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U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555 - 0001

Braidwood Station, Unit 2  
Facility Operating License Nos. NPF-77  
NRC Docket No. STN 50-457

Subject: Braidwood Station, Unit 2 Inservice Inspection Summary Report

Enclosed please find the Post-Outage (90 day) Summary Report for Inservice Inspection examinations conducted during the eighth Braidwood Station, Unit 2, refueling outage (i.e., A2R08). This report is submitted in accordance with the requirements of ASME Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components", Article IWA-6200.

Please direct any questions you may have regarding this submittal to Mr. T.W. Simpkin, Regulatory Assurance Manager, at (815) 458-2801, x2980.

Respectfully,

  
G. Keith Schwartz  
Station Manager  
Braidwood Station

Enclosure: Braidwood Station, Unit 2, Inservice Inspection Summary Report for Internal 2,  
Period 1, Outage 2

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Braidwood Station (w/o enclosure)

A047

# **BRAIDWOOD STATION**

## **UNIT 2 INSERVICE INSPECTION SUMMARY REPORT FOR:**

**Interval 2, Period 1, Outage 2**

### **STATION ADDRESS:**

**Braidwood Station  
35100 S. Rt. 53 Suite 84  
Braceville, Illinois 60407**

### **UNIT 2 COMMERCIAL SERVICE DATE:**

**October 17, 1988**

### **OWNER'S ADDRESS:**

**Exelon Generation Co., LLC  
300 Exelon Way  
Kennett Square PA 19348**

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## 1.0 INSPECTION INFORMATION

### 1.1 Summary

Second Interval Inservice Inspections (ISI) of ASME Class 1, 2, and 3 components were conducted at Braidwood Station Unit 2 from May 21, 1999 through November 5, 2000. With a majority of these inspections being performed during the Braidwood Station Unit 2 eight refueling outage (A2R08). This outage is reflected in the Braidwood ISI schedule by the code 212 (Interval 2, Period 1, Outage 2). The Unit 2, Period 1 ISI Program was scheduled to end on October 16, 2001 but will be extended to include the Unit 2 ninth refueling outage (A2R09) in Spring 2002 as allowed by IWB-2412(c).

On October 16, 2000, Braidwood Station submitted relief request I2R-39 to the U. S. Nuclear Regulatory Commission (NRC) for review and approval. This relief request proposed an alternative to the 1989 edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," requirements for the selection and examination of Class 1 and 2 piping welds. The alternative proposed by Braidwood Station utilizes an Electric Power Research Institute (EPRI Topical Report TR-112657 ) and an ASME Code Case N-578-1 methodology for a Risk Informed Inservice Inspection (RISI) program.

In order to effectively incorporate the RISI examinations and the balance of the ASME Section XI examinations into the first inspection period, Braidwood has substituted the RISI program for the 1989 ASME Section XI Code Edition examination program for Class 1 Category B-J and B-F welds and Class 2 Category C-F-1 and C-F-2 welds during A2R08. Other portions of the ASME Section XI Code outside of this scope were unaffected. The use of the RISI alternative was incorporated into the Braidwood inspection program prior to NRC approval; however, since Braidwood has an additional outage remaining in the first period, sufficient time remains to achieve the ASME code required percentages of piping welds if required.

The examinations were performed in compliance with the rules and regulations of Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components", of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1989 Edition, No Addenda, pursuant to the requirements of Title 10, Part 50.55a of the Code of Federal Regulations (10CFR50.55a).

Braidwood Station implemented ASME Code, Section XI, Division 1, Appendix VIII "Performance Demonstration for Ultrasonic Examination Systems" (PDI) requirements during A2R08 refuel outage. Revisions to 10 CFR 50.55A published September 22, 1999 (Final Rule) mandated implementation of PDI. Appendix VIII requires qualification of inspection procedures, personnel and equipment used to detect and size flaws in piping, bolting and the reactor vessel. Based on the implementation schedule of the Final Rule, Braidwood incorporated the following Appendix VIII supplements into the ISI program:

#### SUPPLEMENT

#### TITLE

1	Evaluating Electronic Characteristics of Ultrasonic Systems
2	Qualification Requirements for Wrought Austenitic Piping Welds
3	Qualification Requirements for Ferritic Piping Welds
8	Qualification Requirements for Bolts and Studs

The Containment Inspection Program was developed and implemented in accordance with the requirements and intent of Subsections IWE and IWL of ASME Section XI, 1992 Edition through the 1992 Addenda, pursuant to the requirements of Title 10, Part 50.55a of the Code of Federal Regulations (10CFR50.55a). This summary report will address inspection results of Class 1 and 2 components and piping, as required by the ASME Code, IWA-6000.

The detailed report for the Steam Generator Eddy Current examination is provided in a 12 month summary report submitted in accordance with Technical Specification 5.6.9, "Steam Generator (SG) Tube Inspection Reports."

In addition to the ASME Section XI requirements of examination, certain Nuclear Regulatory Commission augmented ISI inspections were required during A2R08. The Braidwood Unit 2 Augmented ISI examination requirements include:

- a) Class 1 pressure boundary for leakage at nominal operating pressure, in accordance with NRC Bulletin 88-05.
- b) Class 2 and 3 pressure boundary for leakage at nominal operating pressure, in accordance with NUREG 0737.
- c) NRC Regulatory Guide 1.14, "Reactor Coolant Pump Flywheel Integrity".
- d) NRC commitment to volumetrically examine welds in High Energy Line Break areas.
- e) Augmented examinations to satisfy NRC commitments contained in Relief Requests I2R-01, I2R-02, I2R-08, and I2R-19.

## **1.2 Identification of Examination Requirements**

The Second Interval ISI Program contains the Component Selection Tables. These tables are presented in a tabular format consistent with the Tables found in subsections IWB, IWC, IWD, IWE, IWF, and IWL-2500 of the ASME code. The NDE tables include the corresponding code category, item number, and component/weld population selection in conformance with examination requirements and intent of Subsection IWA, IWB, IWC, IWD, IWE, IWF, and IWL of Section XI of the ASME Code. Program notes and relief requests and additional information are identified in the basis column.

## **1.3 Exempted Components**

ASME Class 1, 2, and 3 components (or parts of components) that are not included in the Component inspection tables and that are exempt from examination, as specified in Section XI Subsection IWB, IWC, IWD, and IWF are identified in the Braidwood Station Boundary Basis document, along with reference to the justification(s) for exempting the component/system.

## **1.4 ISI Program Implementation**

ComEd, or their designee, visually examined (VT-1, VT-2, VT-3/4, VT-1C, and VT-3C) and/or NDE examined (UT, PT, MT) ASME components. The components examined comply with the ISI Program Schedule, Braidwood Technical Specifications, and/or compliance with the ASME Section XI Repair/Replacement Program. All ISI NDE, including evaluation of flaw

indications, were performed in accordance with the requirements stipulated under Section XI, Sub-article IWA-2200: "Examination Methods".

Certified personnel performed and evaluated all NDE. Personnel were certified to the requirements of the American Society for Non-destructive Testing SNT-TC-1A, 1984 Edition. The NDE procedures were developed and certified in conformance with ASME Section V and XI, 1989 Edition, as applicable. In addition, ultrasonic examination personnel were qualified to ANSI/ASNT CP-189, 1995.

Certified personnel performed and evaluated visual examinations (VT-1, VT-2, and VT-3/4) of class 1, 2, and 3 components and supports. Personnel were certified to the requirements of the American Society for Non-destructive Testing SNT-TC-1A, 1984 Edition and/or ASME Section XI 1989, as applicable.

Certified personnel performed and evaluated visual examinations (VT-1, VT-3/4, VT-1C and VT-3C) of Containment Structures. Personnel were certified to the requirements of the ANSI/ANST CP-189, 1991 revision, and/or ASME Section XI 1992 through 1992 Addenda, as applicable.

## **1.5 Witness and Verification of Examination**

The inservice inspections were witnessed and/or verified by the Authorized Nuclear Inservice Inspectors (ANII), L. Malabanan and R. Spuhl. The inspectors are associated with Hartford Steam Boiler Inspection and Insurance Company of Hartford Connecticut, Chicago Branch, at 2443 Warrenville Rd., Suite 500, Lisle, Illinois 60532.

**2.0 INSERVICE EXAMINATION SUMMARY**

The following is a summary of ASME Section XI, RISI, and augmented examinations performed during the Braidwood Unit 2 Eight refueling outage (A2R08). Refer to the component detailed examination tabulations of Section 3.0 for additional information on specific welds, components, supports, snubbers and pressure test examinations and their respective results.

**2.1 Inservice Weld/Component Summary**

SYSTEM EXAMINED	Number of Welds or Components	COMMENTS
Chemical & Volume Control (CV)	14	1 exam not credited
Containment Spray (CS)	3	
Essential Service Water (SX)	2	
Feedwater (FW)	35	
Main Steam (MS)	40	
Reactor Coolant (RC)	46	9 exams not credited
Reactor Coolant (RY)	4	
Residual Heat Removal (RH)	1	
Safety Injection (SI)	13	1 exam not credited
<b>TOTALS</b>	<b>158</b>	11 exams not credited, <90% coverage

**2.2 Inservice Component Support Summary**

SYSTEM EXAMINED	Number of Component Supports	COMMENTS
Main Steam	4	
Reactor Coolant (RC)	1	
Reactor Coolant (RY)	3	
Residual Heat Removal	7	
Safety Injection	17	
Essential Service Water	16	
<b>TOTALS</b>	<b>48</b>	

**2.3 Inservice Snubber Summary**

SYSTEM EXAMINED	Number of Snubbers VT-3/4	Number of Snubbers Functionally Tested	COMMENTS
Containment Spray	2	1	
Chemical & Volume Control	12	12	
Feedwater	4	4	
Main Steam	5	2	
Reactor Coolant	13	6	
Residual Heat Removal	1	1	
Reactor Coolant (RY)	7	3	
Steam Generator Blowdown	4	4	
Safety Injection	10	4	
<b>TOTALS</b>	<b>58</b>	<b>37</b>	

**2.4 Inservice Pressure Test Summary**

**2.4.1 Pressure Test Test-Block Inspection Summary**

Summary of components contained in this Table are those Pressure Test Test-Blocks which were examined for Section XI Inservice Inspection credit.

System	Class	Number of Test Blocks
Fire Protection	2	1
Instrument Air Supply System	2	2
Process Radiation Monitors	2	2
Reactor Equipment Drains	2	3
Reactor Floor Drains	2	1
Reactor Coolant (RY)	2	5
Safety Injection	2	8
Primary Containment Post LOCA Purge	2	6
Make-Up Demineralizers	2	1
Plant Systems Pressurized During Mode 3 (ZZ)	1,2	7
<b>TOTALS</b>		<b>36</b>

**2.4.2 Borated Bolting Inservice Inspection Summary**

Summary of components contained in this Table are those Insulated Borated Bolted connections which were examined for Section XI Inservice Inspection credit. Inspections on these connections are performed per the commitments in Relief Request I2R-12, I2R-13, and I2R-30, as applicable, of the ISI Program Plan.

<b>SYSTEM EXAMINED</b>	<b>Number of Connections VT-2</b>	<b>Number of Connections VT-1</b>	<b>COMMENTS</b>
Chemical & Volume Control	41	11	
Pressurizer	1	0	
Reactor Coolant	23	7	
Residual Heat Removal	17	9	
Reactor Coolant (RY)	6	2	
Safety Injection	2	0	
<b>TOTALS</b>	<b>90</b>	<b>29</b>	

**2.5 Steam Generator Eddy Current Testing Summary**

Eddy current examinations were performed on the tubing in all four steam generators (2RC01BA, 2RC01BB, 2RC01BC, 2RC01BD), during A2R08. The following inspection scope was performed:

- 100% Full Length Bobbin
- 50% Hot Leg Top of Tubesheet (Plus Point Probe)
- 50% Row 1 and 2 U-Bends (Plus Point Probe)
- 50% Hot Leg Dents and Dings > 5.0 Volts (Plus Point Probe)
- 20% Preheater Expansions in 2 SGs (Plus Point Probe)

As a result of these examinations, 10 tubes contained Anti-Vibration Bar (AVB) Wear, greater than 40% through wall, and were removed from service by mechanical tube plugging. One tube was removed from service due to a permeability signal with no sign of degradation. In total 11 tubes were removed from service during A2R08. No indications of stress corrosion cracking were detected. The following table summarizes Braidwood Unit 2 steam generator tube plugging results to date.

## Braidwood Unit 2 Steam Generator Tube Plugging History

	<b>SG A</b>	<b>SG B</b>	<b>SG C</b>	<b>SG D</b>	<b>TOTALS</b>
<b>Total Tubes</b>	4570	4570	4570	4570	18280
<b>Tubes Previously Plugged</b>	35	8	43	23	109
<b>Tubes Plugged During A2R08</b>	8	1	1	1	11
<b>Total Tubes Plugged</b>	43	9	44	24	120
<b>Percent of Tubes Plugged</b>	0.94%	0.20%	0.96%	0.53%	0.65%

Steam generator tube plugging limits are a maximum of 30% in any one SG with a maximum of 24% total in all four SGs.

Additional information concerning the steam generator eddy current inspection results can be obtained in the report submitted to the Nuclear Regulatory Commission as required by Technical Specification 5.6.9

**3.0 COMPONENT DETAILED EXAMINATION TABLES**

**3.1 Detailed Inservice Weld/Component Table(s):**

The table (Pages 3-4 to 3-19) for this section lists the examinations performed for Section XI Inservice Inspection requirements for welds and components. The general format of how the table is set-up is shown below. A description of the information contained in each column can be found in Section 3.5.

Section XI Cat. Item	ISI Identifier Description	Line Number/EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
Inspection Comments								
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
	(K)							
(J)								

**3.2 Detailed Inservice Component Support Table:**

The table (Pages 3-20 to 3-27) for this section lists the examinations performed for Section XI Inservice Inspection requirements for component supports. The general format of how the table is set-up is shown below. A description of the information contained in each column can be found in Section 3.5.

Section XI Cat. Item	ISI Identifier Description	Line Number/EPN	Relief Request	Program Notes	Exam Summary	Results
Inspection Comments						
(A)	(B)	(C)	(D)	(E)	(G)	(I)
	(K)					
(J)						

**3.3 Detailed Inservice Snubber Table:**

The table (Pages 3-28 to 3-38) for this section lists the examinations performed for Section XI Inservice Inspection requirements for snubbers. The general format of how the table is set-up is shown below. A description of the information contained in each column can be found in Section 3.5.

Section XI Cat. Item	ISI Identifier Description	Line Number/EPN	Relief Request	Program Notes	Exam Summary	Results
Inspection Comments						
(A)	(B)	(C)	(D)	(E)	(G)	(I)
	(K)					
(J)						

**3.4 Detailed Inservice Pressure Test Table(s):**

**3.4.1 System Pressure Tests**

The table (Page 3-39 to 3-59) for this section lists the examinations performed for Section XI Inservice Inspection requirements for pressure testing. The general format of how the table is set-up is shown below. A description of the information contained in each column can be found in Section 3.5.

**3.4.2 Borated Bolted Connection Inspections**

The table (Pages 3-60 to 3-71) for this section lists the examinations performed for Inservice Inspection pressure testing requirements of borated bolted connections. The general format of how the table is set-up is shown below. A description of the information contained in each column can be found in Section 3.5.

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
Inspection Comments					
(A)	(B) (K)	(D)	(E)	(G)	(I)
(J)					

**3.5 General Inservice Report Information**

**3.5.1 Report Column Descriptions**

- (A) This column contains the Section XI Category and Item identifiers for the specified component. There are special cases, like snubbers, where an "S" has been added to the end of the Section XI Item identifier. This was done to allow easy sorting of the snubber population by the ISI database.
- (B) This column contains the ISI Identifier that the ISI Program uses to distinguish components.
- (C) This column contains the line number or equipment piece number (EPN) that the component is associated with.
- (D) This column identifies the ISI Program Plan relief request(s) that is associated with that component. A complete copy of the relief request can be found in the ISI Program Plan.
- (E) This column identifies the ISI Program Plan note(s) that is associated with that component. A complete copy of the Program note can be found in the ISI Program Plan.
- (F) This column identifies the percentage of code coverage achieved for the associated exam for that component.

- (G) This column summarizes the exams performed during this outage for the associated component.
- (H) This column identifies actual exams performed during this outage for the associated component.
- (I) This column summarizes the results for exams performed during this outage for the associated component.
- (J) This row states inspection comments, when applicable, for the associated component.
- (K) This column specifies the description of the associated component.

### 3.5.2 Report Abbreviations

FUNCT.	-	Snubber Functional Test
GEOM.	-	Geometry
GE/IND	-	Geometry/Indication
IND.	-	Indication
NRI	-	No Recordable Indications
MT	-	Magnetic Particle Inspection
PT	-	Liquid Penetrant Inspection
SUR	-	Surface Exam
TBD	-	To Be Developed
UT	-	Ultrasonic Inspection
VOL	-	Volumetric Exam
VOL-E	-	Volumetric Exam of an Extended Volume
VT	-	Visual Inspection

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**  
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**SYSTEM:** Containment Spray System (CS)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
C-C	C03.30	2CSP-01-CSP01 2CS01PA PUMP LUG	2CS01PA	I2R-02 I2R-15	NOTE 4	VT-1 SUR	SUR VT-1	NRI NRI
C-C	C03.30	2CSP-01-CSP02 2CS01PA PUMP LUG	2CS01PA	I2R-02 I2R-15	NOTE 4	VT-1 SUR	SUR VT-1	NRI NRI
C-C	C03.30	2CSP-01-CSP03 2CS01PA PUMP LUG	2CS01PA	I2R-02 I2R-15	NOTE 4	VT-1 SUR	SUR VT-1	NRI NRI

## Section 3.1 Detailed Inservice Inspection Weld / Component Listing

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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A	R01.11	2CV-05-03 ELBOW - PIPE	2CVA3B-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-05-04 PIPE - ELBOW	2CVA3B-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-05-05 ELBOW - PIPE	2CVA3B-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-05-06 PIPE - ELBOW	2CVA3B-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-05-13 PIPE - ELBOW	2CVA3B-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-05-14 ELBOW - PIPE	2CVA3B-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-11-06 PIPE - ELBOW	2CVA6AA-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2CV-11-07 ELBOW - PIPE	2CVA6AA-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.20	2CV-21-11 PIPE - FLANGE	2CV08BA-4"	NOTE 4 NOTE 7		VOL-E	UT-45 UT-60L	NRI NRI
RI-ISI weld cannot currently be credited, only 54% coverage.								
R-A	R01.11	2RC-36-15 PIPE - ELBOW	2CVA3AA-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11	2RC-36-16 ELBOW - PIPE	2CVA3AA-2"	NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A	R01.11 2RC-36-17 PIPE - ELBOW	2CVA3AA-2"		NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11 2RC-36-18 ELBOW - PIPE	2CVA3AA-2"		NOTE 4		VT-2	VT-2	NRI
Lines Pressurized 4 hours previously by Outage Activity G1070 OP @ 10/20/00 22:00, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11 2RC-37-13 PIPE - ELBOW	2CVA7AA-2"		NOTE 4		VT-2	VT-2	NRI
Line pressurized 4 hours at 21:46 by outage activity G1068OP, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								
R-A	R01.11 2RC-37-14 ELBOW - PIPE	2CVA7AA-2"		NOTE 4		VT-2	VT-2	NRI
Line pressurized 4 hours at 21:46 by outage activity G1068OP, "PLACE EX L/D O/L PER BWOP CV-15 FOR ISI/VT-2"								

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Feedwater System (FW)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
NA	3.6.2	2FW-02-01 VALVE 2FW079A - PIPE	2FW86AA-16"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-02-02 16" PIPE - 6" WELDOLET	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
Indication noted in previous data observed at below recording level. Also ID geometry.								
NA	3.6.2	2FW-02-03 PIPE - VALVE 2FW009A	2FW86AA-16"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
R-A	R01.11	2FW-02-04 VALVE 2FW009A - PIPE	2FW03DA-16"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45 UT-60	NRI GEOM
R-A	R01.11	2FW-02-05 PIPE - PIPE	2FW03DA-16"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45	GEOM
R-A	R01.11	2FW-02-06 PIPE - PENETRATION (2PC-079) PIPE	2FW03DA-16"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45	NRI
R-A	R01.11	2FW-02-19 PIPE - ELBOW	2FW03DA-16"	NOTE 4 NOTE 7	100%	VOL-E	UT-45	NRI
R-A	R01.11	2FW-02-20 ELBOW - PIPE	2FW03DA-16"	NOTE 4 NOTE 7	100%	VOL-E	UT-45	GEOM
R-A	R01.11	2FW-02-23 PIPE - ELBOW	2FW03DA-16"	NOTE 4 NOTE 7	100%	VOL-E	UT-45	GEOM
R-A	R01.11	2FW-06-11 ELBOW - ELBOW	2FW87CB-6"	NOTE 4 NOTE 7	100%	VOL-E	UT-45	NRI
NA	3.6.2	2FW-11-01 WELDOLET - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-11-02 PIPE - ELBOW	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-03 ELBOW - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-04 PIPE - ELBOW	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM
NA	3.6.2	2FW-11-05 ELBOW - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Feedwater System (FW)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
NA	3.6.2	2FW-11-06 PIPE - ELBOW	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-07 ELBOW - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-08 PIPE - ELBOW	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM
NA	3.6.2	2FW-11-09 ELBOW - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-10 PIPE - VALVE 2FW041A	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-11-11 VALVE 2FW041A - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-11-12 PIPE - VALVE 2FW039A	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-11-13 VALVE 2FW039A - PIPE	2FW81AA-6"	NOTE 4 NOTE 5 NOTE 7	73%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-11-14.01 PIPE - PIPE	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	98%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2FW-11-15.01 PIPE - ELBOW	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM.
NA	3.6.2	2FW-11-16 ELBOW - PIPE	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM
NA	3.6.2	2FW-11-17 PIPE - ELBOW	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-18 ELBOW - PIPE	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2FW-11-19 PIPE - ELBOW	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Feedwater System (FW)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
NA	3.6.2	2FW-11-20 ELBOW - PIPE	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
R-A	R01.11	2FW-11-21 PIPE - TEE	2FW81BA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45 UT-60	NRI NRI
R-A	R01.11	2FW-11-22 TEE - 6"X4" REDUCER	2FW87CA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45 UT-60	NRI NRI
R-A	R01.11	2FW-11-23 TEE - PIPE	2FW87CA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45 UT-60	NRI NRI
R-A	R01.11	2FW-11-24 PIPE - PIPE	2FW87CA-6"	NOTE 4 NOTE 5 NOTE 7	100%	VOL-E	UT-45	GEOM

## Section 3.1 Detailed Inservice Inspection Weld / Component Listing

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**SYSTEM:** Main Steam System (MS)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
NA	3.6.2	2MS-04-01 PENETRATION (2PC-078) PIPE - PIPE	2MS01BA-30.25"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-04 PIPE - 30.25"X28" TEE	2MS01BA-30.25"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2MS-04-07 30.25"X28" TEE - PIPE	2MS01BA-30.25"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2MS-04-09 30.25" PIPE - 12" WELDOLET	2MS143AA-12"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-25 UT-35	NRI NRI
One sided exam due to weldolet configuration.								
NA	3.6.2	2MS-04-10 WELDOLET - PIPE	2MS143AA-12"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2MS-04-11 PIPE - END CAP	2MS143AA-12"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-13 PIPE - VALVE 2MS001A	2MS01BA-30.25"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2MS-04-14 30.25"X28" TEE - PIPE	2MS07AA-28"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI
NA	3.6.2	2MS-04-17 PIPE - PIPE	2MS07AA-28"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-20 PIPE - PIPE	2MS07AA-28"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-23 PIPE - PIPE	2MS07AA-28"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-25 28" PIPE - 8" WELDOLET	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60 UT-25	GEOM NRI GEOM.
Coverage obtained from the downstream (weld-o-let) side only.								
NA	3.6.2	2MS-04-26 WELDOLET - PIPE	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45 UT-60	NRI NRI

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM: Main Steam System (MS)**

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
NA	3.6.2 2MS-04-27 PIPE - ELBOW	2MS07AA-28"		NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2 2MS-04-32 ELBOW - PIPE	2MS07AA-28"		NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2 2MS-04-35 PIPE - SADDLE	2MS07AA-28"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-34. Saddle plate weld.								
NA	3.6.2 2MS-04-36 SADDLE - FLANGE	2MS12AA-6"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-34. Saddle plate weld.								
NA	3.6.2 2MS-04-38 PIPE - SADDLE	2MS07AA-28"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-37. Saddle plate weld.								
NA	3.6.2 2MS-04-39 SADDLE - FLANGE	2MS11AA-6"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-37. Saddle plate weld.								
NA	3.6.2 2MS-04-41 SADDLE - FLANGE	2MS10AA-6"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-40. Saddle plate weld.								
NA	3.6.2 2MS-04-42 PIPE - SADDLE	2MS07AA-28"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-40. Saddle plate weld.								
NA	3.6.2 2MS-04-44 SADDLE - FLANGE	2MS09AA-6"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-43. Saddle plate weld.								
NA	3.6.2 2MS-04-45 PIPE - SADDLE	2MS07AA-28"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-43. Saddle plate weld.								
NA	3.6.2 2MS-04-47 SADDLE - FLANGE	2MS08AA-6"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-46. Saddle plate weld.								
NA	3.6.2 2MS-04-48 PIPE - SADDLE	2MS07AA-28"	I2R-01			MT	MT	NRI
NOTE: Alternate exam for 2MS-04-46. Saddle plate weld.								
NA	3.6.2 2MS-04-50 PIPE - END CAP	2MS07AA-28"		NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2 2MS-04-51 PIPE - ELBOW	2MS13AA-8"		NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM

