

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 27, 2000

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Serial No.: 00-295
NLOS/MM
Docket No.: 50-338
License No.: NPF-4

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT 1
INSERVICE INSPECTION SUMMARY REPORT
FOR THE SPRING 2000 REFUELING OUTAGE

As set forth in the provisions of ASME Section XI, Paragraph IWA-6230, enclosed is the Inservice Inspection Summary Report for North Anna Power Station Unit 1 for the spring 2000 refueling outage. This report provides a summary of the examinations performed during the outage for the third inservice inspection interval. In addition, the report summarizes the inspection activities associated with 10 CFR 50.55a(b)(ix)(E) and 10 CFR 50.55a(b)(x)(A).

In accordance with IWA-6220 of ASME Section XI, Attachment 1 includes a Form NIS-1, "Owner's Report for Inservice Inspections," an examination summary, and abstracts of examinations performed. Attachment 2 includes Forms NIS-2, "Owner's Report for Repairs or Replacements."

The entire report will be maintained on file at the corporate office. If you have any questions or require additional information, please contact us.

Very truly yours,



L. N. Hartz
Vice President - Nuclear Engineering and Services

Attachments

Commitments made in this letter: None

A047

cc: U. S. Nuclear Regulatory Commission
Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23 T85
Atlanta, GA 30303-3415

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

Mr. M. M. Grace
Authorized Nuclear Inspector
North Anna Power Station

Mr. J. E. Reasor, Jr.
Old Dominion Electric Cooperative
Innsbrook Corporate Center
4210 Dominion Blvd.
Glen Allen, Virginia 23260

Attachment 1

Inservice Inspection Summary Report

North Anna Power Station Unit 1

**P.O. Box 402
Mineral, Virginia 23117**

2000 Refueling Outage Owner's Report of Inservice Inspections for Interval 3

Commercial Service Date 6-6-78

**Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060**

Attachment 1

Table of Contents

SECTION	PAGE
FORM NIS-1 Owner's Report for Inservice Inspections	2
Examination Summary	4
Abstract of Examinations Performed IWB, IWC and IWF	8
Abstract of Examinations Performed System Pressure Test Program	14
Abstract of Examinations Performed Snubber Program	28
Abstract of Examinations Performed Steam Generator Program	29
Abstract of Examinations Performed Containment Inservice Inspection Program	36

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Virginia Electric and Power Company, 5000 Dominion Blvd., Glen Allen, VA 23060
(Name and Address of Owner)
2. Plant North Anna Power Station, P.O. Box 402, Mineral, VA 23117
(Name and Address of Plant)
3. Plant Unit 1 4. Owner Certificate of Authorization (if required) NA
5. Commercial Service Date 06/06/78 6. National Board Number for Unit NA
7. Components Inspected

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Charging Pump A 1-CH-P-1A	Pacific Pumps Division Dresser Industries	49786	NA	NA
Steam Generator A 1-RC-E-1A	Westinghouse	1261	VA 58327	6867
Steam Generator B 1-RC-E-1B	Westinghouse	1262	VA 58323	6868
Pressurizer 1-RC-E-2	Westinghouse	1271	VA 58322	6888
RC Pump A 1-RC-P-1A	ESCO	723	NA	NA
Reactor Vessel 1-RC-R-1	RDM Rotterdam	30661	VA 58328	NA
1-RC-SV-1551A	Dresser	BM-06920	NA	NA
1-RC-SV-1551B	Dresser	BM-06919	NA	NA
1-RC-SV-1551C	Dresser	BM-06918	NA	NA
RHR Heat HX A 1-RH-E-1A	Joseph Oat and Sons Inc.	1832-3	VA 58337	370
RHR Heat HX B 1-RH-E-1B	Joseph Oat and Sons Inc.	1832-4	VA 58336	371
Boron Injection Tank 1-SI-TK-2	Struther Wells Corp.	2-70-07-30717-9	VA 59686	13346
Class 1 Piping Non-Serialized	Stone & Webster Eng. Corp.	NA	NA	NA
Class 2 Piping Non-Serialized	Stone & Webster Eng. Corp.	NA	NA	NA
Class 1 Component Supports	Stone & Webster Eng. Corp.	NA	NA	NA
Class 2 Component Supports	Stone & Webster Eng. Corp.	NA	NA	NA

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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-1 (Back)

- 8. Examination Dates 5/01/99 to 4/06/00
- 9. Inspection Period Identification First Period (5-01-99 - 4-30-02)
- 10. Inspection Interval Identification Third Interval (5-01-99 - 4-30-09)
- 11. Applicable Edition of Section XI 1989 Addenda NA
- 12. Date/Revision of Inspection Plan June 13, 2000, Revision 1
- 13. Abstract of Examinations and Tests. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan.
See Attachment 1, Abstract of Examinations Performed
See Attachment 1, Abstract of System Pressure Tests
- 14. Abstract of Results of Examinations and Tests.
See Attachment 1, Examination Summary, Page 4
- 15. Abstract of Corrective Measures.
See Attachment 1, Examination Summary, Page 4

We certify that a) the statements made in this report are correct, b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. (if applicable) NA Expiration Date NA
Date JUNE 13 18 2000 Signed Virginia Elect. & Power Co. By EW Throckmold
Owner

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 or Province of Virginia and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the components described in this Owner's Report during the period 5/01/99 to 6/14/00, and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in this Owner's Report in accordance with the Inspection Plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, 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.

Mark M. Howe Commissions VA 424-R
Inspector's Signature National Board, State, Province, and Endorsements
Date June 14 18 2000

Examination Summary
Virginia Electric and Power Company
North Anna Power Station

Unit 1

2000 Spring Refueling Outage
3rd Interval, 1st Period

Introduction

This report covers inservice examinations and tests of Class 1 and Class 2 components, piping and component supports that were conducted at North Anna Power Station Unit 1 from May 1, 1999 through April 6, 2000. The examinations were conducted to meet the requirements of ASME Section XI, 1989 Edition, of the ASME Boiler and Pressure Vessel Code.

Examination procedures were approved prior to the performance of the examinations. Certification documents relative to personnel, equipment, and materials were reviewed and determined to be satisfactory.

Inspections, witnessing and surveillance of the examinations and related activities were conducted by personnel from the Hartford Steam Boiler Inspection and Insurance Company, One State Street, Hartford, Connecticut 06102 (Mr. Mark Grace), and North Anna technical staff.

By letter to the NRC dated December 22, 1998, Serial No. 98-696, North Anna Unit 1 is delaying the submittal of the Class 1 piping Inservice Inspection (ISI) program (NDE, Categories B-F and B-J) for the third inspection interval until April 30, 2001. The NRC approved this delay in their letter dated May 10, 1999. The delay allows time to develop a risk-informed program for Class 1 piping. Therefore, Category B-F and B-J examinations were not performed during the spring 2000 outage.

Limitations

Some of the arrangements and details of the piping systems and components were designed and fabricated before the access and examination requirements of ASME Section XI of the 1989 Code could be applied. Consequently, some examinations are limited or not practical due to geometric configuration or accessibility. Generally these limitations exist at fitting to fitting joints, such as elbow to tee, elbow to valve, reducer to valve, and where integrally welded attachments, lugs and supports preclude access to

some part of the examination area. These limitations sometimes preclude ultrasonic coupling or access for the required scan length or surface examination.

Examinations

Examinations were conducted to review as much of the examination zones as was practical within geometric, metallurgical and physical limitations. When the required ultrasonic examination volume or area could not be examined 100%, the examination method was evaluated and alternate beam angles or methods were considered in an attempt to achieve the maximum examination volume, or an alternate component was considered for examination. In the case of surface examinations where full coverage could not be achieved, another method was considered, or an alternate component was considered for examination. However, where 100% examination was not possible the examination was considered to be a partial and so noted on the examination report. Where the reduction in coverage was 10% or greater, per Code Case N-460, a subsequent relief request will be provided by separate correspondence.

Results

Examinations of components and component supports resulted in four items being reported on the basis of procedure reporting criteria.

Spring hanger SH-118 (shown on drawing 11715-WMKS-0101GA) had a broken cotter pin on the bottom attachment point and the top attachment plate was separated from the wall about 1/8". The cotter pin still functioned to retain the load bearing pin in the clevis. The attachment plate was not over-loaded and still functioned. Therefore, the spring hanger was considered operable in the as found condition by the evaluation in station REA-00-3. The cotter pin was replaced and the attachment bolts tightened to eliminate separation.

Insufficient thread engagement on top right outer nut on the upper right hand corner of the bottom plate was reported for support A-18 (shown on drawing 11715-WMKS-0104G). Based on field walkdowns the base plate in question was found to have all but one anchor bolt with full thread engagement. Since only three full threads are required to develop the full bolt strength, the support was considered operable in the as found condition by the evaluation in station REA-00-4. The bolt length does not allow for full engagement of all nut threads, however, the bolt load capacity is acceptable.

Spring hanger SH-29 (shown on drawing 11715-WMKS-0111AB) had an improper hot spring setting. The as found setting was 347 lbs and the required setting was 300lbs. The as found setting was within the working range of the spring, therefore, the spring hanger was considered operable in the as found condition by the evaluation in station REA-00-1. The spring hanger was reset to the required load setting by repair and replacement RR# 2000-063.

A flaw indication was found in Weld 2 on the boron injection tank (shown on drawing 11715-WMKS-SI-TK-2) during the 1998 outage. At the time the indication was evaluated using criteria from the 1983 Edition Summer 1983 Addenda of the Code and found to be acceptable. The indication and the evaluation were reported in the NIS-1 report for the 1998 outage dated December 22, 1998, Serial No. 98-542. Because an indication was found, a successive examination was performed during the Spring 2000 outage per the requirements of IWC-2420. The successive examination used new code flaw characterization rules based on the 1989 Edition of the Code. Use of these new rules resulted in a small change in indication depth and a change in length from 4 to 6.4 inches. The new indication size was evaluated by Westinghouse and found to be acceptable for further service without repair in accordance with IWB-3600 (IWC-3600 is in course of preparation).

All examinations of components, piping, and component supports are acceptable.

Resolution of Previous Outage Summary Report Commitments

The following is a brief summary of open commitments that pertain to Interval 3 made in previous outage summary reports:

1. Letter Serial No. 96-154, Attachment 1, Item 5 and reiterated in the outage summary report letter serial No. 97-472 dated September 8, 1997:
 - Support A-179 on drawing 11715-WMKS-0111XD - A commitment was made to visually examine Support A-179 during the next period. The support was examined in the first period of the third inspection interval and was found to be acceptable.

Analytical Evaluation

Analytical evaluation(s) of examination results (Volumetric and/or Surface examinations):

As noted above a flaw indication in Weld 2, (upper head to shell weld), Class 2, on the boron injection tank (1-SI-TK-2) size was evaluated and found to be acceptable for further service without repair. The Westinghouse evaluation is provided in Attachment 3 of this report.

Evaluation Analyses

Evaluation analyses of examination results (Visual Examinations):

There was one component which had a condition exceeding the acceptance standards of IWF-3410 and was not repaired.

Insufficient thread engagement on all but one base plate anchor bolt was reported for support A-18 (shown on drawing 11715-WMKS-0104G). The condition was determined to be acceptable. The examination report and completed evaluation is provided in Attachment 4.

Statement of Interval Status

Virginia Electric and Power Company has completed 58 percent of the first period ISI-NDE examinations and 17 percent of the third interval ISI-NDE examinations.

Virginia Electric and Power Company has completed 58 percent of the first period system pressure test examinations and 18 percent of the third interval system pressure test examinations.

**Abstract of Examinations Performed
IWB, IWC and IWF**

<u>DRAWING NO.</u>	<u>MARK/WELD NO.</u>	<u>LINE NO.</u>	<u>ISI CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>EXAM METHOD</u>	<u>EXAM DATE</u>	<u>REMARKS</u>
11715-WMKS-0101A-1	SW-62 (SW-55)	32"-SHP-22-601-Q2	2	C-F-2	C5.81	MT	03/20/2000	
11715-WMKS-0101A-1	SW-69 (SW-55)	32"-SHP-22-601-Q2	2	C-F-2	C5.81	MT	03/20/2000	
11715-WMKS-0101A-2	R-316	32"-SHP-2-601-Q2	2	F-A	F1.20	VT-3	03/13/2000	
11715-WMKS-0101B	18A	32"-SHP-1-601-Q2	2	C-F-2	C5.51	UT/MT	03/28/2000	
11715-WMKS-0101B	LS-51(18A)	32"-SHP-1-601-Q2	2	C-F-2	C5.52	UT/MT	03/28/2000	
11715-WMKS-0101B	PEN-73	32"-SHP-1-601-Q2	2	F-A	F1.20	VT-3	03/23/2000	
11715-WMKS-0101B	SW-46W	32"-SHP-1-601-Q2	2	C-C	C3.20	MT	03/27/2000	
11715-WMKS-0101C	SW-37W	32"-SHP-2-601-Q2	2	C-C	C3.20	MT	03/27/2000	
11715-WMKS-0101C	SW-38W	32"-SHP-2-601-Q2	2	C-C	C3.20	MT	03/27/2000	
11715-WMKS-0101GA	32	6"-SHP-37-601-Q2	2	C-F-2	C5.51	UT/MT	03/29/2000	
11715-WMKS-0101GA	SH-118	6"-SHP-37-601-Q2	2	F-A	F1.20	VT-3	03/13/2000	RI(1)
11715-WMKS-0101GA	SW-40	6"-SHP-37-601-Q2	2	C-F-2	C5.51	UT/MT	03/29/2000	
11715-WMKS-0101GB	42	6"-SHP-38-601-Q2	2	C-F-2	C5.51	UT/MT	03/28/2000	
11715-WMKS-0102B	54	16"-WFPD-23-601C-Q2	2	C-F-2	C5.51	UT/MT	03/22/2000	
11715-WMKS-0102C	14	16"-WFPD-22-601-Q2	2	C-F-2	C5.51	UT/MT	03/24/2000	
11715-WMKS-0103AC	21	6"-SI-19-1502-Q1	2	C-F-1	C5.11	UT/PT	03/20/2000	
11715-WMKS-0103AC	4	6"-SI-130-1502-Q1	2	C-F-1	C5.11	UT/PT	03/20/2000	
11715-WMKS-0103AC	5	6"-SI-130-1502-Q1	2	C-F-1	C5.11	UT/PT	03/20/2000	P1
11715-WMKS-0103AC	R-208	6"-SI-16-1502-Q1	2	F-A	F1.20	VT-3	03/19/2000	
11715-WMKS-0103AD	SW-59	6"-SI-16-1502-Q1	2	C-F-1	C5.11	UT/PT	03/20/2000	
11715-WMKS-0103AJ	SI-209 BOLTING	6"-SI-21-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0103AJ	SI-99 BOLTING	6"-SI-21-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0103AJ	SW-13	6"-SI-21-1502-Q1	2	C-F-1	C5.11	UT/PT	03/28/2000	
11715-WMKS-0103AR	FE-1480	2"-RC-45-1502-Q1	1	B-G-2	B7.50	VT-1	03/27/2000	
11715-WMKS-0103AU	FLANGE A	1 1/2"-CH-397-1502-Q1	1	B-G-2	B7.50	VT-1	03/27/2000	
11715-WMKS-0103AV	R-19	2"-CH-92-1502-Q1	1	F-A	F1.10	VT-3	03/28/2000	
11715-WMKS-0103K	SI-195 BOLTING	6"-SI-131-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0104A-1	SW-17	10"-SI-15-1502-Q1	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104A-2	20	10"-SI-140-1502-Q1	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104A-2	61	10"-SI-238-1502-Q1	2	C-F-1	C5.11	PT, UT	03/29/2000	
11715-WMKS-0104A-2	70H	10"-SI-238-1502-Q1	2	C-C	C3.20	PT	03/26/2000	
11715-WMKS-0104A-2	SW-16	10"-SI-18-1502-Q1	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104A-2	SW-82	10"-SI-140-1502-Q1	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104C	13	12"-SI-2-153A-Q2	2	C-F-1	C5.11	PT, UT	03/31/2000	
11715-WMKS-0104C	15	12"-SI-1-153A-Q2	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104C	17	12"-SI-1-153A-Q2	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104C	6	12"-SI-1-153A-Q2	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104C	LS-63	12"-SI-1-153A-Q2	2	C-F-1	C5.12	PT, UT	03/30/2000	
11715-WMKS-0104C	SW-24	12"-SI-14-153A-Q2	2	C-F-1	C5.11	PT, UT	03/31/2000	
11715-WMKS-0104C	SW-36	12"-SI-215-153A-Q2	2	C-F-1	C5.11	PT, UT	03/30/2000	
11715-WMKS-0104E-1	11A	12"-RS-8-153A-Q2	2	C-F-1	C5.11	PT, UT	03/31/2000	P1
11715-WMKS-0104E-1	23	12"-RS-7-153A-Q2	2	C-F-1	C5.41	PT	03/29/2000	
11715-WMKS-0104E-2	A-612	8"-RS-E16-153A-Q2	2	F-A	F1.20	VT-3	03/12/2000	
11715-WMKS-0104G	A-18	8"-QS-4-153A-Q3	2	F-A	F1.20	VT-3	03/12/2000	RI(2)
11715-WMKS-0107C	SW-67	6"-QS-19-153A-Q3	2	C-F-1	C5.11	PT, UT	03/15/2000	P1
11715-WMKS-0107C	SW-68	6"-QS-19-153A-Q3	2	C-F-1	C5.11	PT, UT	03/15/2000	
11715-WMKS-0107C	SW-86	6"-QS-19-153A-Q3	2	C-F-1	C5.11	PT, UT	03/15/2000	
11715-WMKS-0107D	A-P1A	1-QS-P-1A	2	F-A	F1.40	VT-3	03/12/2000	
11715-WMKS-0107D	RH-70	8"-QS-3-153A-Q3	2	F-A	F1.20	VT-3	03/12/2000	
11715-WMKS-0107D	SW-66	8"-QS-3-153A-Q3	2	C-F-1	C5.11	PT, UT	03/15/2000	
11715-WMKS-0107D	SW-68	6"-QS-12-153A-Q3	2	C-F-1	C5.11	PT, UT	03/15/2000	
11715-WMKS-0107D	SW-69	6"-QS-12-153A-Q3	2	C-F-1	C5.11	PT, UT	03/15/2000	
11715-WMKS-0107M	82H	8"-SI-40-153A-Q2	2	C-C	C3.20	PT	03/15/2000	
11715-WMKS-0110A	FB-1551C BOLTING	6"-RC-37-1502-Q1	1	B-G-2	B7.50	VT-1	03/27/2000	
11715-WMKS-0110A	MOV-1535 BOLTING	3"-RC-35-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0110A	SV-1551A-BODY	6"-RC-39-1502-Q1	1	B-M-2	B12.50	VT-3	03/15/2000	
11715-WMKS-0110A	SV-1551B BOLTING	6"-RC-38-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0110A	SV-1551B-BODY	6"-RC-38-1502-Q1	1	B-M-2	B12.50	VT-3	03/15/2000	

**Abstract of Examinations Performed
IWB, IWC and IWF**

<u>DRAWING NO.</u>	<u>MARK/WELD NO.</u>	<u>LINE NO.</u>	<u>ISI CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>EXAM METHOD</u>	<u>EXAM DATE</u>	<u>REMARKS</u>
11715-WMKS-0110A	SV-1551C BOLTING	6"-RC-37-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0110A	SV-1551C-BODY	6"-RC-37-1502-Q1	1	B-M-2	B12.50	VT-3	03/15/2000	
11715-WMKS-0110B-1	57H	4"-RC-15-1502-Q1	1	B-K	B10.20	PT	03/18/2000	
11715-WMKS-0110B-1	R-20	4"-RC-15-1502-Q1	1	F-A	F1.10	VT-3	03/28/2000	
11715-WMKS-0110B-1	R-30	4"-RC-15-1502-Q1	1	F-A	F1.10	VT-3	03/17/2000	
11715-WMKS-0110B-1	SH-17	4"-RC-15-1502-Q1	1	F-A	F1.10	VT-3	03/28/2000	
11715-WMKS-0110B-1	SH-18	4"-RC-15-1502-Q1	1	F-A	F1.10	VT-3	03/28/2000	
11715-WMKS-0110B-1	SH-3	1 1/2"-RC-105-1502-Q1	1	F-A	F1.10	VT-3	03/28/2000	
11715-WMKS-0110B-2	R-52	4"-RC-14-1502-Q1	1	F-A	F1.10	VT-3	03/28/2000	
11715-WMKS-0111AB	SH-29	6"-CH-19-153A-Q2	2	F-A	F1.20	VT-3	03/12/2000	RI(3)
11715-WMKS-0111AB	SW-12W	6"-CH-72-153A-Q2	2	C-F-1	C5.11	PT, UT	03/14/2000	
11715-WMKS-0111AB	SW-80	6"-CH-19-153A-Q2	2	C-F-1	C5.11	PT, UT	03/14/2000	
11715-WMKS-0111B	R-36	8"-SI-40-153A-Q2	2	F-A	F1.20	VT-3	03/13/2000	
11715-WMKS-0111BC	18	3"-CH-941-1502-Q2	2	C-F-1	C5.21	PT, UT	03/15/2000	
11715-WMKS-0111C	R-9	8"-SI-102-153A-Q3	2	F-A	F1.20	VT-3	03/13/2000	
11715-WMKS-0111C	RH-11	10"-SI-8-153A-Q3	2	F-A	F1.20	VT-3	03/12/2000	
11715-WMKS-0111C	SW-40	8"-CH-204-153A-Q2	2	C-F-1	C5.11	PT, UT	03/27/2000	
11715-WMKS-0111XD	A-179	3"-CH-71-1502-Q2	2	F-A	F1.20	VT-3	03/12/2000	A(1)
11715-WMKS-0113A-1	72H	14"-RH-2-602-Q2	2	C-C	C3.20	PT	03/21/2000	P
11715-WMKS-0113A-1	MOV-1701 BOLTING	14"-RH-1-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0113A-1	R-16	14"-RH-2-602-Q2	2	F-A	F1.20	VT-3	03/19/2000	
11715-WMKS-0113A-2	55	14"-RH-3-602-Q2	2	C-F-1	C5.11	PT, UT	03/19/2000	
11715-WMKS-0113A-2	64	14"-RH-3-602-Q2	2	C-F-1	C5.11	PT, UT	03/21/2000	P
11715-WMKS-0113A-3	SW-58	10"-RH-8-602-Q2	2	C-F-1	C5.11	PT, UT	03/19/2000	
11715-WMKS-0113A-4	SI-125 BOLTING	12"-SI-67-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0113B	MOV-1720A BOLTING	10"-RH-12-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-0113B	SI-142 BOLTING	12"-SI-68-1502-Q1	1	B-G-2	B7.70	VT-1	03/12/2000	
11715-WMKS-CH-P-1A	SUPT-BASE	1-CH-P-1A	2	F-A	F1.40	VT-3	03/12/2000	
11715-WMKS-CH-P-1A	WS-01	1-CH-P-1A	2	C-C	C3.30	PT	03/14/2000	
11715-WMKS-CH-P-1A	WS-02	1-CH-P-1A	2	C-C	C3.30	PT	03/14/2000	P1
11715-WMKS-CH-P-1A	WS-03	1-CH-P-1A	2	C-C	C3.30	PT	03/14/2000	P
11715-WMKS-CH-P-1A	WS-04	1-CH-P-1A	2	C-C	C3.30	PT	03/14/2000	P
11715-WMKS-RC-E-1A.1	1A	1-RC-E-1A	1	B-B	B2.40	UT	03/22/2000	P1
11715-WMKS-RC-E-1A.1	CL-MANWAY	1-RC-E-1A	1	B-G-2	B7.30	VT-1	03/12/2000	
11715-WMKS-RC-E-1A.1	FRAME	1-RC-E-1A	1	F-A	F1.40	VT-3	03/20/2000	
11715-WMKS-RC-E-1A.1	HL-MANWAY	1-RC-E-1A	1	B-G-2	B7.30	VT-1	03/12/2000	
11715-WMKS-RC-E-1B.1	CL-MANWAY	1-RC-E-1B	1	B-G-2	B7.30	VT-1	03/24/2000	
11715-WMKS-RC-E-1B.1	HL-MANWAY	1-RC-E-1B	1	B-G-2	B7.30	VT-1	03/24/2000	
11715-WMKS-RC-E-1B.1	TUBING HOT LEG SIDE	1-RC-E-1B	1	B-Q	B16.20	EDDY CURR	03/24/2000	
11715-WMKS-RC-E-2	1	1-RC-E-2	1	B-B	B2.12	UT	03/17/2000	
11715-WMKS-RC-E-2	4	1-RC-E-2	1	B-B	B2.11	UT	03/17/2000	P1
11715-WMKS-RC-E-2	8	1-RC-E-2	1	B-K	B10.10	UT	03/17/2000	P1
11715-WMKS-RC-E-2	MANWAY	1-RC-E-2	1	B-G-2	B7.20	VT-1	03/12/2000	
11715-WMKS-RC-MOV1590	NUT-1-24	1-RC-MOV-1590	1	B-G-1	B6.230	VT-1	03/23/2000	
11715-WMKS-RC-MOV1590	STUD-1-24	1-RC-MOV-1590	1	B-G-1	B6.210	UT	03/23/2000	
11715-WMKS-RC-MOV1591	NUT-1-24	1-RC-MOV-1591	1	B-G-1	B6.230	VT-1	03/23/2000	
11715-WMKS-RC-MOV1591	STUD-1-24	1-RC-MOV-1591	1	B-G-1	B6.210	UT	03/23/2000	
11715-WMKS-RC-P-1A.2	B01	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B02	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B03	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B04	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B05	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B06	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	

**Abstract of Examinations Performed
IWB, IWC and IWF**

<u>DRAWING NO.</u>	<u>MARK/WELD NO.</u>	<u>LINE NO.</u>	<u>ISI CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>EXAM METHOD</u>	<u>EXAM DATE</u>	<u>REMARKS</u>
11715-WMKS-RC-P-1A.2	B07	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B08	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B09	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B10	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B11	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B12	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B13	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B14	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B15	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B16	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B17	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B18	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B19	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B20	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B21	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B22	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B23	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	B24	1-RC-P-1A	1	B-G-1	B6.180	UT	03/20/2000	
11715-WMKS-RC-P-1A.2	LSHB	1-RC-P-1A	1	B-G-2	B7.60	VT-1	03/20/2000	
11715-WMKS-RC-R-1.1	09	1-RC-R-1	1	B-D	B3.90	UT-AUT	03/23/2000	P
11715-WMKS-RC-R-1.1	09NIR	1-RC-R-1	1	B-D	B3.100	UT-AUT	03/23/2000	
11715-WMKS-RC-R-1.1	1	1-RC-R-1	1	B-A	B1.30	UT-AUT	03/24/2000	P1
11715-WMKS-RC-R-1.1	11	1-RC-R-1	1	B-D	B3.90	UT-AUT	03/23/2000	P
11715-WMKS-RC-R-1.1	11NIR	1-RC-R-1	1	B-D	B3.100	UT-AUT	03/23/2000	
11715-WMKS-RC-R-1.1	13	1-RC-R-1	1	B-D	B3.90	UT-AUT	03/24/2000	P
11715-WMKS-RC-R-1.1	13NIR	1-RC-R-1	1	B-D	B3.100	UT-AUT	03/24/2000	
11715-WMKS-RC-R-1.1	6	1-RC-R-1	1	B-A	B1.22	UT-AUT	03/24/2000	
11715-WMKS-RC-R-1.1	7	1-RC-R-1	1	B-A	B1.22	UT-AUT	03/24/2000	
11715-WMKS-RC-R-1.1	INST. NOZZLES	1-RC-R-1	1	B-E	B4.13	VT-2	03/14/2000	
11715-WMKS-RC-R-1.3	S-01	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-02	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-03	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/26/2000	
11715-WMKS-RC-R-1.3	S-04	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/26/2000	
11715-WMKS-RC-R-1.3	S-05	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/26/2000	
11715-WMKS-RC-R-1.3	S-06	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-07	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-08	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/26/2000	
11715-WMKS-RC-R-1.3	S-09	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/26/2000	
11715-WMKS-RC-R-1.3	S-10	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/26/2000	
11715-WMKS-RC-R-1.3	S-11	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-12	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-13	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-14	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-15	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-16	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-17	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-18	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	S-19	1-RC-R-1	1	B-G-1	B6.30	MT, UT	03/25/2000	
11715-WMKS-RC-R-1.3	TIF-01	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-02	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-03	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-07	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-08	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-09	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-10	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-11	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-12	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-33	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-34	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-35	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-42	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	

**Abstract of Examinations Performed
IWB, IWC and IWF**

<u>DRAWING NO.</u>	<u>MARK/WELD NO.</u>	<u>LINE NO.</u>	<u>ISI CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>EXAM METHOD</u>	<u>EXAM DATE</u>	<u>REMARKS</u>
11715-WMKS-RC-R-1.3	TIF-43	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-44	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-45	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-46	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-47	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-48	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-49	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-50	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-51	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-52	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-53	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-54	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-55	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-56	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-57	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.3	TIF-58	1-RC-R-1	1	B-G-1	B6.40	UT	03/18/2000	
11715-WMKS-RC-R-1.4	CCW-01	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-02	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-03	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-04	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-05	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-06	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-07	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-08	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-09	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-10	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-11	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-12	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-13	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-14	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-15	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-16	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-17	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-18	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CCW-19	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-01	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-02	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-03	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-04	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-05	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-06	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-07	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-08	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-09	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-10	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-11	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-12	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-13	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-14	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-15	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-16	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-17	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-18	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	CVW-19	1-RC-R-1	1	B-G-1	B6.50	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-01	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-02	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-03	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-04	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-05	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-06	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-07	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	

**Abstract of Examinations Performed
IWB, IWC and IWF**

<u>DRAWING NO.</u>	<u>MARK/WELD NO.</u>	<u>LINE NO.</u>	<u>ISI CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>EXAM METHOD</u>	<u>EXAM DATE</u>	<u>REMARKS</u>
11715-WMKS-RC-R-1.4	N-08	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-09	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-10	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-11	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-12	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-13	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-14	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-15	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-16	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-17	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-18	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RC-R-1.4	N-19	1-RC-R-1	1	B-G-1	B6.10	VT-1	03/25/2000	
11715-WMKS-RH-E-1A	3A	1-RH-E-1A	2	C-B	C2.31	PT	03/16/2000	
11715-WMKS-RH-E-1A	3B	1-RH-E-1A	2	C-B	C2.31	PT	03/16/2000	
11715-WMKS-RH-E-1B	3	1-RH-E-1B	2	C-B	C2.33	VT-2	03/13/2000	
11715-WMKS-RH-E-1B	4	1-RH-E-1B	2	C-B	C2.33	VT-2	03/13/2000	
11715-WMKS-SI-TK-2	1	1-SI-TK-2	2	C-A	C1.20	UT	03/30/2000	P
11715-WMKS-SI-TK-2	2	1-SI-TK-2	2	C-A	C1.20	UT	03/30/2000	S(1), RI(4)
11715-WMKS-SI-TK-2	S01	1-SI-TK-2	2	C-D	C4.10	UT	03/29/2000	
11715-WMKS-SI-TK-2	S02	1-SI-TK-2	2	C-D	C4.10	UT	03/29/2000	
11715-WMKS-SI-TK-2	S03	1-SI-TK-2	2	C-D	C4.10	UT	03/29/2000	
11715-WMKS-SI-TK-2	S04	1-SI-TK-2	2	C-D	C4.10	UT	03/29/2000	
11715-WMKS-SI-TK-2	S05	1-SI-TK-2	2	C-D	C4.10	UT	03/29/2000	

A(1) - a commitment was made in the NIS-1 report dated September 8, 1997 (Serial No. 97-472) to examine support A-179 during the third interval, first period.

P - Partial examination, reduction in coverage is 10% or greater thus requiring a relief request per Code Case N-460. Relief will be submitted by separate correspondence.

P1 - Partial examination, reduction in coverage is less than 10% as allowed by Code Case N-460. Therefore, relief is not required.

RI(1) - Spring hanger SH-118 had a broken cotter pin on the bottom attachment point, and the top attachment plate was separated from the wall about 1/8". The cotter pin still functioned to retain the load bearing pin in the clevis. The attachment plate was not over-loaded and still functioned. Therefore, the spring hanger was considered operable in the as found condition. The cotter pin was replaced and the attachment bolts tightened to eliminate separation.

RI(2) - Insufficient thread engagement on top right outer nut on the upper right hand corner of the bottom plate was reported for support A-18. Based on field walkdowns the base plate in question was found to have all but one anchor bolt with insufficient thread engagement. Since only three full threads are required to develop the full bolt strength, the support was considered operable in the as found condition. The bolt length does not allow for full engagement of all nut threads, however, the bolt load capacity is acceptable.

RI(3) - Spring hanger SH-29 had an improper hot spring setting. The as found setting was 347 lbs and the required setting was 300 lbs. The as found setting was within the working range of the spring, therefore, the spring hanger was considered operable in the as found condition. The spring hanger was reset to the required load setting.

RI(4) - A flaw indication was found in Weld 2 of the boron injection tank (1-SI-TK-2) during the 1998 outage. At the time the indication was evaluated using criteria from the 1983 Edition, Summer of 1983 Addenda of the Code and found to be acceptable. The indication and the evaluation were reported in the NIS-1 report for the 1998 outage dated December 22, 1998, Serial No. 98-542. Because an indication was found, a successive examination was performed during the Spring 2000 outage per the requirements of IWC-2420. The successive examination used new code flaw characterization rules based on the 1989 Edition of the Code. Use of these new rules resulted in a small change in indication depth and a change in length from 4 to 6.4 inches. The new indication size was evaluated and found to be acceptable for further service without repair.

S(1) - This is a successive examination resulting from a reportable indication found on 9/22/98 and reported as such in the NIS-1 report for the 1998 outage (Serial No. 98-542).

