



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

August 31, 2007

Carolina Power and Light Company  
ATTN: Mr. J. Scarola  
Vice President  
Brunswick Steam Electric Plant  
P. O. Box 10429  
Southport, NC 28461

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN -  
BRUNSWICK STEAM ELECTRIC PLANT

Dear Mr. Scarola:

On August 15, 2007, the NRC staff completed its performance review of the Brunswick Steam Electric Plant for the first half of the calendar year (CY) 2007 assessment cycle. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results over the previous twelve months. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and the enclosed inspection plan do not include physical protection information. A separate letter designated and marked as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390," will include the physical protection review and a resultant inspection plan.

Overall, Brunswick Unit 1 operated in a manner that preserved public health and safety and met all cornerstone objectives with moderate degradation in safety performance. Plant performance for Brunswick Unit 1 for the first two quarters of CY 2007 was within the Degraded Cornerstone Column of the NRC's Action Matrix, based on one White inspection finding involving the inoperability of EDG # 1 and a White Performance Indicator, (MSPI - Emergency AC Power) in the Mitigating Systems cornerstone. On May 11, 2007, a supplemental inspection in accordance with Inspection Procedure 95001, "Inspection for One of Two White Inputs in a Strategic Performance Area," was completed for the White performance indicator. No findings of significance were identified. A supplemental inspection in accordance with Inspection Procedure 95002, "Inspection For One Degraded Cornerstone Or Any Three White Inputs In a Strategic Performance Area," was initiated in July, 2007, to review the White inspection finding involving the inoperability of EDG # 1 and the White Performance Indicator (MSPI - Emergency AC Power) in the Mitigating Systems cornerstone. The inspection is being finalized. For the third and fourth quarters of CY 2006, plant performance for Brunswick Unit 1 had been within the Regulatory Response Column of the NRC's Action Matrix.

Subsequent to the end of the assessment period, we have become aware of issues affecting the performance of the Unit 1 service water and residual heat removal service water systems. On August 2, 2007, and again on August 27, 2007, an NRC Special Inspection Team was dispatched to evaluate the circumstances surrounding this matter. These matters are currently under review by the NRC. In addition, we were informed by you that the Unit 1 Performance

Indicator (MSPI - Cooling Water Systems) will transition from Green to White in the third quarter of 2007. Therefore, we plan on conducting an additional supplemental inspection to review this matter.

Overall, Brunswick Unit 2 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for Brunswick Unit 2 for the last four quarters was within the Regulatory Response Column of the NRC's Action Matrix, based on one White Performance Indicator, (White MSPI - Emergency AC Power) in the Mitigating Systems cornerstone.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through March 31, 2009. In addition to the reactor oversight process baseline inspection activities, the plan currently includes an additional Problem Identification and Resolution (PI&R) Inspection to be conducted in early 2008. This PI&R inspection is being performed to assess the effectiveness of your corrective action program in dealing with the issues that caused your transition into the Degraded Cornerstone Column of the NRC's action matrix. The inspection plan is provided to minimize the resource impact on your staff and to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last twelve months of the inspection plan are tentative and may be revised at the end-of-cycle review.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

The NRC is currently evaluating the scope and frequency of all baseline inspection procedures. If the results of the evaluation, or any other circumstances, cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact Randall Musser at (404) 562-4603 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

William D. Travers  
Regional Administrator

Docket Nos.: 50-325, 50-324  
License Nos: DPR-71, DPR-62

Enclosure: Brunswick Inspection/Activity Plan

cc w/encl.:

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(cc w/encl cont'd - see next page)

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cc w/encl cont'd

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**Brunswick**  
**Inspection / Activity Plan**  
**09/01/2007 - 03/31/2009**

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	<b>EB1-CDBI</b>	<b>- COMPONENT DESIGN BASES INSPECTION</b>	<b>8</b>			
1,2	IP 7111121	Component Design Bases Inspection		10/22/2007	10/26/2007	Baseline Inspections
1,2	IP 7111121	Component Design Bases Inspection		11/05/2007	11/09/2007	Baseline Inspections
1,2	IP 7111121	Component Design Bases Inspection		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 7111121	Component Design Bases Inspection		12/10/2007	12/14/2007	Baseline Inspections
	<b>PSB1-EP</b>	<b>- EP INSP</b>	<b>1</b>			
1,2	IP 7111402	Alert and Notification System Testing		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 7111403	Emergency Response Organization Augmentation Testing		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 7111404	Emergency Action Level and Emergency Plan Changes		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 71151-EP01	Drill/Exercise Performance		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 71151-EP02	ERO Drill Participation		11/26/2007	11/30/2007	Baseline Inspections
	<b>PI&amp;R</b>	<b>- PREP TRIP-PROBLEM ID AND RESOL</b>	<b>1</b>			
1,2	IP 71152B	Identification and Resolution of Problems		01/02/2008	01/04/2008	Baseline Inspections
	<b>EB3-HS</b>	<b>- HEAT SINK</b>	<b>1</b>			
1,2	IP 7111107B	Heat Sink Performance		01/28/2008	02/01/2008	Baseline Inspections
	<b>PI&amp;R</b>	<b>- PROBLEM IDENTIFICATION AND RESOLUTION</b>	<b>4</b>			
1,2	IP 71152B	Identification and Resolution of Problems		02/11/2008	02/15/2008	Baseline Inspections
1,2	IP 71152B	Identification and Resolution of Problems		02/25/2008	02/29/2008	Baseline Inspections
	<b>PSB1-RP</b>	<b>- RAD PROTECTION - ACCESS CONTROLS</b>	<b>1</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		03/17/2008	03/21/2008	Baseline Inspections
1,2	IP 71151-OR01	Occupational Exposure Control Effectiveness		03/17/2008	03/21/2008	Baseline Inspections
	<b>EB3-ISI</b>	<b>- UNIT 1 - ISI</b>	<b>1</b>			
1	IP 7111108G	Inservice Inspection Activities - BWR		03/24/2008	03/28/2008	Baseline Inspections
	<b>EB1-MODS</b>	<b>- MODIFICATIONS-10CFR50.59</b>	<b>4</b>			
1,2	IP 7111102	Evaluation of Changes, Tests, or Experiments		04/14/2008	04/18/2008	Baseline Inspections
1,2	IP 7111117B	Permanent Plant Modifications		04/14/2008	04/18/2008	Baseline Inspections
	<b>EB3-ME</b>	<b>- MAINTENANCE EFFECTIVENESS</b>	<b>1</b>			
1,2	IP 7111112B	Maintenance Effectiveness		05/19/2008	05/23/2008	Baseline Inspections
	<b>PSB1-RP</b>	<b>- RADIATION PROTECTION PUBLIC CORNERSTONE</b>	<b>3</b>			
1,2	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		06/16/2008	06/20/2008	Baseline Inspections
1,2	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		06/16/2008	06/20/2008	Baseline Inspections
1,2	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P		06/16/2008	06/20/2008	Baseline Inspections
1,2	IP 71151-PR01	RETS/ODCM Radiological Effluent		06/16/2008	06/20/2008	Baseline Inspections

