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Braidwood Station, Unit 1  
Facility Operating License No. NPF-72  
NRC Docket No. STN 50-456

Subject: Braidwood Station Unit 1 Inservice Inspection Summary Report

Enclosed please find the post-outage summary report (i.e., 90 day report) for inservice inspection examinations conducted during the Braidwood Station Unit 1 fourteenth refueling outage (A1R14). This report is submitted in accordance with the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, "Rules for the Inservice Inspection of Nuclear Power Plant Components," Article IWA-6200, "Requirements."

Please direct any questions you may have regarding this submittal to Mr. David Gullott, Regulatory Assurance Manager, at (815) 417-2800.

Respectfully,



Bryan Hanson  
Site Vice President  
Braidwood Station

Enclosure: Braidwood Station ISI Outage Report for A1R14

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Braidwood Station  
Illinois Emergency Management Agency – Division of Nuclear Safety

Act 17  
NRR

# **BRAIDWOOD STATION**

## **UNIT 1 INSERVICE INSPECTION SUMMARY REPORT FOR:**

**Interval 3, Period 1, Outage 1  
Interval 2, Period 3, Outage 3  
A1R14 Outage**

### **STATION ADDRESS:**

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

### **UNIT 1 COMMERCIAL SERVICE DATE:**

**July 29, 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**

Third Interval Inservice Inspections (ISI) and Preservice Inspections (PSI) of ASME Class 1, 2, and 3 components were conducted at Braidwood Station Unit 1 between January 2, 2008 to June 10, 2009, with the majority of these inspections being performed during the Braidwood Station Unit 1 fourteenth refueling outage (A1R14). A limited amount of examinations for the Second Interval were also performed during the A1R14 outage. This report also contains the results of the remaining Second Interval pressure tests that were not completed prior to submittal of the previous A1R13 outage report.

For the Third Interval, examinations were performed in accordance 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, 2001 Edition through 2003 Addenda, pursuant to the requirements of Title 10, Part 50.55a of the Code of Federal Regulations (10CFR50.55a).

Remaining Second Interval examinations were performed in accordance 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 10CFR50.55a.

The Containment Inspection Program was developed and implemented in accordance with the requirements and intent of Subsections IWE and IWL of ASME Section XI, 2001 Edition through the 2003 Addenda, pursuant to the requirements of 10CFR50.55a.

In addition to the ASME Section XI requirements, certain NRC augmented ISI inspections were completed during A1R14. The Braidwood Unit 1 augmented ISI examinations included:

- a) Examination of the Class 1 pressure boundary for leakage at nominal operating pressure, in accordance with Generic Letter 88-05.
- b) Bare Metal Visual examination of the Unit 1 reactor pressure vessel closure head penetration #74 in accordance with Braidwood Relaxation Request approval contained in T. J. McGinty (NRR) letter to C. Crane (Exelon) dated September 26, 2007 (ADAMS ML 072430457).
- c) Examination of the 1C reactor coolant pump motor flywheel in accordance with Regulatory Guide 1.14.
- d) Examination of welds in accordance with Materials Reliability Project MRP-139 and MRP-146.

There were no significant findings associated with any of the augmented ISI examinations. Reports for these examinations have been submitted under separate transmittals when required.

## **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, and IWF-2500 of the ASME code. The Non-Destructive Examination (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, and IWF 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**

Braidwood Station personnel, or their designee, visually examined (VT-1, VT-2, and VT-3) and/or NDE examined (UT, PT, MT) ASME components. The components examined comply with the ISI Program Schedule, Braidwood Station Technical Specifications (TS), 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, 2001 Edition through 2003 Addenda or 1989 Edition, or approved alternates (Performance Demonstration Initiative Program) as applicable. In addition, ultrasonic examination personnel were qualified in accordance with ANSI/ASME CP-189, 1995.

Certified personnel performed and evaluated visual examinations (VT-1, VT-2, and VT-3) 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 2001 Edition through 2003 Addenda or 1989 Edition, as applicable.

Certified personnel performed and evaluated visual examinations (UT, VT-1, and VT-3) of Containment Structures. Personnel were certified to the requirements of the ANSI/ASNT CP-189, 1991 revision, and/or ASME Section XI 2001 through 2003 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. White. The inspectors are associated with Hartford Steam Boiler Inspection and Insurance Company of 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 Class 1 and 2, Risk Informed ISI, and augmented examinations performed during the Braidwood Station Unit 1 A1R14 refueling outage. 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**

<b>System</b>	<b>Number of Welds / Components*</b>
Containment Spray (CS)	2
Chemical & Volume Control (CV)	3**
Feedwater (FW)	3
Main Steam (MS)	8***
Reactor Coolant (RC)	20
Pressurizer (RY)	5
Safety Injection (SI)	2
<b>TOTALS</b>	<b>43</b>

\* Non-Section XI Augmented examinations and Risk Informed ISI socket weld VT-2 examinations are not included in these counts but are contained in Section 3.1.

\*\* These welds are credited to the Second Interval (1989 Edition).

\*\*\* Includes seven sample expansion welds.

### **2.2 Inservice Component Support Summary**

<b>SYSTEM EXAMINED</b>	<b>Number of Component Supports</b>
Containment Spray (CS)	1
Chemical & Volume Control (CV)	27
Feedwater (FW)	17
Main Steam (MS)	4
Reactor Coolant (RC)	4
Residual Heat Removal (RH)	6
Safety Injection (SI)	1
<b>TOTALS</b>	<b>60</b>

## 2.3 Inservice Snubber Summary

SYSTEM EXAMINED	Number of Snubbers Examined by VT-3	Number of Snubbers Functionally Tested
Auxiliary Feedwater (AF)	1	0
Chemical & Volume Control (CV)	7	4
Main Steam (MS)	2	2
Reactor Coolant (RC)	18	9
Residual Heat Removal (RH)	7	5
Reactor Coolant (RY)	3	3
Steam Generator Blowdown (SD)	2	1
Safety Injection (SI)	10	9
<b>TOTALS</b>	<b>50</b>	<b>33</b>

## 2.4 Inservice Pressure Test Summary

### 2.4.1 Pressure Test Block Inspection Summary

The components contained in Table 2.4.1-1 are pressure test blocks that were examined for Section XI Inservice Inspection credit during A1R14.

**Table 2.4.1-1  
A1R14 Section XI Pressure Tests**

System	Class	Number of Test Blocks Examined*
Plant Systems Pressurized During Mode 3 (ZZ)	1 & 2	2
<b>TOTALS</b>		<b>2</b>

\* The Second ISI Interval was extended as permitted by IWB-2412(b) to complete examinations on remaining Second Interval portion of test block A01ZZ-000005-M04-02A during A1R14.

The components contained in the Table 2.4.1-2 are pressure test blocks that were either examined during A1R14 but credited to the Second ISI Interval or were completed during the Second Interval but were not submitted under the previous A1R13 outage report because surveillances were still in progress at the time the A1R13 90 Day Report was submitted.

**Table 2.4.1-2  
Second Interval Section XI Pressure Tests  
Completed Since Previous Report**

<b>System</b>	<b>Class</b>	<b>Number of Test Blocks Examined</b>
Component Cooling (CC)	2	1
Containment Spray (CS)	2	5
Chemical Volume & Control (CV)	2	2
Fuel Pool Cooling (FC)	2	2
Process Sampling (PS)	2	1
Residual Heat Removal (RH)	2	4
Safety Injection	2	7
Essential Service Water (SX)	2	4
Plant Systems Pressurized During Mode 3 (ZZ)	1 & 2	2
<b>TOTALS</b>		<b>28</b>

## **2.4.2 Borated Bolting Inservice Inspection Summary**

Summary of components contained in this table are those insulated borated bolted connections that were examined for Section XI Inservice Inspection credit. Inspections on these connections are performed per the ISI Program Plan.

<b>SYSTEM EXAMINED</b>	<b>Number of Connections Examined by VT-2</b>	<b>Number of Connections Examined by VT-1</b>
Chemical & Volume Control (CV)	15	0
Pressurizer (PZR)	1	0
Reactor Coolant (RC)	13	1
Residual Heat Removal (RH)	2	0
<b>TOTALS</b>	<b>31</b>	<b>1</b>

## **2.5 Steam Generator Eddy Current Testing Summary**

### **2.5.1 Steam Generator Eddy Current Testing Summary**

In compliance with Braidwood Station Technical Specification (TS) 5.5.9, "Steam Generator (SG) Program," and American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code Section XI 2001 Edition through 2003 addenda, IWB 2500-1, Examination Category B-Q, Item B16.20, SG eddy current examinations were performed during the Braidwood Station Unit 1 Cycle 14 refueling outage (A1R14). In addition, the inspections were performed consistent with the Electric Power Research Institute (EPRI) "PWR Steam Generator Examination Guidelines," Revision 7, and Nuclear Energy Institute NEI 97-06, "Steam Generator Program Guidelines," Revision 2.



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A1R14 ISI Outage Report**

The following inspections were performed during this outage.

- 100% full length bobbin coil eddy current in all four SGs
- 100% hot leg dents and dings  $\geq 2.0$  volts +Point™
- Diagnostic +Point™ eddy current based on bobbin coil eddy current results
- 100% Visual Inspection of Previously Installed Tube Plugs
- 100% Visual Inspection of Newly Installed Tube Plugs

The modes of tube degradation found during A1R14 were fan bar wear, lattice grid wear and foreign object wear.

As a result of the eddy current inspection of the SGs, a total of 5 tubes were removed from service by mechanical tube plugging. The 5 tubes were removed from service due to either having wear associated with secondary side foreign objects or were required to be removed from service in order to bound locations where secondary side foreign objects could not be retrieved.

There were no scanning limitations during the eddy current examinations. Table 2.5.1-1, "Equivalent Tube Plugging Level," provides the total tube plugging history and equivalent plugging levels to-date for the Braidwood Station, Unit 1 SGs. Note: The Braidwood Unit 1 steam generators were replaced during the Cycle 7 refueling outage (November 1998).

**Table 2.5.1-1  
Equivalent Tube Plugging Level**

	<b>SG A</b>	<b>SG B</b>	<b>SG C</b>	<b>SG D</b>	<b>Total</b>
<u>Tubes Plugged at Factory</u>	1	2	0	0	3
<b>Tubes Plugged in A1R08</b>	1	0	0	0	1
<b>Tubes Plugged in A1R10</b>	8	10	3	0	21
<b>Tubes Plugged in A1R11</b>	0	2	2	1	5
<b>Tubes Plugged in A1R12</b>	11	17	0	0	28
<b>Tubes Plugged in A1R13</b>	6	8	7	0	21
<b>Tubes Plugged in A1R14</b>	0	1	4	0	5
<b>Total Tubes Plugged</b>	27	40	16	1	84
<b>Total Tubes Plugged (%)</b>	0.41%	0.60%	0.24%	0.02%	0.32%

Note: Steam Generator Inspections Were Not Performed During A1R09.

One tube contained an indication of secondary side foreign object wear greater than the TS plugging limit of  $\geq 40\%$  in any of the four SGs. The indication was sized as 73% Through Wall (TW). Structural and leakage integrity, as defined by TS 5.5.9.b, "Performance Criteria for SG Tube Integrity," was demonstrated through successful performance of In-Situ pressure testing of the degraded area of the tube.

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, "Steam Generator (SG) Tube Inspection Report."

### 3.0 COMPONENT EXAMINATION RESULTS

#### 3.1 Third Interval Inservice and Preservice Inspection Detailed Result Tables

##### 3.1.1 Detailed Third Interval Inservice Weld/Component Table(s):

The table for this section (Pages 3-6 to 3-19) lists the examinations performed for Section XI Inservice and Augmented Inspection requirements for Class 1 and 2 welds and components for the Third ISI Interval. 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 3.3.

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)
(J)	(K)							

##### 3.1.2 Detailed Third Interval Preservice Weld/Component Table(s):

The table for this section (Page 3-20 to 3-22) lists the baseline examinations performed for Section XI Preservice Inspection requirements for Class 1 and Class 2 components replaced during A1R14 (Third ISI Interval). 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 3.3.

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)
(J)	(K)							

##### 3.1.3 Detailed Third Interval Inservice Component Support Table:

The table for this section (Pages 3-23 to 3-30) lists the examinations performed for Section XI Inservice Inspection requirements for Class 1 and 2 component supports for the Third ISI Interval. 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 3.3.

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)
(J)	(K)					

##### 3.1.4 Detailed Third Interval Preservice Component Support Table:

The table for this section (Pages 3-31) lists the examinations performed for Section XI Inservice Inspection requirements for a replaced Class 2 component support. The general format of how the table is set-up is shown below. A

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A1R14 ISI Outage Report**

description of the information contained in each column can be found in Section 3.3.

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)
(J)	(K)					

### 3.1.5 Detailed Third Interval Inservice Snubber Table:

The table for this section (Pages 3-32 to 3-40) lists the examinations performed for Section XI Inservice Inspection requirements for Class 1 and 2 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 3.3.

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)
(J)	(K)					

### 3.1.6 Detailed Third Interval Preservice Snubber Table:

The table for this section (Pages 3-41 to 3-42) lists the baseline examinations performed for Section XI Preservice Inspection requirements for Class 1 and 2 snubbers replaced during A1R14. 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 3.3.

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)
(J)	(K)					

### 3.1.7 Detailed Listing of Third Interval System Pressure Tests

The table for this section (Pages 3-43) lists the examinations performed for Section XI Inservice and Augmented Inspection requirements for Class 1 and 2 pressure test blocks credited to the Third ISI Interval. 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 3.3.

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

### 3.1.8 Detailed Borated Bolted Connection Table

The table for this section (Pages 3-44 to 3-47) lists the examinations performed for Inservice Inspection pressure testing requirements of Section XI Class 1 and 2 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 3.3.

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

## 3.2 Second Interval Inservice Inspection Detailed Result Tables

### 3.2.1 Detailed Second Interval Inservice Weld/Component Table

The table for this section (Pages 3-48) lists the examinations performed for Section XI Inservice and Augmented Inspection requirements for Class 1 and 2 welds and components for the Second ISI Interval. 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 3.3.

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)
(J)	(K)							

### 3.2.2 Detailed Listing of Second Interval System Pressure Tests

The table for this section (Pages 3-49 to 3-57) lists the examinations performed for Section XI Inservice and Augmented Inspection requirements for Class 1 and 2 pressure test blocks credited to the Second ISI Interval. 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 3.3.

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

### **3.3 General Inservice Report Information**

#### **3.3.1 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) associated with the component for identification.
- (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 surface or volumetric examination 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.

### **3.2.2 Report Abbreviations**

ATI	-	Action Tracking Item
BMV	-	Bare Metal Visual Inspection
FUNCT	-	Snubber Functional Test
FSWOL	-	Full Structural Weld Overlay
GE/IND	-	Geometry/Indication
GEOM	-	Geometry
IND	-	Indication
IR	-	Issue Report
NRI	-	No Recordable Indications
MT	-	Magnetic Particle Inspection
PT	-	Liquid Penetrant Inspection
SUR	-	Surface Exam
TBD	-	To Be Developed
WO	-	Work Order
UT	-	Ultrasonic Inspection
VOL	-	Volumetric Exam
VOL-E	-	Volumetric Exam of an Extended Volume
VT	-	Visual Inspection

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results	
Cat.	Description								
Comments									
NA	ECCS	1CS-01-02	1CS02AA-8"	NOTE 19	100	VOL	UT-0 UT-45 UT-70	NRI	
Zero degree performed to determine material thickness and confirm no existing counterbore. Complete coverage achieved with 45 degree shear wave.									
NA	ECCS	1CS-03-76	1CS06AA-6"	NOTE 19	100	VOL	UT-0 UT-45	NRI	
Zero degree performed to determine material thickness and confirm no existing counterbore. Complete coverage achieved with 45 degree shear wave.									
NA	ECCS	1CS-03-77	1CS06AA-6"	NOTE 19	100	VOL	UT-0 UT-45	NRI	
Zero degree performed to determine material thickness and confirm no existing counterbore. Complete coverage achieved with 45 degree shear wave.									
R-A	R01.20	1CS-04-24	1CS23AB-14"	I3R-01	NOTE 17	97	VOL-E	UT-0 UT-45 UT-60 UT-70	NRI  NRI NRI
Zero degree performed for material thickness and confirm no counterbore. Scanning was limited by gamma port located on elbow at zero degree. The 70 degree scan was performed for single sided examination at gamma port, no coverage credit applied. Root geometry below recording limits was observed.									
C-C	C03.30	1CSP-01-CSP04, 05, 06	1CS01PB	NOTE 17	65.7	SUR	PT	NRI	
Relief Request Required: Surface examination limited to three sides of each lug (three lugs total). OBSTRUCTION: VT-1 has areas of inaccessibility.									

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.11	1CV-05-03 PIPE - ELBOW	1CVA3B-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-05-04 ELBOW - PIPE	1CVA3B-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-05-05 PIPE - ELBOW	1CVA3B-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-05-06 ELBOW - PIPE	1CVA3B-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-05-13 PIPE - ELBOW	1CVA3B-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-05-14.01 ELBOW - PIPE	1CVA3B-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-11-06 PIPE - ELBOW	1CVA6AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1CV-11-07 ELBOW - PIPE	1CVA6AA-2"	I3R-01	NOTE 17		VT-2	NRI
NA	ECCS	1CV-17-16 PIPE - ELBOW	1CV05CB-6"		NOTE 19	100	VOL	UT-45 NRI
NA	ECCS	1CV-17-24 ELBOW - PIPE	1CV05CB-6"		NOTE 19	100	VOL	UT-0 UT-45 NRI
NA	ECCS	1CV-17-25 PIPE - ELBOW	1CV05CB-6"		NOTE 19	100	VOL	UT-45 NRI
R-A	R01.11	1RC-36-15 PIPE - ELBOW	1CVA3AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-16 ELBOW - PIPE	1CVA3AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-17 PIPE - ELBOW	1CVA3AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-18 ELBOW - PIPE	1CVA3AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-11 PIPE - ELBOW	1CVA7AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-12 ELBOW - PIPE	1CVA7AA-2"	I3R-01	NOTE 17		VT-2	NRI



### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

**SYSTEM:** Feedwater System (FW)

Section XI Cat.	Component ID Description	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results
<b>Comments</b>								
R-A	R01.11 1FW-02-04 R01.18 VALVE 1FW009A - PIPE	1FW03DA-16"	I3R-01	NOTE 09 NOTE 17	100	VOL-E	UT-0 UT-45	NRI
Zero degree performed to confirm thickness and determine presence of counterbore. Single-sided examination. Previously recorded geometry observed below recordable levels.								
R-A	R01.11 1FW-02-05 R01.18 PIPE - PIPE	1FW03DA-16"	I3R-01	NOTE 09 NOTE 17	100	VOL-E	UT-0 UT-45	NRI
Zero degree performed to confirm thickness and confirm counterbore did not exist. Previously recorded geometry observed below recordable levels.								
R-A	R01.11 1FW-02-05A R01.18 PIPE - PENETRATION (1PC-079)	1FW03DA-16"	I3R-01	NOTE 09 NOTE 17	100	VOL-E	UT-0 UT-45	NRI
Zero degree performed to confirm thickness and confirm counterbore did not exist. Previously recorded geometry observed below recordable levels.								

