Code

Attachment 2
Code Data Reports
(Page 5 of 6)

CROSBY	CROSBY VALVE & GAGE COMPANY WRENTHAM, MASS	QC-392 Form N-2	
FORM N-2 NON NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL NUCLEAR PARTS AND APPURTENANCES* As Required by the Provisions of the ASME Code, Section III, Division 1 Not To Exceed One Day's Production Pg 1 of 1			
1. Manufactured and certified by <u>Crosby Valve & Gage Co., 43 Kendrick St., Wrentham, MA 02093</u> <small>part and address of certificate holder</small>			
2. Manufactured for <u>Louisiana Power & Light Co., Killona, LA</u> <small>part and address of purchaser</small>			
3. Location of installation <u>Waterford 3 Nuclear, Taft, LA</u> <small>part and address</small>			
4. Type <u>DS-C-59356</u> <u>ASME SA193 GR. B6</u> <u>130,000</u> <u>--</u> <u>1988</u> <small>drawing no. spec. app. no. nominal strength class year built</small>			
5. ASME Code Section III <u>1974</u> <u>Summer 1974</u> <u>2</u> <u>--</u> <small>sub-section sub-section stress class code no. 1</small>			
6. Fabricated in accordance with Conel Spec. (Div. 2 only) <u>--</u> <u>--</u> <u>--</u> <small>no. 1 Revision Date</small>			
7. Remarks <u>N/A</u>			
8. Nom. thickness (in) <u>--</u> Min. design thickness (in) <u>--</u> Dia. ID (R & in) <u>--</u> Length overall (R & in) <u>--</u>			
9. When applicable Certificate Holders' data reports are attached for each item of this report			
Part or Appurtenance Serial Number	National Board No. in Numerical Order	Part or Appurtenance Serial Number	National Board Number in Numerical Order
(1) <u>K57232-01-0073</u>		(26)	
(2) <u>K57232-01-0074</u>		(27)	
(3) <u>K57232-01-0075</u>		(28)	
(4)		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	
10. Design pressure <u>--</u> psi Temp <u>--</u> °F Hydro test pressure <u>--</u> psi at temp <u>--</u> °F <small>when applicable</small>			

Attachment 2
Code Data Reports
(Page 6 of 6)

Form N-2

FORM N-2 (Rev. 6)

Job Number: K57232-01-0073
K57232-01-0074
K57232-01-0075

CERTIFICATE OF DESIGN	
Design specifications certified by <u>Charles S. Rogovin</u> <small>(owner representative)</small>	P. E. state <u>MA</u> Reg. no. <u>11597</u>
Design report certified by _____ <small>(owner representative)</small>	P. E. state _____ Reg. no. _____
CERTIFICATE OF SHOP COMPLIANCE	
We certify that the statements made in this report are correct and that this (these) <u>Spindle Assy.</u> conform to the rules of construction of the ASME Code, Section III	
NPT Certificate of Authorization no. <u>N-1877</u>	Expires <u>9/30/89</u>
Date <u>8-12-88</u> Name <u>Crosby Valve & Cage Co.</u> <small>(shop representative)</small>	Signed <u>[Signature]</u> <small>(shop representative)</small>
CERTIFICATE OF SHOP INSPECTION	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of <u>Massachusetts</u> and employed by <u>Arkwright Mutual Insurance Company</u> of <u>Norwood, MA</u> , have inspected these items described in this data report on <u>2-12-88</u> and state that to the best of my knowledge and belief the Certificate Holder has fabricated these parts or appliances in accordance with the ASME Code, Section III. Each part noted has been authorized for stamping on the date shown above.	
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.	
Date <u>2-12-88</u> Signed <u>[Signature]</u> <small>(Inspector)</small>	Commission no. <u>MA#1287</u> <small>(Not to be endorsed until 10:00 a.m. and 10:00 p.m.)</small>

Factory Mutual System

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70056 WA 01056121, CI 268643
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CS (Containment Spray)

5. (a) Applicable Construction Code Sec III NC, 1971 Edition, S73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CS-125A	WKM Valve Co. ACF Ind. Inc.	500309	1747	Valve 2CS-F305A	1979	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 285 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Dickey Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S IS
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

The containment spray header A isolation valve, CS-125A, leaked by its seat under normal system pressure. The valve was disassembled and inspected. Extensive galling was found on the seats and gate. The seats and gate were replaced with spares from the warehouse.

Upon return to service, the valve was operationally tested in accordance with the Inservice Test Plan and found acceptable. A visual leak test was performed at normal operating pressure. The VT-2 examination results were satisfactory.

The certification for the replacement seats and gate are filed in the following records:

PO	L-22660	MRIR 4598-83
	L-22660	MRIR 4724-83

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 1
Address
2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01031747, WA 01048696, WA 01072952
Address Repair Organization P.O. No., Job No
3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address
4. Identification of System CVC (Chemical and Volume Control) & SI (Safety Injection)
5. (a) Applicable Construction Code Sec III NC 1974 Edition, S76 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CVC Pump 1A	Gaulin Corp.	611848-3	NA	Charging Pump 1A	1974	Partial Replacement	No
CVC-126	Crosby	N59357-00-0002	NA	Valve 2CH-R629A/B	1978	Partial Replacement	No
SI-107A	TRW Mission	D3403	NA	Valve 2SI-V107A	1977	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)
8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2324/200/60 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None
Certificate of Authorization No. Not Applicable Expiration Date Not Applicable
Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

The original piping specification, LOU-1564.100, required ASTM A-193 Grade B8 bolts with ASTM A-194 Grade 8 nuts. During plant operation, leakage at flanged connections became a contamination problem for piping containing borated water. The cause of the leakage was determined to be inadequate compression of the spiral wound gaskets. An alternate bolting material allowed by the piping specification is ASTM A-564 Grade 630 HT1100 bolts with ASTM A-194 Grade 6 nuts. This material is substantially stronger and allows adequate compression of the spiral wound gaskets. A Spare Parts Equivalency Evaluation Report, SPEER 88-E-004, was implemented to track the drawing updates resulting from these bolting changes. Leaking flanges are evaluated on a case by case basis for incorporation into this program. A visual examination (VT-2) at operating temperature and pressure was performed on the flange bolting after replacement.

The material certifications for the replacement bolts and nuts are filed in the following records:

<u>WA Number</u>	<u>Component ID</u>	<u>Bolt PO No./MRIR No.</u>	<u>Nut PO No./MRIR No.</u>
01031747	CVC Pump 1A	WP015765, M01750	WP3-12165, 83-02654 (TR-5983, 0653-88)
01048696	CVC-126	W-12708, 0123-87	L-47690, 6693-84 L-47690, 6721-84 WP034667, M09870
01072962	SI-107A	WP028878, M02386 WP031555, M02618	WP031314, M08574

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address
2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01058269, CI 267714
Address Repair Organization P.O. No., Job No
3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address
4. Identification of System SI (Safety Injection)
5. (a) Applicable Construction Code Sec III NB, 1971 Edition, W72 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SI-512B	Anchor-Darling	E-6373-1-4	NA	Valve 1SI-V2509	1979	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)
8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Kelley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

Dwight M. Kelley Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, a leak developed at the hinge pin cover of check valve, SI-512B, from the HPSI header B to reactor coolant loop 2 hot leg. The cover bolts were retorqued in an effort to stop the leak. As a result, the studs were over torqued past the yield point of the material.

The hinge pin cover studs and nuts were replaced during Refuel 4 with spares from the warehouse. Prior to installation, the replacement studs and nuts were visually examined using the VT-1 method and found acceptable. Upon return to service, the studs and nuts were visually examined. The VT-2 examination results were acceptable.

The certifications for the replacement studs and nuts are filed in the following records:

PO	WP033812	MIR M03786
	WP039160	MIR M05280

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
- 1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 15
Address
2. Plant Waterford Unit 3
Name
- Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01059571, CI 267525
Address Repair Organization P.O. No., Job No
3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address
4. Identification of System RC (Reactor Coolant)
5. (a) Applicable Construction Code Sec III NB 1974 Edition, 576 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through WB1 Addenda
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RC EHTR72A2	Combustion Engineering	20F	NA	Pressurizer Heater	1987	Replaced	No
RC EHTR72A2	Combustion Engineering	6	NA	Pressurizer Heater	1983	Partial Replacement	No
RC EHTR72A3	Combustion Engineering	18F	NA	Pressurizer Heater	1987	Replaced	No
RC EHTR72A3	Combustion Engineering	25F	NA	Pressurizer Heater	1987	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (11 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Duff M. Galley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Louisiana and employed by Awkwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's Report. Futhermore, 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.

Ray E. Buff Commissions 7822 N B I S IS
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner: Entergy Operations, Inc. Date July 1, 1991
1340 Echelon Parkway, Jackson MS 39213 Sheer 3 of 15
2. Plant: Waterford 3 WA 61059571 CI 267525
Hwy. 18, P.O. Box B, Killona, LA 70066
3. Work Performed by: Entergy Operations, Inc. Type Code Stamp: None
Hwy. 18, P.O. Box B, Killona, LA 70066 Authorization No.: NA
Expiration Date: NA
4. Identification of System: RC (Reactor Coolant)
5. (a) Construction Code: ASME Sec III NB 1974 Edition S76 Addenda
(b) Repair/Replacement Code: ASME Sec XI 1980 Edition W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manuf. Serial Number	Other Ident- fication	Year Built	Repaired, Replaced, Replacement	ASME Code Stamp
PC EHTR73B1	Combustion Engineering	20F	Pressurizer Heater	1983	Replaced	No
RC EHTR73B1	Combustion Engineering	1955	Pressurizer Heater	1991	Replacement	No
RC EHTR73B4	Combustion Engineering	24	Pressurizer Heater	1983	Replaced	No
RC EHTR73B4	Combustion Engineering	1964	Pressurizer Heater	1991	Replacement	No
RC EHTR76B1	Combustion Engineering	16	Pressurizer Heater	1983	Replaced	No
RC EHTR76B1	Combustion Engineering	33	Pressurizer Heater	1983	Replacement	No
RC EHTR76B2	Combustion Engineering	4	Pressurizer Heater	1983	Replaced	No
RC EHTR76B2	Combustion Engineering	32	Pressurizer Heater	1983	Replacement	No
RC EHTR76B3	Combustion Engineering	17F	Pressurizer Heater	1987	Replaced	No
RC EHTR76B3	Combustion Engineering	31	Pressurizer Heater	1983	Replacement	No

Attachment 1
Description of Work
(Page 1 of 1)

During plant operating cycle 4, seven (7) pressurizer heaters were found with grounded elements. These heaters were removed and replaced with spare heater assemblies from stores. The socket welds holding the heaters in the pressurizer were examined using the dye penetrant method (PT) and found acceptable. The welds were exempt from testing in accordance with IWA-4400 (b) (5); however, a pressure test (VT-2) was performed at operating temperature and pressure.