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPB-006A-1-1	PENETRATION #91	2	C-H	C7.30	4/1/2000	
11715-SPB-006A-1-1	PENETRATION #91	2	C-H	C7.70	4/1/2000	
11715-SPB-006A-1-2	PENETRATION #90	2	C-H	C7.30	4/1/2000	
11715-SPB-006A-1-2	PENETRATION #90	2	C-H	C7.70	4/1/2000	
11715-SPB-040C-1-1	1-HV-E-4A	3	D-A	D1.10	1/18/2000	
11715-SPB-040D-1-1	1-HV-E-4A	3	D-A	D1.10	1/18/2000	
11715-SPB-102B-1-1	PENETRATION #34	2	C-H	C7.30	3/12/2000	
11715-SPB-102B-1-1	PENETRATION #34	2	C-H	C7.70	3/12/2000	
11715-SPM-070B-1-1		2	C-H	C7.10	4/7/2000	
11715-SPM-070B-1-1		2	C-H	C7.30	4/7/2000	
11715-SPM-070B-1-1		2	C-H	C7.70	4/7/2000	
11715-SPM-070B-2-2		2	C-H	C7.10	4/7/2000	
11715-SPM-070B-2-2		2	C-H	C7.30	4/7/2000	
11715-SPM-070B-2-2		2	C-H	C7.70	4/7/2000	
11715-SPM-070B-3-2		2	C-H	C7.10	4/7/2000	
11715-SPM-070B-3-2		2	C-H	C7.30	4/7/2000	
11715-SPM-070B-3-2		2	C-H	C7.70	4/7/2000	
11715-SPM-072A-2-1	PENETRATION #89	2	C-H	C7.30	3/16/2000	
11715-SPM-072A-2-1	PENETRATION #89	2	C-H	C7.70	3/16/2000	
11715-SPM-074A-1-1		2	C-H	C7.10	4/7/2000	
11715-SPM-074A-1-1		2	C-H	C7.30	4/7/2000	
11715-SPM-074A-1-1		2	C-H	C7.70	4/7/2000	
11715-SPM-074A-1-1		3	D-B	D2.10	4/7/2000	
11715-SPM-074A-1-2		2	C-H	C7.10	4/7/2000	
11715-SPM-074A-1-2		2	C-H	C7.30	4/7/2000	
11715-SPM-074A-1-2		2	C-H	C7.70	4/7/2000	
11715-SPM-074A-1-2		3	D-B	D2.10	4/7/2000	
11715-SPM-074A-1-3		2	C-H	C7.10	4/7/2000	
11715-SPM-074A-1-3		2	C-H	C7.30	4/7/2000	
11715-SPM-074A-1-3		2	C-H	C7.70	4/7/2000	
11715-SPM-074A-1-3		3	D-B	D2.10	4/7/2000	
11715-SPM-074A-3-5		3	D-B	D2.10	3/13/2000	
11715-SPM-078A-1-5		3	D-A	D1.10	12/29/1999	
11715-SPM-078A-1-6		3	D-A	D1.10	12/29/1999	
11715-SPM-078A-1-7		3	D-A	D1.10	12/29/1999	
11715-SPM-078A-1-8		3	D-A	D1.10	12/29/1999	
11715-SPM-078A-4-1		3	D-A	D1.10	3/13/2000	
11715-SPM-078A-4-6		3	D-B	D2.10	3/13/2000	
11715-SPM-078B-1-1		3	D-B	D2.10	3/13/2000	
11715-SPM-078B-1-2		3	D-B	D2.10	3/13/2000	
11715-SPM-078B-1-3		2	C-H	C7.10	3/13/2000	
11715-SPM-078B-1-3		2	C-H	C7.30	3/13/2000	
11715-SPM-078B-1-3		2	C-H	C7.70	3/13/2000	

SOME BURIED PIPING
SW PIPING TO/FROM UNIT 1 SW PENETRATIONS

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-078B-1-4		2	C-H	C7.10	3/13/2000	
11715-SPM-078B-1-4		2	C-H	C7.30	3/13/2000	
11715-SPM-078B-1-4		2	C-H	C7.70	3/13/2000	
11715-SPM-078B-1-5		2	C-H	C7.10	3/13/2000	
11715-SPM-078B-1-5		2	C-H	C7.30	3/13/2000	
11715-SPM-078B-1-5		2	C-H	C7.70	3/13/2000	
11715-SPM-078B-1-6		2	C-H	C7.10	3/13/2000	
11715-SPM-078B-1-6		2	C-H	C7.30	3/13/2000	
11715-SPM-078B-1-6		2	C-H	C7.70	3/13/2000	
11715-SPM-078C-1-1		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-1-2		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-1-3		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-1-4		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-1-5		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-1-6		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-2-1		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-2-2		3	D-A	D1.10	12/29/1999	
11715-SPM-078C-2-3		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-1-1		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-1-2		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-1-3		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-1-4		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-1-5		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-2-1		3	D-A	D1.10	12/29/1999	
11715-SPM-078G-2-2		3	D-A	D1.10	12/29/1999	
11715-SPM-079A-1-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-1-2		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-1-3		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-1-4		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-1-5		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-1-6		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-2-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-2-2		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-3-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-3-5		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-3-6		3	D-A	D1.10	12/30/1999	
11715-SPM-079A-3-8		3	D-A	D1.10	12/30/1999	
11715-SPM-079B-1-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079B-1-2		2	C-H	C7.30	4/7/2000	
11715-SPM-079B-1-2		2	C-H	C7.70	4/7/2000	
11715-SPM-079B-1-2		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-1-3		2	C-H	C7.30	4/7/2000	
11715-SPM-079B-1-3		2	C-H	C7.70	4/7/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-079B-1-3		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-1-4		2	C-H	C7.30	4/7/2000	
11715-SPM-079B-1-4		2	C-H	C7.70	4/7/2000	
11715-SPM-079B-1-4		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-2-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079B-2-2		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-2-3		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-2-3		2	C-H	C7.30	4/7/2000	
11715-SPM-079B-2-3		2	C-H	C7.70	4/7/2000	
11715-SPM-079B-3-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079B-3-2		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-3-3		2	C-H	C7.30	4/7/2000	
11715-SPM-079B-3-3		2	C-H	C7.70	4/7/2000	
11715-SPM-079B-3-3		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-4-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079B-4-2		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-4-3		2	C-H	C7.30	4/7/2000	
11715-SPM-079B-4-3		2	C-H	C7.70	4/7/2000	
11715-SPM-079B-4-3		3	D-A	D1.10	4/7/2000	
11715-SPM-079B-5-1		3	D-A	D1.10	4/7/2000	
11715-SPM-079C-1-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-3-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-3-2		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-3-3		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-3-4		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-3-5		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-4-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079C-5-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079D-4-1		2	C-H	C7.30	4/7/2000	
11715-SPM-079D-4-1		2	C-H	C7.70	4/7/2000	
11715-SPM-079E-1-1		3	D-A	D1.10	12/30/1999	
11715-SPM-079E-1-2		3	D-A	D1.10	12/30/1999	
11715-SPM-082F-1-1	PENETRATION #42	2	C-H	C7.30	3/18/2000	
11715-SPM-082F-1-1	PENETRATION #42	2	C-H	C7.70	3/18/2000	
11715-SPM-082N-1-1	PENETRATION #47	2	C-H	C7.30	3/18/2000	
11715-SPM-082N-1-1	PENETRATION #47	2	C-H	C7.70	3/18/2000	
11715-SPM-088A-1-2		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-1-4		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-2-2	PENETRATION #104	2	C-H	C7.30	3/15/2000	
11715-SPM-088A-2-2	PENETRATION #104	2	C-H	C7.70	3/15/2000	
11715-SPM-088A-4-1		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-10		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-2		3	D-C	D3.10	1/19/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-088A-4-3		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-4		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-5	1-FC-P-1B (1-FC-18 to 1-FC-22)	3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-7		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-8		3	D-C	D3.10	1/19/2000	
11715-SPM-088A-4-9		3	D-C	D3.10	1/19/2000	
11715-SPM-089B-3-1	PENETRATION #104	2	C-H	C7.30	4/7/2000	
11715-SPM-089B-3-1	PENETRATION #104	2	C-H	C7.70	4/7/2000	
11715-SPM-089B-3-2		2	C-H	C7.30	4/7/2000	
11715-SPM-089B-3-2		2	C-H	C7.70	4/7/2000	
11715-SPM-089B-3-3		2	C-H	C7.30	4/7/2000	
11715-SPM-089B-3-3		2	C-H	C7.70	4/7/2000	
11715-SPM-089D-1-1		1	B-P	B15.50	4/7/2000	
11715-SPM-089D-1-1		1	B-P	B15.70	4/7/2000	
11715-SPM-089D-1-3		2	C-H	C7.30	3/13/2000	
11715-SPM-089D-1-3		2	C-H	C7.70	3/13/2000	
11715-SPM-089D-1-4		2	C-H	C7.30	3/14/2000	
11715-SPM-089D-1-4		2	C-H	C7.70	3/14/2000	
11715-SPM-089D-1-5	PENETRATION 56A	1	B-P	B15.50	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-5	PENETRATION 56A	1	B-P	B15.70	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-6	PENETRATION 57C	1	B-P	B15.50	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-6	PENETRATION 57C	1	B-P	B15.70	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-7	PENETRATION 56B	1	B-P	B15.50	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-7	PENETRATION 56B	1	B-P	B15.70	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-9	PENETRATION 56C	1	B-P	B15.50	4/7/2000	Normally isolated but subject to examination.
11715-SPM-089D-1-9	PENETRATION 56C	1	B-P	B15.70	4/7/2000	Normally isolated but subject to examination.
11715-SPM-090A-1-1	PENETRATION #38	2	C-H	C7.30	3/13/2000	
11715-SPM-090A-1-1	PENETRATION #38	2	C-H	C7.70	3/13/2000	
11715-SPM-090C-1-1	PENETRATION #48	2	C-H	C7.30	3/13/2000	
11715-SPM-090C-1-1	PENETRATION #48	2	C-H	C7.70	3/13/2000	
11715-SPM-090C-3-1	PENETRATION #38	2	C-H	C7.30	3/13/2000	
11715-SPM-090C-3-1	PENETRATION #38	2	C-H	C7.70	3/13/2000	
11715-SPM-090C-3-4		1	B-P	B15.50	4/7/2000	Normally isolated but must be examined following refueling since it is contained within the second isolation valve.
11715-SPM-090C-3-4		1	B-P	B15.70	4/7/2000	Normally isolated but must be examined following refueling since it is contained within the second isolation valve.
11715-SPM-090C-3-5		1	B-P	B15.50	4/7/2000	Normally isolated but must be examined following refueling since it is contained within the second isolation valve.
11715-SPM-090C-3-5		1	B-P	B15.70	4/7/2000	Normally isolated but must be examined following refueling since it is contained within the second isolation valve.
11715-SPM-090C-3-6		1	B-P	B15.50	4/7/2000	Normally isolated but must be examined following refueling since it is contained within the second isolation valve.

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-090C-3-6		1	B-P	B15.70	4/7/2000	Normally isolated but must be examined following refueling since it is contained within the second isolation valve.
11715-SPM-091A-1-15		3	D-B	D2.10	3/30/2000	
11715-SPM-091A-1-16		3	D-B	D2.10	3/30/2000	
11715-SPM-092A-1-6	PENETRATION #105D	2	C-H	C7.30	3/16/2000	
11715-SPM-092A-1-6	PENETRATION #105D	2	C-H	C7.70	3/16/2000	
11715-SPM-092A-2-3	PENETRATION #94	2	C-H	C7.30	3/15/2000	
11715-SPM-092A-2-3	PENETRATION #94	2	C-H	C7.70	3/15/2000	
11715-SPM-093A-1-1		1	B-P	B15.10	4/7/2000	
11715-SPM-093A-1-1		1	B-P	B15.30	4/7/2000	
11715-SPM-093A-1-1		1	B-P	B15.50	4/7/2000	
11715-SPM-093A-1-1		1	B-P	B15.60	4/7/2000	
11715-SPM-093A-1-1		1	B-P	B15.70	4/7/2000	
11715-SPM-093A-1-2		1	B-P	B15.50	4/7/2000	Dead leg downstream of 1-RC-9. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-1-2		1	B-P	B15.70	4/7/2000	Dead leg downstream of 1-RC-9. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-1-3		1	B-P	B15.50	4/7/2000	Loop fill. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-1-3		1	B-P	B15.70	4/7/2000	Loop fill. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-1-4		1	B-P	B15.50	4/7/2000	Loop drain. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-1-4		1	B-P	B15.70	4/7/2000	Loop drain. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-1-5		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-185. Normally isolated. Required to be examined.
11715-SPM-093A-1-5		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-186. Normally isolated. Required to be examined.
11715-SPM-093A-1-6		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-186. Normally isolated. Required to be examined.
11715-SPM-093A-1-6		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-186. Normally isolated. Required to be examined.
11715-SPM-093A-2-1		1	B-P	B15.10	4/7/2000	
11715-SPM-093A-2-1		1	B-P	B15.30	4/7/2000	
11715-SPM-093A-2-1		1	B-P	B15.50	4/7/2000	
11715-SPM-093A-2-1		1	B-P	B15.60	4/7/2000	
11715-SPM-093A-2-1		1	B-P	B15.70	4/7/2000	
11715-SPM-093A-2-2		1	B-P	B15.50	4/7/2000	
11715-SPM-093A-2-2		1	B-P	B15.70	4/7/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-093A-2-3		1	B-P	B15.50	4/7/2000	Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-3		1	B-P	B15.70	4/7/2000	Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-4		1	B-P	B15.50	4/7/2000	1-RC-HCV-1557B and 1-RC-50 to header. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-4		1	B-P	B15.70	4/7/2000	1-RC-HCV-1557B and 1-RC-50 to header. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-5		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-190. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-5		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-190. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-6		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-189. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-2-6		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-189. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-1		1	B-P	B15.10	4/7/2000	
11715-SPM-093A-3-1		1	B-P	B15.30	4/7/2000	
11715-SPM-093A-3-1		1	B-P	B15.50	4/7/2000	
11715-SPM-093A-3-1		1	B-P	B15.60	4/7/2000	
11715-SPM-093A-3-1		1	B-P	B15.70	4/7/2000	
11715-SPM-093A-3-10		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-195. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-10		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-195. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-11		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-192. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-11		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-192. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-093A-3-12		1	B-P	B15.50	4/7/2000	Downstream of 1-RC-36. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-12		1	B-P	B15.70	4/7/2000	Downstream of 1-RC-36. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-2		1	B-P	B15.50	4/7/2000	Downstream of 1-RC-80. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-2		1	B-P	B15.70	4/7/2000	
11715-SPM-093A-3-3		1	B-P	B15.50	4/7/2000	
11715-SPM-093A-3-3		1	B-P	B15.70	4/7/2000	Downstream of 1-RC-80. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-4		1	B-P	B15.50	4/7/2000	Downstream of 1-RC-HCV-1556C. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-4		1	B-P	B15.70	4/7/2000	Downstream of 1-RC-HCV-1556C. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-5		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-104. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-5		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-104. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-6		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-194. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-6		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-194. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-7		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-103. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-7		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-103. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-8		1	B-P	B15.50	4/7/2000	1-RC-HCV-1557C and 1-RC-82 to header. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-093A-3-8		1	B-P	B15.70	4/7/2000	1-RC-HCV-1557C and 1-RC-82 to header. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-9		1	B-P	B15.50	4/7/2000	Dead leg portion to 1-RC-105 to 1-RC-152. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093A-3-9		1	B-P	B15.70	4/7/2000	Dead leg portion to 1-RC-105 to 1-RC-152. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-1		1	B-P	B15.20	4/7/2000	
11715-SPM-093B-1-1		1	B-P	B15.50	4/7/2000	
11715-SPM-093B-1-1		1	B-P	B15.70	4/7/2000	
11715-SPM-093B-1-2		1	B-P	B15.50	4/7/2000	1-RC-SOV-102A2/B2. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-2		1	B-P	B15.70	4/7/2000	1-RC-SOV-102A2/B2. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-3		1	B-P	B15.50	4/7/2000	Loop seal drains. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-3		1	B-P	B15.70	4/7/2000	Loop seal drains. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-4		1	B-P	B15.50	4/7/2000	1-RC-176 to 1-RC-178. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-4		1	B-P	B15.70	4/7/2000	1-RC-176 to 1-RC-178. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-5		1	B-P	B15.50	4/7/2000	1-RC-175. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-5		1	B-P	B15.70	4/7/2000	1-RC-175. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-6		1	B-P	B15.50	4/7/2000	1-RC-172. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-6		1	B-P	B15.70	4/7/2000	1-RC-172. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-093B-1-7		1	B-P	B15.50	4/7/2000	1-RC-174. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-093B-1-7		1	B-P	B15.70	4/7/2000	1-RC-174. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-094A-1-1		1	B-P	B15.50	4/7/2000	
11715-SPM-094A-1-1		1	B-P	B15.70	4/7/2000	
11715-SPM-094A-1-2		2	C-H	C7.10	3/13/2000	
11715-SPM-094A-1-2		2	C-H	C7.30	3/13/2000	
11715-SPM-094A-1-2		2	C-H	C7.50	3/13/2000	
11715-SPM-094A-1-2		2	C-H	C7.70	3/13/2000	
11715-SPM-094A-1-3		2	C-H	C7.30	3/13/2000	
11715-SPM-094A-1-3		2	C-H	C7.70	3/13/2000	
11715-SPM-094A-1-4		2	C-H	C7.30	3/13/2000	
11715-SPM-094A-1-4		2	C-H	C7.70	3/13/2000	
11715-SPM-094A-2-1		1	B-P	B15.50	4/7/2000	
11715-SPM-094A-2-1		1	B-P	B15.70	4/7/2000	
11715-SPM-094A-2-2		1	B-P	B15.50	4/7/2000	
11715-SPM-094A-2-2		1	B-P	B15.70	4/7/2000	
11715-SPM-094A-2-3		2	C-H	C7.10	3/13/2000	
11715-SPM-094A-2-3		2	C-H	C7.30	3/13/2000	
11715-SPM-094A-2-3		2	C-H	C7.70	3/13/2000	
11715-SPM-094A-2-4		2	C-H	C7.30	3/13/2000	
11715-SPM-094A-2-4		2	C-H	C7.70	3/13/2000	
11715-SPM-094A-2-6		2	C-H	C7.30	3/13/2000	
11715-SPM-094A-2-6		2	C-H	C7.70	3/13/2000	
11715-SPM-095A-1-1		3	D-A	D1.10	1/18/2000	
11715-SPM-095A-1-3		3	D-A	D1.10	1/19/2000	1-CH-P-2C excluding piping from batch tank from valves 1-CH-79, 1-CH-98, 1-CH-113, and 1-CH-129
11715-SPM-095A-1-4		3	D-A	D1.10	1/19/2000	
11715-SPM-095A-2-1		3	D-A	D1.10	1/18/2000	
11715-SPM-095A-2-2		3	D-A	D1.10	1/19/2000	
11715-SPM-095A-2-3		3	D-A	D1.10	1/19/2000	
11715-SPM-095A-3-1		2	C-H	C7.10	4/7/2000	
11715-SPM-095A-3-1		2	C-H	C7.30	4/7/2000	
11715-SPM-095A-3-1		2	C-H	C7.70	4/7/2000	
11715-SPM-095A-4-1		2	C-H	C7.10	1/18/2000	
11715-SPM-095A-4-1		2	C-H	C7.30	1/18/2000	
11715-SPM-095A-4-1		2	C-H	C7.70	1/18/2000	
11715-SPM-095A-4-2	PENETRATION #28	2	C-H	C7.30	1/18/2000	
11715-SPM-095A-4-2	PENETRATION #28	2	C-H	C7.70	1/18/2000	
11715-SPM-095A-4-3		2	C-H	C7.30	1/18/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-095A-4-3		2	C-H	C7.70	1/18/2000	
11715-SPM-095A-4-4		2	C-H	C7.30	1/18/2000	
11715-SPM-095A-4-4		2	C-H	C7.70	1/18/2000	
11715-SPM-095A-4-5		2	C-H	C7.30	1/18/2000	
11715-SPM-095A-4-5		2	C-H	C7.70	1/18/2000	
11715-SPM-095A-4-6		2	C-H	C7.30	1/18/2000	
11715-SPM-095A-4-6		2	C-H	C7.70	1/18/2000	
11715-SPM-095B-1-1		2	C-H	C7.30	4/7/2000	
11715-SPM-095B-1-1		2	C-H	C7.70	4/7/2000	
11715-SPM-095B-1-2		2	C-H	C7.10	4/7/2000	
11715-SPM-095B-1-2		2	C-H	C7.30	4/7/2000	
11715-SPM-095B-1-2		2	C-H	C7.70	4/7/2000	
11715-SPM-095B-1-3		2	C-H	C7.10	1/12/2000	
11715-SPM-095B-1-3		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-1-3		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-1-3		3	D-A	D1.10	1/12/2000	
11715-SPM-095B-1-5		3	D-C	D3.10	1/19/2000	
11715-SPM-095B-1-6		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-1-6		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-1-7		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-1-7		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-1-8		2	C-H	C7.10	1/12/2000	
11715-SPM-095B-1-8		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-1-8		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-2-1		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-2-1		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-2-3		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-2-3		2	C-H	C7.50	1/12/2000	
11715-SPM-095B-2-3		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-2-5		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-2-5		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-2-6		2	C-H	C7.30	1/12/2000	
11715-SPM-095B-2-6		2	C-H	C7.70	1/12/2000	
11715-SPM-095B-2-9		2	C-H	C7.30	1/12/2000	
11715-SPM-095C-1-1		1	B-P	B15.40	4/7/2000	
11715-SPM-095C-1-1		1	B-P	B15.50	4/7/2000	
11715-SPM-095C-1-1		1	B-P	B15.70	4/7/2000	
11715-SPM-095C-1-1		1	C-H	C7.30	4/7/2000	
11715-SPM-095C-1-1		1	C-H	C7.70	4/7/2000	
11715-SPM-095C-1-2		1	B-P	B15.50	4/7/2000	
11715-SPM-095C-1-2		1	B-P	B15.70	4/7/2000	
11715-SPM-095C-1-3		2	C-H	C7.30	1/12/2000	
11715-SPM-095C-1-3		2	C-H	C7.70	1/12/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-095C-1-4		1	B-P	B15.50	4/7/2000	Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-095C-1-4		1	B-P	B15.70	4/7/2000	Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-095C-1-4		2	C-H	C7.30	4/7/2000	
11715-SPM-095C-1-4		2	C-H	C7.70	4/7/2000	
11715-SPM-095C-1-5		2	C-H	C7.30	4/7/2000	
11715-SPM-095C-1-5		2	C-H	C7.70	4/7/2000	
11715-SPM-095C-1-6		1	B-P	B15.50	4/7/2000	
11715-SPM-095C-1-6		1	B-P	B15.70	4/7/2000	
11715-SPM-095C-1-6		2	C-H	C7.10	4/7/2000	
11715-SPM-095C-1-6		2	C-H	C7.30	4/7/2000	
11715-SPM-095C-1-6		2	C-H	C7.70	4/7/2000	
11715-SPM-095C-1-9	PENETRATION #28	2	C-H	C7.30	4/7/2000	
11715-SPM-095C-1-9	PENETRATION #28	2	C-H	C7.70	4/7/2000	
11715-SPM-095C-2-1		2	C-H	C7.10	1/12/2000	
11715-SPM-095C-2-1		2	C-H	C7.30	1/12/2000	
11715-SPM-095C-2-1		2	C-H	C7.70	1/12/2000	
11715-SPM-095C-2-2		2	C-H	C7.30	4/7/2000	
11715-SPM-095C-2-2		2	C-H	C7.70	4/7/2000	
11715-SPM-095C-2-3		1	B-P	B15.50	4/7/2000	
11715-SPM-095C-2-3		1	B-P	B15.70	4/7/2000	
11715-SPM-095C-2-3		2	C-H	C7.30	4/7/2000	
11715-SPM-095C-2-3		2	C-H	C7.70	4/7/2000	
11715-SPM-095C-2-4		1	B-P	B15.50	4/7/2000	Dead leg of 1-CH-384. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-095C-2-4		1	B-P	B15.70	4/7/2000	Dead leg of 1-CH-384. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-095C-2-6		1	B-P	B15.50	4/7/2000	
11715-SPM-095C-2-6		1	B-P	B15.60	4/7/2000	
11715-SPM-095C-2-6		1	B-P	B15.70	4/7/2000	
11715-SPM-095C-2-7		2	C-H	C7.30	4/7/2000	
11715-SPM-095C-2-7		2	C-H	C7.70	4/7/2000	
11715-SPM-095C-2-8		1	B-P	B15.50	4/7/2000	Dead leg of 1-CH-362. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-095C-2-8		1	B-P	B15.70	4/7/2000	Dead leg of 1-CH-362. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-095C-2-9		1	B-P	B15.50	4/7/2000	Dead leg of 1-CH-340. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-095C-2-9		1	B-P	B15.70	4/7/2000	Dead leg of 1-CH-340. Not normally inservice. This section is not part of the test boundary but is part of the examination boundary since it includes the second isolation back from RCS.
11715-SPM-096A-2-6		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-2-6		2	C-H	C7.70	4/4/2000	
11715-SPM-096A-2-7		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-2-7		2	C-H	C7.70	4/4/2000	
11715-SPM-096A-2-8		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-2-8		2	C-H	C7.70	4/4/2000	
11715-SPM-096A-3-1		2	C-H	C7.10	4/4/2000	
11715-SPM-096A-3-1		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-3-1		2	C-H	C7.70	4/4/2000	
11715-SPM-096A-3-2		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-3-2		2	C-H	C7.70	4/4/2000	
11715-SPM-096A-3-3		3	D-B	D2.10	1/18/2000	
11715-SPM-096A-3-4		2	C-H	C7.30	1/12/2000	
11715-SPM-096A-3-4		2	C-H	C7.70	1/12/2000	
11715-SPM-096A-3-5		2	C-H	C7.30	1/12/2000	
11715-SPM-096A-3-5		2	C-H	C7.70	1/12/2000	
11715-SPM-096A-3-7		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-3-7		2	C-H	C7.70	4/4/2000	
11715-SPM-096A-3-8		2	C-H	C7.30	4/4/2000	
11715-SPM-096A-3-8		2	C-H	C7.70	4/4/2000	
11715-SPM-096B-1-1		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-1-1		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-1-2		2	C-H	C7.10	4/7/2000	
11715-SPM-096B-1-2		2	C-H	C7.30	4/7/2000	
11715-SPM-096B-1-2		2	C-H	C7.70	4/7/2000	
11715-SPM-096B-1-3		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-1-3		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-1-4	PENETRATION #50	2	C-H	C7.30	3/16/2000	
11715-SPM-096B-1-4	PENETRATION #50	2	C-H	C7.70	3/16/2000	
11715-SPM-096B-1-5	PENETRATION #53	2	C-H	C7.30	3/16/2000	
11715-SPM-096B-1-5	PENETRATION #53	2	C-H	C7.70	3/16/2000	
11715-SPM-096B-2-1		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-2-1		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-2-2		2	C-H	C7.10	4/7/2000	
11715-SPM-096B-2-2		2	C-H	C7.30	4/7/2000	
11715-SPM-096B-2-2		2	C-H	C7.70	4/7/2000	
11715-SPM-096B-2-3		1	B-P	B15.50	4/7/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-096B-2-3		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-3-1		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-3-1		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-3-2		2	C-H	C7.10	4/7/2000	
11715-SPM-096B-3-2		2	C-H	C7.30	4/7/2000	
11715-SPM-096B-3-2		2	C-H	C7.70	4/7/2000	
11715-SPM-096B-3-3		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-3-3		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-4-1		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-4-1		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-4-2		2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-2		2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-3	PENETRATION #60	2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-3	PENETRATION #60	2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-4		2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-4		2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-5		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-4-5		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-4-5		2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-5		2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-6		2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-6		2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-7		1	B-P	B15.50	4/7/2000	
11715-SPM-096B-4-7		1	B-P	B15.70	4/7/2000	
11715-SPM-096B-4-7		2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-7		2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-8	PENETRATION #22	2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-8	PENETRATION #22	2	C-H	C7.70	4/4/2000	
11715-SPM-096B-4-9	PENETRATION #113	2	C-H	C7.30	4/4/2000	
11715-SPM-096B-4-9	PENETRATION #113	2	C-H	C7.70	4/4/2000	
11715-SPM-098A-2-1		2	C-H	C7.10	4/7/2000	
11715-SPM-098A-2-1		2	C-H	C7.30	4/7/2000	
11715-SPM-098A-2-1		2	C-H	C7.70	4/7/2000	
11715-SPM-098A-2-2	PENETRATION #39	2	C-H	C7.30	4/7/2000	
11715-SPM-098A-2-2	PENETRATION #39	2	C-H	C7.70	4/7/2000	
11715-SPM-098A-3-1		2	C-H	C7.10	4/7/2000	
11715-SPM-098A-3-1		2	C-H	C7.30	4/7/2000	
11715-SPM-098A-3-1		2	C-H	C7.70	4/7/2000	
11715-SPM-098A-3-2	PENETRATION #41	2	C-H	C7.30	4/7/2000	
11715-SPM-098A-3-2	PENETRATION #41	2	C-H	C7.70	4/7/2000	
11715-SPM-098A-4-1		2	C-H	C7.10	4/7/2000	
11715-SPM-098A-4-1		2	C-H	C7.30	4/7/2000	
11715-SPM-098A-4-1		2	C-H	C7.70	4/7/2000	

**Abstract of Examinations Performed
System Pressure Test Program**

<u>ZONE NO.</u>	<u>DESCRIPTION</u>	<u>ASME CLASS</u>	<u>CATE-GORY</u>	<u>ITEM NO.</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
11715-SPM-098A-4-2	PENETRATION #40	2	C-H	C7.30	4/7/2000	
11715-SPM-098A-4-2	PENETRATION #40	2	C-H	C7.70	4/7/2000	
11715-SPM-102A-2-1		2	C-H	C7.30	4/7/2000	
11715-SPM-102A-2-1		2	C-H	C7.70	4/7/2000	
11715-SPM-102A-2-2		2	C-H	C7.30	4/7/2000	
11715-SPM-102A-2-2		2	C-H	C7.70	4/7/2000	
11715-SPM-102A-2-3		2	C-H	C7.30	4/7/2000	
11715-SPM-102A-2-3		2	C-H	C7.70	4/7/2000	
11715-SPM-102A-2-4	PENETRATION #111	2	C-H	C7.30	4/7/2000	
11715-SPM-102A-2-4	PENETRATION #111	2	C-H	C7.70	4/7/2000	
11715-SPM-102A-2-5	PENETRATION #111	2	C-H	C7.30	4/7/2000	
11715-SPM-102A-2-5	PENETRATION #111	2	C-H	C7.70	4/7/2000	
11715-SPM-102A-2-6	PENETRATION #111	2	C-H	C7.30	4/7/2000	
11715-SPM-102A-2-6	PENETRATION #111	2	C-H	C7.70	4/7/2000	
11715-SPM-105B-1-1	NITROGEN TO S/G.	3	D-A	D1.10	4/7/2000	
11715-SPM-105B-1-2	NITROGEN TO S/G.	3	D-A	D1.10	4/7/2000	
11715-SPM-105B-1-3	NITROGEN TO S/G.	3	D-A	D1.10	4/7/2000	
11715-SPM-106A-2-2	PENETRATION #105B	2	C-H	C7.30	3/16/2000	
11715-SPM-106A-2-2	PENETRATION #105B	2	C-H	C7.70	3/16/2000	
13075-SPM-093C-1-1		1	B-P	B15.50	4/7/2000	
13075-SPM-093C-1-1		1	B-P	B15.70	4/7/2000	
13075-SPM-093C-2-1		1	B-P	B15.50	4/7/2000	
13075-SPM-093C-2-1		1	B-P	B15.70	4/7/2000	
13075-SPM-102C-1-1	CHEM. FEED TO S/G.	2	C-H	C7.30	4/7/2000	
13075-SPM-102C-1-1	CHEM. FEED TO S/G.	2	C-H	C7.70	4/7/2000	
13075-SPM-102C-1-2	CHEM. FEED TO S/G.	2	C-H	C7.30	4/7/2000	
13075-SPM-102C-1-2	CHEM. FEED TO S/G.	2	C-H	C7.70	4/7/2000	
13075-SPM-102C-1-3	CHEM. FEED TO S/G.	2	C-H	C7.30	4/7/2000	
13075-SPM-102C-1-3	CHEM. FEED TO S/G.	2	C-H	C7.70	4/7/2000	

Abstract of Examinations Performed

Snubber Program

A total of 82 small bore snubbers were replaced as part of the normal Technical Specification functional test program. There was one functional test failure in the 82 small bore snubbers functionally tested under this program.

Small bore snubber removal and installation for the Technical Specification functional testing and visual inspection programs are considered maintenance activities and are not ASME Section XI repairs and replacements. For this reason the ANII was not involved in review of the functional or visual programs.

Two large bore Lisega snubbers were scheduled for functional testing as part of normal surveillance (1-RC-HSS-001A and 1-RC-HSS-011C), and one large bore Taylor snubber (1-RC-HSS-001C). There were no functional test failures in the three large bore snubbers functionally tested under this program.

Abstract of Examinations Performed

Steam Generator Program

TUBE INTEGRITY ASSESSMENT

1.0 Summary

Overall condition assessments have been delineated in the North Anna Steam Generator Monitoring and Inspection Program Plan. Consistent with the NEI 97-06 requirements, a pre-outage assessment was performed to identify any relevant or potential degradation mechanisms to be considered for the North Anna Unit 1 steam generators and to identify the appropriate eddy current inspection scope and probe capabilities.

As required by NEI 97-06, performance criteria are established in this document in three areas:

- Tubing Structural Integrity
- Operational Leakage
- Projected Accident Leakage

The inspection performed on the "B" steam generator was consistent with the Program Plan. The results of the inspection formed the basis of the condition monitoring and operational assessment performed for this outage.

Condition Monitoring and Operational Assessment of the steam generator tube bundles are performed to verify that the condition of the tubes, as reflected in the inspection results, is in compliance with plant licensing basis. Defects detected are evaluated to confirm that the Reg. Guide 1.121 margins against leakage and burst were not exceeded at the end of this operating cycle. The results of the Condition Monitoring evaluation are used as a basis for an Operational Assessment, which demonstrates prospectively that the anticipated performance of the steam generators will likewise not exceed the Reg. Guide 1.121 margins against leakage and tube burst during the ensuing operating period.

No degradation was identified during the inspection program. Hence, acceptable tube integrity at the end of the current operating cycle is demonstrated and condition monitoring and operational assessment requirements on burst pressure and accident condition leak rates are satisfied.

The condition of the North Anna Unit 1 steam generators, as indicated by the results of the Condition Monitoring Evaluation, satisfy the requirements of Reg. Guide 1.121 with respect to structural and leakage integrity margin. The completed operating interval, i.e., time between the last Steam Generator "B" inspection, was approximately 46.2 EFPM and the cumulative operating period for the replacement S/Gs was 78.5 EFPM. The planned operating interval before the next inspection of Steam Generator B is approximately 50 EFPM. With no tube degradation being reported following the replacement EOC5 operation, no known condition exists that would fail to meet structural and leakage margin requirements before the end of next planned operating interval for Steam Generator "B". Thus, the Operational Assessment requirements are satisfied.

2.0 North Anna Unit 1 – Summary of Evaluated Degradation Mechanisms, Inspection Methods, and Plan

No "Existing" degradation is being monitored and no degradation was observed this outage as expected, with these units having been replaced in 1993. Based on the assessment of prior inspection results, steam generator design features, and industry experience with similar steam generators, monitoring for the presence of "Relevant" and "Potential" degradation is conducted.

The inspections conducted during this outage follow the philosophy established in the North Anna Steam Generator Monitoring and Inspection Program Plan. The pre-outage assessment noted no particular areas of concern. The pre-outage assessment also covers salient observations of industry experience. In addition, site specific data not available at the issuance of the December 1998 Program Plan such as secondary side deposit characterization and analyses have been evaluated and integrated into the inspection process, as appropriate. Details of the current inspection and results are included in the Steam Generator Services Summary Report provided by Westinghouse Electric Company. Hence, only the specific results relating to the condition evaluation will be covered here.

3.0 Condition Monitoring Assessment – Tube Integrity Evaluation

The condition monitoring assessment is an evaluation of the past operating cycle relative to structural and leakage integrity margin based on current inspection results. The condition of the North Anna Unit 1 steam generators, as indicated by the results of the inspection performed on the "B" steam generator, satisfies the requirements of Reg. Guide 1.121 with respect to structural and leakage integrity margin for the recently completed operating period. A discussion of the inspection results and the evaluations performed is provided in the following sections.

3.1 Primary Side Inspection

No findings corresponding to crack-like indications were observed on the inspection conducted on "B" steam generator. The Planned 50% Bobbin inspection of 1796 tubes full length not previously inspected completes 100% re-inspection of the tubes in this generator since the baseline inspection of 1992. Focused RPC inspections at the H/L top of tubesheet (719 tubes - 20% sample of the population) and in the Row 1 U-bend area (98 tubes - 100% of the tubes in this row) were conducted. No conditions indicative of corrosion degradation were noted from these eddy current programs. Conditions per the site specific analysis guidelines, which required follow-up RPC testing to resolve Bobbin indications, were not observed on any tubes.