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results
Cat.	Description							
<b>Comments</b>								
C-C	C03.20	1MS-01-SW07	1MS01AD-30.25"	NOTE 17	97	SUR	MT	NRI
		(4) LUG ATTACH. FOR 1MS08002C						
Expansion from IR 901376.								
C-C	C03.20	1MS-01-SW08 TO SW09	1MS01AD-30.25"	NOTE 17	97	SUR	MT	NRI
		(8) LUG ATTACH. FOR 1MS08007S						RI
Expansion from IR 904273. Linear indication (0.7" long) located in previously ground out area. Reference Issue Report 905949. Indications were evaluated and accepted for continued service under EC 374961.								
C-C	C03.20	1MS-03-PG01 TO PG16	1MS01AA-30.25"	NOTE 17	97	SUR	MT	NRI
		(8) LUG ATTACH. FOR 1MS05007S						NRI
Expansion from IR 904273.								
C-C	C03.20	1MS-03-SW14 TO SW17	1MS01AA-30.25"	NOTE 17	97	SUR	MT	NRI
		(4) LUG ATTACH. FOR 1MS05002C						
Expansion from IR 904273.								
C-C	C03.20	1MS-05-PG01 TO PG08	1MS01AB-32.75"	NOTE 17	97	SUR	MT	RI
		(8) LUG ATTACH. FOR 1MS06007S						RI
						VOL	UT-0 UT-45	
Sample expansion due to 1MS-07-SW08 indications in A1R14 (IR 901376). Eight welded lugs total (four above clamp and four below pipe clamp). Indications noted, IRs 904273 and 904794 initiated. Two of four lugs above and below pipe clamp are acceptable through further review. Rejected lugs are PG-03, PG04, PG06, and PG08.								
Per discussions with NRR, Exelon agreed to perform UT to confirm and characterize the laminar extent of the welded attachment lug with the longest magnetic particle indication. Zero degree and 45 degree scans confirmed the indication to be laminar. Evaluation EC 374961 determined component acceptable for continued service.								
C-C	C03.20	1MS-05-SW07 TO SW10	1MS01AB-32.75"	NOTE 17	97	SUR	MT	NRI
		(4) LUG ATTACH. FOR 1MS06002C						
Sample expansion due to 1MS-07-SW08 indications in A1R14 (IR 901376). Examination limited by pipe clamp, coverage achieved was 97%.								
C-C	C03.20	1MS-07-SW08	1MS01AC-32.75"	NOTE 17	97	SUR	MT	RI
		(4) LUG ATTACH. FOR 1MS07002C				VOL	UT-0	IND
Multiple linear indications were noted in lug base material at weld toe, reference IR 901376. Zero degree UT was performed to characterize and confirm that indications were laminar flaws. Indications were evaluated in accordance with EC 374961 and component was found to be acceptable for continued service.								
C-C	C03.20	1MS-07-SW09 TO SW10	1MS01AC-32.75"	NOTE 17	97	SUR	MT	NRI
		(8) LUG ATTACH. FOR 1MS07006S						NRI
Sample expansion due to 1MS-07-SW08 indications in A1R14 (IR 901376).								

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI Cat.	Component ID Description	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results
Comments								
R-A	R01.20 1RC-02-04A BRANCH CONNECTION - THERMOWELL	THERMOWELL	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-03-21A BRANCH CONNECTION - THERMOWELL	THERMOWELL	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-06-10 ELBOW - PIPE	1RC21AA-8"	I3R-01	NOTE 17	100	VOL-E	UT-45	NRI
Previously recorded geometry observed below recordable levels.								
R-A	R01.11 1RC-06-12 ELBOW - PIPE	1RC21AA-8"	I3R-01	NOTE 17	100	VOL-E	UT-45	NRI
Previously recorded geometry observed below recordable levels.								
R-A	R01.11 1RC-07-07-02 ELBOW - NOZZLE	1RC37A-3"	I3R-01	NOTE 17		VOL	UT-0 UT-45 UT-70	NRI
Examination for MRP-146, not credited towards Section XI program.								
R-A	R01.11 1RC-07-10-01 ELBOW - PIPE	1RC28A-3"	I3R-01	NOTE 17		VOL	UT-0 UT-45 UT-70	NRI
Examination for MRP-146, not credited to Section XI program.								
R-A	R01.20 1RC-11-07 PIPE - ELBOW	1RC04AB-12"	I3R-01	NOTE 04 NOTE 17	100	VOL-E	UT-45	NRI
Previously recorded geometry observed below recordable levels.								
R-A	R01.20 1RC-11-08 ELBOW - PIPE	1RC04AB-12"	I3R-01	NOTE 04 NOTE 17	100	VOL-E	UT-45	NRI
Previously recorded geometry observed below recordable levels.								
R-A	R01.20 1RC-23-01 3"X1.5" REDUCER - PIPE	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-23-02 PIPE - ELBOW	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-23-03 ELBOW - PIPE	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-23-04 PIPE - ELBOW	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-23-05 ELBOW - PIPE	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-27-04AA PIPE - ELBOW	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-27-05AA ELBOW - PIPE	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-27-06AA PIPE - ELBOW	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.20 1RC-27-07AA ELBOW - PIPE	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2		NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.20	1RC-27-08AA PIPE - VALVE 1RC8045A	1RC22AA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-01-03 PIPE - BRANCH CONNECTION	1RC16AC-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-01-04 PIPE - BRANCH CONNECTION	1RC16AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-02-03 ELBOW - PIPE	1RC16AC-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-02-04 ELBOW - PIPE	1RC16AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-03-03 PIPE - ELBOW	1RC16AC-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-03-04 PIPE - ELBOW	1RC16AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-04-03 ELBOW - PIPE	1RC16AC-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-04-04 ELBOW - PIPE	1RC16AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-05-03 PIPE - ELBOW	1RC16AC-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-05-04 PIPE - ELBOW	1RC16AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-06-03 VALVE 1RC8038C - PIPE	1RC16AC-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-29-06-04 VALVE 1RC8038D - PIPE	1RC16AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-01 BRANCH CONNECTION - PIPE	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-02 PIPE - VALVE 1RC8039B	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-03 VALVE 1RC8039B - PIPE	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-04 PIPE - TEE	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-05 TEE - 2"X.75" REDUCER	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-06 TEE - PIPE	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-31-07 PIPE - VALVE 1RC8037B	1RC14AB-2"	I3R-01	NOTE 17		VT-2	NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
Comments								
R-A	R01.20	1RC-31-08 BRANCH CONNECTION - PIPE	1RC26A-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-01 BRANCH CONNECTION - PIPE	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-02 PIPE - ELBOW	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-03 ELBOW - PIPE	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-04 PIPE - VALVE 1RC8039A	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-05 VALVE 1RC8039A - PIPE	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-06 PIPE - TEE	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-07 TEE - 2"X.75" REDUCER	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-08 TEE - PIPE	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-09 PIPE - VALVE 1RC8037A	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-20 PIPE - TEE	1RC14AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-36-22 TEE - 2"X1" REDUCER	1RC86AA-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-01 BRANCH - PIPE	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-02 PIPE - ELBOW	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-03 ELBOW - PIPE	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-04 PIPE - VALVE 1RC8039D	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-05 VALVE 1RC8039D - PIPE	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-06 PIPE - TEE	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-07 TEE - 2"X.75" REDUCER	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1RC-37-08 TEE - PIPE	1RC14AD-2"	I3R-01	NOTE 17		VT-2	NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
Comments								
R-A	R01.11 1RC-37-09 PIPE - VALVE 1RC8037D	1RC14AD-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-01AA PIPE - BRANCH CONNECTION	1RC16AA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-01AB PIPE - BRANCH CONNECTION	1RC16AB-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-02AA ELBOW - PIPE	1RC16AA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-02AB ELBOW - PIPE	1RC16AB-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-03AA PIPE - ELBOW	1RC16AA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-03AB PIPE - ELBOW	1RC16AB-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-04AA ELBOW - PIPE	1RC16AA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-04AB VALVE 1RC8038B - PIPE	1RC16AB-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-05AA PIPE - ELBOW	1RC16AA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-41-06AA VALVE 1RC8038A - PIPE	1RC16AA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-01 BRANCH CONNECTION - PIPE	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-02 PIPE - ELBOW	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-03 ELBOW - PIPE	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-04 PIPE - VALVE 1RC8039C	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-05 VALVE 1RC8039C - PIPE	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-06 PIPE - TEE	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-07 TEE - 2"X3/4" REDUCER	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-08 TEE - PIPE	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1RC-42-09 PIPE - VALVE 1RC8037C	1RC14AC-2"	I3R-01	NOTE 17		VT-2		NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results
Cat.	Description							
<b>Comments</b>								
R-A	R01.11	1RC-42-10 PIPE - TEE	1RC14AC-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1RC-42-11 TEE - PIPE	1RC14AC-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1RC-42-12 TEE - 2"X1" REDUCER	1RC14AC-2"	I3R-01	NOTE 17	VT-2		NRI
NA	RG 1.14	1RCP-01-FLYWHEEL (PMP C) RCP "C" PUMP FLYWHEEL Examined bore and three keyways of 1C RCP flywheel.	1RCP01C		NOTE 18	100	PT PT	NRI
B-G-1	B06.180	1RCP-01-RCP-PD-01 TO 24 RCP MAIN FLANGE BOLT (01 TO 24)	1RC01PD		NOTE 03 NOTE 15	100	VOL UT-0	NRI
R-A	R01.15	1RV-01-022  B15.90 NOZZLE - SAFE END (22 DEG.) MRP-139 Visual, VE examination in accordance with Code Case N-722.	1RC01R	I3R-01	NOTE 14 NOTE 17		Visual, VE Visual, VE	NRI
R-A	R01.15	1RV-01-025  B15.90 NOZZLE - SAFE END (158 DEG.) MRP-139 Visual, VE examination in accordance with Code Case N-722.	1RC01R	I3R-01	NOTE 14 NOTE 17		Visual, VE Visual, VE	NRI
R-A	R01.15	1RV-01-026  B15.90 NOZZLE - SAFE END (202 DEG.) MRP-139 Visual, VE examination in accordance with Code Case N-722.	1RC01R	I3R-01	NOTE 14 NOTE 17		Visual, VE Visual, VE	NRI
R-A	R01.15	1RV-01-029  B15.90 NOZZLE - SAFE END (338 DEG.) MRP-139 Visual, VE examination in accordance with Code Case N-722.	1RC01R	I3R-01	NOTE 14 NOTE 17		Visual, VE Visual, VE	NRI
NA	NA	1RV-03-74-BMV  WELD IN PERIPHERAL CRD HOUSING After mirror insulation skirting was shimmed to gain access performed VE of penetration 74 in accordance with Relaxation Request commitment. No evidence of leakage, degradation, etc. was noted, acceptable.	1RC01R		NOTE 17	100	Visual, VE Visual, VE	NRI
B-G-1	B06.10	1RV-03-NUTS (01 TO 54) CLOSURE HEAD NUTS (54 TOTAL) After disassembly, examined reactor head flange nuts #19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36.	1RC01R		NOTE 03	100	VT-1 VT-1	NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results
Cat.	Description							
<b>Comments</b>								
B-G-1	B06.50	1RV-03-WASHERS CLOSURE WASHERS (01 TO 54)	1RC01R		NOTE 03	VT-1		NRI
After disassembly, examined reactor head flange washers (two washers each per bolt) #19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36.								
B-Q	B16.20	1SG-05-1RC01BA TUBING STEAM GENERATOR TUBING	1RC01BA			VOL ET		NRI
B-G-1	B06.90	1SG-05-SGB-01 PRIMARY MANWAY (20 STUDS and BOLTS)	1RC01BA		NOTE 03	100	VOL UT-66 UT-80L	NRI
Examined twenty primary manway studs for the 1A steam generator hot leg manway (Numbers 1-AH-01 to 1-AH-20).								
B-G-1	B06.90	1SG-05-SGB-02 PRIMARY MANWAY (20 STUDS and BOLTS)	1RC01BA		NOTE 03	100	VOL UT-66 UT-80L	NRI
Performed volumetric of nineteen primary manway studs for the 1A steam generator cold leg manway (Studs 1-AC-01 to 1-AC-14 and 1-AC-16 to 1-AC-20). The elongation rod in stud 1-AC-15 could not be removed and existing stud was replaced with a tested spare under WO# 1078773-01.								
Preservice UT of replacement primary manway cold leg bolt #15.								
B-G-1	B06.110	1SG-05-SGN-01 PRIMARY MANWAY (20 NUTS, BUSHINGS, and WASHERS)	1RC01BA		NOTE 03	VT-1	VT-1	NRI
Performed VT-1 examination of primary manway stud nuts for 1A steam generator hot leg manway (Nuts 1-AH-01- to 1-AH-20).								
B-G-1	B06.110	1SG-05-SGN-02 PRIMARY MANWAY (20 NUTS, BUSHINGS, and WASHERS)	1RC01BA		NOTE 03	VT-1	VT-1	NRI
Examined twenty primary manway stud nuts for 1A steam generator cold leg manway (Nuts 1-AC-01 to 1-AC-20).								
B-Q	B16.20	1SG-06-1RC01BB TUBING STEAM GENERATOR TUBING	1RC01BB			VOL ET		RI
Tube at Row 89 Column 30 was plugged on hot leg and cold leg ends under WO# 1073205-02 based on eddy current test results.								
B-Q	B16.20	1SG-07-1RC01BC TUBING STEAM GENERATOR TUBING	1RC01BC			VOL ET		RI
The following four tubes were plugged on the hot leg and cold leg ends based on eddy current test results: Row 28 Column 63, Row 30 Column 63, Row 27 Column 64, and Row 29 Column 64. Tubes were plugged under WO# 1073207-02.								
B-Q	B16.20	1SG-08-1RC01BD TUBING STEAM GENERATOR TUBING	1RC01BD			VOL ET		NRI
R-A	R01.20	1SI-02-38 ELBOW - PIPE	1RC35AA-6"	I3R-01	NOTE 17	100	VOL-E UT-45 UT-60	NRI
Previously recorded beam redirection was not observed. Previously recorded root/geometry indications were observed below recordable levels.								
R-A	R01.11	1SI-02-39 PIPE - ELBOW	1RC35AA-6"	I3R-01	NOTE 17	100	VOL-E UT-45 UT-60	NRI
Previously recorded geometry observed below recordable levels.								
R-A	R01.11	1SI-02-40 ELBOW - PIPE	1RC35AA-6"	I3R-01	NOTE 17	100	VOL-E UT-45	NRI



### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.11 1SI-02-44 PIPE - TEE	1RC04AA-12"	I3R-01	NOTE 17	100	VOL-E	UT-45	NRI
ID geometry observed below recordable levels.								
R-A	R01.11 1SI-02-45 ELBOW - PIPE	1RC04AA-12"	I3R-01	NOTE 17	100	VOL-E	UT-45	NRI
ID geometry observed below recordable levels.								
R-A	R01.11 1SI-16-22.01 VALVE 1SI8900D - PIPE	1RC30AD-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-16-23 PIPE - 3"X1½" REDUCER	1RC30AD-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-17-01 PIPE - 3"X1½" REDUCER	1RC30AB-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-17-02 VALVE 1SI8900B - PIPE	1RC30AB-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-31-01 PIPE - REDUCER	1RC30AA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-31-02 VALVE 1SI8900A - PIPE	1RC30AA-1.5"	I3R-01	NOTE 17		VT-2		NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.11	1CV-02-13 VALVE 1CV8377 - PIPE	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1CV-02-14 PIPE - ELBOW	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1CV-02-15 ELBOW - PIPE	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1CV-02-16 PIPE - ELBOW	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1CV-02-17 ELBOW - PIPE	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1CV-02-18 PIPE - ELBOW	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
R-A	R01.11	1CV-02-19 ELBOW - PIPE	1RY18A-2"	I3R-01	NOTE 17	VT-2		NRI
B-K	B10.10	1PZR-01-07 PRESSURIZER SUPPORT SKIRT ATT.	1RY01S	NOTE 17 NOTE 29	100	SUR	MT	NRI
Code Case N-700 applies.								
B-B	B02.11	1PZR-01-08A SHELL - LOWER HEAD	1RY01S	NOTE 17	95.3	VOL	UT-0 UT-45 UT-60	NRI
Examination limited due to welded pads on head side of weld and instrument nozzles, cumulative examination coverage was 95.3%.								
B-B	B02.12	1PZR-01-09A SHELL LONG SEAM	1RY01S	NOTE 17	100	VOL	UT-0 UT-45 UT-60	NRI
Examined twelve inches of longitudinal seam weld associated with 1PZR-01-08A.								
B-G-2	B07.50	1RC-32-B5 FLANGED CONNECTION (12 STUDS)	1RY03BB-6"			VT-1	VT-1	NRI
Inlet flange hydranuts only. Inlet flange bolting stays with valve and will be examined after valve is returned from off site for set point testing and refurbishment.								
B-G-2	B07.50	1RC-32-B6 FLANGED CONNECTION (12 STUDS)	1RY03BC-6"			VT-1	VT-1	NRI
Inlet flange hydranuts only. Inlet flange bolting stays with valve and will be examined after valve is returned from off site for set point testing and refurbishment.								

## Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief Requests	Technical Notes	Code Coverage	Required Exam	Actual Exam	Results
Cat.	Description							
<b>Comments</b>								
NA	ECCS 1SI-01-03 ELBOW - PIPE	1SI09BA-10"		NOTE 19	100	VOL	UT-45	NRI
Augmented examination (stagnant borated line). Volume expanded to include Risk Informed ISI volume. Previously recorded geometry observed below recordable levels.								
NA	ECCS 1SI-01-04 PIPE - ELBOW	1SI09BA-10"		NOTE 19	100	VOL	UT-45	NRI
Augmented examination (stagnant borated line). Volume expanded to include Risk Informed ISI volume (no counterbore detected). Previously recorded geometry observed below recordable levels. Beam redirection noted for information.								
NA	ECCS 1SI-01-05 ELBOW - PIPE	1SI09BA-10"		NOTE 19	100	VOL	UT-45	NRI
Augmented examination (stagnant borated line). Volume expanded to include Risk Informed ISI volume (no counterbore detected). Previously recorded geometry observed below recordable levels. Beam redirection noted for information.								
NA	ECCS 1SI-01-06 PIPE - ELBOW	1SI09BA-10"		NOTE 19	100	VOL	UT-45	NRI
Augmented examination (stagnant borated line). Volume expanded to include Risk Informed ISI volume (no counterbore detected). Previously recorded geometry observed below recordable levels. Beam redirection noted for information.								
NA	ECCS 1SI-01-07 ELBOW - PIPE	1SI09BA-10"		NOTE 19	100	VOL	UT-45	NRI
Augmented examination (stagnant borated line). Volume expanded to include Risk Informed ISI volume (no counterbore detected). Previously recorded geometry observed below recordable levels. Beam redirection noted for information.								
R-A	R01.11 1SI-10-25 PIPE - ELBOW	1SI18FC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-10-26.01 ELBOW - PIPE	1SI18FC-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-18-23 VALVE 1SI8810B - PIPE	1SI08JB-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-18-24 PIPE - ELBOW	1SI08JB-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-18-25 ELBOW - PIPE	1SI08JB-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-18-26 PIPE - ELBOW	1SI08JB-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-19-01 BRANCH CONNECTION - PIPE	1SI08GA-1.5"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-19-06 COUPLING - PIPE	1SI08HA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-19-07 PIPE - FLANGE	1SI08HA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-19-08 FLANGE - PIPE	1SI08HA-2"	I3R-01	NOTE 17		VT-2		NRI
R-A	R01.11 1SI-19-14 PIPE - ELBOW	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2		NRI

### Section 3.1.1 Detailed Third Interval Inservice Inspection Weld Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.11	1SI-19-15 ELBOW - PIPE	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-16 PIPE - VALVE 1SI8810A	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-17 VALVE 1SI8810A - PIPE	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-18 PIPE - FLANGE	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-20 PIPE - ELBOW	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-22 PIPE - ELBOW	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-23 ELBOW - PIPE	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
R-A	R01.11	1SI-19-24 PIPE - ELBOW	1SI08JA-1.5"	I3R-01	NOTE 17		VT-2	NRI
NA	ECCS	1SI-28-25 ELBOW - PIPE	1SI09AC-10"		NOTE 19	100	VOL UT-0 UT-45 UT-70	NA NRI
Stagnant borated piping weld. Zero degree examination to determine presence of counterbore and ID transitions. Previously observed at varying amplitudes.								
NA	ECCS	1SI-28-48 PIPE - ELBOW	1SI09AB-10"		NOTE 19	100	VOL UT-0 UT-45 UT-70	NRI
Augmented examination (stagnant borated line). Volume expanded to include Risk Informed ISI volume (no counterbore detected). Previously recorded geometry observed below recordable levels. The 70 degree was only performed under axial scan to improve coverage.								
R-A	R01.20	1SI-34-07 PIPE - ELBOW	1SI01B-24"	I3R-01	NOTE 17	100	VOL-E UT-0 UT-45 UT-60	NA NRI NRI
Zero degree performed to determine material thickness and confirm no existing counterbore. Previously recorded geometry was observed below recordable levels. The 60 degree shear wave was performed to improve coverage due to hoop shrinkage at the toe of the weld.								
R-A	R01.20	1SI-35-18 TEE - PIPE	1SI53AA-14"	I3R-01	NOTE 17	100	VOL-E UT-0 UT-45 UT-70	NA NRI NRI
Zero degree performed to confirm material thickness and location/extent of counterbore.								