## Section 3.1 Detailed Inservice Inspection Weld / Component Listing

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**SYSTEM:** Main Steam System (MS)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
NA	3.6.2	2MS-04-52 ELBOW - PIPE	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-53 PIPE - ELBOW	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-54 ELBOW - PIPE	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	GEOM
NA	3.6.2	2MS-04-55 PIPE - ELBOW	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-56 ELBOW - PIPE	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-57 PIPE - VALVE 2MS019A	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	83%	VOL	UT-45 UT-60	NRI NRI
Limited coverage not an issue with this augmented exam.								
NA	3.6.2	2MS-04-58 VALVE 2MS019A - ELBOW	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	83%	VOL	UT-45 UT-60	NRI NRI
Limited coverage not an issue with this augmented exam.								
NA	3.6.2	2MS-04-59 ELBOW - PIPE	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-60 PIPE - 8"X6" REDUCER	2MS13AA-8"	NOTE 4 NOTE 5 NOTE 7	100%	VOL	UT-45	NRI
NA	3.6.2	2MS-04-61 8"X6" REDUCER - VALVE 2MS018A	2MS13AA-6"	NOTE 4 NOTE 5 NOTE 7	85%	VOL	UT-45 UT-60	NRI NRI
Limited coverage not an issue with this augmented exam.								
C-C	C03.20	2MS-04-SW18 (1) LUG ATTACH. FOR 2MS01205X	2MS07AA-28"	I2R-15	NOTE 4	SUR	MT	NRI

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Reactor Coolant System (RC)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A	R01.20	2RC-01-04 VALVE 2RC8001A - 31"X29" ELBOW	2RC01AA-29"	NOTE 4 NOTE 19	88%	VOL-E	UT-45L	RI
RI-ISI exam not credited, 88% coverage. Recordable indication shows no change from previous exams.								
R-A	R01.20	2RC-06-01 VALVE NOZZLE 2RC8002A - ELBOW	2RC21AA-8"	NOTE 4	62%	VOL-E	UT-45 UT-60	NRI NRI
RI-ISI exam not credited, 62% coverage								
R-A	R01.20	2RC-06-02 ELBOW - ELBOW	2RC21AA-8"	NOTE 4	100%	VOL-E	UT-45	NRI
R-A	R01.20	2RC-06-03 ELBOW - PIPE	2RC21AA-8"	NOTE 4	100%	VOL-E	UT-45	NRI
R-A	R01.20	2RC-06-11 PIPE - VALVE 2RC8003A	2RC21AA-8"	NOTE 4	41%	VOL-E	UT-45 UT-60L	NRI NRI
RI-ISI exam not credited, 41% coverage								
R-A	R01.20	2RC-06-12 VALVE 2RC8003A - PIPE	2RC21BA-8"	NOTE 4	52%	VOL-E	UT-45 UT-60L	NRI NRI
RI-ISI exam not credited, 52% coverage								
R-A	R01.20	2RC-06-13 PIPE - VALVE NOZZLE 2RC8001A	2RC21BA-8"	NOTE 4	54%	VOL-E	UT-45 UT-60L	NRI NRI
RI-ISI exam not credited, 54% coverage								
R-A	R01.20	2RC-17-09 PIPE - ELBOW	2RC24AA-4"	NOTE 4	100%	VOL-E	UT-45	NRI
R-A	R01.20	2RC-17-10 ELBOW - PIPE	2RC24AA-4"	NOTE 4	100%	VOL-E	UT-45	NRI
R-A	R01.20	2RC-17-13 PIPE - VALVE 2RY022	2RC24AA-4"	NOTE 4	56%	VOL-E	UT-45 UT-60	NRI NRI
RI-ISI exam not credited, 56% coverage								
R-A	R01.20	2RC-17-14 VALVE 2RY022 - PIPE	2RC24AA-4"	NOTE 4	56%	VOL-E	UT-45 UT-60	NRI NRI
RI-ISI exam not credited, 56% coverage								
R-A	R01.20	2RC-17-15 PIPE - VALVE 2RY455B	2RC24AA-4"	NOTE 4	56%	VOL-E	UT-45 UT-60	NRI NRI
R-A	R01.20	2RC-17-16 VALVE 2RY455B - PIPE	2RC24AA-4"	NOTE 4	56%	VOL-E	UT-45 UT-60	NRI NRI
RI-ISI exam not credited, 56% coverage								
R-A	R01.20	2RC-30-11 PIPE - ELBOW	2RC13AB-2"	NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.20	2RC-30-12 ELBOW - PIPE	2RC13AB-2"	NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM: Reactor Coolant System (RC)**

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A	R01.20 2RC-30-13 PIPE - TEE	2RC13AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.20 2RC-30-14 TEE - 2"X.75" REDUCER	2RC13AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.20 2RC-30-15 TEE - PIPE	2RC13AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-01 BRANCH CONNECTION - PIPE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-02 PIPE - ELBOW	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-03 ELBOW - PIPE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-04 PIPE - ELBOW	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-05 ELBOW - PIPE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-06 PIPE - ELBOW	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-07 ELBOW - PIPE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-08 PIPE - VALVE 2RC8039B	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-09 VALVE 2RC8039B - PIPE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-09A.01 PIPE - TEE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11 2RC-31-09B.01 TEE - PIPE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Reactor Coolant System (RC)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results	
<b>Inspection Comments</b>									
R-A	R01.11	2RC-31-09C.01 TEE - 2"X1" REDUCER	2RC86AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-31-10 PIPE - TEE	2RC14AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-31-11 TEE - 2"X.75" REDUCER	2RC15AB-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.20	2RC-31-14 BRANCH CONNECTION - PIPE	2RC26A-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 ascending									
R-A	R01.20	2RC-31-15 PIPE - VALVE 2RC8057	2RC26A-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 ascending									
R-A	R01.11	2RC-36-02 PIPE - ELBOW	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-36-03 ELBOW - PIPE	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-36-04 PIPE - VALVE 2RC8039A	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-36-05 VALVE 2RC8039A - PIPE	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-36-05A.01 PIPE - TEE	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-36-05B.01 TEE - PIPE	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-36-05C.01 TEE - 2"X1" REDUCER	2RC14AA-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-42-01 BRANCH CONNECTION - PIPE	2RC14AC-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2RC-42-02 PIPE - ELBOW	2RC14AC-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM: Reactor Coolant System (RC)**

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results	
<b>Inspection Comments</b>									
R-A	R01.11	2RC-42-03 ELBOW - PIPE	2RC14AC-2"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
NA	RG 1.14	2RCP-01-FLYWHEEL (PMP2B)P01B RCP PUMP "B" FLYWHEEL			NOTE 6		SUR VOL Visual	PT UT-0 UT-18L Visual	NRI NRI NRI NRI
NOTE: Flywheel was removed during A2R08 for 10 year teardown.									
B-G-2	B07.60	2RCP-01-PSB-PA-B1 PUMP SHAFT SEALS (36 BOLTS)	2RC01PA		NOTE 3		VT-1	VT-1	NRI
B-N-1	B13.10	2RV-01-RX INTERIOR ACCESSIBLE INTERIOR SURFACES	2RC01R				VT-3/4	VT-3/4	RI
NOTE: Augmented exam on guide cones only. Thermocouple Guide Cone #75 has a cracked stich weld. See PIF A1999-01326 and ER9900962.									
B-G-1	B06.40	2RV-02-038-01 TO 54 THREADS IN RX FLANGE (54 TL)	2RC01R			100%	VOL	UT-0	NRI
NOTE: Examined around all holes, all 54 ligaments examined A2R08.									
B-G-1	B06.10	2RV-03-NUTS (01 TO 54) CLOSURE HEAD NUTS (54 TOTAL)	2RC01R	I2R-19			VT-1	VT-1	NRI
Examined nuts 89-2-4016-51-13, 14, 15, 16, 17, 18, 19, 22, 25 and 89-2-4016-17-10, 11, 12, 20, 21, 23, 24, 26, 27.									
B-G-1	B06.20	2RV-03-STUDS (01 TO 54) CLOSURE HEAD STUDS (54 TOTAL)	2RC01R			100%	SUR VOL	MT UT-0	NRI NRI
Examined 18 studs 89-2-4016-51-15, 16, 17, 18, 22, 25 and 89-2-4016-17-10, 11, 12, 20, 21, 23, 24, 26, 27 and 89-18960-37-1-19, 89-18960-37-4-13, and 89-18960-37-6-14									
B-G-1	B06.50	2RV-03-WASHERS (01 TO 54) CLOSURE WASHERS (01 TO 54)	2RC01R				VT-1	VT-1	NRI
Examined top and bottom washers 89-2-4016-51-13, 14, 15, 16, 17, 18, 19, 22, 25 and 89-2-4016-17-10, 11, 12, 20, 21, 23, 24, 26, 27.									
B-G-2	B07.30	2SG-01-B1 9A PRIMARY MANWAY (16 BOLTS)	2RC01BA				VT-1	VT-1	NRI RI
Rust on gasket mating surface was noted. Removed by WR 99005715									
B-G-2	B07.30	2SG-01-B2 9B PRIMARY MANWAY (16 BOLTS)	2RC01BA				VT-1	VT-1	NRI RI
Rust on gasket mating surface was noted. Removed by WR 99005715									
R-A	R01.11	2SI-31-01 PIPE - 3"X1.5" REDUCER	2RC30AA-1.5"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									
R-A	R01.11	2SI-31-02 VALVE 2SI8900A - PIPE	2RC30AA-1.5"		NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending									

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A R01.20	2RH-04-47 PIPE - ELBOW	2RH01CA-16"		NOTE 4 NOTE 7	100%	VOL-E	UT-45	NRI

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Reactor Coolant System (RY)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A	R01.11	2CV-02-13 VALVE 2CV8377 - PIPE	2RY18A-2"	NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11	2CV-02-15 ELBOW - PIPE	2RY18A-2"	NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
R-A	R01.11	2CV-02-18 PIPE - ELBOW	2RY18A-2"	NOTE 4		VT-2	VT-2	NRI
Performed during Mode 3 descending								
B-D	B03.110 B03.120	2PZR-01-N1 PRESSURIZER - SURGE NOZZLE	2RY01S	I2R-08	NOTE 4	VT-2	VT-2	NRI
Performed during Mode 3 descending								

**Section 3.1 Detailed Inservice Inspection Weld / Component Listing**

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**SYSTEM:** Safety Injection System (SI)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Code Coverage	Exam Summary	Actual Exam	Results
<b>Inspection Comments</b>								
R-A	R01.11	2SI-20-09 PIPE - FLANGE	2SI08JC-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-10 ELBOW - PIPE	2SI08JC-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-11 PIPE - ELBOW	2SI08JC-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-12 VALVE 2SI8810C - PIPE	2SI08JC-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-13 PIPE - VALVE 2SI8810C	2SI08JC-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-14 2"X1.5" REDUCER - PIPE	2SI08JC-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-27 COUPLING - PIPE	2SI08GD-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-28 PIPE - ELBOW	2SI08GD-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-29 ELBOW - PIPE	2SI08GD-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-30 PIPE - ELBOW	2SI08GD-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-31 ELBOW - PIPE	2SI08GD-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.11	2SI-20-32 PIPE - 2"X1½" REDUCER	2SI08GD-1.5"	NOTE 4		VT-2	VT-2	NRI
Performed during SI full flow testing								
R-A	R01.20	2SI-24-79 ELBOW - 24"X16" REDUCER	2SI06BB-24"	NOTE 4 NOTE 7	100%	VOL-E	UT-45	NRI
R-A	R01.20	2SI-24-82 24"X16"REDUCER - VALVE 2CS009B	2SI06BB-16"	NOTE 4 NOTE 7	56%	VOL-E	UT-45 UT-60	NRI NRI
RI-ISI exam not credited, 56% coverage.								

**Section 3.2 Detailed Inservice Inspection Component Support Listing**  
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**SYSTEM: Main Steam System (MS)**

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.20	2MS01205X Strut, integrally attached to pipe	2MS07AA-28"		NOTE 8	VT-3/4	NRI
F-A F01.20	2MS01221R Slide Plate	2MS07AB-28"		NOTE 8	VT-3/4	NRI
SLIDE PLATE MINOR SURFACE RUST ON LOWER ASSY DOES NOT AFFECT FUNCTIONAL CAPABILITY OF SUPPORT SYSTEM HOT AND IN OPERATION						
F-A F01.20	2MS08006R Steel	2MS01AD-30.25"		NOTE 8	VT-3/4	NRI
REMOTE EXAM 6'						
F-A F01.20	2PC-085A Anchor, Flued Head	2MS01BB-32.75"		NOTE 8	VT-3/4	NRI
ANCHOR FLUED HEAD MINOR SURFACE RUST ON PENETRATION DOES NOT AFFECT INTEGRITY OF PENETRATION SYSTEM HOT AND IN OPERATION. CONTAIN. ALSO INSPECTED REMOTE 12' AWAY						

**Section 3.2 Detailed Inservice Inspection Component Support Listing**  
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**SYSTEM:** Reactor Coolant System (RC)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A	F01.40 2RC01PC C RCP	2RC01PC		NOTE 8	VT-3/4	NRI
INSULATION REMOVED FOR EXAMS						

**Section 3.2 Detailed Inservice Inspection Component Support Listing**

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**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.10	2RH02053R Strut	2RH01AA-12"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST NO WASTAGE						
F-A F01.10	2RH02062R Strut	2RH01AB-12"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST NO WASTAGE						
F-A F01.10	2RH02065R Box	2RH01AA-12"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST NO WASTAGE						
F-A F01.10	2RH02074X Strut	2RH01AB-12"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST / SURFACE CORROSION ON STEEL AND BOLTING NO WASTAGE						
F-A F01.20	2RH07004R Slide Plate	2RH02AA-8"		NOTE 8	VT-3/4	NRI
REMOTE EXAM 12'						
F-A F01.20	2RH08002R Box	2RH02AB-8"		NOTE 8	VT-3/4	NRI
REMOTE EXAM 12'						
F-A F01.20	2SI18002R Rod	2RH03AA-8"		NOTE 8	VT-3/4	NRI

**Section 3.2 Detailed Inservice Inspection Component Support Listing**  
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**SYSTEM:** Reactor Coolant System (RY)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.10	2RY05009V (1) Variable Spring Can	2RY11A-14"		NOTE 8	VT-3/4	NRI
HANDS ON EXAM SPRING SETTING 4875# IN COLD SHUTDOWN SETTING IN TOLERANCE						
F-A F01.10	2RY06024V (1) Variable Spring Can	2RY01B-6"		NOTE 8	VT-3/4	NRI
SYSTEM COLD SPRING SETTING 1105# IN TOLERANCE						
F-A F01.10	2RY06028X Box	2RY01B-6"		NOTE 8	VT-3/4	NRI

**Section 3.2 Detailed Inservice Inspection Component Support Listing**

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**SYSTEM:** Safety Injection System (SI)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.10	2RH02017R Strut	2SI04D-8"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST NO WASTAGE						
F-A F01.10	2RH02020R Strut	2SI04D-8"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST NO WASTAGE						
F-A F01.10	2RH02021R Box	2SI04D-8"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST NO WASTAGE						
F-A F01.20	2RH02026R Strut	2SI04C-8"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST / SURFACE CORROSION ON STEEL AND BOLTING NO WASTAGE						
F-A F01.20	2RH02031V (1) Variable Spring Can	2SI04B-12"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST ON STEEL AND BOLTING NO WASTAGE VARIABLE SPRING SETTING APPROX. 2700#, IN TOLERANCE						
F-A F01.10	2RH02063R Strut	2SIA4B-8"		NOTE 8	VT-3/4	NRI
MINOR RUST / SURFACE CORROSION NO WASTAGE						
F-A F01.10	2RH02064V (1) Variable Spring Can	2SIA4B-8"		NOTE 8	VT-3/4	NRI
MINOR SURFACE RUST ON ROD ASSEM. NO WASTAGE OR METAL REDUCTION SPRING LOAD 1775# IN TOLERANCE						
F-A F01.10	2SI11029X Box	2SI03DA-2"		NOTE 8	VT-3/4	NRI
F-A F01.20	2SI18027R Slide Plate	2SI04A-12"		NOTE 8	VT-3/4	NRI
F-A F01.20	2SI18039R Box	2SI05AB-8"		NOTE 8	VT-3/4	NRI
INFORMATION ONLY MINOR SURFACE RUST ON BASE PLATE AND UNDERSIDE OF BOX CONNECTION ON PIPE. OUTER COATING OF PAINT SCRAPED FROM SOME AUX. STEEL PRIMER REMAINS NO DEGRADATION						
F-A F01.10	2SI20016X Strut	2SI08JC-1.5"		NOTE 8	VT-3/4	NRI
F-A F01.10	2SI20045X Strut	2SI08JC-1.5"		NOTE 8	VT-3/4	NRI
F-A F01.10	2SI20049R Strut	2SI08JC-1.5"		NOTE 8	VT-3/4	NRI
F-A F01.10	2SI21008R Box	2SI08JC-1.5"		NOTE 8	VT-3/4	NRI
F-A F01.10	2SI24003G U-Bolt	2SI08JA-1.5"		NOTE 8	VT-3/4	NRI
F-A F01.10	2SI24004G U-Bolt	2SI08JA-1.5"		NOTE 8	VT-3/4	NRI

**Section 3.2 Detailed Inservice Inspection Component Support Listing**

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**SYSTEM:** Safety Injection System (SI)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.10	2SI24005G U-Bolt	2SI08JA-1.5"		NOTE 8	VT-3/4	NRI

**Section 3.2 Detailed Inservice Inspection Component Support Listing**  
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**SYSTEM:** Essential Service Water System (SX)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A	F01.20	2SX06001R Rod	2SX06BA-16"		NOTE 8 VT-3/4	NRI
UPPER ATTACHMENT REMOTE EXAM 6' AWAY MINOR SURFACE RUST ON STEEL AND BOLTING NO WASTAGE						
F-A	F01.20	2SX06002G Box	2SX06BA-16"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 3' MINOR SURFACE RUST / CORROSION ON STEEL NO WASTAGE						
F-A	F01.20	2SX07099A Anchor, integrally attached to pipe	2SX08AD-10"		NOTE 8 VT-3/4	NRI
F-A	F01.20	2SX08001R Strut	2SX07FA-16"		NOTE 8 VT-3/4	NRI
MINOR RUST / SURFACE CORROSION ON STEEL AND BOLTING NO WASTAGE						
F-A	F01.20	2SX08002G Box	2SX07FA-16"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 12' MINOR SURFACE RUST / SURFACE CORROSION ON STEEL NO WASTAGE						
F-A	F01.20	2SX08007X Strut	2SX07EA-14"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 12' MINOR RUST / SURFACE CORROSION ON STEEL NO WASTAGE						
F-A	F01.20	2SX08024X Strut	2SX07CA-10"		NOTE 8 VT-3/4	NRI
MINOR RUST / SURFACE CORROSION ON STEEL AND BOLTING NO WASTAGE						
F-A	F01.20	2SX08026X Box	2SX07CA-10"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 12' MINOR RUST / SURFACE CORROSION ON STEEL NO WASTAGE						
F-A	F01.20	2SX08091X Strut	2SX07BC-10"		NOTE 8 VT-3/4	NRI
MINOR RUST / SURFACE CORROSION ON STEEL AND BOLTING NO WASTAGE						
F-A	F01.20	2SX08116X Strut	2SX07EA-14"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 12' MINOR RUST / SURFACE CORROSION ON STEEL NO WASTAGE						
F-A	F01.20	2SX09006G Box	2SX07EB-14"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 12' MINOR RUST / SURFACE CORROSION ON STEEL NO WASTAGE						
F-A	F01.20	2SX09021R Box	2SX09CB-10"		NOTE 8 VT-3/4	NRI
Remote Exam from above and below. Max. 12' away. Minor surface rust, no wastage. System cold in operation.						
F-A	F01.20	2SX09047X Strut	2SX07BB-10"		NOTE 8 VT-3/4	NRI
REMOTE EXAM 14'						
F-A	F01.20	2SX09112X Strut	2SX07CD-10"		NOTE 8 VT-3/4	NRI
MINOR RUST / SURFACE CORROSION ON STEEL NO WASTAGE						

**Section 3.2 Detailed Inservice Inspection Component Support Listing**  
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**SYSTEM:** Essential Service Water System (SX)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A	F01.20 2SX09118X Strut	2SX07CB-10"		NOTE 8	VT-3/4	NRI
MINOR RUST SURFACE CORROSION NO WASTAGE						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**

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**SYSTEM:** Containment Spray System (CS)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.20	2CS03022S Snubber	2CS02AB-10"	I2R-14		VT-3/4	NRI
S.N. 19801						
F-A F01.20	2CS03106S Snubber	2CS02AB-10"	I2R-14		VT-3/4 Functional	NRI NRI
S.N. 16591						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**

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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
NA NA	2CV02005S Snubber	2CV10CB-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 12024						
NA NA	2CV02007S Snubber	2CV10CB-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 9821						
NA NA	2CV04015S Snubber	2CV10B-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 9650						
F-A F01.10	2CV06022S Snubber	2CVB7A-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 22277						
NA NA	2CV07032S Snubber	2CV01E-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 12941						
NA NA	2CV07042S Snubber	2CV01CA-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 2170						
F-A F01.20	2CV08010S Snubber	2CV05CB-6"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 8121						
F-A F01.10	2CV16009S Snubber	2CVA7AB-2"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 9610						
NA NA	2CV31020S Snubber	2CV15E-.75"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 20124						
NA NA	2CV41002S Snubber	2CV14ED-2"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 3889						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**

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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
NA NA	2CV41003S Snubber	2CV14ED-2"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 14712						
F-A F01.10	2RY06121S Snubber	2CV45B-2"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 24764						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**  
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**SYSTEM:** Feedwater System (FW)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A	F01.20 2FW02013S Snubber	2FW03DA-16"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 9525						
F-A	F01.20 2FW03012S Snubber	2FW03DB-16"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 10985						
F-A	F01.20 2FW05019S Snubber	2FW03DD-16"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 13882						
F-A	F01.20 2FW08007S Snubber	2FW87CC-6"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 2816, REMOTE EXAM 14' AWAY						
NA	NA 2FW10001S Snubber	2FW87BC-3"	I2R-14		VT-3/4 Functional Functional VT-3/4	NRI NRI NRI NRI
EXAMINED / TESTED DUE TO ISSUES IDENTIFIED ON SNUBBERS INSTALLED IN UNIT 1 FW TEMPERING SYSYTEM DURING UNIT 1 OUTAGE A1R08. ORIGINALLY INSTALLED SNUBBER WAS REPLACED DUE TO MARGINAL TEST RESULTS. THIS SNUBBER WAS NOT INCLUDED IN THE ORIGINAL SCOPE FOR THE A2R08 SNUBBER FUNCTIONAL TEST POPULATION.RESULTS ARE FOR AS FOUND / REPLACEMENT TESTS.REPLACEMENT S.N. 2698.						
NA	NA 2FW12001S Snubber	2FW87BB-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
EXAMINED / TESTED DUE TO ISSUES IDENTIFIED ON SNUBBERS INSTALLED IN UNIT 1 FW TEMPERING SYSYTEM DURING UNIT 1 OUTAGE A1R08. THIS SNUBBER WAS NOT INCLUDED IN THE ORIGINAL SCOPE FOR THE A2R08 SNUBBER FUNCTIONAL TEST POPULATION. S.N. 4750						
NA	NA 2FW14002S Snubber	2FW87BA-3"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
EXAMINED / TESTED DUE TO ISSUES IDENTIFIED ON SNUBBERS INSTALLED IN UNIT 1 FW TEMPERING SYSYTEM DURING UNIT 1 OUTAGE A1R08. THIS SNUBBER WAS NOT INCLUDED IN THE ORIGINAL SCOPE FOR THE A2R08 SNUBBER FUNCTIONAL TEST POPULATION.S.N. 1175						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**  
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**SYSTEM: Main Steam System (MS)**

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.20	2MS01074AS Snubber, integrally attached to pipe	2MS07AA-28"	I2R-14		VT-3/4	NRI
SNUBBER DIRTY, BUT DOES NOT AFFECT FUNCTIONAL CAPABILITIES. S.N. 14216						
F-A F01.20	2MS01074BS Snubber, integrally attached to pipe	2MS07AA-28"	I2R-14		VT-3/4	NRI
SNUBBER DIRTY, BUT DOES NOT AFFECT FUNCTIONAL CAPABILITIES. S.N. 14224						
F-A F01.20	2MS01097S Snubber, integrally attached to pipe	2MS07AB-28"	I2R-14		VT-3/4	NRI
S.N. 8264						
F-A F01.20	2MS05007AS Snubber, integrally attached to pipe	2MS01AA-30.25"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 11035						
F-A F01.20	2MS05007BS Snubber, integrally attached to pipe	2MS01AA-30.25"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 11055						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**

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**SYSTEM:** Reactor Coolant System (RC)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A	F01.10	2CV06003S Snubber	2RC36A-3"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 14687						
F-A	F01.10	2CV24027S Snubber	2RC16AB-2"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 10051						
F-A	F01.40	2RC01BA-A Snubber	S.G. A	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
SCHEDULED SECTION XI VISUAL EXAM. ADDITIONAL FUNCTIONAL TEST FOR SERVICE LIFE MONITORING ONLY. S.N 01						
F-A	F01.40	2RC01BA-B Snubber	S.G. A	I2R-14	VT-3/4	NRI
S.N. 20						
F-A	F01.40	2RC01BB-A Snubber	S.G B	I2R-14	VT-3/4	NRI
S.N. 16						
F-A	F01.40	2RC01BB-B Snubber	S.G B	I2R-14	VT-3/4	NRI
S.N. 8						
F-A	F01.40	2RC01BC-A Snubber	S.G C	I2R-14	VT-3/4	NRI
S.N. 3						
F-A	F01.40	2RC01BC-B Snubber	S.G C	I2R-14	VT-2	NRI
S.N. 29						
F-A	F01.40	2RC01BD-A Snubber	S.G D	I2R-14	VT-3/4	NRI
S.N. 11						
F-A	F01.40	2RC01BD-B Snubber	S.G D	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
SECTION XI VISUAL EXAM, SCHEDULED FUNCTIONAL TEST.S.N. 30						
NA	NA	2RC18037S Snubber	2RC08AC-.75"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
AS FOUND FUNCTIONAL TEST REVEALED MARGINAL RESULTS. SNUBBER WAS REPLACED. AS FOUND / REPLACEMENT TEST DATA IDENTIFIED. REPL. S.N. 21284.						
F-A	F01.10	2RY06104S Snubber	2RC26A-2"	I2R-14	VT-2	NRI
S.N. 16219						

