



**Progress Energy**

10 CFR 50.55a

**JUL 08 2005**

**SERIAL: BSEP 05-0079**

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

**Subject: Brunswick Steam Electric Plant, Unit No. 2  
Docket No. 50-324/License No. DPR-62  
Inservice Inspection Program for the Third 10-Year Interval - Refueling  
Outage 16 Owner's Activity Report**

**Ladies and Gentlemen:**

Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., submits the enclosed American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Form OAR-1 Owner's Activity Reports for the Brunswick Steam Electric Plant (BSEP), Unit No. 2. The enclosed Form OAR-1 Owner's Activity Reports cover inspection activities being credited for the second inspection period of the third 10-year inservice inspection interval. The second period of the third 10-year interval began May 11, 2001, and ended May 10, 2005.

On August 7, 2003, a revision to 10 CFR 50.55a went into effect which incorporates, by reference, NRC Regulatory Guide 1.147, Revision 13, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1." This revision of Regulatory Guide 1.147 indicates that ASME Code Case N-532-1, "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000, Section XI, Division 1," can be used provided the OAR-1 forms are submitted to the NRC within 90 days of the completion of the refueling outage. ASME Code Case N-532-1 requires an Owner's Activity Report Form OAR-1 to be prepared and certified upon completion of each refueling outage.

As specified by the ASME Code Case and Regulatory Guide 1.147, the Form OAR-1 Owner's Activity Report for BSEP, Unit 2 Refueling Outage 16 (i.e., B217R1) is provided in Enclosure 1. Enclosure 2 provides a copy of the Form OAR-1 Owner's Activity Report for the Unit 2 containment inspections performed in accordance with the ASME Code, Section XI, Subsections IWE and IWL, during Refueling Outage 16. Refueling Outage 16 for Unit 2 ended on April 9, 2005.

Progress Energy Carolinas, Inc.  
Brunswick Nuclear Plant  
P.O. Box 10429  
Southport, NC 28461

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Document Control Desk  
BSEP 05-0079 / Page 2

No regulatory commitments are contained in this letter. Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Supervisor - Licensing/Regulatory Programs, at (910) 457-2073.

Sincerely,



Edward T. O'Neil  
Manager - Support Services  
Brunswick Steam Electric Plant

WRM/wrm

Enclosures:

1. Owner's Activity Report - OAR-1 Report for B217R1 Refueling Outage, Revision 0
2. Owner's Activity Report - OAR-1 Report for B217R1 Refueling Outage Containment Inspections

cc (with enclosures):

U. S. Nuclear Regulatory Commission, Region II  
ATTN: Dr. William D. Travers, Regional Administrator  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23T85  
Atlanta, GA 30303-8931

U. S. Nuclear Regulatory Commission  
ATTN: Mr. Eugene M. DiPaolo, NRC Senior Resident Inspector  
8470 River Road  
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission **(Electronic Copy Only)**  
ATTN: Ms. Brenda L. Mozafari (Mail Stop OWFN 8G9)  
11555 Rockville Pike  
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Ms. Jo A. Sanford  
Chair - North Carolina Utilities Commission  
P.O. Box 29510  
Raleigh, NC 27626-0510

Mr. Jack Given, Bureau Chief  
North Carolina Department of Labor  
Boiler Safety Bureau  
1101 Mail Service Center  
Raleigh, NC 27699-1101

**BSEP 05-0079**  
**Enclosure 1**

**Owner's Activity Report - OAR-1 Report**  
**for B217R1 Refueling Outage, Revision 0**



# BRUNSWICK STEAM ELECTRIC PLANT

## UNIT 2



### OWNER'S ACTIVITY REPORT

### OAR-1 REPORT FOR B217R1 REFUELING OUTAGE

REVISION 0

Prepared By: L.D. Dheally Date 6-6-05  
NDE / Snubber & Support Program Manager

Reviewed By: Jerry W. Cook Date 6/6/2005  
Repair/Replacement Program Manager

Reviewed By: Adrian Blum Date 6/6/05  
Independent Review

Reviewed By: Raymond W. Hanks Date 6/8/05  
Authorized Nuclear Inservice Inspector

## Revision Summary

- Initial issue

## INTRODUCTION

This report represents a summary of the Inservice Inspection (ISI) activities performed at the Carolina Power and Light Company's Brunswick Steam Electric Plant (BSEP) Unit 2 during the Spring 2005 refueling outage.

