



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8931

August 31, 2007

Southern Nuclear Operating Company, Inc.  
ATTN: Mr. J. Randy Johnson  
Vice President  
Joseph M. Farley Nuclear Plant  
7388 N. State Highway 95  
Columbia, AL 36319

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN - JOSEPH M. FARLEY NUCLEAR PLANT

Dear Mr. Johnson:

On August 15, 2007, the NRC staff completed its performance review of the Joseph M. Farley Nuclear Plant for the first half of the calendar year 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, both Farley Unit 1 and Unit 2 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for Unit 1 for the most recent quarter as well as the previous three quarters was within the Licensee Response Column of the NRC's Action Matrix. Therefore, the NRC plans to conduct only baseline inspections at Unit 1 through March 31, 2009. In addition, we plan to conduct non-ROP activities involving initial reactor operator examinations at both Unit 1 and Unit 2.

Plant performance for Unit 2 for the previous three quarters was within the Licensee Response Column of the NRC's Action Matrix. However, the Mitigating Systems Performance Index (MSPI), Residual Heat Removal (RHR) System PI crossed the threshold from Green to White in the second quarter of calendar year 2007. This White PI resulted in Unit 2 moving into the Regulatory Response Column of the NRC's Action Matrix which reflected performance at a level requiring increased regulatory response. Therefore, in addition to conducting baseline inspections at Unit 2, the NRC plans to conduct Supplemental Inspection Procedure 95001, "Inspection for One or Two White Inputs In a Strategic Performance Area" when you have notified us of your readiness.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through March 31, 2009. 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.

During the calendar year 2006 assessment cycle, the MSPI, Cooling Water Systems PI for both Unit 1 and Unit 2 crossed the threshold from Green to White in the second quarter. In March 2007, we conducted Supplemental Inspection Procedure 95001 for this White PI. Supplemental Inspection Report 05000348/2007008 and 05000364/2007008 documented a parallel PI White finding due to continuing problems with evaluating safety-related breaker failures. This parallel White finding was not considered during this performance review because the final determination was made after the review had been completed. However, this parallel White finding will be applied to the NRC's Action Matrix beginning with the third quarter of calendar year 2007.

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 this evaluation, or any other circumstances, cause us to change the inspection plan, we will contact you to discuss the changes as soon as possible. Please contact Scott Shaeffer to (404) 562-4521 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

Charles A. Casto, Director  
Division of Reactor Projects

Docket Nos.: 50-348 and 50-364  
License Nos.: NPF-2 and NPF-8

Enclosure: Farley Inspection/Activity Plan

cc w/encl: (See page 3)

cc w/encls:

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**Farley**  
**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>PSB1-EP - EP INSP</b>			<b>1</b>			
1,2	IP 7111402	Alert and Notification System Testing		09/10/2007	09/14/2007	Baseline Inspections
1,2	IP 7111403	Emergency Response Organization Augmentation Testing		09/10/2007	09/14/2007	Baseline Inspections
1,2	IP 7111404	Emergency Action Level and Emergency Plan Changes		09/10/2007	09/14/2007	Baseline Inspections
1,2	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		09/10/2007	09/14/2007	Baseline Inspections
1,2	IP 71151-EP01	Drill/Exercise Performance		09/10/2007	09/14/2007	Baseline Inspections
1,2	IP 71151-EP02	ERO Drill Participation		09/10/2007	09/14/2007	Baseline Inspections
1,2	IP 71151-EP03	Alert & Notification System		09/10/2007	09/14/2007	Baseline Inspections
<b>OL EXAM - INITIAL EXAM PREP</b>			<b>4</b>			
1	V23273	FARLEY/OCTOBER 2007 EXAM AT POWER FACILITIES		10/01/2007	10/05/2007	Not Applicable
<b>EB3-ISI - UNIT 1 INSERVICE INSPECTION</b>			<b>1</b>			
1	IP 7111108P	Inservice Inspection Activities - PWR		10/08/2007	10/12/2007	Baseline Inspections
<b>EB1-SUMP - PWR CONTAINMENT SUMP BLOCKAGE TI (U-1)</b>			<b>1</b>			
1	IP 2515/166	Pressurized Water Reactor Containment Sump Blockage [NRC GENERIC LETTER 2004-02		10/21/2007	10/26/2007	Safety Issues
<b>OL EXAM - INITIAL EXAM WEEK #1</b>			<b>4</b>			
1	V23273	FARLEY/OCTOBER 2007 EXAM AT POWER FACILITIES		10/29/2007	11/02/2007	Not Applicable
<b>OL EXAM - INITIAL EXAM WEEK #2</b>			<b>4</b>			
1	V23273	FARLEY/OCTOBER 2007 EXAM AT POWER FACILITIES		11/05/2007	11/09/2007	Not Applicable
<b>EB1-MODS - MODIFICATIONS - 10CFR50.59</b>			<b>5</b>			
1,2	IP 7111102	Evaluation of Changes, Tests, or Experiments		11/26/2007	11/30/2007	Baseline Inspections
1,2	IP 7111117B	Permanent Plant Modifications		11/26/2007	11/30/2007	Baseline Inspections
<b>EB2-TFP - TRIENNIAL FIRE PROTECTION</b>			<b>4</b>			
1,2	IP 7111105T	Fire Protection [Triennial]		02/26/2008	02/28/2008	Baseline Inspections
1,2	IP 7111105T	Fire Protection [Triennial]		03/17/2008	03/21/2008	Baseline Inspections
1,2	IP 7111105T	Fire Protection [Triennial]		03/31/2008	04/04/2008	Baseline Inspections
<b>OL RQ - REQUAL INSPECTION</b>			<b>2</b>			
1,2	IP 7111111B	Licensed Operator Requalification Program		03/03/2008	03/07/2008	Baseline Inspections
<b>PSB1-EP - EP EXERCISE</b>			<b>3</b>			
1,2	IP 7111401	Exercise Evaluation		03/10/2008	03/14/2008	Baseline Inspections
1,2	IP 7111404	Emergency Action Level and Emergency Plan Changes		03/10/2008	03/14/2008	Baseline Inspections
1,2	IP 71151-EP01	Drill/Exercise Performance		03/10/2008	03/14/2008	Baseline Inspections
1,2	IP 71151-EP02	ERO Drill Participation		03/10/2008	03/14/2008	Baseline Inspections
1,2	IP 71151-EP03	Alert & Notification System		03/10/2008	03/14/2008	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		07/28/2008	08/01/2008	Baseline Inspections