This report does not include INPO and OUTAGE activities.  
This report shows only on-site and announced inspection procedures.

Enclosure

**Brunswick**  
**Inspection / Activity Plan**  
**09/01/2007 - 03/31/2009**

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	<b>OL EXAM - INITIAL EXAM PREP</b>		<b>3</b>			
1	V23291	BRUNSWICK/DECEMBER 2008 EXAM AT POWER FACILITIES		10/07/2008	10/10/2008	Not Applicable
	<b>EB2-TFP - TRIENNIAL FIRE PROTECTION</b>		<b>5</b>			
1,2	IP 7111105T	Fire Protection [Triennial]		10/21/2008	10/23/2008	Baseline Inspections
1,2	IP 7111105T	Fire Protection [Triennial]		11/03/2008	11/07/2008	Baseline Inspections
1,2	IP 7111105T	Fire Protection [Triennial]		11/17/2008	11/21/2008	Baseline Inspections
	<b>OL EXAM - INITIAL EXAM</b>		<b>3</b>			
1	V23291	BRUNSWICK/DECEMBER 2008 EXAM AT POWER FACILITIES		10/27/2008	11/07/2008	Not Applicable
	<b>OL RQ - REQUAL INSPECTION</b>		<b>2</b>			
1,2	IP 7111111B	Licensed Operator Requalification Program		11/17/2008	11/21/2008	Baseline Inspections
	<b>PSB1-EP - EP EXERCISE</b>		<b>3</b>			
1,2	IP 7111401	Exercise Evaluation		11/17/2008	11/21/2008	Baseline Inspections
1,2	IP 7111404	Emergency Action Level and Emergency Plan Changes		11/17/2008	11/21/2008	Baseline Inspections
1,2	IP 71151-EP01	Drill/Exercise Performance		11/17/2008	11/21/2008	Baseline Inspections
1,2	IP 71151-EP02	ERO Drill Participation		11/17/2008	11/21/2008	Baseline Inspections
1,2	IP 71151-EP03	Alert & Notification System		11/17/2008	11/21/2008	Baseline Inspections
	<b>PI&amp;R - PREP TRIP-PROBLEM ID AND RESOL</b>		<b>1</b>			
1,2	IP 71152B	Identification and Resolution of Problems		01/05/2009	01/09/2009	Baseline Inspections
	<b>PI&amp;R - PROBLEM IDENTIFICATION &amp; RESOLUTION</b>		<b>4</b>			
1,2	IP 71152B	Identification and Resolution of Problems		01/12/2009	01/16/2009	Baseline Inspections
1,2	IP 71152B	Identification and Resolution of Problems		01/26/2009	01/30/2009	Baseline Inspections
	<b>PSB1-RP - RADIATION PROTECTION PREINSPECTION VISIT</b>		<b>1</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		02/02/2009	02/04/2009	Baseline Inspections
	<b>PSB1-RP - RAD PROTECTION OCCUPATIONAL WK1</b>		<b>2</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		03/09/2009	03/13/2009	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		03/09/2009	03/13/2009	Baseline Inspections
1,2	IP 7112202	Radioactive Material Processing and Transportation		03/09/2009	03/13/2009	Baseline Inspections
1,2	IP 71151-OR01	Occupational Exposure Control Effectiveness		03/09/2009	03/13/2009	Baseline Inspections
1,2	IP 71151-PR01	RETS/ODCM Radiological Effluent		03/09/2009	03/13/2009	Baseline Inspections
	<b>PSB1-RP - RADIATION PROTECTION OCCUPATIONAL WK2</b>		<b>2</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		03/23/2009	03/27/2009	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		03/23/2009	03/27/2009	Baseline Inspections
1,2	IP 7112202	Radioactive Material Processing and Transportation		03/23/2009	03/27/2009	Baseline Inspections