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**SYSTEM:** Reactor Coolant System (RC)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.10	2RY06106S Snubber	2RC26A-2"	I2R-14		VT-3/4	N/A
S.N. 12825						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**  
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**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A	F01.10	2RH02058S Snubber	2RH01AA-12"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 13550						

### Section 3.3 Detailed Inservice Inspection Snubber Listing

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**SYSTEM:** Reactor Coolant System (RY)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
NA	NA	2RC93A001S Snubber	2RY34BB-.5"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
NOT A SCHEDULED FUNCTIONAL TEST PER SAMPLE PLAN. FUNCTIONAL TEST PERFORMED FOR SERVICE LIFE MONITORING PURPOSES ONLY. S.N. 19231						
NA	NA	2RY06105S Snubber	2RY09AA-.75"	I2R-14	VT-3/4 Functional VT-2	NRI NRI NRI
SNUBBER NOT SCHEDULED IN ORIGINAL SAMPLE PLAN. REMOVED AND TESTED FOR SERVICE LIFE MONITORING DUE TO EVIDENCE OF BORON FROM LEAKING VALVE 2RY455B. S.N. 2673						
NA	NA	2RY06125S Snubber	2RY09AB-.75"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
SNUBBER NOT SCHEDULED IN ORIGINAL SAMPLE PLAN. REMOVED AND TESTED FOR SERVICE LIFE MONITORING DUE TO EVIDENCE OF BORON FROM LEAKING VALVE 2RY455B. S.N. 21557						
F-A	F01.10	2RY09001S Snubber	2RY02B-3"	I2R-14	VT-3/4	NRI
S.N. 378						
F-A	F01.10	2RY09005S Snubber	2RY02B-3"	I2R-14	VT-3/4	NRI
S.N. 143						
F-A	F01.10	2RY09100S Snubber	2RY02B-3"	I2R-14	VT-3/4	NRI
S.N. 20684						
F-A	F01.10	2RY09101S Snubber	2RY06A-3"	I2R-14	VT-3/4	NRI
S.N. 27648						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**  
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**SYSTEM:** Steam Generator Blowdown System (SD)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
NA	NA	2SD06030S Snubber	2SD01CE-2"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 7187						
NA	NA	2SD06032S Snubber	2SD01CE-2"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 9556						
NA	NA	2SD11066S Snubber	2SD01CH-2"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
RESULTS FOR AS FOUND SNUBBER TEST WERE MARGINAL, THEREFORE THE ORIGINAL SNUBBER WAS REMOVED FROM SERVICE AND A REPLACEMENT WAS OBTAINED UNDER NWR 9900223347. TEST RESULTS ARE SHOWN AS AS FOUND/REPLACEMENT. S.N. 2598						
NA	NA	2SD12048S Snubber	2SD01CG-2"	I2R-14	VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 5684						

**Section 3.3 Detailed Inservice Inspection Snubber Listing**

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**SYSTEM:** Safety Injection System (SI)

Section XI Cat. Item	ISI Identifier Description	Line Number / EPN	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>						
F-A F01.10	2RH02018S Snubber	2SI04D-8"	I2R-14		VT-3/4	NRI
S.N. 4439						
F-A F01.20	2RH02027S Snubber	2SI04C-8"	I2R-14		VT-3/4	NRI
S.N. 16589						
F-A F01.10	2RH02079S Snubber	2SIA4B-8"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 20069						
F-A F01.10	2RH02081S Snubber	2SI04D-8"	I2R-14		VT-3/4	NRI
S.N. 16679						
F-A F01.10	2RH02083S Snubber	2SIA4B-8"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 16683						
F-A F01.10	2SI03009S Snubber	2SI05DD-6"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 2553						
F-A F01.10	2SI03018S Snubber	2SI05DD-6"	I2R-14		VT-3/4	NRI
S.N. 7228						
NA NA	2SI05013S Snubber	2SI18AB-4"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 12898						
F-A F01.10	2SI16029S Snubber	2SI18FC-2"	I2R-14		VT-3/4	NRI
S.N. 11728						
NA NA	2SI16038S Snubber	2SI18EC-2"	I2R-14		VT-3/4 Functional VT-3/4	NRI NRI NRI
S.N. 7015						

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Component Cooling System (CC)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02CC-000002-M04-01A		I2R-05	VT-2	
	C07.70 40 Month Period ASME Section XI Pressure Test.		I2R-13		

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Containment Spray System (CS)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.10 A02CS-000003-M04-01A C07.30 40 Month Period ASME Section XI pressure Test. C07.50 C07.70	I2R-05 I2R-13		VT-2	
C-H	C07.10 A02CS-000003-M04-01B C07.30 40 Month Period ASME Section XI pressure Test. C07.50 C07.70	I2R-05 I2R-13		VT-2	
C-H	C07.10 A02CS-000003-M04-01C C07.30 40 Month Period ASME Section XI Pressure Test. The Test Pressure shall be those pressures developed when the Spray Additive Tank is pressurized with the nitrogen blanket. Use SNOOP or Ultraprobe to inspect nitrogen filled piping, valves and upper portion C07.70	I2R-05 I2R-13		VT-2	

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.10 A02CV-000004-M04-01A C07.30 40 Month Period ASME Section XI Pressure Test. C07.50 C07.70	I2R-05 I2R-12 I2R-13		VT-2	
C-H	C07.30 A02CV-000004-M04-01B C07.50 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE15	VT-2	

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Fuel Pool Cooling System (AF)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02FC-000001-M04-01C C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13		VT-2	
C-H	C07.30 A02FC-000001-M04-01D C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13		VT-2	

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Fire Protection System (FP)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02FP-000089-M04-02B	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify valve 2FP010 has been opened per BwGP 100-6 prior to performing VT-2 Visual Examination of test boundary.	I2R-13			
For VT-2 walkdown results reference surveillance (WR 990007195).					

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Instrument Air System (IA)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A021A-000004-M04-01A	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify Continuous Leak Detection System for Airlock is in operation prior to performing SNOOP or Ultraprobe examination of test boundary.	I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088672).					
C-H	C07.30 A021A-000004-M04-01B	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify valves 21A065 and 21A066 have been opened per BwGP 100-6 prior to performing SNOOP or Ultraprobe examination of test boundary.	I2R-13			
For VT-2 walkdown results reference surveillance (WR 990084849).					

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Nitrogen System (NT)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02NT-000004-M04-01A		I2R-05		VT-2
	C07.70 40 Month Period ASME Section XI Pressure Test. Perform SNOOP or Ultraprobe examination after electrical penetrations have been pressurized with nitrogen for at least four hours.		I2R-13		

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Off Gas System (OG)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H C07.30	A02OG-000003-M04-01A	I2R-05	NOTE12	VT-2	
C07.70	40 Month Period ASME Section XI Pressure Test. OPEN valves 0OG065, 1OG082, 1OG083, 1OG084 and 1OG085 and pressurize test boundary using LLRT box for 10 min. Performing a SNOOP or Ultraprobe inspection of pipe.	I2R-13			

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Process Radiation Monitoring System (PR)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02PR-000004-M04-01A	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP during performance of Local Leak Rate Test.	I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088669).					
C-H	C07.30 A02PR-000004-M04-01B	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP piping during performance of Local Leak Rate Test.	I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088669).					

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Process Sampling System (PS)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02PS-000009-M04-01A C07.70 40 Month Period ASME Section XI Pressure Test. OPEN valve 2PS9356A and one of the following valves: 2PS9358A,B,C,D or 2PS9351A,B.	I2R-05 I2R-13	NOTE13	VT-2	
C-H	C07.30 A02PS-000009-M04-01B C07.70 40 Month Period ASME Section XI Pressure Test. OPEN valves 2PS9350A and 2PS9354A.	I2R-05 I2R-13	NOTE12	VT-2	
C-H	C07.30 A02PS-000009-M04-01C C07.70 40 Month Period ASME Section XI Pressure Test. OPEN valves 2PS9350B and 2PS9355A.	I2R-05 I2R-13	NOTE12	VT-2	
C-H	C07.30 A02PS-000009-M04-01D C07.70 40 Month Period ASME Section XI Pressure Test. OPEN valve 2PS9357A and one of the following valves: 2PS9352A,B,C,D.	I2R-05 I2R-13	NOTE12	VT-2	
C-H	C07.30 A02PS-000009-M04-01E C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-13	NOTE12	VT-2	

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Reactor Bldg. Equipment Drain and Vent System (RE)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02RE-000004-M04-01A	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990084841).					
C-H	C07.30 A02RE-000004-M04-01B	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990084841).					
C-H	C07.30 A02RE-000004-M04-01C	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990084841).					

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Auxiliary Building Floor Drain System (RF)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02RF-000004-M04-01A	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990048482).					

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.10 A02RH-000003-M04-01A C07.30 40 Month Period ASME Section XI Pressure Test. VERIFY loop "A" in C07.50 service. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	
C-H	C07.10 A02RH-000003-M04-01B C07.30 40 Month Period ASME Section XI Pressure Test. VERIFY loop "B" in C07.50 service. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	
C-H	C07.30 A02RH-000003-M04-01D C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	
C-H	C07.30 A02RH-000003-M04-01E C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	

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**SYSTEM:** Reactor Coolant System (RY)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02RY-000004-M04-01A	I2R-05	NOTE13	VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-12 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088670).					
C-H	C07.30 A02RY-000004-M04-01B	I2R-05	NOTE13	VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-12 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088670).					
C-H	C07.30 A02RY-000004-M04-01C	I2R-05	NOTE13	VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-12 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088670).					
C-H	C07.30 A02RY-000004-M04-01E	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-12 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088670).					

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Diesel Generator Starting Air System (SA)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02SA-000001-M04-01A	I2R-05		VT-2	
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify valves 2SA032 and 2SA033 have been opened per BwGP 100-6 prior to performing SNOOP or Ultraprobe examination on test boundary.	I2R-13	I2R-13		

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Safety Injection System (SI)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02SI-000010-M04-01A C07.50 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01B C07.50 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01C C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01D C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01F C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01G C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01N C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.30 A02SI-000010-M04-01P C07.70 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.10 A02ZZ-000010-M04-01J C07.30 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.10 A02ZZ-000010-M04-01K C07.30 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.10 A02ZZ-000010-M04-01L C07.30 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A
C-H	C07.10 A02ZZ-000010-M04-01M C07.30 40 Month Period ASME Section XI Pressure Test. C07.70	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	N/A

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**SYSTEM:** Essential Service Water System (SX)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H C07.30 C07.70	A02SX-000011-M04-01E 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-13		VT-2	
C-H C07.30 C07.70	A02SX-000011-M04-01F 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-13		VT-2	
C-H C07.30 C07.70	A02SX-000011-M04-01G 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-13		VT-2	
C-H C07.30 C07.70	A02SX-000011-M04-01H 40 Month Period ASME Section XI Pressure Test.	I2R-05 I2R-13		VT-2	

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**SYSTEM:** Primary Containment Purge System (VQ)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02VQ-000004-M04-01A	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088676).					
C-H	C07.30 A02VQ-000004-M04-01B	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088678).					
C-H	C07.30 A02VQ-000004-M04-01C	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088677).					
C-H	C07.30 A02VQ-000004-M04-01D	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088675).					
C-H	C07.30 A02VQ-000004-M04-01E	I2R-05		VT-2	
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
C-H	C07.30 A02VQ-000004-M04-01F	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. SNOOP or Ultraprobe piping during performance of Local Leak Rate Test.	I2R-11 I2R-13			
For VT-2 walkdown results reference surveillance (WR 990088673).					

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**SYSTEM:** Make-Up Demineralizer System (WM)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A02WM-000004-M04-01A	I2R-05		VT-2	N/A
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify valve 2WM190 has been opened to provide WM supply to containment during Mode 6 prior to performing VT-2 Visual Examination of test boundary.	I2R-13			

For VT-2 walkdown results reference surveillance (WR 990084416).

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**SYSTEM:** Containment Chilled Water System (WO)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 A00WO-000001-M04-01E	I2R-05		VT-2	
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify applicable Train operability prior to performing VT-2 Visual Examination of test boundary.	I2R-13			
C-H	C07.30 A00WO-000001-M04-01F	I2R-05		VT-2	
	C07.70 40 Month Period ASME Section XI Pressure Test. Verify applicable Train operability prior to performing VT-2 Visual Examination of test boundary.	I2R-13			

**Section 3.4.1 Detailed Inservice Inspection Pressure Test Test-Block Listing**  
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**SYSTEM:** Plant Systems Pressurized During Mode 3 (ZZ)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
B-P	B15.10 A02ZZ-000005-M04-01A	I2R-05	NOTE13	VT-2	N/A
	B15.20 Periodic (each refueling outage) ASME Section XI Pressure Test.	I2R-12			N/A
	B15.30	I2R-13			
	B15.50	I2R-30			
	B15.60/70	I2R-31			
Visual (VT-2) exam performed on ASME class 1 components, during Mode 3 heat-up. For walkdown results reference surveillance (WR 990185460). Augmented visual exam performed per Generic Letter 88-05, exam during Mode 1 and 3. For walkdown results reference surveillance (WR 990185105).					
C-H	C07.20 A02ZZ-000005-M04-02B	I2R-05	NOTE13		
	C07.40 10 Year Interval ASME Section XI Pressure Test. All Code Class 2	I2R-12	NOTE17		
	C07.80 Components inside Containment. VT-2 Visual Inspection of components outside of Missile Barrier may be performed during Mode 1 if conditions permit.	I2R-13			
C-H	C07.20 A02ZZ-000005-M04-02C	I2R-05	NOTE13		
	C07.40 10 Year Interval ASME Section XI Pressure Test. Code Class 2	I2R-12	NOTE17		
	C07.80 components outside containment which are normally pressurized during Mode 1-3	I2R-13			
C-H	C07.10 A02ZZ-000078-M04-03A	I2R-05	NOTE13	VT-2	N/A
	C07.30 40 Month Period ASME Section XI Pressure Test. All Code Class 2	I2R-12			
	C07.70 components inside containment. VT-2 Visual Inspection of components outside Missile Barrier may be performed during Mode 1 if conditions permit.	I2R-13			
Visual (VT-2) exam performed on ASME class 2/3 components in containment IMB/OMB, under pressure during Mode 3 heat-up. For VT-2 walkdown results reference surveillance (WR 990185459).					

### Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing

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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
B-P	B15.50 2CV-03-B1 (B-P)	I2R-12		VT-2	NRI
	B15.51 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV123 (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV123 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2CV459 (B-P)	I2R-12		VT-2	NRI
	B15.71 2CV459 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2CV460 (B-P)	I2R-12		VT-2	NRI
	B15.71 2CV460 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8100 (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8100 VLV (8 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8112 (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8112 VLV (8 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8117 (C-H)	I2R-12			
	C07.80 2CV8117 VLV (6 STUDS)	I2R-13			
Component not insulated in the area of interest. Remove from Program.					
C-H	C07.70 2CV8121 (C-H)	I2R-12			
	C07.80 2CV8121 VLV (4 STUDS)	I2R-13			
C-H	C07.70 2CV8142 (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8142 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8143 (C-H)	I2R-12			
	C07.80 2CV8143 VLV (4 STUDS)	I2R-13			
B-P	B15.70 2CV8145 (B-P)	I2R-12		VT-2	NRI
	B15.71 2CV8145 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8146 (C-H)	I2R-12			
	C07.80 2CV8146 VLV (6 STUDS)	I2R-13			
Component not insulated in the area of interest. Remove from Program.					
C-H	C07.70 2CV8147 (C-H)	I2R-12			
	C07.80 2CV8147 VLV (6 STUDS)	I2R-13			
Component not insulated in the area of interest. Remove from Program.					
C-H	C07.70 2CV8149A (C-H)	I2R-12		VT-2	IND.
	C07.80 2CV8149A VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to bonnet connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. Post VT-2 performed, no active leakage noted.					

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**

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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.70 2CV8149B (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8149B VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8149C (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8149C VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8152 (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8152 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2CV8153A (B-P)	I2R-12		VT-2	IND.
	B15.71 2CV8153A VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron (body to bonnet) noted. Component was deconned, VT-1 exam performed on bolting. VT-1 results found no degradation on bolting. Post VT-2 performed, no active leakage noted. Component will be repaired during A2R09.					
B-P	B15.70 2CV8153B (B-P)	I2R-12		VT-2	NRI
	B15.71 2CV8153B VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8320A (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8320A VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8320B (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8320B VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8321A (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8321A VLV (10 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8321B (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8321B VLV (10 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8322A (C-H)	I2R-12		VT-2	N/A
	C07.80 2CV8322A VLV (10 STUDS)	I2R-13		VT-1	NRI
Dry boron (packing leak). Component was deconned, VT-1 performed on bolting. AR 990115075 generated to adjust packing follower. VT-1 results found no degradation on bolting.					
C-H	C07.70 2CV8322B (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8322B VLV (10 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8323A (C-H)	I2R-12		VT-2	IND.
	C07.80 2CV8323A VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to cap connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exists. Post VT-2 performed, no active leakage noted.					

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**  
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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.70 2CV8323B (C-H)	I2R-12		VT-2	IND.
	C07.80 2CV8323B VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to cap connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. Post VT-2 performed, no active leakage noted.					
C-H	C07.70 2CV8374 (C-H)	I2R-12			
	C07.80 2CV8374 VLV (4 STUDS)	I2R-13			
Component not insulated, remove from Program.					
B-P	B15.70 2CV8378A (B-P)	I2R-12		VT-2	NRI
	B15.71 2CV8378A CHECK VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2CV8378B (B-P)	I2R-12		VT-2	NRI
	B15.71 2CV8378B CHECK VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2CV8379A (B-P)	I2R-12		VT-2	IND.
	B15.71 2CV8379A CHECK VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to cap connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. No active leakage noted, Post VT-2 exam.					
B-P	B15.70 2CV8379B (B-P)	I2R-12		VT-2	IND.
	B15.71 2CV8379B CHECK VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to cap connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. No active leakage noted, Post VT-2 exam.					
C-H	C07.70 2CV8389A (C-H)	I2R-12		VT-2	NRI
	C07.80 2CV8389A VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2CV8389B (C-H)	I2R-12		VT-2	IND.
	C07.80 2CV8389B VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to bonnet connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. No active leakage noted, post VT-2 exam.					
C-H	C07.70 2CV8804A (C-H)	I2R-12		VT-2	IND.
	C07.80 2CV8804A VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation noted, body to bonnet leakage. Component was deconned. Bolting material not affected. Note: maintenance will be performed on this valve during A2R08, reference WR 990098020 for specifics. Component was deconned and re-examined. VT-1 exam performed on bolting, no bolting material wastage observed. VT-1 acceptable. Post VT-2 exam acceptable.					
B-P	B15.50 PG-2546C-214 F-2-2 (B-P)	I2R-12		VT-2	NRI
	B15.51 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**  
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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 PG-2546C-218 F-1-2 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-220 F-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-241 F-1-1 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-262 F-1-3 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-262 F-2-2 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-263 F-1 (C-H)	I2R-12		VT-2	IND.
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13		VT-1	NRI
VT-2					
NRI					
Dry boron accumulation around flange, (gasket leak). Component was deconned, VT-1 exam performed bolting material. No bolt degradation observed. VT-1 acceptable. Post VT-2 performed, no active leakage noted.					
C-H	C07.30 PG-2546C-268 F-1-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-270 F-1-2 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
Component not insulated, remove from Program.					
C-H	C07.30 PG-2546C-270 F-2-1 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.50 PG-2546C-271 F-2-3 (B-P)	I2R-12		VT-2	NRI
	B15.51 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-276 F-1-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-285 F-1-3 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-285 F-2-2 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-289 F-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13			

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**  
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**SYSTEM:** Chemical & Volume Control System (CV)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 PG-2546C-290 F-1 (C-H)	I2R-12		VT-2	IND.
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Dry boron accumulation around flange, (gasket leak). Component was deconned, VT-1 exam performed bolting material. No bolt degradation observed. VT-1 acceptable. Post VT-2 performed, no active leakage noted.					
C-H	C07.30 PG-2546C-293 F-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
B-P	B15.50 PG-2546C-301 F-2-2 (B-P)	I2R-12		VT-2	NRI
	B15.51 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-311 F-1-1 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 PG-2546C-319 F-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-319 F-2 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-322 F-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			
C-H	C07.30 PG-2546C-322 F-2 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (4 STUDS)	I2R-13			

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**

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**SYSTEM: Reactor Coolant System (RC)**

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
B-P	B15.20 2PZR-01-B1 (B-P)	I2R-12		VT-2	NRI
	B15.21 MANWAY BOLTING (16 TOTAL)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.50 2RC-20-B1 (B-P)	I2R-12		VT-2	NRI
	B15.51 FLANGED CONNECTION (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RC8001B (B-P)	I2R-13		VT-2	NRI
	B15.71 2RC8001B VLV BOLTING (24 TL)	I2R-30			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RC8002B (B-P)	I2R-13		VT-2	IND.
	B15.71 2RC8002B VLV BOLTING (24 TL)	I2R-30		VT-1	NRI
				VT-2	NRI
Minor dry boron (packing leak) noted. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Post VT-2 exam performed, no active leakage noted.					
B-P	B15.70 2RC8003B (B-P)	I2R-13		VT-2	NRI
	B15.71 2RC8003B VLV (12 STUDS)	I2R-30			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RC8036A (B-P)	I2R-12		VT-2	IND.
	B15.71 2RC8036A VLV (6 STUDS)	I2R-13		VT-1	NRI
Minor dry boron (packing leak). Component deconned, VT-1 performed on bolting. Component being repaired under WR990121923. VT-1 results found no degradation on bolting.					
B-P	B15.70 2RC8036B (B-P)	I2R-12		VT-2	NRI
	B15.71 2RC8036B VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RC8036C (B-P)	I2R-12		VT-2	IND.
	B15.71 2RC8036C VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Dry boron found coming up through nut, thread connection. Component was deconned, VT-1 exam performed on bolting. VT-1 results found no degradation of bolting. Post VT-2 performed, no active leakage noted. Component will be repaired during A2R09.					
B-P	B15.70 2RC8036D (B-P)	I2R-12		VT-2	IND.
	B15.71 2RC8036D VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Dry boron found coming up through nut, thread connection. Component was deconned, VT-1 exam performed on bolting. VT-1 results found no degradation of bolting. Post VT-2 performed, no active leakage noted. Component will be repaired during A2R09.					
B-P	B15.70 2RC8037A (B-P)	I2R-12		VT-2	IND.
	B15.71 2RC8037A VLV (6 STUDS)	I2R-13		VT-1	NRI
Minor dry boron (packing leak). Component deconned, VT-1 performed on bolting. Component being repaired under WR990121916. VT-1 results found no degradation on bolting.					
B-P	B15.70 2RC8037B (B-P)	I2R-12		VT-2	IND.
	B15.71 2RC8037B VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Dry boron found coming up through nut, thread connection. Component was deconned, VT-1 exam performed on bolting. VT-1 results found no degradation of bolting. Post VT-2 exam performed, no active leakage noted. Component will be repaired during A2R09.					

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**SYSTEM:** Reactor Coolant System (RC)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
B-P	B15.70 2RC8037C (B-P)	I2R-12		VT-2	IND.
	B15.71 2RC8037C VLV (6 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron (body to bonnet) noted . Componet was deconned, VT-1 exam performed on bolting. VT-1 results found no degradation on bolting. Post VT-2 performed, no active leakage noted. Component will be repaired during A2R09.					
B-P	B15.70 2RC8037D (B-P)	I2R-12		VT-2	NRI
	B15.71 2RC8037D VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RC8085 (B-P)	I2R-12		VT-2	NRI
	B15.71 2RC8085 VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.10 2RV-03-STUDS (01 TO 54, B-P)	I2R-13		VT-2	NRI
	B15.11 CLOSURE HEAD STUDS (54 TOTAL)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-01-B1 (B-P)	I2R-13		VT-2	NRI
	B15.31 9A PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-01-B2 (B-P)	I2R-13		VT-2	NRI
	B15.31 9B PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-02-B1 (B-P)	I2R-13		VT-2	NRI
	B15.31 9A PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-02-B2 (B-P)	I2R-13		VT-2	NRI
	B15.31 9B PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-03-B1 (B-P)	I2R-13		VT-2	NRI
	B15.31 9A PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-03-B2 (B-P)	I2R-13		VT-2	NRI
	B15.31 9B PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-04-B1 (B-P)	I2R-13		VT-2	NRI
	B15.31 9A PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.30 2SG-04-B2 (B-P)	I2R-13		VT-2	NRI
	B15.31 9B PRIMARY MANWAY (16 BOLTS)	I2R-31			
No evidence of boric acid leakage noted. VT-2 acceptable.					