No tubing wear at AVB contact points was observed even in the initial stages of wear, approximately 10% thru-wall (TW). This is consistent with experience in the industry that the appearance of these indications in earlier F-type steam generators (i.e. Model F and 51-F with 600 TT tubing) typically begin at approximately the 4th to 5th cycle of operation. None has been observed on Unit 1 after 5 cycles of operation. Limited inspection populations on later generation Westinghouse F-type units with Alloy 690 tubing such as North Anna have not reported any AVB associated wear in data reported through mid 1999. Some later replacement Alloy 690 BWI (Canada) Units have exhibited significant tube wear at AVB's during the first cycle that required plugging and require closer scrutiny.

Manufacturing Buff Mark (MBM) signals were typical of what was observed on baseline inspections and were resolved through comparison of signals per the analysis guidelines. None required additional RPC testing. Excellent correlation of signals indicates that A690TT tubing appears to be less susceptible to resistivity changes that affect eddy current signatures than does A600TT tubing.

RPC inspection of the top of the hot leg tubesheet location was performed for 720 tubes (1 more than the base scope plan). This program focused primarily on the low velocity region in the middle of the bundle. One anomalous indication (in tube R3C58 – SAA – single axial anomaly) and one MBM (in tube R10C52) were reported. The anomaly appeared to be produced by a ding in the transition area with no crack-like components and was resolved per the guidelines. The tube with the MBM signal showed it to be in the free-span area above the transition and traced back to baseline bobbin data and was resolved.

Ninety-eight Row 1 U-bends were inspected with single coil RPC probes. Data from 6 tubes showed C-scan signals that could be characterized as circumferential anomalies. The RPC lissajous was flat, indicative of a non-flaw-like signal. Repeat tests were performed from the hot leg side in both the push and the pull modes; however they did not resolve the signals. After discussion with Station Management regarding the options to resolve the signals, Plus Point testing was performed on these U-bends from

the cold leg side. Evaluation of the Plus Point data showed no signals indicative of cracks. Hence all tubes were found to be devoid of flaws.

No observations, such as that found in the Fall 98 inspection (TSH + 10"; Volumetric / PIT) that was plugged, was found during the current inspection.

During this examination the Virginia Power NDE Level III performed random data checks as well as a final verification of the planned versus completed inspection program. No issues were noted.

3.2 Localized Sludge Accumulation

As a part of the onsite review process, a sample of 382 tubes (TTS RPC program) was identified. These tubes were focused predominantly in the tubesheet sludge zone (H/L) and RPC Eddy Current data from these tubes were screened to determine the presence of sludge. As is typical from other screening evaluations, the particulate "fallout" appears in the open "doughnut hole" area of the baffle plate. Minimal deposits were noted in the area toward the periphery of the tubesheet. One hundred and forty one tubes appeared to have some accumulation of sludge ranging in height up to 3 inches. The focused RPC inspection makes it appear that more tubes are affected, but the percentage of the tubes affected in the sludge zone is consistent with the past findings (ratio ~ 50%). The eddy current data indicated that these deposits accumulated in small pockets and do not uniformly surround the tube. No attempt was made to determine tube scale thickness from the eddy current data. Minimal sludge deposits were seen at tube support plate elevations based on a 100 tube random sample from the bobbin program with all TSP elevations in the hot and cold legs evaluated.

3.3 Secondary Side Inspections

Consistent with the North Anna Steam Generator Program Plan, NEI 97-06, and GL 97-06, secondary side inspections were performed to confirm that no secondary side condition existed that would impact tube integrity. Inspection at the 7th tube support plate, including wedge blocks, back-up bars and support structures, was performed and no issues identified. A light oxide deposit covered all tube support plate surfaces examined with no appreciable loose sludge. Tube surfaces showed minimal oxide buildup and no evidence of scale. No blockage or sludge build-up was noted within the tube support plate broached holes.

Sludge mapping was performed on a sample of 382 tubes as noted in Section 3.2. No conditions were found which would have adversely affected the operation of the North Anna Unit 1 Steam Generator B during the last operating interval. Secondary system corrosion product transport continues to be excellent with approximately 141 lbs. total for all three steam generators having been passed forward over the last cycle. A

cumulative total of approximately 845 lbs. is estimated since replacement based on the operating data through 4th quarter of 1999 and an estimate for the first quarter of 2000, prior to the refueling shut down. This demonstrates continued good chemistry environment.

3.4 Operational Leakage

The primary-to-secondary leakage response limit of 100 GPD/steam generator from the Technical Specifications still exists as the limit imposed prior to replacement. Station procedures continue to use a lower administrative limit of 50 GPD/steam generator with a total rate of change limit of 60 GPD within 90 minutes to evaluate shut down actions. The value typically used in the industry as a critical leakage value requiring unit shutdown is 150 GPD/steam generator and/or a rate of change leakage limit of > 60 GPD/hour/steam generator and is referenced in EPRI Document on Primary-to-Secondary Leak Guidelines. Assessments as a part of the action plan to comply with the NEI 97-06 Steam Generator Program Document will define where enhancements or changes to current procedures may be necessary as a result of the pending Revision 2 industry document. This assessment should be completed by September, 2000 in concert with the new Technical Specification requirements. The current procedures are viewed as conservative with respect to the vintage of the replacement North Anna units and that no active degradation has been noted.

During the past operating cycle, no primary-to-secondary leakage was observed during plant operation. Monitoring continues per testing requirements of PT-46.3 B and PT-46.3 C. N -16 monitors continue to be used to provide fast response trending of any potential leakage.

3.5 Projected Accident Leakage

No inspection findings were indicative that leakage would have occurred since the findings confirm the lack of operative degradation mechanisms since unit replacement.

3.6 Conclusion

The condition of the North Anna Unit 1 steam generators, as indicated by the results of the inspection performed on the "B" steam generator, satisfy the requirements of Reg. Guide 1.121 with respect to structural and leakage integrity margin for the recently completed operating period.

4.0 Operational Assessment: Tube Integrity And Leakage

4.1 Discussion

Based on information contained in Technical Report NE-1214, Rev. 0 "Fuel Management Scheme 1999-B," the past operating interval between inspections of the "B" steam generator was 46.2 EFPM and the cumulative operating period for the replacement S/Gs was 78.5 EFPM. The projected operating interval until the next inspection of S/G B is approximately 50 EFPM. No conditions were identified during the current completed inspection efforts that would impact the structural and leakage performance of the Unit 1 steam generators through the next planned operating interval, thereby satisfying the operational assessment. In accordance with the referenced Program Plan logic of general and focused tubing inspections on one steam generator per refueling cycle, the findings of this inspection are consistent with maintaining this planned frequency of inspection.

The only degradation that is expected over the long term is minor wear at anti-vibration bar (AVB) locations. AVB wear, if present, is reported during bobbin testing. Typically, indications begin to be reported at approximately 10% through wall and, in general, are slow growing. Industry experience, to date, on similar Model F type replacement steam generators have reported no appreciable AVB wear. Typical growth of 2% to 5% throughwall per cycle has been experienced at Surry. The performance of the North Anna generators is expected to at least equal that of Surry since the close gap AVB tolerance techniques were used during manufacturing of the North Anna steam generators.

The following evaluation was performed to evaluate a potential existing 10% throughwall AVB wear condition relative to tube integrity requirements at the end of the next planned operating interval (3 Cycles - 50 EFPM) for the "B" steam generator. The projection is based on 5 % / Cycle growth rate and a total NDE uncertainty of 14.6 %.

$$\% \text{ TW (2004)} = 10\% \text{ TW (2000)} + [(5\% \text{ Growth / cycle}) \times 3 \text{ Cycles}] + 14.6\%$$

$$\% \text{ TW (2004)} = 39.6 \%$$

No structural integrity concern is identified for the planned operating interval of North Anna Unit 1 "B" steam generator.

Although there are no findings indicative of a concern, sensitivity to primary-to-secondary leakage events will continue with conservatively based monitoring procedures. Consideration is being given to moving to generic industry leakage thresholds now that replacement has been completed on all North Anna units. Incorporation of industry recommended values as indicated in Revision 2 to the EPRI Primary-to-Secondary Leakage Guideline will be implemented as a part of the

assessment of the current procedures compared to those guidelines and related commitments to the NEI 97-06 S/G Program Guideline Document.

Similar chemistry controls as in the past cycle should be maintained throughout the next cycle. Chemistry excursions or significant changes to treatment programs will be evaluated on a case by case basis relative to impact on planned inspection cycles and scopes. Due to low amounts of sludge being removed and continued low corrosion product transport, sludge lancing or other enhanced methods will continue to be planned on an every other outage basis. The laboratory analysis of scale samples and subsequent review of results will be continued and evaluated with respect to sludge lance frequency. Supplemental inspections and enhanced cleaning methods will be pursued consistent with the Steam Generator Advisory Committee recommendations from the October 1999 meeting. Subsequent Program Plan requirements will be modified and approved as necessary.

4.2 Conclusion

Based on the results of this eddy current inspection, past inspections, and current chemistry operating practices, "B" steam generator meets the performance criteria to operate for at least three cycles before the next planned tubing inspection. If other issues are identified on other North Anna steam generators in ensuing inspections or other relevant industry findings are noted during the inspection of similar model steam generators, review of planned inspection intervals will be conducted per Program Plan requirements. Results to date indicate that the currently planned tubing inspection interval on "A" and "C" steam generators can remain as planned. Steam Generator "A" is currently scheduled to be inspected in the Fall of 2001 and Steam Generator "C" is scheduled to be inspected in the Spring of 2003. The current inspection of Steam Generator "B" completes 100% bobbin re-inspection of tubes in all S/Gs since the baseline inspection of 1992.

Results of secondary side inspections continue to demonstrate reliable operation. Continuing diligence on chemistry and FME control will support long term performance. Evaluation and monitoring will continue as planned and further detailed in the Monitoring and Inspection Program Plan. Continuing awareness of any related industry issues will be considered when planning future inspections.

Abstract of Examinations

Containment Inservice Inspection Program

For Category IWE, a general visual examination was performed of the accessible portions of the containment liner and VT-1 examinations were performed on the electrical penetrations, the emergency personnel hatch and the equipment hatch. The examinations did not identify any conditions which would affect inaccessible areas and require reporting per 10 CFR 50.55a(b)(ix)(E) or 10 CFR 50.55a(b)(x)(A).

Attachment 2

Inservice Inspection Summary Report

North Anna Power Station Unit 1

P.O. Box 402

Mineral, Virginia 23117

2000 Refueling Outage Owner's Report of Inservice Inspections for Interval 3

Commercial Service Date 6-6-78

**Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060**

Repair and Replacements

Repair and replacements completed during this refueling outage were performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, 1989 Edition.

The following paragraphs and the attached NIS-2 forms represent those repairs and replacements performed on Class 1 and Class 2 systems.

RR# 1999-065, Replaced pilot plug and primary plug on valve 1-MS-PCV-101A, Class 2, due to leakby. This replacement was performed under work order 412716-01, and completed on 10-21-1999.

RR# 1999-145, Replaced studs and nuts during repair for body to bonnet leak on valve 1-MS-60, Class 2. This replacement was performed under work order 417788-01, and completed on 11-10-1999.

RR# 1999-152, Replaced valve 1-MS-60, Class 2, and associated downstream piping, Class 3. The valve had previously been injected with leak sealant. This replacement was performed under work order 411467-01, and completed on 3-15-2000. Plant Issue 2000-1474 was written for failure to perform surface examination on the root pass of two Class 3 welds as required by Code Case N-416-1. The Class 3 piping was removed from service and will be hydrostatically tested during the next refueling outage. The NIS-2 Form will be completed following the hydrostatic test.

RR# 1999-155, Removed and destroyed ASME NPT tag to perform inservice inspection of weld 31 on line 2"-RC-198-1502-Q1, Class 1. This replacement was performed under work order 418543-01, and completed on 4-25-2000.

RR# 2000-009, Rev. 1, Replaced plug on valve 1-RC-PCV-1455C, Class 1, due to leakby. This replacement was performed under work order 421410-01, and completed on 4-6-2000. Plant Issue 2000-1087 was written for work performed outside the original scope of the repair and replacement program.

RR# 2000-012, Replaced plug on valve 1-RC-PCV-1456, Class 1, due to leakby. This replacement was performed under work order 399336-01, and completed on 4-25-2000.

RR# 2000-017, Replaced studs and nuts on pump 1-QS-P-1A, Class 2, due to corrosion caused by leak at pump casing gasket. This replacement was performed under work order 409747-01, and completed on 4-5-2000.

RR# 2000-021, Replaced valve 1-CH-306 and associated piping 2"-CH-77-1502-Q2, Class 2, due to leakby. This replacement was performed under work order 419922-01, and completed on 4-6-2000.

RR# 2000-022, Replaced valve 1-CH-302 and associated piping 2"-CH-76-1502-Q2, Class 2, due to leakby. This replacement was performed under work order 419922-02, and completed on 4-6-2000.

RR# 2000-026, Replaced flange studs and nuts with improved design on valve 1-RC-SV-1551A, Class 1. This replacement was performed under work order 407696-01, and completed on 4-4-2000.

RR# 2000-027, Replaced flange studs and nuts with improved design on valve 1-RC-SV-1551B, Class 1. This replacement was performed under work order 407697-01, and completed on 4-4-2000.

RR# 2000-028, Replaced flange studs and nuts with improved design on valve 1-RC-SV-1551C, Class 1. This replacement was performed under work order 407698-01, and completed on 4-4-2000.

RR# 2000-030, Replaced valve 1-FP-272, Class 2, due to failed Type C test. This replacement was performed under work order 426907-01, and completed on 4-5-2000.

RR# 2000-031, Replaced studs and nuts on valve 1-MS-SV-103C, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407657-01, and completed on 4-2-2000.

RR# 2000-032, Replaced studs and nuts on valve 1-MS-SV-104A, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407658-01, and completed on 4-2-2000.

RR# 2000-033, Replaced studs and nuts on valve 1-MS-SV-104C, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407661-01, and completed on 4-2-2000.

RR# 2000-034, Removed 7/16" linear liquid penetrant indication from end of valve 1-BD-128, Class 2. This replacement was performed under work order 426896-01, and completed on 4-10-2000.

RR# 2000-035, Replaced studs and nuts on valve 1-MS-SV-101B, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407646-01, and completed on 4-2-2000.

RR# 2000-036, Replaced studs and nuts on valve 1-MS-SV-102B, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407651-01, and completed on 4-2-2000.

RR# 2000-037, Replaced studs and nuts on valve 1-MS-SV-103B, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407655-01, and completed on 4-2-2000.

RR# 2000-038, Replaced studs and nuts on valve 1-MS-SV-104B, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407659-01, and completed on 4-2-2000.

RR# 2000-039, Replaced 6" check valve 1-CC-154, Class 2, and bolting during repair for seat leakage. This replacement was performed under work order 427048-01, and completed on 5-2-2000.

RR# 2000-040, Replaced support 1-MS-SH-118, Class 2, because it was found broken during inspection. This replacement was performed under work order 427207-01, and completed on 3-31-2000.

RR# 2000-041, Replaced support 1-MS-SH-116, Class 2, because it was found broken during inspection. This replacement was performed under work order 427209-01, and completed on 3-31-2000.

RR# 2000-042, Replaced support 1-MS-SH-117, Class 2, because it was found broken during inspection. This replacement was performed under work order 427210-01, and completed on 3-31-2000.

RR# 2000-046, Replaced disc insert on valve 1-MS-SV-103B, Class 2, due to normal wear. This replacement was performed under work order 407655-01, and completed on 4-2-2000.

RR# 2000-047, Replaced bolting on valve 1-RH-24, Class 2, due to corrosion due to body to bonnet leak. The replacement was performed under work order 427248-01, and completed on 5-16-2000.

RR# 2000-050, Replaced pin on support 1-RC-HSS-001C, Class 1, and cleaned up burrs caused during removal. The pin was damaged during removal. This replacement was performed under work order 391371-01, and completed on 4-2-2000.

RR# 2000-053, Replaced disc insert and spindle on valve 1-MS-SV-102C, Class 2, due to normal wear. This replacement was performed under work order 407653-03, and completed on 4-2-2000.

RR# 2000-054, Replaced body/nozzle assembly and body to bonnet bolting on valve 1-MS-SV-104B, Class 2, due to degraded condition found during testing. This replacement was performed under work order 407659-03, and completed on 4-4-2000.

RR# 2000-055, Replaced nozzle and disc on valve 1-RC-SV-1551B, Class 1, due to damage found during testing. This replacement was performed under work order 407697-01, and completed on 4-5-2000.

RR# 2000-056, Replaced bolting on valve 1-RH-1, Class 2, due to corrosion caused by body to bonnet leak. This replacement was performed under work order 427405-01, and completed on 4-2-2000.

RR# 2000-057, Replaced bolting on valve 1-MS-TV-101B, Class 2 due to bolting being over torqued during re-assembly. This replacement was performed under work order 407670-01, and completed on 4-10-2000.

RR# 2000-058, Replaced body to bonnet bolting on valve 1-SI-MOV-1862A, Class 2 due to bolting being found rusted when valve was disassembled. This replacement was performed under work order 413121-02, and completed on 3-28-2000.

RR# 2000-059, Machined nozzle on valve 1-MS-SV-102A, Class 2, to restore design dimensions. Replaced valve disc insert due to normal wear. This repair and replacement was performed under work order 407649-01, and completed on 4-5-2000.

RR# 2000-060, Replaced disc insert on valve 1-MS-SV-103C, Class 2, due to normal wear. This replacement was performed under work order 407657-01, and completed on 4-2-2000.

RR# 2000-061, Replaced body to bonnet nuts and valve plugs on valve 1-CV-8, Class 2, as part of the check valve inspection program. This replacement was performed under work order 419951-01, and completed on 4-2-2000.

RR# 2000-062, Replaced body to bonnet nuts and valve plugs on valve 1-CV-14, Class 2, as part of the check valve inspection program. This replacement was performed under work order 419952-01, and completed on 4-2-2000.

RR# 2000-063, Replaced threaded rod on support 1-CH-SPRH-SH-19.29, Class 2, to achieve proper spring setting. This replacement was performed under work order 427477-01, and completed on 4-10-2000.

RR# 2000-064, Replaced bolting on valve 1-QS-5, Class 2. Wrong material was previously installed under RR 2000-048, WO 410220-01. This replacement was performed under work order 427730-01, and completed on 4-2-2000.

RR# 2000-065, Replaced bolting on valve 1-QS-21, Class 2. Wrong material was previously installed under RR 2000-047, WO 410210-01. This replacement was performed under work order 427730-02, and completed on 4-2-2000.

RR# 2000-066, Replaced studs and nuts on valve 1-MS-SV-102B, Class 2, as a good maintenance practice after valve was reinstalled after testing. This replacement was performed under work order 407651-02, and completed on 4-5-2000.

RR# 2000-069, Replaced bolting on support 1-BD-SH-14.11, Class 2, during adjustment of clamp location. This replacement was performed under work order 427778-01, and completed on 4-5-2000.

RR# 2000-070, Replaced plug on valve 1-MS-SV-104B, Class 2. The plug was found to be missing after the valve was returned from the testing vendor. This replacement was performed under work order 407659-02, and completed on 4-5-2000.

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

1. Owner Virginia Electric & Power Company Date October 21, 1999
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 99-065 Work Order 412716-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Pilot Plug	Fisher	971002-4	N/A	1-MS-PCV-101A	1997	Replacement	No
Primary Plug	Fisher	PC0037-1	N/A	1-MS-PCV-101A	1997	Replacement	No

7. Description of Work Replaced pilot plug and primary plug due to leakby.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 807 psi Test Temp. N/A °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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naught ISI Engineer Date October 21, 1999
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 7/2/99 to 10/21/99, 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.

M M Grace Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 10/21 1999

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

1. Owner Virginia Electric & Power Company Date November 10, 1999
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 99-145 Work Order 417788-01
Address _____ Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name _____ Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address _____

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, _____ Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989 Edition

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)
5/8 Nuts	Mackson, Inc.	Ht. # 31937OF	N/A	1-MS-60	1999	Replacement	No
5/8" Studs	Mackson, Inc.	Ht. # 38286	N/A	1-MS-60	1998	Replacement	No

7. Description of Work Replaced studs and nuts during repair for body to bonnet leak.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed *Pat J. Whittle* ISI Engineer Date November 10, 1999
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 9/29/99 to 11/16/99, 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.

M. M. Awe Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 11/16 19 99

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

1. Owner Virginia Electric & Power Company Date April 25, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 1999-155 Work Order 418543-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
2" NPS Pipe	Southwest Fabricating and Welding	2977	N/A	CH-44-1X	1973	Replaced	Yes

7. Description of Work Removed and destroyed ASME NPT tag to perform inservice inspection of weld 31 on line 2"-RC-198-1502-Q1.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naughton ISI Engineer Date April 25 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.T. & L. Co. of Hartford, CT have inspected the components described in this Owner's Report during the period 11/30/99 to 5/2/00, 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.

Mark M. Husi Commissions VA424-R NB 9531 A, N, P
Inspector's Signature National Board, State, Province, and Endorsements

Date 5/2 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 6, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 2
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 *Rev 1 P/N 4-6-06 MR 4/6/00*
Address R/R 2000-009*Work Order 421410-01
Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ANSI B16.5 Edition, 1968 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Plug	Dresser Valve Division	Ht. # 606740-35	N/A	1-RC-PCV-1455C	1999	Replacement	No

7. Description of Work Replaced plug due to leaky.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 Plant Issue N-2000-1087 written for work performed outside
Applicable Manufacturer's Data Reports to be attached
the original repair and replacement program.

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Peter Naught IST Engineer Date April 6 X10 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 1/25/00 to 4/6/00, 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.

Mark M. Hance Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/6 X10 2000

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

1. Owner Virginia Electric & Power Company Date April 25, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-012 Work Order 399336-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Reactor Coolant, Class 1
5. (a) Applicable Construction Code ANSI B16.5 Edition, 1968 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Plug	Dresser Valve Division	Ht. # G4151-3	N/A	1-RC-PCV-1456	2000	Replacement	No

7. Description of Work Replaced plug due to leaky.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naught ISI Engineer Date April 25 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.R.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 2/25/00 to 5/12/00, 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.

Mark M. Hugg Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-12 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-017 Work Order 409747-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Quench Spray, Class 2
5. (a) Applicable Construction Code Draft Pump & Valve Code 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989 Edition
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)
5/8 Nuts	Mackson, Inc.	Ht. # 31937OF	N/A	1-QS-P-1A	1999	Replacement	No
5/8" Studs	Mackson, Inc.	Ht. # 38286	N/A	1-QS-P-1A	1998	Replacement	No

7. Description of Work Replaced studs and nuts due to corrosion caused by leak at pump casing gasket.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Patsy Nawroth ISI Engineer Date April 5 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 2/22/00 to 4/15/00, 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.

Mark M. Hess Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/15 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 6, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-021 Work Order 419922-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Chemical and Volume Control, Class 2
ANSI B16.5 1968 Edition - valve

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
2" Globe Valve	Framatome Technologies	C3595	N/A	1-CH-306	1999	Replacement	Yes
2" Pipe	Energy and Process Inc.	Heat # 446523	N/A	2"-CH-77-1502-Q2	1999	Replacement	No
2" 90 Degree Elbow	Capital Pipe and Steel	Heat # OJ	N/A	2"-CH-77-1502-Q2	1989	Replacement	No

7. Description of Work Replaced valve and associated piping due to leak by.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 2650 psi Test Temp. N/A °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 Code Case N-416-1 was invoked for this replacement.

Applicable Manufacturer's Data Reports to be attached

Mfr. Data Report SN# C3525

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 _____

Certificate of Authorization No. _____ Expiration Date _____

Signed Robt Waugh ISI Engineer Date April 6 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 2/25/00 to 4/7/00, 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.

Mark M. Hens Commissions VA424-R NB 9531 A,N,I
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/7 ~~XX~~ 2000

FORM NPV-1 (back)

8. Remarks VALVES ARE BONNETLESS DESIGN. BACKSEAT BUSHING LISTED IN LIEU OF BONNET.

9. Design conditions _____ psi _____ °F or valve pressure class 1700 (1)
(pressure) (temperature)

10. Cold working pressure 4000 psi at 100°F

11. Hydrostatic test 6125 psi. Disk differential test pressure 4500 psi

CERTIFICATION OF DESIGN

Design Specification certified by George J. Paptzun P.E. State PA Reg. no. PE-034809-E
Design Report certified by Murray W. Randall P.E. State MA Reg. no. 27395

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N2449 Expires 11/14/2001
Date 9/9/99 Name Yarway Corporation Signed [Signature]
(N Certificate Holder) (authorized representative)

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 PENNSYLVANIA and employed by ARKWRIGHT MUTUAL INS. CO.* of NORWOOD, MA have inspected the pump, or valve, described in this Data Report on 09/09, 19 99, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component 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 09/09/99 Signed [Signature] Commissions PA2389 'N'
(Authorized Inspector) *FACTORY MUTUAL ENGINEERING ASSOCIATION
(Natl Bd. (incl. endorsements) state or prov. and no.)

(1) For manually operated valves only.



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

1. Owner Virginia Electric & Power Company Date April 6, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-022 Work Order 419922-02
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Chemical and Volume Control, Class 2
ANSI B16.5 1968 Edition - valve

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
2" Globe Valve	Framatome Technologies	C3596	N/A	1-CH-302	1999	Replacement	Yes
2" Pipe	Energy and Process Inc.	Heat # 446523	N/A	2"-CH-76-1502-Q2	1999	Replacement	No
2" 90 Degree Elbow	Energy and Process Inc.	Heat # RW	N/A	2"-CH-76-1502-Q2	1999	Replacement	No

7. Description of Work Replaced valve and associated piping due to leak by.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 2650 psi Test Temp. N/A °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 Code Case N-416-1 was invoked for this replacement.
Applicable Manufacturer's Data Reports to be attached
Mfr. Data Report SN# C 3596

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 _____

Certificate of Authorization No. _____ Expiration Date _____

Signed Pat Waugh ISI Engineer Date Apr: 6 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 2/25/00 to 4/7/00, 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.

Mark M. Hwa Commissions VA424-R NB 9531 A, N, E
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/7 ~~XX~~ 2000

FORM NPV-1 (back)

8. Remarks VALVES ARE BONNETLESS DESIGN. BACKSEAT BUSHING LISTED IN LIEU OF BONNET.

9. Design conditions _____ psi _____ °F or valve pressure class 1700 (1)
(pressure) (temperature)

10. Cold working pressure 4080 psi at 100°F

11. Hydrostatic test 6125 psi. Disk differential test pressure 4500 psi

CERTIFICATION OF DESIGN

Design Specification certified by George J. Paptzun P.E. State PA Reg. no. PE-034808-E
Design Report certified by Murray W. Randall P.E. State MA Reg. no. 27395

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N2449 Expires 11/14/2001

Date 9/9/99 Name Yarway Corporation Signed [Signature]
(N Certificate Holder) (authorized representative)

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 PENNSYLVANIA and employed by ARKWRIGHT MUTUAL INS. CO.* of NORWOOD, MA have inspected the pump, or valve, described in this Data Report on 09/09, 19 99, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component 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 09/09/99 Signed [Signature] Commissions PA2389 'N'
(Authorized Inspector) (*Factory Mutual Engineering Association
[Nat'l Bd. (incl. endorsements) state or prov. and no.]

(1) For manually operated valves only.



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

1. Owner Virginia Electric & Power Company Date April 4, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-026 Work Order 407696-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Superbolts NUH650	Nova Machine Products	Heat # 36398006	N/A	1-RC-SV-1551A	1999	Replacement	No
1 3/8" Heavy Hex Head Nuts	Mackson, Inc.	Heat # 60344	N/A	1-RC-SV-1551A	1998	Replacement	No
1 3/8" Studs	Mackson, Inc	Heat # 67889	N/A	1-RC-SV-1551A	1999	Replacement	No
1 3/8" Studs	Mackson, Inc	Heat # 8098419	N/A	1-RC-SV-1551A	1998	Replacement	No

7. Description of Work Replaced flange studs and nuts with improved design.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Pat. Waugh
Owner or Owner's Designee, Title

ISI Engineer

Date April 4

X5 2000

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/7/00 to 4/5/00, 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.

Mark M. Hwa
Inspector's Signature

Commissions VA424-R

National Board, State, Province, and Endorsements

Date 4/5 X5 2000

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

1. Owner Virginia Electric & Power Company Date April 4, 2000
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 2000-027 Work Order 407697-01
Address _____ Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp _____ N/A
Name _____ Authorization No. _____ N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date _____ N/A
Address _____

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Superbolts NUH650	Nova Machine Products	Heat # 36398006	N/A	1-RC-SV-1551B	1999	Replacement	No
1 3/8" Heavy Hex Head Nuts	Mackson, Inc.	Heat # 60344	N/A	1-RC-SV-1551B	1998	Replacement	No
1 3/8" Studs	Mackson, Inc	Heat # 67889	N/A	1-RC-SV-1551B	1999	Replacement	No

7. Description of Work Replaced flange studs and nuts with improved design.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pete Waucho ISI Engineer Date April 4 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/7/00 to 4/5/00, 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.

Mark M. Area Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/5 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 4, 2000
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 2000-028 Work Order 407698-01
Address _____ Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp _____ N/A
Name _____ Authorization No. _____ N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date _____ N/A
Address _____

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Superbolts NUH650	Nova Machine Products	Heat # 36398006	N/A	1-RC-SV-1551C	1999	Replacement	No
1 3/8" Heavy Hex Head Nuts	Mackson, Inc.	Heat # 60344	N/A	1-RC-SV-1551C	1998	Replacement	No
1 3/8" Studs	Mackson, Inc	Heat # 67889	N/A	1-RC-SV-1551C	1999	Replacement	No

7. Description of Work Replaced flange studs and nuts with improved design.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Vaughn ISI Engineer Date April 4 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/7/00 to 4/5/00, 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.

Mark M. Hua Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/5 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-030 Work Order 426907-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Fire Protection, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
4" Check Valve	Techno Corporation	E1500	N/A	1-FP-272	2000	Replacement	No

7. Description of Work Replaced valve due to failed Type C test.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naughton ISI Engineer Date April 5 XX 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/14/00 to 4/15/00, 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.

Mark M. Faria Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/15 XX 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-031 Work Order 407657-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-103C	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-103C	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Palauetto ISI Engineer Date April 2 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/17/00 to 4/3/00, 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.

Mark M. Hare Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/2 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name _____
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____
P.O. Box 402, Mineral, VA 23117 R/R 2000-032 Work Order 407658-01
Address _____ Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name _____ Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address _____

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-104A	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-104A	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Patricia Naughton ISI Engineer Date April 2 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/17/00 to 4/3/00, 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.

Mark M. Shera Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/3 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-033 Work Order 407661-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-104C	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-104C	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Nangle ISI Engineer Date April 2 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/14/00 to 4/3/00, 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.

Mark M. Arora Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/3 2000

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

1. Owner Virginia Electric & Power Company Date April 10, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-034 Work Order 426896-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Blowdown, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" Globe Valve	Anchor Darting	E-154A-10-3	N/A	1-BD-128	1999	Repair	No

7. Description of Work Removed 7/16" linear liquid penetrant indication from valve end.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached _____

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naughton ISI Engineer Date April 10, 192000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B. E+I Co. of Hartford, CT. have inspected the components described in this Owner's Report during the period 3/17/00 to 4/8/00, 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.

Mark M. Hawn Commissions VA 424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/18 192000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-035 Work Order 407646-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-101B	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-101B	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naught ISI Engineer Date April 2 ~~XX~~ 2000
Owner of Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/14/00 to 4/3/00, 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.

MM Hove Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/3 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000

Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1

Address

2. Plant North Anna Power Station Unit: 1

Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-036 Work Order 407651-01

Address

Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A

Name

Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A

Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-102B	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-102B	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Naught ISI Engineer Date April 2 X8 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/14/00 to 4/3/00, 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.

Mark M. Hance Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/3 X8 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-037 Work Order 407655-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-103B	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-103B	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Pat J. Naughton
Owner or Owner's Designee, Title

ISI Engineer Date April 2

XX 2000

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT

_____ have inspected the components described in this Owner's Report during the period 3/14/00 to 4/3/00, 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.

Mark M. Huse
Inspector's Signature

Commissions VA424-R

National Board, State, Province, and Endorsements

Date 4/2

XX 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 2000-038 Work Order 407659-01
Address _____ Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name _____ Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address _____

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 716798	N/A	1-MS-SV-104B	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 60344	N/A	1-MS-SV-104B	1998	Replacement	No

7. Description of Work Replaced studs and nuts as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naught ISI Engineer Date April 2 X8 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/14/00 to 4/3/00, 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.

Mark M. Hane Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/2 X8 2000

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

1. Owner Virginia Electric & Power Company Date May 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-039 Work Order 427048-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Component Cooling, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" Nuts	Mackson, Inc.	Ht # 33863PE	N/A	1-CC-154	1999	Replacement	No
3/4" Studs	Mackson, Inc.	Ht # 44185	N/A	1-CC-154	1999	Replacement	No
6" Check Valve	Anderson, Greenwood & Co.	Serial No. N950029	N/A	1-CC-154	1995	Replacement	No

7. Description of Work Replaced 6" check valve and bolting during repair for seat leakage.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 45 psi Test Temp. ambient °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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naught ISI Engineer Date May 2 ~~19~~ 2000
Owner/for Owner's Designee, Title

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 or Province of Virginia and employed by Hartford Steam Boiler of Hartford, CT have inspected the components described in this Owner's Report during the period 3/16/00 to 5/2/00, 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.

Mark M. Hwa Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 5/2 ~~19~~ 2000

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

1. Owner Virginia Electric & Power Company Date March 31, 2000
Name _____
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____
P.O. Box 402, Mineral, VA 23117 R/R 2000-040 Work Order 427207-01
Address _____ Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp _____ N/A
Name _____ Authorization No. _____ N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date _____ N/A
Address _____

4. Identification of System Main Steam, Class 2
5. (a) Applicable Construction Code ANSI B31.7 _____ 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" pin	Energy & Process Corp	Heat # 651418	N/A	1-MS-SH-118	1997	Replacement	No

7. Description of Work Found broken during inspection.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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

Applicable Manufacturer's Data Reports to be attached

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 NA

Certificate of Authorization No. NA Expiration Date NA

Signed Pat A. Nangitt PE Engineer Date March 31, 19 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H. S. B. I. & E. Co of Hartford, CT have inspected the components described in this Owner's Report during the period 3/18/00 to 4/2/00, 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.

Mark M. Angus Commissions VA 424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/2 2000
20

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

1. Owner Virginia Electric & Power Company Date March 31, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-041 Work Order 427209-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" pin	Energy & Process Corp	Heat # 651418	N/A	1-MS-SH-116	1997	Replacement	No

7. Description of Work Found broken during inspection.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 _____ NA _____
Certificate of Authorization No. _____ NA _____ Expiration Date _____ NA _____
Signed _____ Pat J. Naudts ISR Engineer Date _____ March 31 _____, 19 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.D. EIT. Co of Hartford, CT have inspected the components described in this Owner's Report during the period 3/18/00 to 4/2/00, 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.

M.M. Hane _____ Commissions _____ VA 424-R
Inspector's Signature National Board, State, Province, and Endorsements
Date _____ 4/2 _____, 19 2000

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

1. Owner Virginia Electric & Power Company Date March 31, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-042 Work Order 427210-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" pin	Energy & Process Corp	Heat # 651418	N/A	1-MS-SH-117	1997	Replacement	No

7. Description of Work Found broken during inspection.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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

Applicable Manufacturer's Data Reports to be attached

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 NA

Certificate of Authorization No. NA Expiration Date NA

Signed Pete Wright ISE Engineer Date March 31, 19-2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.D. I & C of Hartford, CT have inspected the components described in this Owner's Report during the period 3/14/00 to 4/2/00, 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.

