

January 3, 2000

Mr. Harold W. Keiser
President and Chief Nuclear Officer
PSEG Nuclear LLC
Post Office Box 236
Hancocks Bridge, NJ 08038

**SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN -
SALEM NUCLEAR STATION**

Dear Mr. Keiser:

On December 13, 1999, the NRC staff reviewed the plant performance of Salem Nuclear Station during June 1- November 30, 1999, as reflected in the performance indicators and inspection results, in order to integrate performance information and to plan for inspection activities at your facility through July 31, 2000. The purpose of this letter is to inform you of our plans for future inspections at your facility so that you will have an opportunity to prepare for these inspections and to inform us of any planned inspections which may conflict with your plant activities.

Our review of performance at Salem noted that all performance indicators (PIs) and inspection areas were green (licensee response band), with the exception of an inspection finding in the emergency preparedness area which was classified as white (increased regulatory response band) using the Significance Determination Process. The EP performance issue was described in NRC Inspection Report 05000272 & 05000311/99-09, issued on December 28, 1999, and applied to both Salem units. Pending final resolution of this white finding, supplemental inspection is planned in the EP area as part of the upcoming EP exercise review. In addition, up until October 1999, there was one PI which exceeded the white threshold at both Salem units (*i.e.*, *Protected Area Security Equipment Performance Index*), but this PI was based on performance concerns which had been previously addressed.

This letter advises you of our planned inspection effort resulting from our Salem mid-cycle performance review. Enclosure 1 lists the scheduled inspections that are planned through July 31, 2000. The inspection plan is provided to minimize the resource impact on your staff, and to allow for scheduling conflicts and personnel availability to be resolved in advance of inspectors arriving onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The last few months of the inspection plan are tentative and will be addressed at the end-of-cycle performance review in April 2000, which we expect to issue to you in May 2000.

Mr. Harold W. Keiser

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In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR). If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Glenn Meyer at 610/337-5211 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

Original Signed by:

A. Randolph Blough, Director
Division of Reactor Projects

Docket Nos. 05000272 & 05000311
License Nos. DPR - 70 & 75

Enclosures: 1. Salem Station Scheduled Inspections (January 1 - July 31, 2000)
2. Plant Issue Matrix

cc w/encls:

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Mr. Harold W. Keiser

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| OFFICE | RI/DRP | RI/DRP | RI /DRP | RI/ORA | | |
|--------|-----------------|-----------|------------|------------|--|--|
| NAME | Rbarkley/GM for | GMeyer/GM | RBlough/RB | HMiller/HM | | |
| DATE | 01/3/00 | 01/3/00 | 01/3/00 | 01/3/00 | | |