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**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 2RH-09 F-1 (C-H)	I2R-12		VT-2	IND.
	C07.40 FLANGED CONNECTION (20 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron noted around gasket. Component deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Post VT-2 exam performed, no active leakage noted.					
C-H	C07.30 2RH-09 F-2 (C-H)	I2R-12		VT-2	IND.
	C07.40 FLANGED CONNECTION (20 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron noted around gasket. Component deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Post VT-2 exam performed, no active leakage noted.					
C-H	C07.30 2RH-10 F-2-2 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (24 STUDS)	I2R-13			
C-H	C07.30 2RH-10 F-3-2 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (24 STUDS)	I2R-13			
C-H	C07.30 2RH-10 F-4 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13			
C-H	C07.30 2RH-11 F-1 (C-H)	I2R-12		VT-2	IND.
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13		VT-1	IND.
				VT-2	NRI
Dry boron accumulation found around flange connection. Component deconned, VT-1 exam performed bolting. VT-1 results found that one bolt exhibited thread wastage. Post VT-2 exam performed, no active leakage noted. AR990113478 was generated to replace bolt. CR A2000-03914					
C-H	C07.30 2RH-12 F-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13			
C-H	C07.30 2RH-12 F-2-1 (C-H)	I2R-12		VT-2	IND.
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13		VT-1	NRI
Dry boron accumulation around flange, (gasket leak). Component was deconned, VT-1 exam performed bolting material. No bolting material wastage observed. VT-1 acceptable. AR990113496 generated to check bolt torque on flange.					
C-H	C07.30 2RH-12 F-3-1 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 2RH-12 F-4-1 (C-H)	I2R-12		VT-1	NRI
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 2RH-12 F-5 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 2RH-13 F-1 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (20 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.30 2RH-13 F-2 (C-H)	I2R-12		VT-2	NRI
	C07.40 FLANGED CONNECTION (20 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					

### Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing

(Page 9 of 12)

**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.30 2RH-13 F-3-1 (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (8 STUDS)	I2R-13			
C-H	C07.30 2RH01MA (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13			
C-H	C07.30 2RH01MB (C-H)	I2R-12			
	C07.40 FLANGED CONNECTION (12 STUDS)	I2R-13			
C-H	C07.70 2RH606 (C-H)	I2R-12			
	C07.80 2RH606 VLV (4 STUDS)	I2R-13			
C-H	C07.70 2RH607 (C-H)	I2R-12		VT-2	IND.
	C07.80 2RH607 VLV (4 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Dry boron accumulation around blank-off plate, (gasket leak). Component was deconned. Also noted missing hex nut on plate. AR 990112926 generated to repalce gasket and hex nut. CR A200-03874 Component was deconned, VT-1 exam performed bolting material, no bolting material wastage observed. VT-1 acceptable. Post VT-2 exam performed, no active leakage noted.					
C-H	C07.70 2RH610 (C-H)	I2R-12			
	C07.80 2RH610 VLV (16 STUDS)	I2R-13			
C-H	C07.70 2RH611 (C-H)	I2R-12		VT-2	NRI
	C07.80 2RH611 VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2RH618 (C-H)	I2R-12			
	C07.80 2RH618 VLV (4 STUDS)	I2R-13			
C-H	C07.70 2RH619 (C-H)	I2R-12		VT-2	NRI
	C07.80 2RH619 VLV (4 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RH8702A (B-P)	I2R-13		VT-2	IND.
	B15.71 2RH8702A GATE VLV (18 STUDS)	I2R-30		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to bonnet connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. Post VT-2 performed, no active leakage noted.					
B-P	B15.70 2RH8702B (B-P)	I2R-13		VT-2	NRI
	B15.71 2RH8702B GATE VLV (18 STUDS)	I2R-30			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2RH8708B (C-H)	I2R-12			
	C07.80 2RH8708B VLV (6 STUDS)	I2R-13			
C-H	C07.70 2RH8716A (C-H)	I2R-12		VT-2	IND.
	C07.80 2RH8716A VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to bonnet connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. Post VT-2 performed, no active leakage noted.					

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**

(Page 10 of 12)

**SYSTEM:** Residual Heat Removal System (RH)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.70 2RH8716B (C-H)	I2R-12		VT-2	IND.
	C07.80 2RH8716B VLV (16 STUDS)	I2R-13		VT-1	NRI
				VT-2	NRI
Minor dry boron accumulation around body to bonnet connection. Component was deconned, VT-1 performed on bolting. VT-1 results found no degradation on bolting. Component will be re-examined during the next scheduled refueling outage (A2R09) to verify if leakage still exsist. Post VT-2 performed, no active leakage noted.					
C-H	C07.70 2RH8724A (C-H)	I2R-12			
	C07.80 2RH8724A VLV (16 STUDS)	I2R-13			
C-H	C07.70 2RH8724B (C-H)	I2R-12		VT-2	NRI
	C07.80 2RH8724B VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
C-H	C07.70 2RH8730A (C-H)	I2R-12			
	C07.80 2RH8730A VLV (16 STUDS)	I2R-13			
C-H	C07.70 2RH8730B (C-H)	I2R-12		VT-2	NRI
	C07.80 2RH8730B VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**  
(Page 11 of 12)

**SYSTEM:** Reactor Coolant System (RY)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
B-P	B15.70 2RY025 (B-P)	I2R-12			
	B15.71 2RY025 VLV (6 STUDS)	I2R-13			
B-P	B15.70 2RY455A (B-P)	I2R-12		VT-2	NRI
	B15.71 2RY455A GLOBE VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RY455B (B-P)	I2R-12		VT-2	IND.
	B15.71 2RY455B CONTROL VLV (8 STUDS)	I2R-13		VT-1	NRI
Dry boron, body to bonnet leakage. Component being repaired during A2R08, reference WR990060305 for specifics. VT-1 results found no degradation on bolting. Post VT-2 exam performed, no active leakage noted.					
B-P	B15.70 2RY455C (B-P)	I2R-12		VT-2	NRI
	B15.71 2RY455C VLV (8 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RY456 (B-P)	I2R-12		VT-2	NRI
	B15.71 2RY456 VLV (6 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2RY8000A (B-P)	I2R-12		VT-2	IND.
	B15.71 2RY8000A VLV (16 STUDS)	I2R-13		VT-1	NRI
Minor dry boron residue noted, around body to bonnet. Component deconned, VT-1 exam performed on bolting. VT-1 results found no degradation on bolting. Post VT-2 exam performed, no active leakage noted.					
B-P	B15.70 2RY8000B (B-P)	I2R-12		VT-2	NRI
	B15.71 2RY8000B VLV (14 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					

**Section 3.4.2 Detailed Inservice Inspection Borated Bolting Listing**

(Page 12 of 12)

**SYSTEM:** Safety Injection System (SI)

Section XI Cat. Item	ISI Identifier Description	Relief Request	Program Notes	Exam Summary	Results
<b>Inspection Comments</b>					
C-H	C07.70 2SI8809B (C-H)	I2R-12		VT-2	NRI
	C07.80 2SI8809B VLV (16 STUDS)	I2R-13			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2SI8948B (B-P)	I2R-13		VT-2	NRI
	B15.71 2SI8948B CHECK VLV (18 STUDS)	I2R-30			
No evidence of boric acid leakage noted. VT-2 acceptable.					
B-P	B15.70 2SI8949B (B-P)	I2R-13			
	B15.71 2SI8949B CHECK VLV (16 STUDS)	I2R-30			
Component not insulated in the area of interest.					

**4.0 NIS-1 FORM**

As required by IWA-6000 of Section XI, this section contains the Owner's Report for Inservice Inspections, Form NIS-1, for the preservice and inservice examination of Class 1 and Class 2 pressure retaining components and their supports.

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



**Braidwood Station Unit 2**  
**A2R08 ISI Outage Report**

(Page 1 of 4)

1. **Owner** Exelon Generation, 300 Exelon Way, Kennett Square PA 19348  
(Name and Address of Owner)
2. **Plant** Braidwood Nuclear Power Station, 35100 S. Rt 53 Suite 84, Braceville, Illinois 60407  
(Name and Address of Plant)
3. **Plant Unit** 2      4. **Owner Certificate Of Authorization (if required)** N/A
5. **Commercial Service Date** 10/17/88      6. **National Board Number for Unit** N-197
7. **Components Inspected** See Section 3 of this report.

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Component Cooling System (CC)	N/A	N/A	N/A	N/A
Containment Spray System (CS)	N/A	N/A	N/A	N/A
Chemical & Volume Control System (CV)	N/A	N/A	N/A	N/A
Fuel Pool Cooling System (AF)	N/A	N/A	N/A	N/A
Fire Protection System (FP)	N/A	N/A	N/A	N/A
Feedwater System (FW)	N/A	N/A	N/A	N/A
Instrument Air System (IA)	N/A	N/A	N/A	N/A
Main Steam System (MS)	N/A	N/A	N/A	N/A
Nitrogen System (NT)	N/A	N/A	N/A	N/A

1. **Owner** Exelon Generation, 300 Exelon Way, Kennett Square PA 19348  
(Name and Address of Owner)
2. **Plant** Braidwood Nuclear Power Station, 35100 S. Rt 53 Suite 84, Braceville, Illinois 60407  
(Name and Address of Plant)
3. **Plant Unit** 2      4. **Owner Certificate Of Authorization (if required)** N/A
5. **Commercial Service Date** 10/17/88      6. **National Board Number for Unit** N-197
7. **Components Inspected** See Section 3 of this report.

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Off Gas System (OG)	N/A	N/A	N/A	N/A
Process Radiation Monitoring System (PR)	N/A	N/A	N/A	N/A
Process Sampling System (PS)	N/A	N/A	N/A	N/A
Reactor Coolant System (RC)	N/A	N/A	N/A	N/A
Reactor Bldg. Equipment Drain and Vent System (RE)	N/A	N/A	N/A	N/A
Auxiliary Building Floor Drain System (RF)	N/A	N/A	N/A	N/A
Residual Heat Removal System (RH)	N/A	N/A	N/A	N/A
Reactor Coolant System (RY)	N/A	N/A	N/A	N/A
Diesel Generator Starting Air System (SA)	N/A	N/A	N/A	N/A
Steam Generator Blowdown System (SD)	N/A	N/A	N/A	N/A

1. Owner Exelon Generation, 300 Exelon Way, Kennett Square PA 19348  
(Name and Address of Owner)
2. Plant Braidwood Nuclear Power Station, 35100 S. Rt 53 Suite 84, Braceville, Illinois 60407  
(Name and Address of Plant)
3. Plant Unit 2 4. Owner Certificate Of Authorization (if required) N/A
5. Commercial Service Date 10/17/88 6. National Board Number for Unit N-197
7. Components Inspected See Section 3 of this report.

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Safety Injection System (SI)	N/A	N/A	N/A	N/A
Essential Service Water System (SX)	N/A	N/A	N/A	N/A
Primary Containment Purge System (VQ)	N/A	N/A	N/A	N/A
Make-Up Demineralizer System (WM)	N/A	N/A	N/A	N/A
Containment Chilled Water System (WO)	N/A	N/A	N/A	N/A
Plant Systems Pressurized During Mode 3 (ZZ)	N/A	N/A	N/A	N/A

(BACK)

- 8. Examination Dates May 21, 1999 to November 5, 2000
- 9. Inspection Period Identification: First Inspection Period
- 10. Inspection Interval Identification: Second Inspection Interval
- 11. Applicable Edition of Section XI 1989 Addenda No Addenda
- 12. Date/Revision of Inspection Plan: Second Interval ISI Program Plan, Revision 3.
- 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.  
A summary of examinations is discussed in Section 2, with a detailed listing of examinations contained in Section 3.
- 14. Abstract of Results of Examination and Tests.  
A summary and discussion of examination results are contained with the detailed listing of examinations provided in Section 3.
- 15. Abstract of Corrective Measures.  
A summary of corrective measures are contained with the detailed listing of examinations provided in Section 3.

We certify that a) the statements made in this report are correct, b) the examination 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) N/A Expiration Date N/A  
Date 1/15/2001 20      Signed Exelon Generation By [Signature]  
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 ILLINOIS and employed by HSTBI # 1 Co. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 5-21-99 to 11-5-2000, 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.

[Signature] Commissions NB# 8756, IL# 1085 "C" "I" "N"  
Inspector's Signature National Board, State, Province, and Endorsements

Date 1-16- 2001

## **5.0 REPORT OF CONTAINMENT DEGRADATION**

The Nuclear Regulatory Commission (NRC) has amended its Code of Federal Regulations (10CFR 50.55a) to incorporate by reference the 1992 Edition with the 1992 Addenda of Subsection IWE (Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Power Plants) and Subsection IWL (Requirements for Class CC Components of Light-Water Cooled Power Plants) of ASME Section XI, Division 1, with specified modifications and a limitation noted. This segment is included in the Inservice Inspection Summary report required by IWA-6000 of ASME Section XI to meet the reporting conditions specified in 10CFR 50.55a(b)(2)(viii)(A)-(E) and 10CFR 50.55a(b)(2)(ix)(A)-(E).

### **5.1 Containment Tendon Water Surveillance**

Braidwood Station performs an annual surveillance of a random sample of the containment anchorage components that are located below grade. Grade elevation at Braidwood is 401'. This summary report encompasses the information obtained from two Unit 2 surveillances as two surveillances have been completed since the previous summary report was submitted. The surveillances were completed in the summers of 1999 and 2000.

The purpose of the surveillance is to monitor the post tensioning systems for evidence of free water and identify any adverse affects the free water may have on the tendon anchorage components. The Surveillance Procedure employed to perform this inspection is ComEd Procedure BwVSR 5.5.6-2 "Containment Tendon Water Inspection Surveillance". A summary of the required Unit 2 data is attached .

The NRC Code Of Federal Regulations, 10CFR 50.55a Codes and Standards (ix) Examination of Concrete Containments (D) requires that the licensee report the following conditions, if they occur, in the ISI Summary Report required by ASME Section XI, IWA-6000:

- The sampled sheathing filler grease contains chemically combined water exceeding 10 percent by weight or the presence of free water.
- The absolute difference between the amount of sheathing filler grease removed and that replaced exceeds 10 percent of the tendon net duct volume.
- Leakage is detected during general visual examination of the containment surface.

In accordance with the Braidwood Technical Requirements Manual (TRM) and ASME Section XI, IWL-3300, items which do not meet the acceptance standards shall be evaluated. An Engineering Evaluation Report stating the following shall be prepared:

- Description of the condition of the tendon.
- The condition of the concrete (especially at tendon anchorage locations).
- The tolerance on concrete cracking.
- The cause of the condition that does not meet the acceptance standards.
- The acceptability of the concrete containment without repair of the item.
- Whether or not repair or replacement is required and if required, the extent, method, and completion date for the repair or replacement.

- The corrective actions taken.
- The extent, nature, and frequency of additional examinations.

**1999 Water Surveillance:**

The following provides a summation of the of Unit 2 surveillance competed in the summer of 1999. Tendons with an "H" prefix are in a horizontal configuration. Tables providing specific inspection and test results are included. Tendons with a "V" prefix are in a vertical configuration. Conditions where the acceptance criteria was exceeded are in bold print.

**Braidwood Unit 2 1999 Surveillance Free Water Quantification**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Tendon EPN	Anchorage End	Elevation Of Anchorage	Quantity Of Free Water Collected	Grease Can Removed? (Yes or No)	Comments
H1DF-F	FIELD	378'-6"	<b>5 Ounces</b>	Yes	
H1DF-D	SHOP	378'-6"	Zero	Yes	
H1FE-F	SHOP	378'-6"	<b>5 Ounces</b>	Yes	
H1FE-E	FIELD	378'-6"	Zero	Yes	
H3ED-E	FIELD	383'-6"	<b>1 Ounce</b>	Yes	Free water quantity insufficient for sample
H3ED-D	SHOP	383'-6"	Zero	Yes	
H4ED-D	SHOP	385'-10"	<b>422 Ounces</b>	Yes	Grease Replaced In 1999
H4ED-E	FIELD	385'-10"	<b>540 Ounces</b>	Yes	Grease Replaced In 1999
H5ED-D	SHOP	387'-8"	<b>32 ounces</b>	Yes	
H5ED-E	FIELD	387'-8"	Zero	Yes	
H5FE-E	FIELD	387'-8"	<b>9 Ounces</b>	Yes	
H5FE-F	SHOP	387'-8"	<b>1 Ounce</b>	Yes	Free water quantity insufficient for sample
V210	FIELD	362'-0"	<b>1 Ounce</b>	No	Free water quantity insufficient for sample
V217	SHOP	579'-0"	Zero	Yes	
V217	FIELD	362'-0"	<b>1/2 Ounce</b>	Yes	Free water quantity insufficient for sample
V230	FIELD	362'-0"	<b>&lt; 1/2 Ounce</b>	No	Free water quantity insufficient for sample
V236	FIELD	362'-0"	<b>224 Ounces</b>	Yes	
V241	FIELD	362'-0"	<b>2 1/2 Ounces</b>	Yes	Grease Replaced In 1998
V249	FIELD	362'-0"	<b>8 Ounces</b>	Yes	
V263	FIELD	362'-0"	<b>&lt; 1/2 ounce</b>	No	Free water quantity insufficient for sample
V259	FIELD	362'-0"	<b>&lt; 1/2 ounce</b>	No	Free water quantity insufficient for sample
V273	FIELD	362'-0"	<b>&lt; 1/2 ounce</b>	No	Free water quantity insufficient for sample
V311	FIELD	362'-0"	<b>&lt; 1/2 ounce</b>	No	Free water quantity insufficient for sample

**Braidwood Unit 2 1999 Surveillance Free Water  
Sheathing Filler Grease Chemical Analysis Results**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected  Note 1	Moisture Content (% by wt.)  Note 2	Water Soluble Chlorides (ppm)  Note 3	Water Soluble Nitrate (ppm)  Note 4	Water Soluble Sulfide (ppm)  Note 5	Neutralization No. Reserve Alkalinity (Base No.) mg/KOH/g  Note 6
H1DF-F	FIELD	5 Oz.	0.38%	<0.50 ppm	1.25 ppm	<0.50 ppm	45.9 mg/KOH/g
H1DF-D	SHOP	Zero	<0.10%	<0.50 ppm	2.18 ppm	<0.50 ppm	53.5 mg/KOH/g
H1FE-F	SHOP	5 Oz.	0.50%	<0.50 ppm	1.21 ppm	<0.50 ppm	51.3 mg/KOH/g
H1FE-E	FIELD	Zero	<0.10%	<0.50 ppm	<0.50 ppm	<0.50 ppm	26.8 mg/KOH/g
H3ED-E	FIELD	1 Oz.	0.28%	<0.50 ppm	1.52 ppm	<0.50 ppm	77.7 mg/KOH/g
H3ED-D	SHOP	Zero	0.15%	<0.50 ppm	0.91 ppm	<0.50 ppm	50.4 mg/KOH/g
H4ED-D	SHOP	422 Oz.	0.79%	<0.50 ppm	1.82 ppm	<0.50 ppm	30.5 mg/KOH/g
H4ED-E	FIELD	540 Oz.	0.77%	<0.50 ppm	1.52 ppm	<0.50 ppm	29.1 mg/KOH/g
H4ED	MID	N/A	30.4%	<0.50 ppm	1.21 ppm	<0.50 ppm	23.5 mg/KOH/g
H5ED-D	SHOP	32 Oz.	0.56%	<0.50 ppm	0.61 ppm	<0.50 ppm	63.8 mg/KOH/g
H5ED-E	FIELD	Zero	0.19%	<0.50 ppm	1.82 ppm	<0.50 ppm	42.6 mg/KOH/g
H5FE-E	FIELD	9 Oz.	1.1%	<0.50 ppm	0.91 ppm	<0.50 ppm	62.3 mg/KOH/g
H5FE-F	SHOP	1 Oz.	0.48%	<0.50 ppm	0.61 ppm	<0.50 ppm	65.4 mg/KOH/g
V210	FIELD	1 Oz.	Not Applicable. See Note 7				
V217	SHOP	Zero	0.86%	<0.50 ppm	1.52 ppm	<0.50 ppm	44.9 mg/KOH/g
V217	FIELD	1/2 Oz.	0.68%	<0.50 ppm	1.52 ppm	<0.50 ppm	33.2 mg/KOH/g
V230	FIELD	< 1/2 Oz.	Not Applicable. See Note 7				
V236	FIELD	224 Oz.	2.2 %	<0.50 ppm	1.52 ppm	<0.50 ppm	41.9 mg/KOH/g
V241	FIELD	2 1/2 Oz.	0.87%	<0.50 ppm	0.91 ppm	<0.50 ppm	44.2 mg/KOH/g
V249	FIELD	8 Oz.	11.2 %	<0.50 ppm	1.52 ppm	<0.50 ppm	29.0 mg/KOH/g

**Braidwood Unit 2 1999 Surveillance Free Water  
Sheathing Filler Grease Chemical Analysis Results (Continued)**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected  Note 1	Moisture Content (% by wt.)  Note 2	Water Soluble Chlorides (ppm)  Note 3	Water Soluble Nitrate (ppm)  Note 4	Water Soluble Sulfide (ppm)  Note 5	Neutralization No. Reserve Alkalinity (Base No.) mg/KOH/g  Note 6
V259	FIELD	< 1/2 Oz.	Not Applicable. See Note 7				
V263	FIELD	< 1/2 Oz.	Not Applicable. See Note 7				
V273	FIELD	< 1/2 Oz.	Not Applicable. See Note 7				
V311	FIELD	< 1/2 Oz.	Not Applicable. See Note 7				

Notes Applicable To Table:

Note 1: Acceptance Standard for Free Water is zero.

Note 2: Acceptance Standard for Moisture Content: Moisture Content shall not exceed 10% by wt.

Note 3: Acceptance Standard for Water Soluble Chlorides: 10 ppm max.

Note 4: Acceptance Standard for Water Soluble Nitrates: 10 ppm max.

Note 5: Acceptance Standard for Water Soluble Sulfides: 10 ppm max.

Note 6: Acceptance Standard for Reserve Alkalinity (Base No.): The base no. shall be at least 50% of the installed value, unless the value is 5 or less, in which case the as installed value shall be no less than zero. If the tendon duct is filled with a mixture of materials having various installed numbers, the lowest numbers shall govern acceptance. The containment tendon ducts at Braidwood are filled with "Visconorust 2090P-4" Casing Filler For Tendon Sheathing. The neutralization base no. as published by the manufacturer is a minimum of 35. Therefore the acceptance criteria as applied to the tendon surveillance inspections at Braidwood is a minimum of 50% of the installed value or a minimum of 17.5 mg KOH/g.

Note 7: The grease caps were not removed from these tendon anchorage locations. The small quantity of water was collected during pipe plug removal from all vertical tendon cans located below grade. The quantity of free water collected ranged from a trace to 1 ounce. The grease is in good condition. These locations may be included in the scope of a future surveillance.

**Braidwood Unit 2 1999 Surveillance Free Water  
Free Water Chemical Analysis Results**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected	Dissolved Iron mg / l	Total Iron mg/l	Chloride mg/l	Sulfate mg/l	pH Level (laboratory)	
H1DF-F	FIELD	5 Oz.	0.074	0.074	79.2	905	11.43	
H1DF-D	SHOP	Zero	No Free Water Collected					
H1FE-F	SHOP	5 Oz.	<0.020	0.181	87.8	1200	11.05	
H1FE-E	FIELD	Zero	No Free Water Collected					
H3ED-E	FIELD	1 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis					
H3ED-D	SHOP	Zero	No Free Water Collected					
H4ED-D	SHOP	422 Oz.	<0.020	0.960	53.2	910	9.46	
H4ED-E	FIELD	540 Oz.	0.155	0.458	17.3	139	6.88	
H5ED-D	SHOP	32 Oz.	<0.020	0.044	26.2	458	11.45	
H5ED-E	FIELD	Zero	No Free Water Collected					
H5FE-E	FIELD	9 Oz.	<0.020	0.096	37.7	533	11.48	
H5FE-F	SHOP	1 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis					
V210	FIELD	1 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis					
V217	SHOP	Zero	No Free Water Collected					
V217	FIELD	1/2 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis					
V230	FIELD	< 1/2 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis					
V236	FIELD	224 Oz.	4.80	4.89	246	2960	7.31	
V241	FIELD	2 1/2 Oz.	0.051	0.173	236	2940	8.80	
V249	FIELD	8 Oz.	0.026	0.154	62.3	1940	10.30	
V259	FIELD	< 1/2 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis					

**Braidwood Unit 2 1999 Surveillance Free Water  
Free Water Chemical Analysis Results (Continued)**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected	Dissolved Iron mg / l	Total Iron mg/l	Chloride mg/l	Sulfate mg/l	pH Level (laboratory)
V263	FIELD	< 1/2 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis				
V273	FIELD	< 1/2 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis				
V311	FIELD	< 1/2 Oz.	Quantity Of Free Water Collected Insufficient For Chemical Analysis				

**Evaluation Of Conditions and Corrective Actions**

**Description Of The Condition Of The Tendons:**

The grease cans were removed from the anchorage locations specified in Table 1, Column 5. The anchor heads, shims, bearing plates, button heads, and bushings, installed at these locations were cleaned of all grease using approved solvents. A visual examination (VT-1) was performed on the tendon anchorage components. No degradation was identified. No active corrosion exists on the anchor heads, shims, button heads, or bushings, or bearing plates. The quantity of effective wires (not unseated or protruding) matched that recorded during previous inspections.

**Description Of The Condition Of The Concrete (Tendon Anchorage Locations):**

The grease cans were removed from the anchorage locations specified in Table 1, Column 5. The concrete extending 24" beyond the bearing plate for each of these locations was visually examined using the VT-1C method. The tolerance for cracking is "no crack width shall exceed a width of 0.010". No crack widths exceeded the acceptance standard. No other conditions indicative of structural degradation were identified. The concrete surrounding all bearing plates is sound and not structurally degraded.

**Root Cause of The Conditions That Did Not Meet The Acceptance Standards:**

1. Identification / Collection of Free Water :

The quantity of free water collected ranged from less than 1 ounce to 962 ounces. For tendons where insignificant quantities (< 3 ounces) of free water were collected, the probable cause is condensation in the grease cap or a very small leak path into the tendon duct. For tendons where 5 ounces or greater were collected, the cause is a leak path into the tendon duct. The inaccessibility of the concrete and tendon ducts (below grade) and the multiple locations within the concrete that a leak path may exist prohibit the identification of the exact location of cracks that allow water intrusion.

2. Moisture Content In Sheathing Filler Grease Exceeded 10% By Weight:

This condition was identified for two tendons (V249 and H4ED). The cause is water saturation of the grease. V249 is a vertical tendon. The grease sample was taken from the lower anchorage. Free water is heavier than the grease and will therefore collect in the lower can. The condition of the grease was

undesirable. The grease was light in color and creamy in texture. These conditions are indicative of water saturation. H4ED is a horizontal tendon. This tendon has a history of significant quantities of free water. As a result of the significant quantity of free water collected during the 1998 inspection, a corrective action to remove the grease, to the extent practical, and replace it with new grease was completed during the 1999 inspection. Grease samples were taken from both ends of the tendon. The grease analysis results are within the acceptance limits for both ends. A third grease sample was taken during the process of removing the old grease. This sample contained 30.4% moisture by weight. The condition of the grease from H4ED was also undesirable. The grease was light in color and creamy in texture. The old grease was removed using forced air. New grease was heated and pumped into the tendon duct.

