



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

March 3, 2010

Carolina Power and Light Company  
Mr. Christopher L. Burton  
Vice President  
Shearon Harris Nuclear Power Plant  
P. O. Box 165, Mail Code: Zone 1  
New Hill, North Carolina 27562-0165

**SUBJECT: ANNUAL ASSESSMENT LETTER - SHEARON HARRIS NUCLEAR POWER  
PLANT (NRC INSPECTION REPORT 05000400/2010001)**

Dear Mr. Burton:

On February 10, 2010, the NRC technical staff completed its performance review of the Shearon Harris Power Plant. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2009. 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 security information. A separate letter designated and marked as "Official Use Only – Security-Related Information" will include the security cornerstone performance review and a resultant inspection plan.

Overall, Shearon Harris Unit 1 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter, as well as the first three quarters of the assessment cycle, was within the Licensee Response Column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility. We also plan on conducting several infrequently performed inspections which include: TI 2515/172, "Reactor Coolant System Dissimilar Metal Butt Welds," TI 2515/173, "Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative", and TI 2515/177, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray System."

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2011. The inspection plan is provided 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 listed in the last nine months of the inspection plan are tentative and may be revised at the mid-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).

If circumstances arise which cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact me at (404) 562-4603 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

*/RA/*

Randall A. Musser, Chief  
Reactor Projects Branch 4  
Division of Reactor Projects

Docket No.: 50-400  
License No.: NPF-63

Enclosure: Harris Inspection/Activity Plan

cc w/encl: (See page 3)

cc w/encl:  
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**Harris**  
**Inspection / Activity Plan**  
**03/01/2010 - 06/30/2011**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
<b>PSB1EP - EMERGENCY PREPAREDNESS INSPECTION</b>					
1	03/01/2010	03/05/2010	IP 7111402	Alert Notification System Evaluation	1
1	03/01/2010	03/05/2010	IP 7111403	Emergency Response Organization Augmentation Testing	
1	03/01/2010	03/05/2010	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1	03/01/2010	03/05/2010	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	03/01/2010	03/05/2010	IP 71151	Performance Indicator Verification	
<b>PSB1-RP - RP GROUNDWATER PROTECTION</b>					
1	04/22/2010	04/23/2010	IP 2515/173	Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative	1
<b>EB3 HS - HEAT SINK INSPECTION</b>					
1	06/14/2010	06/18/2010	IP 7111107T	Heat Sink Performance	1
<b>PSB1-RP - RP OCCUPATIONAL BASELINE WEEK 1</b>					
1	10/04/2010	10/08/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	10/04/2010	10/08/2010	IP 71124.02	Occupational ALARA Planning and Controls	
1	10/04/2010	10/08/2010	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	10/04/2010	10/08/2010	IP 71124.04	Occupational Dose Assessment	
<b>EB3ISI - INSERVICE INSPECTION</b>					
1	10/11/2010	10/15/2010	IP 7111108P	Inservice Inspection Activities - PWR	1
<b>EB3TI172 - EB3 RX COOLANT DM BUTT WELDS</b>					
1	10/11/2010	10/15/2010	IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds	1
<b>EB3SGISI - SG INSERVICE INSPECTION</b>					
1	10/18/2010	10/22/2010	IP 7111108P	Inservice Inspection Activities - PWR	1
<b>PSB1-RP - RP OCCUPATIONAL BASELINE WEEK 2</b>					
1	10/25/2010	10/29/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	10/25/2010	10/29/2010	IP 71124.02	Occupational ALARA Planning and Controls	
1	10/25/2010	10/29/2010	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	10/25/2010	10/29/2010	IP 71124.04	Occupational Dose Assessment	
1	10/25/2010	10/29/2010	IP 71151	Performance Indicator Verification	
<b>EB1-MODS - MODIFICATION - 10 CFR50.59</b>					
1	11/29/2010	12/03/2010	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	4
1	12/13/2010	12/17/2010	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	
<b>PSB1-RP - RP OCCUPATIONAL--TRANSPORTATION</b>					
1	12/06/2010	12/10/2010	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	1
<b>EB1/DRS - TI-177 GAS ACCUMULATION</b>					
1	03/28/2011	04/01/2011	IP 2515/177	Managing Gas Accumulation In Emergency Core Cooling, Decay Heat Removal & Containment Spray System	3

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

Enclosure

**Harris**  
**Inspection / Activity Plan**  
**03/01/2010 - 06/30/2011**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
<b>PSB1EP - EMERGENCY PREPAREDNESS EXERCISE</b>					<b>4</b>
1	04/25/2011	04/29/2011	IP 7111401	Exercise Evaluation	
1	04/25/2011	04/29/2011	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1	04/25/2011	04/29/2011	IP 71151-EP01	Drill/Exercise Performance	
1	04/25/2011	04/29/2011	IP 71151-EP02	ERO Drill Participation	
1	04/25/2011	04/29/2011	IP 71151-EP03	Alert & Notification System	
<b>OL EXAM - INITIAL EXAM PREP</b>					<b>2</b>
1	06/20/2011	06/24/2011	V23352	HARRIS/JULY 2011 EXAM AT POWER FACILITIES	

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Enclosure