OFFICIAL RECORD COPY

SALEM
Inspection / Activity Plan
01/01/2000 - 07/31/2000

| Units | Inspection Activity | Title | No. of Staff on Site | No. assigned to Procedure | Planned Dates Start End | Inspection Type |
|-------|--|--|----------------------|---------------------------|-------------------------|-----------------|
| 1 | 1/10 EXM - INIT. OPER. LIC. EXAM | | 3 | | | |
| | U01267 | SALEM 1 INITIAL EXAM | | 3 | 01/10/2000 01/21/2000 | Not Applicable |
| 2 | U01269 | SALEM 2 INITIAL EXAM | | 3 | 01/10/2000 01/21/2000 | Not Applicable |
| 1,2 | 71121 - PI - OCCUPATIONAL RAD | | 1 | | | |
| | IP 71121.01 | Access Control to Radiologically Significant Areas | | 1 | 01/10/2000 01/14/2000 | Other Routine |
| 2 | IP 71121.02 | ALARA Planning and Controls | | 1 | 01/10/2000 01/14/2000 | Other Routine |
| 1,2 | IP 71121.03 | Radiation Monitoring Instrumentation | | 1 | 01/10/2000 01/14/2000 | Other Routine |
| 1,2 | 71152 - ANNUAL PIR INSPECTION | | 5 | | | |
| | IP 71152 | Identification and Resolution of Problems | | 1 | 03/06/2000 03/10/2000 | Other Routine |
| 1,2 | 71111.12 - DRS MAINT. RULE INSP. (MRI) | | 1 | | | |
| | IP 71111.12 | Maintenance Rule Implementation (I,M,B) | | 1 | 03/20/2000 03/24/2000 | Other Routine |
| 1,2 | 71152 - ANNUAL PIR INSPECTION | | 5 | | | |
| | IP 71152 | Identification and Resolution of Problems | | 5 | 03/27/2000 03/31/2000 | Other Routine |
| 1,2 | 2515/142 - T12515/142 GL98-02 FOLLOWUP | | 1 | | | |
| | IP 2515/142 | Draindown During Shutdown and Common-Mode Failure (NRC GL 98-02) | | 1 | 03/20/2000 03/24/2000 | Safety Issues |
| 1,2 | 71330 - BASELINE SECURITY | | 2 | | | |
| | IP 71330.03 | Response to Contingency Events | | 2 | 03/20/2000 03/24/2000 | Other Routine |
| 1,2 | EXR - FULL SCALE EXERCISE | | 6 | | | |
| | IP 71114.01 | Drill and Exercise Inspection | | 2 | 04/11/2000 04/14/2000 | Other Routine |
| 1,2 | 95001 - FOLLOWUP EP WHITE FINDING | | 1 | | | |
| | IP 95001 | Supplemental Inspection For One Or Two White Inputs In A Strategic Performan | | 1 | 04/10/2000 04/14/2000 | Other Routine |
| 1,2 | 71111.07 - HEAT SINK | | 2 | | | |
| | IP 71111.07 | Heat Sink Performance (I,M) | | 2 | 04/24/2000 04/28/2000 | Other Routine |
| 1,2 | 71121 - OCCUPATIONAL RADIATION SAFETY | | 1 | | | |
| | IP 71121.01 | Access Control to Radiologically Significant Areas | | 1 | 05/22/2000 05/26/2000 | Other Routine |
| 1,2 | IP 71121.02 | ALARA Planning and Controls | | 1 | 05/22/2000 05/26/2000 | Other Routine |
| 1,2 | IP 71121.03 | Radiation Monitoring Instrumentation | | 1 | 05/22/2000 05/26/2000 | Other Routine |

This report does not include NFO and OUI/AE activities.
This report shows only on-site and announced inspection procedures.

United States Nuclear Regulatory Commission Revised Oversight Process PLANT ISSUE MATRIX

By Cornerstone

Region 1
SALEM

| Date | Source | ID | Type | Cornerstone | Significance Determination | Item Title Item Description/Significance |
|---|------------|----------|------|-------------------|----------------------------|--|
| 10/10/1999 | 1999008-01 | NRC | NCV | Initiating Events | Green | FAILURE TO FOLLOW PROCEDURE FOR PLACING A MIXED BED DEMINERALIZER IN SERVICE, RESULT I PSEG operators failed to properly implement the procedure for placing a mixed bed demineralizer in service which resulted in an inadvertent reduction in reactor coolant system boron concentration of approximately 75 ppm. The safety significance of this event was very low based on the absence of any adverse consequences during the event and the TS limit for shutdown boron concentration not having been exceeded. |
| Dockets Discussed: 05000272 SALEM 1 | | | | | | |
| 10/10/1999 | 1999008-02 | NRC | NCV | Initiating Events | Green | TWO EXAMPLES OF OPERATOR FAILURES TO FOLLOW SURVEILLANCE TEST PROCEDURES, RESULT I Two examples of licensed reactor operators failing to properly implement surveillance test procedures resulted in the operation of: (1) a switch in the wrong Unit 1 safeguards equipment cabinet, and (2) a charging system flow control valve on the wrong Salem unit. The safety significance of these examples was very low - in the first case, the plant was shutdown and there were no consequences to the error; in the second case, only one cornerstone was affected and (in the worst case) the error would have resulted in an uncomplicated reactor trip. |
| Dockets Discussed: 05000272 SALEM 1 | | | | | | |
| 08/29/1999 | 1999007-02 | Licensee | NCV | Initiating Events | Green | FAILURE TO PROPERLY CONTROL THE REMOVAL OF ELECTRICAL CABLE FIRE WRAP MATERIAL During the implementation of design change package 1EE-0436, some fire wrap was inappropriately removed such that UFSAR-described cable separation criteria were not met. The risk significance of this issue was low because only one train of safe shutdown equipment was affected. This issue represented a non-cited violation of 10 CFR 50, Appendix B Criterion III. This issue was characterized as a "green" finding as the risk significance of this issue was very low because only one train of safe shutdown equipment was affected. |
| Dockets Discussed: 05000272 SALEM 1 | | | | | | |
| 08/29/1999 | 1999007-04 | Licensee | NCV | Initiating Events | Green | FAILURE TO COMPLY WITH TS 3.11.2.6 WITHIN THE REQUIRED TIME PERIOD Unit 2 operators were slow in reducing the oxygen concentration in the waste gas decay tank to levels below those potentially explosive and exceeded the time limit required by technical specification 3.11.2.5. The risk associated with this event was minimal because all fire protection equipment remained available. This event was characterized as a "green" issue due to its very low safety significance since all fire protection equipment in the area remained available and the event was of limited duration. |
| Dockets Discussed: 05000311 SALEM 2 | | | | | | |
| 07/11/1999 | 1999005 | NRC | FIN | Initiating Events | Green | FIRE PROTECTION/BARRIERS PSEG maintained appropriate control of combustible material and ignition sources in inspected areas. In general, impaired fire barriers were clearly tagged and documented in the corrective action program (CAP). However, the inspectors discovered some minor deficiencies such as a fire door which would not completely close without operator assistance. The minor violation associated with the fire door which would not close completely without operator assistance was classified as a green finding due to its very low safety significance. |
| Dockets Discussed: 05000272 SALEM 1 05000311 SALEM 2 | | | | | | |