## Section 3.1.2 Detailed Third Interval Preservice Weld / Component Table

**SYSTEM:** Auxiliary Feedwater System (AF)

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat. Item	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.20 1AF-01-13	1AF02EB-4"	I3R-01	NOTE 17	100	VOL-E	UT-0	NRI
	Pipe - Elbow						UT-45	NRI
Preservice volumetric of new weld performed as part of pipe replacement under WO# 1170562. Weld is denoted as FW-23, FW-23 R1, and FW-23 R2 in work package weld inspection records and RT and UT data sheets.								
R-A	R01.20 1AF-01-14	1AF02EB-4"	I3R-01	NOTE 17	100	VOL-E	UT-0	NRI
	Elbow - Pipe						UT-45	NRI
Preservice volumetric of new weld performed as part of pipe replacement under WO# 1170562. Weld is denoted as FW-2A-1 in work package weld inspection records and RT and UT data sheets. ID geometry below recordable levels noted.								
R-A	R01.20 1AF-01-15	1AF02EB-4"	I3R-01	NOTE 17	100	VOL-E	UT-0	NRI
	Pipe - Elbow						UT-45	NRI
Preservice volumetric of new weld performed as part of pipe replacement under WO# 1170562. Weld is denoted as FW-22 in work package weld inspection records and RT and UT data sheets.								
R-A	R01.20 1AF-01-16	1AF02EB-4"	I3R-01	NOTE 17	100	VOL-E	UT-0	NRI
	Elbow - Pipe						UT-45	NRI
Preservice volumetric of new weld performed as part of pipe replacement under WO# 1170562. Weld is denoted as FW 1-1 in work package weld inspection records and RT and UT data sheets.								
R-A	R01.20 1AF-01-23	1AF02EB-4"	I3R-01	NOTE 17	100	VOL-E	UT-0	NRI
	Pipe - Pipe						UT-45	NRI
Preservice volumetric of new weld performed as part of pipe replacement under WO# 1170562. Weld is denoted as FW-21, FW-21 R1, and FW-21 R2 in work package weld inspection records.								

## Section 3.1.2 Detailed Third Interval Preservice Weld / Component Table

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

Section XI		Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat.	Item	Description		Requests	Notes	Coverage	Exam	Exam	
Comments									
R-A	R01.20	1RC-24-07 ELBOW - PIPE	1RC22AC-1.5"	I3R-01	NOTE 17	100	SUR	PT	NRI
Baseline surface examination for replacement of valve 1RC8042C under EC 367651 / WO# 1067695-01. Weld is denoted as FW 8-1 in weld records and PT report.									
R-A	R01.20	1RC-24-08 PIPE - VALVE 1RC8042C	1RC22AC-1.5"	I3R-01	NOTE 17		SUR	PT	NRI
Baseline surface examination for replacement of valve 1RC8042C under EC 367651 / WO# 1067695-01. Weld is denoted as FW 7-1 in weld records and PT report.									
R-A	R01.20	1RC-24-09 VALVE 1RC8042C - PIPE	1RC22AC-1.5"	I3R-01	NOTE 17	100	SUR	PT	NRI
Baseline surface examination for replacement of valve 1RC8042C under EC 367651 / WO# 1067695-01. Weld is denoted as FW 6-1 in weld records and PT report.									
B-G-1	B06.90	1SG-05-SGB-02 PRIMARY MANWAY (20 STUDS and BOLTS)	1RC01BA		NOTE 03	100	VOL	UT-66 UT-80L	NRI
Preservice UT of replacement primary manway cold leg bolt #15.									

### Section 3.1.2 Detailed Third Interval Preservice Weld / Component Table

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

Section XI	Component ID	Line Number	Relief	Technical	Code	Required	Actual	Results
Cat. Item	Description		Requests	Notes	Coverage	Exam	Exam	
<b>Comments</b>								
R-A	R01.11	1SI-23-03-FA.01 PIPE - ELBOW	1SI18FA-2"	I3R-01	NOTE 17	100	SUR PT	NA
Baseline surface examination of socket weld replaced as part of replacement of valve 1SI8819A under WO# 609951. Identified as Weld 18-2 in weld records and PT report.								
R-A	R01.11	1SI-23-04-FA.01 VALVE 1SI8819A - PIPE	1SI18FA-2"	I3R-01	NOTE 17	100	SUR PT	NA
Baseline surface examination of socket weld replaced as part of replacement of valve 1SI8819A under WO# 609951. Identified as Weld 4-2 in weld records and PT report.								

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI		ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description					
Comments							
F-A	F01.40	1CS03150G Box	1CS02AB-10"			VT-3	NRI



### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
<b>Comments</b>						
F-A	F01.20	1AB-113A Anchor, integrally attached to pipe	1CVA1A-6"		VT-3 VT-3	NRI NRI
F-A	F01.20	1CV08001V (1) Variable Spring Can	1CV05CB-6"		VT-3	NRI
F-A	F01.20	1CV08005X (1) Strut	1CV05CB-6"		VT-3	NRI
F-A	F01.20	1CV08014G Box	1CV05CB-6"		VT-3	NRI
F-A	F01.20	1CV08017X Box	1CV05CB-6"		VT-3	NRI
F-A	F01.20	1CV08035R Box	1CV05B-8"		VT-3	NRI
F-A	F01.10	1CV09001R Box	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV09004R (1) Rod	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV09016R (1) Strut	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV11021R Box	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV11022A Anchor	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV11A001 Box	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV15001X (1) Strut	1CVA5AB-2"		VT-3	NRI
F-A	F01.10	1CV15022R Box	1CVA5AA-2"		VT-3	NRI
F-A	F01.10	1CV15031R (1) Strut	1CVA5AA-2"		VT-3	NRI
F-A	F01.10	1CV15033R (1) Strut	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV16024G Box	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV16034V (1) Variable Spring Can	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV16037R Box	1CVA3B-2"		VT-3	NRI
F-A	F01.10	1CV25006R Strap	1CVA7AA-2"		VT-3	NRI

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat. Item	Description					
Comments						
F-A F01.10	1CV25016X (1) Strut	1CVA7AA-2"			VT-3	NRI
F-A F01.10	1CV25030G U-Bolt	1CVA3B-2"			VT-3	NRI
F-A F01.20	1CV47003R (1) Strut	1CV05B-8"			VT-3	NRI
F-A F01.10	1RB-330A Anchor, integrally attached to pipe	1CVB7A-3"			VT-3	NRI
F-A F01.10	1RY06095V (1) Variable Spring Can	1CV45B-2"			VT-3	NRI
F-A F01.10	1RY06104A Anchor	1CV45B-2"			VT-3	NRI
F-A F01.10	1RY06174R Box	1CV45B-2"			VT-3	NRI

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

**SYSTEM:** Feedwater System (FW)

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
Comments						
F-A	F01.20	1AF04071R (1) Rod	1FW81AB-6"		VT-3	NRI
F-A	F01.20	1AF04080X (1) Strut	1FW81AB-6"		VT-3	NRI
F-A	F01.20	1AF05061R (1) Strut	1FW81AC-6"		VT-3	NRI
F-A	F01.20	1AF06037R (1) Rod	1FW81AA-6"		VT-3	NRI
F-A	F01.20	1AF06038R (1) Rod	1FW81AA-6"		VT-3	NRI
F-A	F01.20	1AF06040V (1) Variable Spring Can	1FW81BA-6"		VT-3	NRI
F-A	F01.40	1AF06048G (1) Strut	1FW81AA-6"		VT-3	NRI
F-A	F01.20	1AF07030X Box	1FW81AD-6"		VT-3	NRI
F-A	F01.20	1FW02020X (1) Strut	1FW03DA-16"		VT-3	NRI
F-A	F01.20	1FW03020X (1) Strut	1FW03DB-16"		VT-3	NRI
F-A	F01.20	1FW03021C (1) Constant Spring Can	1FW03DB-16"		VT-3	NRI
F-A	F01.20	1FW04019X (1) Strut	1FW03DC-16"		VT-3	NRI
F-A	F01.20	1FW04020C (1) Constant Spring Can	1FW03DC-16"		VT-3	NRI
F-A	F01.20	1FW04021C (1) Constant Spring Can	1FW03DC-16"		VT-3	NRI
F-A	F01.20	1FW05002R (1) Strut	1FW03DD-16"		VT-3	NRI
F-A	F01.20	1FW05023X (1) Strut	1FW03DD-16"		VT-3	NRI
F-A	F01.20	1FW05024C (1) Constant Spring Can	1FW03DD-16"		VT-3	NRI

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
Comments						
F-A	F01.20	1MS01210X (1) Strut, integrally attached to pipe	1MS07AD-28"		VT-3	NRI
F-A	F01.20	1MS01211R Slide Plate	1MS07AD-28"		VT-3	NRI
F-A	F01.20	1MS06002C (2) Constant Spring Cans, IWA to pipe	1MS01AB-32.75"		VT-3 VT-3	NRI IND
04/10/2009 Exam Comments: Support was examined in support of issues identified during MT Exams on associated shear lugs. The identified indication pertained to inadequate shimming between the shear lugs and pipe clamp. Condition was deemed as acceptable with no further actions. Reference Issue Report 906194.						
F-A	F01.20	1MS06006R Steel	1MS01AB-32.75"		VT-3	NRI

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat. Item	Description					
<b>Comments</b>						
F-A F01.10	1CV11018C (1) Constant Spring Can	1RC14AA-2"			VT-3	NRI
F-A F01.10	1CV15038G Box	1RC14AB-2"			VT-3	NRI
F-A F01.10	1CV15041R (1) Strut	1RC14AB-2"			VT-3	NRI
F-A F01.40	1RC01BA S.G A	1RC01BA			VT-3	NRI

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
Comments						
F-A	F01.20	1RH01006X Box	1RH03AA-8"		VT-3	NRI
F-A	F01.40	1RH02AA 1A HT EXCH., integrally attached to HX	1RH02AA		VT-3	NRI
F-A	F01.20	1RH08002R (2) Struts	1RH02AB-8"		VT-3	NRI
F-A	F01.20	1RH08017X (1) Strut	1RH02AB-8"		VT-3	NRI
F-A	F01.20	1RH08019G (2) Struts	1RH02AB-8"		VT-3	NRI
F-A	F01.20	1SI18075R Box	1RH03AA-8"		VT-3	NRI

### Section 3.1.3 Detailed Third Interval Inservice Component Support Table

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

Section XI		ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description					
Comments							
F-A	F01.20	1PC-066A	1SI04B-12"			VT-3	NRI
		Anchor, integrally attached to pipe				VT-3	NRI

### Section 3.1.4 Detailed Preservice Component Support Table

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

Section XI		Component ID	Line Number	Relief	Technical	Exam	Results
Cat.	Item	Description		Requests	Notes		
Comments							
F-A	F01.20	1MS05002C	1MS01AA-30.25"			VT-3	IND
		(2) Constant Spring Cans, IWA to pipe				VT-3	NRI
Support was examined in support of issues identified during MT Exams on associated shear lugs. The identified indication pertained to inadequate shimming between the shear lugs and pipe clamp. The 04/09/2009 examination was as-found. The 04/14/2009 Exam was the baseline exam after repairs were completed.							



### Section 3.1.5 Detailed Third Interval Inservice Snubber Table

**SYSTEM:** Auxiliary Feedwater System (AF)

Section XI		ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description					
Comments							
F-A	F01.20	1FW12025S Snubber	1FW87BB-3"		NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)							

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
<b>Comments</b>						
NA	NA	1CV01006S Snubber	1CV08BA-4"	NOTE 01	VT-3 FT	NRI PASS
SLM (DTPG 1-1). Snubber was replaced due to marginal test results during A1R13. Remove S.N. was 16688. Replacement Snubber S.N. is 10167.						
F-A	F01.10	1CV16008S Snubber	1CVA3AB-2"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
NA	NA	1CV28005S Snubber	1CV15AB-.75"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
NA	NA	1CV30002S Snubber	1CV15AD-.75"	NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						
NA	NA	1CV30004S Snubber	1CV15AD-.75"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
NA	NA	1CV31007S Snubber	1CV15DA-.75"	NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						
NA	NA	1CV41036S Snubber	1CV14ED-2"	NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI		ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description					
Comments							
F-A	F01.20	1MS06007AS Snubber	1MS01AB-32.75"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-3)							
F-A	F01.20	1MS06007BS Snubber	1MS01AB-32.75"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-3)							

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

## Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
Comments						
NA	NA	1CV09069S Snubber	1RC14AC-2"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
NA	NA	1CV14001S Snubber	1RC16AD-2"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1CV24026S Snubber	1RC16AB-2"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.40	1RC01BA-A Snubber	S.G A		NOTE 01 VT-3	NRI
Reservoir Level: 2 1/4" above shut down level.						
F-A	F01.40	1RC01BA-B Snubber	S.G A		NOTE 01 VT-3	NRI
Reservoir Level: 2 1/4" above shut down level.						
F-A	F01.40	1RC01BB-A Snubber	S.G B		NOTE 01 VT-3	NRI
Reservoir Level: 2 1/4" above shut down level.						
F-A	F01.40	1RC01BB-B Snubber	S.G B		NOTE 01 VT-3	NRI
Reservoir Level: 2 1/4" above shut down level.						
F-A	F01.40	1RC01BC-A Snubber	S.G C		NOTE 01 VT-3	NRI
Reservoir Level: 2" above shut down level.						
F-A	F01.40	1RC01BC-B Snubber	S.G C		NOTE 01 VT-3 FT	NRI PASS
Reservoir Level: 2" above shut down level (As Left). Retest Of A1R13 Outage Functional Test Failure. (DTPG 1-4).						
F-A	F01.40	1RC01BD-A Snubber	S.G D		NOTE 01 VT-3 FT	NRI PASS
Reservoir Level: 2 1/4" above shut down level (As Left). (DTPG 1-4).						
F-A	F01.40	1RC01BD-B Snubber	S.G D		NOTE 01 VT-3	NRI
Reservoir Level: 2 1/4" above shut down level						
F-A	F01.10	1RC03006S Snubber	1RC21AC-8"		NOTE 01 VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						
F-A	F01.10	1RC17058S Snubber	1RC22AB-1.5"		NOTE 01 VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat: Item	Description					
<b>Comments</b>						
F-A F01.10	1RC18034BS Snubber	1RC22AC-1.5"		NOTE 01	VT-3 FT	RI INFO
Snubber was examined and replaced due to exposure to borated water and boric acid residues. (Reference Issue Report 901553). The source of the borated water / boric acid residues was from valve 1RC8042C (Reference Issue Report 899611). Replaced Snubber (S.N. 13082) was stroked through the full travel range to verify freedom of movement in the envelope of thermal expansion. The replacement snubber (Serial Number 9627) was functionally tested (pre-service, baseline test) prior to installation.						
NA NA	1RC19049S Snubber	1RC08AD-.75"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
F-A F01.10	1RC19054S Snubber	1RC22AD-1.5"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
NA NA	1RC19060S Snubber	1RC20AD-.75"		NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						
F-A F01.10	1RY06017S Snubber	1RC24AA-4"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

## Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
Comments						
F-A	F01.10	1RH02002S Snubber	1RH01AB-12"	NOTE 01	VT-3 VT-3	IND NRI
Snubber assembly was examined due to significant exposure to boric acid residues from leakage from valve 1RC8042C (Reference Issue Report 899611). The as found condition revealed the following indications: Surface corrosion on pipe clamp. Heavy accumulation of boric acid residues at the forward attachment and within the spherical bearing assembly. Corrective Actions per W/O 1224191 included thorough cleaning of all components and verification of freedom of movement through rotating the bearing within the end connection. As left exam was acceptable with only minor surface rust and coating damage noted. Freedom of movement was verified.						
F-A	F01.10	1RH02007S Snubber	1RH01AB-12"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1RH02047S Snubber	1RH01AA-12"	NOTE 01	VT-3 FT	NRI MARG
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2). Snubber met all functional test acceptance criteria but results of drag test in compression were marginal. Snubber is to be replaced during Refuel Outage A1R15. Reference Issue Report 902853.						
F-A	F01.10	1RH02058S Snubber	1RH01AA-12"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
NA	NA	1RH02208S Snubber	1RH26AA-.75"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
NA	NA	1RH02215S Snubber	1RH26AB-.75"	NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
NA	NA	1RH02217S Snubber	1RH26AB-.75"	NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat. Item	Description					
Comments						
NA NA	1RC92021S Snubber	1RY34AB-5"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
F-A F01.10	1RY06118S Snubber	1RY01B-6"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A F01.10	1RY09078S Snubber	1RY06A-3"		NOTE 01	VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.5 Detailed Third Interval Inservice Snubber Table

**SYSTEM:** Steam Generator Blowdown System (SD)

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat. Item	Description					
Comments						
NA NA	1SD23093S Snubber	1SD01CG-2"		NOTE 01	VT-3 FT	NRI PASS
Retest Of A1R13 Functional Failure. (DTPG 1-1)						
NA NA	1SD24078S Snubber	1SD01CD-2"		NOTE 01	VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables



## Section 3.1.5 Detailed Third Interval Inservice Snubber Table

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

Section XI	ISI Identifier	Line Number	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
<b>Comments</b>						
F-A	F01.10	1RH02018S Snubber	1SI04D-8"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1RH02079S Snubber	1SIA4B-8"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1RH02081S Snubber	1SI04B-8"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1SI01018S Snubber	1SI05DA-6"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1SI01020S Snubber	1SI05DA-6"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1SI04016S Snubber	1SI05DB-6"		NOTE 01 VT-3 FT	NRI MARG
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2). Snubber met all functional test acceptance criteria but results of drag test in tension were marginal. Snubber is to be replaced during Refuel Outage A1R15. Reference Issue Report 909809						
F-A	F01.10	1SI04020S Snubber	1SI05DB-6"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-2)						
F-A	F01.10	1SI16029S Snubber	1SI18FC-2"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
NA	NA	1SI16038S Snubber	1SI18EC-2"		NOTE 01 VT-3 FT	NRI PASS
Initial Functional Test Sample Per ASME OM Code, ISTD. (DTPG-1-1)						
F-A	F01.10	1SI24012S Snubber	1SI08JA-1.5"		NOTE 01 VT-3	NRI
Snubber scheduled for visual examination only during A1R14 (Ref. ASME Code Case OM 13)						

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.6 Detailed Third Interval Preservice Snubber Table

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

Section XI		Component ID	Line Number	Relief	Technical	Exam	Results
Cat.	Item	Description		Requests	Notes		
Comments							
NA	NA	1CV01006S Snubber	1CV08BA-4"		NOTE 01	FT VT-3	PASS NRI
Existing snubber (Serial Number 16688) passed functional test with marginal results and was replaced with tested spare (Serial Number 10167) under WO# 1071173.							