Copies of Code Data Reports for the replacement heaters are presented in Attachment 2. Material certifications for the heaters are filed in the following record:

PO	L-14076	MRIR 2393-83 (SN 31,32,33)
	L-27018	MRIR 5822-84 (SN 6)
	L-97732	MRIR 9068-87 (SN 25F)
	WPO19852	MIR M04276 (SN 1955, 1964)

Attachment 2
Code Data Reports
(Page 1 of 11)

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES

As required by the Provisions of the ASME Code Rules

Sheet 1 of 2

1. (a) Manufactured by Combustion Engineering, Inc. -1, **PSG, 911 W. Main St., Chatta., TN 37402
(Name and address of Manufacturer of part)
- (b) Manufactured for SAME AS ABOVE (Replacement Parts for Pressurizer-C-E Cont. 74370)
(Name and address of Manufacturer of completed vessel component)
2. Identification-Manufacturer's Serial No. of Part See Supplemental Sheet No. 1 Bd. No. N/A
- (a) Constructed According to Drawing No. A-246-908-0 Drawing Prepared by Combustion Engineering, Inc.
- (b) Description of Part Inspected PRESSURIZER HEATER
- (c) Applicable ASME Code Section III, Edition 1971, Addenda date 8-71, Case No. 1588 Class 1
3. Remarks: Above parts to be used in a Class 1 nuclear pressurizer. Stamping in accordance with Code Case No. 1588. This data report consists of two (2) sheets. Parts have been hydro tested to 3125 psig. **Power Systems Group
***The Hartford Steam Boiler Inspection and Insurance Co.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.
(The applicable Design Specifications and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date MAY 1, 19 87 Signed Combustion Engineering, Inc. By R. A. Hillis
(Manufacturer) R. A. Hillis

Certificate of Authorization Expires JANUARY 2, 1990 Certificate of Authorization No. N-1960

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file as N/A

Stress analysis report on file as N/A

Design specifications certified by N/A Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by N/A Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP 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 Tennessee and employed by **The H.S.B.I. & I. CO.
of Hartford, Connecticut have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on May 1, 19 87, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial 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 May 1, 19 87

R. E. Pits Commission MB 7972 TW 1041
Inspector's Signature R. E. Pits National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1-3 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3, "Remarks".

Attachment 2
Code Data Reports
(Page 2 of 11)

FORM N-2 (back)

Items 4-6 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

Sheath SA-213
1. Shell: Material TP 316 T.S. 75,000 Thickness 1.06 Corrosion Allowance 0 in. Dia. 1.245 in. Length 8 ft. 0 in.
(Kind & Spec. No.) (Min. of Range Specified)

2. Seams: Long Formless H.T.¹ E.T. Efficiency %

End Plug Circ N/A H.T.¹ E.T. No. of Courses

6. Heads: (a) Material SA-479, TP316 T.S. 75,000 (b) Material N/A T.S. N/A

Location (Top, bottom, ends)	Thickness	Crown Radius	Knob Radius	Elliptical Ratio	Central Apex Angle	Noncircular Radius	Flat Diameter	Side to Press. (Conv. or Conc.)
(a) One End	.500"	Flat	N/A	N/A	N/A	N/A	1.244	N/A
(b) N/A								

If removable, bolts used N/A (Material, Spec. No., T.S., Size, Number) Other fastening (Describe or attach sketch)

N/A 7. Jacket Cleaners: (Describe as pipe and rods, bar, etc. If bar give diameters, length, or weight or sketch)

N/A 8. Design pressure² psi at °F Drop Weight _____ lb
Charge Impact _____ in-lb
at temp. of _____ °F

N/A Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to approval) (Welded, Bolted)

Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ in. Attachment _____
Number _____ Type _____
(St. or U)

N/A Items 11-14 incl. to be completed for inner chambers of jacketed vessels, or chambers of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T.¹ E.T. Efficiency %

Circ _____ H.T.¹ E.T. No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knob Radius	Elliptical Ratio	Central Apex Angle	Noncircular Radius	Flat Diameter	Side to Press. (Conv. or Conc.)
(a) Top, bottom, end								
(b) Chamber								

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening (Describe or attach sketch)

14. Design pressure² psi at °F Drop Weight _____ lb
Charge Impact _____ in-lb
at temp. of _____ °F

N/A Items below to be completed for all vessels where applicable.

15. Safety Valve Outlet: Number _____ Size _____ Location _____

16. Nozzles

Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached

17. Inspection Manholes, No. _____ Size _____ Location _____
Openings: Handholes, No. _____ Size _____ Location _____
Threads, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Legs _____ (Number) _____ Other _____ (Describe) Attached _____ (Flange & Bolt)

¹ If Pressure Heat-Treated.
² List other internal or external pressure and calculated temperatures when applicable.

Attachment 2
Code Data Reports
(Page 3 of 11)

SUPPLEMENT TO
N-2 MANUFACTURER'S DATA REPORT FOR NUCLEAR PART AND
APPURTENANCES

Contract 74370

Sheet 2 of 2

1. (a) Manufactured by Combustion Engineering, Inc.-2 **POB 911 W. Main St.,
Chattanooga, TN. 37403
- (b) Manufactured for Same as above (Replacement Parts for PRESSURIZED, C-E Contract 74370)
2. Identification - Manufacturer's Serial No. of Part See below
National Board No. N/A
- (a) Constructed According to Drawing No. A-246-908-0 Drawing Prepared by Combustion
Engineering, Inc.
- (b) Description of Part Inspected PRESSURIZED VESTERS
- (c) Applicable ASME Code: Section III, Edition 1971 Addenda date 8-71
- Case No. 1588 Class 1
1820

3. Remarks:

Serial Numbers of Parts:

17F
18F
19F
20F
25F
29F

Attachment 2
Code Data Reports
(Page 4 of 11)

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES* 1
As required by the Provisions of the ASME Code Rules Sheet 1 of 2

1. (a) Manufactured by Combustion Engineering, Inc. - 2, 4450, 911 W. Main St., Chatta., TN 37402
(Name and address of Manufacturer of part)
(b) Manufactured for "Same as above" (Replacement Parts for Pressurizer-CE Contract 74370)
(Name and address of Manufacturer of completed nuclear installation)
2. Identification-Manufacturer's Serial No. of Part See Supplemental Sheets Serial No. N/A
(a) Constructed According to Drawing No. A-246-785-0 Drawing Prepared by Combustion Engineering, Inc.
(b) Description of Part Inspected Pressurizer Heaters
(c) Applicable ASME Code Section III, Edition 1971, Addenda date 5-71, Case No. 1588
3. Remarks Above parts to be used in a Class 1 Nuclear Pressurizer, stamped in accordance with Code Case No. 1588. This data report consists of two (2) sheets. Parts to be hydro tested in the field.

Power Systems Group *The Hartford Steam Boiler Inspection and Insurance Company

To certify that the statements made in this report are correct and that related part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.
(The applicable Design Specification and Service Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Service Report if the appurtenance is not included in the companion Design Specification and Service Report.)

Date July 6 1983 signed Combustion Engineering, Inc. By W. A. Stone, Jr.
(Typed name) (Typed name)

Certificate of Authorization Expires JANUARY 9, 1984 Certificate of Authorization No. B-1980

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)			
Design information on file at	<u>N/A</u>		
Stress analysis report on file at	<u>N/A</u>		
Design specifications certified by	<u>N/A</u>	Prof. Eng. Sign.	<u>Eng. No.</u>
Stress analysis report certified by	<u>N/A</u>	Prof. Eng. Sign.	<u>Eng. No.</u>

CERTIFICATE OF SHOP 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 <u>Tennessee</u> and employed by <u>The H.S.B.I. Co.</u>	
of <u>Hartford, Connecticut</u> have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on <u>July 6</u> 19 <u>83</u> , and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.	
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial 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 <u>July 6</u> 19 <u>83</u>	<u>R. E. Ritz</u> Commission No. <u>TN 1041 NB 7972</u>
<u>R. E. Ritz</u>	National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided all data is 2 1/2" x 11". (If information is added and is data not in part is included on each sheet, and (2) each sheet is numbered and number of sheets is recorded in item 2, "Remarks".)

Attachment 2
Code Data Reports
(Page 5 of 11)

FORM N-6 (back)

Items 1 and 2 to be completed for single or all vessels, jackets of jackets or shells or shells of heat exchangers.

570274 SR#213
A. Shell Material TP 316L 75.000 Thickness 1.245
B. Shell Spacing 1.000 (100% of Shell Spacing)

1. Shell Long Seamless H.T. N/A R.T. N/A Efficiency N/A

End Plug
6. Head (a) Material SA479 TP316 T.S. 75.000 (b) Material N/A T.S. N/A
7. Head (c) Top, bottom, neck (d) Crowned
8. Head (e) Crowned
9. Head (f) Crowned
10. Head (g) Crowned
11. Head (h) Crowned
12. Head (i) Crowned
13. Head (j) Crowned
14. Head (k) Crowned
15. Head (l) Crowned
16. Head (m) Crowned
17. Head (n) Crowned
18. Head (o) Crowned
19. Head (p) Crowned
20. Head (q) Crowned
21. Head (r) Crowned
22. Head (s) Crowned
23. Head (t) Crowned
24. Head (u) Crowned
25. Head (v) Crowned
26. Head (w) Crowned
27. Head (x) Crowned
28. Head (y) Crowned
29. Head (z) Crowned

15. Safety Valve Outlet Nozzle Size Location

16. Nozzle
Pressure Rating, Outlet, Inlet
Function
Spec. or Std.
Type
Material
Thickness
Development Standard
New Standard

17. Inspection Holes, No. Size Location
Opening Holes, No. Size Location
Threads, No. Size Location

18. Support Shell Legs
Type of Leg
Material
Location
Other
Attachment
Standard
Code & Size

Attachment 2
Code Data Reports
(Page 7 of 11)

Corrected Copy
*** See Back

FORM N-2 N OR NRT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES*

As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

Pg. 1 of 1

1. Manufactured and certified by Power, Newington Operations, 55 Old Dover Rd, Newington, NH 03851
ABB Combustion Engineering, Inc.