Mark M. Hewitt Commissions VA 424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/2 19 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-046 Work Order 407655-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ASME III 1968 Edition, 70 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Main Steam Safety Valve Disc Insert	Crosby	N88473-36-0069	N/A	1-MS-SV-103B	1989	Replacement	No

7. Description of Work Replaced disc insert due to normal wear.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed *Ruby Nantz* ISI Engineer Date Apr. 1 2 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/19/00 to 4/4/00, 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.

Mark M. Hucci Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/4 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date May 16, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-047 Work Order 427248-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Residual Heat Removal, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
7/8" Studs	Texas Bolt	Ht # 70796	N/A	1-RH-24	1998	Replacement	No
7/8" Nuts	Texas Bolt	Ht # 15862JF	N/A	1-RH-24	1996	Replacement	No

7. Description of Work Replaced bolting due to corrosion caused by body to bonnet leak.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Naught ISI Engineer Date May 16 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by Hartford Steam Boiler of Hartford, CT have inspected the components described in this Owner's Report during the period 3/19/00 to 5/17/00, 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.

Mark M. Hines Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date May 17 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-050 Work Order 391371-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Cleaves Pin	Newport News Industrial	Heat # 97731	N/A	1-RC-HSS-001C	1998	Replacement	No

7. Description of Work Replaced pin damaged during removal. Cleaned up burrs caused during removal.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Dwyer ISI Engineer Date April 2 X8 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described

in this Owner's Report during the period 3/21/00 to 4/2/00, 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.

Mark M. Hagg Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/2 X8 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-053 Work Order 407653-03
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ASME III 1968 Edition, 70 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Main Steam Safety Valve Disc Insert	Crosby	N88473-36-0070	N/A	1-MS-SV-102C	1989	Replacement	No
Main Steam Safety Valve Spindle	Crosby	N88474-40-0040	N/A	1-MS-SV-102C	1987	Replacement	No

7. Description of Work Replaced disc insert and spindle due to normal wear.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pete Naught ISI Engineer Date April 2 XX 2000
Owner of Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/22/00 to 4/4/00, 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.

Mark M. Hwa Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/4 XX 2000

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

1. Owner Virginia Electric & Power Company Date April 4, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-054 Work Order 407659-03
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ASME III 1968 Edition, Winter 70 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Body/Nozzle Assembly	Crosby Valve and Gage Co.	K55042-45-0041	N/A	1-MS-SV-104B	1990	Replacement	No
1 1/8" Body to Bonnet Bolt	Crosby Valve and Gage Co.	AUG	N/A	1-MS-SV-104B	1991	Replacement	No
1 1/8" Body to Bonnet Bolt	Crosby Valve and Gage Co.	AJJ	N/A	1-MS-SV-104B	1992	Replacement	No

7. Description of Work Replaced valve body/nozzle assembly, and body to bonnet bolting found to be degraded during testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 ANI witnessed transfer of nameplate from body to bonnet
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed P. Wards ISI Engineer Date April 4 X5 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/22/00 to 4/4/00, 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.

Mark M. Hara Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/4 X5 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name _____
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____
P.O. Box 402, Mineral, VA 23117 R/R 2000-055 Work Order 407697-01
Address _____ Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name _____ Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address _____

4. Identification of System Reactor Coolant, Class 1

5. (a) Applicable Construction Code ASME III 1968 Edition, 68 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Disc	Dresser Industrial Valve	ACU26	N/A	1-RC-SV-1551B	2000	Replacement	Yes
Nozzle	Dresser Industrial Valve	APB84	N/A	1-RC-SV-1551B	1992	Replacement	Yes

7. Description of Work Replaced nozzle and disc found damaged during testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Waugh ISI Engineer Date April 5 XX 2000
Owner of Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/22/00 to 4/5/00, 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.

Mark M. Hwe Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/5 XX 2000

see Attached Manufacturer's Data Reports

**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**

Attachment 2
Page 38 of 52
Serial No.: 00-295
Doc No. 69-338 2

1. Manufactured and certified by Dresser Valve Division; Dresser Equipment Group, Inc.
Intersection Hwy. 167 @ 3225 North, Alexandria, Louisiana 71309
(name and address of NPT Certificate Holder)
2. Manufactured for Virginia Power P.O. Box 402 Mineral, Virginia 23117-0402
(name and address of purchaser)
3. Location of installation Virginia Power/Storeroom #8500 North Anna Pwr. Sta. Warehouse #5 Route 700 Mineral, Virginia 23117
(name and address)
4. Type OS424 SB637, Inconel X750 170,000 PSI N/A 2000
(drawing no.) (mat'l spec. no.) (tensile strength) (CRN) (year built)
5. ASME Code Section III, Division 1: 1968 Winter 1968 A Vessels, Art. 9 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 : N/A

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 Board No. in Numerical Order
(1) ACU26	
(2) ADB54	
(3)	
(4)	
(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 4500 PSIG at temp. °F

* 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.

FORM N-2 (Back — Pg. 2 of 2)

Certificate Holder's Serial Nos. ACU26 & ADB54 through _____

CERTIFICATION OF DESIGN

Design specifications certified by N/A P.E. State N/A Reg. No. N/A
(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) Disc
 conforms to the rules of construction of the ASME Code, Section III, Division 1.

NPT Certificate of Authorization No. N-2434 Expires 5/20/2001

Date 2-28-2000 Name SEE LINE 1 Signed Jerry W. Daines
(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 Louisiana and employed by H. S. B. I. & I. Co.
 of Hartford, Ct. have inspected these items described in this Data Report on 2/28/00, 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 2/28/00 Signed [Signature] Commissions NB7779 "A" "N" "L 6664
(Authorized Nuclear Inspector) (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES*
As Required by the Provisions of the ASME Code, Section III, Div. 1
Not To Exceed One Day's Production

- Dresser Industries, Inc., Dresser Valve & Controls Div., Industrial Valve
- Manufactured and certified by Operations, Interseccion Hwy. 167 & 3225 North, Alexandria, LA 71309-1430
(name and address of certificate holder)
 - Manufactured for Virginia Power Co, P. O. Box 402, Mineral VA 23117-0402
(name and address of purchaser)
 - Location of installation Virginia Power Steam 8500, No. Anna Power Station, Mineral VA 23117
(name and address)
 - Type OS424, Rev. 3 SA182 Gr. F34 7SKSI N/A 1991
(drawing no.) (mat'l spec no.) (tensile strength) (CRN) (year built)
 - ASME Code, Section III: 1968 Summer 1968 Article 9 N/A
(edition) (addenda) (class) (Code Case No.)
 - Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)
 - Remarks: _____
 - Nom. thickness(in.)N/A Min. design thickness (in.)N/A Dia. ID (ft.&in.)N/A Length overall(ft.&in.)N/A
 - 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) ABP84	
(2) ABP85	
(3) ABP86	
(4) ABP87	
(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)	

20. Design pressure N/A psi Temp. N/A °F Hydro test pressure 4500 PSIG at temp. °F

*Supplemental information in form of lists, sketches or drawings may be used provided, (1) size is 8-1/2 x 11, (2) information in items 2 & 3 on this data report is included on each sheet, (3) sheet is numbered and number of sheets is recorded at top of this form, and (4) each additional sheet shall be signed by the Certificate holder and the ANI.

CERTIFICATE OF DESIGN

Design specifications certified by N/A P.E. N/A Reg. no. N/A
 (when applicable)

Design report* certified by N/A P.E. N/A Reg. no. N/A

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Nozzle
 conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization No. K-2434 Expires May 20, 1992

Date 2-25-91 Name See Note 1 above Signed R. R. Thomas
 (NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP COMPLIANCE

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Vessel Inspector and the state or province of Louisiana and employed by The Hartford Steam Boiler Inspection & Insurance Co., of Hartford, CT, have inspected these items described in this data report on 2-25-91 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 2-25-91 Signed [Signature] Commissions LA664
 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) 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 Virginia Electric & Power Company Date April 2, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-056 Work Order 427405-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Residual Heat Removal, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 1/8" Nuts	Mackson, Inc.	Ht # 18023JO	N/A	1-RH-1	2000	Replacement	No
1 1/8" Studs	Mackson, Inc.	Ht # 680S086	N/A	1-RH-1	1999	Replacement	No

7. Description of Work Replaced bolting due to corrosion caused by body to bonnet leak.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A
Certificate of Authorization No. N/A Expiration Date N/A
Signed Pat J. Waight ISI Engineer Date April 2 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/22/00 to 4/3/00, 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.

Mark M. Anca Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements
Date 4/3 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 10, 2000
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 2000-057 Work Order 407670-01
Address _____ Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp _____ N/A
Name _____ Authorization No. _____ N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date _____ N/A
Address _____

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, _____ Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 7/8" Nuts	Nova Machine Products	Ht. # 84799	N/A	1-MS-TV-101B	1991	Replacement	No
1 7/8" Studs	Hardware Specialty Company	Ht. # PS 22	N/A	1-MS-TV-101B	1987	Replacement	No

7. Description of Work Replaced bonnet and associated bolting that had been over torqued during reassembly.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 _____ N/A _____
Certificate of Authorization No. _____ N/A _____ Expiration Date _____ N/A _____
Signed Pat J. Naught _____ IST Engineer Date April 10 _____ ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/23/00 to 4/15/00, 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.

Mark M. Area _____ Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements
Date 4/15 _____ ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date March 28, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-058 Work Order 413121-02
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Safety Injection, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" Nuts	Mackson, Inc.	Ht # 33863PE	N/A	1-SI-MOV-1862A	1999	Replacement	No
3/4" Studs	Mackson, Inc.	Ht # 8875989	N/A	1-SI-MOV-1862A	1998	Replacement	No

7. Description of Work Replaced body to bonnet bolting. Bolting found to be rusted when valve was disassembled.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Naught ISI Engineer Date March 28 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/24/00 to 4/7/00, 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.

Mark M. Hira Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/7 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-059 Work Order 407649-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Wyle Laboratories Type Code Symbol Stamp N/A
Name Authorization No. N/A
7800 Highway 20 West, Huntsville, AL 35806 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ASME III 1968 Edition, 70 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1986 Edition

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)
Main Steam Safety Valve Nozzle	Crosby	N55044-00-004	N/A	1-MS-SV-102A	1972	Repair	No
Main Steam Safety Valve Disc Insert	Crosby	N88473-41-0106	N/A	1-MS-SV-102A	2000	Replacement	No

7. Description of Work Machined nozzle to restore design dimensions. Replaced disc insert due to normal wear.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE *repair &*

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed *Pat Waugter* ISI Engineer Date April 5 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/25/00 to 4/5/00, 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.

Mark M. Huci Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/5 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-060 Work Order 407657-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ASME III 1968 Edition, 70 Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
Main Steam Safety Valve Disc Insert	Crosby	N88473-40-0103	N/A	1-MS-SV-103C	1998	Replacement	No

7. Description of Work Replaced disc insert due to normal wear.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Waucho ISI Engineer Date April 2, ~~XB~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/25/00 to 4/4/00, 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.

Mark M. Hume Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/4 ~~XB~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-061 Work Order 419951-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Containment Vacuum, Class 2
5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, Addenda, Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
9/16" Nuts	Mackson, Inc.	Ht # 91098	N/A	1-CV-8	1997	Replacement	No
Valve Plugs	Energy and Process Corp.	Ht # C3717	N/A	1-CV-8	1996	Replacement	No

7. Description of Work Replaced body to bonnet nuts and valve plugs as part of check valve inspection program.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat Naught ISI Engineer Date April 2 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/28/00 to 4/4/00, 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.

Mark M. Hea Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/4 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 2000-062 Work Order 419952-01
Address _____ Repair Organization P.O. No. Job No., etc. _____

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp _____ N/A
Name _____ Authorization No. _____ N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date _____ N/A
Address _____

4. Identification of System Containment Vacuum, Class 2

5. (a) Applicable Construction Code ANSI B16.5 1968 Edition, _____ Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
9/16" Nuts	Mackson, Inc.	Ht # 91098	N/A	1-CV-14	1997	Replacement	No
Valve Plugs	Energy and Process Corp.	Ht # C3717	N/A	1-CV-14	1996	Replacement	No

7. Description of Work Replaced body to bonnet nuts and valve plugs as part of check valve inspection program.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Robt. Naught ISI Engineer Date April 2 ~~XX~~ 2000
Owner/for Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/28/00 to 4/4/00, 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.

Mark M. Husa Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/4 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 10, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-063 Work Order 427477-01
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Chemical and Volume Control, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1/2" threaded rod	Mackson, Inc	Heat # 8H0025A	N/A	1-CH-SPRH-SH-19.29	1999	Replacement	No

7. Description of Work Replaced threaded rod to achieve proper spring setting.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 _____ N/A _____

Certificate of Authorization No. _____ N/A _____ Expiration Date _____ N/A _____

Signed Pat J. Naught _____ ISI Engineer Date April 18 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/29/00 to 4/19/00, 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.

Mark M. Howe _____ Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/19 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-064 Work Order 427730-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Quench Spray Class 2

5. (a) Applicable Construction Code Draft Pump & Valve Code 1968 Edition, _____ Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
½" Stud	Mackson	Heat # 72696	N/A	1-QS-5	1999	Replacement	No
½ Nut	Mackson	Heat # 34146PG	N/A	1-QS-5	1998	Replacement	No

7. Description of Work Replaced bonnet and bolting. Wrong material was previously installed under RR 2000-048 WO 410220-01.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat. J. Naughton ISI Engineer Date April 2 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/27/00 to 4/3/00, 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.

Mark M. Hines Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/3 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 2, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-065 Work Order 427730-02
Address Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Quench Spray Class 2

5. (a) Applicable Construction Code Draft Pump & Valve Code 1968 Edition, _____ Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1/2" Stud	Mackson	Heat # 72696	N/A	1-QS-21	1999	Replacement	No
1/2 Nut	Mackson	Heat # 34146PG	N/A	1-QS-21	1998	Replacement	No

7. Description of Work Replaced bonnet and bolting. Wrong material was previously installed under RR 2000-047 WO 410210-01.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Pat J. Warrick
Owner or Owner's Designee, Title

ISI Engineer Date April 2 ~~XX~~ 2000

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/29/00 to 4/3/00, 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.

Mark M. Hurre
Inspector's Signature

Commissions VA424-R
National Board, State, Province, and Endorsements

Date 4/3 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name _____

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address _____

2. Plant North Anna Power Station Unit: 1
Name _____

P.O. Box 402, Mineral, VA 23117 R/R 2000-066 Work Order 407651-02
Address _____ Repair Organization P.O. No. Job No. , etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp _____ N/A
Name _____ Authorization No. _____ N/A

5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date _____ N/A
Address _____

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
1 3/8" Studs	Mackson, Inc.	Heat # 680S086	N/A	1-MS-SV-102B	1999	Replacement	No
1 3/8" Nuts	Mackson, Inc.	Heat # 29329MY	N/A	1-MS-SV-102B	1997	Replacement	No

7. Description of Work Replaced studs and nuts during as a good maintenance practice after valve was reinstalled after testing.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____

Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Waugh ISI Engineer Date April 5 X8 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 7/31/00 to 4/5/00, 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.

Mark M. Hana Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/5 X8 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name
5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name
P.O. Box 402, Mineral, VA 23117 R/R 2000-069 Work Order 427778-01
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name Authorization No. N/A
5000 Dominion Blvd., Glen Allen, VA 23060 Expiration Date N/A
Address

4. Identification of System Blowdown, Class 2

5. (a) Applicable Construction Code ANSI B31.7 1969 Edition, 1970 Addenda, 78, 81, 83(R), 115 Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
½" Cap Screw	Mackson	Heat # 29700	N/A	1-BD-SH-14.11	1999	Replacement	No
½ Nut	Mackson	Heat # 34146PG	N/A	1-BD-SH-14.11	1999	Replacement	No

7. Description of Work Replaced bolting during adjustment of clamp location.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 8½ 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Wright ISI Engineer Date April 5 ~~XX~~ 2000
Owner or Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 3/31/00 to 4/19/00, 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.

Mark M. Hines Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/19 ~~XX~~ 2000

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

1. Owner Virginia Electric & Power Company Date April 5, 2000
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Sheet 1 of 1
Address

2. Plant North Anna Power Station Unit: 1
Name

P.O. Box 402, Mineral, VA 23117 R/R 2000-070 Work Order 407659-02
Address Repair Organization P.O. No. Job No., etc.

3. Work Performed By Virginia Electric & Power Company Type Code Symbol Stamp N/A
Name

5000 Dominion Blvd., Glen Allen, VA 23060 Authorization No. N/A
Address Expiration Date N/A

4. Identification of System Main Steam, Class 2

5. (a) Applicable Construction Code ASME III 1968 Edition, Winter 70 Addenda, _____ Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989

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)
3/4" Threaded Plug	Dubose National Energy Services	Heat # 9196	N/A	1-MS-SV-104B	1999	Replacement	No

7. Description of Work Replaced plug found missing after return for testing vendor.

8. Tests Conducted: Hydrostatic Pneumatic Nominal 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 _____
Applicable Manufacturer's Data Reports to be attached

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 N/A

Certificate of Authorization No. N/A Expiration Date N/A

Signed Pat J. Naughts IST Engineer Date April 5 ~~XX~~ 2000
Owner of Owner's Designee, Title

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 or Province of Virginia and employed by H.S.B.I. & I. of Hartford, CT have inspected the components described in this Owner's Report during the period 4/1/00 to 4/6/00, 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.

Mark M. Havel Commissions VA424-R
Inspector's Signature National Board, State, Province, and Endorsements

Date 4/6 ~~XX~~ 2000

Attachment 3

Inservice Inspection Summary Report

North Anna Power Station Unit 1

P.O. Box 402

Mineral, Virginia 23117

2000 Refueling Outage Owner's Report of Inservice Inspections for Interval 3

Commercial Service Date 6-6-78

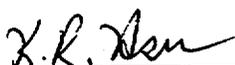
**Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060**

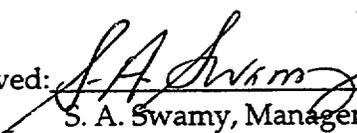
WCAP-15122
Revision 1

Fracture Analysis of Boron Injection Tanks North Anna Nuclear Station

C. K. Ng
W. H. Bamford

April 2000

Reviewer: 
K. R. Hsu

Approved: 
S. A. Swamy, Manager
Structural Mechanics Technology

Westinghouse Electric Company LLC
P.O. Box 355
Pittsburgh, PA 15230-0355

©2000 Westinghouse Electric Company LLC
All Rights Reserved

TABLE OF CONTENTS

LIST OF TABLES.....	v
LIST OF FIGURES.....	vii
1 INTRODUCTION.....	1-1
2 FLAW GEOMETRY.....	2-1
3 CRITERIA FOR FLAW ACCEPTABILITY.....	3-1
3.1 Fracture Criteria Based on Stress Intensity Factor.....	3-1
3.2 Primary Stress Limits.....	3-2
4 LOADS.....	4-1
5 STRESS INTENSITY FACTOR CALCULATIONS.....	5-1
6 FRACTURE TOUGHNESS.....	6-1
7 FATIGUE CRACK GROWTH.....	7-1
7.1 Crack Growth Rate Reference Curves.....	7-1
7.2 Fatigue Crack Growth Results.....	7-1
8 FRACTURE ANALYSIS AND RESULTS.....	8-1
9 REFERENCES.....	9-1
APPENDIX A FLAW EVALUATION CHARTS.....	A-1

LIST OF TABLES

Table 4-1 Boron Injection Tank Normal Condition Transients (Upset and Test
Conditions Inclusive) 4-2

Table 7-1 Fatigue Crack Growth Results for Embedded Flaws 7-2

Table 8-1 Results of Margin Calculations..... 8-2

LIST OF FIGURES

Figure 1-1	Geometry of Boron Injection Tank: North Anna Units 1 and 2	1-2
Figure 2-1	Geometry and Terminology for Various Flaw Types.....	2-2
Figure 4-1	Finite Element Model of Head to Shell Weld Region.....	4-3
Figure 4-2	Axial Stress Contours, Boron Injection Tank at 2735 psig	4-4
Figure 4-3	Axial Stress Distribution Through the Wall at the Indication Location	4-5
Figure 7-1	Reference Fatigue Crack Growth Curves for Carbon and Low Alloy Ferritic Steels, Air Environment.....	7-3
Figure 8-1	Determination of Allowable Flaw Depth for Steady State Operation	8-3
Figure 8-2	Allowable Test Pressure vs. Temperature. Any combination of pressure and temperature below this curve satisfies Section XI acceptance criteria for the indication.	8-4
Figure A-1	Embedded Flaw Evaluation Chart.....	A-5
Figure A-2	Evaluation of Indication Discovered in Spring 2000	A-6
Figure A-3	Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.05$).....	A-7
Figure A-4	Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.10$).....	A-8
Figure A-5	Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.15$).....	A-9
Figure A-6	Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.20$).....	A-10
Figure A-7	Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.25$).....	A-11
Figure A-8	Test Pressure vs. Temperature Curve (Aspect ratio = 6, $d/t=0.05$).....	A-12
Figure A-9	Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t=0.10$).....	A-13
Figure A-10	Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t=0.15$).....	A-14
Figure A-11	Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t=0.20$).....	A-15
Figure A-12	Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t=0.25$).....	A-16
Figure A-13	Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.05$).....	A-17
Figure A-14	Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.10$).....	A-18
Figure A-15	Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.15$).....	A-19
Figure A-16	Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.20$).....	A-20
Figure A-17	Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.25$).....	A-21
Figure A-18	Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.05$).....	A-22
Figure A-19	Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.10$).....	A-23

LIST OF FIGURES (Continued)

Figure A-20	Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.15$).....	A-24
Figure A-21	Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.20$).....	A-25
Figure A-22	Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.25$).....	A-26

1 INTRODUCTION

The boron injection tank is part of the high head safety injection system, designed to deliver concentrated boric acid solution to the cold leg for small pipe breaks. The tank [1] has a 900 gallon capacity, and is a cylindrical tank with hemispherical heads, attached with full penetration welds, as shown in Figure 1-1. The tank has an inside diameter of 48 inches, and was fabricated of clad carbon steel, ASTM 516 Grade 70. The tank head thickness is about 2 inches, and the head transitions to a cylindrical shell has a minimum thickness of 4.157 inches.

An indication has been discovered in the upper dome to shell weld of this tank. The indication qualifies as embedded according to the rules of the ASME Code Section XI, but exceeds the flaw evaluation standards of IWB 3500. The code of record for the examination is 1989. The code used for this flaw evaluation is the 1995 edition, since the criteria for acceptance are unchanged, and the 1995 code has the most up-to-date materials information.

A flaw evaluation has been completed of the indication using the rules of Section XI of the ASME Code, as contained in IWC 3600. The rules of IWC 3600 are in the course of preparation, and so the rules of IWB 3600 are invoked by the code. The indication was discovered during an earlier inspection, in the Fall of 1998, and was evaluated and shown acceptable in Revision 0 of this report. The inspection in the Spring of 2000 was a follow-up and this report provides the results of the evaluation based on data obtained from this recent inspection.

Also in this report, a flaw evaluation chart has been provided in Appendix A, which is designed for the evaluation of indications which may be discovered during future inservice inspections. This chart allows the evaluation of any indications discovered in the upper dome to shell weld region of the boron injection tank without additional fracture mechanics calculations. Since the severity of the hydrotest can be controlled by setting the test temperature to ensure adequate fracture toughness or by adjusting the test pressure, allowable test pressure versus temperature curves are provided to ensure that the indications discovered in the boron injection tank meet the required Section XI margins.

2 FLAW GEOMETRY

The indication found during the Spring 2000 inspection was characterized in the same manner as the 1998 inspection, and was found to have remained unchanged in size. However, use of the new code flaw characterization rules has resulted in a small change in the indication depth, and a change in length from 4 inches to 6.4 inches. This new indication size has been evaluated here.

The boron injection tank was fabricated by Struthers Wells of clad carbon steel, ASTM A516 grade 70. The tank is a cylindrical design with hemispherical head, and the indication is located near the head to shell weld, oriented circumferentially. The wall thickness in the region of the indication was determined to be 2.64 in., and the indication has the following dimensions, as taken directly from the NDE results:

$$2a = 0.358 \text{ in.} \quad a = 0.179 \text{ in.} \quad S = 0.402 \text{ in.} \quad l = 6.4 \text{ in.}$$

$$a/t = 0.068 \quad a/l = 0.028$$

Using the criteria of Section XI, this indication qualifies as embedded, since the value S exceeds 0.4a. Therefore, the indication was analyzed as an embedded flaw, as will be detailed below. The flaw description terminology is shown in Figure 2-1.

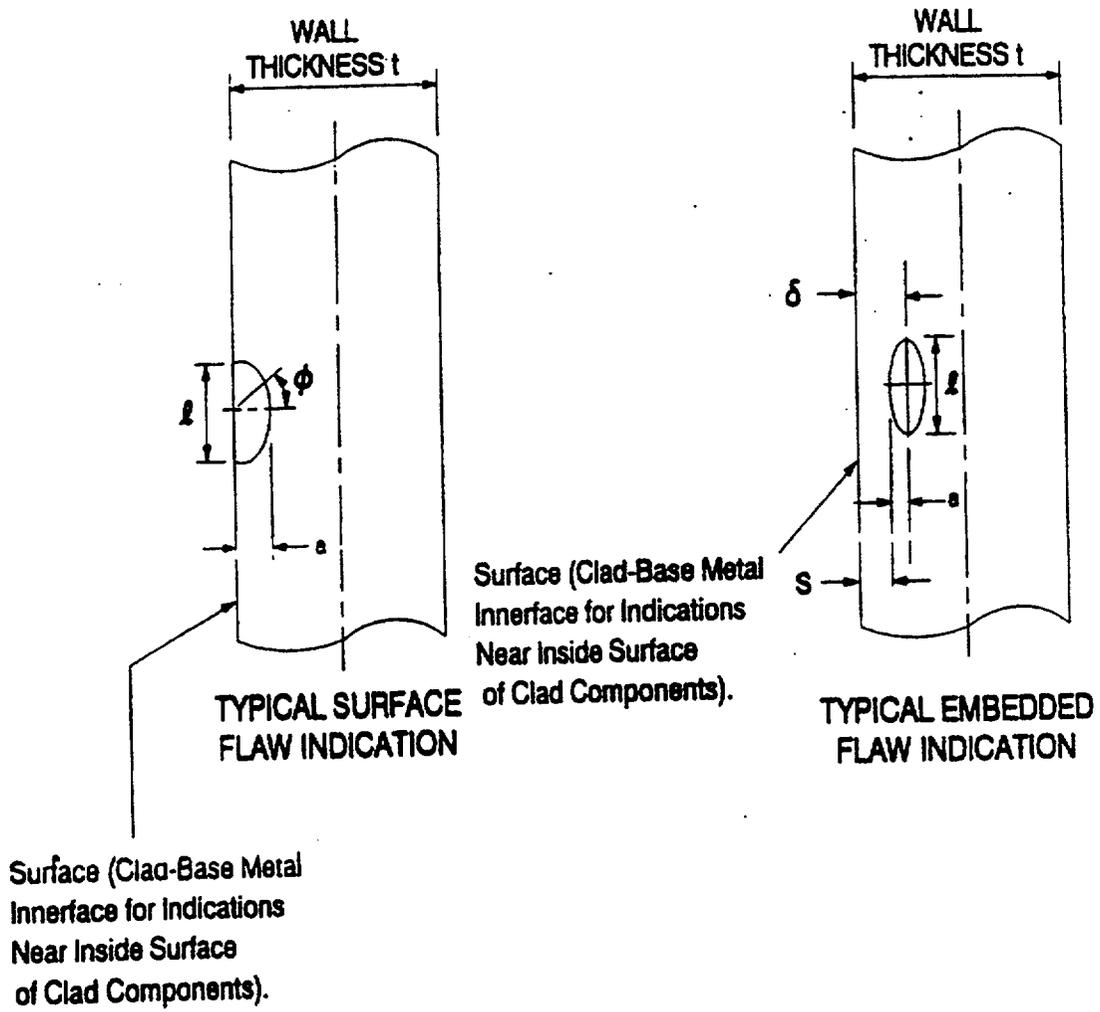


Figure 2-1 Geometry and Terminology for Various Flaw Types

3 CRITERIA FOR FLAW ACCEPTABILITY

Two criteria for acceptability are required by Section XI if flaws are found during an inspection, and they are:

1. Acceptance Criteria based on Stress Intensity Factor (Section XI, IWB-3612).
2. Acceptance Criteria based on Primary Stress Limits (Section XI, IWB-3610, which requires meeting the limits of Section III, NB 3000).

These criteria are explained in the following sections, and will be used to establish the margins for flaw acceptability of the indication. These criteria are specifically for ASME Class I components, but we have applied them to the boron injection tank because there are no separate criteria for Class 2 equipment in Section XI at this time.

3.1 FRACTURE CRITERIA BASED ON STRESS INTENSITY FACTOR

These criteria are from IWB-3612 of Section XI. The term stress intensity factor (K_I) is defined as the driving force on a crack. It is a function of the size of the crack and the applied stresses, as well as the overall geometry of the structure. In contrast, the fracture toughness (K_{Ia} , K_{Ic}) is a measure of the resistance of the material to propagation of a crack. It is a material property, and a function of temperature.

The criteria are:

$$K_I \leq \frac{K_{Ia}}{\sqrt{10}} \quad \text{for normal conditions (upset and test conditions inclusive)}$$

$$K_I \leq \frac{K_{Ic}}{\sqrt{2}} \quad \text{for faulted conditions (emergency conditions inclusive)}$$

where

K_I = The maximum applied stress intensity factor for the flaw size "a" considering all the transients which could occur. (Calculated by methods described in Section 5)

K_{Ia} = Fracture toughness based on a lower bound of dynamic and arrest toughness measurements for the corresponding crack tip temperature. (See Section 6)

K_{Ic} = Fracture toughness based on a low bound of static toughness measurements for the corresponding crack tip temperature. (See Section 6)

3.2 PRIMARY STRESS LIMITS

In addition to satisfying the fracture criteria, the primary stress limits of Section III, paragraph NB 3000 must be satisfied. A local area reduction of the pressure retaining membrane was used, equal to the area of the indication, and the stresses were increased to reflect the smaller cross section. Using this criterion, the allowable flaw depth is 0.43 in. In general the allowable depths calculated based on the criteria of Section 3.1 are more restrictive, and therefore the criteria of Section 3.1 will be governing. This calculation was included to ensure that integrity would be maintained from the standpoint of ductile fracture.

4 LOADS

All design transients are listed in Table 4-1. This is a Class 2 tank which only functions during safety injection. The loads considered in the analysis are the pressure and temperature [1,2]. The most severe load on the tank is the hydrotest at 4200 psig. The tank operates at 2735 psig, and the only pressure transients are due to depressurization and repressurization. The thermal transients occur at constant pressure, and are not severe, and are also included in the table.

The transients specified for this tank are all considered normal, upset, and test transients. No emergency or faulted transients were specified for this tank, and this makes sense when considering the tank design and construction, and its role in the system. The tank performs its functions during emergency or faulted events, so the activation of the tank is a normal function. The only other emergency or faulted event would be a seismic event, but the tank is supported from the bottom, and the indication is near the top so it would not be affected. Therefore the only stress in the region with the indication would be the steady state stress.

The pressure stress distribution was obtained by doing a finite element analysis of the tank geometry. The stresses resulting from piping loads may be ignored, since the indication is far removed from any nozzle connections. The finite element model is shown in Figure 4-1, and the stress contours for internal pressure are shown in Figure 4-2. The stress distribution through the wall at the location of the indication is shown in Figure 4-3.

Transient Title	Transient (psig)	Number of Cycles
I. Test Condition		
A. Pressure Test	0 - 4200 - 0 psig	2
II. Operating Conditions		
A. Pressure Variations	50 - 2735 - 50 psig	550
B. Thermal (1)	50 - 250°F @ 2735 psig	1
C. Thermal (2)	175 - 40°F @ 2735 psig	3

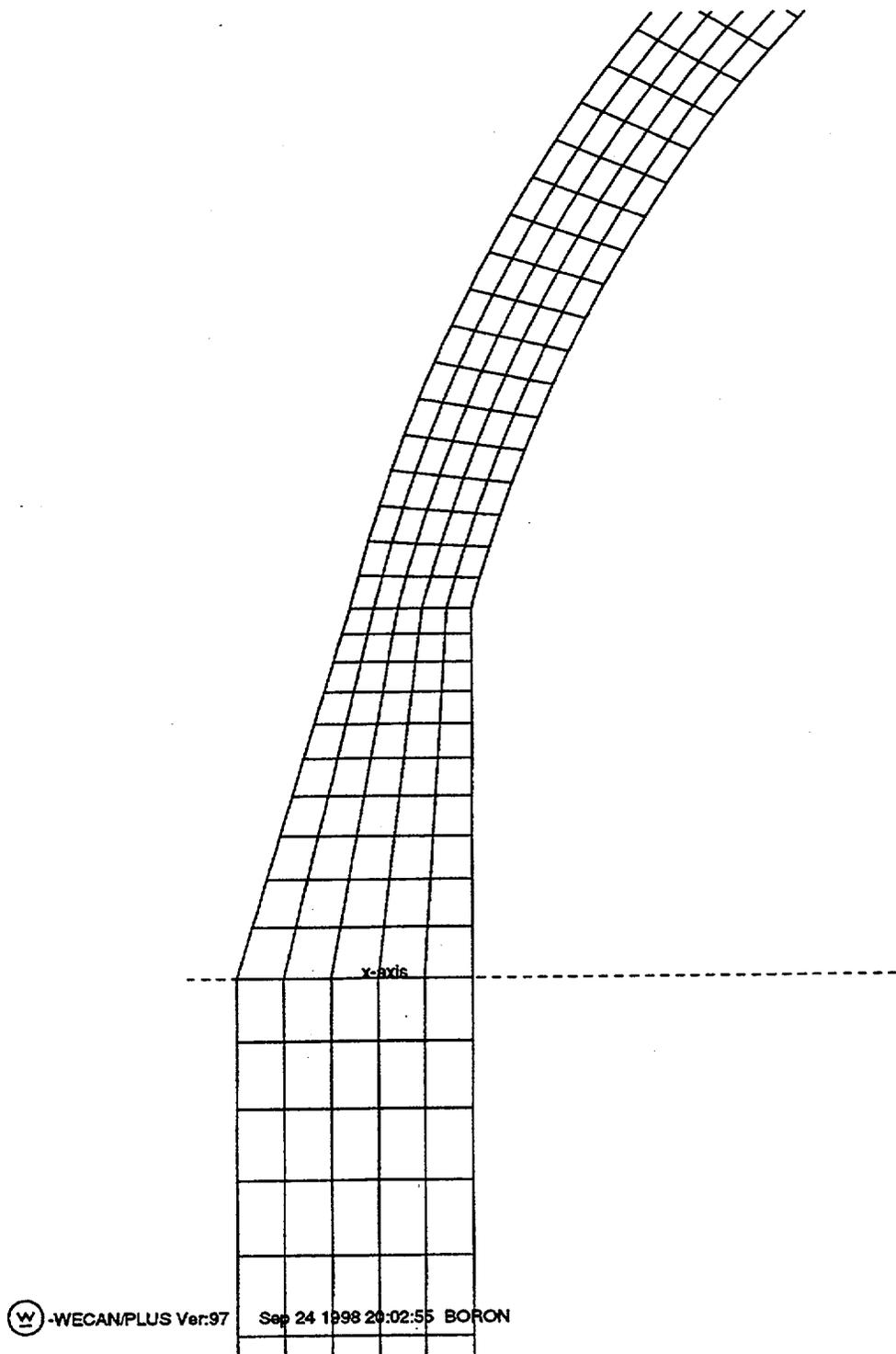


Figure 4-1 Finite Element Model of Head to Shell Weld Region

Max. = 26319.5
Min. = -2730.9
8 = 24495.
7 = 20865.
6 = 17235.
5 = 13605.
4 = 9975.
3 = 6345.
2 = 2715.
1 = -915.