United States Nuclear Regulatory Commission Revised Oversight Process Plant Issue Matrix

By Cornerstone

Region 1
 SALEM

| Date | Source | ID | Type | Cornerstone | Significance Determination | Item Title Item Description/Significance |
|------------|------------|----------|------|--------------------|----------------------------|--|
| 09/01/1999 | 1999006-01 | NRC | NCV | Mitigating Systems | Green | <p>INADEQUATE ACCEPTANCE CRITERIA IN SURVEILLANCE TEST PROCEDURES</p> <p>The acceptance criteria in the auxiliary feedwater (AFW) pump surveillance test procedures was inadequate since it did not ensure that the pump performance was capable of meeting accident analysis performance or pump operability criteria found in the Unit 1 and 2 Technical Specifications. This issue was considered potentially significant due to the allowable degraded core cooling capability associated with the established AFW pump minimum performance acceptance criteria. This issue has been entered into PSEG Nuclear's corrective action program (CAP).</p> <p>The issue was considered "green" in the significance determination process since it did not have an immediate impact on AFW system operability as determined by an evaluation of recent pump performance.</p> |
| 08/01/1999 | 1999006-02 | NRC | NCV | Mitigating Systems | Green | <p>MULTIPLE EXAMPLES OF INEFFECTIVE IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM</p> <p>The team identified some instances where PSEG Nuclear did not effectively implement the corrective action program (CAP): 1) A prior performance weakness resulted in a governor control system needle valve setting for the 23 AFW pump turbine that was not optimal for actual operating conditions; 2) During operation of the 23 AFW pump, the team identified that the turbine outboard bearing temperature exhibited an increasing trend, which represented an operability question, and PSEG Nuclear was not aware of this potential problem. Consequently, this problem was not entered into the CAP; and, 3) Other examples of ineffective implementation of the CAP were identified, including deficiencies not promptly entered into the CAP or not adequately corrected. These issues were considered to be significant in that they indicated an overall CAP weakness since problems were noted in not identifying corrective action items and the lack of timeliness and effectiveness of corrective actions.</p> <p>These issues were considered "green" in the significance determination process because they did not have an immediate impact on AFW system operability and were ultimately included in PSEG Nuclear's CAP.</p> |
| 09/01/1999 | 1999006-03 | NRC | NCV | Mitigating Systems | Green | <p>INADEQUATE DESIGN CONTROL CONCERNING REPLACEMENT PARTS FOR POSITIONERS FOR AFW FL</p> <p>The team found that the positioners for the AFW flow control valves had been maintained with parts that were not qualified for use in safety-related applications. This issue was considered significant since the functionality for valves in a risk significant system was being challenged.</p> <p>The qualification issue was considered "green" in the significance determination process because it did not have an immediate impact on AFW system operability based on an engineering evaluation and the issue was being addressed by PSEG Nuclear's CAP.</p> |
| 07/11/1999 | 1999005 | Licensee | FIN | Mitigating Systems | Green | <p>CFCU TRAIN UNAVAILABILITY PERFORMANCE CRITERIA</p> <p>PSEG nuclear personnel properly monitored containment fan cooling unit (CFCU) performance for reliability and unavailability. However, while PSEG's recent change in the CFCU train unavailability performance criteria was acceptable, it was not based on an evaluation of all of the appropriate factors. Also, the goals for the diesel generators were weak in that the cause of the associated unavailability was not addressed.</p> <p>This finding was assessed to be green as a reevaluation by PSEG of the CFCU train unavailability performance criteria using more appropriate factors revealed only a minimal increase in large early release frequency (LERF).</p> |
| 07/11/1999 | 1999005 | NRC | FIN | Mitigating Systems | Green | <p>INCOMPLETE COMPENSATORY MEASURES FOR DEGRADED EQUIPMENT CONDITIONS</p> <p>PSEG nuclear operators appropriately assessed three degraded equipment conditions in terms of their impact on the design basis functions of the affected systems. Each of the operability evaluations were completed in a timely manner. However, some of the associated compensatory measures were either incomplete or poorly controlled.</p> <p>This finding was evaluated to be green due to the minor significance of the compensatory measures needed and the absence of NRC requirements in this area.</p> |