Note: Section XI Category numbers identified as "N/A" are exempt from IWF-1220 and IWF-2500 tables

### Section 3.1.6 Detailed Third Interval Preservice Snubber Table

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

Section XI		Component ID	Line Number	Relief	Technical	Exam	Results
Cat.	Item	Description		Requests	Notes		
Comments							
F-A	F01.10	1RC18034BS Snubber	1RC22AC-1.5"		NOTE 01	VT-3 FT FT VT-3 PMT	RI INFO NRI NRI

Snubber was examined and replaced due to exposure to borated water and boric acid residues. (Reference Issue Report 901553). The source of the borated water / boric acid residues was from valve 1RC8042C (Reference Issue Report 899611). Replaced Snubber (S.N. 13082) was stroked through the full travel range to verify freedom of movement in the envelope of thermal expansion. The replacement snubber (Serial Number 9627) was functionally tested (pre-service, baseline test) prior to installation.

### Section 3.1.7 Detailed Third Interval Pressure Tests

**SYSTEM:** Plant Systems Pressurized During Mode 3 (ZZ)

Section XI Cat. Item	Component ID Inspection Notes	Relief Requests	Technical Notes	Required Exam	Results
<b>Comments</b>					
B-P B15.10	A01ZZ-000005-M04-01A Each Refueling Outage ASME Section XI Pressure Test & Generic Letter 88-05. Class 1 components.		NOTE 22 NOTE 23	VT-2	NRI
C-H C07.10	A01ZZ-000078-M04-03A Period ASME Section XI Pressure Test. All Class 2 components inside containment. VT-2 visual inspection of components outside Missile Barrier may be performed during Mode 1 if conditions permit.		NOTE 22	VT-2	IND
Packing leak at Valve 1RY8078 (IR 909019) and leaking compression fitting on 11C5005F, Tube N-6 (IR 909008).					

### Section 3.1.8 Detailed Borated Bolted Connection Table

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

Section XI	Component ID	Relief	Technical	Actual	Results
Cat.	Item	Requests	Notes	Exam	
Comments					
C-H	C07.10	1A-CV-10 F-2-1 (C-H) FLANGED CONNECTION (8 STUDS)		VT-2	NRI
C-H	C07.10	1CV04AA (C-H) 1CV04AA HX (28 STUDS)		VT-2	NRI
C-H	C07.10	1CV04AB (C-H) 1CV04AB HX (28 STUDS)		VT-2	NRI
B-P	B15.10	1CV-06-B1 (B-P) FLANGE BOLTING (4 STUDS)		VT-2	NRI
C-H	C07.10	1CV-10 F-1-1 (C-H) FLANGED CONNECTION (8 STUDS)		VT-2	NRI
C-H	C07.10	1CV-10 F-3-2 (C-H) FLANGED CONNECTION (8 STUDS)		VT-2	NRI
B-P	B15.10	PG-2546C-014 F-2-2 (B-P) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
C-H	C07.10	PG-2546C-022 F-2-3 (C-H) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
C-H	C07.10	PG-2546C-062 F-2-3 (C-H) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
C-H	C07.10	PG-2546C-069 F-1-2 (C-H) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
C-H	C07.10	PG-2546C-070 F-2-3 (C-H) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
C-H	C07.10	PG-2546C-085 F-2-2 (C-H) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
B-P	B15.10	PG-2546C-091 F-2-3 (B-P) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
B-P	B15.10	PG-2546C-101 F-2-3 (B-P) FLANGED CONNECTION (4 STUDS)		VT-2	NRI
C-H	C07.10	PG-2546C-111 F-1-2 (C-H) FLANGED CONNECTION (8 STUDS)		VT-2	NRI

### Section 3.1.8 Detailed Borated Bolted Connection Table

**SYSTEM:** Pressurizer (PZR)

Section XI		Component ID	Relief	Technical	Actual	Results
Cat.	Item	Description	Requests	Notes	Exam	
Comments						
B-P	B15.10	1PZR-01-B1 (B-P) MANWAY BOLTING (16 TOTAL)			VT-2	NRI

### Section 3.1.8 Detailed Borated Bolted Connection Table

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

Section XI		Component ID	Relief	Technical	Actual	Results
Cat.	Item	Description	Requests	Notes	Exam	
Comments						
B-P	B15.10	1RC-19-B3 (B-P) FLANGED CONNECTION (4 STUDS)			VT-2	NRI
B-P	B15.10	1RC-20-B1 (B-P) FLANGED CONNECTION (4 STUDS)			VT-2 VT-1	IO NRI
B-P	B15.10	1RC-23-B1 (B-P) FLANGED CONNECTION (4 STUDS)			VT-2	NRI
B-P	B15.10	1RC-27-B1 (B-P) FLANGED CONNECTION (4 STUDS)			VT-2	NRI
B-P	B15.10	1RV-03-STUDS (01 TO 54, B-P) CLOSURE HEAD STUDS (54 TOTAL)			VT-2	NRI
B-P	B15.10	1SG-05-SGB-01 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-05-SGB-02 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-06-SGB-01 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-06-SGB-02 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-07-SGB-01 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-07-SGB-02 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-08-SGB-01 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI
B-P	B15.10	1SG-08-SGB-02 (B-P) PRIMARY MANWAY (20 STUDS)			VT-2	NRI

### Section 3.1.8 Detailed Borated Bolted Connection Table

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

Section XI		Component ID	Relief Requests	Technical Notes	Actual Exam	Results
Cat.	Item	Description				
Comments						
C-H	C07.10	1A-RH-04 F-1-1 (C-H) FLANGED CONNECTION (24 STUDS)			VT-2	NRI
C-H	C07.10	1A-RH-04 F-3 (C-H) FLANGED CONNECTION (12 STUDS)			VT-2	NRI



**Section 3.2.1 Detailed Second Interval Inservice Inspection Weld / Component Table****SYSTEM:** Chemical & Volume Control System (CV)

Section XI	Component ID	Relief	Technical	Code	Required	Actual	Results
Cat. Item	Inspection Notes	Requests	Notes	Coverage	Exam	Exam	
Comments							

R-A	R01.20	1CV-21-14 PIPE - ELBOW	1CV08AA-4"	I2R-39	NOTE 4 NOTE 7	100	VOL-E	UT-0 UT-45	NRI
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Second interval examination performed during A1R14.

R-A	R01.20	1CV-21-15 ELBOW - PIPE	1CV08AA-4"	I2R-39	NOTE 4 NOTE 7	100	VOL-E	UT-0 UT-45	NRI
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Second interval examination performed during A1R14.

R-A	R01.20	1CV-21-16 PIPE - PIPE	1CV08AA-4"	I2R-39	NOTE 4 NOTE 7	100	VOL-E	UT-0 UT-45	NRI
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Second interval examination performed during A1R14.

### Section 3.2.2 Detailed Second Interval System Pressure Tests

**SYSTEM:** Component Cooling System (CC)

Section XI		Component ID	Relief	Technical	Required	Results
Cat.	Item	Inspection Notes	Requests	Notes	Exam	
Comments						

C-H C07.40 A01CC-000005-M04-02A  
C07.80

I2R-05  
I2R-13

NOTE17

VT-2

NRI

### Section 3.2.2 Detailed Second Interval System Pressure Tests

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

Section XI		Component ID	Relief Requests	Technical Notes	Required Exam	Results
Cat.	Item	Inspection Notes				
Comments						
C-H	C07.20	A01CS-000005-M04-02A	I2R-05	NOTE13	VT-2	IND.
	C07.40		I2R-13	NOTE17		
	C07.60					
	C07.80					
Leakage noted at bolted connection at 1CS057C (reference IR 660009), bolting was pulled, examined and reinstalled under WO# 1054783.						
C-H	C07.20	A01CS-000005-M04-02B	I2R-05	NOTE13	VT-2	IND.
	C07.40		I2R-13	NOTE17		
	C07.60					
	C07.80					
Minor leakage noted at body-to-bonnet connection of Valve 1CS009B (reference IR 660013), existing bolting was removed, examined and reinstalled under WO# 1054785.						
C-H	C07.20	A01CS-000005-M04-02C	I2R-05	NOTE13	VT-2	NRI
	C07.40		I2R-13	NOTE17		
	C07.80					
C-H	C07.40	A01CS-000005-M04-02D	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-13	NOTE17		
C-H	C07.40	A01CS-000005-M04-02E	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-13	NOTE17		

## Section 3.2.2 Detailed Second Interval System Pressure Tests

## SYSTEM: Chemical &amp; Volume Control System (CV)

Section XI	Component ID	Relief	Technical	Required	Results
Cat. Item	Inspection Notes	Requests	Notes	Exam	
Comments					

C-H	C07.20	A01CV-000005-M04-02A	I2R-05	NOTE13	VT-2	IND.
	C07.40		I2R-12	NOTE17		IND.
	C07.60		I2R-13			IND.
	C07.80					NRI
						NRI
						NRI

The following leakage (and associated IR) was noted during VT-2 examinations:

7/31/2007 Exams, non-active/minor packing leaks:

1CV068 (IR 664109), 1CV204 (IR 663848)  
 1CV065B (IR 663856), 1CV8369A (IR 663859)  
 1CV8355D (IR 664043), 1CV8355C (IR 664046)  
 1CV8355A (IR 664050), 1CV8369C (IR 664100)  
 1CV8355B (IR 664102), 1CV061 (IR 664106)  
 1CV051D (IR 664110), 1CV8369B (IR 664113)  
 1CV052D (IR 664139), 1CV063 (IR 664149)  
 1CV202 (IR 664095), 1SI045 (IR 664146)  
 1CV037 (IR 664169)

Minor leakage at 1CV01PB seal was noted (IR 664163).

8/1/2007 minor packing leak:

1CV016A (IR 664182)

8/6/2007 minor packing leak:

1CV030 (IR 664154)

C-H	C07.40	A01CV-000005-M04-02B	I2R-05	NOTE13	VT-2	IO
	C07.60		I2R-12	NOTE17		NRI
	C07.80		I2R-13			

Minor packing leak on 1CV112B (reference IR 663844) noted during 7/31/2007 exam.

**Section 3.2.2 Detailed Second Interval System Pressure Tests****SYSTEM:** Fuel Pool Cooling System (FC)

Section XI		Component ID	Relief	Technical	Required	Results
Cat.	Item	Inspection Notes	Requests	Notes	Exam	
Comments						
C-H	C07.30 C07.70	A01FC-000001-M04-01C	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	NRI
C-H	C07.30 C07.70	A01FC-000001-M04-01D	I2R-05 I2R-12 I2R-13	NOTE13	VT-2	NRI

**Section 3.2.2 Detailed Second Interval System Pressure Tests**

**SYSTEM:** Process Sampling System (PS)

Section XI		Component ID	Relief	Technical	Required	Results
Cat.	Item	Inspection Notes	Requests	Notes	Exam	
Comments						

C-H C07.30 A01PS-000009-M04-01E  
C07.70

I2R-05 NOTE13  
I2R-13  
I2R-47

NRI

Performed alternate test as approved via relief request I2R-47 utilizing surveillance 1BwOSR 3.6.1.1-8.

### Section 3.2.2 Detailed Second Interval System Pressure Tests

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

Section XI		Component ID	Relief	Technical	Required	Results
Cat.	Item	Inspection Notes	Requests	Notes	Exam	
Comments						
C-H	C07.20	A01RH-000005-M04-02A	I2R-05	NOTE13	VT-2	IO
	C07.40		I2R-12	NOTE17		
	C07.60		I2R-13			
	C07.80					
Minor leakage noted at the following components: 1RH026A (IR 682409) 1FIS-0610 (IR 682407) 1RH01PA Cooling Lines (IR 682405)						
C-H	C07.20	A01RH-000005-M04-02B	I2R-05	NOTE13	VT-2	IO
	C07.40		I2R-12	NOTE17		
	C07.60		I2R-13			
	C07.80					
Minor leakage noted at 1RH01PB pump seal (reference IR 682404).						
C-H	C07.40	A01RH-000005-M04-02D	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-12	NOTE17		
			I2R-13			
C-H	C07.40	A01RH-000005-M04-02E	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-12	NOTE17		
			I2R-13			

## Section 3.2.2 Detailed Second Interval System Pressure Tests

SYSTEM: Safety Injection System (SI)

Section XI		Component ID	Relief	Technical	Required	Results
Cat.	Item	Inspection Notes	Requests	Notes	Exam	
Comments						
C-H	C07.40	A01SI-000005-M04-02G	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-12	NOTE17		
			I2R-13			
C-H	C07.20	A01SI-000005-M04-02J	I2R-05	NOTE13	VT-2	IO
	C07.40		I2R-12	NOTE17		
	C07.80		I2R-13			
Minor packing leaks noted at Valves 1SI8879A (reference IR 677995), 1SI003A (IR 678009), and 1SI8878A (IR 678058). Minor nitrogen leaks noted at 1A SI Accumulator manway cover (IR 678615) and at valve upstream of 1SI8983A (IR 678620).						
C-H	C07.20	A01SI-000005-M04-02K	I2R-05	NOTE13	VT-2	IO
	C07.40		I2R-12	NOTE17		
	C07.80		I2R-13			
Minor packing leaks noted at Valves 1SI8875B (reference IR 678045), 1SI8934B (IR 678044), and 1SI8879B (IR 678015). Minor nitrogen leak noted at 1B SI Accumulator manway cover (IR 678616).						
C-H	C07.20	A01SI-000005-M04-02L	I2R-05	NOTE13	VT-2	IO
	C07.40		I2R-12	NOTE17		
	C07.80		I2R-13			
Minor packing leaks noted at Valves 1SI8934C (reference IR 678057), 1SI8878C (IR 678047), 1SI8879C (IR 678014), and 1SI8877C (IR 677999). Minor nitrogen leaks noted at 1C SI Accumulator manway cover (IR 678617) and Valve 1SI032C (IR 678629).						
C-H	C07.20	A01SI-000005-M04-02M	I2R-05	NOTE13	VT-2	IO
	C07.40		I2R-12	NOTE17		
	C07.80		I2R-13			
Minor packing leaks noted at Valves 1SI8934D (reference IR 678051), 1SI8878D (IR 678050), and 1SI8879D (IR 678012).						
C-H	C07.40	A01SI-000005-M04-02N	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-12	NOTE17		
			I2R-13			
C-H	C07.40	A01SI-000005-M04-02P	I2R-05	NOTE13	VT-2	NRI
	C07.80		I2R-12	NOTE17		
			I2R-13			



**Section 3.2.2 Detailed Second Interval System Pressure Tests**

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

Section XI		Component ID	Relief Requests	Technical Notes	Required Exam	Results
Cat.	Item	Inspection Notes				
Comments						
C-H	C07.40 C07.80	A01SX-000005-M04-02N	I2R-05 I2R-13	NOTE17	VT-2	NRI
C-H	C07.40 C07.80	A01SX-000005-M04-02P	I2R-05 I2R-13	NOTE17	VT-2	NRI
C-H	C07.40 C07.80	A01SX-000005-M04-02T	I2R-05 I2R-13	NOTE17	VT-2	NRI
C-H	C07.40 C07.80	A01SX-000005-M04-02U	I2R-05 I2R-13	NOTE17	VT-2	NRI

### Section 3.2.2 Detailed Second Interval System Pressure Tests

**SYSTEM:** Plant Systems Pressurized During Mode 3 (ZZ)

Section XI	Component ID	Relief	Technical	Required	Results
Cat. Item	Inspection Notes	Requests	Notes	Exam	
Comments					

B-P	B15.11	A01ZZ-000005-M04-02A	I2R-05	NOTE13	VT-2	NRI
	B15.21		I2R-12	NOTE14		
	B15.31		I2R-13	NOTE17		
	B15.51		I2R-30			
	B15.61/71		I2R-31			

Remaining sections of test block not completed during A1R13 outage.

C-H	C07.10	A01ZZ-000078-M04-03B	I2R-05		VT-2	IND.
	C07.30		I2R-12			
	C07.70		I2R-13			NRI

Portions completed 9/29/2007. Substantial accumulation of mineral deposit noted on Line 1AF02EB-4" on 9/29/2007, reference IR 677540.

No indications noted during examination of main steam, feedwater, and steam generator blowdown systems during 5/30/2008 walk downs.

## **4.0 Class 2 Main Steam Welded Attachment Indications**

During the inservice inspection (magnetic particle examination) of the shear lugs on support 1MS07002C several linear indications were identified on all 4 of the lugs (9 total indications). Five of these indications exceeded the acceptance criteria as delineated in ASME Section XI, 2001 Edition, 2003 Addenda (reference Issue Report 901376). The indications exceeding the applicable acceptance standards of Table IWC-3410-1 required additional engineering evaluation to determine acceptability.

Braidwood Design Engineering and Corporate Engineering (Cantera) reviewed the NDE results and sketches for the identified linear indications. From this report, the indications exceeding the acceptance criteria were located in the lug base metal along the weld toe. These indications run parallel to the weld toe and based on the 0° beam UT examination are running in a plane parallel to the 16" x 4 1/2" surface of the lug. Based on the location and orientation of the indications it was evident that these were not caused by external piping loads, i.e., not service induced. Since this is a vertical riser supported with a riser clamp and shear lugs, the load applied to the clamp / lug is essentially a weight shear load in the pipe axial direction. The stresses decrease from the bearing surface of the lugs to the top (free) surface of the lugs, where more of the indications were found (i.e., the shear approaches "zero" at the top end of the lug just above the weld since this is a free edge). Also any radial stress from the constant support load being eccentrically applied would be compressive as well as going to zero at the top end of lug. The piping pressure stress would tend to put the lug weld and these laminations into compression due the increased rigidity of the lug compared to the piping wall without the lug. The highest stressed area of these lugs would be at the bottom end of the lugs, at the lug/clamp interface. The majority of the indications are not located in this area. These indications are linear and located just above the welds of the lugs to the pipe, in a plane parallel to the pipe axis. This is indicative of a laminar separation caused by the fabrication process of the lug and the weld residual stresses. These lugs are 2 1/2" thick, 4 1/2" wide and 16" long, welded to the pipe with 1 3/8" partial penetration groove welds with 1 3/8" fillet caps along the two 16" lengths and the top 4 1/2" length of the lugs. The welding process for these large welds introduces a significant amount of weld shrinkage stress into the lug itself and large residual stresses acting on the lugs can cause laminar separations that result over time into indications similar to those identified. These lugs also may not have been cut in the optimal orientation, which can make them more susceptible to laminar separation.

As previously described the applied weight load on the lug is parallel to the plane of the indications, therefore the applied load will not cause the indication to grow in a different direction. Also, the weight load variations between hot and cold positions of the piping are very small and would not cause a stress range sufficient to initiate fatigue cracking in the lug or the weld. Other operating stresses, i.e., from pressure loads and through-wall thermal stress gradients due to heat-up and cool-down of the steam lines, are small and occur infrequently with the start-up and shutdown of the Unit (less than ~200 cycles for the life time of the plant) and would not be a cause of fatigue damage to the lug or weld. Since the through wall stress in the lug is insignificant or very small, there is no crack driving force that would cause growth or failure of these laminar flaws, i.e., the mode I stress intensity factor along the crack tip is essentially zero.

As previously stated, all the indications that exceeded the acceptance criteria were located in the lug base metal itself, just above the welds, and oriented parallel with the welds. In the extreme case (not credible), assuming the lugs were to shear off, just above the weld, which would in turn result in a lug that is now only 1 3/8" thick vs. 2 1/2" thick (still 4 1/2" wide by 16" long). This would still be of sufficient size to restrain the load and actually reduce the stresses in the pipe wall since the moment arm from the bearing load point of the clamp to the pipe wall would actually be smaller i.e., reduced integral welded attachment (IWA) stresses. The amount of weld transferring the load from the pipe lugs to the clamp has not decreased. Weld stresses would actually decrease slightly based on the reduced moment arm discussed above. Shear on

the lug would not change since the cross sectional area resisting the shear is the same ( $4.5" \times 16" = 72$  sq. inches).

The design basis calculation and evaluation for this configuration uses a LF (load factor) = 0.5, which means half of the total load is applied to a single lug. Thus, only 2 of the 4 lugs are assumed to be active for evaluations in this type of lug arrangement.

