



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

September 1, 2009

Mr. Thomas P. Joyce  
President and Chief Nuclear Officer  
PSEG Nuclear LLC - N09  
P. O. Box 236  
Hancocks Bridge, NJ 08038

**SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN –  
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2**

Dear Mr. Joyce:

On August 13, 2009, the NRC staff completed its performance review of Salem Nuclear Generating Station (Salem). Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from July 1, 2008, through June 30, 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 enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only--Security Information" will include the security cornerstone review and resultant inspection plan.

Plant performance for the most recent quarter at Salem Units 1 and 2 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.

In our annual assessment letter dated March 4, 2009 (ML090620756)<sup>1</sup>, we advised you of a substantive cross-cutting issue in the area of human performance with a cross-cutting theme in the aspect of documentation and procedure adequacy (H.2(c))<sup>2</sup>. We were concerned, at that time, that your actions had not proven effective in substantially mitigating this longstanding cross-cutting theme, as indicated by an increase in the number of findings with the same causal factor. In the annual assessment letter, we stated that the substantive cross-cutting issue would be cleared when PSEG demonstrated sustainable performance improvement as evidenced by effective implementation of an appropriate corrective action plan that resulted in no safety significant inspection findings and a notable reduction in the overall number of inspection findings with the same causal factor.

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<sup>1</sup> Designation in parenthesis refers to an ADAMS accession number. Documents referenced in this letter are publicly available using the accession number in ADAMS.

<sup>2</sup> This is a descriptor that correlates to this cross-cutting aspect in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program."

During this assessment period, we noted that you completed three common cause analyses, two work group evaluations and a root cause analysis on implementing procedure quality which was completed in June 2009. Appropriate corrective actions were identified to address procedure adequacy that included: revising the administrative process for writing and modifying station procedures; reinforcing management expectations regarding procedure quality with station personnel; improving the process for incorporating operating experience into procedures; and forming a procedure working group to ensure procedure quality. However, we concluded that you did not meet the criteria for clearing the substantive cross-cutting issue because you have not demonstrated that you have achieved sustainable performance improvement that is the result of your effective implementation of a corrective action plan. Specifically, we note that many of the corrective actions that resulted from the cause analyses are still in progress. While we note improvement in this area over the last six months with only one new finding, because many corrective actions have not yet been completed, we continue to evaluate the sustainability of your procedure improvement plans. As such, the NRC will maintain this substantive cross cutting issue open.

We will monitor your progress in this area through the baseline inspection program, including completion of a focused problem identification and resolution inspection sample during the fourth quarter of 2009, in accordance with Inspection Procedure 71152, "Identification and Resolution of Problems." Our review will focus on your integration of corrective action plans from the multiple causal analyses that were completed in response to this issue. We will continue to evaluate the comprehensiveness of your plan including how you will address implementing procedure issues and incorporation of operating experience into procedures. Our review will focus on risk significant procedures including those that will be used during the upcoming refueling outage. The criteria for clearing this substantive crosscutting issue remains as stated in the March 4, 2009 annual assessment letter.

The staff also identified four inspection findings for the current assessment period in the area of human performance with a documented cross-cutting aspect of procedural compliance (H.4(b))<sup>2</sup>. Each finding in this area involved information-use-only (level 3) procedures that were not required to be with the worker at the work location. The staff had previously identified a substantive cross-cutting issue with a procedural compliance (H.4(b))<sup>2</sup> aspect in 2007 that was closed in 2008. Corrective actions taken to address the 2007 issues were comprehensive, timely, and effective in reducing non-compliance issues with continuous use (level 1) and reference use (level 2) procedures. However, based on the recent findings documented with aspects in this area, it appears performance gaps still persist related to compliance with information-use-only (level 3) procedures. The staff has determined that a substantive cross-cutting issue does not exist because a reasonable duration of time has not passed since the identification of the new procedural compliance theme. The staff noted that you recognized the problem with procedural compliance and determined that it affected multiple areas before the theme was identified in May 2009. In addition, you already have corrective actions in place that include department functional and cross functional area procedure reviews intended to increase user awareness and compliance with reference-use procedures. We also note that you plan to perform an additional causal evaluation in this area to identify remaining performance gaps and develop corrective actions to close those gaps. We will continue to monitor the effectiveness of the corrective actions in this area through the baseline inspection program.

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through December 31, 2010. 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 in the last nine 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).

As you may know, the NRC is currently evaluating the scope and frequency of all the baseline inspection procedures as part of our biennial review of the reactor oversight process. 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 Art Burritt at 610-337-5069 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

James W. Clifford, Acting Director  
Division of Reactor Projects  
Region I

Docket Nos. 50-272, 50-311  
License Nos. DPR-70, DPR-75

Enclosure: Salem Nuclear Generating Station Inspection/ Activity Plan

cc w/encl:

W. Levis, President and Chief Operating Officer, PSEG Power  
R. Braun, Site Vice President  
P. Davison, Director of Nuclear Oversight  
E. Johnson, Director of Finance  
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A. Muller, Executive Director, Green Delaware  
V. Zabielski, General Solicitor, PSEG