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

Enclosure

**Farley**  
**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>PSB1-RP - RADIATION PROTECTION PREINSPECTION VISIT</b>		<b>1</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		08/25/2008	08/29/2008	Baseline Inspections
	<b>PI&amp;R - PROBLEM IDENTIFICATION AND RESOLUTION</b>		<b>4</b>			
1,2	IP 71152B	Identification and Resolution of Problems		09/08/2008	09/12/2008	Baseline Inspections
1,2	IP 71152B	Identification and Resolution of Problems		09/22/2008	09/26/2008	Baseline Inspections
	<b>EBR - MR - MAINTENANCE RULE</b>		<b>1</b>			
1,2	IP 7111112B	Maintenance Effectiveness		09/22/2008	09/26/2008	Baseline Inspections
	<b>OL EXAM - INITIAL EXAM PREP</b>		<b>3</b>			
1	V23288	FARLEY/NOVEMBER 2008 EXAM AT POWER FACILITIES		10/13/2008	10/17/2008	Not Applicable
	<b>EB3-ISI - UNIT 2 - ISI</b>		<b>1</b>			
2	IP 7111108P	Inservice Inspection Activities - PWR		10/20/2008	10/24/2008	Baseline Inspections
	<b>PSB1-RP - RADIATION PROTECTION OCCUPATIONAL WK1</b>		<b>2</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		10/20/2008	10/24/2008	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		10/20/2008	10/24/2008	Baseline Inspections
1,2	IP 7112202	Radioactive Material Processing and Transportation		10/20/2008	10/24/2008	Baseline Inspections
1,2	IP 71151-OR01	Occupational Exposure Control Effectiveness		10/20/2008	10/24/2008	Baseline Inspections
1,2	IP 71151-PR01	RETS/ODCM Radiological Effluent		10/20/2008	10/24/2008	Baseline Inspections
	<b>PSB1-RP - RADIATION PROTECTION OCCUPATIONAL WK2</b>		<b>3</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		11/03/2008	11/07/2008	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		11/03/2008	11/07/2008	Baseline Inspections
1,2	IP 7112202	Radioactive Material Processing and Transportation		11/03/2008	11/07/2008	Baseline Inspections
1,2	IP 71151-OR01	Occupational Exposure Control Effectiveness		11/03/2008	11/07/2008	Baseline Inspections
1,2	IP 71151-PR01	RETS/ODCM Radiological Effluent		11/03/2008	11/07/2008	Baseline Inspections
	<b>OL EXAM - INITIAL EXAM</b>		<b>3</b>			
1	V23288	FARLEY/NOVEMBER 2008 EXAM AT POWER FACILITIES		11/03/2008	11/14/2008	Not Applicable
	<b>EB1-CDBI - COMPONENT DESIGN BASIS INSPECTION</b>		<b>8</b>			
1,2	IP 7111121	Component Design Bases Inspection		11/03/2008	11/07/2008	Baseline Inspections
1,2	IP 7111121	Component Design Bases Inspection		11/17/2008	11/21/2008	Baseline Inspections
1,2	IP 7111121	Component Design Bases Inspection		12/01/2008	12/05/2008	Baseline Inspections
1,2	IP 7111121	Component Design Bases Inspection		12/15/2008	12/19/2008	Baseline Inspections
	<b>EB3-HS - HEAT SINK</b>		<b>1</b>			
1,2	IP 7111107B	Heat Sink Performance		12/08/2008	12/12/2008	Baseline Inspections
	<b>PSB1-RP - RADIATION PROTECTION PREINSPECTION VISIT</b>		<b>1</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		01/05/2009	01/07/2009	Baseline Inspections

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

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates		Inspection Type
				Start	End	
<b>PSB1-RP - RADIATION PROTECTION PUBLIC CORNERSTONE</b>			<b>4</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		02/02/2009	02/06/2009	Baseline Inspections
1,2	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		02/02/2009	02/06/2009	Baseline Inspections
1,2	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		02/02/2009	02/06/2009	Baseline Inspections
1,2	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P		02/02/2009	02/06/2009	Baseline Inspections