If the lug were to shear off as described above, the bearing area on the clamp would decrease from approximately  $4.5" \times 2" = 9$  sq. inches to  $4.5" \times 1 \frac{3}{8}" = 6$  sq. inches/lug. The load on the support is approximately 50 kips. The 50 kip load is distributed between 2 lugs, which results in an increase in bearing stress on the clamp/lug interface from  $25 / 9 = 2.8$  ksi to  $25 / 6 = 4.2$  ksi, which is very low for bearing stresses. Therefore, even if the lugs sheared off just above the welds, the remaining portions of the lugs would still provide adequate support for the riser clamp to perform its design function for the support with no increase in IWA stresses on the pipe wall. This was an extreme example and not a credible scenario. It should also be noted that only 1 of the 4 lugs had any indications over 0.50".

### **Conclusions/Findings**

Based on the above evaluation, the indications identified were acceptable and the lugs will provide their intended design functions for the restraints. Based on the location and orientation of the indications and on the magnitude and direction of the applied operating loads, these indications will remain stable and will not prevent the lug from performing its intended function of providing weight support for this MS riser pipe. Furthermore the design basis qualification for the lugs requires only 2 of the 4 lugs to satisfy design criteria and the material of the lug above the top of the weld (i.e., radially out from the pipe surface) is not required for functionality or to satisfy design stress limits. Note also that these conclusions are also applicable to the lugs on the sister supports on the 1A, 1B, 1C and 1D MS lines off the generators (subsystems 1MS05, 1MS06, 1MS07 and 1MS08) when reviewing similar lug anomalies.

The formal analyses will be sent under a separate submittal in accordance with IWC-3125(b).

## **5.0 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 inservice examination of Class 1 and Class 2 pressure retaining components. Two Form NIS-1 are included, one for the Second ISI Interval which is now completed, and one for the Third ISI Interval.

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

1. Owner Exelon Generation Company (EGC, LLC), 200 Exelon Way, Kennett Square, PA, 19348  
(Name and Address of Owner)
2. Plant Braidwood Station, 35100 South Route 53, Suite 84, Braceville, Illinois 60450  
(Name and Address of Plant)
3. Plant Unit 1 4. Owner Certificate of Authorization (if required) Not Applicable
5. Commercial Service Date 7/29/1988 6. National Board Number for Unit N-195
7. Components Inspected See Section 3 of this report for all components (report is a total of 113 pages).

Component or Appurtenance	Manufacturer Or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
See Section 3.2 and associated tables for specific Class 1 and 2 component locations examined for the Second Interval ISI Program.				

**FORM NIS-1 (Back)**

8. Examination Dates: January 3, 2008 to June 10, 2009
9. Inspection Period Identification: 3<sup>rd</sup> Period, Second Interval - From July 29, 2005 through July 28, 2009\*
- \* In order to support a limited amount of remaining examinations, one year has been added to interval end date as allowed by IWB-2412(b).
10. Inspection Interval Identification: 2<sup>nd</sup> Interval - From July 29, 1998 through July 28, 2009\*
- \* In order to support a limited amount of remaining examinations, one year has been added to interval end date as allowed by IWB-2412(b).
11. Applicable Edition of Section XI 1989 Edition Addenda No Addenda
12. Date/Revision of Inspection Plan: June 29, 2009 / Revision 10f
13. Abstract of Examination and Tests. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan. See Attached Sections 2 and 3.
14. Abstract of Results of Examinations and Tests. See Attached Sections 2 and 3.
15. Abstract of Corrective Measures. See Attached Sections 2 and 3.

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

Certificate of Authorization No. (if applicable) Not Applicable Expiration Date Not Applicable

Date July 2 20 09 Signed Exelon Nuclear Braidwood Station

By Brendan J. Casey Owner Braidwood ISI Program Manager

**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 Hartford Steam Boiler Inspection and Insurance Company of Connecticut have inspected the components described in this Owner's Report during the period 1-3-08 to 6-10-09 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 and 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.

J. Hudson Commissions NB#8756, IL#1085 NIC  
Inspector's Signature National Board, State, Province, and Endorsements

Date 7-2 2009

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

1. Owner Exelon Generation Company (EGC, LLC), 200 Exelon Way, Kennett Square, PA, 19348  
(Name and Address of Owner)
2. Plant Braidwood Station, 35100 South Route 53, Suite 84, Braceville, Illinois 60450  
(Name and Address of Plant)
3. Plant Unit 1 4. Owner Certificate of Authorization (if required) Not Applicable
5. Commercial Service Date 7/29/1988 6. National Board Number for Unit N-195
7. Components Inspected See Section 3 of this report for all components (report is a total of 113 pages).

Component or Appurtenance	Manufacturer Or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Reactor Vessel 1RC01R	Babcock & Wilcox	640-0014-52	B-24360	N-195
Pressurizer 1RY01S	Westinghouse	2101	U-199012	18696

See Sections 3.1 through 3.1.8 and associated tables for specific Class 1 and 2 component locations examined for the Third Interval ISI Program.

See Section 4.0 of report for discussion of indications discovered on Class 2 Main Steam welded attachment lugs.



**FORM NIS-1 (Back)**

8. Examination Dates: July 29, 2008 to June 10, 2009
9. Inspection Period Identification: 1<sup>st</sup> Period, Third Interval - From July 29, 2008 through July 28, 2011
10. Inspection Interval Identification: 2<sup>nd</sup> Interval - From July 29, 2008 through July 28, 2018
11. Applicable Edition of Section XI 2001 Edition Addenda 2003 Addenda
12. Date/Revision of Inspection Plan: December 8, 2008 / Revision 0
13. Abstract of Examination and Tests. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan. See Attached Sections 2 and 3.
14. Abstract of Results of Examinations and Tests. See Attached Sections 2 and 3.
15. Abstract of Corrective Measures. See Attached Sections 2 and 3.

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

Certificate of Authorization No. (if applicable) Not Applicable Expiration Date Not Applicable

Date July 2 20 09 Signed Exelon Nuclear Braidwood Station

By Brendan J. Casey Braidwood ISI Program Manager  
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 Hartford Steam Boiler Inspection and Insurance Company of Connecticut have inspected the components described in this Owner's Report during the period 7-29-08 to 6-10-09 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 and 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.

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

Date 7-2- 20 09

<b>Braidwood Unit 1 Non-Deferrable Inspection Status (Third Interval) After A1R14 per IWA-6220(f)</b>				
<b>Code Category</b>	<b>Code Item Number</b>	<b>Total Number Selected (Interval)</b>	<b>Total Number Examined in A1R14</b>	<b>Current Percentage Completed for Category</b>
B-A	B1.30	1	0	0%
	B1.40	1	0	
B-B	B2.11	2	1	2/5 = 40%
	B2.12	2	1	
	B2.40	1	0	
B-D	B3.110	6	0	0%
	B3.120	6	0	
	B3.140	8	0	
B-K	B10.10	1	1	1/3 = 33%
	B10.20	2	0	
B-N-1	B13.10	1	0	0
B-P	B15.10	Every Outage	1	Not Applicable
B-Q	B16.20	Per Technical Specifications	4	Not Applicable
C-A	C1.10	2	0	0%
	C1.20	2	0	
	C1.30	1	0	
C-B	C2.21	5	0	0%
	C2.22	1	0	
C-C	C3.10	1	0	5/14 = 35.7%
	C3.20	10	4	
	C3.30	3	1	
C-H	C7.10	38	0	0%
D-A	D1.10	6	2	6/20 = 30%
	D1.20	13	4	
	D1.30	1	0	
D-B	D2.10	35	0	0%
E-A	E1.11	256	0	0%
	E1.30	1	0	
E-C	E4.11	13	0	0%
F-A	F1.10	199	23	84/562 = 15%
	F1.20	175	33	
	F1.30	151	23	
	F1.40	37	5	
L-A	L1.11	2	0	0%
L-B	L2.10	965	0	0%
R-A	Butt Welds	186	26	26/186 = 14%
	Socket Welds	123 Welds Every Outage	123	

## 6.0 REPORT OF CONTAINMENT DEGRADATION

Containment inspections are performed in accordance with 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 limitations in 10 CFR 50.55a. The following sections are included in the Inservice Inspection Summary report as required by IWA-6000 of ASME Section XI to meet the reporting conditions specified in 10CFR 50.55a(b)(2)(ix)(A)(1) through (3). A limited scope of IWE inspections was completed during A1R14. The completed surveillances for IWE contain all the examination details along with indications recorded and their associated evaluations required by ASME Section XI.

There were no IWL surveillances completed prior to or during A1R14 and thus there are no results to report.

### 6.1 A1R14 Containment Metal Liner Examinations (IWE)

Augmented Section XI IWE examinations of the Class CC liner examinations for the Third Interval were performed in accordance with the requirements of ASME Section XI, Table IWE-2500-1, Category E-C, Containment Surfaces Requiring Augmented Examination.

Exelon Procedures ER-AA-330-007, "Visual Examination of ASME Section XI Class MC Surfaces and Class CC Liners" and ER-AA-335-018, "Detailed, General Visual, VT-1, VT-1C, VT-3 and VT-3C, Visual Examination of ASME Class MC and CC Containment Surfaces and Components" were used to perform the examinations.

#### **A description of the type and estimated extent of degradation, and the conditions that led to the degradation [10CFR 50.55a(b)(2)(ix)(A)(1)]:**

During the performance of augmented examinations of the Unit 1 containment liner plate, additional degradation was discovered in surfaces directly below the moisture barrier (MB). The most notable type of degradation was liner pitting just below the MB resulting in metal loss of varying depths. The maximum pit depth identified was 8/64".

A separation crack or cut was discovered in twenty locations in the Dymeric portion of the MB between the MB and the trough in front of the liner plate. IWE-3510.4 requires that MB damage/defects that permit intrusion of moisture against inaccessible areas of the liner must be corrected, and all twenty areas were repaired during A1R14.

#### **Extent of condition:**

The maximum pit depth measured was 8/64" and was limited to one location based on Detail Visual (VT-1) examinations of the areas inspected. These examinations also indicated that the liner plate contained numerous pits in the areas below MB with pit depth averaging less than or equal to 3/64" and pits with larger depths occurring less frequently. The evaluation performed concluded that this pattern of pitting is typical of the entire liner plate surfaces below the moisture barrier without requiring the removal of the entire MB.

This condition was not observed elsewhere on the liner plate.

#### **Description of the conditions that led to the degradation:**

It is evident that degradation of the liner plate below the MB is attributed to corrosion. The liner plate surface below the MB was coated with Carbo Zinc CZ11 in the year 2000,

**Braidwood Station Unit 1  
A1R14 ISI Outage Report**

which does not tolerate improper surface preparation. This coating product is not recommended for use unless white metal surface condition with contoured surface profile is achieved. Since this strip of liner plate below the MB is not easily accessible, it is unlikely that the proper surface preparation was attained. Furthermore, the liner plate surface may not have been completely dried (some moisture left in the wall) when the MB was replaced in 2000, as the Cerefibre was found wet and adhering to the liner, prompting the MB replacement. The liner most likely experienced a slow chronic corrosion rate prior to 2000. After 2000 when MB was opened up, the bulk of the liner corrosion probably occurred in the early years after the MB replacement. It has conservatively been considered that the corrosion rate had a linear progression over the past nine years since 2000. The new Service Level I coating applied in A1R14 was Keeler and Long 9600 Series, which does not require a white metal surface condition prior to application.

**Evaluation of each area, and the result of the evaluation  
[10CFR 50.55a(b)(2)(ix)(A)(2)]:**

Since the indications of degradation (pitting) were similar in each area inspected, one engineering evaluation was performed to address all the documented indications since the corrosion leading to the degraded condition is the same contributor affecting the same component (liner plate).

The evaluation determined that sufficient margin exists for the liner plate with the highest identified degraded condition (8/64" at Containment Radius R14) to remain operational and meet its intended design function during the upcoming run cycle until A1R15 where additional examinations are scheduled.

**Description of Necessary Corrective Actions Completed  
[10CFR 50.55a(b)(2)(ix)(A)(3)]:**

In 20 damaged MB areas initially identified, five of the areas exhibited evidence of liner plate degradation exceeding 10% acceptable criteria, prompting additional MB removal adjacent to the degradation. These areas were inspected (VT-1 method), recoated with Service Level 1 coating, and covered with new MB.

In addition to the twenty damaged MB areas initially identified, four additional random locations on the liner plate were selected and were inspected (VT-1 method) below the moisture barrier. The total amount of MB removed during A1R14 was slightly more than 100'. These areas were inspected (VT-1 method), recoated with Service Level 1 coating, and covered with new MB.

The removed MB also allowed additional VT-1 examinations on the liner plate below MB adjacent to all the vertical leak chase channels where the largest degradation were found.

Ultrasonic thickness readings were performed near two areas (including the area having the greatest metal loss), to document actual liner plate thicknesses.

A calculation was completed to assess the acceptability of the liner plate at its thinnest location, which demonstrated that adequate margin exists for operation until A1R15.

The liner surfaces at all the exposed locations where the moisture barrier had been removed were prepared for a new protective Service Level I coating that was applied during A1R14.

**Braidwood Station Unit 1  
A1R14 ISI Outage Report**

A new MB was installed at all areas where existing MB was removed. A post-installation VT-3 examination was performed on entire MB and no cracks were found.

Portions of Class CC liner below MB have been categorized as Category E-C in accordance with IWE-1242 and the ISI schedule.

**Proposed Actions for A1R15**

Additional examinations are scheduled for the A1R15 refueling outage to inspect the condition of the liner plate at the location with the most metal loss of 8/64" (R14). The remaining areas not inspected during A1R14 are being evaluated for MB removal and visual examination in A1R15.

**Conclusions/Findings**

The liner plate containing the degraded conditions below the moisture barrier in the Unit 1 containment as identified during A1R14 refueling outage is acceptable and capable of performing its intended design function. In A1R15 one location (R14) with the largest metal loss will be reinspected as an augmented area.

Additionally, the UT results at points for augmented areas are acceptable and will continue to be classified as augmented items and subject to subsequent examinations in A1R15.

## 7.0 NIS-2 FORM (OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS)

### SUMMARY OF NIS-2 FORMS

The following table provides the Class 1 and 2 ASME Section XI repairs completed since the last outage report (A1R13). Activities where the replacement item installed was a rotated spare are not included in this summary as allowed by IWA-4132(g) and Code Case N-508-3.

System		ASME Code Classification	
		Code Class 1	Code Class 2
AF	Auxiliary Feedwater	-	2
CV	Chemical & Volume Control	-	4
CS	Containment Spray	-	1
FW	Main Feedwater	-	1
MS	Main Steam	-	5
RC	Reactor Coolant	5	-
SI	Safety Injection	1*	2
WO	Chilled Water	-	1

\* Valve is class break between Class 1 and 2, listed as Class 1.

<b>Total NIS-2 Forms</b>	<b>22</b>
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Associated NIS-2 Forms and associated Code Data Report are attached (36 total pages).

1.	Owner : Exelon Generation Co., LLC Address: 300 Exelon Way, Kennett Square, PA 19348	Date 5/28/2008 Sheet 1 of 1
2.	Plant Name: Braidwood Station Unit 00 (Spare Valve) Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407	<u>Work Order #01071950-01</u> Repair Organization P.O., Job No., etc
3.	Work Performed By: Braidwood Station Mechanical Maintenance Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407	Code Symbol Stamp: None Authorization No.: None Expiration Date: None
4.	Identification of System: Auxiliary Feed Water (AF) (Class 2 System)	
5	(a) Applicable Construction Code: ASME Section III 1974 Edition, Winter 1975 Addenda, No Code Case (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition with No Addenda (c) Section XI code Cases used: None	
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)
Spare 4" 900# Class Check Valve Assorted Parts	Anderson, Greenwood & Co.	Not Recorded	Not Applicable	Serial Number A1081	Not Recorded	Replaced	Yes
Check Valve Disc	Anderson-Greenwood USA, Inc.	Code A547	Not Applicable	Cat ID 20848-1 UTC 2009712	1986	Replacement	Yes (N-2)
Hinge Pin Bushings	Anderson Greenwood Crosby	N97915-35-0016 N97915-36-0017	Not Applicable	Cat ID 20850 UTC 2706617 UTC 2706618	2004	Replacement	No
Hex Screw	Anderson Greenwood Crosby/ Energy Steel	Heat 8898247 Lot Code BL	Not Applicable	Cat ID 21096-1 UTC 2696744	2001	Replacement	No
Slotted Hex Nut	Anderson Greenwood Crosby/ Dyson Corp. Domestic Nut	Heat 681X014 Lot Code ESM2	Not Applicable	Cat ID 21097-1 UTC 2545171	2000	Replacement	No

- ## CERTIFICATE OF COMPLIANCE

Signed Brendan J. Casey ISI Coordinator Date 5/28, 2008  
Owner or Owner's Designee, Title

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.

Date 5/30, 2004

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348  
 Date 6/22/2009  
 Sheet 1 of 1
2. Plant Name: Braidwood Station  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
 Unit: 1  
 Work Order #01170562-01  
 Repair Organization P.O., Job No., etc
3. Work Performed By: Braidwood Mechanical Maintenance  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
 Type Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None
4. Identification of System: Auxiliary Feedwater (AF)
5. (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repair/Replacement: 2001 Edition with 2003 Addenda  
 (c) Section XI Code Cases used: None

6. Identification of Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected Removed, or Installed	ASME Code Stamped (Yes or No)
Line 1AF02EB (4" Carbon Steel)	Not Recorded	Not Recorded	Not Applicable	1AF02EB-4"	Not Recorded	Corrected	No
4" SA-106 Schedule 80 Grade B Seamless Pipe	USS Tubular Products	Heat C45131	Not Applicable	Cat ID 24937-1 UTC 2823520	2007	Installed	No
4" SA-234 WPB Long Radius Elbows (2 Total)	Tube Forgings of America, Inc/ USS Tubular Products	Heat H535P	Not Applicable	Cat ID 1435000-1 UTC 2827761	1998	Installed	No
3/32" ER70S-2 Weld Rod	ESAB	Heat 065727	Not Applicable	Cat ID 8519-1 UTC 2726532	2005	Installed	No
1/8" ER70S-2 Weld Rod	ESAB	Heat 065767	Not Applicable	Cat ID 8520-1 UTC 2798921	2007	Installed	No

7. Description of Work: Replaced sections of pipe and two long radius elbows to repair corrosion discovered on the outside diameter of pipe penetrating through floor (reference Issue Reports 681140, 683709, 677540, and 794858). Four in-process weld repairs and final finished welds were examined by radiography and ultrasonic (PDI qualified) methods.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
 Other ☒ Pressure 2150 psig Test Temp. 76 °F
9. Remarks: VT-2 completed on 4/18/2009, all newly installed pipe/fittings and associated welds were acceptable. Applicable material documentation for pipe, elbows, and filler materials used was attached at the time of final review and is maintained on file.

**CERTIFICATE OF COMPLIANCE**

I certify that the statements made in the report are correct and this conforms to the requirements of the ASME Code, Section XI.

Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable Expiration Date: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/22, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 1/5/2009 to 6/22/2009, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

[Signature]  
 Inspector's Signature

Commissions IL1085  
 National Board, State, Province, and Endorsements

Date 6-23-, 2009



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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 5/12/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01061116-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Chemical and Volume Control (CV) (Class 2 System)

- 5 (a) Applicable Construction Code: ASME Section III 1971 Edition, Winter 1972 Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI code Cases used: None

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

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
2" X 3" Relief Valve 1CV8123	Not Recorded	N60722 00019	Not Applicable	1CV8123	Unknown	Replaced	Yes
2" X 3" Crosby Relief Valve	Crosby	N56900-00-0038	Not Applicable	Cat ID 27260-1 UTC 2746404	1976	Replacement	Yes

7. Description of Work: Replaced existing relief valve with a tested spare relief valve under preventative maintenance surveillance.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☒ Pressure 16 psig Test Temp. 76 °F

9. Remarks: VT-2 was performed on 4/16/2009, no evidence of leakage was noted. Applicable documentation for replacement relief valve was attached at the time of final review and is on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casny ISI Coordinator Date 5/12, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 8/18/2008 to 5/12/2009, 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. Hudson Commissions IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 5/13, 2009

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 5/11/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01060843-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Chemical and Volume Control (CV) (Class 2 Portion of System)

- 5 (a) Applicable Construction Code: ASME Section III 1971 Edition, Winter 1972 Addenda, No Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI code Cases used: None

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)
ER 316/316L Weld Rod (3/32" Diameter) for Body-to-Bonnet Seal Weld for Valve 1CV8368A	Arcos Alloys	Lot CM8256	N/A	Cat ID 8500-1 UTC 2715657	2004	Replacement	No

7. Description of Work: Reapplied body-to-bonnet seal weld that was removed to gain access to valve internals for surveillance inspection. Seal weld was examined in the finished condition by liquid penetrant, initially rejected. Surface of weld was reconditioned and reinspected by liquid penetrant, acceptable per Report A1R14-092.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☒ Pressure Not Available\* psig Test Temp. Not Available\* °F

9. Remarks: Although exempt from Section XI pressure testing requirements per IWA-4540(b)(8), a VT-2 examination was performed during the ascending Mode 3 walk down on 4/18/2009 (valve is included in Test Boundary A01ZZ-000078-M04-03A). (\*)Pressure/Temperature readings are not available (no local or remote instruments), system was verified to be in normal line up. Applicable material certifications for filler metal were attached at the time of final review and are maintained on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 5/11, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 9/24/2008 to 5/11/2009, 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. Luca Commissions IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 5-12, 2009

# **As Required by the Provisions of the ASME Code Section XI**

1. Owner : Exelon Generation Co., LLC  
Address: 300 Exelon Way, Kennett Square, PA 19348

Date 5/11/2009  
Sheet 1 of 1

2. Plant Name: Braidwood Station Unit 1  
Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #00935555-02  
Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
Authorization No.: None  
Expiration Date: None

4. Identification of System: Chemical and Volume Control (CV) (Class 2 Portion of System)

- 5 (a) Applicable Construction Code: ASME Section III 1971 Edition, Winter 1972 Addenda, No Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
(c) Section XI code Cases used: None

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)
ER 316/316L Weld Rod for Body-to-Bonnet Seal Weld for Valve 1CV8348	Arcos Alloys	Lot CM8256	N/A	Cat ID 8500-1 UTC 2715657	2004	Replacement	No
	Arcos Alloys	Lot DF7967	N/A	Cat ID 8512-1 UTC 2670511	2002	Replacement	No

7. Description of Work: Reapplied body-to-bonnet seal weld that was removed to gain access to valve internals for surveillance inspection. Seal weld was examined in the finished condition by liquid penetrant, acceptable per Report A1R14-083.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
Other ☒ Pressure Not Applicable psig Test Temp. Not Applicable °F

9. Remarks: Exempt from Section XI pressure testing requirements per IWA-4540(b)(8). Applicable material certifications for filler metal were attached at the time of final review and are maintained on file.

## **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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 5/11, 2009  
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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 5/1/2007 to 5/1/2009, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

[Signature]  
Inspector's Signature

Commissions IL1085  
National Board, State, Province, and Endorsements

Date 5/12, 2009

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

1. Owner : Exelon Generation Co., LLC  
Address: 300 Exelon Way, Kennett Square, PA 19348  
Date 5/28/2008  
Sheet 1 of 1
2. Plant Name: Braidwood Station Unit 1  
Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
Work Order #01116347-01  
Repair Organization P.O., Job No., etc.
3. Work Performed By: Braidwood Station Mechanical Maintenance  
Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
Code Symbol Stamp: None  
Authorization No.: None  
Expiration Date: None
4. Identification of System: Chemical and Volume Control (CV) (Class 2 Portion of System)
- 5 (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, No Code Cases  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition with No Addenda  
(c) Section XI code Cases used: None

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)
Line 1CV06A-4" Bolted Connections CV-3-F3-1 and CV-3-F4-2	Not Recorded	Not Recorded	Not Applicable	1CV06A-4"	Not Recorded	Replaced	No
5/8"-11 Threaded Rod	NOVA Machine Products	Heat 7404456 Lot 40062896 Trace Code F440	Not Applicable	Cat ID 571385-1 UTC 2657685	2001	Replacement	No
5/8"-11 Heavy Hex Nuts	NOVA Machine Products	Heat 7220464 Lot 50002892 Trace Code M192	Not Applicable	Cat ID 37029-1 UTC 2689561	2001	Replacement	No

7. Description of Work: Replaced existing bolting that was removed for VT-1 examination in accordance with the Boric Acid Corrosion Control Program.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure N/A psig Test Temp. N/A °F
9. Remarks: Section XI pressure testing not required. Applicable manufacturer's certifications were attached at the time of final review and are maintained on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casuy ISI Coordinator Date 5/28, 2008  
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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 5/22/2008 to 5/28/2008, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

Inspector's Signature

Commissions IL1085

National Board, State, Province, and Endorsements

Date 3-19, 2009

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 7/2/2009  
 Sheet 1 of 1

Plant Name: Braidwood Station  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Unit: 1

Work Order #01216080-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Braidwood Station Mechanical Maintenance  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Containment Spray (CS) (Class 2)

5. (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, No Code Case  
 (b) Applicable Edition of Section XI Utilized for Repair/Replacement: 2001 Edition with 2003 Addenda  
 (c) Section XI Code Cases used: None

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	Corrected Removed, or Installed	ASME Code Stamped (Yes or No)
¾"-10 Double Ended Stud	Not Recorded	Not Recorded	Not Applicable	1CS01SB	Not Recorded	Removed	Yes
Replacement ¾"-10 Double Ended Stud	Anvil International/ The Colonial Machine Company, Inc.	Heat M19576 H8725 Code 725-4	Not Applicable	Cat ID 32401-1 UTC 2791934	2007	Installed	Yes

7. Description of Work: Replaced existing stud during visual examination for the Boric Acid Corrosion Control program, reference IR 883083 for initial condition. No degradation of existing bolting material was documented under VT-3 examination completed on 5/28/2009. Replacement stud specified by work planner was coded as a Class NF component support (material was SA 193 Grade B7 material as required by Piping Design Table "140BB". Replacement bolt equivalency was evaluated under Issue Report 937148.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☒  
 Other ☐ Pressure \_\_\_\_\_ psig Test Temp. \_\_\_\_\_ °F

9. Remarks: Material certification for replacement bolt was attached at the time of final review and is available on file.

**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.  
 Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 7/2, 2009  
 Owner or Owner's Designee, Title

**CERTIFICATE OF INSERVICE INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 12/24/2008 to 7/2/2009, 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 IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 7-2-, 2009

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

1. Owner : Exelon Generation Co., LLC  
Address: 300 Exelon Way, Kennett Square, PA 19348  
Date 6/11/2009  
Sheet 1 of 1
2. Plant Name: Braidwood Station Unit 1  
Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
Work Order #01085384-01  
Repair Organization P.O., Job No., etc
3. Work Performed By: Braidwood Mechanical Maintenance Department  
Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
Code Symbol Stamp: None  
Authorization No.: None  
Expiration Date: None
4. Identification of System: Main Feedwater (FW) (Class 2 System)
- 5 (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, No Code Cases  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
(c) Section XI code Cases used: None

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)
Bonnet for 16" 900# Class Flow Check Valve	Borg Warner	Not Recorded	Not Applicable	Valve 1FW079B	Unknown	Replaced	Yes (Valve)
16" 900# Class Valve Bonnet	Flowserve Corporation	Serial Number L203 Heat G4508	Not Applicable	Cat ID 32144-1 UTC 2040056	1999	Replacement	Yes (Form N-2)

7. Description of Work: Replaced existing flow check valve bonnet assembly to as opposed to spend time refurbishing existing valve bonnet assembly during maintenance on valve. Valve would not fully open, reference Issue Report 703438.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☒ Pressure 1097.5 psig Test Temp. 444.1 °F
9. Remarks: VT-2 examination completed and acceptable. Applicable documentation for replacement disc (N-2 NPT Certificate) was attached at the time of final review and is on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/11, 2009  
Owner or Owners 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 9/29/2008 to 6/11/2009, 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. Commissions IL1085  
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-12, 2009

# FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\*

As required by the Provision of the ASME Code Rules, Section III, Div. 1

1. (a) Manufactured by Flowserve Corp., 701 First Street, Williamsport, PA 17701  
(Name and address of NPT Certificate Holder)  
(b) Manufactured for Commonwealth Edison Co., P. O. Box 767, Chicago, IL 60690  
(Name and address of NPT Certificate Holder for completed nuclear component)  
2. Identification-Certificate Holder's Serial No. of Part L203 Nat'l Bd. No. N/A  
(a) Constructed According to Drawing No. 86523 R/F Drawing Prepared by Flowserve Corp. /  
(b) Description of Part Inspected Bonnet Assembly Heat # G4508 SA 105  
(c) Applicable ASME Code: Section III, Edition 1974, Addenda date Sum '75, Case No. N/A Class 2  
3. Remarks: Spare Part(s) for 16"-900 A TDC Valve  
(Brief description of service for which component was designed)  
Flowserve S.O. and Item No: E-418P-1

NOTE: No Hydrotesting Performed Cylinder Material: SA-106-B/Ht. #F0873

Bryon NUCLEAR STATION: Pipe Material: SA106-B/Ht. #268672

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

Date 8/4/99 19 99 Signed Flowserve Corp. By [Signature]  
(NPT Certificate Holder)  
Certificate of Authorization Expires 4/15/01 Certificate of Authorization No. N1713

## CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at \_\_\_\_\_  
Stress analysis report on file at \_\_\_\_\_  
Design specifications certified by \_\_\_\_\_ Prof. Eng. State \_\_\_\_\_ Reg. No. \_\_\_\_\_  
Stress analysis report certified by \_\_\_\_\_ Prof. Eng. State \_\_\_\_\_ Reg. No. \_\_\_\_\_

## CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Pennsylvania and employed by Commercial Union Insurance Company of Boston, Mass. have inspected the part of a pressure vessel described in this Partial Data Report on 3-1-99 thru 8-5-99 19 99 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.  
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8-5 19 99  
[Signature] Commissions Pennsylvania 2392  
Inspector's Signature National Board, State, Province and No.

\*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) also is 8 1/2" x 11", (2) information in items 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and tabular of sheets is provided in item 3. Remarks

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/11/2009  
 Sheet 1 of 1

Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01213473-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Main Steam (MS) (Class 2 System)

5. (a) Applicable Construction Code: ASME Section III 1974 Edition, No Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI code Cases used: None

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)
6" Safety Relief Valve Main Disc for Safety Relief Valve 1MS014C	Dresser	Not Recorded	Not Applicable	Valve 1MS014C (Serial Number BR09636/ Cat ID 1388672-1)	Unknown (Valve Built in 1977)	Replaced	Yes (Valve)
6" Safety Relief Valve Main Disc	Dresser	ADG33	Not Applicable	Cat ID 16492-1 UTC 2615931	2001	Replacement	No (N-2 Form)

7. Description of Work: Removed valve was sent to NWS Technologies for set point verification and refurbishment under PO #00445095. NWS Technologies replaced existing main disc of valve with disc (Serial Number ADG33) provided by Exelon. Valve was reinstalled back to same position.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure Not Applicable psig Test Temp. Not Applicable °F

9. Remarks: Section XI pressure testing was not applicable. Applicable documentation for refurbished valve (NVR-1) and replacement disc (N-2 Certificate Holders' Data Report for Identical Nuclear Parts and Appurtenances) were attached at the time of final review and is on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable  
 Signed Brendan J. Casey ISI Coordinator Date 6/11, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 3/17/2009 to 6/11/2009, 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. Mullen Commissions IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements  
 Date 6-12, 2009



**FORM NVR-1 REPORT OF REPAIR ☒ REPLACEMENT ☒  
OF NUCLEAR PRESSURE RELIEF DEVICES**

145894

1. Work performed by: NWS Technologies, LLC Purchase Order # 445095  
131 Venture Boulevard, Spartanburg, SC 29306
2. Work performed for: Exelon Corporation, Braidwood Station
- 3/4. Owner - name, address and identification of nuclear power plant: Exelon Corp. - Braidwood Station  
East of IL RT 53, 1-1/2 Miles South of RT 113 Braidwood IL 60408
5. a: Repaired pressure relief device: Main Steam Safety Valve  
 b: Name of manufacturer: Consolidated / Dresser  
 c: Identifying nos.
- |  |                |            |                 |              |             |
|--|----------------|------------|-----------------|--------------|-------------|
| <u>3707R</u>                             | <u>BR09636</u> | <u>n/a</u> | <u>steam</u>    | <u>6"</u>    | <u>1977</u> |
| (type)                                   | (mfr's S/N)    | (NB#)      | (service)       | (size)       | (yr.built)  |
| d: Construction Code: <u>Section III</u> | <u>1974</u>    | <u>n/a</u> | <u>n/a</u>      | <u>n/a</u>   | <u>2</u>    |
| (name/section/division)                  | (edition)      | (addenda)  | (Code Cases(s)) | (Code Class) |             |
6. ASME Code Section XI applicable for inservice inspection: 2001 2003 n/a  
 (edition) (addenda) (Code Case(s))
7. ASME Code Section XI used for repairs, replacements: 2001 2003 n/a  
 (edition) (addenda) (Code Case(s))
8. Construction Code used for repairs, replacements: 1974 n/a n/a  
 (edition) (addenda) (Code Case(s))
9. Design responsibilities: n/a
10. Opening pressure: 1220 psig  
 Set-pressure adjustment made at: NWS Technologies, LLC using steam
11. Description of work (include name and identifying number of replacement parts): Disassembled, inspected, installed  
preoxidized X750 disc, lapped nozzle seat and passivated seat area, cleaned, lubricated, assembled.  
Certified set-pressure and seat tightness using steam.
12. Remarks: NWS Traveler # 09-103. Replacement disc s/n ADG33. \*Under extension ☒

**CERTIFICATE OF COMPLIANCE**

I, Cesar V. Sierra certify that to the best of my knowledge and belief the statements made in this report are correct and the repair, modification or replacement of the pressure relief devices described above conforms to Section XI of the ASME Code and the National Board Inspection Code "VR" and "NR" rules.

National Board Certificate of Authorization No. 632 to use the "VR" stamp expires April 3, 2009.

National Board Certificate of Authorization No. 81 to use the "NR" stamp expires April 9, 2009.

4/3/09 NWS Technologies, LLC [Signature] Manager, QA  
 Date Repair Organization Authorized representative Title

**CERTIFICATE OF INSPECTION**

I, Charles F. Toegel Jr. holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of North Carolina and employed by Hartford Steam Boiler of CT of Hartford, CT have inspected the repair, modification or replacement described in this report on 8 APR 2009 and state that to the best of my knowledge and belief, this repair, modification or replacement has been completed in accordance with Section XI of the of the ASME Code and the National Board Inspection Code "VR" and "NR" rules.

By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning this repair, modification or replacement described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

4/3/09 [Signature] NB # 8462, A, N, I NC# 1073  
 Date Inspector's Signature Commissions (NB (incl endorsements), jurisdiction, & no.)

145894

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

|||||| 71193

Pg. 1 of 2

1. Manufactured and certified by Dresser Valve Division; Dresser Equipment Group, Inc.  
Intersection Hwy. 167 @ 3225 North, Alexandria, Louisiana 71309  
 (name and address of NPT Certificate Holder)
2. Manufactured for Exelon Generation Company LLC P.O. Box 805388 Chicago, Illinois 60680-5388  
 (name and address of purchaser)
3. Location of Installation Commonwealth Edison Co. Byron Station 4450 North German Church Road Byron, Illinois 61010-9794  
 (name and address)
4. Type OS430 SB637 (Inconel X-750) N/A N/A 2001  
 (drawing no.) (mat'l spec. no.) (tensile strength) (CRN) (year built)
5. ASME Code Section III, Division 1: 1974 None 2 N/A  
 (edition) (addenda date) (class) (Code Case no.)
6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A  
 (no)
7. Remarks : Serial Numbers Are Used In Lieu Of NPT Stamping.

Corrected Location Of Installation, Name And Address.

8. Nom. thickness (in.) N/A Min. design thickness (in.) N/A Dia. ID (ft. & in.) N/A Length overall (ft. & in.) N/A
9. When applicable, Certificate Holders' Data Reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. in Numerical Order	Part or Appurtenance Serial Number	National Board No. in Numerical Order
(1) ADG11		(26)	
(2) ADG12		(27)	
(3) ADG13		(28)	
(4) ADG14 <i>72V</i>		(29)	
(5) ADG15		(30)	
(6) ADG16		(31)	
(7) ADG17		(32)	
(8) ADG18		(33)	
(9) ADG19		(34)	
(10) ADG20		(35)	
(11) ADG21		(36)	
(12) ADG24		(37)	
(13) ADG25		(38)	
(14) ADG27		(39)	
(15) ADG29		(40)	
(16) ADG30		(41)	
(17) ADG32		(42)	
(18) ADG33		(43)	
(19) ADG34		(44)	
(20) ADG35		(45)	
(21) ADG36		(46)	
(22) ADG37		(47)	
(23) ADG40		(48)	
(24) ADG44		(49)	
(25) ADG47		(50)	

10. Design pressure N/A psi Temp. N/A °F Hydro. Test pressure 2250 PSIG at temp. °F  
 (when applicable)

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

MSB-ANII  
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71193

145894

FORM N-2 (Back — Pg. 2 of 2 )

Certificate Holder's Serial Nos. ADG11 THRU ADG21 And ADG24, 25, 27, 29, 30  
32, 33, 34, 35, 36, 37 And 40, 44, 47

#### CERTIFICATION OF DESIGN

Design specifications certified by N/A P.E. State N/A Reg. No. N/A  
(when applicable)  
Design report\* certified by N/A P.E. State N/A Reg. No. N/A  
(when applicable)

#### CERTIFICATE OF COMPLIANCE

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

NPT Certificate of Authorization No. N-2434 Expires 5/20/2004  
Date 7-31-01 Name SEE LINE 1 Signed V. J. Beaver  
( NPT Certificate Holder ) ( authorized representative )

#### CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province  
of LOUISIANA and employed by H. S. B. I. & I. Co.  
of HARTFORD, CT. have inspected these items described in this Data Report on 7/23/01, and state that to the  
best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section  
III, Division 1. Each part listed has been authorized for stamping on the date shown above.  
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described  
in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage  
or loss of any kind arising from or connected with this inspection.

Date 7/26/01 Signed [Signature] Commissions LA664  
( Authorized Nuclear Inspector ) ( Nat'l Bd. (incl. endorsements ) and state or prov. and no. )

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

- |    |   |   |
|----|---|---|
| 1. | Owner : Exelon Generation Co., LLC<br>Address: 300 Exelon Way, Kennett Square, PA 19348   | Date 6/11/2009<br>Sheet 1 of 1  |
| 2. | Plant Name: Braidwood Station Unit 1<br>Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407   | <u>Work Order #01213471-01</u><br>Repair Organization P.O., Job No., etc    |
| 3. | Work Performed By: Shaw / Stone & Webster<br>Address: 36400 S. Essex Road, Wilmington, IL 60481   | Code Symbol Stamp: None<br>Authorization No.: None<br>Expiration Date: None |
| 4. | Identification of System: Main Steam (MS) (Class 2 System)  |   |
| 5  | (a) Applicable Construction Code: ASME Section III 1974 Edition, No Addenda, No Code Cases<br>(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda<br>(c) Section XI code Cases used: None |   |

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)
6" Safety Relief Valve Main Disc for Safety Relief Valve 1MS017B	Dresser	Not Recorded	Not Applicable	Valve 1MS017B (Serial Number BR09647/ Cat ID 1388663-1)	Unknown (Valve Built in 1977)	Replaced	Yes (Valve)
6" Safety Relief Valve Main Disc	Dresser	ADE65	Not Applicable	Cat ID 1387627-1 UTC 2663786	2001	Replacement	No (Form N-2)

7. Description of Work: Removed valve was sent to NWS Technologies for set point verification and refurbishment under PO #00445095. NWS Technologies replaced existing main disc of valve with disc (Serial Number ADE65) provided by Exelon. Valve was reinstalled back to same position.
8. Tests Conducted:      Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
   Other ☐ Pressure Not Applicable psig Test Temp. Not Applicable °F
9. Remarks: Section XI pressure testing was not applicable. Applicable documentation for refurbished valve (NVR-1) and replacement disc (N-2 Certificate Holders' Data Report for Identical Nuclear Parts and Appurtenances) were attached at the time of final review and is on file.