2. Manufactured for 1000 Prospect Hill Road, Windsor, CT 06095-0500
Interco Operations, Inc., 525 Nuclear Hwy 18, Taft, LA 70066

3. Location of installation Interco Waterford-3 525 Nuclear Hwy 18, Taft, LA 70066

4. Type Rev. 03 Item 1 SA-4791316 Item 2 SA-2137378 End Plug Sheath 1991

5. ASME Code Section III 1971 Summer 1971 1 None

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A

7. Remarks ABB CE Newington was directed to follow the 1986 Edition, 86 Addenda for welding and WDA procedures.

* Item 1 .500 .485 .894 Max. O.D. .500
Item 2 .180 .180 .885 100.625/96.625

8. Nom. thickness (in.) _____ Min. design thickness (in.) _____ Dia. (D) (in.) _____ Length overall (L) (in.) _____

9. When applicable, Certificate Holders' data reports are attached for each item of this report.

Part or Appurtenance Serial Number MFG. S/N	National Spec. No. in Numerical Order
(1) *** 1944	None
(2) 1945	
(3) 1946	
(4) 1947	
(5) 1948	
(6) 1949	
(7) 1950	
(8) 1951	
(9) 1952	
(10) 1953	
(11) 1954	
(12) 1955	
(13) 1956	
(14) 1957	
(15) 1958	
(16) 1959	
(17) 1960	
(18) 1961	
(19) 1962	
(20) 1963	
(21) 1964	
(22) 1965	
(23) 1966	
(24) 1967	
(25)	

Part or Appurtenance Serial Number	National Spec. No. in Numerical Order
(26)	
(27)	
(28)	
(29)	
(30)	
(31)	
(32)	
(33)	
(34)	
(35)	
(36)	
(37)	
(38)	
(39)	
(40)	
(41)	
(42)	
(43)	
(44)	
(45)	
(46)	
(47)	
(48)	
(49)	
(50)	

10. Design pressure 2500 psi Temp. 775 °F Hydro. test pressure 3125 at temp 78 °F

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) such is not in conflict with the information in this report, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Attachment 2
Code Data Reports
(Page 8 of 11)

FORM N-2 (back)

CERTIFICATE OF DESIGN			
Design identifications certified by _____	**	P.E. title _____	Reg. no. _____
(to be filled in by the designer)	**	**	**
Design report certified by _____	**	P.E. title _____	Reg. no. _____
(to be filled in by the designer)	**	**	**
CERTIFICATE OF SHOP COMPLIANCE			
We certify that the statements made in this report are correct and that this design _____ <u>Pressureizer Heaters</u> _____			
conforms to the rules of construction of the ASME Code, Section III.			
NPT Certificate of Authorization no. _____	N-2041	Expires _____	February 20, 1993
Date <u>2-14-91</u>	Name <u>ABB Combustion Engineering</u>	Signed _____	<u>G.P. Dopp</u>
(to be filled in by the designer)	(to be filled in by the designer)	(to be filled in by the designer)	(to be filled in by the designer)
CERTIFICATE OF SHOP INSPECTION			
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of _____ <u>NH</u> _____ and employed by _____ <u>H.B.I. & I. Co.</u> _____			
of _____ <u>HARDEN, CT</u> _____ have inspected these items described in this data report on _____ <u>2-14-91</u> _____ and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.			
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.			
Date <u>2-14-91</u>	Signed _____	Commission _____	N.H. 350
(to be filled in by the inspector)	(to be filled in by the inspector)	(to be filled in by the inspector)	(to be filled in by the inspector)
Robert A. Smith			

** responsibility of others.

THE SCOPE OF THIS N-2 DATA REPORT DOES NOT INCLUDE 7 INCHES FROM THE ELECTRODE END. (THIS IS THE NON-CODE BOUNDARY AREA).

*** Corrected Mfg. Serial Numbers.

G.P. Dopp Q.A. Engineer 3/27/91

Robert A. Smith A.N.I. 3/27/91
N.H. 350
3/27/91

QA
3-27-91

Attachment 2
Code Data Reports
(Page 9 of 11)

FORM N-1 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provisions of the ASME Code Rules Sheet 1 of 2

1. Part Manufactured by Combustion Engineering, Inc. - 2, **PSG, 911 W. Main St., Chatta, TN 37402
(Name and address of Manufacturer of part)
(M) Manufactured for SAME AS ABOVE (Replacement Parts for Pressurizer E-E Contract 74370)
(Name and address of Manufacturer of equipment or installation)
2. Identification-Manufacturer's Serial No. of Part See Supplemental SHEET No. 1 of 2
(a) Constructed According to Drawing No. A-246-788-0 Drawing Prepared by Combustion Engineering, Inc.
(M) Description of Part Inspected PRESSURIZER HEATERS
(c) Applicable ASME Code Section III, Edition 1971, Addenda date 5-71, Case No. 1588

3. Remarks Above parts to be used in a Class 1 Nuclear Pressurizer, stamped in accordance with Code Case No. 1588. This data report consists of two (2) sheets. Parts to be hydro tested in the field.

Power Systems Group *The Hartford Steam Boiler Inspection and Insurance Company

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.
(The applicable Design Specifications and Service Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Service Report if the appurtenance is not applicable to the equipment Design Specifications and Service Report.)

Date December 14, 19 83 Signed Combustion Engineering, Inc. By W. A. Stone, Jr.
(Manufacturer) (Inspector)
Certificate of Authorization Expires January 9, 1984 Certificate of Authorization No. N-1580

CERTIFICATION OF DESIGN FOR APPURTENANCE (where applicable)			
Design information on file as	<u>N/A</u>		
Stress analysis report on file as	<u>N/A</u>		
Design specifications certified by	<u>N/A</u>	Prof. Eng. State	Eng. No.
Stress analysis report certified by	<u>N/A</u>	Prof. Eng. State	Eng. No.

CERTIFICATE OF SHOP 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 <u>Tennessee</u> and employed by <u>The H.S.B.I. Co.</u>	
of <u>Hartford, Connecticut</u> have inspected the part of a pressure vessel described in this Manufacturer's Part Data Report on <u>December 14, 19 83</u> and agree that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.	
By signing this certificate, neither the Inspector nor the Manufacturer makes any warranty, express or implied, concerning the part described in this Manufacturer's Part Data Report. Furthermore, neither the Inspector nor the Manufacturer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising here or connected with this inspection.	
Date <u>December 14, 19 83</u>	Commission <u>TN 1041 NB 7972</u>
<u>R. E. Flitz</u> Inspector's Signature	<u>R/E. Flitz</u> Manufacturer's Signature

*Supplemental sheets in form of lists, sketches or drawings may be provided (1) size 14" x 17", (2) information in sheet 1 of 2 shall be repeated on each sheet, and (3) each sheet is numbered and number of sheets is recorded on sheet 1, "Remarks".

Attachment 2
Code Data Reports
(Page 10 of 11)

FORM N-8 (back)

Items 1-10 and 12-14 to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

1. Shell Material SA-516 TP 316 T.S. 75,000 Corrosion Allowance 0 in. Dia. 1.250 in. Length 8 ft. 6 in.

2. Shell Long. Seamless H.T. _____ S.T. _____ Efficiency _____ %

End Plug Class N/A H.T. _____ S.T. _____ No. of Courses _____

3. Heads (a) Material SA-516 TP 316 T.S. 75,000 (b) Material N/A T.S. N/A

Location	Thickness	Stress	Stress Ratio	Efficiency	Corrosion Allowance	Manufacturing Factor	FS	FS to Stress Ratio
(a) One End	.500"	Flat	N/A	N/A	N/A	N/A	100%	N/A
(b) N/A								

If removable, bolting used: _____ Other fastening: _____

4. Joints Classed _____

5. Design pressure _____ psi or _____ "H₂O

6. Items 7 and 8 to be completed for tube bundles.

7. Tube Sheet Material _____ Dia. _____ Thickness _____ in. Attachment _____

8. Tubes Material _____ O.D. _____ in. Thickness _____ in. No. _____ Type _____

9. Items 11-14 to be completed for inner diameter of jacketed vessels, or shells of heat exchangers.

10. Shell Material _____ T.S. _____ Corrosion Allowance _____ in. Dia. _____ in. Length _____ ft. 6 in.

11. Shell Long. _____ H.T. _____ S.T. _____ Efficiency _____ %

12. Heads (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Stress	Stress Ratio	Efficiency	Corrosion Allowance	Manufacturing Factor	FS	FS to Stress Ratio
(a) Top, bottom, side								
(b) Closed								

If removable, bolting used: _____ Other fastening: _____

13. Design pressure _____ psi or _____ "H₂O

14. Items 15-17 to be completed for all vessels where applicable.

15. Safety Valve Outlet: Number _____ Size _____ Location _____

16. Nozzles

Process (Steam, Shell, Jacket)	Number	Size or Dia.	Type	Material	Thickness	Attachment Method	FS

17. Inspection Handhole, No. _____ Size _____ Location _____
Opening Handhole, No. _____ Size _____ Location _____
Threaded, No. _____ Size _____ Location _____

18. Support Stair _____ Legs _____ Other _____ Attached _____

Attachment 2
Code Data Reports
(Page 11 of 11)

Contract: W-2 MANUFACTURER(S) DATA REMOVE FOR NUCLEAR PARTS AND APPURTEANCES

- 1. (a) Manufactured by Combustion Engineering, Inc., **RSCMO, 911 W. Main St., Chattanooga, TN. 37402
- (b) Manufactured for SAME AS ABOVE (Replacement Parts for Pressurizer-C Contract 74370)

2. Identification - Manufacturer's Serial No. of Part See below
Mat'l. Id. No. N/A

(a) Constructed According to Drawing No. A-242-785-0 Drawing Prepared by Combustion Engineering, Inc.

(b) Description of Part Inspected Pressurizer Heaters

(c) Applicable ASME Code: Section III, Edition 1971 Addenda date 1971
Code No. 1500 Class 1

Remarks:

Serial Numbers of Parts:
31, 32, 33

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01072955, RT 019051
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CVC (Chemical and Volume Control)

5. (a) Applicable Construction Code Sec III NC 1971 Edition, W73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CVC-194AB	Velan	169-1	NA	Valve 2CH-V1502-2	1975	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2210 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this repair conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

Dugan M. Gilley
Inspector's Signature

Commissions 7822 N B I S IS
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During disassembly of charging pump AB discharge header check valve, CVC-194AB, for inspection, the bonnet galled in the body threads. The outside surface of the bonnet was gouged during the removal process.