### 3. Quantity of Grease Replaced Versus Quantity Removed Exceeded 10% Of The Net Duct Volume of The Tendon.

This condition is exclusive to horizontal tendon H4ED. This deficiency was not identified at any other anchorage location. The quantity of free water collected from tendon H4ED has increased since it was initially included in the surveillance scope. The first inspection was performed in 1997. 104 ounces of free water were collected in 1997, 266 in 1998, and 962 in 1999. As a corrective action, the grease was replaced, to the extent practical, in 1999. The old grease was removed by forced air. The new grease was heated and pumped into the tendon duct. 32 gallons of grease plus 962 ounces (7.5 gallons) of free water were removed. The grease and free water accounted for 39.5 gallons of material that was removed. 53 gallons of grease were replaced. The net duct volume of the tendon is required to be full of grease. Therefore no credit was taken for the volume of free water that existed. This is the first horizontal tendon below the containment piping penetrations for the Main Steam System. In order to avoid interference with the penetrations, this tendon was designed to traverse underneath the penetrations. The majority of the tendon is installed at elevation 385'-10". The elevation at the center of the MS system piping penetrations is 386'-6". The diameter of the piping penetration is 58". The tendon traverses underneath the penetrations at 382'-4" and then rises to 385'-10". The Main Steam penetrations are at elevated temperatures during normal operations. Construction drain outlets are installed in the bottom of the tendon duct sheathing at 382'-4". The exact cause of this condition is indeterminate. This condition has not been identified during past inspections when the grease has been replaced in other tendons. Based on the research that has been performed, the probable causes are the tendon duct was not completely filled during construction, grease shrinkage has resulted in a void within the duct, or a void exists in the concrete. The results of the chemical analysis for the free water indicate low dissolved and total iron content and therefore, no indication of significant corrosion activity. The accessible areas of the concrete located below the containment penetrations were examined. No evidence of grease leakage was identified. The majority of the external concrete surface is buried and therefore inaccessible for visual inspection.

### 4. Identified Abnormalities In The Chemical Analysis Results For Free Water

With the exception of tendon V236, the identified corrosion products are insignificant. The quantity of dissolved iron and iron products in the sample for V236 are significantly higher than that in the other samples. The pH levels vary significantly. The cause of the condition is the accumulation of free water in the tendon cans and ducts. The significance of the free water chemical analysis results is indeterminate. With the exception of the moisture content in the grease samples for H4ED and V249, the grease analysis results are all within the acceptance standards. The free water analysis results are subjective. Where small quantities of free water were identified, the free water accumulated only in the grease can. No additional free water flowed or dripped from the tendon ducts. Free water was collected from the ducts in tendons H4ED, H5ED, and V236. Although the identification of free water is undesirable, the condition of the tendon anchorage components and the ability of the grease to maintain the corrosion protection properties are the vital attributes. Due to the elevated corrosion products identified the free water sample for tendon V236, corrective actions, specific to this tendon, have been assigned. These corrective actions are described further in this report.

**Acceptability Of The Containment Without Repair:**

The containment is acceptable as is without repair. The existence of the free water in the tendon grease cans does not affect the structural integrity of the containment. The following provides justification for this conclusion:

The grease cans for all tendon locations located below grade were examined. 162 vertical tendon grease cans and 66 horizontal tendon grease cans were examined. Each can was examined for corrosion, grease leakage, and deformation. One tendon location (V244) was identified to have minor grease leakage from a pin hole in the seam weld on the grease can. The grease can was removed and repaired. V244 was not scheduled to be included in free water surveillance exam scope. No free water was collected when the grease can was removed. The grease condition is normal. No actions beyond repairing the grease can were performed. Minor surface rust was identified on the grease cans and bolting. No corrosion that challenges the structural integrity or leak tightness of the grease cans was identified. No deformation or additional grease leakage was identified.

For locations where the grease cans were removed (Ref. Table 1 Column 5), a visual examination (VT-1) was performed on the tendon anchorage components. No conditions that indicate structural degradation were identified. The anchorage components are in good condition. No active corrosion was identified. No cracks were identified. The quantity of effective wires (not unseated or protruding) matched that recorded during previous inspections.

For locations where the grease cans were removed (Ref. Table 1 Column 5), a visual examination (VT-1C) was performed on the concrete extending 24" out from each tendon anchorage location. The acceptance standard on cracking is "no crack width shall exceed 0.010" in width". No cracks exceeded 0.010" in width. The concrete is in good condition. No conditions indicative of structural degradation were identified. The remainder of the concrete located below grade level received a general visual examination. No conditions indicative of structural degradation were identified.

With the exception of the elevated moisture content in the grease samples taken from tendons V249 and H4ED, the results of the chemical analysis performed on all grease samples were within the acceptance standards. These two tendons will require specific corrective actions. The corrective actions are described further in this report.

The issue of the effect free water has on the corrosion protection properties of the grease has been previously discussed with the manufacturer of the sheathing filler grease. The corrosion protection medium "Viscosity 2090P-4 Casing Filler" will continue to provide protection provided the components are coated, regardless of the presence of moisture. All anchorage components were verified as completely coated with sheathing filler grease in the as found condition. Although the difference between the quantity of grease replaced versus that removed exceeded 10% (12% to be exact) of the net duct volume of tendon H4ED, the results of the chemical analysis for the free water samples indicate the wire bundle is coated. The results of the chemical analysis for the free water indicate low dissolved and total iron content and therefore, no indication of significant corrosion activity. 10% of the net duct volume of the tendon is approximately 17.5 gallons while the as found difference was 12% or 21 gallons. The delta (3.5 gallons) is not considered as significant. Specific corrective actions have been assigned to further address this condition. The corrective actions are described further in this report.

With the exception of tendon H4ED, the quantity of sheathing filler grease that was replaced versus that removed was within 10% of the tendon net duct volume in all cases.

**Corrective Actions Taken:**

In order to determine the extent of free water accumulation in the Unit 2 vertical tendons, the pipe plug was removed from all 162 of the lower grease cans. The pipe plugs are screwed vertically into the horizontal face of each grease can. Free water will settle to the bottom of the can, and will therefore drip out when the pipe plug is removed. Free water was collected from 10 of the 162 grease cans. Free water in quantities greater than 1 ounce was collected from 3 locations. The remaining 7 locations had free water collected in quantities of 1 ounce or less. The grease was visually examined through the plug hole. The grease from 2 locations (V217 and V241) was determined to be unacceptable. The grease in these two tendons was light in color and creamy in texture. The grease cans were removed from tendons where free water in quantities greater than 1 ounce was collected and where the grease was determined to be unacceptable.

The grease in tendon H4ED was replaced to the extent practical. The old grease was blown out. New grease was heated and pumped into the tendon duct. The grease was removed and replaced in all locations where the grease cans were removed. Grease and free water sample chemical analysis was completed in accordance with ASME Section XI, IWL -2525.2.

**Extent, Nature, and Frequency Of Additional Examinations:****Specific Corrective Actions For Tendon H4ED:**

(Significant quantity of free water collected, moisture content in grease exceeded acceptable limits, and the difference between the quantity of grease replaced versus that removed was 12% of the tendon net duct volume)

- 1) Both tendon anchorage components will be included in the year 2000 water inspection scope.
- 2) Physical testing of the post tensioning system for Braidwood Unit 2 is scheduled to be performed in 2001. In addition to the inspection sample specified in ASME Section XI, IWL, tendon H4ED will have the following physical tests performed:
  - a) Visual examination in accordance with ASME Section XI, IWL-2524
  - b) Examination of Corrosion Protection Medium and Free Water in accordance with ASME Section XI, IWL-2524.1.
  - c) A Lift Off Force Test will be performed.
  - d) The tendon will be completely detensioned.
  - e) A minimum of one wire will be removed and subjected to visual inspection and physical testing in accordance with ASME Section XI, IWL-2523.2. In the event the acceptance standards are not met, additional wires will be removed and the inspections and tests will be repeated.
  - f) A wire continuity test will be performed. This test is performed for the purpose of identifying any broken wires internal to the tendon duct.

**Specific Corrective Actions For Tendon V236:**

( Significant quantity of free water collected and high dissolved and total iron content in free water sample)

1) Both anchorage locations will be included in the year 2000 water inspection scope. The grease will be drained to the extent practical and replaced.

2) Physical testing of the post tensioning system for Braidwood Unit 2 is scheduled to be performed in 2001. In addition to the inspection sample specified in ASME Section XI, IWL, tendon V236 will have the following physical tests performed:

a) Visual examination in accordance with ASME Section XI, IWL-2524

b) Examination of Corrosion Protection Medium and Free Water in accordance with ASME Section XI, IWL-2524.1.

c) A Lift Off Force Test will be performed.

d) The tendon will be completely detensioned.

e) A minimum of one wire will be removed and subjected to visual inspection and physical testing in accordance with ASME Section XI, IWL-2523.2. In the event the acceptance standards are not met, additional wires will be removed and the inspections and tests will be repeated.

In the event the acceptance standards are not met, the conditions will be evaluated. Additional tests and inspections will be considered for other tendons from which significant quantities of free water have been collected.

#### **Specific Corrective Actions For Tendon V249:**

(Moisture content in grease exceeded acceptable limits)

1) Both anchorage locations will be included in the year 2000 water inspection scope. All the grease will be drained to the extent practical and replaced.

#### **Additional Corrective Actions:**

The Unit 2 containment is acceptable as is and repair or replacement of the tendon components is not required. The identification of the conditions which did not meet the acceptance standards has not adversely affected the structural integrity of the containment. However, the specific corrective actions that were previously described must be implemented. These corrective actions will detect degradation internal to the tendons and will provide assurance of the long term structural integrity of the containment and post tensioning system. In addition to these specific corrective actions, the Unit 2 containment tendons will continue to be monitored on an annual basis. Based on the favorable results of the inspections performed when all of the pipe plugs were removed from the vertical tendons in 1999, the primary focus of the year 2000 inspections will be placed on the horizontal tendons. As a minimum, 20 of the 66 horizontal tendon anchorage locations will be examined during the year 2000 surveillance.

**2000 Water Surveillance:**

The following provides a summation of the of Unit 2 surveillance competed in the summer of 2000. Tendons with an "H" prefix are in a horizontal configuration. Tables providing specific inspection and test results are included. Tendons with a "V" prefix are in a vertical configuration. Conditions where the acceptance criteria was exceeded are in bold print.

**Description Of Conditions Which Did Not Meet Acceptance Standards:**

The following describes conditions which did not meet the acceptance standards. All conditions were identified in the station corrective actions program.

The acceptable quantity of free water collected from any location is zero. Free water was collected from 8 horizontal tendon anchorage locations. Free water was collected from 1 vertical tendon location.

Free water was not collected from vertical tendon anchorage locations V236 and V249. However, the as found condition of the sheathing filler grease indicated it was saturated with water. The grease was light in color and creamy in texture. These conditions are indicative of moisture saturation. As a corrective action, the sheathing filler grease was drained from these tendons (to the extent practical) and replaced. Contrary to the acceptance standards, the difference between the quantity of sheathing filler grease that was replaced versus that removed exceeded 10% of the absolute net duct volume of the tendons. The net duct volume of these tendons is approximately 95 to 100 gallons. A total of 38.5 gallons were removed from V236 and a total of 59 gallons were replaced. The difference in that removed versus that replaced was 20.5 gallons or 20.5% of the net duct volume of the tendon. A total of 41 gallons were removed from V249 and a total of 61 gallons were replaced. The difference in that removed versus that replaced was 20 gallons or 20% of the net duct volume of the tendon.

The maximum acceptable moisture content in sheathing filler grease samples is 10% by weight. The acceptance standard was not met in one case. The moisture content in the grease sample that was taken from anchorage location V217B was 14% The grease was drained, to the extent practical, and then replaced. Samples of Free water are collected when sufficient quantities exist for chemical analysis. Samples of sufficient quantity were collected from 7 locations. As required by ASME Section XI, Subsection 1WL-2525.2 (b), the free water samples were analyzed for pH. In addition, the samples were analyzed for chlorides, sulfates, total iron, and dissolved iron. Elevated pH levels were identified in 4 of the 7 samples. The following tables provide a summation of the quantity of free water that was collected and the results of the chemical analysis that was performed on the grease and free water samples. The grease cans from all sampled locations were removed for further examination of the tendon anchorage components, collection of grease and free water samples (where sufficient quantities existed for chemical analysis), and examination of the surrounding concrete. No free water was included in the grease samples. All grease samples were obtained from areas immediately adjacent to the tendon anchorage components. Tendons with an "H" prefix are in a horizontal configuration. Tendons with a "V" prefix are in a vertical configuration. Conditions where the acceptance standard was not met are in bold print.

**Braidwood Unit 2 2000 Surveillance Free Water Quantification**

Tendon EPN	Anchorage End	Elevation Of Anchorage	Quantity Of Free Water Collected	Comments
H4ED-D	Shop	385'-10"	2 Oz.	422 Oz. collected in 1999. Grease removed / replaced in 1999.
H5ED-D	Shop	387'-8"	38 Oz.	32 Oz. collected in 1999
H1DF-F	Field	377'-7"	0.50 Oz.	Insufficient Qty. For Analysis
H1FE-F	Shop	377'-7"	0.50 Oz.	Insufficient Qty. For Analysis
H1ED-E	Field	377'-7"	0 Oz.	Not sampled in 1999
H2ED-E	Field	379'-5"	0 Oz.	Not sampled in 1999
H3ED-E	Field	383'-1"	7 Oz.	1.0 Oz. collected in 1999
H4ED-E	Field	385'-10"	4 Oz.	540 Oz. collected in 1999. Grease removed / replaced in 1999.
H5ED-E	Field	387'-8"	0 Oz.	0 oz. collected in 1999
H6ED-E	Field	390'-5"	0 Oz.	Not sampled in 1999
H7ED-E	Field	393'-2"	0 Oz.	Not sampled in 1999
H8ED-E	Field	395'-11"	0 Oz.	Not sampled in 1999
H1FE-E	Field	377'-7"	0 Oz.	0 Oz. collected in 1999
H2FE-E	Field	379'-5"	0 Oz.	Not sampled in 1999
H3FE-E	Field	383'-1"	0 Oz.	Not sampled in 1999
H4FE-E	Field	385'-10"	0 Oz.	Not sampled in 1999
H5FE-E	Field	387'-8"	40 Oz.	9 Oz. collected in 1999
H6FE-E	Field	390'-5"	40 Oz.	Not sampled in 1999
H7FE-E	Field	393'-2"	0 Oz.	Not sampled in 1999
H8FE-E	Field	395'-11"	0 Oz.	Not sampled in 1999
V217B	Tunnel	362'-0"	104.5 Oz.	Grease drained and replaced to the extent practical in 2000. (due to saturation) 0.5 Oz. collected in 1999
V217T	Top / Dome	579'-0"	0 Oz.	
V236B	Tunnel	362'-0"	0 Oz.	Grease drained and replaced to the extent practical in 2000. (due to saturation) 224 Oz. collected in 1999
V236T	Top / Dome	579'-0"	0 Oz.	
V241B	Tunnel	362'-0"	0 Oz.	2.5 Oz. collected in 1999
V249B	Tunnel	362'-0"	0 Oz.	Grease drained and replaced to the extent practical in 2000. (due to saturation) 8 Oz. collected in 1999
V249T	Top / Dome	579'-0"	0 Oz.	

**Braidwood Unit 2 2000 Surveillance Free Water  
Sheathing Filler Grease Chemical Analysis Results**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected Note 1	Moisture Content (% by wt.) Note 2	Water Soluble Chlorides (ppm) Note 3	Water Soluble Nitrate (ppm) Note 4	Water Soluble Sulfide (ppm) Note 5	Neutralization No. Reserve Alkalinity (Base No.) mg/KOH/g Note 6
H4ED-D	Shop	2 Oz.	7.0%	< 0.50 ppm	2.8 ppm	< 0.50 ppm	57.9 mg KOH/g
H5ED-D	Shop	38 Oz.	0.10%	< 0.50 ppm	1.8 ppm	< 0.50 ppm	67.9 mg KOH/g
H1DF-F	Field	0.50 Oz.	< 0.10%	< 0.50 ppm	3.0 ppm	< 0.50 ppm	77.0 mg KOH/g
H1FE-F	Shop	0.50 Oz.	< 0.10%	< 0.50 ppm	3.3 ppm	< 0.50 ppm	64.1 mg KOH/g
H1ED-E	Field	0 Oz.	0.10%	< 0.50 ppm	2.1 ppm	< 0.50 ppm	61.1 mg KOH/g
H2ED-E	Field	0 Oz.	0.38%	< 0.50 ppm	2.5 ppm	< 0.50 ppm	69.4 mg KOH/g
H3ED-E	Field	7 Oz.	< 0.10%	< 0.50 ppm	1.8 ppm	< 0.50 ppm	69.9 mg KOH/g
H4ED-E	Field	4 Oz.	1.8%	< 0.50 ppm	2.8 ppm	< 0.50 ppm	67.9 mg KOH/g
H5ED-E	Field	0 Oz.	0.10%	< 0.50 ppm	2.8 ppm	< 0.50 ppm	68.2 mg KOH/g
H6ED-E	Field	0 Oz.	0.10%	< 0.50 ppm	3.0 ppm	< 0.50 ppm	50.7 mg KOH/g
H7ED-E	Field	0 Oz.	0.49%	< 0.50 ppm	4.0 ppm	0.66 ppm	41.6 mg KOH/g
H8ED-E	Field	0 Oz.	0.14%	< 0.50 ppm	1.8 ppm	< 0.50 ppm	46.1 mg KOH/g
H1FE-E	Field	0 Oz.	< 0.10%	< 0.50 ppm	2.3 ppm	< 0.50 ppm	67.2 mg KOH/g
H2FE-E	Field	0 Oz.	0.14%	< 0.50 ppm	2.6 ppm	< 0.50 ppm	50.8 mg KOH/g
H3FE-E	Field	0 Oz.	0.19%	< 0.50 ppm	1.6 ppm	< 0.50 ppm	49.6 mg KOH/g
H4FE-E	Field	0 Oz.	0.19%	< 0.50 ppm	2.1 ppm	< 0.50 ppm	52.0 mg KOH/g
H5FE-E	Field	40 Oz.	0.19%	< 0.50 ppm	2.1 ppm	< 0.50 ppm	65.7 mg KOH/g
H6FE-E	Field	40 Oz.	1.1%	< 0.50 ppm	2.3 ppm	< 0.50 ppm	54.8 mg KOH/g
H7FE-E	Field	0 Oz.	0.56%	< 0.50 ppm	3.5 ppm	< 0.50 ppm	39.1 mg KOH/g
H8FE-E	Field	0 Oz.	< 0.10%	< 0.50 ppm	2.6 ppm	< 0.50 ppm	34.4 mg KOH/g
V217B	Tunnel	104.5 Oz.	4.8%	< 0.50 ppm	3.0 ppm	< 0.50 ppm	50.2 mg KOH/g

**Braidwood Unit 2 2000 Surveillance Free Water  
Sheathing Filler Grease Chemical Analysis Results (continued)**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected Note 1	Moisture Content (% by wt.) Note 2	Water Soluble Chlorides (ppm) Note 3	Water Soluble Nitrate (ppm) Note 4	Water Soluble Sulfide (ppm) Note 5	Neutralization No. Reserve Alkalinity (Base No.) mg/KOH/g Note 6
V217T	Top / Dome	0 Oz.	0.55%	< 0.50 ppm	2.1 ppm	< 0.50 ppm	50.3 mg KOH/g
V236B	Tunnel	0 Oz.	6.0%	< 0.50 ppm	3.0 ppm	< 0.50 ppm	32.4 mg KOH/g
V236T	Top / Dome	0 Oz.	1.5%	< 0.50 ppm	3.3 ppm	< 0.50 ppm	47.7 mg KOH/g
V241B	Tunnel	0 Oz.	4.6%	< 0.50 ppm	2.1 ppm	< 0.50 ppm	53.5 mg KOH/g
V249B	Tunnel	0 Oz.	14%	< 0.50 ppm	2.8 ppm	< 0.50 ppm	25.6 mg KOH/g
V249T	Top / Dome	0 Oz.	0.28%	< 0.50 ppm	1.8 ppm	< 0.50 ppm	39.6 mg KOH/g

Note 1: Acceptance Standard for Free Water is zero.

Note 2: Acceptance Standard for Moisture Content: Moisture Content shall not exceed 10% by wt.

Note 3: Acceptance Standard for Water Soluble Chlorides: 10 ppm max.

Note 4: Acceptance Standard for Water Soluble Nitrates: 10 ppm max.

Note 5: Acceptance Standard for Water Soluble Sulfides: 10 ppm max.

Note 6: Acceptance Standard for Reserve Alkalinity (Base No.): The base no. shall be at least 50% of the installed value, unless the value is 5 or less, in which case the as installed value shall be no less than zero. If the tendon duct is filled with a mixture of materials having various installed numbers, the lowest numbers shall govern acceptance. The containment tendon ducts at Braidwood are filled with "Visconorust 2090P-4" Casing Filler For Tendon Sheathing. The neutralization base number as published by the manufacturer is a minimum of 35. Therefore the acceptance criteria as applied to the tendon surveillance inspections at Braidwood is a minimum of 50% of the installed value or a minimum of 17.5 mg KOH/g.

**Braidwood Unit 2 2000 Surveillance Free Water  
Free Water Chemical Analysis Results**

Tendon EPN	Anchorage End	Quantity Of Free Water Collected	Anions By ION Chromatography (Chloride) mg/l (Note 1)	Anions By ION Chromatography (Sulfate) mg/l (Note 1)	Iron by ICP (Total) mg/l (Note 1)	Iron by ICP (Dissolved) mg/l (Note 1)	pH Level (laboratory pH Units) (Note 2)	
H4ED-D	Shop	2 Oz.	25.2 mg/l	429 mg/l	0.127 mg/l	< .01 mg/l	10.50	
H5ED-D	Shop	38 Oz.	23.4 mg/l	465 mg/l	0.0450 mg/l	< .01 mg/l	11.82	
H3ED-E	Field	7 Oz.	65.1 mg/l	123 mg/l	34.1 mg/l	0.022 mg/l	7.56	
H4ED-E	Field	4 Oz.	27.5 mg/l	480 mg/l	0.654 mg/l	0.015 mg/l	7.30	
H5FE-E	Field	40 Oz.	23.6 mg/l	368 mg/l	0.0430 mg/l	< .01 mg/l	11.95	
H6FE-E	Field	40 Oz.	42.0 mg/l	605 mg/l	0.0780 mg/l	< .01 mg/l	11.73	
V217B	Tunnel	104.5 Oz.	55.6 mg/l	1,210 mg/l	0.0105 mg/l	< .01 mg/l	10.44	
H1DF-F	Field	0.50 Oz.	Quantity Collected Not Sufficient For Analysis					
H1FE-F	Shop	0.50 Oz.	Quantity Collected Not Sufficient For Analysis					
H1ED-E	Field	0 Oz.	No Free Water Collected					
H2ED-E	Field	0 Oz.	No Free Water Collected					
H5ED-E	Field	0 Oz.	No Free Water Collected					
H6ED-E	Field	0 Oz.	No Free Water Collected					
H7ED-E	Field	0 Oz.	No Free Water Collected					
H8ED-E	Field	0 Oz.	No Free Water Collected					
H1FE-E	Field	0 Oz.	No Free Water Collected					
H2FE-E	Field	0 Oz.	No Free Water Collected					
H3FE-E	Field	0 Oz.	No Free Water Collected					
H4FE-E	Field	0 Oz.	No Free Water Collected					
H7FE-E	Field	0 Oz.	No Free Water Collected					
H8FE-E	Field	0 Oz.	No Free Water Collected					
V217T	Top / Dome	0 Oz.	No Free Water Collected					
V236B	Tunnel	0 Oz.	No Free Water Collected					
V236T	Top / Dome	0 Oz.	No Free Water Collected					
V241B	Tunnel	0 Oz.	No Free Water Collected					
V249B	Tunnel	0 Oz.	No Free Water Collected					
V249T	Top / Dome	0 Oz.	No Free Water Collected					

Note 1: The parameters have no specific acceptance limits and there is no specific requirement to analyze free water to determine content. These are information only analysis results that are used in the evaluation process.

Note 2: As required by ASME Section XI, 1992 Edition with the 1992 Addenda, IWL 2525.2 (b), free water samples shall be analyzed for pH and the results shall be evaluated.

**Evaluation Of Conditions and Corrective Actions****Description Of The Condition Of The Tendons:**

The grease cans were removed from all sampled anchorage locations. The anchor heads, shims, bearing plates, button heads, and bushings, were cleaned of all grease using approved solvents. A visual examination (VT-1) was performed on the tendon anchorage components. No degradation was identified. No active corrosion exists on the anchor heads, shims, button heads, or bushings, or bearing plates. The quantity of effective wires (not unseated or protruding) matched that recorded during previous inspections.

**Description Of The Condition Of The Concrete (Tendon Anchorage Locations):**

The concrete extending 24" beyond the bearing plate for each of these locations was visually examined using the VT-1C method. The tolerance for cracking is "no crack width shall exceed a width of 0.010". No crack widths exceeded the acceptance standard. No other conditions indicative of structural degradation were identified. The concrete surrounding all bearing plates is sound and not structurally degraded.

**Root Cause of The Conditions That Did Not Meet The Acceptance Standards:****1. Identification / Collection of Free Water :**

The quantity of free water collected ranged from less than 1 ounce to 104.5 ounces. For tendons where insignificant quantities (< 3 ounces) of free water were collected, the probable cause is condensation in the grease cap or a very small leak path into the tendon duct. For tendons where 4 ounces or greater were collected, the cause is a leak path into the tendon duct. The inaccessibility of the concrete and tendon ducts (below grade) and the multiple locations within the concrete that a leak path may exist prohibit the identification of the exact location of cracks that allow water intrusion.