## 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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/11, 2009  
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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 3/17/2009 to 6/1/2009, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

Inspector's Signature \_\_\_\_\_ Commissions IL1085  
National Board, State, Province, and Endorsements

Date 6-12-2009

145894

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# **FORM NVR-1 REPORT OF REPAIR ☒ REPLACEMENT ☒** **OF NUCLEAR PRESSURE RELIEF DEVICES**

1. Work performed by: **NWS Technologies, LLC** Purchase Order # 445095  
131 Venture Boulevard, Spartanburg, SC 29306
2. Work performed for: Exelon Corporation, Braidwood Station
- 3/4. Owner - name, address and identification of nuclear power plant: Exelon Corp. - Braidwood Station  
East of IL RT 53, 1-1/2 Miles South of RT 113 Braidwood IL 60408
5. a: Repaired pressure relief device: Main Steam Safety Valve  
b: Name of manufacturer: Consolidated / Dresser  
c: Identifying nos.  

<u>3707R</u>	<u>BR09647</u>	<u>n/a</u>	<u>steam</u>	<u>6"</u>	<u>1977</u>
<small>(type)</small>	<small>(mfr's S/N)</small>	<small>(NB#)</small>	<small>(service)</small>	<small>(size)</small>	<small>(yr. built)</small>
- d: Construction Code: Section III 1974 n/a n/a 2  

<small>(name/section/division)</small>	<small>(edition)</small>	<small>(addenda)</small>	<small>(Code Cases(s))</small>	<small>(Code Class)</small>
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6. ASME Code Section XI applicable for inservice inspection: 2001 2003 n/a  

<small>(edition)</small>	<small>(addenda)</small>	<small>(Code Case(s))</small>
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7. ASME Code Section XI used for repairs, replacements: 2001 2003 n/a  

<small>(edition)</small>	<small>(addenda)</small>	<small>(Code Case(s))</small>
--------------------------	--------------------------	-------------------------------
8. Construction Code used for repairs, replacements: 1974 n/a n/a  

<small>(edition)</small>	<small>(addenda)</small>	<small>(Code Case(s))</small>
--------------------------	--------------------------	-------------------------------
9. Design responsibilities: n/a
10. Opening pressure: 1175 psig  
Set-pressure adjustment made at: NWS Technologies, LLC using steam
11. Description of work (Include name and identifying number of replacement parts): Disassembled, inspected, installed  
preoxidized X750 disc, lapped nozzle seat and passivated seat area, cleaned, lubricated, assembled.  
Certified set-pressure and seat tightness using steam.
12. Remarks: NWS Traveler # 09-105. Replacement disc s/n ADE65. \* Under extension

CERTIFICATE OF COMPLIANCE			
I, <u>Cesar V. Sierra</u> certify that to the best of my knowledge and belief the statements made in this report are correct and the repair, modification or replacement of the pressure relief devices described above conforms to Section XI of the ASME Code and the National Board Inspection Code "VR" and "NR" rules.			
National Board Certificate of Authorization No. <u>632</u>		to use the "VR" stamp expires <u>April 3, 2009.</u>	
National Board Certificate of Authorization No. <u>81</u>		to use the "NR" stamp expires <u>April 9, 2009.</u>	
<u>4/8/09</u> <small>Date</small>	<u>NWS Technologies, LLC</u> <small>Repair Organization</small>	 <small>Authorized representative</small>	<u>Manager, QA</u> <small>Title</small>
CERTIFICATE OF INSPECTION			
I, <u>Charles F. Toegel Jr.</u> holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of <u>North Carolina</u> and employed by <u>Hartford Steam Boiler of CT</u> of <u>Hartford, CT</u> have inspected the repair, modification or replacement described in this report on <u>8 APRIL 2009</u> and state that to the best of my knowledge and belief, this repair, modification or replacement has been completed in accordance with Section XI of the of the ASME Code and the National Board Inspection Code "VR" and "NR" rules.			
By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning this repair, modification or replacement described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.			
<u>4/8/09</u> <small>Date</small>	 <small>Inspector's Signature</small>	<u>NB # 8462, A, N, I NC# 1073</u> <small>Commissions (NB (incl endorsements), jurisdiction, &amp; no.)</small>	

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

Pg. 1 of 2

1. Manufactured and certified by Dresser Valve Division; Dresser Equipment Group, Inc.  
Intersection Hwy. 167 @ 3225 North, Alexandria, Louisiana 71309  
(name and address of NPT Certificate Holder)

2. Manufactured for Exelon Generation Company LLC P.O. Box 805388 Chicago, Illinois 60680-5388  
(name and address of purchaser)

3. Location of Installation Commonwealth Edison Co. Braidwood Sta. E Of ILL. Rt. 53.11-1/2 Mi. S. Of Rt. 113 Braidwood, ILL. 60408  
(name and address)

4. SB637 (Inconel X-750) N/A N/A 2001  
(drawing no.) (mat'l spec. no.) (article strength) (CRN) (year built)

5. ASME Code Section III, Division 1: 1974 None 2 N/A  
(edition) (article date) (class) (Code Case no.)

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

7. Remarks: Serial Numbers Are Used In Lieu Of NPT Stamping.

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

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

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board No. In Numerical Order
(1) ADE40		(26)	
(2) ADE41		(27)	
(3) ADE42		(28)	
(4) ADE43		(29)	
(5) ADE44		(30)	
(6) ADE45		(31)	
(7) ADE46		(32)	
(8) ADE47		(33)	
(9) ADE48		(34)	
(10) ADE49		(35)	
(11) ADE50		(36)	
(12) ADE51		(37)	
(13) ADE52		(38)	
(14) ADE53		(39)	
(15) ADE54		(40)	
(16) ADE55		(41)	
(17) ADE56		(42)	
(18) ADE57		(43)	
(19) ADE58		(44)	
(20) ADE59		(45)	
(21) ADE60		(46)	
(22) ADE61		(47)	
(23) ADE62		(48)	
(24) ADE63		(49)	
(25) ADE64		(50)	

10. Design pressure N/A psi Temp. N/A °F. Hydro. Test pressure 2250 PSIG at temp. °F  
(when applicable)

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

POOR QUALITY ORIGINAL

27683

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

Customer Name: ACER Design:

CERTIFICATE OF DESIGN

Design modification certified by N/A P.E. State N/A Reg. No. N/A  
 Design report certified by N/A P.E. State N/A Reg. No. N/A

CERTIFICATE OF COMPLIANCE

We certify that the equipment made in this report is correct and that we Disc  
 conform to the rules of construction of the ASME Code, Section II, Division 1.

API Certificate of Authorization No. N-7020 Date May 20, 2001  
 Date 4-26-99 Name See line 1 W. J. J. J.

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid certification issued by the American Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by The Harrison Inspection & Engineering Co. have inspected this item described in this Data Report on 4/26/99 and make this to the best of my knowledge and belief, the Certificate holder has determined that (none of) observations in compliance with the ASME Code, Section II, Division 1, have been made and have been corrected on the date shown above.  
 By signing this Certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the technical description in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind, arising from or connected with this report.  
 Date 4/26/99 Name W. J. J. J. Inspector W. J. J. J.

OML:NNI - 4/26/99

POOR QUALITY ORIGINAL

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/11/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01213472-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Main Steam (MS) (Class 2 System)

- 5 (a) Applicable Construction Code: ASME Section III 1974 Edition, No Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI code Cases used: None

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)
6" Safety Relief Valve Main Disc for Safety Relief Valve 1MS015C	Dresser	Not Recorded	Not Applicable	Valve 1MS015C (Serial Number BR09640/ Cat ID 1388667-1)	Unknown (Valve Built in 1977)	Replaced	Yes (Valve)
6" Safety Relief Valve Main Disc	Dresser	ACZ87	Not Applicable	Cat ID 1387627-1 UTC 2780096	1999	Replacement	No (Form N-2)

7. Description of Work: Removed valve was sent to NWS Technologies for set point verification and refurbishment under PO #00445095. NWS Technologies replaced existing main disc of valve with disc (Serial Number ACZ87) provided by Exelon. Valve was reinstalled back to same position.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure Not Applicable psig Test Temp. Not Applicable °F

9. Remarks: Section XI pressure testing was not applicable. Applicable documentation for refurbished valve (NVR-1) and replacement disc (N-2 Certificate Holders' Data Report for Identical Nuclear Parts and Appurtenances) were attached at the time of final review and is on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brundan J. Casey ISI Coordinator Date 6/11, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 3/17/2009 to 6/11/2009, 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. M. Green Commissions IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 6-12-, 2009



**FORM NVR-1 REPORT OF REPAIR ☒ REPLACEMENT ☒  
OF NUCLEAR PRESSURE RELIEF DEVICES**

145894

1. Work performed by: NWS Technologies, LLC Purchase Order # 445095  
131 Venture Boulevard, Spartanburg, SC 29306
2. Work performed for: Exelon Corporation, Braidwood Station
- 3/4. Owner - name, address and identification of nuclear power plant: Exelon Corp. - Braidwood Station  
East of IL RT 53, 1-1/2 Miles South of RT 113 Braidwood IL 60408
5. a: Repaired pressure relief device: Main Steam Safety Valve  
 b: Name of manufacturer: Consolidated / Dresser  
 c: Identifying nos.
- |   |                               |                         |                              |                          |                            |
|---|-------------------------------|-------------------------|------------------------------|--------------------------|----------------------------|
| <u>3707R</u><br>(type)  | <u>BR09640</u><br>(mfr's S/N) | <u>n/a</u><br>(NB#)     | <u>steam</u><br>(service)    | <u>6"</u><br>(size)      | <u>1977</u><br>(yr. built) |
| d: Construction Code: <u>Section III</u><br>(name/section/division) | <u>1974</u><br>(edition)      | <u>n/a</u><br>(addenda) | <u>n/a</u><br>(Code Case(s)) | <u>2</u><br>(Code Class) |                            |
6. ASME Code Section XI applicable for inservice inspection: 2001  
(edition)
7. ASME Code Section XI used for repairs, replacements: 2001  
(edition)
8. Construction Code used for repairs, replacements: 1974  
(edition)
9. Design responsibilities: n/a
10. Opening pressure: 1205 psig  
 Set-pressure adjustment made at: NWS Technologies, LLC using steam
11. Description of work (include name and identifying number of replacement parts): Disassembled, inspected, installed preoxidized X750 disc, lapped nozzle and passivated seat area, replaced spindle (CEAR 09-30) cleaned, lubricated, assembled. Certified set-pressure and seat tightness using steam.
12. Remarks: NWS Traveler # 09-104. Replacement disc s/n ACZ87. \* Under extension

**CERTIFICATE OF COMPLIANCE**

I, Cesar V. Sierra certify that to the best of my knowledge and belief the statements made in this report are correct and the repair, modification or replacement of the pressure relief devices described above conforms to Section XI of the ASME Code and the National Board Inspection Code "VR" and "NR" rules.

National Board Certificate of Authorization No. 632 to use the "VR" stamp expires April 3, 2009.  
 National Board Certificate of Authorization No. 81 to use the "NR" stamp expires April 9, 2009.

4/8/09 NWS Technologies, LLC [Signature] Manager, QA  
 Date Repair Organization Authorized representative Title

**CERTIFICATE OF INSPECTION**

I, Charles F. Toegel Jr. holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of North Carolina and employed by Hartford Steam Boiler of CT of Hartford, CT have inspected the repair, modification or replacement described in this report on 8 April 2009 and state that to the best of my knowledge and belief, this repair, modification or replacement has been completed in accordance with Section XI of the of the ASME Code and the National Board Inspection Code "VR" and "NR" rules.

By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning this repair, modification or replacement described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

4/8/09 [Signature] NB # 8462, A, N, I NC# 1073  
 Date Inspector's Signature Commissions (NB (incl endorsements), jurisdiction, & no.)

145894

**FORM N-2 CERTIFICATE HOLDING DATA REPORT FOR IDENTICAL  
NUCLEAR PARTS AND APPURTENANCES\***

27683

As Required by the Provisions of the Atomic Energy Act, Section III  
Not to Exceed One Day's Possession

Pg. 1 of 2

Dresser Industries, Inc., Dresser Valve & Controls Div. Industrial  
Valve Operations, Intersection Hwy. 167 & 2225 North Alton, LA 71309-1430

1. Manufactured and certified by Dresser Industries, Inc.
2. Manufactured by Commonwealth Edison Co., P. O. Box 747, Chicago, IL 60680-0767
3. Location of Manufacture Commonwealth Edison Co., Railroad Station 2 of N. St. 53 11-1/2 mi S of St. Louis, MO 63048
4. Type 08430 57637 (Inconel 750) N/A N/A 1999
5. ASME Code, Section II, Division 1: 1974 2 N/A
6. Fabricated in accordance with Const. Spec. Div. 2 only: N/A N/A N/A
7. Remarks None

8. Name, Address (in U.S.) N/A City, State, Zip (in U.S.) N/A Div. ID (in U.S.) N/A Length overall (in U.S.) N/A
9. When specified, Certificate Holders' Data Reports are attached for each item of this report.

Part or Appurtenance Serial Number	Material Spec. No. In Statistical Order	Part or Appurtenance Serial Number	Material Spec. No. In Statistical Order
01 AC287		028	
02		029	
03		030	
04		031	
05		032	
06		033	
07		034	
08		035	
09		036	
10		037	
11		038	
12		039	
13		040	
14		041	
15		042	
16		043	
17		044	
18		045	
19		046	
20		047	
21		048	
22		049	
23		050	
24		051	
25		052	
26		053	
27		054	
28		055	
29		056	
30		057	
31		058	
32		059	
33		060	
34		061	
35		062	
36		063	
37		064	
38		065	
39		066	
40		067	
41		068	
42		069	
43		070	
44		071	
45		072	
46		073	
47		074	
48		075	
49		076	
50		077	
51		078	
52		079	
53		080	
54		081	
55		082	
56		083	
57		084	
58		085	
59		086	
60		087	
61		088	
62		089	
63		090	
64		091	
65		092	
66		093	
67		094	
68		095	
69		096	
70		097	
71		098	
72		099	
73		100	

10. Design pressure N/A Temp. N/A
11. Hydro. test pressure 2250-PSY at temp. of

\*Supplemental information in the form of text, sketches, or drawings may be used provided (1) one is (2) in (3) information on items 2 and 3 on the Data Report to include on each sheet; (4) each sheet is numbered and the number of sheets is recorded on the top of this form.

POOR QUALITY ORIGINAL

145894

21683

FORM N-2 (Book 1 Pg. 2 of 2)

Certification Number: ACB7

CERTIFICATION OF DESIGN			
Design manufacturer certified by	<u>N/A</u>	P.E. State	<u>N/A</u>
Design report* certified by	<u>N/A</u>	P.E. State	<u>N/A</u>

CERTIFICATE OF COMPLIANCE	
We certify that the statements made in this report are correct and that we are <u>Disc</u> conforming to the rules of construction of the ASME Code, Section II, Division 1, Subpart 1.	
NPT Certificate of Authorization No.	<u>N-2033</u>
Date	<u>May 29, 2001</u>
Signature	<u>[Signature]</u>

CERTIFICATE OF INSPECTION	
I, the undersigned, holding a valid commission issued by the Board of Boiler and Pressure Vessel Inspectors and the State of Louisiana, and employed by <u>The National Boiler Inspection &amp; Ins. Co.</u> , have inspected the boiler described in the Data Report on <u>4/21/01</u> and state that to the best of my knowledge and belief, the Certificate Number has been issued in accordance with the ASME Code, Section II, Division 1, Subpart 1, and that the boiler is in compliance with the Code on the date shown above.	
By signing this certificate, neither the undersigned nor his employer makes any warranty, endorsement or statement, concerning the boiler, described in this Data Report. Furthermore, neither the undersigned nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind, arising from or connected with this inspection.	
Date	<u>4/21/01</u>
Signature	<u>[Signature]</u>
Company	<u>WILLIAM P. L. L.</u>

CHURCH - 10-11

POOR QUALITY ORIGINAL

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 5/6/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01226434-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 364100 S. Essex Road, Wilmington IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Main Steam (MS) Class 2 system

- 5 (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, Code Cases: None  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI code Cases used: None

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)
Welded Attachment Lugs for Component Support 1MS06007S	Not Recorded	None	Not Applicable	1MS06007S	Not Recorded	Modified	No
3/32" E7018 Electrode	ESAB	Heat163978 Lot 2L705C01 Control MMM035	Not Applicable	Cat ID 8491-1 UTC 2807647	2008	Replacement	No

7. Description of Work: Installed shims to correct excessive gap between existing pipe clamp and welded attachment lugs in accordance with ECR 389887. Shims were fabricated from 3/8" thick bar stock (Cat ID 514291-1, UTC 2804471 / Heat JC9892). A post maintenance VT-3 examination was completed upon final installation of shims on 4/14/2009.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
 Other ☒ Pressure Not Applicable psig Test Temp. Not Applicable °F

9. Remarks: VT-3 examination of support was performed after reinstallation. Applicable material certifications were attached at the time of final review and are maintained on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 5/6, 2009  
 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 IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 4/11/2009 to 5/6/2009, 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 IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 5-7, 2009

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

- |   |   |
|---|---|
| 1. Owner : Exelon Generation Co., LLC<br>Address: 300 Exelon Way, Kennett Square, PA 19348<br><br>2. Plant Name: Braidwood Station Unit 1<br>Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407<br><br>3. Work Performed By: Shaw / Stone & Webster<br>Address: 364100 S. Essex Road, Wilmington IL 60481<br><br>4. Identification of System: Main Steam (MS) Class 2 system<br><br>5. (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, Code Cases: None<br>(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda<br>(c) Section XI code Cases used: None | Date 5/6/2009<br>Sheet 1 of 1<br><br>Work Order #01226435-01<br>Repair Organization P.O., Job No., etc<br><br>Code Symbol Stamp: None<br>Authorization No.: None<br>Expiration Date: None |
|---|---|

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)
Welded Attachment Lugs for Component Support 1MS05002C	Not Recorded	None	Not Applicable	1MS05002C	Not Recorded	Modified	No
3/32" E7018 Electrode	ESAB	Heat163978 Lot 2L705C01 Control MMM035	Not Applicable	Cat ID 8491-1 UTC 2807647	2008	Replacement	No

7. Description of Work: Installed shims to correct excessive gap between existing pipe clamp and welded attachment lugs in accordance with ECR 389887. Shims were fabricated from 3/8" thick bar stock (Cat ID 514291-1, UTC 2804471 / Heat JC9892). A post maintenance VT-3 examination was completed upon final installation of shims on 4/14/2009.
8. Tests Conducted:      Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
    Other ☒ Pressure Not Applicable psig Test Temp. Not Applicable °F
9. Remarks: VT-3 examination of support was performed after reinstallation. Applicable material certifications were attached at the time of final review and are maintained on file.