The threaded surfaces were cleaned up using taps and die nuts. The external surface of the bonnet was ground smooth as preparation for seal welding at reassembly.

The ground area of the bonnet was examined using the dye penetrant method (PT) and found acceptable prior to seal welding. A dye penetrant (PT) examination was performed on the seal weld with acceptable results.

The repair is exempt from hydrostatic testing per IWA-4400 (b) (3). The valve was visually examined for leakage at operating pressure. The VT-2 examination results were satisfactory.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 5
Address
2. Plant Waterford Unit 3
Name
Hwy 18, P.O. Box B, Killona, LA 70066 WA 01076000 & WA 01076278
Address Repair Organization P.O. No., Job No
3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address
4. Identification of System SI (Safety Injection)
5. (a) Applicable Construction Code Sec III NC 1971 Edition, W73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SI-108A	TRW Mission	D3642	NA	Valve 2SI-V331A	1977	Replaced	Yes
SI-108A	TRW Mission	D3643	NA	Valve 2SI-V331A	1977	Replacement	No
SI-108B	TRW Mission	D3643	NA	Valve 2SI-V332B	1977	Replaced	Yes
SI-108B	TRW Mission	D3642	NA	Valve 2SI-V332B	1977	Replacement	No

7. Description of Work See Attachment 1 (1 Page)
8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 415 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (2 Pages) for Code Data Report.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI, repair or replacement:

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Inspector's Signature Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During disassembly inspection of the low pressure safety injection (LPSI) pump A suction header check valve, SI-108A, it was discovered that the Buna-N elastomeric seats in the valve body had degraded. Based on the seat degradation in SI-108A, the LPSI pump B suction header check valve, SI-108B, was also inspected. Seat degradation was also found in SI-108B. The Buna-N (nitrile) seats were replaced with ethylene propylene (EPDM) seats.

Inspection of the disc plates from SI-108B revealed a 0.005 inch deep scratch across the seating surface. While removing the scratch, a 0.125 inch deep half moon shaped groove was cut in the center of the disc. The groove was machined an additional 0.010 inches to remove any scratches as preparation for weld repair.

The prepared area was examined using the dye penetrant method and found acceptable prior to weld repair. After weld repair, the surface was machined to a flatness of 0.002 inches. A final dye penetrant examination was performed on the machined surface. The results were acceptable.

Due to refueling outage scheduling concerns, a disc plate from SI-108A was installed in the SI-108B valve. The original SI-108B valve was then installed in the SI-108A location. The repaired disc plate from the original SI-108B valve was installed in the original SI-108A. The original SI-108A valve was then installed in the SI-108B location.

Upon return to service, a visual leak test was performed on the valves. The VT-2 examination results for SI-108A were acceptable. Valve SI-108B had a small leak at the hinge pin retainer plug. This leak could not be corrected with the valve in service. The leak will be corrected under CI 275656.

A copy of the Code Data Report for the valves is presented in Attachment 2. The certifications for the valves are filed in the following record:

PO NY-403493 MRIR 77-05939

Attachment 2
Code Data Report
(Page 2 of 2)

FROM NOV. 18 1973

Mat. No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
(d) Other Parts			
17B14-5-4	ASME SA479 Type 316	Carpenter Tech	
17B14-6-4	ASME SA479 Type 316	Carpenter Tech	

5. Hydrostatic test 925 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1971.

Addressed Winter 1973 Code Case No. _____ Date 4-5-73

Signed T.H. Mission Mfg. Co. by M. B. Darity
(Manufacturer)

Our ASME Certificate of Authorization No. N-1137 is valid thru 6-30-78 and expires 6-30-78
(N) (M) (V) (Date)

CERTIFICATION OF DESIGN

Design information on file at Esasco Services, Inc., New York, New York

Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) Charles S. Rogovin
PE State Louisiana Reg. No. 11597

Stress analysis certified by (1) N/A
PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

REVIEWED BY

ESASCO QA REP.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by H.S.E.I. & I. Co. of Hartford, Connecticut have inspected the pump, or valve, described in this Data Report on 4-5-73 and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

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

Date 4-5-73 18 17
H. E. Camp (Inspector) Commission TEXAS 833
(List Ed. State Prov and No.)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Energy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 5
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01050437, CI 267222
Address Repair Organization P.O. No., Job No

3. Work Performed by Energy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CS (Containment Spray)

5. (a) Applicable Construction Code Sec III NC 1971 Edition, W73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CS-127A	Velan	803-2	NA	Valve 2CS-V601-2	1977	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 165 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9 Remarks See Attachment 2 (2 Pages) for Code Data Report.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Kelly, Maintenance Engineer, Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, the containment spray leader A drain valve, CS-127A, developed a seat leak. The valve was subsequently disassembled and inspected. Inspection results revealed a damaged disc, stem and backseat.

The disc was replaced with a spare from the warehouse. The stem and back seat were removed from a spare valve in the warehouse and used as replacements for the damaged stem and backseat.

Upon return to service, the valve was visually examined for leakage under WA CI 246435. The VT-2 examination results were acceptable.

A copy of the Code Data Report for the disc (serial no. 127-3) is presented in Attachment 2. The certifications for the replacement items are filed in the following records:

PO	NY-403506	MRIR 83-02158 (TR-4737	MRIR 6435-86)
	WP017535	MRIR 3409-90	

Attachment 2
Code Data Report
(Page 1 of 2)

FORM N-2 NPT CERTIFICATE HOLDER'S DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provisions of the ASME Code Rules, Section III, Div. 1

00143

1. (a) Manufactured by VELAN INC 215 LUGG, MOBILE (Name and address of NPT holder)
- (b) Manufactured for LOUISIANA POWER LIGHT # (Name and address of Certificate holder)
2. Identification-Certificate Holder's Serial No. of Part ELC 127-1234 NPT Bd. No. 1/4
- (a) Constructed According to Drawing No. PI-NUC-N-14 Drawing Prepared by VELAN INC
- (b) Description of Part Inspected 2" CONCRETE HOSE 1/2" DISC STEEL #6
- (c) Applicable ASME Code: Section III, Edition 1971, Addenda date 1978, Case No. 1/4 Class 1
3. Remarks SHARE PARTS FOR PI-71867 NIP ITEM 1, # A18625, DATE 1/30/77
STEELITE #6, VEITINELL NPT CODES V2201 & V2305, VELAN CO
#S A18621 & A18620.

We certify that the information made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III. (The applicable Design Specifications and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certificate Holder for appurtenance is responsible for furnishing a separate Design Specifications and Stress Report if the appurtenance is not included in the original Design Specifications and Stress Report.)

Date JUN 7 19 88 Signed VELAN INC By [Signature]
NPT Certificate Holder
Certificate of Authorization Expires MAY 3, 1989 Certificate of Authorization No. N 1784

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design intent data on file at _____

Stress analysis report on file at _____

Design special criteria certified by _____ Prof. Eng. Date _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. Date _____ Reg. No. _____

CERTIFICATE OF SHOP 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 Alabama and employed by [Signature] of [Signature] have inspected the part of a pressure vessel described in this Partial Data Report on June 14 19 88 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this commission, either the inspector or his employer makes any warranty, expressed or implied, concerning the part described in this Partial 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 June 14 19 88

[Signature] Inspector's Signature Commission (2) National Board, State, Province and No. _____

Attachment 2
Code Data Report
(Page 2 of 2)

FLUE GAS HEATER

Items 4-8 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell Material _____ T.S. _____ Nominal Thickness _____ Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Steel & Spec. No.) (Min. of Single Specimens)

5. Shell Lap _____ H.T.¹ _____ R.T. _____ Efficiency _____ %
Girth _____ H.T.¹ _____ R.T. _____ No. of Courses _____

6. Heads (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
Lap _____ Thickness _____ Crown Radius _____ Eccentric Radius _____ Elliptical Ratio _____ Conical Apex Angle _____ Hemispherical Radius _____ Flat Diameter _____ Side to Proc. (Conv. or Conc.)
(Top, bottom, code)
(a) _____
(b) _____
If removable, bolt used _____ Other fastening _____
(Material, Spec. No., T.S., Size, Number) (Describe or sketch details)

7. Jacket Closure: _____
(Describe as open end or blind, bar, etc. If bar give dimensions, if bolted, describe or sketch)

8. Design pressure² _____ psi at _____ °F
Drop Weight _____
Charpy Impact _____ lb-ft
or temp. of _____ °F

Items 9 and 10 to be completed for tube sections

9. Tube Sheet Stationary, Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Steel & Spec. No.) (Subject to pressure) (Welded, Bolted)

10. Tube Material _____ O.D. _____ in. Thickness _____ in. Attachment _____
Number _____ Type _____
(W. or V)

Items 11-14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell Material _____ T.S. _____ Nominal Thickness _____ Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Steel & Spec. No.) (Min. of Single Specimens)

12. Shell Lap _____ H.T.¹ _____ R.T. _____ Efficiency _____ %
Girth _____ H.T.¹ _____ R.T. _____ No. of Courses _____

13. Heads (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
Lap _____ Thickness _____ Crown Radius _____ Eccentric Radius _____ Elliptical Ratio _____ Conical Apex Angle _____ Hemispherical Radius _____ Flat Diameter _____ Side to Proc. (Conv. or Conc.)
(a) Top, bottom, code _____
(b) Channel _____
If removable, bolt used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or sketch details)

14. Design pressure² _____ psi at _____ °F
Drop Weight _____
Charpy Impact _____ lb-ft
or temp. of _____ °F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlet Number _____ Size _____ Location _____

16. Headed

Purpose (Dist., Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reference Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Hatches, No. _____ Size _____ Location _____
Openings Hatches, No. _____ Size _____ Location _____
Threshold, No. _____ Size _____ Location _____

18. Supports Bolt _____ Legs _____ Other _____ Attached _____
(Vee or flat) (Number) (Number) (Number) (Plate & Rivet)

¹ If Processed Heat-Treated.
² Use other material or elevated pressure with elevated temperature when applicable.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01071658 & WA 01074741
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System SG (Steam Generator)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, S71 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SG No. 1	Combustion Engineering	74270-1	22156	Steam Generator	1975	Partial Replacement	No
SG No. 1	Combustion Engineering	74270-1	22156	Steam Generator	1975	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 900 & 2250 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

repair & replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Ingram Hilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Akwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

While disassembling the handhole cover for steam generator no. 1 secondary side inspection, two studs were damaged. The studs were replaced with spares from the warehouse.