**2. Moisture Content In Sheathing Filler Grease Exceeded 10% By Weight:**

This condition was identified for one tendon (V217). The cause is water saturation of the grease. V217 is a vertical tendon. The grease sample that contained the excessive moisture content (14%) was obtained from the lower anchorage. Free water is heavier than the grease and will therefore collect in the lower can. The condition of the grease was undesirable. The grease was light in color and creamy in texture. These conditions are indicative of water saturation. The grease was drained from this tendon (to the extent practical) and then replaced. Free water has been consistently collected from this tendon since 1988. The root cause is the intrusion of free water through cracks in the concrete.

**3. Quantity of Grease Replaced Versus Quantity Removed Exceeded 10% Of The Net Duct Volume of The Tendon.**

The affected tendons (V236 and V249) have a history of free water intrusion. The causes of the identified condition are suspected to be grease settlement and grease volume shrinkage due to moisture saturation. The as found condition of the sheathing filler grease indicated it was saturated with water. The grease was light in color and creamy in texture. Water saturation tends to "thin out" the grease and it becomes more fluid. When the grease becomes saturated, it takes less volume. There is no evidence of grease leakage on the accessible areas of the exterior of the concrete containment surface where these tendons are installed.

#### 4. Identified Abnormalities In The Chemical Analysis Results For Free Water

With the exception of the moisture content in the grease samples for V217, the grease analysis results are all within the acceptance standards. The free water analysis results are subjective. Where small quantities of free water were identified, the free water accumulated only in the grease can. With the exception of locations H5FE-E and H6FE-E no water flowed or dripped from the tendon duct after the grease can was removed. The root cause is the presence of free water in the grease cans and tendon components. Although not desirable, the identified abnormalities are not excessive, and based upon inspection results, did not have an adverse affect on the tendon components.

#### Acceptability Of The Containment Without Repair:

The containment is acceptable as is without repair. The existence of the free water does not affect the structural integrity of the post tensioning system or the containment structure. The following provides justification for this conclusion:

The grease cans for all tendon locations located below grade were examined. 162 vertical tendon grease cans and 66 horizontal tendon grease cans were examined. Each can was examined for corrosion, grease leakage, and deformation. Minor surface rust was identified on the grease cans and bolting. No corrosion that challenges the structural integrity of the grease cans was identified. No deformation was identified. With the exception of minor accumulation of grease at the gasket connections on 4 of the 228 grease cans that were examined, no leakage was identified.

A visual examination (VT-1) was performed on all sampled tendon anchorage components. No conditions that indicates structural degradation were identified. The anchorage components are in good condition. No active corrosion was identified. No cracks were identified. The quantity of effective wires (not unseated or protruding) matched that recorded during previous inspections.

A visual examination (VT-1C) was performed on the concrete extending 24" out from each tendon anchorage location. The acceptance standard on cracking is "no crack width shall exceed 0.010" in width". No cracks exceeded 0.010" in width. The concrete is in good condition. No conditions indicative of structural degradation were identified. The remainder of the concrete located below grade level received a general visual examination. No conditions indicative of structural degradation were identified.

With the exception of the elevated moisture content in the grease samples taken from tendon V217, the results of the chemical analysis performed on all grease samples were within the acceptance standards. The grease was drained from this tendon (to the extent practical) and replaced.

The issue of the effect free water has on the corrosion protection properties of the grease has been previously discussed with the supplier of the sheathing filler grease. The corrosion protection medium "Viscosity 2090P-4 Casing Filler" will continue to provide protection provided the components are coated, regardless of the presence of moisture.

As previously stated, the difference between the quantity of grease replaced versus that removed exceeded 10% of the absolute net duct volume in tendons V236 (20.5% of the net duct volume) and V249 (20% of the net duct volume). The net duct volume of these tendons is approximately 95 to 100 gallons. 10% of the net duct volume is approximately 10 gallons. Although the 10 gallon delta between the acceptable difference in volume and that which was replaced (approximately 20 gallons) did not meet the acceptance standard, it is believed no part of the tendon was not coated with sheathing filler grease. The upper and lower grease cans on both tendons were removed. The as found condition of the grease in the upper cans was acceptable. The anchorage components were coated in the as found condition with no sign of grease settlement. The grease in the lower cans was considered as unacceptable due to water saturation. However, the anchorage components were identified as completely coated in the as found condition. All anchorage components received a VT-1 visual examination. No abnormal conditions were

identified. No active corrosion was identified and the quantity of effective wires matched that recorded during the previous inspection. The sheathing filler supplier was contacted on this subject. The specific issue of discussion was the adhesion qualities of the sheathing filler. The product (Visconorust 2090-P4) has a very high polar affinity for steel, and thus as it is pumped in as a liquid (over 140 degrees F.) it penetrates the tendon wire bundle and coats all surfaces by molecular attachment, and in addition, by adhesion of its wax components upon cooling and solidifying. The exit temperature of the sheathing filler had to be a minimum of 120 degrees F. during initial construction and during past surveillance inspections. The grease is pumped in at a higher temperature from one end of the tendon to ensure the temperature is in excess of 120 degrees F. when the grease exits the other end of the tendon. The temperature of the grease entering the tendon was as high as 185 degrees F. As the sheathing filler grease cools, there is some contraction of the product. This is typical of all petroleum based products. However, the supplier has performed laboratory tests on the product. A vertical tendon was placed in a clear plastic pipe and the pipe was filled with grease. Contraction occurred at the top with small rivulets along the sides of the pipe. All metal surfaces, in the area of contraction remained coated with a coating thickness of 24 mils, which offers excellent long term protection. The supplier also stated the product has maintained its film integrity in severe environments. Heavy moisture encroachment has been kept from contacting the tendon components and causing corrosion.

With the exception of tendons V236 and V249, the quantity of sheathing filler grease that was replaced versus that removed during the 2000 inspection was within 10% of the absolute net duct volume of the tendons in all cases. A historical review relating to the quantity of grease removed versus that replaced was performed for Units 1 and 2. Since the first Inservice Inspection of containment tendons in June of 1987, over 500 inspections have been performed where grease was removed and replaced on tendon anchorage components. In 7 cases, the quantity of grease replaced versus that removed exceeded 10% of the absolute net duct volume of the tendon. This includes tendons V236 and V249 during the 2000 inspection. The remaining 5 tendons are Unit 2 Horizontal Tendon H4ED, Unit 1 Vertical Tendons V30 and V57, and Unit 2 Vertical Tendons V217 and V241. All locations have been inspected after the deficiencies were identified. The amount of grease replaced versus that removed did not exceed 10% of the absolute net duct volume of any tendon during any subsequent inspection.

#### **Corrective Actions Taken:**

The as found appearance of the grease in tendons V217, V236, V249 was unacceptable. The grease was light in color and creamy in texture. These conditions are indicative of water saturation. As a corrective action, the grease in these tendons was drained to the extent practical, and then replaced.

The grease was removed and replaced in the grease cans installed at all other locations where free water was collected. Grease and free water sample chemical analysis was completed in accordance with ASME Section XI, IWL-2525.2.

#### **Extent, Nature, and Frequency Of Additional Examinations:**

The Unit 2 containment is acceptable as is and repair or replacement of the tendon components is not required. The identification of the conditions which did not meet the acceptance standards does not have an adverse affect on the structural integrity of the post tensioning system or the containment structure. The required corrective actions have been implemented. Where a significant quantity of free water was collected (Tendon V217) or where the appearance of the grease was unacceptable (Tendons V236 and V249), the tendons have been drained to the extent practical and the grease replaced. Tendons V217, V236, and V249 will be detensioned during the 2001 physical surveillance. A wire will be removed and examined for corrosion degradation. In the event significant corrosion is identified, the wire samples will be subjected to physical testing. The grease was removed and replaced in the grease cans installed at all other locations where free water was collected. The locations from which a significant quantity of free water was collected (> 4 ounces) will be examined during the 2001 surveillance.

## **5.2 IWE General Visual Exam and VT-3**

A Section XI IWE general visual examination on a normally inaccessible area of the Braidwood Station Unit 2 ¼" thick liner plate was performed during Refuel Outage A2R08. This area was a 4" height of liner plate just below the removed Moisture Barrier (MB) and adjacent to 3" thick cerablanket material. The MB, located between the containment liner and the basemat floor inside containment at elevation 377'-0", was completely removed to perform this examination.

The decision to examine this normally inaccessible area in Unit 2 was part of the corrective actions developed in Braidwood Evaluation No. 99-IWE-01, Revision 0 from A2R07. Some areas below the MB were coincidentally accessible in Unit 2 during A2R07 because MB repairs were in progress. Eight corrective actions were also developed in Engineering Evaluation 99-IWE-01 during A2R07. Corrective action #4 required removal of the entire Unit 2 MB, including the 3" depth of Cerablanket material, and also required a general visual examination of the MB liner surface. ComEd Procedure SPP GV-2 was used to perform this general visual examination. Exam Data Form No. GV-2-1 was generated to characterize the extent of corrosion on the Class CC liner.

The IWE examination beneath the MB found approximately 160 total inches of indications on the Class CC liner (total length approximately 3.5% of the total length examined), which were determined to be approximately 100 recordable indications per the General Visual acceptance criteria.

The worst case corrosion caused a reduction of 37% of the liner's nominal thickness at two spots. All degraded areas of the Class CC liner were accepted by analysis. The exposed surface area in Unit 2 was prepared for coating per the instructions of a level III coatings person. After inspection, the surface of the liner was solvent wiped to prepare the surface for recoating with service level I qualified coatings. Informational Ultrasonic Tests (UT's) were performed in the vicinity of liner degradation prior to the recoating of the liner. These UTs indicate, in areas in the vicinity of the degradation the liner plate thickness varies from .246" to .32". The UTs also show that the degradation, is only on the front side of the liner that is being examined. The MB was restored in accordance with the design detail in all areas, and to improve performance, it was enhanced by addition of a sloping profile to drain water away.

The degradation to the liner was a result of moisture barrier aging and mechanical damage from impact of tools, barrels and scaffolding during maintenance activities. This combined with impingement of water as a result of fan cooler condensate leakage established the conditions for liner degradation. Water had a path to flow between the MB and the liner. Water was entrapped below the Tremco epoxy sealant into the Cerablanket material and above the adhesive used to anchor the compressible material in the 2 inch annular space between the basemat and the liner. The surface of the liner remained wetted, and with the presence of oxygen, the liner began to degrade. The localized maximum wastage of material was measured to be 3/32 of an inch at two spots, which is 37 % of the liners nominal thickness of 1/4 inch. Most of the recordable indications had reductions of 1/64 - 2/64 of an inch, or a little over 10% metal reduction.

There was also a VT-3 examination of the newly installed moisture barrier. There were no indications found.

### **Engineering Evaluation**

Engineering Evaluation No. 00-IWE-02 Rev. 0 was performed and degraded liner areas were shown by analysis to be acceptable.

Local defects on the Braidwood containment liner plate up to 1/8 inch in depth are acceptable per Calculation 5.2.6-BRW-98-1090 Revision 2. The reduction of plate thickness in all areas of degradation is less than 1/8 inch. The maximum of 1/8 inch reduced thickness of the liner plate has been shown by analysis to satisfy the requirements of the design specifications.

### Additional Examinations

IWE-2430 ADDITIONAL EXAMINATIONS - Examinations that reveal flaws shall be extended to include an additional number of examinations within the same category and equal to the same number previously performed. The entire moisture barrier was removed so there were no additional exams within the same category to be examined. However, seven additional areas below existing liner indications were selected for removal of the top 6 to 9 inches of Styrofoam. The liner plate area exposed by the removal of the Styrofoam was examined, and no indications were found.

### Augmented Examinations

Approximately 160 total inches of the degraded liner surfaces below the MB (approximately 3.5% of surface area) on the class CC liner will be categorized as an augmented examination area per IWE Table 2500-1. The augmented examination will be scheduled into the IWE Program requiring VT-1 and volumetric examinations of the areas with minimum wall thickness for the next 3 consecutive examination periods.

### Corrective Actions

1. The degradation (rust) was removed from the liner under the direction of the level III coatings person. This allowed for liner examination, and surface preparation for application of a Service Level 1 coating.
2. A Service Level 1 qualified coating was applied to the 4" deep exposed portion of the liner below the MB.
3. New dry Cerablanket material was installed below the MB.
4. The MB removed was restored per existing design details except for enhanced profile which will facilitate runoff of moisture from the MB.
5. Approximately 3.5% total length of the Class CC liner below the MB will be categorized as Category E-C in the Braidwood Unit 2 IWE Program Plan.
6. An engineering evaluation 00-IWE-02, Rev. 0, was completed on the degraded liner.

Local defects on the Braidwood containment liner plate up to 1/8 inch in depth are acceptable per Calculation 5.2.6-BRW-98-1090 Revision 2. The reduction of plate thickness in all areas of degradation is less than 1/8 inch. The maximum of 1/8 inch reduced thickness of the liner plate has been shown by analysis to satisfy the requirements of the design specifications.

### **Additional Examinations**

IWE-2430 ADDITIONAL EXAMINATIONS - Examinations that reveal flaws shall be extended to include an additional number of examinations within the same category and equal to the same number previously performed. The entire moisture barrier was removed so there were no additional exams within the same category to be examined. However, seven additional areas below existing liner indications were selected for removal of the top 6 to 9 inches of Styrofoam. The liner plate area exposed by the removal of the Styrofoam was examined, and no indications were found.

### **Augmented Examinations**

Approximately 160 total inches of the degraded liner surfaces below the MB (approximately 3.5% of surface area) on the class CC liner will be categorized as an augmented examination area per IWE Table 2500-1. The augmented examination will be scheduled into the IWE Program requiring VT-1 and volumetric examinations of the areas with minimum wall thickness for the next 3 consecutive examination periods.

### **Corrective Actions**

1. The degradation (rust) was removed from the liner under the direction of the level III coatings person. This allowed for liner examination, and surface preparation for application of a Service Level 1 coating.
2. A Service Level 1 qualified coating was applied to the 4" deep exposed portion of the liner below the MB.
3. New dry Cerablanket material was installed below the MB.
4. The MB removed was restored per existing design details except for enhanced profile which will facilitate runoff of moisture from the MB.
5. Approximately 3.5% total length of the Class CC liner below the MB will be categorized as Category E-C in the Braidwood Unit 2 IWE Program Plan.
6. An engineering evaluation 00-IWE-02, Rev. 0, was completed on the degraded liner.

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

1. Owner Commonwealth Edison Company Date 11-1-00  
Name  
One First National Plaza, Chicago, IL 60690  
Address
2. Plant Braidwood ComEd Plant Unit 02  
Name  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407  
Address WR# 990106419-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Name Authorization Number N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Expiration Date N/A  
Address
4. Identification of System CV / Chem & Volume Control
5. (a) Applicable Construction Code Section CL 219 71 Edition, W'72 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89
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)
VALVE Relief	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	2CV 8117 M-158-5C	N/A	Replaced	Yes
VALVE Relief	Crosby	N56903-00-0017	NOT APPLICABLE	UTC # 0002069976	1976	Replacement	Yes

7. Description of Work Replaced Relief Valve
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT 2 performed  
Code Case N416-1  Other: Pressure 120 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

\_\_\_\_\_

Crosby Valve & Gage Co. NVI form for Valve 2CV8117

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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 \_\_\_\_\_ Not Applicable

Certificate of Authorization No. \_\_\_\_\_ Not Applicable Expiration Date \_\_\_\_\_ Not Applicable

Signed \_\_\_\_\_ G. A. Daniels Date \_\_\_\_\_ 11/5/00  
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 of Province of Illinois and employed by Hobas & Co. of Hartford, CT. have inspected the components described in this Owner's Report during the period 7-13-00 to 11-6-00, 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.

J. [Signature] Commissions 241025  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11-6-00, 2000

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

1. Owner Commonwealth Edison Company Date 7/12/00  
One First National Plaza, Chicago, IL 60690 Sheet 1 of \_\_\_\_\_  
Name  
Address

2. Plant Braidwood Nuclear Power Station Unit 2  
R R 1 Box 84, Braceville, IL 60407 WR# 990096733-01  
Name Address Repair Organization P.O. No., Job No., etc.

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R R 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System C.V. - CHEM & VOLUME CONTROL NS# 2CV-3

5. (a) Applicable Construction Code SECTION 2 1974 Edition. W/76 Addenda. N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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: Stamp (Yes or No)
CLOSURE BOLT	OEM	NOT APPLICABLE	NOT APPLICABLE	ZCV02F M-138-6	N/A	REPLACED	NO
CLOSURE BOLT	NOVA	HEAT CODE QCL	NOT APPLICABLE	UTC# 2049062 RIN 29409	1999	REPLACEMENT	NO

7. Description of Work REPLACED CLOSURE BOLTS ON FILTER ZCV02F (4) TOTAL

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure Leak Check  
 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 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)

Remarks CERTIFICATE OF COMPLIANCE / DOCUMENTATION ATTACHED FOR  
REPLACEMENT BOLTING. -Applicable Manufacturer's Data Reports to be attached  
Tom Johnson 72 07/19/2000  
98 7-19-2000

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 Not Required

Certificate of Authorization No Not Required Expiration Date \_\_\_\_\_

Signed Tom Johnson Date 07/19/2000 2000  
D.J. Johnson Date 7/17 19 2000  
Owner or Owner's Designee Title DC 7/17/00

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of ILLINOIS and employed by HSBI-1 Co. of HANFORD, CA. have inspected the components described in this Owner's Report during the period 10-8-99 of 7-18-00 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 examination and corrective measures described in this Owner's Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions IR-1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 7-18-2000 [Signature] 7/20/00

**6.0 NIS-2 FORM (OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS)****SUMMARY OF NIS-2 FORMS**

System	ASME Code Classification	
	Code Class 1	Code Class 2
Auxiliary Feedwater (AF)	-	1
Component Cooling (CC)	-	1
Containment Spray (CS)	-	2
Chemical & Volume Control (CV)	-	5
Feedwater (FW)	-	1
Main Steam (MS)	-	3
Reactor Coolant (RC)	3	-
Residual Heat Removal (RH)	-	3
Reactor Pressurizer (RY)	4	-
Steam Generator Blowdown (SD)	-	1
Safety Injection (SI)	2	3
Steam Generator (SG)	1	-
Essential Service Water (SX)	-	2
<b>Total</b>	<b>10</b>	<b>22</b>

**Total NIS 2 Forms - 32****Total Pages - 66**

See Attached NIS 2 Forms for reference

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

1. Owner COMMONWEALTH EDISON Date 10-31-00  
Name  
ONE FIRST NATIONAL BANK PLAZA, CHICAGO, IL 60690  
Address
2. Plant BRAIDWOOD NUCLEAR POWER STATION Sheet 1 of 2  
Name  
RR1 BOX 84, BRACEVILLE, IL 60407  
Address Unit 02  
WIP#990122902-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by THE VENTURE Type Code Symbol Stamp NOT APPLICABLE  
Name  
RR1 BOX 80, BRACEVILLE, IL 60407  
Address Authorization Number NOT APPLICABLE  
Expiration Date NOT APPLICABLE
4. Identification of System AF-AUX FEEDWATER 2AF06040Y
5. (a) Applicable Construction Code SEC III (2) 19 74 Edition, S 75 Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 89 / NO ADDENDA
6. Identification of Components Repaired or Replaced and Replacement Components

20A Name of Component	20B Name of Manufacturer	20C Manufacturer Serial No.	20D National board No.	20E Other Identification	20F Year Built	20G Repaired, Replaced, or Replacement	20H ASME Code; Stamped (Yes or No)
FIG. 1375-N LL-BOLT W/NUTS	GRINNELL	N/A	N/A	HT# 43286 NUTS HT# M67772	1997	REPLACEMENT	No

7. Description of Work REPLACE LL-BOLT
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT 3/4  Other: Pressure N/A 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.

DO NOT DUPLICATE

FORM NIS-2 (Back)

9. Remarks \_\_\_\_\_  
Applicable Manufacturer's Data Reports to be attached

CofC/CMTA 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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G. A. Daniell Date 11/1/00  
Owner or Owner's Designee, Title

30 CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of Illinois and employed by HSTBI, Inc of Hartford, CT. have inspected the components described in this Owner's Report during the period 2-3-00 to 11-1-00 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.

I. [Signature] Commissions IA 1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11-1-00

(12/82)

DO NOT DUPLICATE

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

1. Owner Commonwealth Edison Company \_\_\_\_\_ Date 10-31-00  
Name  
 One First National Plaza, Chicago, IL 60690 \_\_\_\_\_  
Address
2. Plant Braidwood Nuclear Power Station \_\_\_\_\_ Sheet 1 of 2  
Name  
 R.R. 1 Box 84, Braceville, IL 60407 \_\_\_\_\_  
Address Unit 2  
W.R. 990121275-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by Mechanical Maintenance \_\_\_\_\_ Type Code Symbol Stamp Not Applicable  
 Braidwood Nuclear Power Station \_\_\_\_\_ Authorization Number Not Applicable  
 R.R. 1 Box 84, Braceville, IL 60407 \_\_\_\_\_ Expiration Date Not Applicable  
Address
4. Identification of System 2CC9428B - EXCESS LETDOWN HX ZB OUTLET RELIEF VALVE.
5. (a) Applicable Construction Code SEC III / 2 1971 Edition, W72 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1989
5. 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: Stamp (Yes or No)
RELIEF VALVE	CROSBY	N5702T-00-0005	N/A	N/A	N/A	REPLACED	YES
RELIEF VALVE	CROSBY	N5702T-00-0004	N/A	MRR #10321	76	REPLACEMENT	YES

7. Description of Work REPLACED RELIEF VALVE.
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT2 performed  
Code Case N416-1  Other: Pressure 135.3 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 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 SUPPLIER'S FORM NV-1 FOR REPLACEMENT RELIEF VALUE  
Applicable Manufacturer's Data Reports to be attached  
REF NUM 990121275 / EPN 2CC94288 IS 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  
(Repair or Replacement)

Type Code Symbol Stamp NOT APPLICABLE

Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed G. J. Danell Date 11/5/00  
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  
Province of ILLINOIS and employed by HSBI & L Co. of HARTFORD, CT  
have inspected the components described in this Owner's Report during the period 8-1-00 to 11-6-00  
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 examination 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.

I. [Signature] Commissions IL 61085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11-6-2000

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

1. Owner Commonwealth Edison Company Date 10-29-00  
One First National Plaza, Chicago, IL 60690 Name  
Address One First National Plaza, Chicago, IL 60690 Sheet 1 of 2

2. Plant Braidwood ComEd Plant Unit 02  
Name Braidwood ComEd Plant  
Address 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 WR#990055747-01  
Repair Organization P.O. No., Job No., etc.

3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Name Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Authorization Number N/A  
Address Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Expiration Date N/A

4. Identification of System CS Containment SPRAY

5. (a) Applicable Construction Code SECT. III CL219 74 Edition, 5'75 Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89

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)
VALVE Check	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	205008A M-129-1C	NOT APPLICABLE	Replaced	Yes
VALVE Check	TRW MISSION	D2975	N/A	UTC 2055670	77	Replacement	Yes

7. Description of Work Replaced Valve

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
OPEN Flow Path Test  
BWVSR 5.5.8.CSG  Other: Pressure N/A psi Test Temp. N/A °F  
G. Donnell 10/31/00

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 \_\_\_\_\_  
\_\_\_\_\_  
NSPV 1 / Code Reconciliation 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 \_\_\_\_\_ not Required \_\_\_\_\_  
Certificate of Authorization No. \_\_\_\_\_ not Required \_\_\_\_\_ Expiration Date \_\_\_\_\_ not Required \_\_\_\_\_  
Signed G. J. Daniello \_\_\_\_\_ Date 10/31/00 \_\_\_\_\_  
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 of Province of Illinois and employed by HSTBI-1 Co. of Hartford, CT. have inspected the components described in this Owner's Report during the period 5-25-00 to 10-31-00, 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.

[Signature] \_\_\_\_\_ Commissions IL 1085 \_\_\_\_\_  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 10-31- 2000

(12/82)

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

1. Owner Commonwealth Edison Company Date 10-29-00  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station Sheet 1 of 2  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address Unit 2  
W.R. 990224739-01  
Repair Organization P.O. No., Job No., etc.

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System CNMT SPRAY HDR 2B INBOARD CNMT CHECK

5. (a) Applicable Construction Code SEC III/B 1974 Edition, ST5 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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: Stamp: (Yes or No)
CHECK VALVE	O.E.M.	UNKNOWN	N/A	2CS008B	N/A	REPLACED	YES NO <i>GD</i>
CHECK VALVE	TRW MISSION	P-7705	N/A	UTC-0002039028 2CS008B	81	REPLACEMENT	YES NO <i>10/29/00</i>

7. Description of Work REPLACED VALVE

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
open full flow test  
Per BwAP 5.5.8.CS.6  Other: Pressure N/A 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 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

(UTC# 0002039028)

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  
(Repair or Replacement)

Type Code Symbol Stamp Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed [Signature] Date 10/30/00  
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  
Province ILLINOIS  
of 10-20-00 and employed by HSDI, Inc. of Hartford, CT  
have inspected the components described in this Owner's Report during the period 10-20-00 to 10-31-00  
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 examination and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions IL 1025  
Inspector's Signature National Board, State, Province, and Endorsements

Date 10-31 2000

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

1. Owner Commonwealth Edison Company Date 8/7/00  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station Sheet 1 of \_\_\_\_\_  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address Unit Z  
WR# 990096737-01  
Repair Organization P.O. No., Job No., etc.