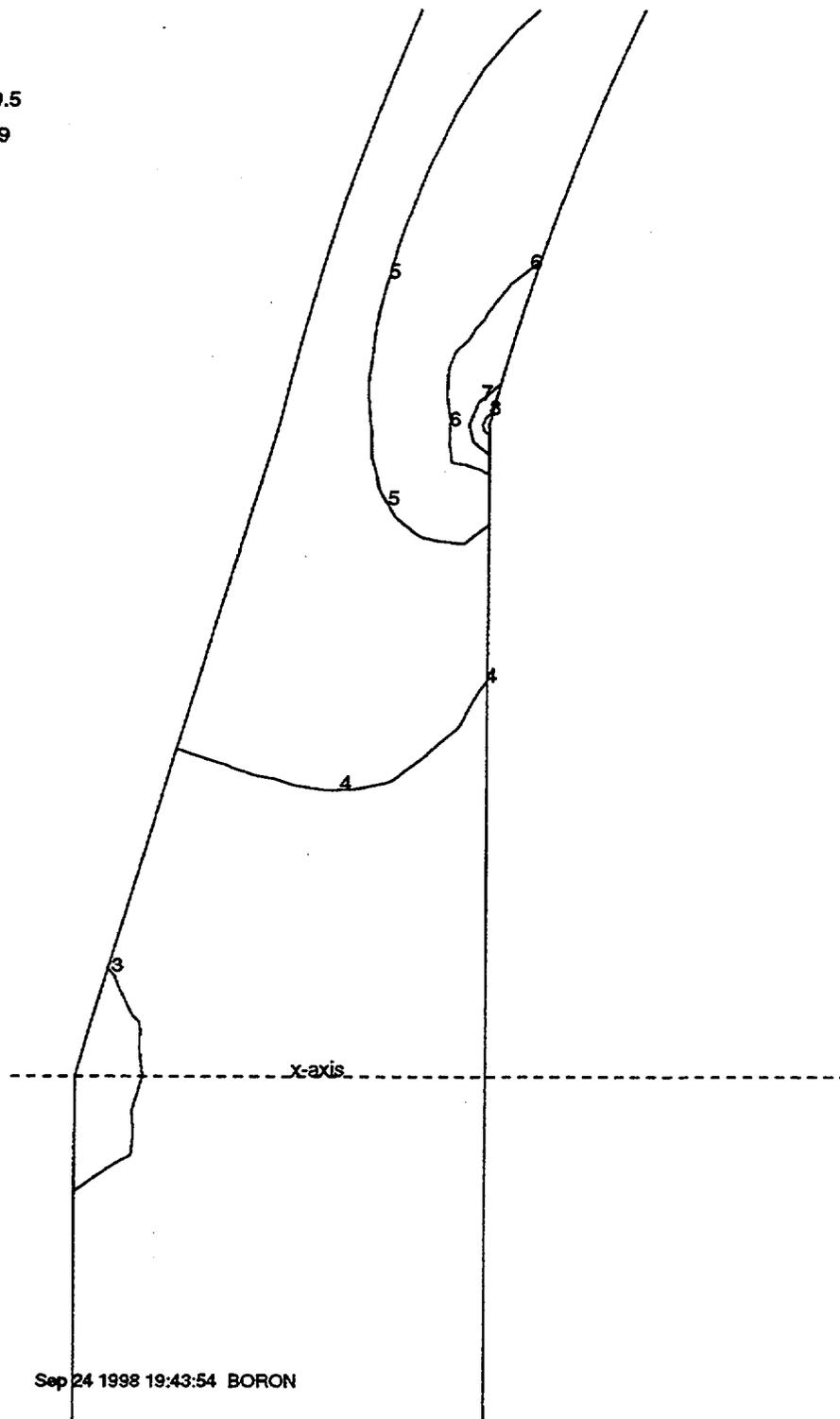


Figure 4-2 Axial Stress Contours, Boron Injection Tank at 2735 psig

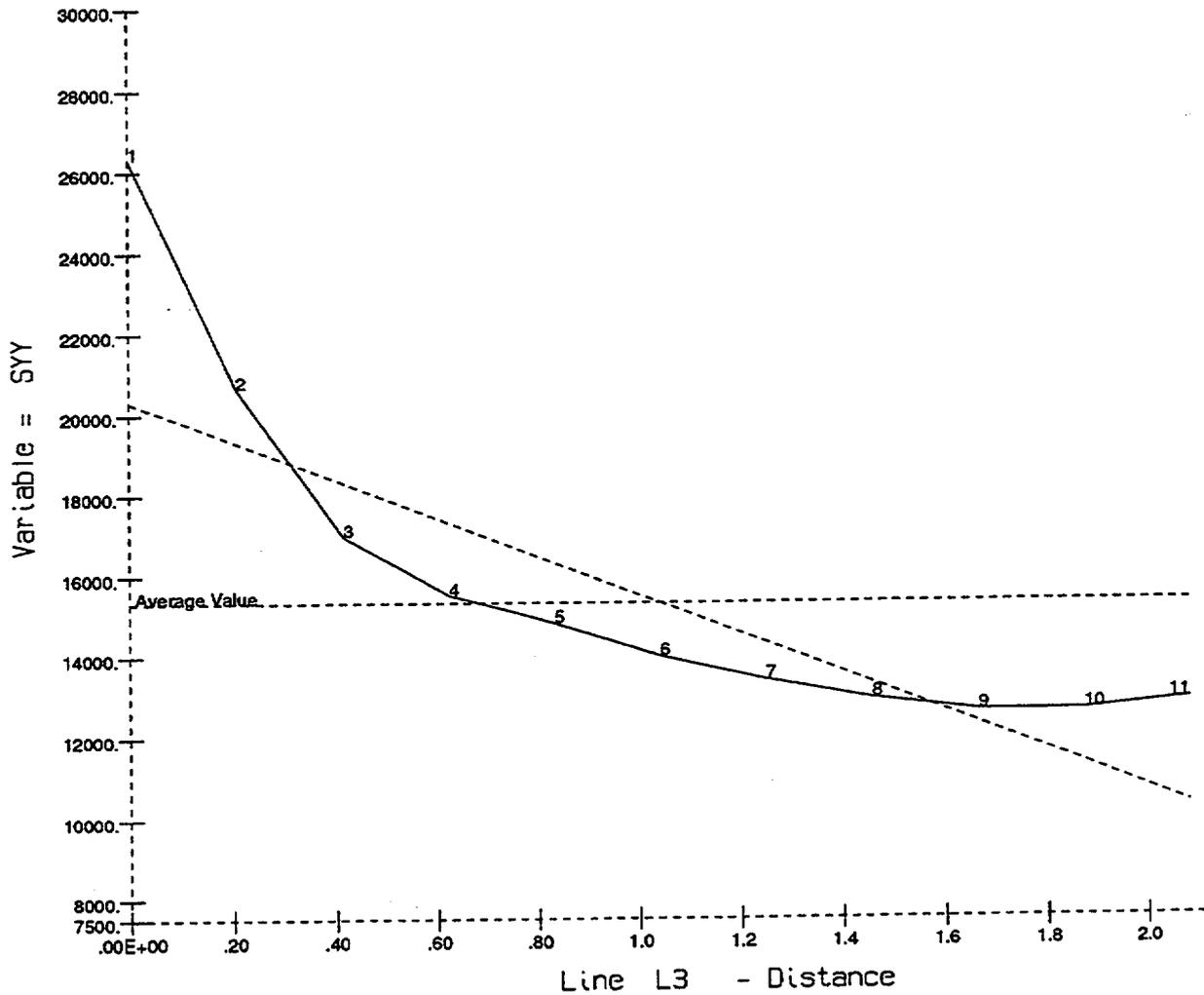


Figure 4-3 Axial Stress Distribution Through the Wall at the Indication Location

5 STRESS INTENSITY FACTOR CALCULATIONS

One of the key elements of the allowable flaw size calculations is the determination of the driving force or stress intensity factor (K_I). This was done using expressions available from the literature. In all cases the stress intensity factor for the critical flaw size calculations utilized a representation of the actual stress profile rather than a linearization. This was necessary to provide the most accurate determination possible of the critical flaw size and is particularly important for consideration of emergency and faulted conditions, where the stress profile is generally nonlinear and often very steep. The stress profile was represented by a cubic polynomial:

$$\sigma(x) = A_0 + A_1 x + A_2 x^2 + A_3 x^3$$

where

$A_0, A_1, A_2,$ and A_3 are stress profile curve fitting coefficients

x is the coordinate distance into the wall

σ is the stress perpendicular to the plane of the crack

The stress intensity factor calculation for an embedded flaw was taken from work by Shah and Kobayashi [3] which is applicable to an embedded flaw in an infinite medium, subjected to an arbitrary stress profile. This expression has been shown to be applicable to embedded flaws in a thick-walled pressure vessel in a recent paper by Lee and Bamford [4].

6 FRACTURE TOUGHNESS

The other key element in the determination of critical flaw sizes is the fracture toughness of the material. The fracture toughness has been taken directly from the reference curves of Appendix A, Section XI. In the transition temperature region, these curves can be represented by the following equations:

$$K_{Ic} = 33.2 + 2.806 \exp. [0.02 (T - RT_{NDT} + 100^\circ F)]$$

$$K_{Ia} = 26.8 + 1.233 \exp. [0.0145 (T - RT_{NDT} + 160^\circ F)]$$

where K_{Ic} and K_{Ia} are in $\text{ksi}\sqrt{\text{in}}$.

The upper shelf temperature regime requires utilization of a shelf toughness which is not specified in the ASME Code. A value of $200 \text{ ksi}\sqrt{\text{in}}$ has been used here. This value is consistent with general practice in such evaluations, as shown for example in reference 5, which provides the background and technical basis for Appendix A of Section XI.

The other key element on the determination of the fracture toughness is the value of RT_{NDT} which is a parameter determined from Charpy V-notch and drop-weight tests. For this analysis, it was assumed that the RT_{NDT} was 10°F for the weld material in the boron injection tank. This is considered to be an upper bound for welds of this type based on earlier work on accumulator and boron injection tanks and the guarantees which are available from fabricators on vessels of this size. The tank shell was fabricated from A516 Grade 70 carbon steel, purchased to a maximum $RT_{NDT} = 60^\circ\text{F}$. The analysis used a value of $RT_{NDT} = 60^\circ\text{F}$ for conservatism, for all the materials.

7 FATIGUE CRACK GROWTH

The fatigue crack growth analysis procedure involves postulating an initial flaw at specific regions and predicting the growth of that flaw due to an imposed series of loading transients. The input required for a fatigue crack growth analysis is basically the information necessary to calculate the parameter ΔK_I which depends on crack and structure geometry and the range of applied stresses in the area where the crack exists. Once ΔK_I is calculated, the growth due to that particular stress cycle can be calculated by equations given in Section 7.1 and Figure 7-1. This increment of growth is then added to the original crack size, and the analysis proceeds to the next transient. The procedure is continued in this manner until all the transients known to occur in the period of evaluation have been analyzed.

7.1 CRACK GROWTH RATE REFERENCE CURVES

The crack growth rate curves used in the analyses were taken directly from Appendix A of Section XI of the ASME Code.

The crack growth rate applicable for an embedded flaw is that for an air environment, as shown in Figure 6, and given below:

$$\frac{da}{dN} = C_o \Delta K^{3.07}$$

where $\frac{da}{dN}$ = Crack Growth rate, inches/cycle.

$$C_o = (1.99 \times 10^{-10}) Q$$

Q = a scaling parameter to account for R ratio, or K_{min}/K_{max}

$$Q = 25.72 (2.88 - R)^{-3.07}$$

7.2 FATIGUE CRACK GROWTH RESULTS

Table 7-1 gives the fatigue crack growth results for a range of embedded flaws. Table 7-1 shows that the crack growth is small enough to be neglected in the fracture analysis. Therefore, the fracture analysis in Section 8 is based on the flaw sizes which were discussed in Section 2, without consideration of fatigue crack growth.

One-Half of Initial Crack Width (a) in inches	One-Half Crack Width (a) in inches After Year			
	10	20	30	40
.130	.130	.130	.130	.130
.175	.175	.175	.175	.175
.200	.200	.200	.200	.200

*Dimension "a" in Figure 5

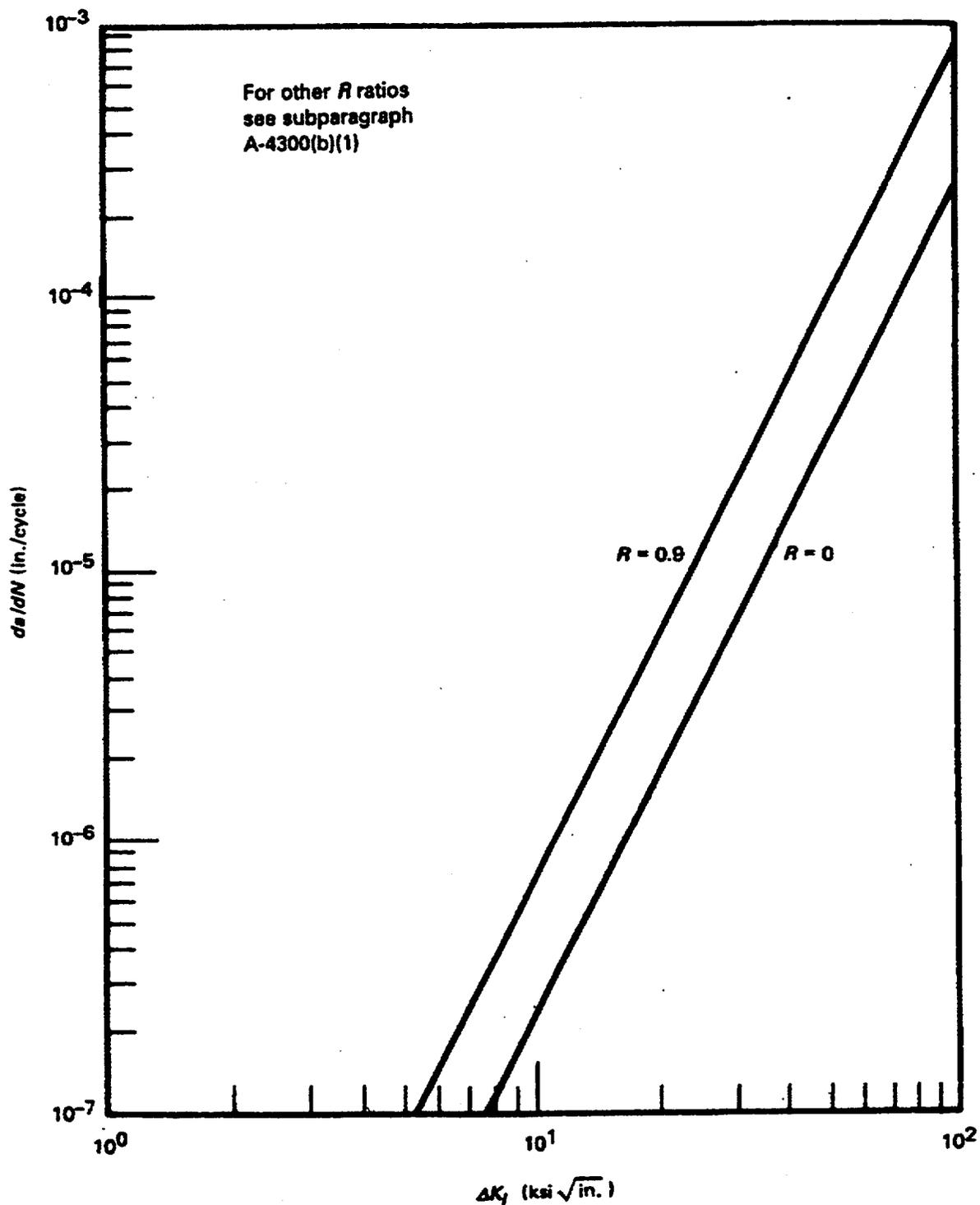


Figure 7-1 Reference Fatigue Crack Growth Curves for Carbon and Low Alloy Ferritic Steels, Air Environment

8 FRACTURE ANALYSIS AND RESULTS

To determine the margins of safety, first the appropriate values for K_{Ia} and K_{Ic} were computed using the information given in Section 6. The K_{Ia} is associated with the criteria for normal conditions, which are in all cases near operating temperature, which is 115°F and can drop as low as 50°F. The K_{Ic} is based on the lowest coolant temperature the tank is exposed to during faulted conditions. The lowest temperature the tank sees is 50°F. For an RT_{NDT} of 60°F and a service temperature during faulted conditions of 50°F (Section 6), a K_{Ic} of 50.2 ksi $\sqrt{\text{in}}$ is computed. For a nominal operating temperature of 100°F, the K_{Ia} value was found to be 49.2 ksi $\sqrt{\text{in}}$. The allowable stress intensity factor can then be calculated from:

$$\frac{K_{Ia}}{K_I} \geq \sqrt{10} \quad \text{for normal conditions (upset and test conditions inclusive)}$$

$$\frac{K_{Ic}}{K_I} \geq \sqrt{2} \quad \text{for faulted conditions (emergency conditions inclusive)}$$

The results are shown in Figures 8-1 and 8-2, and Table 8-1, and it is seen that the margins of Section XI of the ASME Code are met. The hydrotest severity can be controlled by setting the temperature to ensure adequate fracture toughness. The other way to control the severity of the hydrotest is to adjust the test pressure. It can therefore be concluded that many combinations of pressure and temperature could be envisioned to satisfy the required Section XI margins with the indication in the boron injection tank. A curve of the results for the flaw size obtained during the previous and current inspection has been provided in Figure 8-2 for the hydrotest pressure at a range of temperatures from 60 to 110°F. Any combination of pressure and temperature which is below the curve will satisfy the Section XI requirements for the indication.

Therefore, it may be concluded that the indication is acceptable for further service without repair.

Table 8-1 Results of Margin Calculations		
Condition	Flaw	Calculated Margin
Emergency/Faulted (Required Margin = 1.41) (Temperature = 50°F)	Embedded Flaw $a = 0.179$ $a/t = 0.068$	3.71
Normal/Upset (Required Margin = 3.16) (Temperature = 100°F)	Embedded Flaw $a = 0.179$ $a/t = 0.068$	3.20

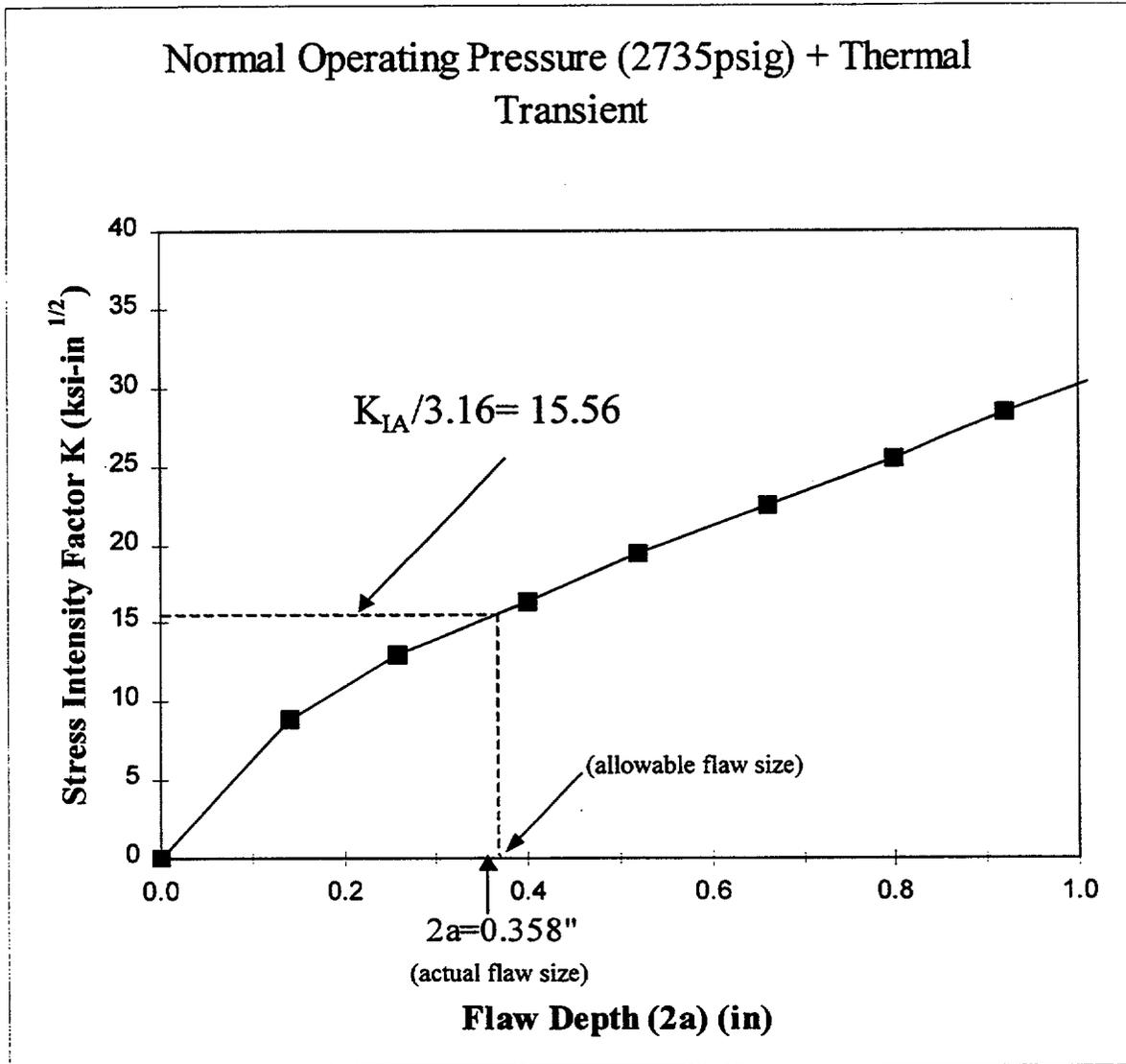


Figure 8-1 Determination of Allowable Flaw Depth for Steady State Operation

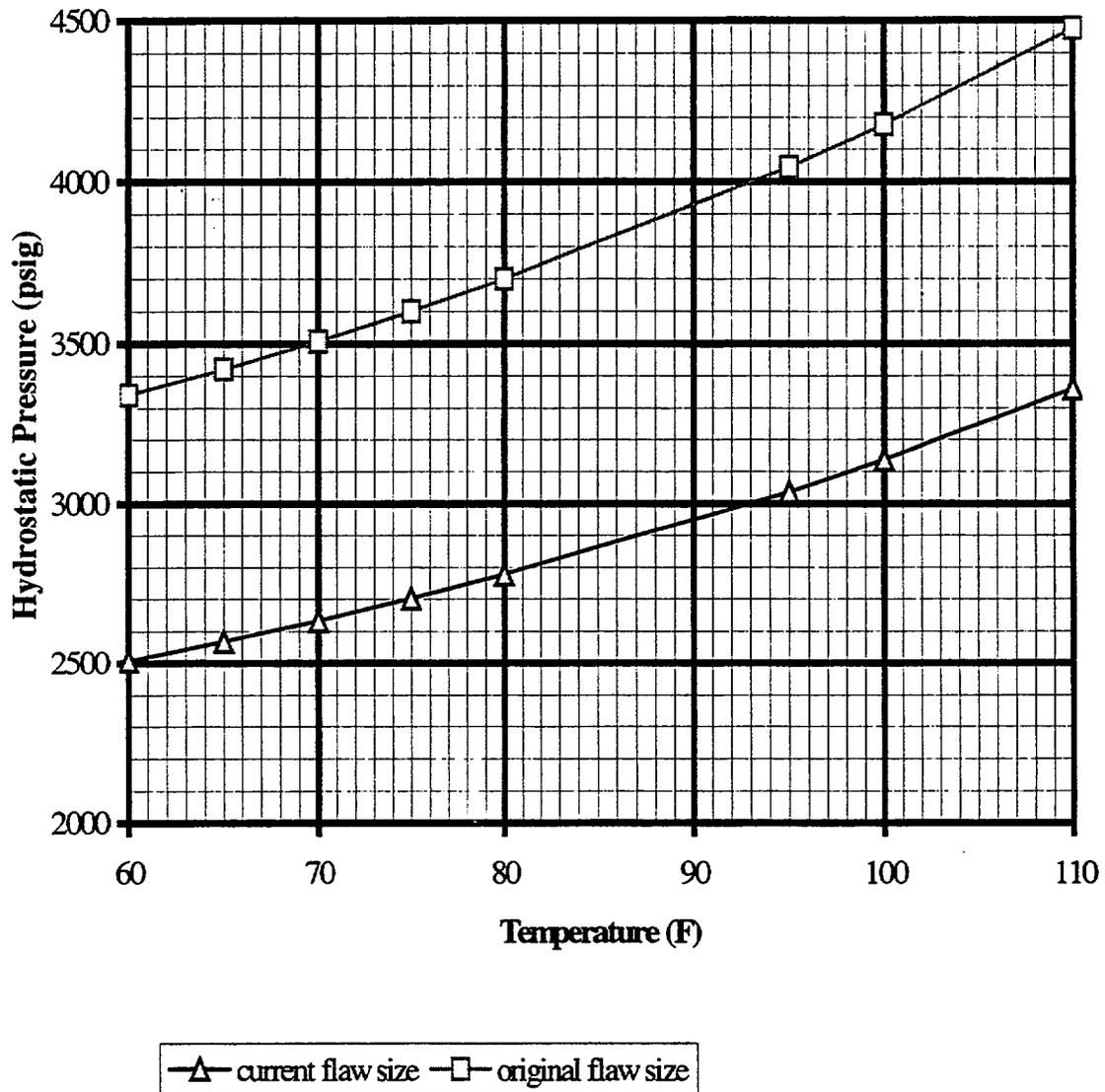


Figure 8-2 Allowable Test Pressure vs. Temperature. Any combination of pressure and temperature below this curve satisfies Section XI acceptance criteria for the indication.

9 REFERENCES

1. Tank-900 Gallon Boron Injection, Drawing #113E275, Rev. 6, March 1971.
2. Westinghouse System Standard Design Criteria 1.3.X, "Nuclear Steam Supply System Design Transients," Revision 0, September 1978.
3. Shah, R. C. and Kobayashi, A. S., "Stress Intensity Factor for an Elliptical Crack Under Arbitrary Loading," Engineering Fracture Mechanics, Vol. 3, 1981, pp. 71-96.
4. Lee, Y. S. and Bamford, W. H., "Stress Intensity Factor Solutions for a Longitudinal Buried Elliptical Flaw in a Cylinder Under Arbitrary Loads," presented at ASME Pressure Vessel and Piping Conference, Portland Oregon, June 1983, Paper 83-PVP-92.
5. Marston, T. U. et. "Flaw Evaluation Procedures: ASME Section XI," Electric Power Research Institute Report EPRI-NP-719-SR, August 1978.
6. ASME Code, Section XI, 1995 edition (used for materials and crack growth calculations).

APPENDIX A FLAW EVALUATION CHARTS

In this Appendix, an embedded flaw evaluation chart is provided in Figure A-1 which is designed for the evaluation of indications which may be discovered during future inservice inspections. This chart allows the evaluation of any indications discovered in the upper dome to shell weld region of the boron injection tank without additional fracture mechanics calculations.

Since the severity of the hydrotest can be controlled by setting the test temperature to ensure adequate fracture toughness or by adjusting the test pressure. It can therefore be concluded that many combinations of pressure and temperature could be envisioned to satisfy the required Section XI margins with the indication in the boron injection tank. Allowable test pressure versus temperature curves are provided in Figure A-3 to A-22 for hydrotest pressure at a range of temperatures from 60 to 100°F. These curves are provided to ensure that the future indications discovered in the boron injection tank meet the required Section XI margins.

The following provides discussions and examples on the use of the embedded flaw evaluation chart and allowable test pressure versus temperature curves given in this Appendix.

Evaluation Procedure

The evaluation procedures contained in ASME Section XI are clearly specified in paragraph IWB-3600. Use of the evaluation chart herein follows these procedures directly, but the steps are greatly simplified.

Once the indication is discovered, it must be characterized as to its location, length (l) and depth dimension ($2a$) for embedded flaws, including its distance from the inside metal surface. This characterization is discussed in further detail in paragraph IWA-3000 of Section XI.

The following parameters must be calculated from the above dimensions to use the chart:

- flaw shape parameter, a/l
- flaw depth parameter, a/t
- surface proximity parameter, d/t

where

- t = wall thickness of region where indication is located
- l = length of indication
- a = half depth of embedded flaw in the crack width direction
- d = distance from flaw centerline to surface ($d = S+a$)
- S = smallest distance from edge of embedded flaw to surface

Once the above parameters have been determined, the two parameters may be plotted directly on the appropriate evaluation chart. The location of the point on the chart determines whether or not the indication is acceptable.

Discussion on Embedded Flaw Evaluation Chart

The embedded flaw evaluation chart is shown in Figure A-1. The heavy diagonal line in the figure can be used directly to determine whether the indication should be characterized as an embedded flaw, or whether it is sufficiently close to the surface that it must be considered as a surface flaw (by the rule of Section XI). If the flaw parameters produce a plotted point below the heavy diagonal line, it is acceptable by analysis if the point is below the appropriate aspect ratio (l/a) limit line. If it is above the line, it cannot be justified by analysis, and is therefore, not acceptable.

Example : Use of Embedded Flaw Evaluation Chart

Using the flaw size data evaluated in this report as an example, the indication discovered has the following characterized dimensions :

$$\begin{aligned} 2a &= 0.358'' \\ l &= 6.4'' \\ t &= 2.64'' \\ S &= 0.402'' \end{aligned}$$

Calculating the flaw parameters, we have :

$$\begin{aligned} a/t &= 0.179/2.64=0.068 \\ d &= S + a =0.402+0.179= 0.581'' \\ d/t &= 0.581/2.64=0.220 \\ l/a &= 6.4/0.179=35.8 \end{aligned}$$

By plotting these parameters on the embedded flaw evaluation chart in Figure A-2, it may be quickly seen that the indication is embedded, and is acceptable by analysis, since it lies below the aspect ratio limit line ($l/a = 50$) and the actual aspect ratio for the indication is only 35.8.

Discussion on Allowable Test Pressure vs. Temperature Curve

Figure A-3 to A-7 provides allowable test pressure versus temperature curves for an aspect ratio (l/a) of 3.0 with normalized distance from the inside surface (d/t) of 0.05, 0.10, 0.15, 0.20 and 0.25 respectively. Similar curves are provided in Figure A-8 to A-22 for aspect ratios (l/a) of 6.0, 10 and 50. It should be noted that Figure A-3 to A-22 should only be used after the indication discovered can be characterized as an embedded flaw. This characterization can be performed using Figure A-1.

Example : Use of Allowable Test Pressure versus Temperature Curve

Using the flaw parameters for the indication evaluated in this report as an example, we have:

$$a/t = 0.068$$

$$d/t = 0.220$$

$$l/a = 35.8$$

From Figure A-1, this indication can be characterized as an embedded flaw.

Figure A-16 and A-17 provide allowable test pressure versus temperature curves (aspect ratio = 10) for d/t of 0.20 and 0.25 respectively, while Figure A-21 and A-22 provide similar curves (aspect ratio = 50) for d/t of 0.20 and 0.25 respectively. It can be seen that the indication in this example is bounded by these four curves. Linear interpolation can be used to determine the test pressure for a desired test temperature for a given indication.

Assuming that the desired test temperature is set at 70°F, the allowable test pressure (P) can be determined as follows:

Step 1: From Figure A-16, ($l/a = 10$, $d/t=0.20$)

$$a/t = 0.050 \quad P = 3125 \text{ psig}$$

$$a/t = 0.075 \quad P = 2500 \text{ psig}$$

For $a/t=0.068$, $l/a=10$ and $d/t=0.20$,

$$P = [(0.068-0.05)/(0.075-0.05)](2500-3125)+3125 = 2675 \text{ psig}$$

Step 2: From Figure A-17, ($l/a = 10$, $d/t=0.25$)

$$a/t = 0.050 \quad P = 3375 \text{ psig}$$

$$a/t = 0.075 \quad P = 2700 \text{ psig}$$

For $a/t=0.068$, $l/a=10$ and $d/t=0.25$,

$$P = [(0.068-0.05)/(0.075-0.05)](2700-3375)+3375 = 2889 \text{ psig}$$

Step 3: Determine P for $a/t=0.068$, $l/a=10$ and $d/t=0.22$

$$P = [(0.22-0.20)/(0.25-0.20)](2889-2675)+2675 = 2761 \text{ psig}$$

Step 4: From Figure A-21, ($1/a = 50$, $d/t=0.20$)

$$a/t=0.050 \quad P=3000 \text{ psig}$$

$$a/t=0.075 \quad P=2400 \text{ psig}$$

For $a/t=0.068$, $1/a=50$ and $d/t=0.20$,

$$P = [(0.068-0.05)/(0.075-0.05)](2400-3000)+3000 = 2568 \text{ psig}$$

Step 5: From Figure A-22, ($1/a = 50$, $d/t=0.25$)

$$a/t=0.050 \quad P=3250 \text{ psig}$$

$$a/t=0.075 \quad P=2575 \text{ psig}$$

For $a/t=0.068$, $1/a=50$ and $d/t=0.25$,

$$P = [(0.068-0.05)/(0.075-0.05)](2575-3250)+3250 = 2764 \text{ psig}$$

Step 6: Determine P for $a/t=0.068$, $1/a=50$ and $d/t=0.022$

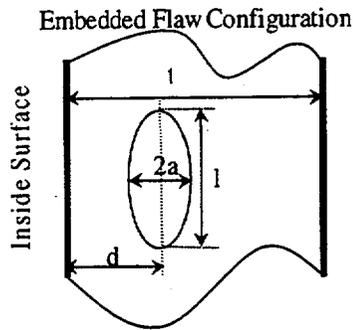
$$P = [(0.22-0.20)/(0.25-0.20)](2764-2568)+2568 = 2646 \text{ psig}$$

Step 7: Determine P for $a/t=0.068$, $1/a=35.8$ and $d/t=0.022$

Using linear interpolation on the results obtained from Step 3 and 6,

$$P = [(35.8-10)/(50-10)](2646-2761)+2761 = 2687 \text{ psig}$$

It should be noted that the result estimated above compares favorably with those obtained from Figure 8 of this report ($P=2625$ psig). The percentage error is about 2.3% which is due primarily to the use of linear interpolation.