During removal of the steam generator no. 1 hot leg manway, one stud had to be cut off. The stud was drilled out and a threaded insert was installed to allow use of the original size stud.

The replacements were visually examined at normal operating pressure. The VT-2 examination results were acceptable.

The certifications for the replacements are filed in the following records:

PO	L-31976	MRIR 5472-84
	TR-8847	MRIR 4367-91 (Contract C-31565)
	WPO33048	MIR M04912

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01071582, WA 01071659 & WA 01075129
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System SG (Steam Generator)

5. (a) Applicable Construction Code Sec III NB, 1971 Edition, S71 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SG No. 2	Combustion Engineering	74270-2	22157	Steam Generator	1976	Partial Replacement	No
SG No. 2	Combustion Engineering	74270-2	22157	Steam Generator	1976	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 900 & 2250 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

repair & replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan M. Hilley, Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

While disassembling the handhole cover for steam generator no. 2 secondary side inspection under WA 01071659, four studs and nuts were damaged. The studs and nuts were replaced with spares from the warehouse. Prior to installation, the four replacement studs were examined using the VT-1 method and found acceptable.

During removal of the cold leg manway under WA 01075129, four studs galled. Two of the studs (no. 1 & 2) were removed with no damage to the threaded holes. The other two studs (no. 18 & 19) had to be cut off. The studs were drilled out and threaded inserts were installed to allow use of the original size studs. Prior to installation, the four replacement studs were examined using the VT-1 method and found acceptable.

During removal of the hot leg manway under WA 01071582, two studs were damaged. The studs were replaced with spares from the warehouse. Prior to installation, the two replacement studs were examined using the VT-1 method and found acceptable.

The replacements were visually examined at normal operating pressure. The VT-2 examination results were acceptable.

The certifications for the replacements are filed in the following records:

PO	A-75611	QCRIR 86-80
	L-31976	MRIR 5472-84
	TR-8847	MRIR 4367-91 (Contract C-31565)
	WPO32817	MIR M07313
	WPO33048	MIR M04912

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 5
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01061831 CI 269570
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System SI (Safety Injection)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W73 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SI-301	Velan	470-1	NA	Valve ISI-V2504	1980	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (2 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No Not Applicable Expiration Date Not Applicable

Signed Dwight M Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, the reactor coolant loop 1 hot leg injection leakage drain valve, SI-301, developed a seat leak. The valve was subsequently disassembled and inspected. Inspection revealed a damaged disc, seat and backseat.

The disc, seat and backseat were replaced with spares from the warehouse.

Upon return to service, the valve was visually examined for leakage. The VT-2 examination results were acceptable.

A copy of the Code Data Report for the disc is presented in Attachment 2. The certifications for the replacements are filed in the following records:

P.O.	L-48866	MRIR	9073-85
	WPO17535	MRIR	3409-90
	WPO19530	MIR	M08063

Attachment 2
Code Data Report
Page 2 of 2

Items 4-6 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ in. Length _____ in.
(Steel & Spec. No.) (Min. of Range Specified)

5. Seams Long _____ H.T.¹ _____ R.T. _____ Efficiency _____ %

Girth _____ H.T.¹ _____ R.T. _____ No. of Courses _____

6. Heads (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
Location (Top, bottom, ends) Thickness Crown Radius Elliptical Ecc. Elliptical Ecc. Conical Apex Angle Hemispherical Radius Flat Diameter Size to Press. (Code, or Cont.)

(a) _____
(b) _____

If removable, bolt used _____ Other fastening _____
(Material, Spec. No., T.S., Size, Number) (Describe or sketch system)

7. Jacket Closure: _____
(Describe or sketch and weld, bar, etc. If bar give dimensions, if bolted, describe or sketch)

8. Design pressure² _____ psi at _____ °F
Drop Weight _____
Charpy Impact _____ (ft-lb)
at temp. of _____ °F

Items 9 and 10 to be completed for tube sections

9. Tube Sheet Stationary, Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Steel & Spec. No.) (Subject to approval) (Welded, Bolted)

Flange, Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes Material _____ O.D. _____ in. Thickness _____ in. or equiv. Number _____ Type _____
(St. or V)

Items 11-14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ in. Length _____ in.
(Steel & Spec. No.) (Min. of Range Specified)

12. Seams Long _____ H.T.¹ _____ R.T. _____ Efficiency _____ %

Girth _____ H.T.¹ _____ R.T. _____ No. of Courses _____

13. Heads (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location Thickness Crown Radius Elliptical Ecc. Elliptical Ecc. Conical Apex Angle Hemispherical Radius Flat Diameter Size to Press. (Code, or Cont.)

(a) Top, bottom, ends _____

(b) Chassis _____

If removable, bolt used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or sketch system)

14. Design pressure² _____ psi at _____ °F
Drop Weight _____
Charpy Impact _____ (ft-lb)
at temp. of _____ °F

Items 15-16 to be completed for all vessels where applicable.

15. Safety Valve Outlet Number _____ Size _____ Location _____

16. Heads:

Purpose (e.g., Girth, Bolt)	Number	Size or Size	Type	Material	Thickness	Location	Not Attached

17. Inspection Manholes, No. _____ Size _____ Location _____

Openings Handholes, No. _____ Size _____ Location _____

Threaded, No. _____ Size _____ Location _____

18. Supports Bolt _____ Legs _____ Legs _____ Other _____ Attached _____
(Top or Bot) (Number) (Number) (Describe) (Show & Sketch)

¹ If Pressure Non-Treated.

² For other material or design pressure with restricted experience when applicable.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plan: Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01049168 CI 266769
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CAR (Containment Atmospheric Release)

5. (a) Applicable Construction Code AWS D1.1 1972 Edition, NA Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
HVSH-4028	Bergen Paterson	NA	NA	Spring Hanger	NA	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure _____ psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

Dwight M. Gilley Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

Routine walkdown of plant pipe supports revealed that the spring on pipe support HVSH-4028 was not supporting line 2HV4-14 as designed. The pipe support was evaluated and modified to properly support the piping.

After modification, pipe support HVSH-4028 was visually inspected. The VT-3 and VT-4 examination results were acceptable.

The certifications for the replacement materials are filed in the following records:

P.O. WP3-3495 MRIR 80-02057 (TR-3315 Item 6 MRIR 3190-86)
WP3-11039 MRIR 83-01751 (TR-5352 Item 9 MRIR 8070-87)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01059064 CI 269675
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System CAR (Containment Atmospheric Release)

5. (a) Applicable Construction Code AWS D1.1 1972 Edition, NA Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
HVRR-4029	Bergen Paterson	NA	NA	Rigid Restraint	NA	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure _____ psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

A design engineering walkdown of the Containment Atmospheric Release (CAR) system revealed that adequate clearances did not exist to accommodate containment expansion during LOCA conditions. Pipe support HVRR-4029 and line 2HV1-17 were modified to provide adequate clearance for 2HV4-14.

Line 2HV1-17 was shortened 1.5 inches to allow 2 inch minimum clearance during normal operation and adequate clearance during LOCA conditions. Pipe support HVRR-4029 was modified for a 2.5 inch clearance during operation and acceptable clearance during accident conditions.

Pipe support HVRR-4029 was visually examined under WA 01080816 CI 276435. The VT-3 examination results were acceptable.

The certification for the replacement material is filed in the following record:

P.O. WPO26234

MIR M03968

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 DC-3277 WA 99000352 CI 274482
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System MS (Main Steam)

5. (a) Applicable Construction Code AWS D1.1 1972 Edition, NA Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
MSRR-2	Bergen Paterson	NA	NA	Rigid Restraint	NA	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure _____ psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

As part of Design Change 3277, pipe support MSRR-2 was modified. The tube steel that connected the end attachment to the structural steel was replaced and the strut length was adjusted.

The welds were visually examined and were found acceptable. Support MSRR-2 was examined using the VT-3 method. The results were acceptable.

The certifications for the replacement material are filed in the following record:

P.O. WP3-8530 MRIR 82-02579 (TR-5872 Item 18 MRIR 0185-87)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 7
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01054796 & WA 01056125
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Expiration Date Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066
Address

4. Identification of System RC (Reactor Coolant)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W71 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RC-317A	Dresser	BS-08031	NA	Valve IRC R2573A	1979	Replaced	No
RC-317A	Dresser	BW-09724	NA	Valve IRC-R2573A	1985	Replacement	No
RC-317A	Dresser	BW-09724	NA	Valve IRC-R2573A	1985	Replaced	No
RC-317A	Dresser	BS-08031	NA	Valve IRC-R2573A	1979	Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (4 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, one of the pressurizer relief valves began to leak by its seat. A short maintenance outage was planned to replace both valves.

Under WA 01056125, pressurizer relief valve RC-317A (serial no. BS-08031) was replaced with a spare valve (serial no. BW-09724) during the maintenance outage. The spare valve had been refurbished and tested under WPO32365 by the valve manufacturer, Dresser Industries, Inc. Upon return to service, the replacement was visually examined using the VT-2 method. The results were acceptable.

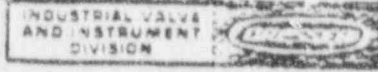
During the refueling outage under WA 01054796, the installed valve (serial no. BW09724) was replaced with the original valve (serial no. BS-08031). The original valve had been refurbished and tested under WPO35078 by the valve manufacturer, Dresser Industries, Inc.

Upon return to service, the valve was visually examined using the VT-2 method. The results were acceptable.