The examinations and testing performed during this timeframe were for credit during the second inspection period of the Third Inspection Interval.

Examinations and testing were performed to satisfy the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Inspection Program B, 1989 Edition with no addenda.

During the refueling outage, ASME Code Category B-D and R-A components were identified as having less than 90% coverage. A relief request will be submitted prior to the end of the Inspection Interval for examination coverage.

In accordance with requirements of Code Case N-532, which has been approved for use at the Brunswick Station, enclosed is the Owners Activity Report (OAR-1 Report).

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report number 2-05-B217R1

Owner Carolina Power & Light Company, PO Box 1551, Raleigh, North Carolina  
(Name and Address of Owner)

Plant Brunswick Steam Electric Plant, PO Box 10429, Southport, North Carolina  
(Name and Address of Plant)

Unit No. 2 Commercial Service Date 11/3/75 Refueling outage no. B217R1A  
(if applicable)

Current inspection interval 3rd  
(1st, 2nd, 3rd, 4th, other)

Current inspection period 2nd  
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plan 1989 edition with no addenda

Date and revision of inspection plan February 23, 2005 ISI Program Plan revision 12

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan \_\_\_\_\_

CERTIFICATE OF CONFORMANCE

I certify that the statements made in this Owner's Activity Report are correct and that the examinations, tests, repairs, replacements, evaluations and corrective measures represented by this report conform to the requirements of Section XI.

Certificate of Authorization No. NA Expiration Date NA  
(if applicable)

Signed [Signature] NDE Program Manager Date 6-6-05  
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the under signed, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of North Carolina and employed by Hartford Steam Boiler of Connecticut have inspected the items described in the Owner's Activity Report during the period 8/26/03 to 5/10/05, and state that to the best of my knowledge and belief, the Owner has performed all of the activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warrantee, expressed or implied, concerning the tests, repairs, replacements, evaluations and corrective measures described this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for a personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions NC-1433, A.N.I.B.C.  
Inspector's Signature National Board, State, Province and Endorsements

Date 6/8/05

**TABLE 1****ABSTRACT OF EXAMINATIONS AND TESTS**

Examination Category (see note 1)	Total Examinations Required for the Interval	Total Examinations Credited for This Period	Total Examinations Credited (%) for the Period	Total Examinations Credited (%) to Date for the Interval	Remarks
B-A	28	0	0	32	See note 2
B-D	70	19	27	56	See note 2
B-E	46	0	0	0	See note 2
B-G-1	320	0	0	0	See note 2
B-G-2	NA	6	NA	NA	See note 4, 5
B-K	13	8	61	61	See note 7
B-L-2	NA	NA	NA	NA	See note 4
B-M-2	NA	3	NA	NA	See note 4
B-N-1	3	1	33	66	
B-N-2	32	0	0	0	See note 2
B-O	8	0	0	0	See note 2
C-A	3	1	33	66	
C-B	2	2	100	100	See note 6
C-C	11	6	54	72	See note 7
C-F-2	31	8	26	65	
D-A	6	2	33	67	See note 7
F-A	77	30	38	61	
R-A	56	28	50	50	See note 3

## TABLE 1 NOTES

The following notes correspond to the numbers referenced in Table 1 of the OAR-1 Report:

1. Examination categories B-B, B-H, B-K-1, B-N-3, B-L-1, B-M-1, C-F-1, C-G, D-B, D-C do not apply to the Brunswick Station. Examination categories B-K, C-C and D-A reflect Code Case N-409.
2. Some or all examinations in this category may be deferred until the end of the inspection interval.
3. Examination category B-F and B-J have been subsumed by Category R-A to reflect approval of a Class 1 Risk Informed ISI Program. This was implemented with the commencement of the Second Inspection Period and the total number of examinations for the remaining periods and interval reflect Relief Request RR-27 and NRC Safety Evaluation dated 2/17/2000.
4. The examinations under this examination category are event related. They are only required if a subject pump or valve is disassembled during a maintenance activity.
5. Item number B7.80 of this category includes a requirement to examine CRD bolting if a CRD is disassembled. In accordance with relief request RR-04 which implemented Code Case N-547, there is no longer a requirement to examine this bolting.
6. This category has only 2 items and is covered by Relief Request RR-21.
7. This category reflects adoption of code case N-409 during 2<sup>nd</sup> Inspection Period.

