

Salem 1

2Q/2010 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Buried AFW Discharge Piping not Tested in Accordance with 10 CFR 50.55a

The inspector identified an NCV of very low safety significance for PSEG's failure to perform AFW discharge piping system pressure tests on buried piping components as required by 10 CFR 50.55a(g)(4) and the referenced American Society of Mechanical Engineers Code (ASME), Section XI, paragraph IWA-5244 for Salem Unit 1. The required tests are intended to demonstrate the structural integrity of the buried piping portions of the system. PSEG entered this condition into the corrective action program (Notification 20459689) and replaced the affected Unit 1 AFW piping.

This performance deficiency is more than minor, because, if left uncorrected, it would have resulted in a more significant safety concern. Specifically, the inspectors determined that based on the degraded condition of the coating and piping discovered during excavation on Unit 1, without performance of the required pressure test, an undetected failure of the piping would have resulted due to continued, undetected corrosion. The finding impacts the Mitigating Systems cornerstone. Using IMC 0609, Attachment 4, the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, did not result in an actual loss of safety function, and was not potentially risk significant for external events.. No Cross Cutting Aspect is assigned to this violation because this condition began in 1988, more than 3 years ago, and is not indicative of current performance.

Inspection Report# : [2010003](#) (*pdf*)

Significance:  Mar 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Chillers Inoperability Exceeds TS Allowed Outage Time

A self-revealing NCV of TS 3.7.10, "Chilled Water System, Auxiliary Building Subsystem," was identified because the 12 chiller tripped on low chill water temperature during the starting of the 13 chiller for post-maintenance testing on December 7, 2010.

The inspectors determined that the cause of the chiller trip was inadequate troubleshooting that was conducted after the 12 chiller tripped on December 4, 2010.

Corrective actions included calibration of the low temperature trip instrument and raising the priority placed on correcting problems with the chillers. This issue was placed in PSEG's corrective action program.

The performance deficiency was more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone, and it adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent adverse consequences. Specifically, not conducting adequate troubleshooting in accordance MA-AA-716-004 affected the reliability of the emergency control air system by reducing the capability of the chilled water system to cool the emergency control air compressor. The finding was evaluated using a Phase 3 risk analysis and confirmed to be of very low safety significance (Green). This performance deficiency has a cross-cutting aspect in the area of human

performance because PSEG did not use conservative assumptions in decision making. Specifically, when the complex troubleshooter was completed after the 12 chiller trip on December 4, and no cause for the trip was identified, PSEG did not reconsider completing a step, intentionally skipped during the troubleshooting, that subsequent testing determined would have identified the cause. (H.1(b))

Inspection Report# : [2010002](#) (pdf)

Significance: G Jul 10, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH GOALS AND MONITOR FOR (a)(1) SERVICE WATER SYSTEM

The inspectors identified a non-cited violation of very low safety significance of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," paragraph (a)(1), for PSEG's failure to monitor the performance of the service water system against established (a)(1) goals in a manner sufficient to provide reasonable assurance that the system was capable of fulfilling its intended function. PSEG also failed to take corrective action when system performance exceeded the (a)(1) unavailability goals. Specifically, PSEG failed to establish (a)(1) goals and monitor service water system performance from January 2008 through October 2008. Additionally, the inspectors identified a second example of this issue when PSEG failed to recognize that the service water system exceeded the new (a)(1) monitoring goals from April 2009 through June 2009. PSEG entered this issue into their corrective action program under notifications 20422672 and 20422673.

This finding is more than minor because it is associated with the equipment performance attribute of the mitigating systems cornerstone and affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). This finding is not suitable for evaluation using the SDP because the performance deficiency did not cause the degraded equipment performance. Findings for which the SDP does not apply may be Green or assigned a severity level after NRC management review. Per the guidance provided in Inspection Procedure 71111.12, this issue is considered to be a Category II finding and thus, per NRC management review, is considered to be Green. With respect to assigning a cross-cutting aspect to this finding, the inspectors determined that the most meaningful insight into PSEG's performance was a programmatic concern with the implementation of the maintenance rule program at Salem. PSEG acknowledged this programmatic concern, which included ownership and accountability issues, initiated a focused self-assessment of the maintenance rule program, and will assign corrective actions as appropriate. This insight is not aligned with the specific cross cutting attributes defined in IMC 0305 and, as such, the inspectors have not assigned a cross-cutting aspect to this finding.

Inspection Report# : [2009007](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Jul 10, 2009

Identified By: NRC

Item Type: FIN Finding

SALEM BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION

The inspectors concluded that Public Service Enterprise Group Nuclear, LLC (PSEG) was generally effective in identifying, evaluating, and resolving problems. PSEG personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with their safety significance. In most cases, PSEG appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that PSEG typically implemented corrective actions to address the problems identified in the corrective action program in a timely manner. However, the inspectors identified one violation of NRC requirements in the area of effectiveness of corrective actions. The inspectors concluded that, in general, PSEG adequately identified, reviewed, and applied relevant industry operating experience to Salem Nuclear Generating Station (Salem) operations. In addition, based on those items selected for review by inspectors, PSEG's audits and self-assessments were thorough. Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employee concerns program issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety issues nor did they identify conditions that could have had a negative impact on the site's safety conscious work environment.

Inspection Report# : [2009007](#) (*pdf*)

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