Copies of the Code Data Reports for the replacements are presented in Attachment 2. Certifications for the refurbishment by Dresser Industries, Inc. are filed in the following records:

PO	WPO32365	MIR M06241
	WPO35078	MIR M08067

Attachment 2
Code Data Reports
(Page 1 of 4)



FORM NV-1 (N) CERTIFICATE HOLDERS' DATA REPORT FOR SAFETY AND SAFETY RELIEF VALVES*
(AS REQUIRED BY THE PROVISIONS OF THE ASME CODE, SECTION VIII, DIV. 1)

1. MANUFACTURED BY DRESSER INDUSTRIAL VALVE & INSTR. DIV., HIGHWAY 71 NORTH ALEXANDRIA, LOUISIANA
(NAME AND ADDRESS OF N CERTIFICATE HOLDER)

2. MANUFACTURED FOR Combustion Engineering Inc., 1000 Prospect Hill Rd. Windsor, CT 06095
(NAME AND ADDRESS OF PURCHASER OR USER)

3. LOCATION OF INSTALLATION Boston Edison Co., Pilgrim Sta. Unit #2, Plymouth, Mass.
(NAME AND ADDRESS)

4. 3NC047 1979
(CRN) (DRAWING NO.) (NAIL BRO. NO.) (YEAR BUILT)

5. VALVE 6"31709NAX-1-XFNL-NC047 IDENTIFYING NOS BS-08031
(MODEL NO., SERIES NO.) (N CERTIFICATE HOLDERS' SERIAL NO.)

TYPE Safety CLASS 1
(SAFETY, SAFETY RELIEF; PNEUMATIC, POWER-ACTUATED)

ORIFICE SIZE 2.351 NOMINAL INLET SIZE 6 INCH 8 INCH
INCH INCH

6. SET PRESSURE (PSIG) 2485 RATED TEMPERATURE 700 °F

STAMPED CAPACITY 504,874 LBS./HR. @ 3 % OVERPRESSURE BLOWDOWN (PSIG) 124
SAT. STEAM

HYDROSTATIC TEST (PSIG) INLET 3728 OUTLET 750

7. PRESSURE RETAINING PIECES (APPLICABLE TO VALVES FOR CLOSED SYSTEMS ONLY)

	SERIAL NO. OR IDENTIFICATION	MATERIAL SPECIFICATION INCL. TYPE OR GRADE
BODY	AAA46	SA182 Gr. F316
BONNET OR YOKE	T1166	SA105
SUPPORT RODS		
NOZZLE	AAA92	SA182, Gr. F347
DISC	AAB44	SA637 Gr. 688
SPRING WASHERS	(Top) AAA31 (Bottom) AAA13	SA105
ADJUSTING SCREW	AAA17	SB164 Class A
SPINDLE	AAA59	SA479 Gr. 347
SPRING	A26168	ASTM A681 Type H-12
BOLTING	AU2	SA193, Gr. 87
OTHER PIECES		
Outlet Flange	623787	SA182, Gr. F316
Nipple	462883	SA312 Gr. 316
Bonnet Nuts	CF39	SA194, Gr. 2H

*SUPPLEMENT SHEETS IN FORM OF LISTS, SKETCHES OR DRAWINGS MAY BE USED PROVIDED (1) SIZE IS 8-1/2" X 11"
(2) INFORMATION IN ITEMS 1-2 ON THIS DATA REPORT IS INCLUDED ON EACH SHEET, AND (3) EACH SHEET IS
NUMBERED AND NUMBER OF SHEETS IS RECORDED AT TOP OF THIS FORM.

Attachment 2
Code Data Reports
(Page 2 of 4)

FORM NV-1 (BACK)

CERTIFICATE OF COMPLIANCE

WE CERTIFY THAT THE STATEMENTS MADE IN THIS REPORT ARE CORRECT AND THAT THIS VALVE CONFORMS TO THE RULES OF CONSTRUCTION OF THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS, SECTION III, DIV. 1, 1974
EDITION ADDENDA Summer 1975 (DATE), CODE CASE NO. 118
DATE 1-25-79 SIGNED Dresser IVID BY [Signature]
(IN CERTIFICATE HOLDER) Principal Quality Assurance Engineer
OUR ASME CERTIFICATE OF AUTHORIZATION NO. N-1747 TO USE THE NY
SYMBOL EXPIRES May 20, 1980 (DATE) (MT)

CERTIFICATION OF DESIGN

DESIGN INFORMATION ON FILE AT Dresser Plant, Alexandria, La.
STRESS ANALYSIS REPORT (CLASS I ONLY) ON FILE AT Dresser Plant, Alexandria, La.
DESIGN SPECIFICATIONS CERTIFIED BY W. W. Albert
PE STATE Connecticut REG. NO. 6333
STRESS REPORT CERTIFIED BY Y. S. Lai
PE STATE Louisiana REG. NO. 14103
SIGNATURE NOT REQUIRED—LIST NAME ONLY

CERTIFICATE OF SHOP INSPECTION

I, THE UNDERSIGNED, HOLDING A VALID COMMISSION ISSUED BY THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS AND THE STATE OR PROVINCE OF LOUISIANA AND EMPLOYED BY THE HARTFORD STEAM BOILER & I COMPANY OF HARTFORD CONN. HAVE INSPECTED THE PUMP OR VALVE, DESCRIBED IN THIS DATA REPORT ON 1-26 1979 AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IN CERTIFICATE HOLDER HAS CONSTRUCTED THIS PUMP OR VALVE, IN ACCORDANCE WITH THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS.
BY SIGNING THIS CERTIFICATE, NEITHER THE INSPECTOR NOR HIS EMPLOYER MAKES ANY WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE EQUIPMENT DESCRIBED IN THIS 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 1-26 1979
SIGNED [Signature] COMMISSIONS Louisiana 672
(INSPECTOR) (NAT'L. BO. STATE PROV. AND NO.)

Attachment 2
Code Data Reports
(Page 3 of 4)



FORM NV-111 CERTIFICATE HOLDERS' DATA REPORT FOR SAFETY AND SAFETY RELIEF VALVES*
(AS REQUIRED BY THE PROVISIONS OF THE ASME CODE, SECTION VIII, DIV. 1)

1. MANUFACTURED BY INDUSTRIAL VALVE OPERATIONS, DRESSER INDUSTRIES INC., HIGHWAY 71 NORTH ALEXANDRIA, LA
(NAME AND ADDRESS OF MANUFACTURER)

2. MANUFACTURED FOR La. Pwr & Lgt. Co., 317 Saronne St., P.O. Box 61005, New Orleans, LA 70161
(NAME AND ADDRESS OF PURCHASER OR OWNER)

3. LOCATION OF INSTALLATION La. Pwr & Lgt. Co., Waterford #3 Nuclear, Hwy 18, Taft, LA 70066
(NAME AND ADDRESS)

4. NC119 N/A 1985
(CRN) (DRAWING NO.) (NATL. STD. NO.) (YEAR BUILT)

5. VALVE 6"31709NA-1-XPM1-NC119 IDENTIFYING NOS BH-09724
(MODEL NO. SERIES NO.) (M. CERTIFICATE HOLDERS' SERIAL NO.)

TYPE Safety CLASS 1
(SAFETY SAFETY RELIEF PILOT POWER ACTUATED)

ORIFICE SIZE 2.351 NOMINAL INLET SIZE 6 OUTLET SIZE 8
INCH INCH INCH

6. SET PRESSURE (PSIG) 2495 RATED TEMPERATURE Saturated
STAMPED CAPACITY 504,874 LBS. HR. @ 03 % OVERPRESSURE BLOWDOWN (PSIG) 124
SAT. STEAM

HYDROSTATIC TEST (PSIG) INLET 3750 OUTLET 750
(APPLICABLE TO VALVES FOR CLOSED SYSTEMS ONLY)

7. PRESSURE RETAINING PIECES

	SERIAL NO. OR IDENTIFICATION	MATERIAL SPECIFICATION INCL. TYPE OR GRADE
BODY	<u>AAA78</u>	<u>SA182, Gr. F316</u>
BONNET OR YOKER	<u>6061156</u>	<u>SA105</u>
SUPPORT ROOS		
NOZZLE	<u>AAB58</u>	<u>SA182, Gr. F347</u>
DISC	<u>AA031</u>	<u>SA637, Gr. 688</u>
SPRING WASHERS		
ADJUSTING SCREW		
SPINDLE		
SPRING		
BOLTING	<u>Studs</u> <u>1046</u>	<u>SA193, Gr. B7</u>
OTHER PIECES		
	<u>Outlet Flange</u> <u>615509</u>	<u>SA182, Gr. F316</u>
	<u>Stud Nuts</u> <u>1065</u>	<u>SA194, Gr. 2H</u>
	<u>Drain Nipple</u> <u>462885</u>	<u>SA312, Type 316</u>

*SUPPLEMENT SHEETS IN FORM OF LISTS, SKETCHES OR DRAWINGS MAY BE USED PROVIDED (1) SIZE IS 8-1/2" X 11"
(2) INFORMATION IN ITEMS 1-7 ON THIS DATA REPORT IS INCLUDED ON EACH SHEET, AND (3) EACH SHEET IS
NUMBERED AND NUMBER OF SHEETS IS RECORDED AT TOP OF THIS FORM.

Attachment 2
Code Data Reports
(Page 4 of 4)

FORM NY-1 (BACK)

CERTIFICATE OF COMPLIANCE

WE CERTIFY THAT THE STATEMENTS MADE IN THIS REPORT ARE CORRECT AND THAT THIS VALVE CONFORMS TO THE RULES OF CONSTRUCTION OF THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS, SECTION III, DIV. 1, 1974 EDITION, ADDENDA SEPTEMBER 1975 (DATE), CODE CASE NO. N/A
DATE 5-20-85 SIGNED IWO, Dresser Ind., Inc. BY (IN CERTIFICATE HOLDER) [Signature] Principal O. A. Engineer
OUR ASME CERTIFICATE OF AUTHORIZATION NO. N-1747 TO USE THE NV (NY)
SYMBOL EXPIRES May 20, 1986 (DATE)

CERTIFICATION OF DESIGN

DESIGN INFORMATION ON FILE AT Dresser Plant, Alexandria, La.
STRESS ANALYSIS REPORT (CLASS 1 ONLY) ON FILE AT Dresser Plant, Alexandria, La.
DESIGN SPECIFICATIONS CERTIFIED BY W. W. Albert
PE STATE Connecticut REG. NO. 6333
STRESS REPORT CERTIFIED BY Y. S. Lai
PE STATE Louisiana REG. NO. 14105
SIGNATURE NOT REQUIRED—LIST NAME ONLY

CERTIFICATE OF SHOP INSPECTION

I, THE UNDERSIGNED, HOLDING A VALID COMMISSION ISSUED BY THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS AND THE STATE OR PROVINCE OF LOUISIANA AND EMPLOYED BY THE HARTFORD STEAM BOILER I & I COMPANY OF KATFORD, CONN. HAVE INSPECTED THE PUMP OR VALVE DESCRIBED IN THIS DATA REPORT ON 22 May 85 AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IN CERTIFICATE HOLDER HAS CONSTRUCTED THIS PUMP, OR VALVE, IN ACCORDANCE WITH THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS.
BY SIGNING THIS CERTIFICATE, NEITHER THE INSPECTOR NOR HIS EMPLOYER MAKES ANY WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE EQUIPMENT DESCRIBED IN THIS 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 5/20 19 85
SIGNED [Signature] (INSPECTOR) COMMISSIONS Louisiana 451 (NAT'L. BO. STATE PROV. AND NO.)