United States Nuclear Regulatory Commission Revised Oversight Process PLANT ISSUE MATRIX

By Cornerstone

Region 1
SALEM

| Date | Source | ID | Type | Cornerstone | Significance Determination | Item Title Item Description/Significance |
|---|------------|----------|------|-------------------------------|----------------------------|--|
| 11/28/1999 | 1999009-01 | NRC | AV | Emergency Preparedness | White | A WHITE FINDING FOR INEFFECTIVE CORRECTIVE ACTIONS IN THE EP AREA INVOLVING THE FAILURE WHITE. The inspectors identified a problem regarding corrective actions for emergency classifications, based on an unfilled emergency declaration for a Unit 2 event in December, 1998 which recurred during a Unit 1 event in September, 1999. Using the SDP, the finding was determined to be White with low to moderate safety significance, in that a problem identification and resolution (PIDR) problem existed, that there was a failure to resolve the problem (based on its recurrence), and that an emergency preparedness planning standard (10 CFR 50.47(b)(14)) was involved. In addition, the inspectors noted related observations regarding ineffective PSEG efforts to address the problem. (Section 1EP1.1) |
| The safety significance of this WHITE finding was low to moderate. | | | | | | |
| 08/29/1999 | 1999007-05 | Licensee | NCV | Occupational Radiation Safety | Green | INADVERTENT DISCHARGE FROM THE 23 WASTE GAS DECAY TANK TO THE AUXILIARY BUILDING PSEG operators inadvertently vented radioactive gas into the Unit 2 auxiliary building. The plant vent and auxiliary building air radiation monitors detected increased radiation levels, which remained well below technical specification limits. Errors by control room and field operators, including failure to follow procedures, contributed to the incident. |
| This event was characterized as a "green" issue since the increased radiation levels in the auxiliary building were well below regulatory limits. | | | | | | |
| 10/10/1999 | 1999008-04 | NRC | NCV | Public Radiation Safety | Green | FAILURE TO REPORT IN RAD. ENV. OP. REPORTS ACTIONS TO PREVENT RECURRENCE OF RAD. ENVIR PSEG failed to provide complete information in their 1997 and 1998 Annual Radiological Environmental Operating Reports in that these documents did not describe plans to prevent recurrence of multiple environmental air sampler outages. This issue was characterized as a Non-Cited Violation of TS 3.12.1. |
| The safety significance of this issue was very low because it did not significantly compromise PSEG's ability to assess the environmental impact of continued plant operation. | | | | | | |
| 08/29/1999 | 1999007-03 | Licensee | NCV | Public Radiation Safety | Green | INADEQUATELY PERFORMED SURVEILLANCE PROCEDURE The carbon adsorber (activated charcoal) in the auxiliary building ventilation exhaust system was operated at an air flow in excess of the specified maximum. Operators declared the adsorber inoperable until engineering department personnel assessed the potential impact of this occurrence, which was later determined to be negligible. This issue had low safety significance since the excessive flow rate did not affect the adsorber's ability to filter radiiodine. Insufficient attention to detail by a control room operator had resulted in this incident, which represented a non-cited violation of technical specification 6.8.1. |
| This issue was characterized as a "green" event due to its very low safety significance since the excessive flow rate did not affect the adsorber's ability to filter radiiodine. | | | | | | |
| 08/29/1999 | 1999007-06 | NRC | NCV | Physical Protection | Green | FAILURE TO CONDUCT PACKAGE SEARCH IN ACCORDANCE WITH SITE SECURITY PLAN Security personnel did not properly search a hand-carried package prior to granting it unrestricted access to the site protected area (SPA). Specifically, guards permitted a plant worker to bypass the x-ray machine and carry a large bag of moving blankets into the SPA without a search of the bag's contents. Later examination of the bag's contents yielded no contraband. |
| This incident was characterized as a "green" issue since no contraband was identified in the package which was not searched. | | | | | | |