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System CV - CHEM & VOLUME CONTROL

5. (a) Applicable Construction Code SECT III E2 1974 Edition. W/76 Addenda. N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1999

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: Stamp (Yes or No)
DRIVE SHAFT BOLTS	OEM	NOT APPLICABLE	NOT APPLICABLE	ZCVO3F	N/A	REPLACED	NO
DRIVE SHAFT BOLTS	NOVA	HEAT CODE QCL	NOT APPLICABLE	UTC# 2049062 QC# 29409	1999	REPLACEMENT	NO
DRIVE SHAFT BOLTS	NOVA	HEAT CODE QCL	NOT APPLICABLE	UTC# 2049062 QC# 29409	1999	REPAIR	NO

7. Description of Work REPLACED (4) DRIVE SHAFT BOLTS, MACHINED BOLTS TO .742 PER QR 9903054.

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure \_\_\_\_\_ psi Test Temp. \_\_\_\_\_ °F  
 VT2 not Required  
 INT: KI-1-92-65

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 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 \_\_\_\_\_  
Application 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  
(Repair or Replacement)

Type Code Symbol Stamp Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G. H. Daniels Date 8/15/00 19  
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  
Province  
of ILLINOIS and employed by HSTBI-1 Co. of HARTFORD, CT.  
have inspected the components described in this Owner's Report during the period 10-7-99 to 8-15-00  
and state  
that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Ow  
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 examina  
and corrective measures described in this Owner's Report. Furthermore, neither the inspector nor his employer shall be liable in any man  
any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions IL#1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 8-15- 2000

(12/82)

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

Owner Commonwealth Edison Company  
Name  
One First National Plaza, Chicago, IL 60690  
Address

Plant Braidwood Nuclear Power Station  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address

Work Performed by Mechanical Maintenance  
Braidwood Nuclear Power Station  
R.R. 1 Box 84, Braceville, IL 60407  
Address

Identification of System 2 CV 8804A (RH HX 2A TO CV PMPS SUCT ISOL VLV) N5# 2 CV-3

(a) Applicable Construction Code SEC III / B 1974 Edition. 574 Addenda. 1553-1 Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1989

Identification of Components Repaired or Replaced and Replacement Components

Date 10-29-00  
Sheet 1 of 2  
Unit 2  
W.R. 990098020-01  
Repair Organization P.O. No., Job No., etc.  
Type Code Symbol Stamp Not Applicable  
Authorization Number Not Applicable  
Expiration Date Not Applicable

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code: Stamp: (Yes or No)
GATE VALVE	WESTINGHOUSE	BGMT4FE	W14934	2 CV 8804A	1977	* REPAIRED	NO

7. Description of Work DRILL HOLE IN VALVE DISC & REPACK (3/16" HOLE PER DWG 5D64201)

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure N/A psi Test Temp. N/A °F  
NO EXTERNAL PRESSURE RETAINING CODE PARTS WERE REPAIRED/REPLACED, THEREFORE NO ASME RELATED LEAKAGE TEST IS REQUIRED. 7/10/30/00

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 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

\* VALVE DISC HAD HOLE DRILLED IN IT TO PREVENT PRESSURE LOCKING.  
REF. OWNER DESIGN CHANGE D20-2-99-348, DCP 9900196.  
Junghans 10-30-00

FORM NIS-2 (Back)

9. Remarks MANUFACTURERS/ SUPPLIERS FORM NPV-1 FOR AFFECTED COMPONENT  
(VALVE 2CV8804A) IS ATTACHED. REF. NWR. 990098020-01.  
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this \*MODIFICATION  
REPAIR conforms to the rules of the ASME Code, Section  
(Repair or Replacement)

Type Code Symbol Stamp NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE  
Signed [Signature] Date 10/30/02 <sup>To 10/30/00</sup>  
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  
Province of ILLINOIS and employed by HSTI, Inc. of Hartford, CT  
have inspected the components described in this Owner's Report during the period 5-17-00 ~~to~~ 10-30-00  
and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owr  
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 examina  
and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any man  
any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions IL + 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 10-30- 2000

(12/82)

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

1. Owner Commonwealth Edison Company  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address

3. Work Performed by Mechanical Maintenance  
Braidwood Nuclear Power Station  
R.R. 1 Box 84, Braceville, IL 60407  
Address

Date 11-2-00  
Sheet 1 of 2  
Unit 02  
NWR # 990225602-02  
Repair Organization P.O. No., Job No., etc.

Type Code Symbol Stamp Not Applicable  
Authorization Number Not Applicable  
Expiration Date Not Applicable

4. Identification of System CENTRIFUGAL CHARGING PUMPS FLOW CONTROL VALVE 2CV121

5. (a) Application Construction Code Sect. III/B '97 Edition. 572 Addenda. N/A Code Case  
(b) Application Edition of Section XI Utilized for Repairs or Replacement 1999

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	COPE'S VULCAN	N/A	N/A	2CV121	N/A	REPLACED	YES
PLUG	COPE'S VULCAN	9821-96652-1-1	N/A	ORI A99-00362	98	REPLACEMENT	YES

7. Description of Work REPLACED PLUG INTERNAL TO VALVE 2CV121

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: \* Pressure N/A psi Test Temp. 4/0 °F

\* NO ASME RELATED TESTING REQUIRED. NO EXTERNAL PRESSURE CONTAINMENT CODE PARTS WERE REPAIRED 11-03-00

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 ATTACHED IS SUPPLIER'S FORM N-2 FOR REPLACEMENT COMPONENT. (INTERNAL  
VALVE PLUG. REF VALVE 2CV121, JWR 990225602  
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 NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed [Signature] Date 11-03-2000 15-11-03-00  
Owner or Owner's Designee, Title 2000  
10

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of  
Province of Illinois and employed by HSTB: I Co. of HARTFORD, CT.  
and state have inspected the components described in this Owner's Report during the period 10-30-00 to 11-4-00

that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

[Signature] Commissions D# 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 11-4 2000

(12/82)

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

1. Owner Commonwealth Edison Company Date 10-29-00  
One First National Plaza, Chicago, IL 60690 Sheet 1 of 2  
 2. Plant Braidwood Nuclear Power Station Unit 02  
R.R. 1 Box 84, Braceville, IL 60407 WR # 990206889-01  
 Repair Organization P.O. No., Job No., etc.  
 3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
 4. Identification of System 2FW10001S 1734, 1644, REV. 6, 1683, 1683, 1685, 1685, 1685  
 5. (a) Application Construction Code SECT. VIII / DIV. 2 74 Edition. 5 '74 Addenda. 1651, 1728, 1729 Code Case  
 (b) Application Edition of Section XI Utilized for Repairs or Replacement 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)
MECH SNUBBER	ITT GRINNEL	4083	N/A	N/A	'78	REPLACED	YES
MECH SNUBBER	ITT GRINNEL	2698	N/A	N/A	'78	REPLACEMENT	YES

7. Description of Work REPLACED OLD SNUBBER WITH NEW  
 8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: VT 3/4 Pressure N/A psi Test Temp. N/A °F

POST INSTALLATION VT 3/4 VISUAL EXAM PERFORMED AFTER INSTALLATION. TS 10-30-00

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8-1/2" 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 SUPPLIER'S CERTIFICATION DOCUMENT ATTACHED. REF SNUBBEL S.N 2698  
Applicable Manufacturer's Data Reports to be attached  
INSTALLED AT LOCATION 2FW100015, NWA 990206889-01

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 NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed [Signature] Date 10/30/2000 <sup>TS 10-30-00</sup>  
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 of  
Province of ILLINOIS and employed by Hospital Co of HARTFORD, CT.  
have inspected the components described in this Owner's Report during the period 9-12-00 to 10-30-00  
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.

[Signature] Commissions DA 1025  
Inspector's Signature National Board, State, Province, and Endorsements

Date 10-30 2000

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

1. Owner Commonwealth Edison Company Date 11-1-00  
One First National Plaza, Chicago, IL 60690 Sheet 1 of 2  
Name  
Address
2. Plant Braidwood ComEd Plant Unit 02  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407 WR#980116833-01  
Name Repair Organization P.O. No., Job No., etc.  
Address
3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Authorization Number N/A  
Name Expiration Date N/A  
Address
4. Identification of System MS / MAIN STEAM
5. (a) Applicable Construction Code SECT III CL 2 19 74 Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89
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	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	2M5017B M-120-1	NOT APPLICABLE	Replaced	NO
Disc	Dresser	ADB67	NOT APPLICABLE	UTC 2060146	2000	Replacement	NO YES

7. Description of Work Rebuilt Valve Replaced Disc
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
Disc internal to  
Valve - No VT Required  Other: Pressure \_\_\_\_\_ psi Test Temp. \_\_\_\_\_ °F  
XI-1-95-48

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 MANUFACTURER'S / SUPPLIER'S CERT. OF COMPLIANCE AND N-2 FORM  
ATTACHED FOR REPLACEMENT PART (VALVE DISC) REF NUM  
980116833-01, EPN 2MS017B.  
Replaced Disc is internal to the Valve - No VT Required PER XI-1-95-48 interp.

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 NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE  
Signed G. Danell Date 11/1/00  
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 of Province of ILLINOIS and employed by HOTB-1 Co. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 4-3-99 to 11-6-00, 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.

J. Heu Commissions IR 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 11-6, 2000

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

1. Owner Commonwealth Edison Company Date 11-1-00  
Name  
One First National Plaza, Chicago, IL 60690  
Address
2. Plant Braidwood ComEd Plant Unit 02  
Name  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407  
Address WR#990168683-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Name Authorization Number N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Expiration Date N/A  
Address
4. Identification of System MS / MAIN STEAM
5. (a) Applicable Construction Code sect III cl 2 19 74 Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89
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)
Spindle	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	2MS 016 D M-120-1	N/A	Replaced	NO
Spindle	Consolidated	WENT # 800508	NOT APPLICABLE	UTC # 0002066327	98	Replacement	NO
Disc	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	2MS 016 D M-120-1	N/A	Replaced	NO
Disc	Dresser	ADB66	NOT APPLICABLE	UTC # 0002060146	2000	Replacement	NO

7. Description of Work Rebuilt Valve Replaced Spindle, And Disc.
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
Leak Check At N.O.P  
VT2 not Required  Other: Pressure \_\_\_\_\_ psi Test Temp. \_\_\_\_\_ °F  
XI-1-95-48

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

Dresser Valve Division CoFC for Disc \*ADB66 And N-2 form  
~~Dresser Valve Division CoFC for Spindle \*200508 and CMTR~~ <sup>CR</sup>

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 Not Applicable  
Certificate of Authorization No. Not Applicable Expiration Date Not Applicable  
Signed G. A. Daniel Date 11/5/00  
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 of Province of Illinois and employed by HABISIL Co of Hartford, CT have inspected the components described in this Owner's Report during the period 8-14-00 to 11-6-00, 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.

I. [Signature] Commissions DA 1025  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 11-6-00 2000

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

1. Owner Commonwealth Edison Company Date 11-1-00  
Name  
One First National Plaza, Chicago, IL 60690 Sheet 1 of 2  
Address

2. Plant Braidwood ComEd Plant Unit 02  
Name  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407 WR#990055331-01  
Address Repair Organization P.O. No., Job No., etc.

3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Name Authorization Number N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Expiration Date N/A  
Address

4. Identification of System MS / MAIN STEAM

5. (a) Applicable Construction Code SECT III CL2 19 74 Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89

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	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	ams013B M-120-1	N/A	Replaced	NO
Disc	Dresser	ADC06	NOT APPLICABLE	UTC 0002064514	2000	Replacement	NO YES

7. Description of Work Rebuilt Valve Replaced Disc

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT2 not Required  
 Other: Pressure N/A psi Test Temp. N/A °F  
XI-1-95-48

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 MANUFACTURER'S FORM N-2 ATTACHED FOR REPLACEMENT VALVE  
Applicable Manufacturer's Data Reports to be attached  
DISC. REF. No. 990055331, VALVE EPN 2MS013B TS 11-01-00  
2MS013B.

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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G. Daniel Date 11/1/00, 1900  
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 of Province of ILLINOIS and employed by TRTORI & CO. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 4-20-00 to 11-6-00, 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.

J. Hagan Commissions D-1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11-6-, 1900

(12/82)

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

1. Owner Commonwealth Edison Company (EXCELON) Date 11-02-00  
Name  
One First National Plaza, Chicago, IL 60690 Sheet 1 of 3  
Address
2. Plant Braidwood ComEd Plant Unit 02  
Name  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407 NWR 990098905-01 DESIGN CHG. D-20-2-99-360  
Address Repair Organization P.O. No., Job No., etc.
3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Name Authorization Number N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Expiration Date N/A  
Address
4. Identification of System REACTOR COOLANT REACTOR HEAD CORE EXIT THERMOCOUPLE ASSEMBLIES
5. (a) Applicable Construction Code SECTION III 19 71 Edition, 73 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89
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)
		SEE PAGE	3 OF 3				

7. Description of Work INSTALL MODIFIED CORE EXIT THERMOCOUPLE ASSEMBLIES \*
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VTZ performed  Other: Pressure 2245 psi Test Temp. 556 °F  
 Code Case N416-1

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.

**\* REF. BRAIDWOOD ENGINEERING REQUEST ER 9902503 FOR CODE RECONCILIATION FOR LOWER CLAMPS (ATTACHED)**

**\* REF. APPENDIX "F" OF ABB COMBUSTION ENGINEERING DESIGN REPORT MISC. ME-DR-033 R1 FOR CODE RECONCILIATION FOR SEAL NOZZLE ASSEMBLIES. (ATTACHED)**

FORM NIS-2 (Back)

9. Remarks ① ATTACHED IS CERTIFICATE OF CONFORMANCE FROM SUPPLIER FOR COMPONENTS IDENTIFIED AS "SEAL NOZZLE" ON PL. 3 OF 3. ALSO APPENDIX "F" OF ASME COMBUSTION ENGINEER W/L DESIGN REPORT <sup>TS-11-03-00</sup> ~~AT 66-06~~ MISC. ME-DR033 R/L THAT DOCUMENTS CODE RECONCILIATION FROM ORIG. CONST. 7/ED/73 <sup>SUMMER</sup> ADDENDA TO ASME SECTION III 1989 EDITION. ② ATTACHED IS OWNER'S ENGINEERING REQUEST ER 9902503 THAT DOCUMENTS RECONCILIATION FOR LOWER CLAMPS FROM ORIG. CONST. CODE <sup>SUMMER</sup> 7/ED/73 ADDENDA TO ASME SECT. III 1986 EDITION.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this REPAIRMENT conforms to the rules of the ASME Code, Section XI.  
(Repair or Replacement)

Type Code Symbol Stamp Not Applicable  
Certificate of Authorization No. Not Applicable Expiration Date Not Applicable  
Signed G. A. Daniell Date 11/5/00  
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 of Province of Illinois and employed by HSTI of Hartford, CT. have inspected the components described in this Owner's Report during the period 5-19-00 to 11-6-00, 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.

J. [Signature] Commissions II-1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 11-6-00, 2000

(12/82)

FORM NIS-2 SUPPLEMENTAL SHEET

1. Owner: Commonwealth Edison Company  
One First National Plaza  
Chicago, Illinois 60690

Sheet 3 of 3  
Date 11/02/2000  
Unit 02

2. Plant: Braidwood ComEd Plant  
35100 S. Rt. 53 Suite 84  
Braceville, Illinois 60407

Unit 02  
NWR 990098905-01  
DESIGN CHANGE D-20-2-99-360  
P.O. No., WR No., etc

3. Work Performed by EXCELON MECH. MAINT  
Name  
BRIDWOOD N.P.S. 35100 S. RT. 53 SUITE 84  
Address  
BRACEVILLE ILL 60407 TS 11-02-00

Type Code Symbol Stamp NOT APPLICABLE  
Authorization No. NOT APPLICABLE  
Expiration Date NOT APPLICABLE

4. Identification of System REACTOR COOLANT REACTOR HEAD CORE EXIT THERMOCOUPLE ASSEMBLY

5. (a) Applicable Construction Code ASME SECTION III, 19 71 Edition 1973 Addenda

Code Cases NOT APPLICABLE

(b) Applicable Edition of Section XI Utilized ASME SECT. XI, 19 89 Edition No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components.

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code; Stamped (Yes or No)
SEAL NOZZLE ASS	OEM	N/A	N/A	IRCOIR-A	N/A	REPLACED	YES
SEAL NOZZLE	ABB COMB. ENGR	C1294001	N/A	UTC 0002055021	1989	REPLACEMENT	YES
SEAL NOZZLE	ABB COMB. ENGR	C1294002	N/A	UTC 0002055022	1989	REPLACEMENT	YES
SEAL NOZZLE	ABB COMB. ENGR	C1294003	N/A	UTC 0002055023	1989	REPLACEMENT	YES
SEAL NOZZLE	ABB COMB. ENGR	C1294004	N/A	UTC 0002055024	1989	REPLACEMENT	YES
SEAL NOZZLE	ABB COMB. ENGR	C1294005	N/A	UTC 0002055025	1989	REPLACEMENT	YES
LOWER CLAMP	ABB COMB. ENGR	4989G	N/A	UTC 0002055050	1986	REPLACEMENT	YES
LOWER CLAMP	ABB COMB. ENGR	4984G	N/A	UTC 0002055051	1986	REPLACEMENT	YES
LOWER CLAMP	ABB COMB. ENGR	4312G	N/A	UTC 0002055052	1986	REPLACEMENT	YES
LOWER CLAMP	ABB COMB. ENGR	4329G	N/A	UTC 0002055024	1986	REPLACEMENT	YES
LOWER CLAMP	ABB COMB. ENGR	4326G	N/A	UTC 0002055026	1986	REPLACEMENT	YES
				TS 11-03-00			

(Final)

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

1. Owner Commonwealth Edison Company  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address

3. Work Performed by Mechanical Maintenance  
Braidwood Nuclear Power Station  
R.R. 1 Box 84, Braceville, IL 60407  
Address

Date 5/14/99

Sheet 1 of \_\_\_\_\_

Unit 2

WR\* 970117245-01  
Repair Organization P.O. No., Job No., etc.

Type Code Symbol Stamp Not Applicable

Authorization Number Not Applicable

Expiration Date Not Applicable

4. Identification of System RC- REACTOR COOLANT

5. (a) Applicable Construction Code SECTION XI 1971 Edition 5/73 Addenda N/A Code Case

(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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)
REACTOR CLOSURE STUD	OEM	N/A	N/A	M-135-1B	N/A	REPLACED	NO
REACTOR CLOSURE STUD	BABCOCK & WILCOX	89-1-8960-37-4 HT*153412	N/A	QRI# A99-01013		REPLACEMENT	NO
REACTOR CLOSURE STUD	OEM	N/A	N/A	M-135-1B	N/A	REPLACED	NO
REACTOR CLOSURE STUD	BABCOCK & WILCOX	89-1-8960-37-6 HT*153412	N/A	QRI# A99-01013		REPLACEMENT	NO

7. Description of Work REPLACED REACTOR CLOSURE STUDS #13 AND #14.

8. Test 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 \_\_\_\_\_ Not Applicable \_\_\_\_\_  
Certificate of Authorization No. \_\_\_\_\_ Not Applicable \_\_\_\_\_ Expiration Date Not Applicable \_\_\_\_\_  
Signed G. A. Daniell \_\_\_\_\_ Date 7/20 19 99  
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 of Province of ILLINOIS and employed by HARBOR CO of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 4-25-99 of 7-21-99 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.

J. [Signature] \_\_\_\_\_ Commissions IL-#1 1088 \_\_\_\_\_  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 7-21- 1999

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

1. Owner Commonwealth Edison Company Date \_\_\_\_\_  
One First National Plaza, Chicago, IL 60690 Sheet 1 of \_\_\_\_\_  
Name  
Address
2. Plant Braidwood ComEd Plant Unit Z  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407 WR# 990042146-01  
Name Repair Organization P.O. No., Job No., etc.  
Address
3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Authorization Number N/A  
Name Expiration Date N/A  
Address
4. Identification of System RC - REACTOR COOLANT NS# ZRC-1
5. (a) Applicable Construction Code Section E1 19 71 Edition, 5/74 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89
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)
<u>N NTS</u>	<u>OEM</u>	<u>NOT APPLICABLE</u>	<u>NOT APPLICABLE</u>	<u>ZRC01BD</u> <u>M-2110-10</u>	<u>NA</u>	<u>REPLACED</u>	<u>NO</u>
<u>NUT</u>	<u>JOS DYSON</u>	<u>SN# 343</u> <u>HT# 4-6752EG</u>	<u>NOT APPLICABLE</u>	<u>GR#</u> <u>A92-00688</u>	<u>1988</u>	<u>REPLACEMENT</u>	<u>NO</u>
<u>NUT</u>	<u>JOS DYSON</u>	<u>SN# 319</u> <u>HT# 4-6752EG</u>	<u>NOT APPLICABLE</u>	<u>GR#</u> <u>A92-00688</u>	<u>1988</u>	<u>REPLACEMENT</u>	<u>NO</u>

7. Description of Work REPLACED (2) NUTS : REFERENCE ER 9903048
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: \* Pressure 4/2 psi Test Temp. 4/2 °F

*78102900*  
 \* No ASME ACME CODE RELATED TESTING REQUIRED, ONLY BOLTING (NO OTHER EXTERNAL PRESSURE RETAINING COOLANTS) WERE REPAIRED OR REPLACED

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 SUPPLIER'S CERTIFICATE OF COMPLIANCE ATTACHED FOR  
REPLACEMENT BOLTING (MUIS). REF NUM 990042146-06 EPN  
22C018D. ALSO OWNERS ENGR. REQUEST NO. ER9903048  
ATTACHED FOR SPECIAL PROCUREMENT REQUIREMENTS

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 NOT APPLICABLE

Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed [Signature] Date 10-29-2000 <sup>2000</sup> ~~10-10-2000~~  
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 of Province of Illinois and employed by BBB 1-1 CO. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 8-11-00 to 10-29-00, 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.

[Signature] Commissions II-A 1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 10-29- 2000

Doc # 10  
WR # 990073518-01

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

1. Owner Commonwealth Edison Company Date 10-28-00  
One First National Plaza, Chicago, IL 60690 Sheet 1 of 2  
 2. Plant Braidwood Nuclear Power Station Unit 02  
R R 1 Box 84, Braceville, IL 60407 WR#990073518-01  
 Repair Organization P.O. No., Job No., etc.  
 3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
 4. Identification of System RHR MINIFLOW OFFICE  
 5. (a) Applicable Construction Code III/2 Edition 74 Addenda N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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: Stamp (Yes or N)
THIRD ROD	CARDINAL	HT 95202	N/A	QRI# A91-02560 HT # 95202	1991	REPLACEMENT	N
HEX NUT	ENERGY STEEL & SUPPLY	HT 84635/520	N/A	QRI# BAI-01587 HT # 84635/520	1991	REPLACEMENT	N

7. Description of Work REPLACED STUDS & NUTS  
 8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure N/A psi Test Temp. 40 °F

**NO ASME RELATED TESTING IS REQUIRED. ONLY BOLTING WAS REPLACED AND NO OTHER EXTERNAL PRESSURE RETAINING COOL PARTS WERE REPAIRED / RUL 103000**

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 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)

Remarks SUPPLIERS / MANUFACTURERS CERTIFICATES OF COMPLIANCE  
Applicable Manufacturer's Data Reports to be attached  
ATTACHED FOR REPLACEMENT BOLTING. REF NUM 99073518-01  
AND CP# 2FE-0610

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and the REPLACEMENT conforms to the rules of the ASME Code, Section  
(Repair or Replacement)

Type Code Symbol Stamp NOT APPLICABLE

Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed [Signature] Date 10/30/00  
Owner or Owner's Designee Title 10-30-00  
2000  
-18-

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  
Province of ILLINOIS and employed by HOBAS CO. of HARTFORD, CT.  
have inspected the components described in this Owner's Report during the period 6-9-00 to 10-30-00  
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 examination and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions II a 1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 10-30-2000

Dec 11

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

1. Owner Commonwealth Edison Company Date 7-12-99  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station Sheet 1 of 2  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System RH - Residual Heat Removal  
Address

5. (a) Applicable Construction Code III/CL2 19 1971 Edition, W'1972 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1989

6. Identification of Components Repaired or Replaced and Replacement Components

WR#970125669-02  
Repair Organization P.O. No., Job No., etc.

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASM Code Stamp (Yes or No)
Valve Relief	O.E.M.	Not Applicable	Not Applicable	2RH 8708B P&ID M-137	Not Applicable	Replaced	Yes
Valve Relief	Crosby	NS604-000033	Not Applicable	2RH 8708B P&ID M-137	1976	Replacement	Yes

7. Description of Work Replace Valve

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT2  
 Other: Pressure 125 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 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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G.A. Daniell Date 7/14, 19 99  
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 of Province of Illinois and employed by WSDI Co. of Hartford, CT. have inspected the components described in this Owner's Report during the period 5-15-99 of 7-14-99 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.

[Signature] Commissions IL# 1035  
Inspector's Signature National Board, State, Province, and Endorsements

Date 7-14-, 19 99

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

1. Owner Commonwealth Edison Company Date 10/17/00  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station Sheet 1 of \_\_\_\_\_  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address Unit Z  
WR# 990219950-01  
Repair Organization P O No., Job No., etc.

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System RH - RESIDUAL HEAT REMOVAL NS# ZRH-2

5. (a) Applicable Construction Code SECT III EZ 1971 Edition, W/72 Addenda, NA Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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)
NUT	OEM	NOT APPLICABLE	NOT APPLICABLE	ZRH607 M-137	N/A	REPLACE	NO
NUT	NOVA	HEAT CODE LMI	NOT APPLICABLE	QRI # A99-00203	1999	REPLACEMENT	NO

7. Description of Work REPLACED MISSING NUT

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT2 not Required  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

Code Data Reports 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

Not Applicable

Certificate of Authorization No.

Not Applicable

Expiration Date Not Applicable

Signed

Gary A. Dancell  
Owner or Owner's Designee, Title

Date 10/20/00 18

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of ILLINOIS and employed by HSBI F I Co. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 10-14-2000 to 10-23-00 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 examination and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature]  
Inspector's Signature

Commissions IL# 1085

National Board, State, Province, and Endorsements

Date 10-23- 2000

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

1. Owner Commonwealth Edison Company Date 11/3/00  
Name  
One First National Plaza, Chicago, IL 60690  
Address  
 2. Plant Braidwood Nuclear Power Station Sheet 1 of 2  
Name  
R.R. 1 Box 84, Braceville, IL 60407 Unit 02  
Address WR 990060305-01  
Repair Organization P O No., Job No., etc.