Embedded Flaw Evaluation Chart for Boron Injection Tank Upper Dome to Shell Weld

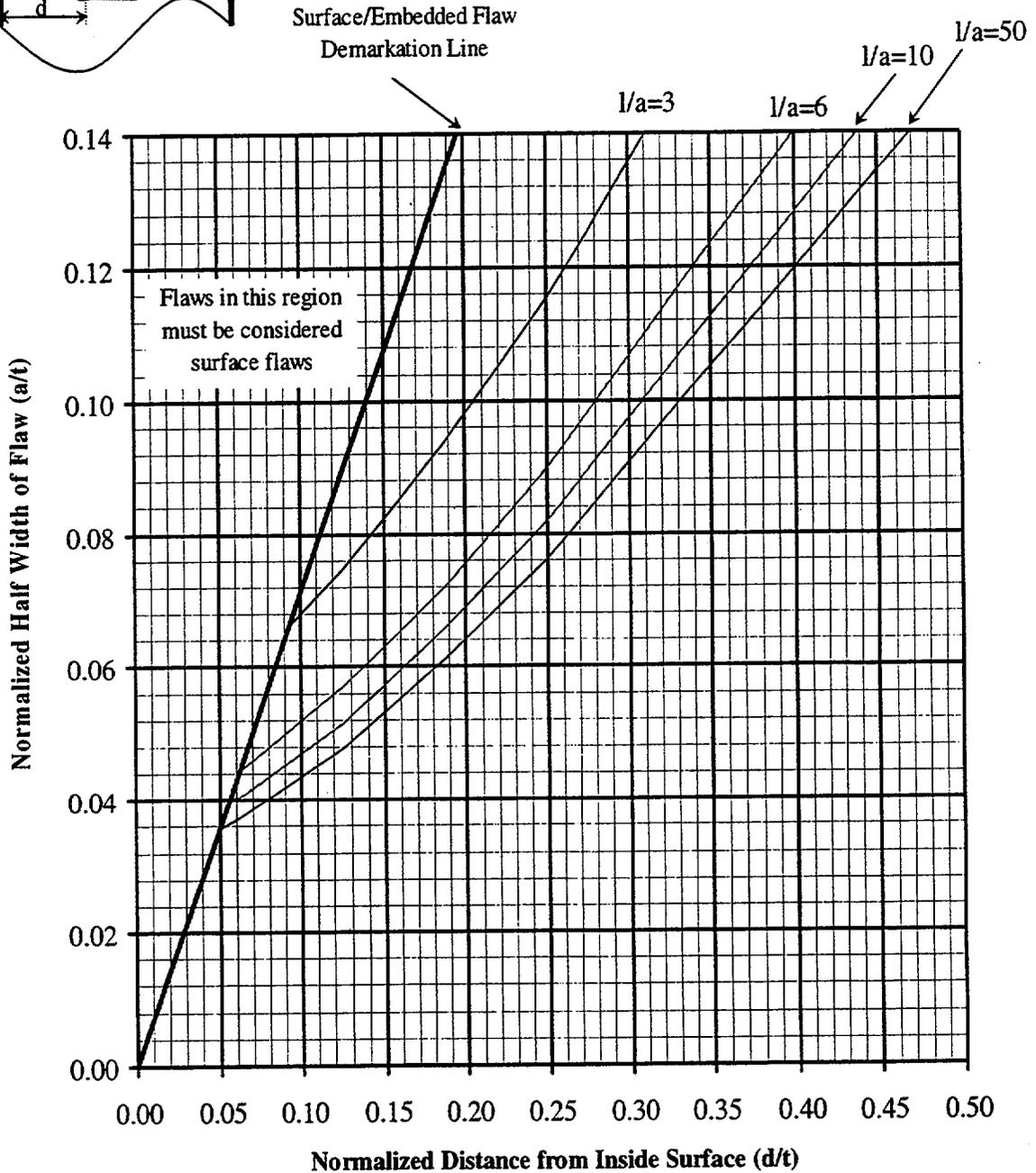


Figure A-1 Embedded Flaw Evaluation Chart

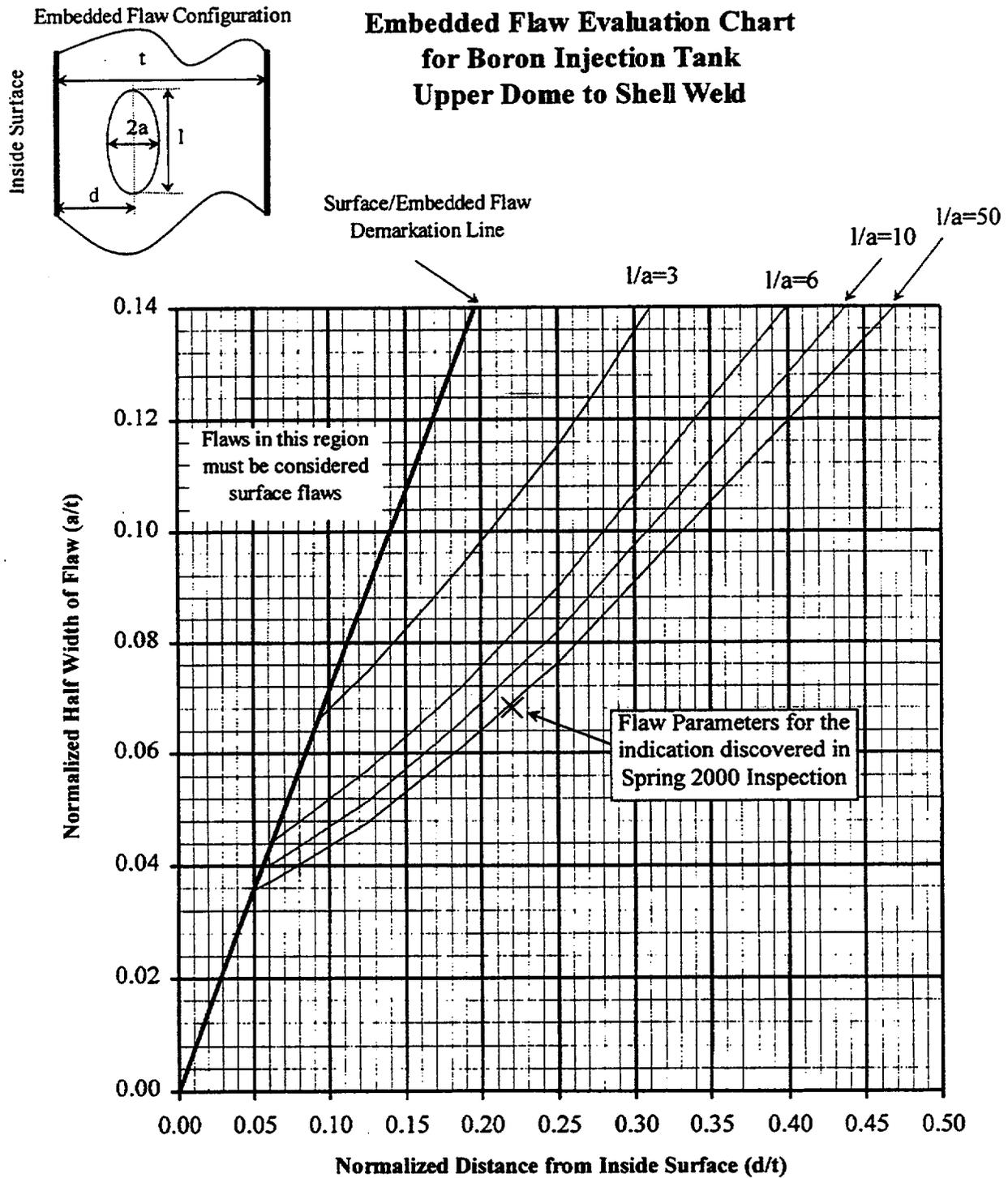


Figure A-2 Evaluation of Indication Discovered in Spring 2000

Aspect Ratio (l/a) = 3
 $d/t = 0.15$

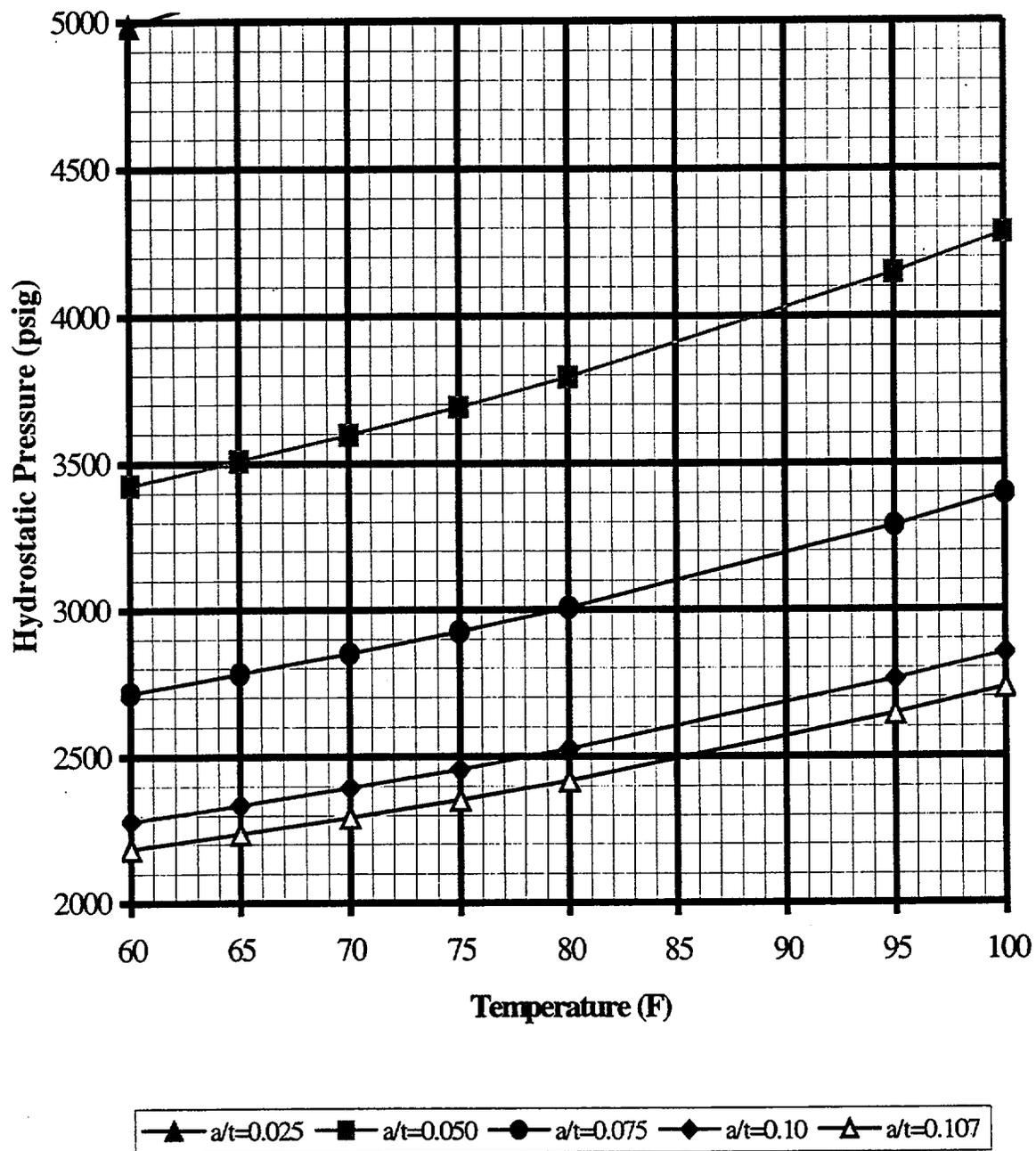


Figure A-5 Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t = 0.15$)

Aspect Ratio (l/a) = 3
d/t = 0.20

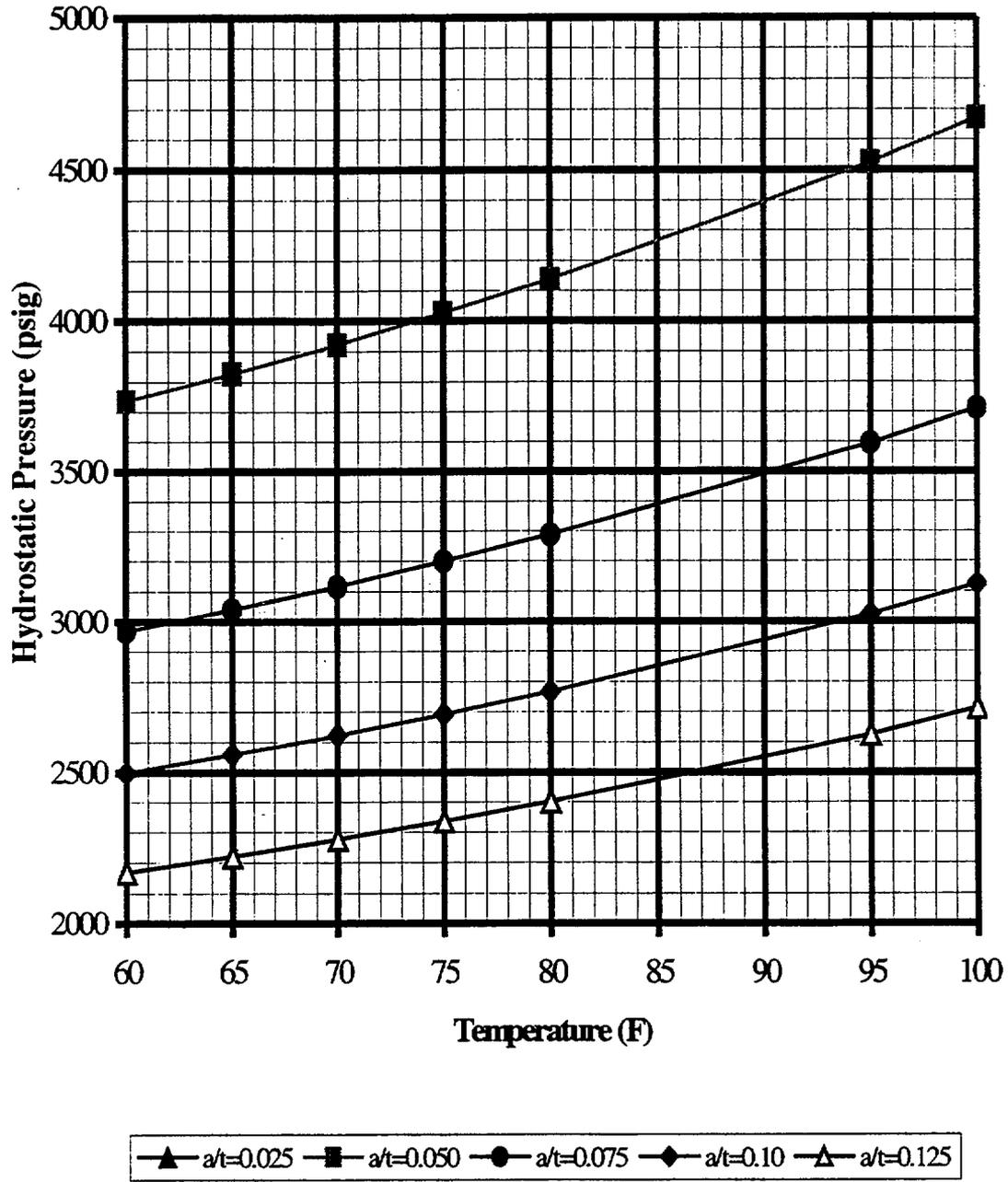


Figure A-6 Test Pressure vs. Temperature Curve (Aspect Ratio = 3, d/t=0.20)

Aspect Ratio (l/a) = 3
 $d/t = 0.05$

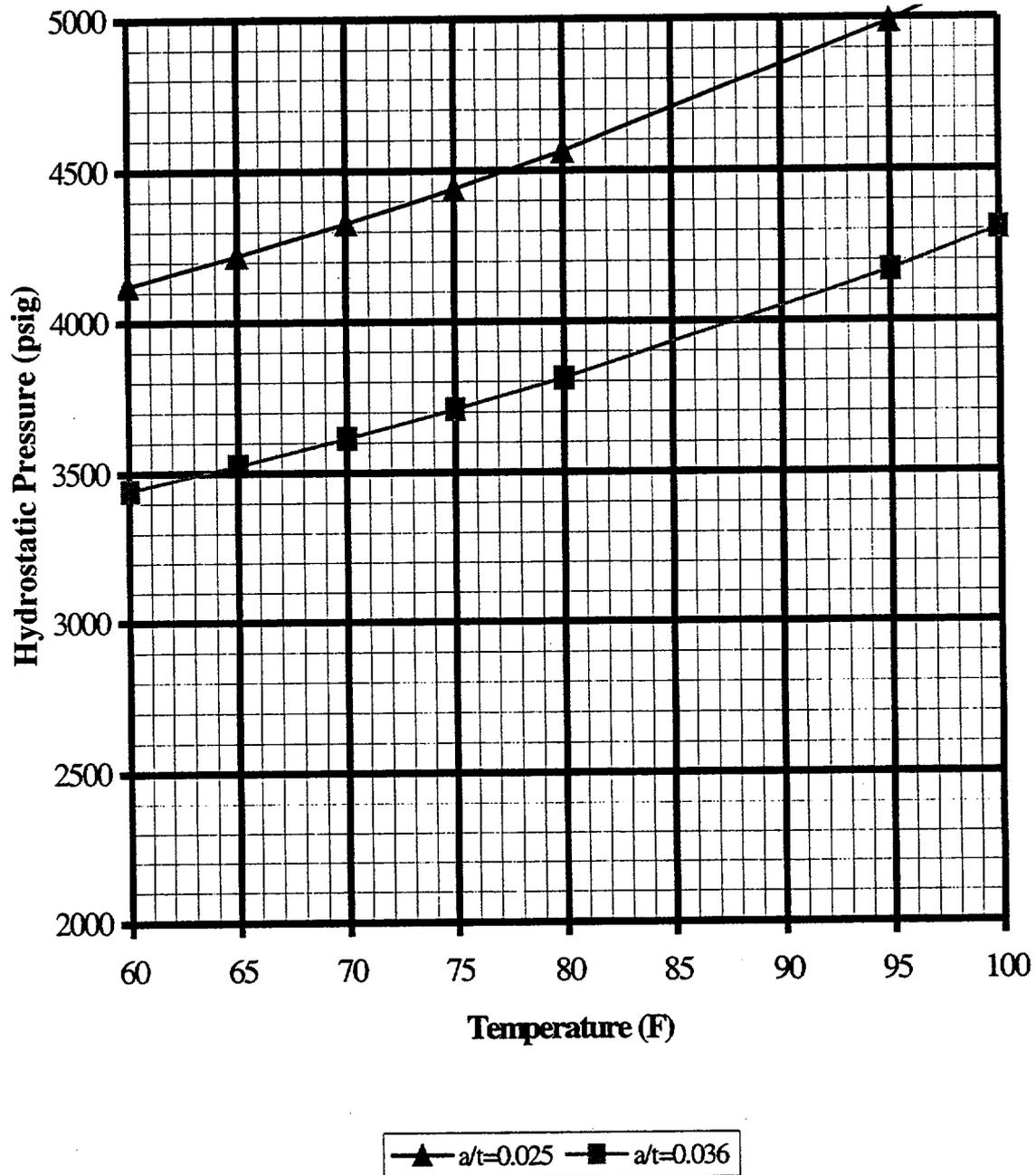


Figure A-3 Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.05$)

Aspect Ratio (l/a) = 3
 $d/t = 0.10$

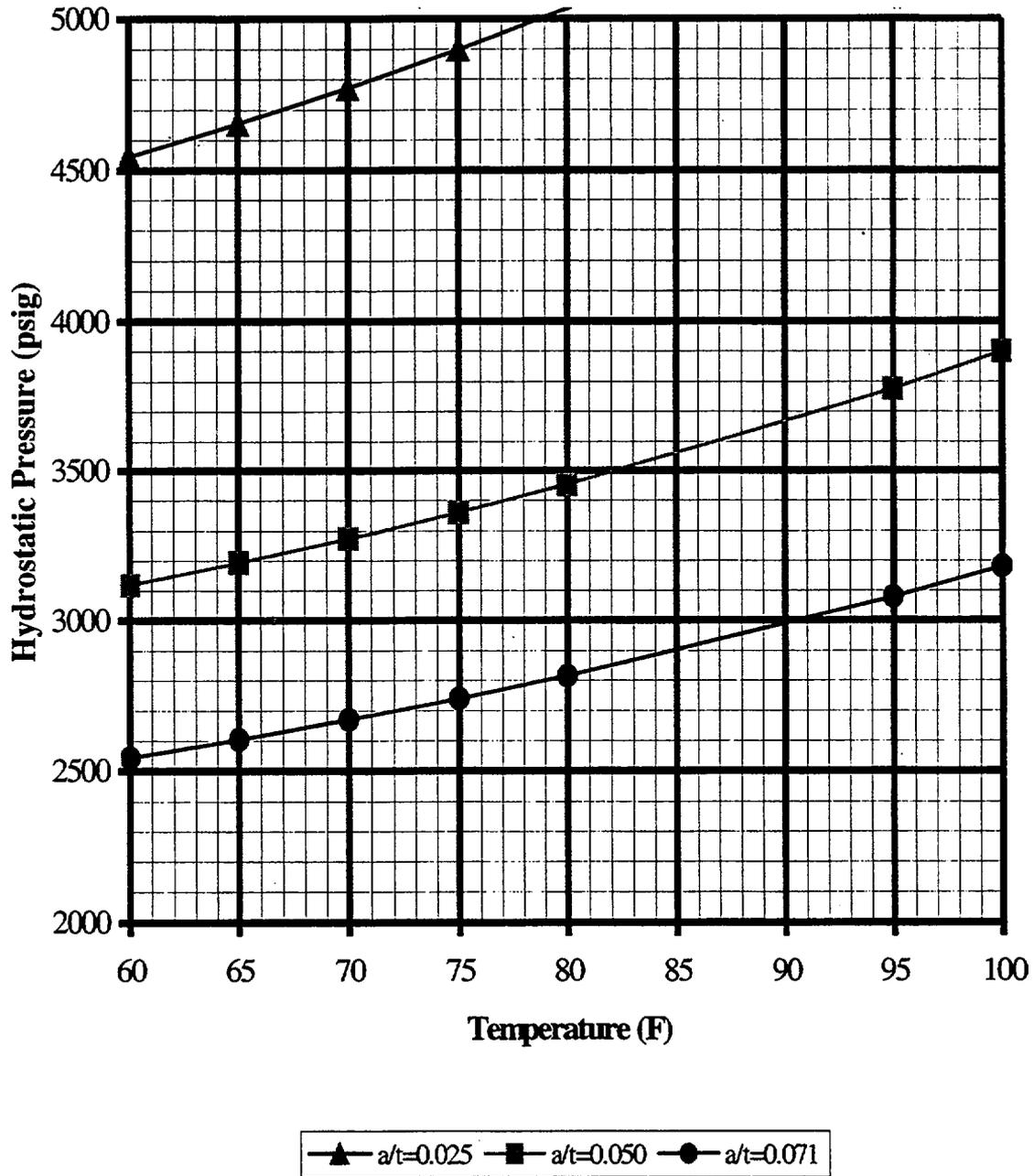


Figure A-4 Test Pressure vs. Temperature Curve (Aspect Ratio = 3, $d/t=0.10$)

Aspect Ratio (l/a) = 3
d/t = 0.25

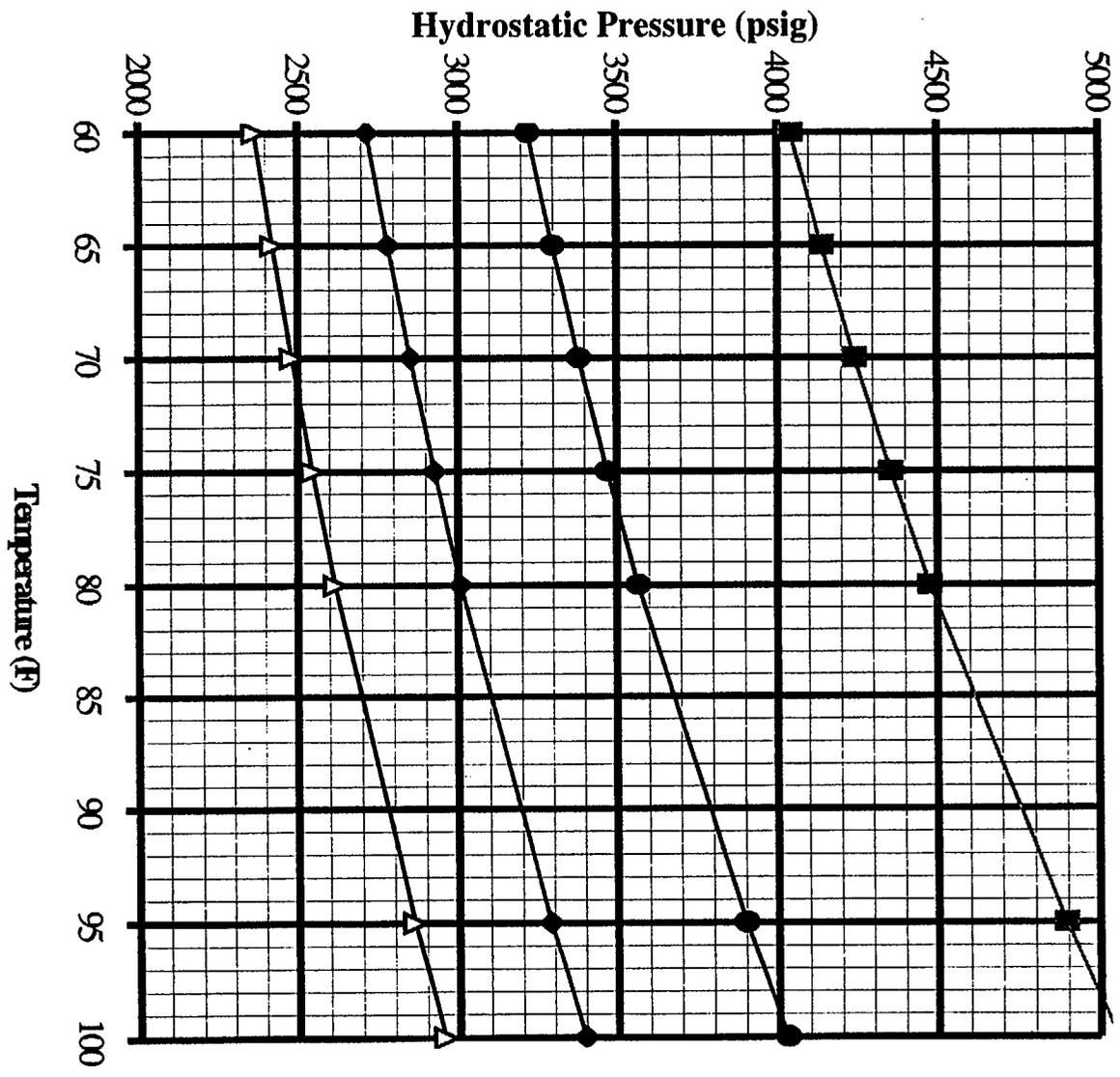


Figure A-7 Test Pressure vs. Temperature Curve (Aspect Ratio = 3, d/t=0.25)

Aspect Ratio (l/a) = 6
 $d/t = 0.05$

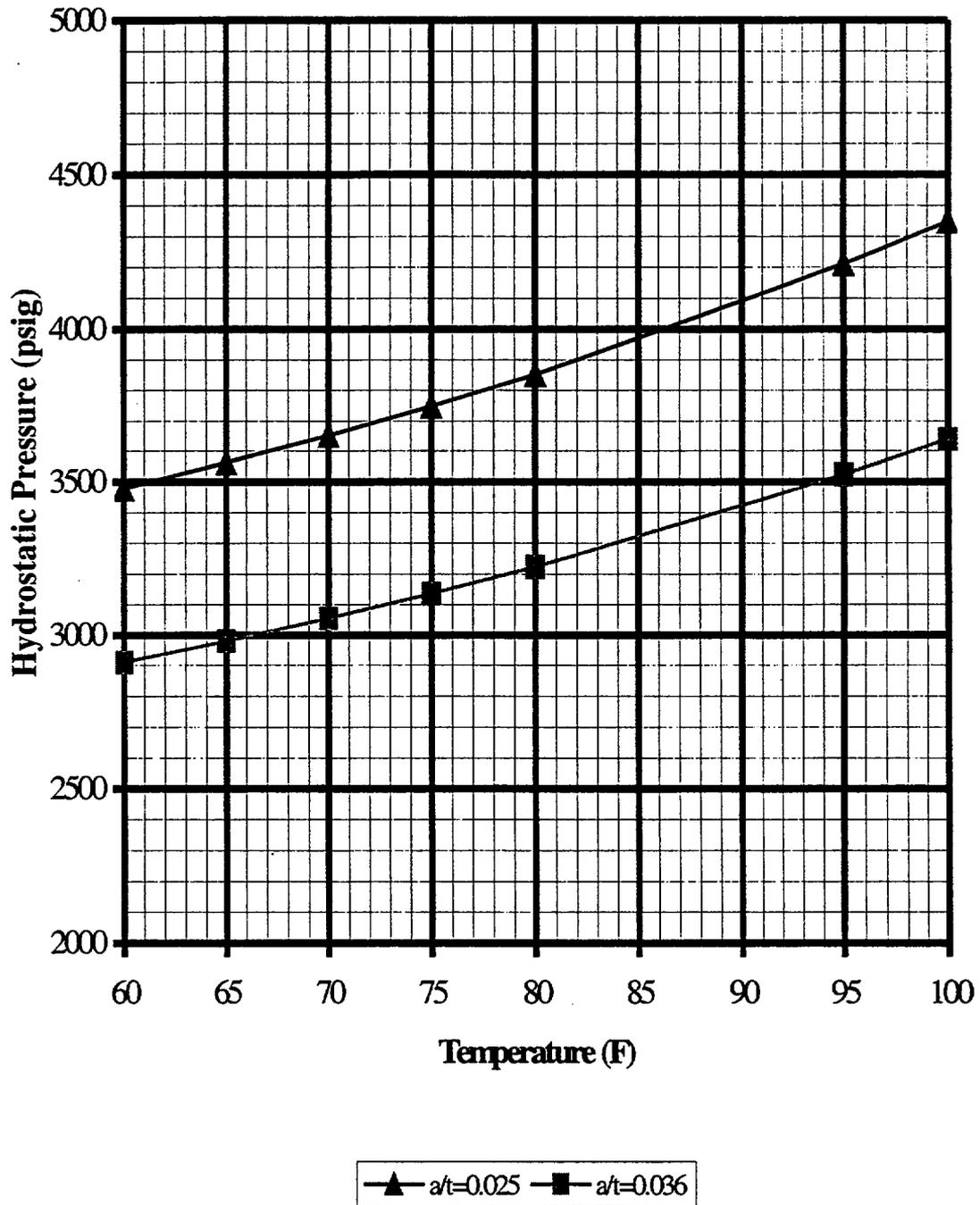


Figure A-8 Test Pressure vs. Temperature Curve (Aspect ratio = 6, $d/t=0.05$)

Aspect Ratio (l/a) = 6
 $d/t = 0.10$

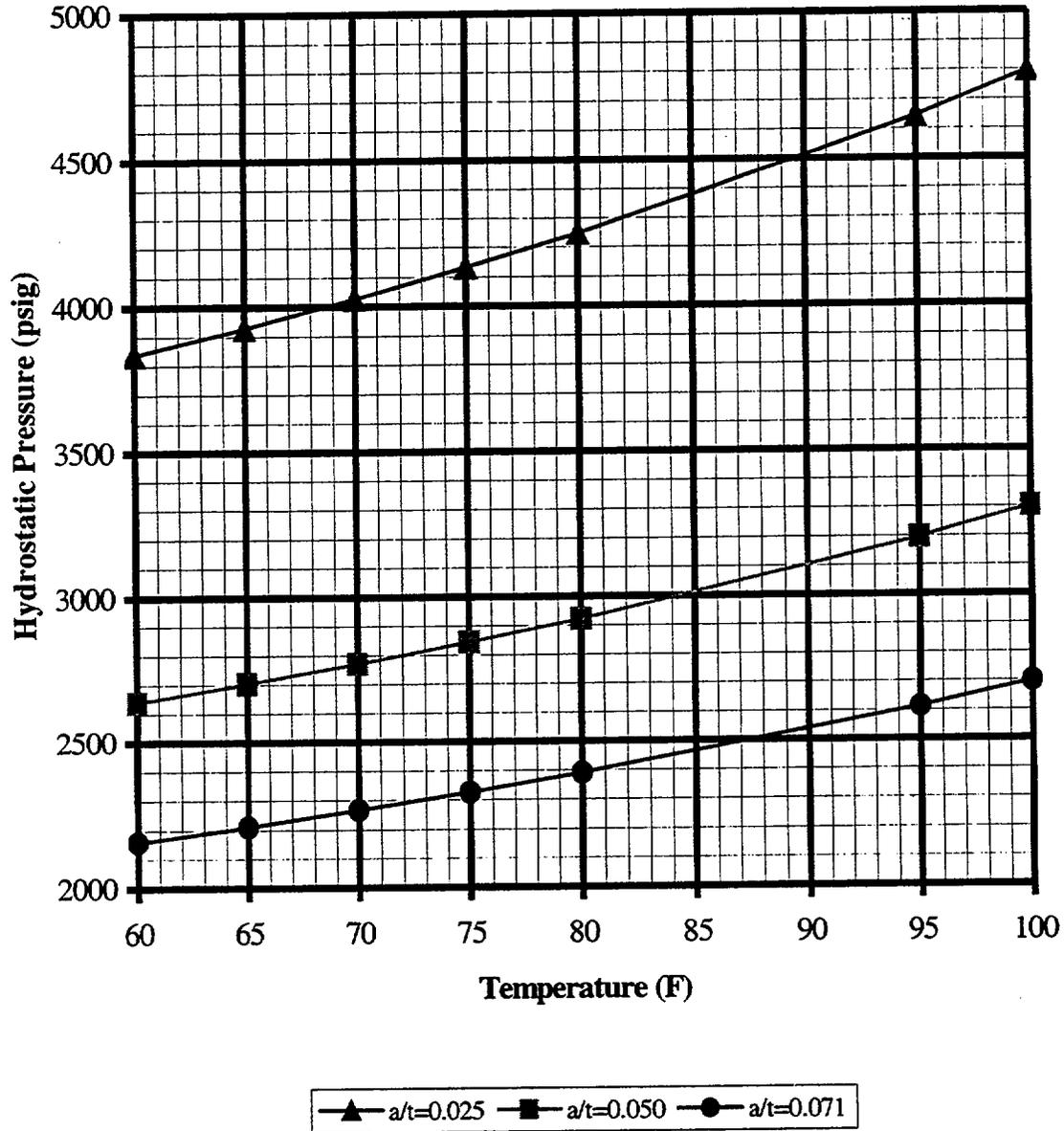


Figure A-9 Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t = 0.10$)