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 7
Address

2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01054797 & WA 01064718
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System RC (Reactor Coolant)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W71 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RC-317B	Dresser	BS-08030	NA	Valve 1RC-R2574B	1979	Replaced	No
RC-317B	Dresser	BS-01593	318	Valve 1RC-R2574B	1978	Replacement	No
RC-317B	Dresser	BS-01593	318	Valve 1RC-R2574B	1978	Replaced	No
RC-317B	Dresser	BS-08030	NA	Valve 1RC-R2574B	1979	Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks See Attachment 2 (4 Pages) for Code Data Reports.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During plant operation, one of the pressurizer relief valves began to leak by its seat. A short maintenance outage was planned to replace both valves.

Under WA 01064718, pressurizer relief valve RC-317B (serial no. BS-08030) was replaced with a spare valve (serial no. BS-01593) during the maintenance outage. The spare valve had been refurbished and tested under WPO35457 by the valve manufacturer, Dresser Industries, Inc. Upon return to service, the replacement was visually examined using the VT-2 method. The results were acceptable.

During the refueling outage under WA 01054797, the installed valve (serial no. BS-01593) was replaced with the original valve (serial no. BS-08030). The original valve had been refurbished and tested under WPO35078 by the valve manufacturer, Dresser Industries, Inc.

Upon return to service, the valve was visually examined using the VT-2 method. The results were acceptable.

Copies of the Code Data Reports for the replacements are presented in Attachment 2. Certifications for the refurbishment by Dresser Industries, Inc. are filed in the following records:

PO	WPO35078	MIR M08067
	WPO35457	MRIR 0162-90

Attachment 2
Code Data Reports
(Page 1 of 4)

INDUSTRIAL VALVE
AND INSTRUMENT
DIVISION

FORM NV-1 "N" CERTIFICATE HOLDERS' DATA REPORT FOR SAFETY AND SAFETY RELIEF VALVES*
(AS REQUIRED BY THE PROVISIONS OF THE ASME CODE, SECTION VIII, DIV. 1)

1. MANUFACTURED BY DRESSER INDUSTRIAL VALVE & INSTR. DIV. HIGHWAY 71 NORTH ALEXANDRIA, LOUISIANA
(NAME AND ADDRESS OF "N" CERTIFICATE HOLDER)

2. MANUFACTURED FOR Combustion Engineering Inc., 1000 Prospect Hill Rd. Windsor, CT 06095
(NAME AND ADDRESS OF PURCHASER OR OWNER)

3. LOCATION OF INSTALLATION Boston Edison Co., Pilgrim Sta. Unit #2, Plymouth, Mass.
(NAME AND ADDRESS)

4. 3NC047 ✓ (DRAWING NO.) 1979 (YEAR BUILT)

5. VALVE 6"31709NAX-1-XFM-NC047 IDENTIFYING NOS. BS-08030
(MODEL NO., SERIES NO.) (N CERTIFICATE HOLDERS' SERIAL NO.)

TYPE Safety CLASS 1
(SAFETY, SAFETY RELIEF; PILOT; POWER ACTUATED)

ORIFICE SIZE 2.351 INCH NOMINAL INLET SIZE 6 INCH OUTLET SIZE 8 INCH

6. SET PRESSURE (PSIG) 2485 RATED TEMPERATURE 700 °F

STAMPED CAPACITY 504,874 LBS./HR. @ 3 % OVERPRESSURE BLOWDOWN (PSIG) 124
SAT. STEAM

HYDROSTATIC TEST (PSIG) INLET 3728 OUTLET 750
(APPLICABLE TO VALVES FOR CLOSED SYSTEMS ONLY)

7. PRESSURE RETAINING PIECES

	SERIAL NO. OR IDENTIFICATION	MATERIAL SPECIFICATION INCL. TYPE OR GRADE
BODY	AAA45	SA182 Gr. F316
BONNET OR YOKE	J9893	SA105
SUPPORT RODS		
NOZZLE	AAA93	SA182 Gr. F316
DISC	AA846	SA637 Gr. 688
SPRING WASHERS	(Top) AAA27 (Bottom) AAA14	SA105
ADJUSTING SCREW	AAA18	SB164 Class A
SPINDLE	AAA36	SA479 Gr. 347
SPRING	A26168	ASTM A681 Type H-12
BOLTING	A02	SA193 Gr. B7
OTHER PIECES		
Outlet Flange	623787	SA182 Gr. F316
Nipple	462885	SA312 Gr. 316
Bonnet Nuts	GK59	SA194 Gr. 2H

*SUPPLEMENT SHEETS IN FORM OF LISTS, SKETCHES OR DRAWINGS MAY BE USED PROVIDED (1) SIZE IS 8-1/2" X 11"
(2) INFORMATION IN ITEMS 1-2 ON THIS DATA REPORT IS INCLUDED ON EACH SHEET, AND (3) EACH SHEET IS
NUMBERED AND NUMBER OF SHEETS IS RECORDED AT TOP OF THIS FORM.

Attachment 2
Code Data Reports
(Page 2 of 4)

FORM N-14 (REV. 1974)

CERTIFICATE OF COMPLIANCE

WE CERTIFY THAT THE STATEMENTS MADE IN THIS REPORT ARE CORRECT AND THAT THIS VALVE CONFORMS TO THE RULES OF CONSTRUCTION OF THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS, SECTION III, DIV. 1, 1974
EDITION, ADDENDA Summer 1975 CODE CASE NO.
(DATE)
DATE 1-25-79 SIGNED Dresser IVID BY [Signature]
(IN CERTIFICATE HOLDER) Principal Quality Assurance Engineer
OUR ASME CERTIFICATE OF AUTHORIZATION NO. N-1747 TO USE THE NV
SYMBOL EXPIRES May 20, 1980 (DATE) (NY)

CERTIFICATION OF DESIGN

DESIGN INFORMATION ON FILE AT Dresser Plant, Alexandria, La.
STRESS ANALYSIS REPORT (CLASS I ONLY) ON FILE AT Dresser Plant, Alexandria, La.
DESIGN SPECIFICATIONS CERTIFIED BY W. W. Albert
PE STATE Connecticut REG. NO. 6333
STRESS REPORT CERTIFIER BY Y. S. Lai
PE STATE Louisiana REG. NO. 14105
SIGNATURE NOT REQUIRED—LIST NAME ONLY

CERTIFICATE OF SHOP INSPECTION

I, THE UNDERSIGNED, HOLDING A VALID COMMISSION ISSUED BY THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS AND THE STATE OR PROVINCE OF LOUISIANA AND EMPLOYED BY THE HARTFORD STEAM BOILER & I COMPANY OF HARTFORD, CONN. HAVE INSPECTED THE PUMP OR VALVE, DESCRIBED IN THIS DATA REPORT ON 1-25-79 TO 70, AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IN CERTIFICATE HOLDER HAS CONSTRUCTED THIS PUMP OR VALVE, IN ACCORDANCE WITH THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS.
BY SIGNING THIS CERTIFICATE, NEITHER THE INSPECTOR NOR HIS EMPLOYER MAKES ANY WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE EQUIPMENT DESCRIBED IN THIS 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 1-26-79
SIGNED [Signature] COMMISSIONS Louisiana 672
(INSPECTOR) (NAT'L. BO. STATE PROV. AND NO.)

Attachment 2
Code Data Reports
(Page 3 of 4)



FORM NV-1 M CERTIFICATE HOLDERS' DATA REPORT FOR SAFETY AND SAFETY RELIEF VALVES*
(AS REQUIRED BY THE PROVISIONS OF THE ASME CODE, SECTION III, DIV. 1)

1. MANUFACTURED BY DRESSER INDUSTRIAL VALVE & INSTR. DIV. HIGHWAY 71 NORTH ALEXANDRIA, LOUISIANA
(NAME AND ADDRESS OF M CERTIFICATE HOLDER)
2. MANUFACTURED FOR Babcock & Wilcox Pwr. Gen. Div., P.O. Box 1260, Lynchburg, VA 24505
(NAME AND ADDRESS OF PURCHASER OR OWNER)
3. LOCATION OF INSTALLATION Washington Public Power Supply System, WPPSS WNP-1/4 Site
(NAME AND ADDRESS) Hanford Works, Richland, Wash. 99352
4. 4CP-2291 318 1978
(CRN) (DRAWING NO.) (MATERIAL BRD. NO.) (YEAR BUILT)
5. VALVE 6" 31709NA-1-0S284 IDENTIFYING NOS. BS-01593
(MODEL NO., SERIES NO.) (M CERTIFICATE HOLDERS' SERIAL NO.)
TYPE Safety CLASS 1
(SAFETY, SAFETY RELIEF, PILOT, POWER ACTUATED)
- ORIFICE SIZE 2.351 NOMINAL INLET SIZE 6" OUTLET SIZE 8"
INCH INCH INCH
6. SET PRESSURE (PSIG) 2500 RATED TEMPERATURE 670 °F
STAMPED CAPACITY 507,918 LBS./HR. @ 3 % OVERPRESSURE BLOWDOWN (PSIG) 125
SAT. STEAM
- HYDROSTATIC TEST (PSIG) INLET 3750 OUTLET 1050
(APPLICABLE TO VALVES FOR CLOSED SYSTEMS ONLY)
7. PRESSURE RETAINING PIECES

	SERIAL NO. OR IDENTIFICATION	MATERIAL SPECIFICATION INCL. TYPE OR GRADE
BODY	AAA34	SA-182 Gr. F316
BONNET OR YOKE	122T238	SA-105
SUPPORT RODS		
NOZZLE	AAA69	SA-182 Gr. F347
DISC	AAB18	ASTM A-637 Gr. 688
SPRING WASHERS	122T238 (top) 213378 (bottom)	SA-105
ADJUSTING SCREW	M6591BG	ASTM B-164
SPINDLE	AAA42	SA-479 Gr. 347
SPRING	72499	AISI H-21
BOLTING	GK22	SA-193 Gr. B7
OTHER PIECES		
Outlet Flange	K4027 0003	SA-182 Gr. F316
Bonnet Nuts	DC44	SA-194 Gr. 2H
Adapter	D14482	ASTM A565 Gr. 616

*SUPPLEMENT SHEETS IN FORM OF LISTS, SKETCHES OR DRAWINGS MAY BE USED PROVIDED (1) SIZE IS 8-1/2" X 11" (2) INFORMATION IN ITEMS 1-2 ON THIS DATA REPORT IS INCLUDED ON EACH SHEET, AND (3) EACH SHEET IS NUMBERED AND NUMBER OF SHEETS IS RECORDED AT TOP OF THIS FORM.