**TABLE 2**

**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT  
REQUIRED EVALUATION FOR CONTINUED SERVICE**

Examination Category	Item Number	Item Description	Flaw Characterization (IWA-3300)	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)
D-B	D2.10	SW Flange & bolting replacement per EC 50480 due to through-wall leak	Evaluation for continued service per Code Case N-513	No
D-B	D2.10	Through-wall leak SW line 2-SW-103-24-157	Evaluation for continued service per Code Case N-513	No
D-B	D2.10	Through-wall leak SW line 2-SW-103-30-157	Evaluation for continued service per Code Case N-513	No
D-B	D2.10	Through-wall leak SW line 2-SW-142-30-157	Evaluation for continued service per Code Case N-513	No

**TABLE 3****ABSTRACT OF REPAIRS, REPLACEMENTS, OR CORRECTIVE  
MEASURES REQUIRED FOR CONTINUED SERVICE**

Code Class	Repair, Replacement, or Corrective Measure	Item Description	Description of Work	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)	Date Completed	Repair/ Replacement Plan Number
2	Repair	CRD Insert line (30-43)	Installation of mechanical clamp per Code Case N-523-2	No	3/18/05	592811-01
2	Repair	CRD Insert line (34-43)	Installation of mechanical clamp per Code Case N-523-2	No	3/18/05	595039-01
2	Repair	CRD Insert line (38-43)	Installation of mechanical clamp per Code Case N-523-2	No	3/18/05	595045-01
2	Repair	CRD Insert line (26-43)	Installation of mechanical clamp per Code Case N-523-2	No	3/18/05	595563-01
3	Replacement	SW Piping (2-SW-29-6-046)	Replacement of flange & bolting per EC 50480 on through-wall leak	No	1/7/03	322150-04
3	Repair	SW Piping (2-SW-103-24-157)	Repair of through-wall leak	No	3/16/03	191267-01
3	Replacement	SW Piping (2-SW-103-30-157)	Replacement of piping due to through-wall leak	No	4/20/05	545165-01
3	Replacement	SW Piping (2-SW-142-30-157)	Flange replacement	No	4/21/05	502255-01

BSEP 05-0079  
Enclosure 2

Owner's Activity Report - OAR-1 Report  
for B217R1 Refueling Outage Containment Inspections

**FORM OAR-1 OWNER'S ACTIVITY REPORT**

Report Number CIP-B217R1

Owner Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc., PO Box 1551, Raleigh, North Carolina  
(Name and Address of Owner)

Plant Brunswick Steam Electric Plant, PO Box 10429, Southport, North Carolina  
(Name and Address of Plant)

Unit No. 2 Commercial Service Date November 1975 Refueling Outage No. B217R1  
(if applicable)

Current Inspection Interval First Containment Inspection Interval (Subsection IWE & IWL Only)  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, other)

Current Inspection Period 2<sup>nd</sup> Inspection Period  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)

Edition and Addenda of Section XI Applicable to the Inspection Plan 1992 Edition w/ 1992 Addenda

Date and Revision of Inspection Plan 0BNP-TR-002 (R8-8/30/04)

Edition and Addenda of Section XI Applicable to Repairs and Replacements, if different than the Inspection Plan N/A

**CERTIFICATE OF CONFORMANCE**

I certify that the statements made in this Owner's Activity Report are correct and that the examinations, tests, repairs, replacements, evaluations, and corrective measures represented by this report conform to the requirements of Section XI.