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System 2B PZR Spray Valve 2RY455B

5. (a) Applicable Construction Code Sec III 19 74 Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1989 N-3-10  
2B sub 11-5.00

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)
Studs 7/8"	O.E.M.	N/A	N/A	2RY455B	N/A	REPLACED	NO
Studs 7/8"	NOVA	N/A	N/A	HT CODE 7311-0400 RIN A99-01051	1999	REPLACEMENT	NO
Nuts 7/8"	O.E.M.	N/A	N/A	2RY455B	N/A	REPLACED	NO
Nuts 7/8"	NOVA	N/A	N/A	HT CODE 7311-0400 RIN # 27284	1999	REPLACEMENT	NO

7. Description of Work Disassemble and Rebuild Valve using 8 new studs and nuts

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other:  Pressure N/A psi Test Temp. NA °F

\* NO ASME RELATED TESTING REQUIRED (ONLY BOLTING) NO OTHER EXTERNAL PRESSURE RETAINING CODE PARTS WERE REPLACED. July 11-04-00

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 MANUFACTURER'S / SUPPLIER'S MATERIAL TEST REPORT /  
Applicable Manufacturer's Data Reports to be attached  
CERTIFICATE OF COMPLIANCE ATTACHED FOR REPLACEMENT  
BOLTING USED ON VALVE 214455B REF. NUM. 990060305-01

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 NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed Jim Johnson Date 11-04-00  
Owner or Owner's Designee, Title 11-04-00  
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 of  
Province Illinois and employed by HSBI, Inc. of Haverford, Pa.  
have inspected the components described in this Owner's Report during the period 9-28-00 to 11-6-00  
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.

J. [Signature] Commissions IL-1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 11-6-00, 2000

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

1. Owner Commonwealth Edison Company \_\_\_\_\_ Date 11-3-00  
Name  
 One First National Plaza, Chicago, IL 60690 \_\_\_\_\_  
Address

2. Plant Braidwood Nuclear Power Station \_\_\_\_\_ Sheet 1 of 2  
Name  
 R.R. 1 Box 84, Braceville, IL 60407 \_\_\_\_\_  
Address Unit 2  
W.R. 99005517-01  
Repair Organization P.O. No., Job No., etc.

3. Work Performed by Mechanical Maintenance \_\_\_\_\_ Type Code Symbol Stamp Not Applicable  
 Braidwood Nuclear Power Station \_\_\_\_\_ Authorization Number Not Applicable  
 R.R. 1 Box 84, Braceville, IL 60407 \_\_\_\_\_ Expiration Date Not Applicable  
Address

4. Identification of System ZRY8010 B (PZR SAFETY REL VLV)

5. (a) Applicable Construction Code SEC III / A 19 71 Edition, WTZ Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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: Stamp (Yes or No)
RELIEF VALVE	CROSBY	N56964-00-0054	N/A	N/A	N/A	REPLACED	YES
RELIEF VALVE	CROSBY	N56964-00-0032	N/A	UTC 2059074 A 98-00272	76	REPLACEMENT	YES

7. Description of Work REPLACED VALVE

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VTZ performed  
Code Case N416-1  Other: Pressure 2222 psi Test Temp. 556 °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 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 SUPPLIERS FORM NIS-1 ATTACHED FOR REPLACEMENT RELIEF VALVE  
Applicable Manufacturer's Data Reports to be attached  
S.N. N56964-00-0032, EPN 2R78010B

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           
(Repair or Replacement)

Type Code Symbol Stamp NOT APPLICABLE

Certificate of Authorization No. NOT APPLICABLE

Expiration Date NOT APPLICABLE

Signed G. A. Danzell  
Owner or Owner's Designee, Title

Date 11/5/00

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 Province of ILLINOIS and employed by HOBAS CO. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 7-27-00 to 11-6-00 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 examination and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature]  
Inspector's Signature

Commissions ILLINOIS  
National Board, State, Province, and Endorsements

Date 11-6- 2000

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

1. Owner Commonwealth Edison Company \_\_\_\_\_ Date 11-3-00  
Name  
 One First National Plaza, Chicago, IL 60690 \_\_\_\_\_  
Address

2. Plant Braidwood Nuclear Power Station \_\_\_\_\_ Sheet 1 of 2  
Name  
 R.R. 1 Box 84, Braceville, IL 60407 \_\_\_\_\_  
Address

3. Work Performed by Mechanical Maintenance \_\_\_\_\_ Type Code Symbol Stamp Not Applicable  
 Braidwood Nuclear Power Station \_\_\_\_\_ Authorization Number Not Applicable  
 R.R. 1 Box 84, Braceville, IL 60407 \_\_\_\_\_ Expiration Date Not Applicable  
Address

4. Identification of System ZRYB010A (PZR SAFETY REL VLV) \_\_\_\_\_  
Address

5. (a) Applicable Construction Code SEC III/A 1971 Edition, WT2 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1989

6. Identification of Components Repaired or Replaced and Replacement Components

Unit 2  
W.R. 990106517-01  
Repair Organization P.O. No., Job No., etc.

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code; Stamp; (Yes or No)
RELIEF VALVE	CROSBY	N56964-00-0109	N/A	N/A	N/A	REPLACED	YES
RELIEF VALVE	CROSBY	N56964-00-0091	N/A	UTC 2061839 A89-01461	77	REPLACEMENT	YES

7. Description of Work REPLACED VALVE

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 VT2 completed  
 Code Case N416-1  Other: Pressure 2222 psi Test Temp. 556 °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 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 ATTACHED ARE SUPPLIER'S FORM NV-1 FOR REPLACEMENT  
Applicable Manufacturer's Data Reports to be attached  
VALVE S.N. N-56964-0071 EPN 21248010A. AND EXCERPT  
FROM CECO ITEM NUMBER 138 WHICH PROVIDES CODE  
RECONCILIATION FROM 1974 EDITION/WINTER ADDENDA TO  
1971 EDITION/WINTER 1972 ADDENDA.

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  
(Repair or Replacement)

Type Code Symbol Stamp Not Applicable  
 Certificate of Authorization No. Not Applicable Expiration Date Not Applicable  
 Signed G. A. Daniell Date 11/5/00  
(Owner or Owner's Designee, N/A)

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State  
 Province of ILLINOIS and employed by HSTBI, Inc. of HARTFORD, CT.  
 have inspected the components described in this Owner's Report during the period 7-25-00 to 11-6-00  
 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 examination 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.

L. [Signature] Commissions DA 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
 Date 11-6-00 2000

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

1. Owner Commonwealth Edison Company Date 11-3-00  
Name  
One First National Plaza, Chicago, IL 60690  
Address

2. Plant Braidwood Nuclear Power Station Sheet 1 of 2  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address Unit 2  
W.R. 990055516-01  
Repair Organization P.O. No., Job No., etc.

3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address

4. Identification of System 2RY8010C (PRZ SAFETY RLF VLV)

5. (a) Applicable Construction Code SEC III/A 1971 Edition, WT2 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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: Stamp: (Yes or No)
RELIEF VALVE	CROSBY	N56964-00-0055	N/A	N/A	N/A	REPLACED	YES
RELIEF VALVE	CROSBY	N56964-00-0053	N/A	UTC 2061838 MRR-10310	76	REPLACEMENT	YES

7. Description of Work REPLACED VALVE.

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VT2 performed  
 Other: Pressure 2222 psi Test Temp. 556 °F  
Code Case N416-1

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 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 SUPPLIER'S  
MANUFACTURER'S FORM NV-1 FOR REPLACEMENT VALUE  
SAN NS6964-0053 FOR VALUE EYN. 2R8010C.  
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  
(Repair or Replacement)

Type Code Symbol Stamp NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE  
Signed G. Daniel Date 11/3/00  
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  
Province of Illinois and employed by HSTBI Co. of HARTFORD, CT.  
have inspected the components described in this Owner's Report during the period 7-25-00 to 11-6-00  
and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Ow  
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 examina  
and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any man  
any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

J. [Signature] Commissions DA 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 11-6-00 21500

(12/82)

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

1. Owner Commonwealth Edison Company \_\_\_\_\_ Date 10-27-00  
Name  
 One First National Plaza, Chicago, IL 60690  
Address
2. Plant Braidwood Nuclear Power Station \_\_\_\_\_ Sheet 1 of 2  
Name  
 R.R. 1 Box 84, Braceville, IL 60407  
Address Unit 02  
WR#99022334701  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
 Braidwood Nuclear Power Station Authorization Number Not Applicable  
 R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address
4. Identification of System 2SD110669
5. (a) Applicable Construction Code Sec. VIII / II B 19 74 Edition, 6 '74 Addenda 1651, 1728, 1729 Code Case 1734, 1644 Rev. 6, 1682, 1683, 1685, 1686  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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)
MECHANICAL SNUBBER	ITT GRINWELL	TS 10-28-00 2598 465443	N/A	N/A	'78	REPLACEMENT	YES
MECH SNUBBER	ITT GRINWELL	23231	N/A	N/A	'78	REPLACED	YES

7. Description of Work REPLACE OLD SNUBBER WITH NEW.
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: \* Pressure N/A psi Test Temp. N/A °F  
VT 3/4 EXAMINATION PERFORMED UPON REINSTALLATION OF NEW SNUBBER Temp. stamp - 10/28/00

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.

Doc # 6 Pg. 1 of 2  
WP # 990223347-01

FORM NIS-2 (Back)

9. Remarks MANUFACTURER'S CERTIFICATE OF COMPLIANCE ATTACHED FOR  
REPLACEMENT SNUGGER. REF NUM 99023347-01, SNUGGER  
25D110665, S/N 2598

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.  
Application of Manufacturer's Data Reports to be attached  
Repair or Replacement

Type Code Symbol Stamp NOT APPLICABLE

Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE

Signed [Signature] Date 10/29/00  
Owner or Owner's Designee, Title 10-29-00

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of  
Province of ILLINOIS and employed by HSB LLC of HARTFORD, CT.  
have inspected the components described in this Owner's Report during the period 10-23-00 to 10-29-00  
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.

[Signature] Commissions DA 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 10-29- 2000

(12/82)

Doc # 6  
Pg. 2 of 2  
W.P. # 99023347-01

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

1. Owner COMMONWEALTH EDISON Date 5-2-99  
Name  
ONE FIRST NATIONAL BANK PLAZA, CHICAGO, IL 60690  
Address
2. Plant BRAIDWOOD NUCLEAR POWER STATION Sheet 1 of 2  
Name  
RR1 Box 84, BRACEVILLE, IL 60407  
Address Unit 02  
WORK REQUEST # 98001007-02  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by THE VENTURE Type Code Symbol Stamp NOT APPLICABLE  
Name  
RR1 Box 80, BRACEVILLE, IL 60407  
Address Authorization Number NOT APPLICABLE  
Expiration Date NOT APPLICABLE
4. Identification of System SI SAFETY-INJECTION N-5 2SI-1
5. (a) Applicable Construction Code SEC III/1 19 74 Edition, 5'75 Addenda, N/A Code Case N-416-1  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89 / NO ADDENDA
6. Identification of Components Repaired or Replaced and Replacement Components

20A Name of Component	20B Name of Manufacturer	20C Manufacturer Serial No.	20D National board No.	20E Other Identification	20F Year Built	20G Repaired, Replaced, or Replacement	20H ASME Code; Stamped (Yes or No)
25I-18FC-1 PIPE	PGCO	2539C-2MA-1	N/A	25I-18FC 2"	1987	REPAIRED	YES
25I-18FC 2* PIPE	CONSOLIDATED POWER SUPPLY	N/A	N/A	ERI-448-00754 HEAT # L28108	N/A	REPLACEMENT	NO

7. Description of Work REPLACE PIPE to accommodate valve (25I18FC) REPLACEMENT CODE CASE I2R05, N-416-1
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure 2230 psi Test Temp. N.O.T °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.

DO NOT DUPLICATE

FORM NIS-2 (Back)

9. Remarks CERTIFICATION FROM CONSOLIDATED POWER SUPPLY  
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 Not Applicable  
Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G.A. Daniell Date 6/23, 19 99  
Owner or Owner's Designee, Title

30

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of ILLINOIS and employed by HSBI - I CO. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 4-22-99 of 6-23-99 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.

J. H. H. H. Commissions IL 1085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 6-23, 1999

(12/82)

DO NOT DUPLICATE

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

1. Owner COMMONWEALTH EDISON Date 5-2-99  
Name  
ONE FIRST NATIONAL BANK PLAZA, CHICAGO, IL 60690  
Address
2. Plant BRAIDWOOD NUCLEAR POWER STATION Sheet 1 of 2  
Name  
RR1 BOX 84, BRACEVILLE, IL 60407  
Address Unit 02  
WORK REQUEST # 980010007-02  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by THE VENTURE Type Code Symbol Stamp NOT APPLICABLE  
Name  
RR1 BOX 80, BRACEVILLE, IL 60407  
Address Authorization Number NOT APPLICABLE  
Expiration Date NOT APPLICABLE
4. Identification of System SI SAFETY INJECTION N5 2SI-1
5. (a) Applicable Construction Code SEC III/1 19 71 Edition, W'72 Addenda, N/A N-416-1  
Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89 / NO ADDENDA
6. Identification of Components Repaired or Replaced and Replacement Components

20A Name of Component	20B Name of Manufacturer	20C Manufacturer Serial No.	20D National board No.	20E Other Identification	20F Year Built	20G Repaired, Replaced, or Replacement	20H ASME Code; Stamped (Yes or No)
VALVE 2SI8819C	KEROTEST	P51-10	11/647	2SI8819C	1976	REPLACED	YES
VALVE 2SI8819C	FINN SERVE CORP	E-467P-1-3	N/A	QRI-A94-00944	1999	REPLACEMENT	YES
WELD MATERIAL	THE ESAB GROUP	N/A	N/A	QRI-A95-04344 HEAT # PJ903	N/A	REPAIRED	NO

7. Description of Work VALVE LEAKS BY CODE CASE I2R05 / N-416-1
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure 2230 psi Test Temp. N.O.T °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.

DO NOT DUPLICATE

FORM NIS-2 (Back)

9. Remarks FORM NPV-1 and CMTR  
Applicable Manufacturer's Data Reports to be attached

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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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G. A. Daniell Date 6/23, 19 99  
Owner or Owner's Designee, Title

30

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of ILLINOIS and employed by HSBI : 1 Co. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 4-22-99 of 4-23-99 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.

L. H. ... Commissions IL 1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-23, 19 99

(12/82)

DO NOT DUPLICATE

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

1. Owner COMMONWEALTH EDISON Date 5-2-99  
Name  
ONE FIRST NATIONAL BANK PLAZA, CHICAGO, IL 60690  
Address
2. Plant BRAIDWOOD NUCLEAR POWER STATION Sheet 1 of 2  
Name  
RR1 Box 84, BRACEVILLE, IL 60407  
Address Unit 02  
WORK REQUEST # 980010007-02  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by THE VENTURE Type Code Symbol Stamp NOT APPLICABLE  
Name  
RR1 Box 80, BRACEVILLE, IL 60407  
Address Authorization Number NOT APPLICABLE  
Expiration Date NOT APPLICABLE
4. Identification of System SI SAFETY-INJECTION N-5 2SI-2
5. (a) Applicable Construction Code SEC III/2 19 74 Edition, 5'75 Addenda, N/A Code Case  
Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89 / NO ADDENDA
6. Identification of Components Repaired or Replaced and Replacement Components

20A Name of Component	20B Name of Manufacturer	20C Manufacturer Serial No.	20D National board No.	20E Other Identification	20F Year Built	20G Repaired, Replaced, or Replacement	20H ASME Code; Stamped (Yes or No)
2SI-18EC-2" PIPE	PGCO	2539C-2A-5	N/A	2SI-18EC-2"	1987	REPLACED	YES
2SI-18EC-2" PIPE	CONSOLIDATED POWER SUPPLY	N/A	N/A	GRE-A98-00754 HEAT# L28108	N/A	REPLACEMENT	NO
2SI-18EC-2" FLANGE	PGCO	2539C-2A-5	N/A	2SI-18EC-2"	1987	REPLACED	YES
2SI-18EC-2" FLANGE	COFFER CORPORATION	N/A	N/A	QRI# 1003-87 HT# AL2M	N/A	REPLACEMENT	NO

7. Description of Work REPLACE PIPE/FLANGE TO ACCOMMODATE VALVE (2539819C) REPLACEMENT  
CODE CASE I2R05/ N416-1
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure 2230 psi Test Temp. N.O.T. °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.

DO NOT DUPLICATE

FORM NIS-2 (Back)

9. Remarks CERTIFICATION FROM CONSOLIDATED POWER SUPPLY, MILL TEST REPORT  
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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G.A. Daniell Date 6/24, 19 99  
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

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I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of Illinois and employed by H3B1: 1 Co. of HANFORD, CA. have inspected the components described in this Owner's Report during the period 2-10-99 of 6-23-99 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.

L. H. ... Commissions IL-1025  
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-23-, 1999

(12/82)

DO NOT DUPLICATE

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

1. Owner COMMONWEALTH EDISON Date 5/5/99  
Name  
ONE FIRST NATIONAL BANK PLAZA, CHICAGO, IL 60690  
Address
2. Plant BRAIDWOOD NUCLEAR POWER STATION Sheet 1 of 3  
Name  
RR 1 BOX 84, BRACEVILLE, IL 60407  
Address Unit 2  
WORK REQUEST # 980010007-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by THE VENTURE Type Code Symbol Stamp NOT APPLICABLE  
Name  
RR 1 BOX 80, BRACEVILLE, IL 60407  
Address Authorization Number NOT APPLICABLE  
Expiration Date NOT APPLICABLE
4. Identification of System SI SAFETY-INJECTION N-5 2SI-1
5. (a) Applicable Construction Code SEC III/A 19 74 Edition, S'75 Addenda, N-416-1 Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89 / NO ADDENDA
6. Identification of Components Repaired or Replaced and Replacement Components

20A Name of Component	20B Name of Manufacturer	20C Manufacturer Serial No.	20D National board No.	20E Other Identification	20F Year Built	20G Repaired, Replaced, or Replacement	20H ASME Code; Stamped (Yes or No)
LINE# 2SI18FC-2" PIPE	PG&O	2539C-219A-1	N/A	2SI18FC-2"	1987	REPLACED	YES
LINE# 2SI18FC-2" PIPE	CONSOLIDATED POWER SUPPLY	N/A	N/A	QRI# A98-00754 HT# L28108	N/A	REPLACEMENT	NO
LINE# 2SI18FC-2" 45° EL.	PG&O	2539C-219A-1	N/A	2SI18FC-2"	1987	REPLACED	YES
LINE# 2SI18FC-2" 45° EL	TIOGA PIPE SUPPLY	N/A	N/A	QRI# A99-00998 HT# RA	N/A	REPLACEMENT	NO

7. Description of Work REPLACE PIPE AND FITTINGS CODE CASE I2205/N-416-1
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure 2230 psi Test Temp. N.O.T. °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.

DO NOT DUPLICATE

FORM NIS-2 (Back)

9. Remarks CERTIFICATION, COFC'S  
Applicable Manufacturer's Data Reports to be attached

- Supplemental sheet 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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G. H. Daniell Date 6/23, 19 99  
Owner or Owner's Designee, Title

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CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of ILLINOIS and employed by HOBASCO of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 3-10-99 of 6-23-99 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.

L. H. H. H. Commissions IL 1035  
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-23, 1999

(12/82)

DO NOT DUPLICATE



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

1. Owner Commonwealth Edison Company Date 10-30-00  
One First National Plaza, Chicago, IL 60690 Sheet 1 of 2  
Name  
Address
2. Plant Braidwood ComEd Plant Unit 02  
35100 S. Rt. 53 Suite 84, Braceville, IL 60407 WR# 980082228-01  
Name Repair Organization P.O. No., Job No., etc.  
Address
3. Work Performed by MECHANICAL MAINTENANCE Type Code Symbol Stamp N/A  
Braidwood ComEd Plant, 35100 S. Rt. 53 Suite 84, Braceville, IL 60407 Authorization Number N/A  
Name Expiration Date N/A  
Address
4. Identification of System SI SAFETY INJECTION
5. (a) Applicable Construction Code Sec. III CL2 19 71 Edition, W'72 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 19 89
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)
Valve Relief	O.E.M.	NOT APPLICABLE	NOT APPLICABLE	2SI 8856A M-136-4	NOT APPLICABLE	Replaced	Yes
Valve Relief	Crosby	N56902-00-0015	NOT APPLICABLE	UTC 2056190	1977	Replacement	Yes

7. Description of Work Replace Valve
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
VTZ performed  Other: Pressure 140 psi Test Temp. Amb. °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 MANUFACTURERS NV-1 REPORT ATTACHED FOR VALVE.  
Applicable Manufacturer's Data Reports to be attached  
REF. Num. 980082228  
VALVE 2SI8856A  
VALVE S.N. N56902-00-0015

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 NOT APPLICABLE  
Certificate of Authorization No. NOT APPLICABLE Expiration Date NOT APPLICABLE  
Signed G. Danell Date 10/31/00  
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 of Province of Illinois and employed by HOTBELL CO. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 5-15-99 to 10-31-00, 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.

I have Commissions DB 11085  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 10-31-2000

(12/82)

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

1. Owner Commonwealth Edison Company Date 8-3-00  
Name  
One First National Plaza, Chicago, IL 60690  
Address
2. Plant Braidwood Nuclear Power Station Sheet 1 of 2  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address Unit 2  
W.R. 990066534-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address
4. Identification of System SPARE SIG SECONDARY MANWAY COVER
5. (a) Applicable Construction Code SEC III <sup>CL.1</sup> 1971 Edition, 572 Addenda, 1355, 1484-3 Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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)
<u>SIG MANWAY COVER</u>	<u>ESAB WELDING &amp; CUTTING PROD.</u>	<u>ER70S-2</u>	<u>N/A</u>	<u>HEAT NO. 065651</u>	<u>97</u>	<u>REPAIRED</u>	<u>NO</u>

7. Description of Work WELD REPAIRED & MACHINED GASKET SEALING FACE
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
NDE Performed ON EXCAVATED AREA AND FINAL WELD  Other: NDE Pressure N/A 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 \_\_\_\_\_  
Non Destructive Exam - Magnetic Particle - Performed on Excavated Area of Repair  
AND AFTER Final welding

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 Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed G.A. Daniell Date 10/21/00  
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 of Province of ILLINOIS and employed by HSBI Inc of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 10-16-00 to 10-23-00 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.

L. Hansen Commissions IL 1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 10-23-00 78000

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

1. Owner Commonwealth Edison Company  
Name  
One First National Plaza, Chicago, IL 60690  
Address

Date 6-29-99

Sheet 1 of 2

2. Plant Braidwood Nuclear Power Station  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address

Unit 02

WR# 970083765-01  
Repair Organization P.O. No., Job No., etc.

3. Work Performed by Mechanical Maintenance  
Braidwood Nuclear Power Station  
R.R. 1 Box 84, Braceville, IL 60407  
Address

Type Code Symbol Stamp Not Applicable  
Authorization Number Not Applicable  
Expiration Date Not Applicable

4. Identification of System SX - Essential service water

5. (a) Applicable Construction Code III/B 19 77 Edition, W'78 Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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)
BALL VALVE	ITT ENG. valve Div.	NOT Applicable	NOT Applicable	25X2077A PEID M-126-2	NOT Applicable	Replaced	NO
BALL VALVE	ITT ENG. VALVE Div.	639135-1-3	NOT Applicable	ARI # A99-00806	1999	Replacement	NO

7. Description of Work Rebuild Valve.

8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure

N/A  Other: Pressure \_\_\_\_\_ psi Test Temp. \_\_\_\_\_ °F

DJC 6/29/99

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 Not applicable

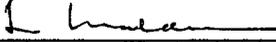
Certificate of Authorization No. Not applicable Expiration Date Not Applicable

Signed  Date 6/29, 19 99  
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 of Province of Illinois and employed by Hobas & Co. of Hartford, CT. have inspected the components described in this Owner's Report during the period 3-10-99 of 6-30-99 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.

 Commissions IL 1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-30-, 19 99

Doc # 16

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

1. Owner Commonwealth Edison Company Date 6-29-99  
Name  
One First National Plaza, Chicago, IL 60690  
Address
2. Plant Braidwood Nuclear Power Station Sheet 1 of 2  
Name  
R.R. 1 Box 84, Braceville, IL 60407  
Address Unit 02  
WR# 970083767-01  
Repair Organization P.O. No., Job No., etc.
3. Work Performed by Mechanical Maintenance Type Code Symbol Stamp Not Applicable  
Braidwood Nuclear Power Station Authorization Number Not Applicable  
R.R. 1 Box 84, Braceville, IL 60407 Expiration Date Not Applicable  
Address
4. Identification of System SX - Essential Service Water
5. (a) Applicable Construction Code III/B 19 77 Edition, W'78 Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 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)
Ball Valve	ITT ENG. VALVE DIV.	NOT APPLICABLE	NOT APPLICABLE	25X 2080A P&ID M-126-2	NOT APPLICABLE	Replaced	NO
Ball Valve	ITT ENG. VALVE DIV.	HEAT # 772322-4	NOT APPLICABLE	QRT # A98-00409	1998	Replacement	NO

7. Description of Work Rebuild valve
8. Test Conducted:  Hydrostatic  Pneumatic  Nominal Operating Pressure  
 Other: Pressure \_\_\_\_\_ psi Test Temp. \_\_\_\_\_ °F
- N/A

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 Not applicable

Certificate of Authorization No. Not applicable Expiration Date \_\_\_\_\_

Signed D. J. Amador Date 6/29, 19 99  
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 of Province of ILLINOIS and employed by HSB 1 Co. of HARTFORD, CT. have inspected the components described in this Owner's Report during the period 5-15-99 of 7-1-99 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.

L. Mearns Commissions DA 1035  
Inspector's Signature National Board, State, Province, and Endorsements

Date 7-6, 19 99