Aspect Ratio (l/a) = 6
d/t = 0.15

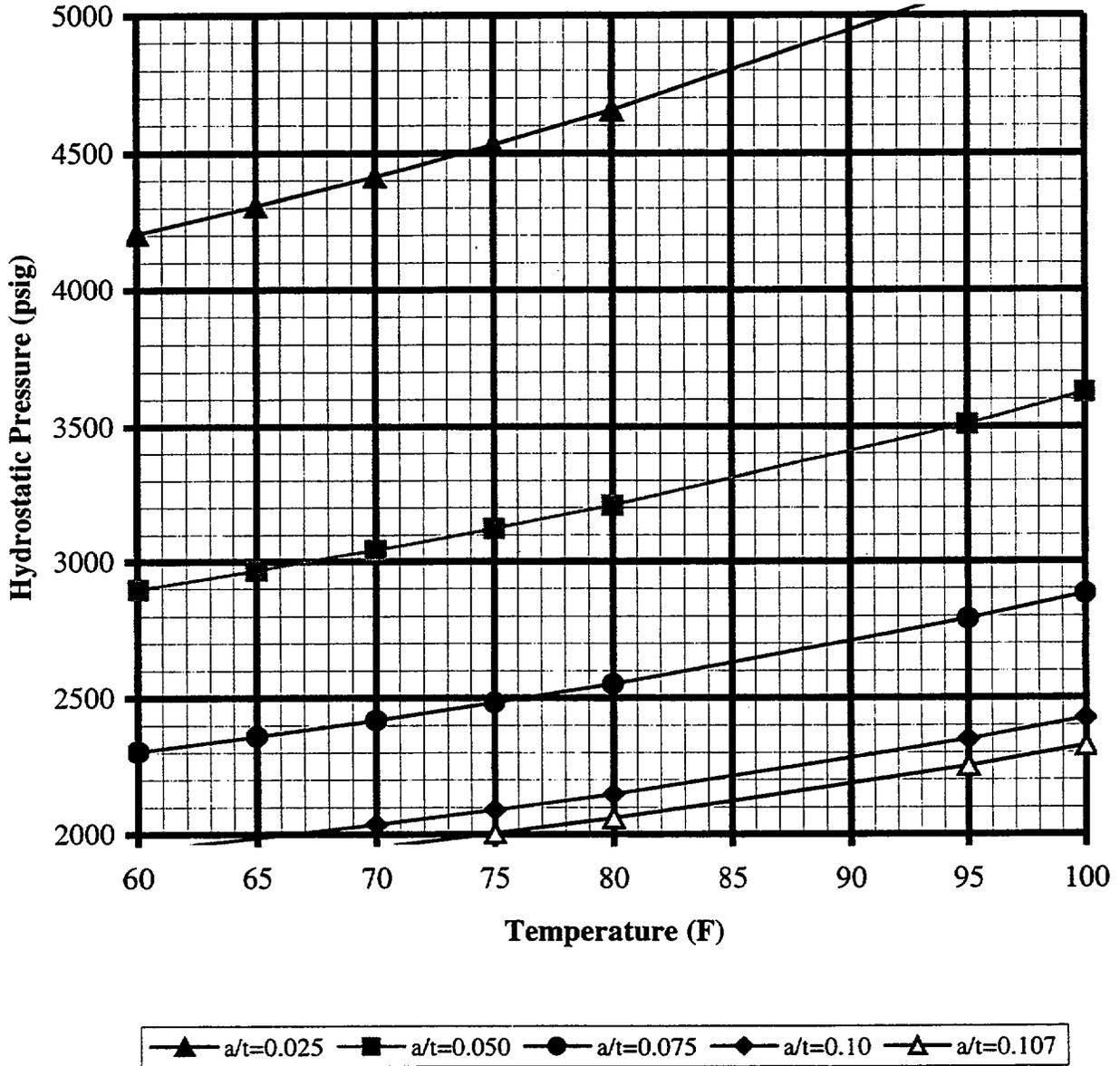


Figure A-10 Test Pressure vs. Temperature Curve (Aspect Ratio = 6, d/t=0.15)

Aspect Ratio (l/a) = 6
 $d/t = 0.20$

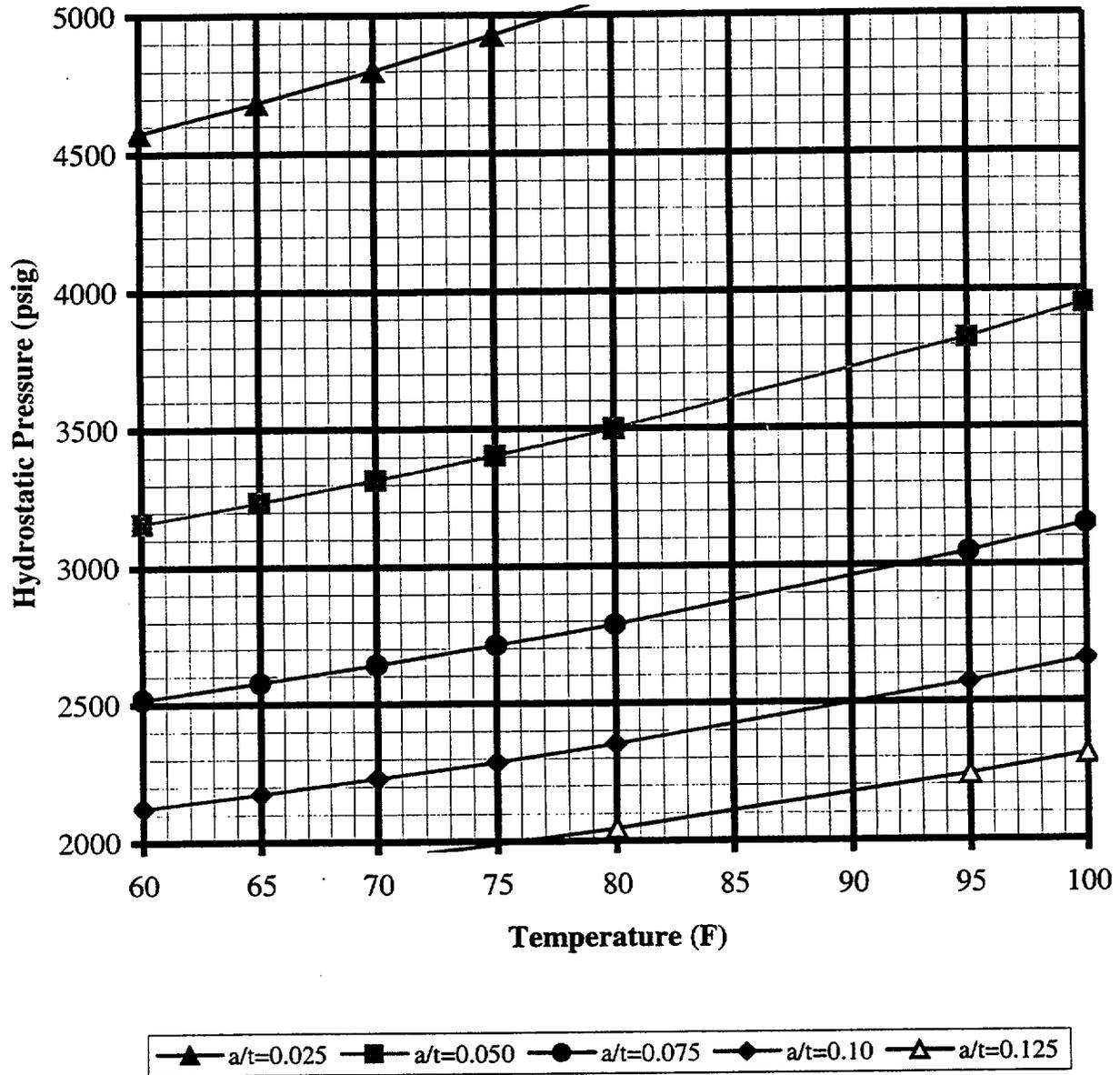


Figure A-11 Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t=0.20$)

Aspect Ratio (l/a) = 6
 $d/t = 0.25$

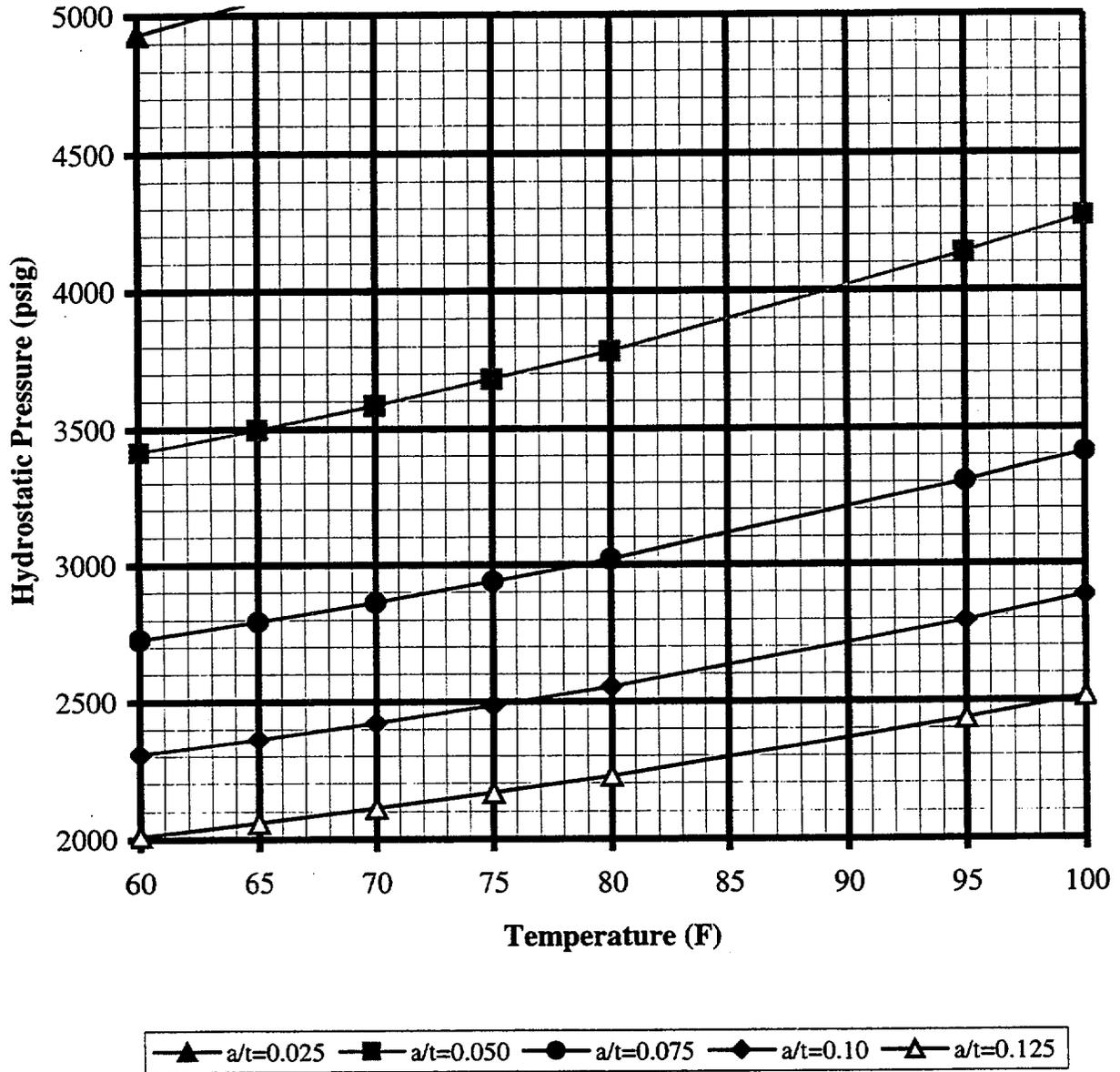


Figure A-12 Test Pressure vs. Temperature Curve (Aspect Ratio = 6, $d/t = 0.25$)

Aspect Ratio (l/a) = 10
 $d/t = 0.05$

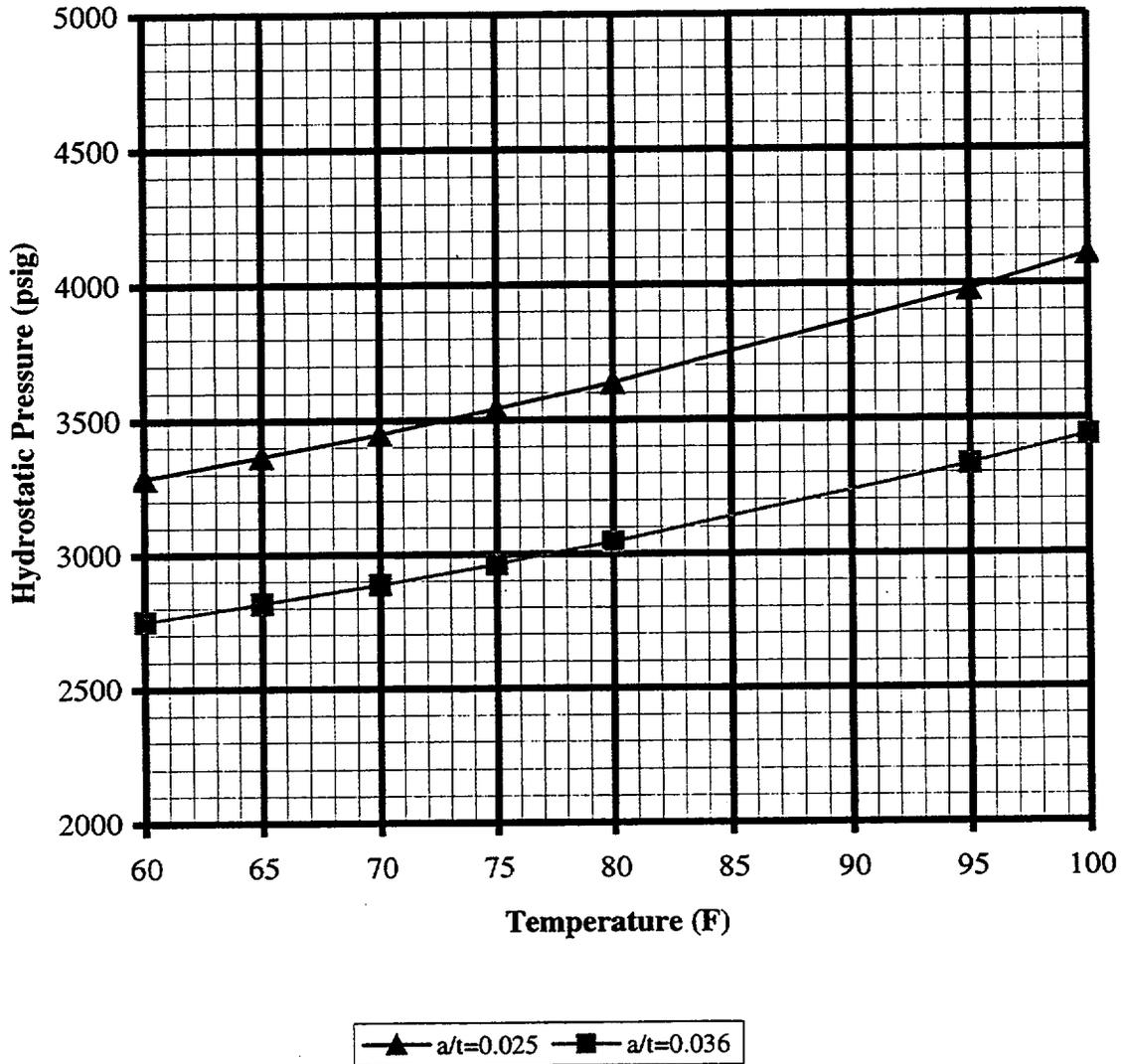


Figure A-13 Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.05$)

Aspect Ratio (l/a) = 10
 $d/t = 0.10$

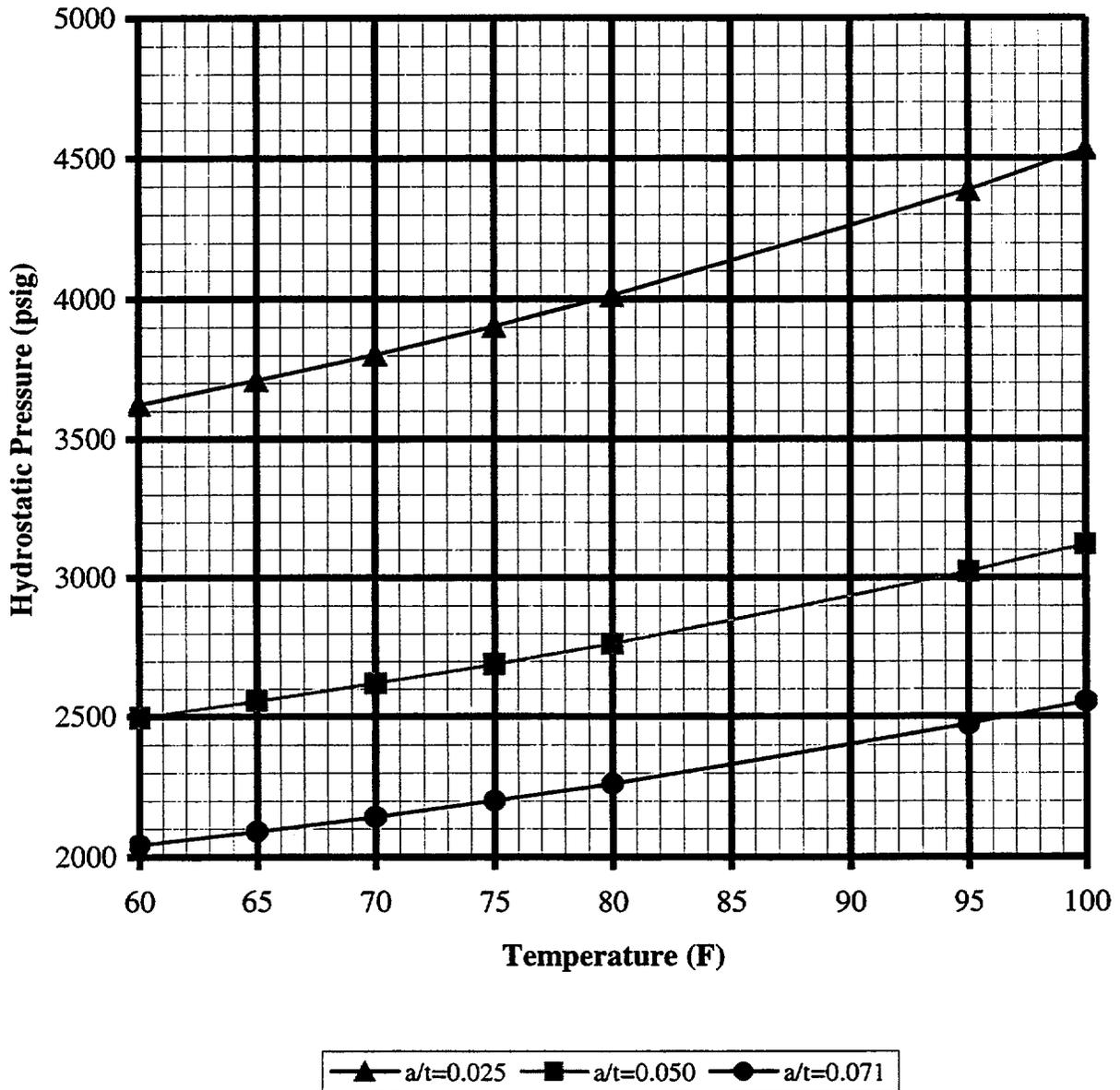


Figure A-14 Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t=0.10$)

Aspect Ratio (l/a) = 10
 $d/t = 0.15$

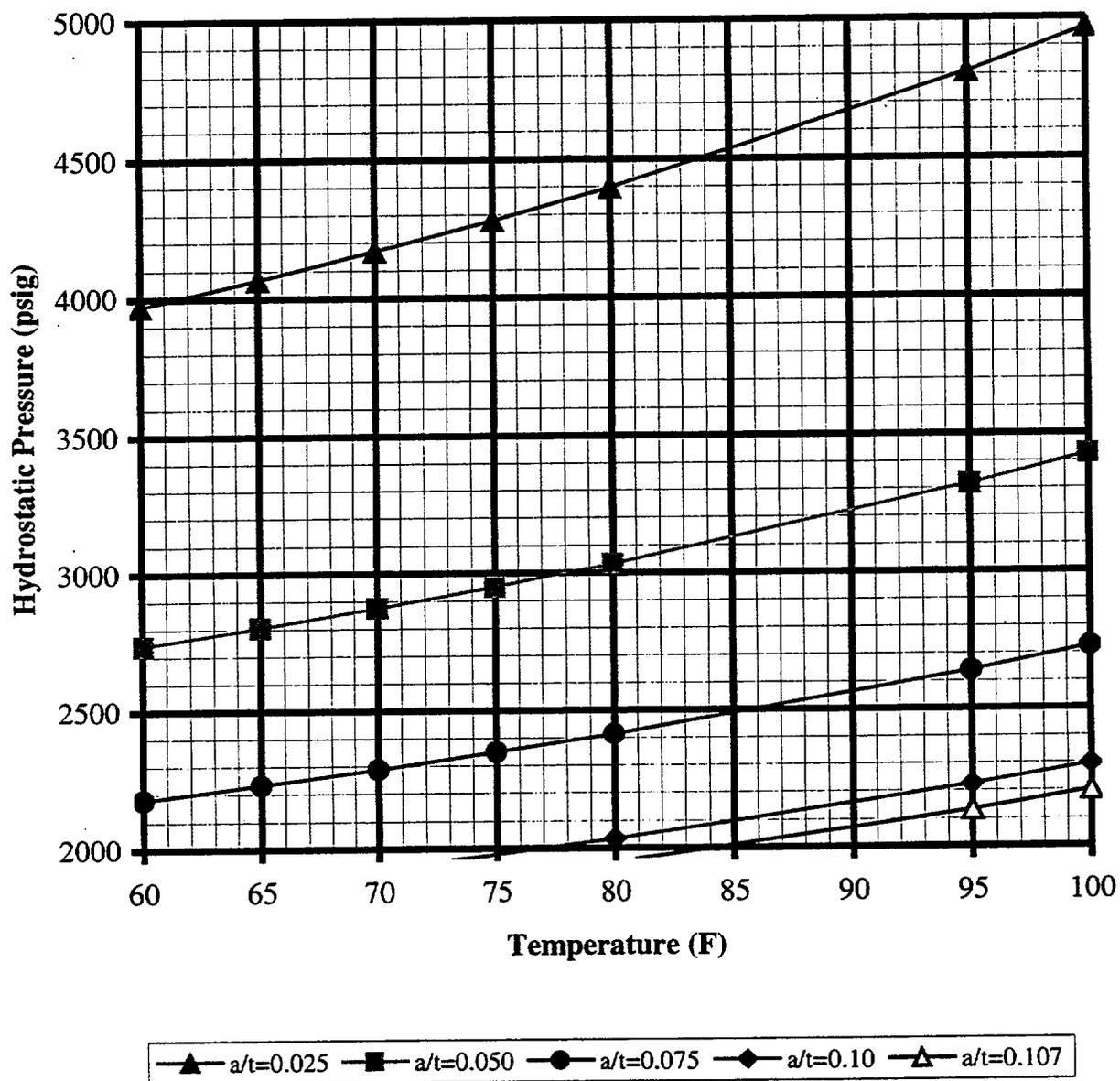


Figure A-15 Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t = 0.15$)

Aspect Ratio (l/a) = 10
 $d/t = 0.20$

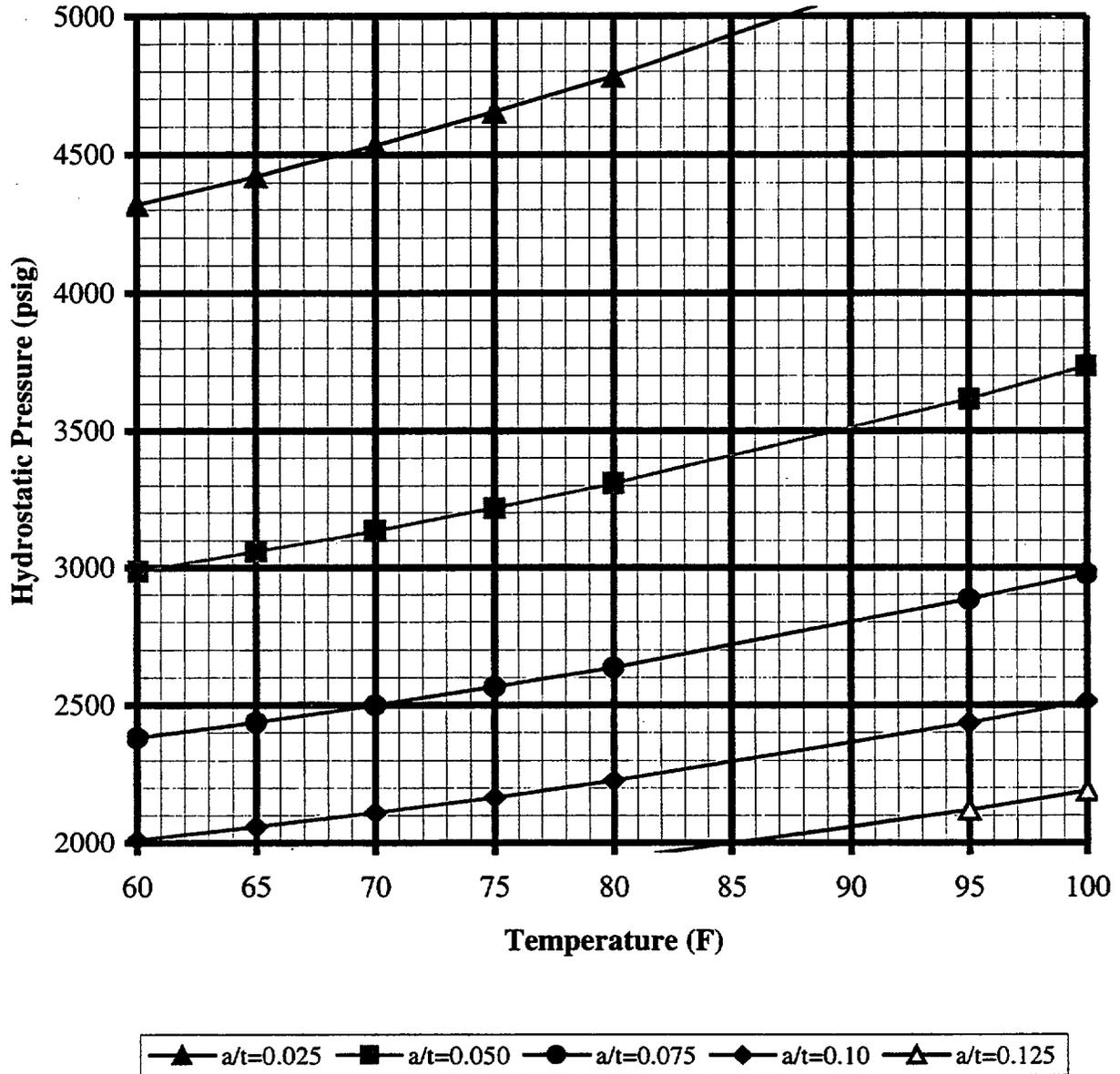


Figure A-16 Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t = 0.20$)

Aspect Ratio (l/a) = 10
 $d/t = 0.25$

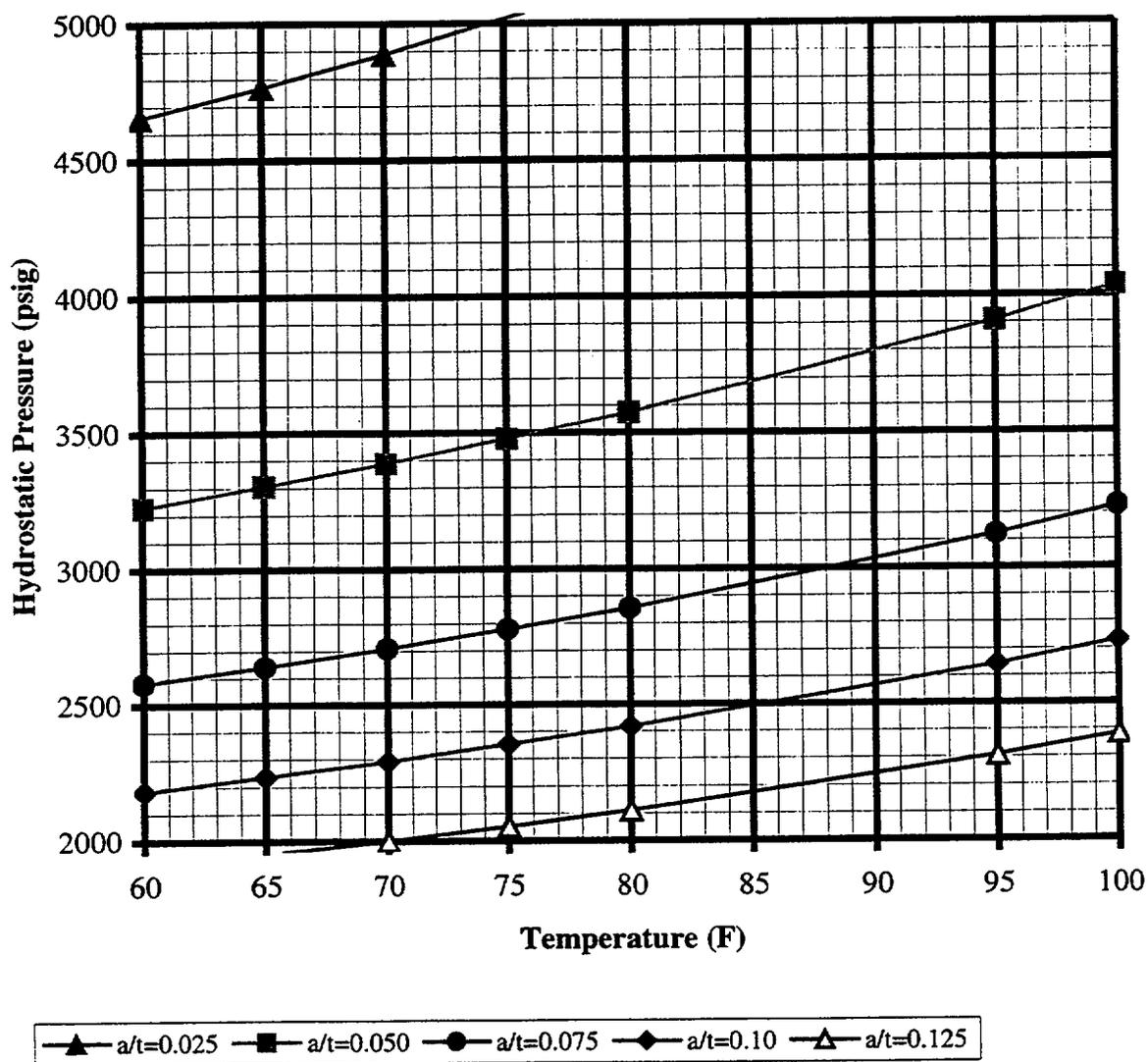


Figure A-17 Test Pressure vs. Temperature Curve (Aspect Ratio = 10, $d/t = 0.25$)

Aspect Ratio (l/a) = 50
 $d/t = 0.05$

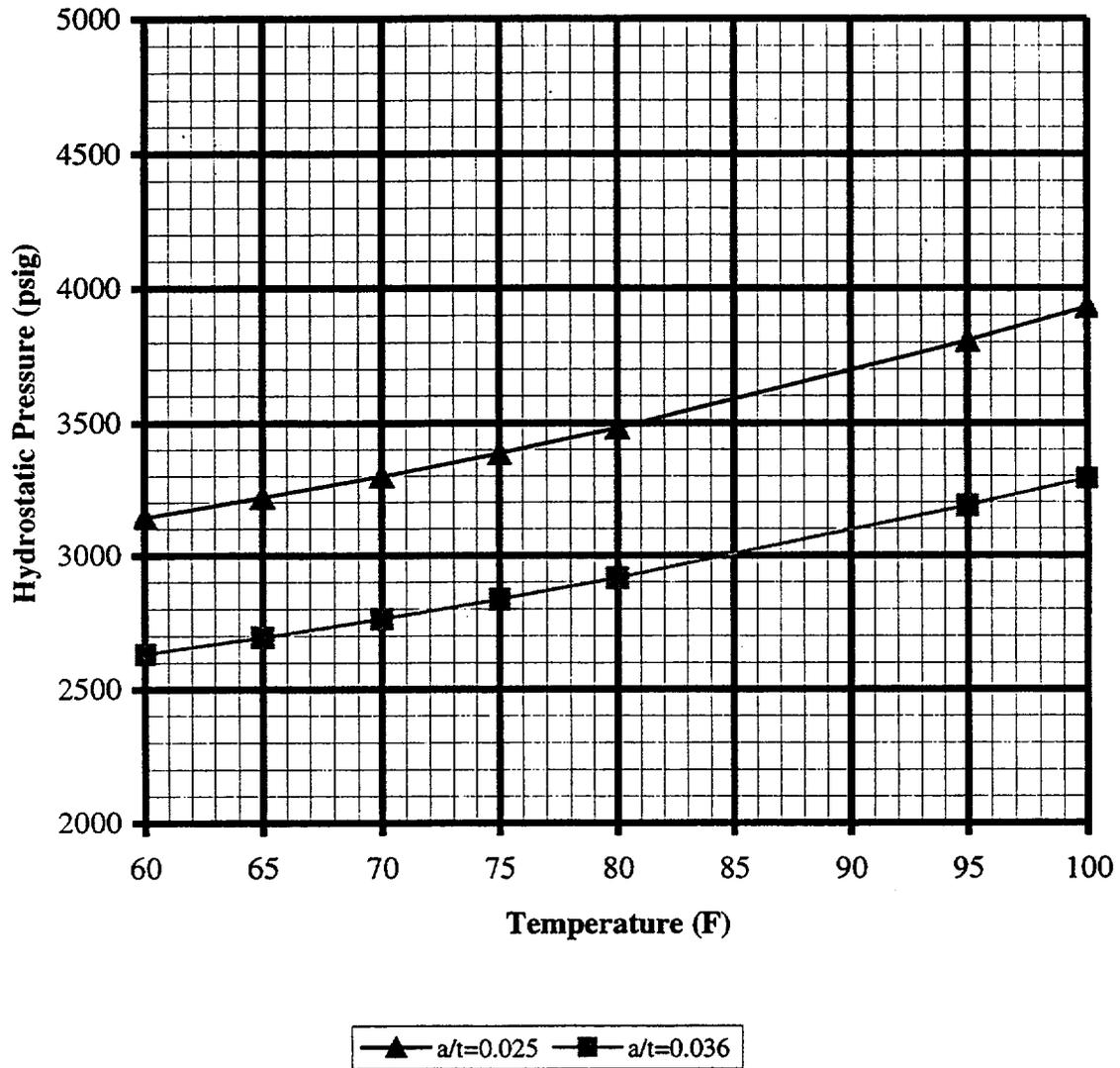


Figure A-18 Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.05$)