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

Signed W.P. Wepner Materials Programs Supervisor Date 6/6/05  
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 North Carolina and employed by Hartford Steam Boiler Inspection and Insurance Company of Hartford, Connecticut have inspected the items described in this Owner's Activity Report, during the period 4/11/03 to 4/01/05, and state that to the best of my knowledge and belief, the Owner has performed all of the activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, repairs, replacements, evaluations and corrective measures described in this 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.

Raymond W. Acme Commissions NC-1433, AINBC  
Inspector's Signature National Board, State, Province and Endorsements  
Date 6/6/05

This form (E00127) may be obtained for the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

**ATTACHMENT 2**  
**Page 2 of 2**  
**Code Case N-532 Tables 1, 2, and 3**

Note: This Owner's Activity Report is only applicable to the Containment Inspection Program (Subsection IWE & IWL) and does not address Class 1, 2, and 3 components.

**TABLE 1**  
**ABSTRACT OF EXAMINATIONS AND TESTS**

Examination Category	Total Examinations Required For The Interval	Total Examinations Credited For This Period	Total Examinations Credited (%) For This Period	Total Examinations Credited (%) To Date For The Interval	Remarks
E-A	See Notes	See Notes	100%	66%	All components within this category were examined except those components which were insulated or submerged.
E-B	N/A	N/A	N/A	N/A	This Category is not being implemented as allowed by 10 CFR 50.55a(b)(2)(ix)(C).
E-C	See Notes	See Notes	100%	66%	All components within this category were examined.
E-D	See Notes	See Notes	100%	66%	All components within this category were examined.
E-F	N/A	N/A	N/A	N/A	This Category is not being implemented as allowed by 10 CFR 50.55a(b)(2)(ix)(C).
E-G	See Notes	See Notes	100%	66%	All components within this category were examined.
E-P	N/A	N/A	N/A	N/A	
L-A	N/A	1B	100%	N/A	
L-B	N/A	N/A	N/A	N/A	The Unit 2 containment does not have a post-tensioning system.

**TABLE 2**  
**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRE EVALUATION FOR CONTINUED SERVICE**

Examination Category	Item Number	Item Description	Flaw Characterization (IWA-3000)	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)
None				

**TABLE 3**  
**ABSTRACT OF REPAIRS, REPLACEMENTS, OR CORRECTIVE MEASURES REQUIRED FOR CONTINUED SERVICE**

Code Class	Repair, Replacement, or Corrective Measure	Item Description	Description of Work	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)	Date Completed	Repair/ Replacement Plan Number
E-A	2-X-2	General Corrosion on Penetration Sleeve Exterior Surfaces	Restored design wall thickness by welding on interior surface.	Yes	3/25/05	584530-01

In accordance with 10CFR50.55a (b)(2)(ix)(A), the inaccessible areas of the containment liner which displayed evidence of degradation are addressed below.

- (1) Blistering and bulging was identified during general visual examinations in 1-X-2. As a consequence of this, engineering directed inspections were conducted on the Unit 2 Personnel Airlock Penetration Sleeve 2-X-2. Contingency Work Order 584530 was developed prior to the outage to support inspection and repair of the liner, additionally, the Specification for Containment Structures Steel Liners, Spec. 015-001 was revised to provide a minimum design wall thickness for the life of the plant. Ultrasonic measurements were taken to assess liner thickness in areas identified as bulged. The ultrasonic measurements indicated that the liner thickness in the area of the bulging was below the expected wall thickness for the liner when compared with the design drawings. Based on the inspection results from Unit 1, wastage on the exterior surface of the Drywell Personnel Airlock penetration was attributed to surface corrosion as a result of a material defect occurring during construction.
- (2) Areas of the liner which were below the minimum design wall thickness were restored to the design wall thickness specified in Spec. 015-001. W/O 584530 provided instructions for this repair.

ATTACHMENT 2  
Page 2 of 2  
Code Case N-532 Tables 1, 2, and 3

- (3) The repair to this area is complete. Relief Request CIP-05, "Successive Examinations Following a Repair" provides for relief from conducting augmented examinations of this component.