**Salem**  
**Inspection / Activity Plan**  
**07/01/2009 - 12/31/2010**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>7111111B - BIENNIAL REQUAL INSP WITH P/F RESULTS</b>		<b>3</b>
1,2	07/27/2009	07/31/2009	IP 7111111B	Licensed Operator Requalification Program	
			<b>71152B - PI&amp;R BIENNIAL TEAM</b>		<b>4</b>
1,2	07/06/2009	07/10/2009	IP 71152B	Identification and Resolution of Problems	
			<b>7112203 - PUB RAD SAFETY - REMP</b>		<b>1</b>
1,2	09/14/2009	09/18/2009	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control Program	
			<b>71121 - OCC RAD SAFETY</b>		<b>1</b>
2	10/19/2009	10/23/2009	IP 7112101	Access Control to Radiologically Significant Areas	
2	10/19/2009	10/23/2009	IP 7112102	ALARA Planning and Controls	
2	10/19/2009	10/23/2009	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment	
1,2	10/19/2009	10/23/2009	IP 71151	Performance Indicator Verification	
			<b>TI-172 - U2 TI-172 RCS DISSIMILAR METAL WELDS</b>		<b>1</b>
2	10/19/2009	10/30/2009	IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds	
			<b>7111108P - U2 INSERVICE INSPECTION</b>		<b>1</b>
2	10/19/2009	10/30/2009	IP 7111108P	Inservice Inspection Activities - PWR	
			<b>7112202 - PUB RAD SAFETY - RADWASTE</b>		<b>1</b>
1,2	12/07/2009	12/18/2009	IP 7112202	Radioactive Material Processing and Transportation	
			<b>7112201 - PUB RAD SAFETY - RETS</b>		<b>1</b>
1,2	01/04/2010	01/08/2010	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems	
			<b>5/10EXAM - OPERATOR LICENSING INITIAL EXAM</b>		<b>6</b>
1	04/12/2010	04/16/2010	U01764	FY10 - SALEM UNITS 1&2 INITIAL OPERATOR LICENSING EXAM	
1	05/10/2010	05/14/2010	U01764	FY10 - SALEM UNITS 1&2 INITIAL OPERATOR LICENSING EXAM	
			<b>MODS - PERMANENT PLANT MODIFICATIONS</b>		<b>5</b>
1,2	02/08/2010	02/12/2010	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	
1,2	02/22/2010	02/26/2010	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	
			<b>71121 - OCC RAD SAFETY</b>		<b>1</b>
1	04/12/2010	04/16/2010	IP 7112101	Access Control to Radiologically Significant Areas	
1	04/12/2010	04/16/2010	IP 7112102-7112102R	ALARA - Required	
1	04/12/2010	04/16/2010	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment	
			<b>7111108P - U1 INSERVICE INSPECTION</b>		<b>1</b>
1	04/12/2010	04/23/2010	IP 7111108P	Inservice Inspection Activities - PWR	
			<b>TI-172 - U1 TI 2515/172 DISSIMILAR METAL WELDS</b>		<b>1</b>
1	04/12/2010	04/23/2010	IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds	
			<b>EP EX - EP EXERCISE EVALUATION</b>		<b>4</b>
1,2	05/17/2010	05/21/2010	IP 7111401	Exercise Evaluation	

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

## Salem

## Inspection / Activity Plan

07/01/2009 - 12/31/2010

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
<b>EP EX - EP EXERCISE EVALUATION</b>					<b>4</b>
1,2	05/17/2010	05/21/2010	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1,2	05/17/2010	05/21/2010	IP 71151-EP01	Drill/Exercise Performance	
1,2	05/17/2010	05/21/2010	IP 71151-EP02	ERO Drill Participation	
1,2	05/17/2010	05/21/2010	IP 71151-EP03	Alert & Notification System	
<b>ISFSI - ANNUAL SAMPLE - ISFSI INSPECTION</b>					<b>1</b>
1	07/01/2010	09/30/2010	IP 60855	Operation Of An ISFSI	
<b>71121 - OCC RAD SAFETY</b>					<b>1</b>
1,2	07/19/2010	07/23/2010	IP 7112101	Access Control to Radiologically Significant Areas	
1,2	07/19/2010	07/23/2010	IP 7112102-7112102R	ALARA - Required	
1,2	07/19/2010	07/23/2010	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment	
<b>TI-177 - MANAGING GAS ACCUMULATION IN ECCS</b>					<b>5</b>
1,2	08/02/2010	08/06/2010	IP 2515/177	Managing Gas Accumulation In Emergency Core Cooling, Decay Heat Removal & Containment Spray System	
<b>ISFSI - ISFSI - DRY RUN AND INITIAL LOADING</b>					<b>1</b>
1,2	08/09/2010	08/20/2010	IP 60854	Preoperational Testing Of An ISFSI	
1,2	08/09/2010	08/20/2010	IP 60854.1	Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants	
1,2	08/09/2010	08/20/2010	IP 60855	Operation Of An ISFSI	
1,2	08/09/2010	08/20/2010	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
<b>71121 - OCC RAD SAFETY</b>					<b>1</b>
1,2	09/27/2010	10/01/2010	IP 7112101	Access Control to Radiologically Significant Areas	
1,2	09/27/2010	10/01/2010	IP 7112102-7112102R	ALARA - Required	
1,2	09/27/2010	10/01/2010	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment	
1,2	09/27/2010	10/01/2010	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1,2	09/27/2010	10/01/2010	IP 71151-PR01	RETS/ODCM Radiological Effluent	
<b>711107T - TRIENNIAL HEAT SINK</b>					<b>1</b>
1,2	12/06/2010	12/10/2010	IP 7111107T	Heat Sink Performance	

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