United States Nuclear Regulatory Commission Revised Oversight Process PLANT ISSUE MATRIX

By Cornerstone

Region 1
 SALEM

| Date | Source | ID | Type | Cornerstone | Significance Determination | Item Title Item Description/Significance |
|------------|-----------------|-----|--------|---------------|----------------------------|---|
| 11/28/1999 | 1999009-02 | NRC | MV | Miscellaneous | N/A | <p>PSEG DID NOT ACCURATELY REPORT DATA NEEDED TO SUPPORT TWO SALEM UNIT 2 PERFORMANCE INDICATORS (PI). PSEG did not accurately report data needed to support two Salem Unit 2 performance indicators (PI). Specifically, an October 1987 reactor trip was not included in the Scrams with Loss of Normal Heat Removal PI, and third and fourth quarter 1988 Unplanned Transient PI data were reversed. Neither of these errors affected the outcome of the PI with respect to its threshold, and the PIs remained Green. (Section 40A2.1)</p> <p>There was no safety significance to these PI reporting errors.</p> |
| 10/10/1999 | 1999008-05 | NRC | URI | Miscellaneous | N/A | <p>INACCURATE SUBMITTAL OF SAFETY SYSTEM FUNCTIONAL FAILURE PI DATA FOR UNITS 1 & 2 PSEG did not accurately report five issues described in 1998 and 1999 Licensee Event Reports (LERs) that should have been included in the Safety System Functional Failure performance indicator. However, neither the Unit 1 nor the Unit 2 SSFF performance indicator would have entered the White band even if PSEG had included these issues in the data.</p> <p>The safety significance of this matter was very low as no change in the licensee's corrective actions or the NRC's response per the action matrix was caused by this error in generating the SSFF performance indicator.</p> |
| 07/28/1999 | 01014-EA1899055 | NRC | VIO/IV | Miscellaneous | N/A | <p>DISCRIMINATION AGAINST NUCLEAR MECHANICAL TECHNICIAN A July 28, 1999, the NRC letter issued a violation related to licensee discrimination against an employee for engaging in protected activities following a Department of Labor decision on March 4, 1999, and a June 24, 1999, transcribed enforcement conference with the NRC in this matter. Specifically, a nuclear mechanical technician received a negative performance appraisal April 1998 in retaliation for raising safety concerns regarding the repair of a safety-related valve at Salem Unit 1.</p> <p>The Significance Determination Process does not apply to this item.</p> |

United States Nuclear Regulatory Commission Revised Oversight Process PLANT ISSUE MATRIX

By Comerstone

Legend

Type Codes:

| | |
|-----|--------------------|
| AV | Apparent Violation |
| FIN | Finding |
| NCV | NonCited Violation |
| URI | Unresolved Item |
| VIO | Violation |

ID Codes:

| | |
|----------|---------------|
| NRC | NRC |
| Self | Self-Revealed |
| Licensee | Licensee |

AVs are apparent violations of NRC Requirements that are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Action" (Enforcement Policy), NUREG-1600. However, the NRC has not reached its final enforcement decision on the issues identified by the AVs and the PIM entries may be modified when the final decisions are made.

URIs are unresolved items about which more information is required to determine whether the issue in question is an acceptable item, a deviation, a nonconformance, or a violation. A URI may also be a potential violation that is not likely to be considered for escalated enforcement action. However, the NRC has not reached its final conclusions on the issues, and the PIM entries may be modified when the final conclusions are made.