DOCUMENT REVIEWED
MAY 8 1978
By: JSV
UE & C

Attachment 2
Code Data Reports
(Page 4 of 4)

FORM NV-1 (BACK)

CERTIFICATE OF COMPLIANCE

WE CERTIFY THAT THE STATEMENTS MADE IN THIS REPORT ARE CORRECT AND THAT THIS VALVE CONFORMS TO THE RULES OF CONSTRUCTION OF THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS, SECTION III, DIV.1, 1971 EDITION, ADDENDA Winter, 1972, CODE CASE NO. N/A
(DATE)
DATE 4-12-78 SIGNED Dresser IVID BY [Signature]
(N CERTIFICATE HOLDER) Principal Q.A. Engineer
OUR ASME CERTIFICATE OF AUTHORIZATION NO. N-1747 TO USE THE NV
SYMBOL EXPIRES May 20, 1980 (NV)
(DATE)

CERTIFICATION OF DESIGN

DESIGN INFORMATION ON FILE AT Dresser Plant, Alexandria, La.
STRESS ANALYSIS REPORT (CLASS I ONLY) ON FILE AT Dresser Plant, Alexandria, La.
DESIGN SPECIFICATIONS CERTIFIED BY John W. Merchant
PE STATE Virginia REG. NO. 4418
STRESS REPORT CERTIFIED BY Y. S. Lai
PE STATE Louisiana REG. NO. 14105
SIGNATURE NOT REQUIRED-LIST NAME ONLY

CERTIFICATE OF SHOP INSPECTION

I, THE UNDERSIGNED, HOLDING A VALID COMMISSION ISSUED BY THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS AND THE STATE OR PROVINCE OF LOUISIANA AND EMPLOYED BY THE HARTFORD STEAM BOILER I & I COMPANY OF HARTFORD, CONN., HAVE INSPECTED THE PUMP OR VALVE, DESCRIBED IN THIS DATA REPORT ON 4-12-1978 AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE N CERTIFICATE HOLDER HAS CONSTRUCTED THIS PUMP, OR VALVE, IN ACCORDANCE WITH THE ASME CODE FOR NUCLEAR POWER PLANT COMPONENTS.
BY SIGNING THIS CERTIFICATE, NEITHER THE INSPECTOR NOR HIS EMPLOYER MAKES ANY WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE EQUIPMENT DESCRIBED IN THIS 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 April 12, 1978
SIGNED [Signature] COMMISSIONS National Board 7876
(INSPECTOR) (NAT'L. BD. STATE PROV. AND NO.)

DOCUMENT REVIEWED
MAY 8 1978
By ISV
U.S.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 99000399 CI 273474 & CI 273886
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System RC (Reactor Coolant)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W71 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RCP-2A	Byron-Jackson	711-N-0175	NA	Reactor Coolant Pump	1978	Repaired	No
RCP-2A	Byron-Jackson	711-N-0175	NA	Reactor Coolant Pump	1978	Partial Replacement	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this repair & replacement conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dugan M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1, 1990 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

During a forced outage in October 1990, a leak was found at the casing gasket on Reactor Coolant Pump 2A, RCP-2A. The pump was disassembled during Refuel 4 for repairs. Subsequent inspection revealed erosion on the driver mount bottom flange. The upper surface was eroded in the heat exchanger seating surface. The lower surface was eroded around the keyways and casing stud holes. The lower surface did not meet the flatness criteria specified by the pump manufacturer, Byron-Jackson.

Engineering evaluated the conditions and determined that the heat exchanger seating surface would be repaired and the flatness criteria would be restored. Prior to welding, the excavated cavity was examined using the magnetic particle (MT) method and was found acceptable. Weld repairs were performed by PCI Energy Services. Preheating operations were performed by Cooperheat, Inc.

After being machined to meet the flatness criteria, the repaired area was examined using the magnetic particle (MT), dye penetrant (PT) and ultrasonic test (UT) methods and was found acceptable. The repair was exempt from hydrostatic pressure testing per IWA-4400(b)(3). Upon return to service, the pump flange was visually examined at operating pressure. The VT-2 results were acceptable.

To provide for additional inspection capability in the future, the casing stud elongation holes were extended to a depth of 32 inches under design change DC-3340. This repair is documented under NIS-2 91-025.

The casing studs and nuts and the heat exchanger studs and nuts were replaced. The replacement casing studs were pre-drilled with the 32 inch elongation hole. The preservice examinations were performed in accordance with IWA-7530.

The certifications for the replacements are filed in the following records:

P.O. L84666 MRIR 5575-86 (heat exchanger studs and nuts)
WPO37551 MIR M03255 (casing studs and nuts)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address
2. Plant Waterford Unit 3
Name
Hwy. 18, P.O. Box B, Killona, LA 70066 DC-3340 WA 99003340
Address Repair Organization P.O. No., Job No
3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable
Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address
4. Identification of System RC (Reactor Coolant)
5. (a) Applicable Construction Code Sec III NB 1971 Edition, W7 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
RCP-1A	Byron-Jackson	711-N-0173	NA	Reactor Coolant Pump	1978	Repaired	No
RCP-1B	Byron-Jackson	711-N-0174	NA	Reactor Coolant Pump	1978	Repaired	No
RCP-2A	Byron-Jackson	711-N-0175	NA	Reactor Coolant Pump	1978	Repaired	No
RCP-2B	Byron-Jackson	711-N-0176	NA	Reactor Coolant Pump	1979	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2250 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this
repair conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Louisiana and employed by Akwright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S I S
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

Design change DC-3340 was implemented during Refuel 4 to provide additional inspection capability for Reactor Coolant Pump (RCP) studs. The length of the elongation holes down the center of the studs was increased from 24 inches to 32 inches. Ultrasonic (UT) examination of the studs from the elongation holes can be performed for the portion of the stud below the casing joint. Stud erosion due to casing gasket leakage could be more accurately measured if the gasket were to leak in the future. This information would be a vital part of the operability evaluation on a pump with a gasket leak.

The elongation holes in the studs on RCP-1A, RCP-1B and RCP-2B were drilled with the studs under tension in the pump. The new studs installed in RCP-2A were drilled prior to installing the studs. The installation of the replacement studs in RCP-2A is documented under NIS-2 91-024.

After drilling the holes deeper, the studs in RCP-1A, RCP-1B and RCP-2B were examined in-place using the ultrasonic (UT) method and were found acceptable. The replacement studs for RCP-2A were examined using the visual (VT-1) and ultrasonic (UT) examination methods. The results were acceptable.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 1, 1991
Name

1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name

Hwy. 18, P.O. Box B, Killona, LA 70066 WA 01076557 CI 274685
Address Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name Authorization No. Not Applicable

Hwy. 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System FW (Feed Water)

5. (a) Applicable Construction Code Sec III NC 1971 Edition, W72 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
2FW20-12A-6	Dravo Corp.	8554	NA	2FW18-40A	1982	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure _____ psi Test Temp. _____ F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

repair conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date No. Applicable

Signed Dwight M. Gilbey Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co.* of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature] Commissions 7822 N B I S I S
Inspector's Signature National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

Upon removal of the pipe clamp FWSH-001 for the ultrasonic examination (UT) of weld 45-002, a gouge was discovered in pipe 2FW18-40A. The wall thickness at the gouge was measured using an ultrasonic thickness measurement technique. A stress calculation was performed using the actual wall thickness at the gouge. The stress values complied with ASME Section III Subsection NC 1971 edition through winter 1971 addenda requirements.

The gouge was blended into the surrounding area and weld repaired. The repair was examined using the magnetic particle (MT) technique and found acceptable.

The repair was exempt from hydrostatic pressure testing per IWA-4400(b)(3).

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Entergy Operations, Inc. Date July 2, 1991
Name
1340 Echelon Parkway, Jackson, MS 39213 Sheet 1 of 3
Address

2. Plant Waterford Unit 3
Name
Hwy 18, P.O. Box B, Killona, LA 70066 DC-3162
Address WA 99000404 CI 273576 & CI 273699
Repair Organization P.O. No., Job No

3. Work Performed by Entergy Operations, Inc. Type Code Symbol Stamp None
Name
Authorization No. Not Applicable
Hwy 18, P.O. Box B, Killona, LA 70066 Expiration Date Not Applicable
Address

4. Identification of System RC (Reactor Coolant)

5. (a) Applicable Construction Code Sec III NB 1971 Edition, W71 Addenda, NA Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 through
W81 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
1RC2-50A/B-1	Tompkins-Beckwith	NA	NA	Pipe spool	1982	Repaired	No

7. Description of Work See Attachment 1 (1 Page)

8. Tests Conducted: Hydrostatic Pneumatic Normal Operating Pressure
Other Pressure 2700 psi Test Temp. F

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 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.

FORM NIS-2 (Back)

9. Remarks None

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this repair conforms to the rules of the ASME Code, Section XI.
repair or replacement

Type Code Symbol Stamp None

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed Dwight M. Gilley Maintenance Engineer Date July 1, 1991

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Providence of Louisiana and employed by Awkright Mutual Insurance Co * of Norwood, MA have inspected the components described in this Owner's Report during the period November 1989 to May 1991, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's 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 Owner's 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.

[Signature]
Inspector's Signature

Commissions 7822 N B I S IS
National Board and Endorsements

Date July 1, 1991

* Factory Mutual System

Attachment 1
Description of Work
(Page 1 of 1)

Design Change DC-3162 was implemented during Refuel 4 to provide a second independent, continuous reactor coolant system (RCS) level indication to monitor RCS level during reduced inventory condition. As part of this modification, line 1RC2-50A/B was shortened from 9 inches to 3 inches between valves RC-106 and RC-107. The original pipe was shortened and valve RC-107 was reinstalled.

The replacement welds on valve RC-107 were examined using the visual, dye penetrant (PT) and radiographic test (RT) methods. The outlet weld, DC-3162-V-8.5-1001-239-FW1, was acceptable. The radiograph on the inlet weld, DC-3162-LW3-RC-19-FW1, was unacceptable. The inlet weld was removed and replaced with weld DC-3162-LW3-RC-19-FW1-A. The replacement weld was examined using the visual, dye penetrant (PT) and radiographic test (RT) methods. The weld exhibited a visual weld defect. The weld was repaired and examined using the visual and dye penetrant (PT) methods. The results were acceptable.

The inlet replacement weld to valve RC-107 was pressure tested in accordance with IWA-4400(a). The VT-2 results were acceptable.

No replacement parts were required.