**CERTIFICATE OF COMPLIANCE**

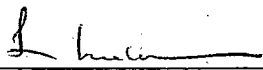
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey      ISI Coordinator      Date 5/6 2009  
    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 IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 4/11/2009 to 5/6/2009, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

  
 Inspector's Signature      Commissions IL1085  
    National Board, State, Province, and Endorsements

Date 5/7 2009

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348  
 Date 5/14/2009  
 Sheet 1 of 1
2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
 Work Order #01067695-01  
 Repair Organization P.O., Job No., etc
3. Work Performed By: Braidwood Mechanical Maintenance  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407  
 Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None
4. Identification of System: Reactor Coolant (RC) (Class 1 System)
- 5 (a) Applicable Construction Code: ASME Section III 1971/(Valve)/ 1974 (Pipe) Edition, Winter 1972 (Valve)/Summer 1975 (Pipe) Addenda, No Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI Code Cases used: None

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)
Kerotest 1.5" 1500# Manual Valve and associated pipe	Kerotest	Not Recorded	Not Recorded	1RC8042C Line 1RC22AC-1 1/2"	Not Recorded	Replaced	Yes
1 1/2" Manual Globe Valve	BW / IP International	Valve Serial Number EZ935-3-4	Not Applicable	Cat ID 36308-1 UTC 2637823	1998	Replacement	Yes
1 1/2" Seamless Pipe	Sandvik Materials Technology	Heat 510310	Not Applicable	Cat ID 41105-1 UTC 2793196	2006	Replacement	Yes
1/8" Diameter ER308/308L Bare Wire	Arcos Industries, LLC	Lot/Alloy DF7995	Not Applicable	Cat ID 8513-1 UTC 2702660	2003	Replacement	Yes
3/32" Diameter ER308/308L Bare Wire	Arcos Industries, LLC	Lot CT8816 Heat 735857	Not Applicable	Cat ID 8497-1 UTC 2702660	2008	Replacement	Yes

7. Description of Work: Replaced existing manual valve (which had a major boric acid leak) and adjacent section of pipe in accordance with EC 367651. All welds were examined in the finished condition by liquid penetrant and were found acceptable.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☒ Pressure 2236.5 psig Test Temp. 552.1 °F
9. Remarks: VT-2 performed on 4/18/2009 during ascending Mode 3 surveillance (Test Block A01ZZ-000005-M04-01A, WO# 1081910). Applicable documentation (Form NPV-1 Data Report for Nuclear Valve) and associated material certifications were attached at the time of final review and are on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan G. Casey ISI Coordinator Date 5/14, 2009  
 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 IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 3/31/2009 to 5/14/2009, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

[Signature]  
 Inspector's Signature

Commissions IL1085  
 National Board, State, Province, and Endorsements

Date 5/15, 2009

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/11/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01078773-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Reactor Coolant/Steam Generator (Class 1 Portion of Vessel)

- 5 (a) Applicable Construction Code: ASME Section III 1986 Edition, No Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI Code Cases used: None

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)
1A Steam Generator Primary Manway Cover (Cold Leg, Bolt #15)	Not Recorded	Stamped with "B7 EMO1 338 2"	Not Applicable	1RC01BA Cold Leg Bolt #15	Not Recorded	Replaced	No
Primary Manway Hex Head Closure Bolt (2" Diameter)	Babcock & Wilcox/ NOVA Machine Products Corp.	Heat Code DVD Lot 35395014	Not Applicable	Cat ID 47398-1 UTC 2622541 RIN A98-00289	1997	Replacement	No

7. Description of Work: Replacement not due to any inservice inspection flaw or material degradation, the existing manway closure bolt was replaced because elongation rod could not be removed to support ISI B-G-1 volumetric inspection of bolt. Preservice UT was performed on replacement bolt prior to installation on 4/6/2009 (reference Data Sheet A1R14UT-044).

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☒ Pressure Not Required psig Test Temp. Not Required °F

9. Remarks: Section XI pressure testing is not required. Connection was visually examined for leakage during ascending Mode 3 walkdown on 4/18/2009, no leakage identified. Applicable material documentation was attached at the time of final review and is maintained on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/11, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 9/29/2008 to 6/11/2009, 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. Hume Commissions IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 6-12, 2009

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/23/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Unit: 1

Work Order #01073205-02  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Westinghouse Electric Corporation  
 Address: P. O. Box 158, Madison, PA 15663

Type Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Reactor Coolant/Steam Generator

5. (a) Applicable Construction Code: ASME Section III 1986 Edition, No Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repair/Replacement: 2001 Edition with 2003 Addenda  
 (c) Section XI Code Cases used: None

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	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
1B Steam Generator Tubes	Babcock & Wilcox	Unknown	Not Applicable	1RC01BA <sup>BAC 6/23/09</sup> B	Not Recorded	Corrected	No (Tubes)
Plugs in Hot Leg and Cold Leg End of Tube Row 89, Column 30	Westinghouse Electric Corporation/ Inco Alloys International	Heat NX9982HK Serial Numbers (Hot Leg) 9T658 (Cold Leg) 9T659	Not Applicable	Cat ID 1033239-1 UTC 2827733	1997	Installed	No

7. Description of Work: Mechanically plugged steam generator tubes in the 1B steam generator based on eddy current test results.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☐  
 Other ☒ Pressure Not Required psig Test Temp. Not Required °F

9. Remarks: Section XI pressure testing is not applicable. Applicable material documentation for tube plugs was attached at the time of final review and is maintained on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/23, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 9/29/2008 to 6/19/2009, 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. Hudson Commissions IL1085  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 6-24, 2009



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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/23/2009  
 Sheet 1 of 1

2. Plant Name: Braidwood Station  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Unit: 1

Work Order #01073207-02  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Westinghouse Electric Corporation  
 Address: P. O. Box 158, Madison, PA 15663

Type Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Reactor Coolant/Steam Generator

5. (a) Applicable Construction Code: ASME Section III 1986 Edition, No Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repair/Replacement: 2001 Edition with 2003 Addenda  
 (c) Section XI Code Cases used: None

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	Corrected Removed, or Installed	ASME Code Stamped (Yes or No)
1C Steam Generator Tube	Babcock & Wilcox	Unknown	Not Applicable	1RC01BC	Not Recorded	Corrected	No (Tubes)
Plugs in Hot Leg and Cold Leg End of Tube  Row 28, Column 63 Row 30, Column 63 Row 27, Column 64 Row 29, Column 64	Westinghouse Electric Corporation/  Inco Alloys International	Heat NX9982HK Serial Numbers  (Hot Leg) 9T538 9T539 9T540 9T541  (Cold Leg) 9T534 9T535 9T536 9T537	Not Applicable	Cat ID 1033239-1 UTC 2827733	1997	Installed	No

7. Description of Work: Mechanically plugged steam generator tubes in the 1C steam generator based on eddy current test results.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☒  
 Other ☒ Pressure Not Required psig Test Temp. Not Required °F

9. Remarks: Section XI pressure testing is not applicable. Applicable material documentation for tube plugs was attached at the time of final review and is maintained on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/23, 2009  
 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 9/29/2008 to 6/23/2009, 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. Hatcher  
 Inspector's Signature

Commissions IL1085  
 National Board, State, Province, and Endorsements

Date 6-24, 2009

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/4/2009  
 Sheet 1 of 1

Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01073784-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Reactor Coolant / Pressurizer (RY) (Class 1 Portion of System)

- 5 (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, No Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (c) Section XI code Cases used: None

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 Bonnet Assembly for 4" 1500# Manual Valve	Borg Warner	Not Recorded	Not Recorded	1RY025	Not Recorded	Replaced	Yes
Valve Bonnet Assembly for 4" 1500# Manual Valve	Flowserve Corporation	Serial Number 96796-1	Not Applicable	Cat ID 12679-1 UTC 2827548	2009	Replacement	Yes

7. Description of Work: Replaced existing valve bonnet with new bonnet as part of stem replacement (existing stem was broken).

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☒ Pressure 2236.5 psig Test Temp. 552.1 °F

9. Remarks: VT-2 performed on 4/18/2009 during system leakage test. Applicable documentation (Form N-2 Data Report for Identical Nuclear Parts and Appurtenances) was attached at the time of final review and is on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 6/8, 2009  
 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 IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 4/2/2009 to 6/4/2009, 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. C.  
 Inspector's Signature

Commissions IL1085  
 National Board, State, Province, and Endorsements

Date 6/21, 2009

## Page 7-30

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

- |   |   |
|---|---|
| <p>1. Owner: Exelon Generation Co., LLC<br/>         Address: 300 Exelon Way, Kennett Square, PA 19348</p> <p>2. Plant Name: Braidwood Station Unit 1<br/>         Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407</p> <p>3. Work Performed By: Shaw / Stone &amp; Webster<br/>         Address: 36400 S. Essex Road, Wilmington, IL 60481</p> <p>4. Identification of System: Safety Injection (SI), Class 1 and 2</p> <p>5 (a) Applicable Construction Code: ASME Section III 1974 with Summer 1975 Addenda, No Code Cases<br/>         (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda<br/>         (d) Section XI code Cases used: None</p> | <p>Date 5/13/2009<br/>         Sheet 2 of 2</p> <p><u>Work Order #00609951-01</u><br/>         Repair Organization P.O., Job No., etc</p> <p>Type Code Symbol Stamp: None<br/>         Authorization No.: None<br/>         Expiration Date: None</p> |
|---|---|

6. Identification of Components Repaired or Replaced and Replacement Components (continued from Sheet 1):

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
2" Socket Weld Flange	Western Forge & Flange Co.	Heat 24329 Lot 6373 Code BYL	Not Applicable	Cat ID 30443-1 UTC 2696519	2004	Replacement	No
3/32" Diameter ER316/316L Bare Welding Rod	Arcos Industries, LLC	Lot/Alloy CM8256	Not Applicable	Cat ID 8500-1 UTC 2715657	2004	Replacement	No
3/32" Diameter ER308/308L Bare Welding Rod	Arcos Industries, LLC	Lot CT8816 Heat 735857 Control 8816	Not Applicable	Cat ID 8497-1 UTC 2807789	2008	Replacement	No
1/8" Diameter ER308/308L Bare Welding Rod	Arcos Industries, LLC	Lot DT8780 Heat 735456 Control 8780	Not Applicable	Cat ID 8513-1 UTC 2802006	2007	Replacement	No

*B. Casey 5/13/09*  
*L. L. 5/14/09*

24919

**FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES\***

**As Required by the Provisions of the ASME Code Rules**

1. Manufactured by Flowserve Corp. Order No. E-467P-1  
701 First Street, Williamsport, PA 17701  
(Name & Address of Manufacturer)  
Commonwealth Edison Company  
P. O. Box 767, Chicago, IL 60690

2. Manufactured for \_\_\_\_\_ Order No. 345778; Rel. XX1282  
(Name and Address)

3. Owner Commonwealth Edison Company

4. Location of Plant Braidwood Station, E/S Rt 53, 1.5 mi. S. Rt 113, Braidwood, IL 60408

5. Pump or Valve Identification Valve Serial No. E-467P-1- 6  
2" - 1500# Y-Piston Check Valve  
(Brief description of service for which equipment was designed)

(a) Drawing No. 72593395, R/P Prepared by Flowserve Corp.

(b) National Board No. N/A

6. Design Conditions 3600 psi 100 °F  
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III. Class 1

Edition 1971, Addenda Date Winter 1972, Case No. N/A

[illegible]

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

123475

FORM NPV-1 (back)

24919

	Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting	N/A			
(d) Other Parts				
Disc HT #715898		SA479-316	Carpenter Technology Corp.	
S/N 6				

8. Hydrostatic test 5400 psi.

CERTIFICATION OF DESIGN

Design information on file at Flowserve Corp., 701 First St., Williamsport, PA 17701

Stress analysis report on file at Flowserve Corp., 701 First St., Williamsport, PA 17701

Design specifications certified by L. Ike Ezekoye (I) Prof. Eng. State PA Reg. No. 18379E

Stress analysis report certified by Ronald S. Farrell (I) Prof. Eng. State PA Reg. No. PE-035216-E

(I) Signature not required. List name only.

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

Date 7/21 19 99 Signed Flowserve Corp. By [Signature]  
(Manufacturer)

Certificate of Authorization No. N1712 expires 4/15/01

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State PA of Pennsylvania and employed by Commercial Union Ins. Co. of Boston, MA

have inspected the equipment described in this Data Report on 2-11-99 19 99, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

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

Date 7-21 19 99

[Signature] Commissions Pennsylvania 2392  
(Inspector) Charles Young (National Board, State, Province and No.)

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

1. Owner : Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 5/15/2009  
 Sheet 1 of 1

Plant Name: Braidwood Station Unit 2  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01146685-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Braidwood Mechanical Maintenance  
 Address: 35100 S. Route 53, Suite 84, Braceville, IL 60407

Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Safety Injection (SI) (Class 2 Portion of System)

- 5 (a) Applicable Construction Code: ASME Section III 1974 Edition, Summer 1975 Addenda, No Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition with No Addenda  
 (c) Section XI Code Cases used: None

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)
Bolting at Connection 2A-SI-22 on Line 2SI01B-24	Unknown	Not Recorded	Not Recorded	2A-SI-22	Not Recorded	Replaced	No
5/8"-11 Heavy Hex Nuts	NOVA Machine Products Corporation	Heat 7220464 Lot 50002892 Trace M192	Not Applicable	Cat ID 37029-1-1 UTC 2689561	2005	Replacement	No
5/8"-11 Threaded Rod	NOVA Machine Products Corporation	Heat 7404456 Lot 40062896 Trace F440	Not Applicable	Cat ID 571385-1 UTC 2657685	2002	Replacement	No

7. Description of Work: Replaced existing bolting with new material as part of corrective actions from leak identified under Issue Report 785926.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure Not Applicable psig Test Temp. Not Applicable °F

9. Remarks: Applicable material certifications were attached at the time of final review and are on file.

**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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey ISI Coordinator Date 5/15, 2009  
 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 IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 7/10/2008 to 5/15/2009, 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. Lee  
 Inspector's Signature

Commissions IL1085  
 National Board, State, Province, and Endorsements

Date 5/15, 2009

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

- |    |   |  |
|----|---|--|
| 1. | Owner: Exelon Generation Co., LLC<br>Address: 300 Exelon Way, Kennett Square, PA 19348  | Date 6/11/2009<br>Sheet 1 of 2   |
| 2. | Plant Name: Braidwood Station Unit 1<br>Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407   | <u>Work Order #01033800-01</u><br>Repair Organization P.O., Job No., etc         |
| 3. | Work Performed By: Shaw / Stone & Webster<br>Address: 36400 S. Essex Road, Wilmington, IL 60481   | Type Code Symbol Stamp: None<br>Authorization No.: None<br>Expiration Date: None |
| 4. | Identification of System: Safety Injection (SI), Class 2 portion of system  |  |
| 5  | (a) Applicable Construction Code: ANSI B31.1, 1973 Edition through 1975 Addenda, No Code Cases<br>(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda<br>(c) Section XI code Cases used: None |  |

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)
Line 1SI99F-1"	Not Recorded	Not Recorded	Not Applicable	Line 1SI99F-1"	Not Recorded	Replaced	No
2" Socket Weld Pipe Tee	Bonney Forge	Lot P294	Not Applicable	Cat ID 26554-1 UTC 2812987	1978	Replacement	No
2" Seamless Pipe	Sandvik	Heat 512741	Not Applicable	Cat ID 26883-1 UTC 2800388	2007	Replacement	No

Continued on Sheet 2 of 2

7. Description of Work: Removed existing 1" check valve (1SI8969F) from Line 1SI99F-1" and replaced with several 1" manual valves per EC 365547. Part of the change modified the existing 1" line to include 2" diameter piping to increase volume for condensate collection.
8. Tests Conducted:                      Hydrostatic ☒ Pneumatic ☐ Nominal Operating Pressure ☐  
Other ☒      Pressure 60 psig Test Temp. Ambient °F
9. Remarks: VT-2 examination of 2" NPS pipe, fittings, and associated socket welds performed on 3/27/2009 in fabrication shop. Applicable material certifications were attached at the time of final review and are on file.

## 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. Type Code Symbol Stamp: Not Applicable Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey, ISI Coordinator Date 6/11, 2009  
Owner or Owner's Designee's 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 and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 10/7/2008 to 6/11/2009, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

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

Inspector's Signature \_\_\_\_\_ Commissions IL1085  
National Board, State, Province, and Endorsements \_\_\_\_\_

Date 6/23, 2009



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

1. Owner: Exelon Generation Co., LLC  
 Address: 300 Exelon Way, Kennett Square, PA 19348

Date 6/11/2009  
 Sheet 2 of 2

2. Plant Name: Braidwood Station Unit 1  
 Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407

Work Order #01033800-01  
 Repair Organization P.O., Job No., etc

3. Work Performed By: Shaw / Stone & Webster  
 Address: 36400 S. Essex Road, Wilmington, IL 60481

Type Code Symbol Stamp: None  
 Authorization No.: None  
 Expiration Date: None

4. Identification of System: Safety Injection (SI), Class 2 portion of system

5 (a) Applicable Construction Code: ANSI B31.1, 1973 Edition through 1975 Addenda, No Code Cases  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda  
 (d) Section XI code Cases used: None

6. Identification of Components Repaired or Replaced and Replacement Components (continued from Sheet 1):

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
2" Socket Weld Elbow	Bonney Forge	Lot 44013	Not Applicable	Cat ID 26740-1 UTC 2774224	2006	Replacement	No
2" X 1/2" Reducing Bushing	Bonney Forge	Lot 7562	Not Applicable	Cat ID 26742-1 UTC 2826654	2009	Replacement	No
2" X 1" Pipe Insert	Bonney Forge	Lot 7517	Not Applicable	Cat ID 38282-1 UTC 2825005	2006	Replacement	No
1/8" ER308/308L Weld Rod	Arcos	Lot DT8659	Not Applicable	Cat ID 8513-1 UTC 2785469	2007	Replacement	No
3/32" ER308/308L Weld Rod	Arcos	Heat 735857 Lot CT8816	Not Applicable	Cat ID 8497-1 UTC 2807789	2008	Replacement	No

*B. Glassey 6/11/2009*  
*L. H. 6/23/09*

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

- |   |  |
|---|--|
| 1. Owner : Exelon Generation Co., LLC<br>Address: 300 Exelon Way, Kennett Square, PA 19348<br><br>2. Plant Name: Braidwood Station Unit 1<br>Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407<br><br>3. Work Performed By: Braidwood Station Mechanical Maintenance<br>Address: 35100 S. Rte. 53, Suite 84, Braceville, IL 60407<br><br>4. Identification of System: Chilled Water (WO) (Class 2 Portion of System)<br><br>5. (a) Applicable Construction Code: ASME Section III 1974 Edition, Winter 1976 Addenda, No Code Cases<br>(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 2001 Edition with 2003 Addenda<br>(c) Section XI code Cases used: None | Date 2/16/2009<br>Sheet 1 of 1<br><br>Work Order #00900455-01<br>Repair Organization P.O., Job No., etc<br><br>Code Symbol Stamp: None<br>Authorization No.: None<br>Expiration Date: None |
|---|--|

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)
Bolting for 10" Anderson Greenwood Wafer Check Valve	Unknown	Unknown	Not Applicable	1WO007A	Not Recorded	Replaced	No
7/8"-9 Threaded Rod	NOVA Machine Products / AUGE Industrial Fasteners	Heat 245182 Lot 50095480 Trace 0E21	Not Applicable	Cat ID 37096-1 UTC 2772837	2007	Replacement	No
7/8"-9 Heavy Hex Nuts	NOVA Machine Products / AUGE Industrial Fasteners	Heat 251919 Lot 50134646 Trace 1N89	Not Applicable	Cat ID 37033-1 UTC 2806660	2008	Replacement	No

7. Description of Work: Replaced flange bolting materials during preventative maintenance surveillance inspection.
8. Tests Conducted:    Hydrostatic ☐    Pneumatic ☐    Nominal Operating Pressure ☒  
    Other ☐    Pressure Not Applicable    psig    Test Temp. Not Applicable °F
9. Remarks: Section XI pressure testing not applicable. Applicable material certifications for bolting materials were attached at the time of final review and are maintained on file.

**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.    Type Code Symbol Stamp: Not Applicable    Certificate of Authorization No.: Not Applicable

Signed Brendan J. Casey    ISI Coordinator    Date 4/14, 2009  
    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 IL and employed by HSBCT of CT have inspected the components described in this Owner's Report during the period 12/19/2006 to 2/16/2009, 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. Miller    Commissions IL1085  
    Inspector's Signature    National Board, State, Province, and Endorsements

Date 4-14, 2009