Aspect Ratio (l/a) = 50
 $d/t = 0.10$

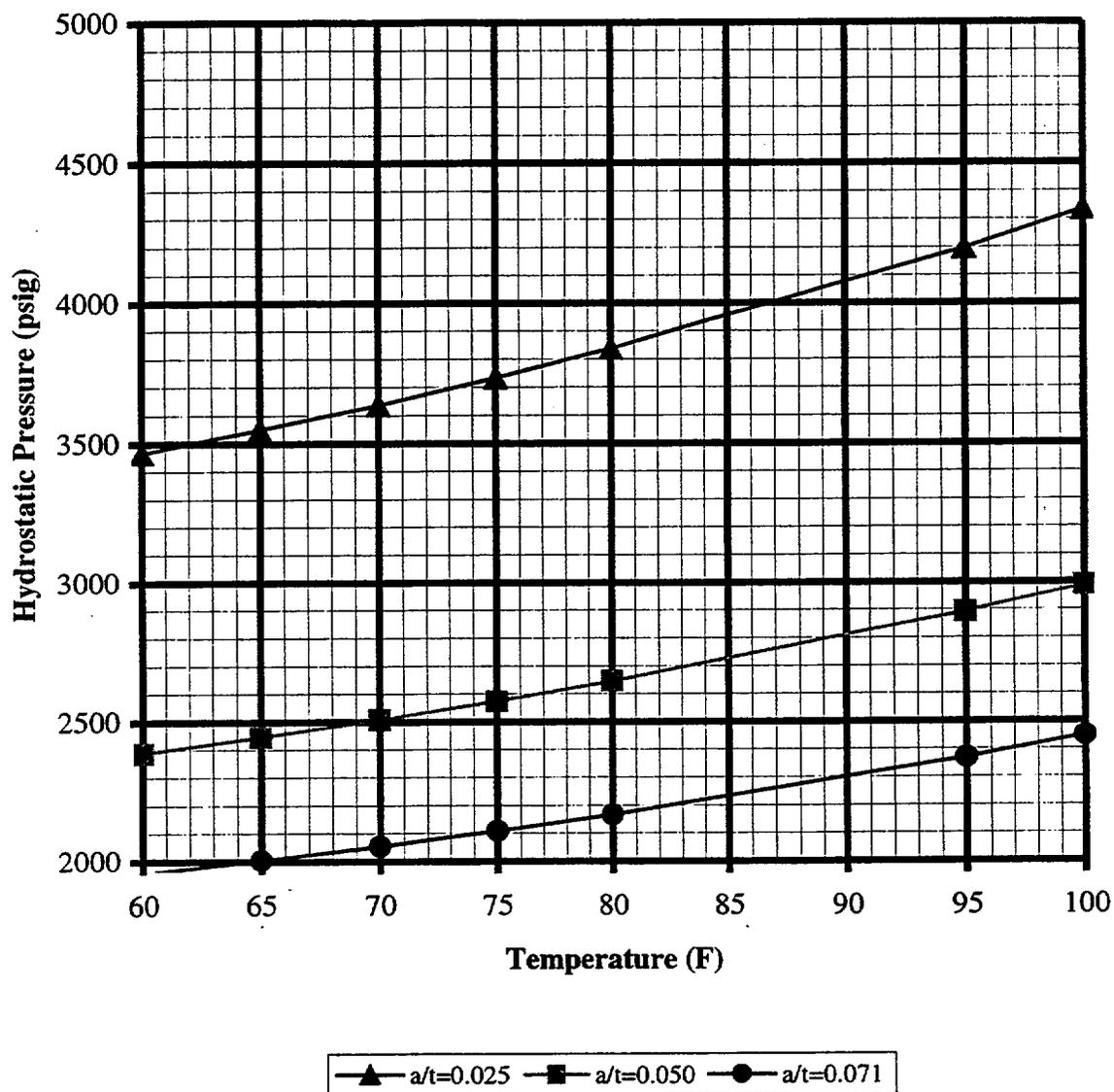


Figure A-19 Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.10$)

Aspect Ratio (l/a) = 50
d/t = 0.15

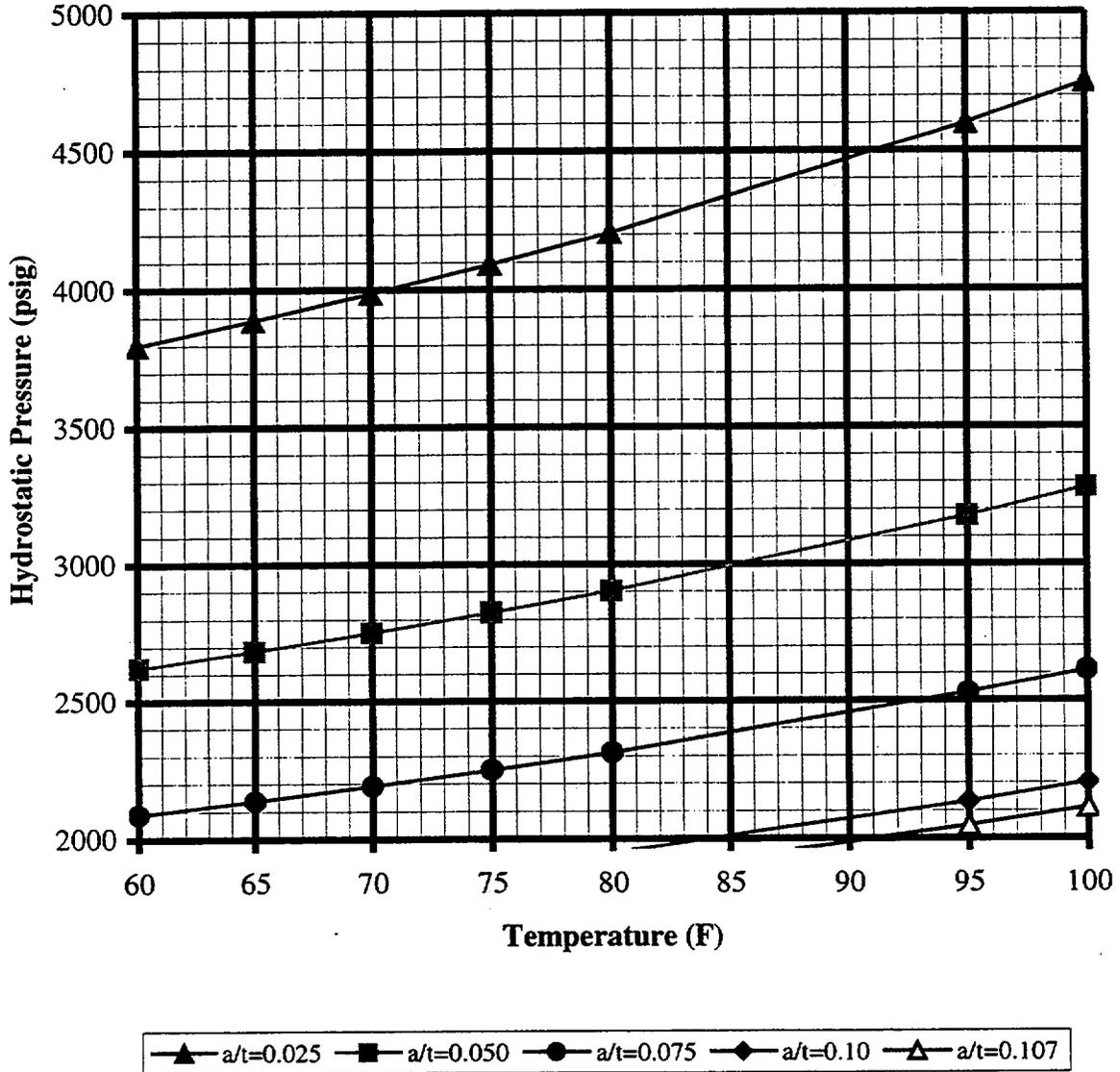


Figure A-20 Test Pressure vs. Temperature Curve (Aspect Ratio = 50, d/t=0.15)

Aspect Ratio (l/a) = 50
 $d/t = 0.20$

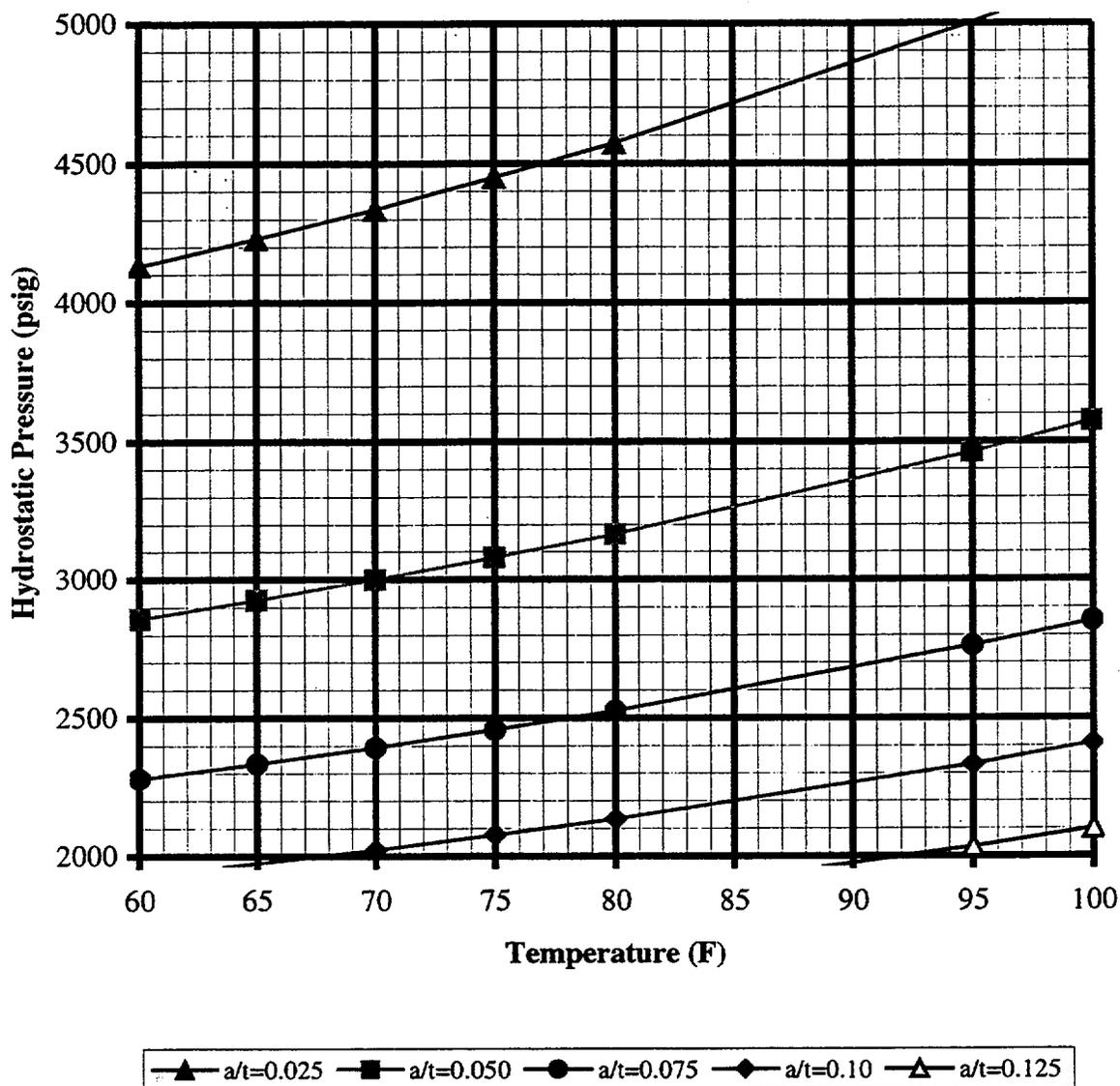


Figure A-21 Test Pressure vs. Temperature Curve (Aspect Ratio = 50, $d/t=0.20$)

Aspect Ratio (l/a) = 50
d/t = 0.25

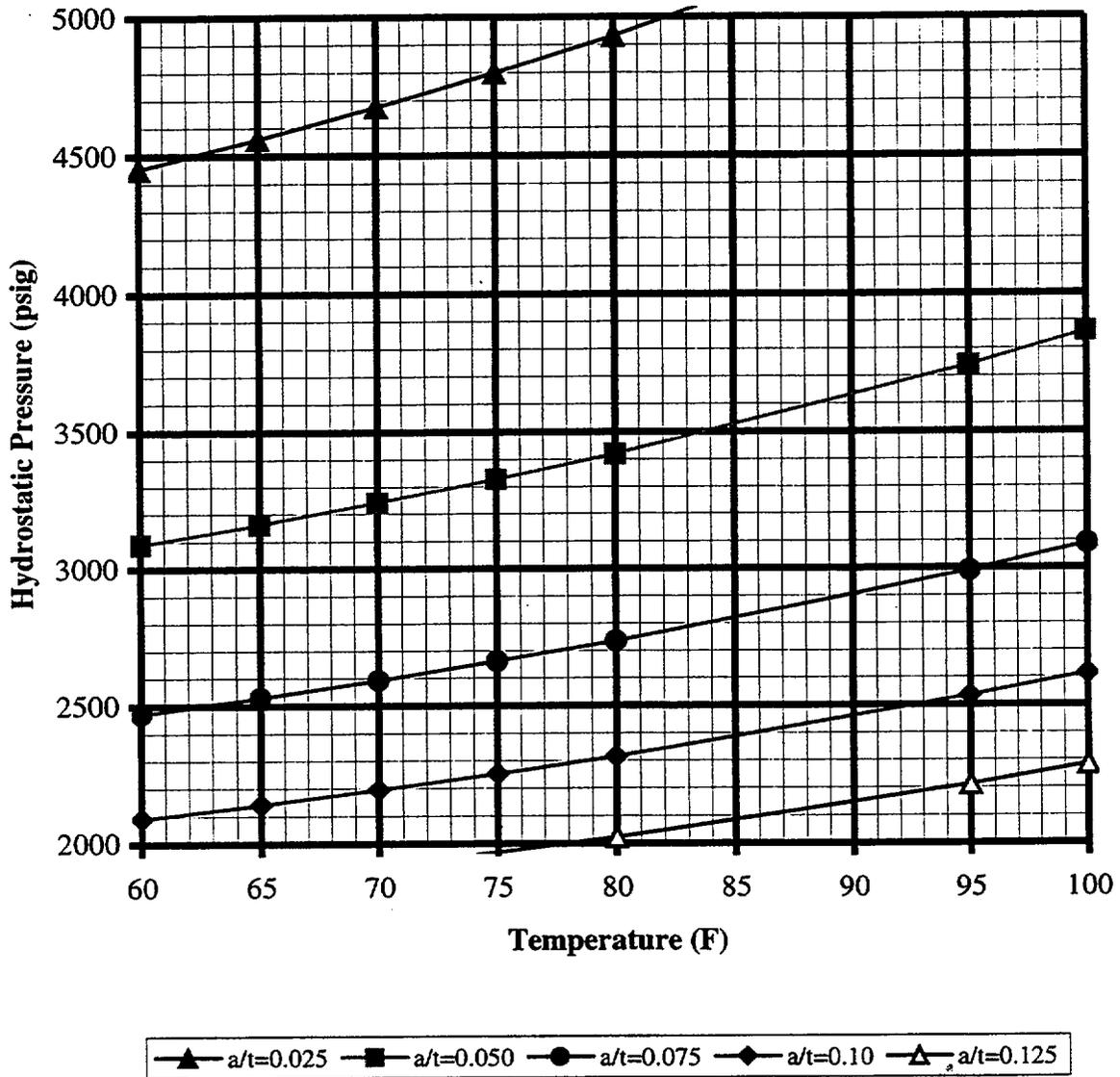


Figure A-22 Test Pressure vs. Temperature Curve (Aspect Ratio = 50, d/t=0.25)

Attachment 4

Inservice Inspection Summary Report

**North Anna Power Station Unit 1
P.O. Box 402
Mineral, Virginia 23117**

2000 Refueling Outage Owner's Report of Inservice Inspections for Interval 3

Commercial Service Date 6-6-78

**Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060**



VT-3 Visual Examination Report, IWF Component Supports

2893

324

Procedure : VPAP - 1103 Revision: 4

Attachment 13

1. Station <input type="checkbox"/> Surry <input checked="" type="checkbox"/> North Anna	Unit <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	System QS	Drawing Number(s)/Revision 11715-WMKS-0104G 4	Repair/Replacement No. (When Applicable) N/A
2. Remote No		Direct Yes		
3. Component Inspected Line: 8"-QS-4-153A-Q3		Mark/Weld: A-18		

4. For Spring Hanger			
Manufacturer N/A	Model Number N/A	Spring Size N/A	

5. Work Order/ DCP Number(s) (If Applicable) N/A

6. Checklist

For statements a through f, check the applicable selection for each condition

- If the statement is true, check "Reject"
- If the statement is not true, check "Accept"
- If the statement does not apply, check "N/A". The use of "N/A" requires an explanation in the comment section (block 9) and may require re-examination

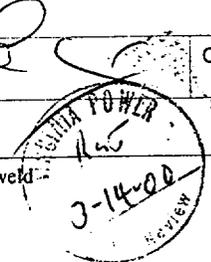
a. Structural degradation of the support where the cross-section is reduced	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input type="checkbox"/> N/A
b. Deformation or structural degradations of fasteners, springs, clamps, or other support items	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input type="checkbox"/> N/A
c. Missing, detached or loosened support items	<input type="checkbox"/> Accept	<input checked="" type="checkbox"/> Reject	<input type="checkbox"/> N/A
d. Arc strikes, weld spatter, paint, scoring roughness, or general corrosion on close tolerance machined or sliding surfaces	<input type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input checked="" type="checkbox"/> N/A
e. Fluid loss beyond specific limits or lack of fluid indication (hydraulic snubbers only)	<input type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input checked="" type="checkbox"/> N/A
f. Improper hot or cold positions (snubber and spring supports)	<input type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input checked="" type="checkbox"/> N/A

7. Actual Setting: N/A Hot N/A Cold	Required Setting: N/A Hot N/A Cold
-------------------------------------	------------------------------------

8. Supplemental examination required? (Explanation required if "Yes")	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	---

9. Comments (Any item with "N/A" must be explained.)
 ITEM IS NOT A SNUBBER, SPRING HANGER OR A SLIDING SURFACE. INSUFFICIENT THREADS ON THE TOP RIGHT OUTER NUT ON THE UPPER RIGHT HAND CORNER OF THE BOTTOM PLATE.

10. ISI Engineer Notified - Notification Received By (Name)	Date
11. Examiner (Print Name) GERALD L. HENDRIX	Exam Date 03/12/2000
12. ANII Signature <i>G.L. Hendrix</i>	Date 3/22/00
Examiner (Signature) <i>G.L. Hendrix</i>	Certification Level II



Note: Provide any comments concerning visual aids required, scaffolding, insulation removal or weld preparation in block 9 of this form.

Key: VT-Visual Testing; DCP Design Change Package; ISI-Inservice Inspection; ANII-Authorized Nuclear Inservice Inspector

ASME Section XI Component
Examination Program

STATION REQUEST REA #00 - 4

STATION ISI REQUEST #

ENGINEERING EVALUATION

Class 1, 2, and 3 NDE Problem Resolution

NP _____

COMPONENT NO. 1-QS-A-18 LINE NO 8"-QS-4-153A-Q3

LOCATION DWG. 11715-WKMS-0104G REV 4 REFERENCE DWG. _____

REPORTED PROBLEM:

1. Insufficient threads on top right outer nut on the upper right hand corner of the bottom plate.

REPORTED BY: John F. Eschmann III DATE: 03/15/00 EXT. 2370

Is the component support operable in the current condition? yes no

EVALUATION Based on field walkdowns the Anchor Bolt in question was found to have All but one Full thread engaged. Since only three full threads are required to develop the full bolt strength (Ref. Mechanical Engineering Design, 4th Ed., by J.E. Shigley and L.D. Mitchell), the structural integrity of the support is not affected.

CORRECTIVE ACTION REQUIRED DCR 2000-361 has been issued to add a note to drawing 11715-PSSK-104 G.02, sheet 2 of 3 to indicate that the As-Built bolt length is acceptable.

FINAL REVIEW
M.H.
HSB/CI
4/2/00
M.H. CRANE

EVALUATED BY Brian Derreberry DATE: 3-20-2000

REVIEWED BY GE Modyluski DATE: 3/20/2000



VT-3 Visual Examination Report, IWF Component Supports

2893

324

Procedure : VPAP - 1103 Revision: 4

Attachment 13

1. Station <input type="checkbox"/> Surry <input checked="" type="checkbox"/> North Anna	Unit <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	System QS	Drawing Number(s)/Revision 11715-WMKS-0104G 4	Repair/Replacement No. (When Applicable) N/A
2. Remote No		Direct Yes		
3. Component Inspected Line: 8"-QS-4-153A-Q3		Mark/Weld: A-18		

4. For Spring Hanger			
Manufacturer N/A	Model Number N/A	Spring Size N/A	

5: Work Order/ DCP Number(s) (If Applicable)	N/A
--	-----

6. Checklist

For statements a through f, check the applicable selection for each condition

- If the statement is true, check "Reject"
- If the statement is not true, check "Accept"
- If the statement does not apply, check "N/A". The use of "N/A" requires an explanation in the comment section (block 9) and may require re-examination

a. Structural degradation of the support where the cross-section is reduced	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input type="checkbox"/> N/A
b. Deformation or structural degradations of fasteners, springs, clamps, or other support items	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input type="checkbox"/> N/A
c. Missing, detached or loosened support items	<input type="checkbox"/> Accept	<input checked="" type="checkbox"/> Reject	<input type="checkbox"/> N/A
d. Arc strikes, weld spatter, paint, scoring roughness, or general corrosion on close tolerance machined or sliding surfaces	<input type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input checked="" type="checkbox"/> N/A
e. Fluid loss beyond specific limits or lack of fluid indication (hydraulic snubbers only)	<input type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input checked="" type="checkbox"/> N/A
f. Improper hot or cold positions (snubber and spring supports)	<input type="checkbox"/> Accept	<input type="checkbox"/> Reject	<input checked="" type="checkbox"/> N/A

7. Actual Setting: N/A Hot N/A Cold	Required Setting: N/A Hot N/A Cold
-------------------------------------	------------------------------------

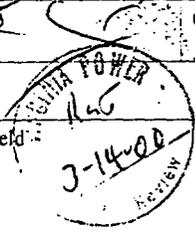
8. Supplemental examination required? (Explanation required if "Yes")	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	---

9. Comments (Any item with "N/A" must be explained.)
 ITEM IS NOT A SNUBBER, SPRING HANGER OR A SLIDING SURFACE. INSUFFICIENT THREADS ON THE TOP RIGHT OUTER NUT ON THE UPPER RIGHT HAND CORNER OF THE BOTTOM PLATE.

10. ISI Engineer Notified - Notification Received By (Name)	Date
11. Examiner (Print Name) GERALD L. HENDRIX	Exam Date 03/12/2000
Examiner (Signature)	Certification Level II
12. ANII Signature	Date

Note: Provide any comments concerning visual aids required, scaffolding, insulation removal or weld preparation in block 9 of this form.

Key: VT-Visual Testing; DCP Design Change Package; ISI-Inservice Inspection; ANII-Authorized Nuclear Inservice Inspector



REV	DESCRIPTION	CHKD	CORR	APPR	DATE
1	ORIGINAL ISSUE				
2					
3					

NORTH ANNO POWER STATION
VIRGINIA ELECTRIC AND POWER COMPANY

SUPPORT NO. 1-Q5-A-18

QUENCH SPRAY SYSTEM
SAFEGUARD AREA
UNIT I

NUCLEAR SAFETY RELATED
QA CAT 1

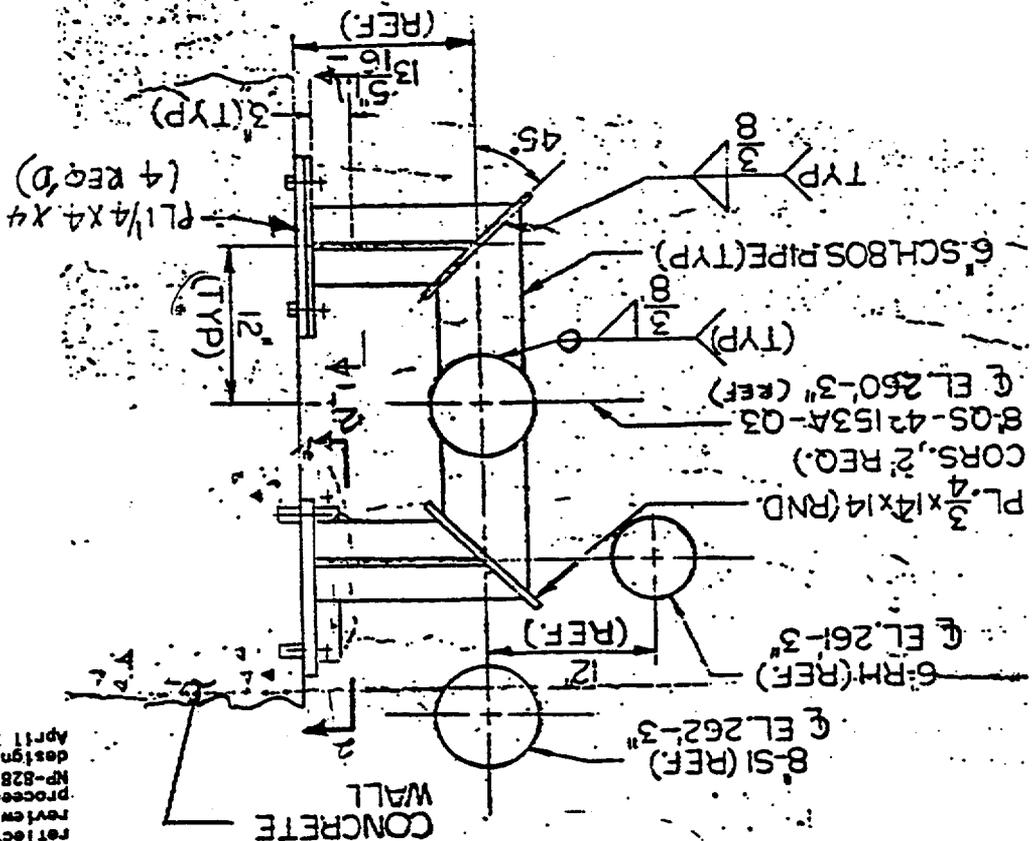
REF. DWG.
11715-FP-4A
11715-FC-19SERIES
11715-AX-104G.PT.NO.29
STRESS CALC.
13075.62-NP(B)-2-84-X2

SPEC. J.O. NO. 14238.18

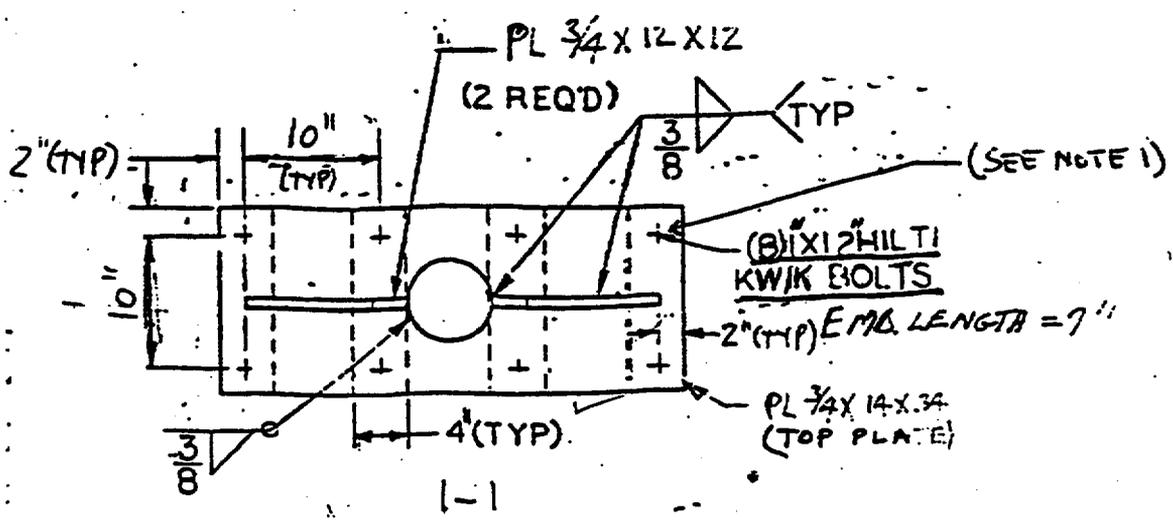
INFORMATION TRANSPOSED
CHECKED BY
DATE
SIGNATURE

INFORMATION TRANSPOSED
BY PAUL WONG
DATE 1-26-86
SIGNATURE

ELEVATION LOOKING NORTH-WEST



CAUTION: Modifications made
by Design Change Packages
(DCP) or Engineering Work
Requests (EWR) with an
installation complete date
after April 30, 1985 are not
reflected on this drawing. A
review of DCP's and EWR's is
proceeding under IR-5672 (EAC
NP-828) to incorporate any
design changes made after
April 30, 1985.



Note 1) The top right anchor bolt length does not allow for the full engagement of all available threads, however the bolt capacity is not affected.

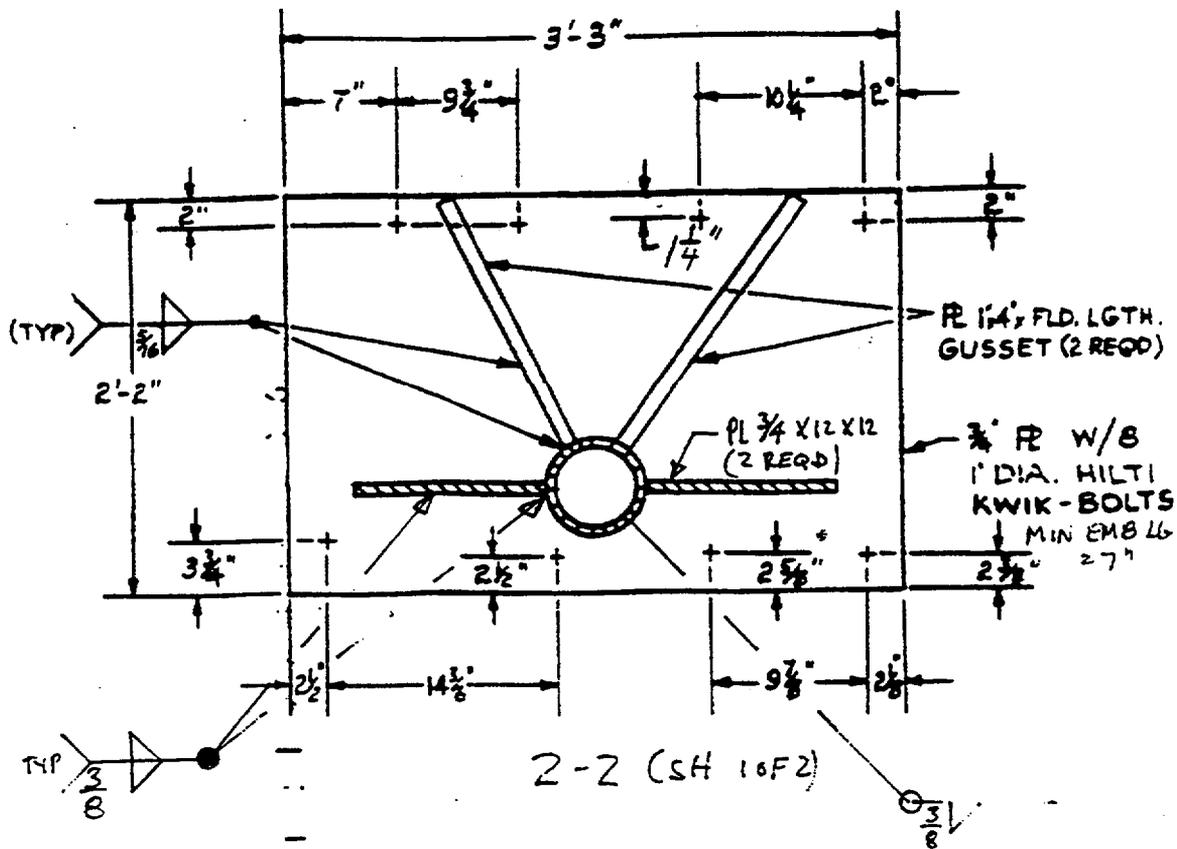
CAUTION: Modifications made by Design Change Packages (DCP) or Engineering Work Requests (EWR) with an installation complete date after April 30, 1985 are not reflected on this drawing. A review of DCP's and EWR's is proceeding under IR-5672 (E&C NP-828) to incorporate any design changes made after April 30, 1985.

**NUCLEAR SAFETY RELATED
Q.A. CAT I**

QUENCH SPRAY SYSTEM SAFE GUARD AREA UNIT I	
SUPPORT NO. 1-Q5-A-18	
NORTH ANNA POWER STATION VIRGINIA ELECTRIC AND POWER COMPANY	
DWG NO. 11715-PSSK-1046.02 SHT 2 OF 3	REV 1

SWEC J.O. NO. 14238.18

3					
2					
1	ORIGINAL ISSUE				
REV	DESCRIPTION	CHKD	CORR	APPR	DATE



CAUTION: Modifications made by Design Change Packages (DCP) or Engineering Work Requests (EMR) with an installation complete date after April 30, 1985 are not reflected on this drawing. A review of DCP's and EMR's is proceeding under IR-5672 (E&C NP-828) to incorporate any design changes made after April 30, 1985.

SWEC J.O. NO. 14238.18

REV	DESCRIPTION	CHKD	CORR	APPR	DATE
3					
2					
1	ORIGINAL ISSUE				

NUCLEAR SAFETY RELATED
Q.A. CAT I

QUENCH SPRAY SYSTEM SAFE GUARD AREA UNIT I	
SUPPORT NO. 1-QS-A-18	
NORTH ANNA POWER STATION VIRGINIA ELECTRIC AND POWER COMPANY	
DWG NO. 11715-PSSK-104G.02 SHT 3 OF 3	REV 1



VIRGINIA POWER
NORTH CAROLINA POWER

VOA/BACKGROUND

Memorandum

POW-48
JWK-00-012

To: Ms. M. McClure

Innsbrook Technical Center

From: J.W. Kin

June 19, 2000

**North Anna Unit 1
Interval 3
Inservice Inspection Summary Report**

The subject report is attached and should be submitted to the NRC by July 5, 2000.

The information contained in this report accurately reflects the examinations, repairs and replacements performed on ASME Section XI, Class 1 and Class 2 components.

The site ANII has reviewed all examination reports and repair/replacement programs, contained in this report.

Relief requests for partial examinations as stated in the Abstract of Examinations Performed, IWB, IWC and IWF, will be provided by separate correspondence.

It is requested that the Supervisor Materials/ISI Engineering (Mr. E. W. Throckmorton), the Lead ISI Engineer (Mr. P. J. Naughton - North Anna) and Mr. Melvin Murph (Risk Services 20/OJRP) be placed on distribution for the finalized submittal to the NRC, with attachments. Mr. Murph will hand carry his copy to the Virginia State Boiler Inspector.

If you have any questions, contact me extension 2122.


J. W. Kin

cc: Mr. E.W. Throckmorton
Mr. D. H. Smith
Mr. P.J. Naughton
Mr. M. Grace

CHECKLIST FOR INSERVICE INSPECTION SUMMARY REPORT

Item	Complete	NA	Remarks
1. Preamble information as required by paragraph 5.5.a of this procedure.	Yes		
2. Owner's Report of Inservice Inspections Form NIS-1 completed per paragraph 5.5.b of this procedure.	Yes		
3. Examination Summary containing the information required by paragraph 5.5.c of this procedure.	Yes		
4. Abstract of examinations on Class 1 & 2 piping and components containing the information required in paragraph 5.5.d of this procedure.	Yes		
5. Abstract of Class 1 & 2 system pressure tests containing the information required by paragraph 5.5.e of this procedure. *	Yes		
6. Abstract of snubber examinations per paragraph 5.5.f of this procedure. *	Yes		
7. Abstract of eddy current examination of steam generator tubes per paragraph 5.5.g of this procedure.	Yes		
8. Abstract of Repairs and Replacements providing the information required by paragraph 5.5.h of this procedure.	Yes		
9. Evaluation of inaccessible areas of accessible areas of Class MC and CC components required by paragraph 5.6 of this procedure.	Yes		
10. Form NIS-2 for each repair or replacement listed in abstract.	Yes		

Note: PROVIDE EXPLANATION FOR ANY N/A ITEM

* Verification of Accuracy required for this item

COMPLETED BY:

John W. King

DATE:

8/13/00

APPROVED: Ernie W. Throckmorton

Ernie W. Throckmorton

DATE:

6/13/00