

Salem 2

2Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Evaluate Corrective Action Options for RCP Motor Cables

A self-revealing finding of very low safety significance was identified on June 26, 2011, as Salem Unit 2 tripped following a trip of the 23 reactor coolant pump (RCP) due to a ground fault inside the 23 RCP motor junction box. PSEG determined that the cause of the ground fault was RCP motor cable jacket cracking that was first identified in 2005. PSEG entered this event into the CAP as notification 20515977.

The performance deficiency was more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone, and it adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, action from notifications in January 2006 for the engineering department to determine various options to address RCP motor lead jacket cracking including an evaluation on whether to replace the cables during the June 2008 refueling outage (RFO) was not completed prior to the June 2008 motor replacement and continued to be an open action up to the point of the June 2011 RCP cable failure and reactor trip. The finding was evaluated under IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. This finding had a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because PSEG did not take appropriate corrective action to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, PSEG did not ensure that the CAP assignment for the engineering department to evaluate long-term corrective action options for the RCP motor lead cables were completed timely and effectively in accordance with their CAP procedure. (P.1(d))

Inspection Report# : [2011004](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate IST Program Evaluation of a Pressure Relief Valve

The inspectors identified a NCV of Salem Technical Specification (TS) 6.8.4.j, "In Service Testing," that implements the in service testing program for American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components in accordance with the ASME Operations and Maintenance (OM) code. Specifically, PSEG did not complete an adequate ASME OM code required evaluation following the test of the Unit 2 Boron Injection Tank (BIT) relief, 2SJ10, which lifted outside of its acceptance criteria. This finding was determined to be of very low safety significance. PSEG entered this issue into their CAP as notifications 20523948 and 20518249. Corrective actions at that time included replacing the damaged seat and disk, rebuilding the valve, and performing a post maintenance test of the rebuilt valve.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating

Systems cornerstone, and it impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, leakage of greater than 10 gpm through the 2SJ10 valve degraded the ability of the charging system to deliver design flow rates to the reactor following a safety injection signal that would un-isolate the BIT. The inspectors evaluated this finding 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 represent an actual loss of system safety function, and was not potentially risk significant for external events. This finding had a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because PSEG did not thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary. Specifically, PSEG's evaluation following the 2SJ10 failure in April 2011 did not meet the requirements of PSEG procedure ER-SA-321-1010. The evaluation contained incorrect information regarding valve refurbishment that prevented PSEG from identifying the cause of the 2SJ10 failure. (P.1 (c))

Inspection Report# : [2011004](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Late State Notification of UE

The inspectors identified a NCV of 10 CFR 50.47, "Emergency Plans." Specifically, state officials were not notified within 15 minutes of the declaration of an Unusual Event (UE), a risk significant planning standard. PSEG has entered this issue into their CAP as notification 20518004. PSEG's corrective actions for this performance deficiency was to complete licensed operator training regarding classification and notification requirements for short duration emergency events terminated before classifications and notifications can be completed.

The inspectors determined that a performance deficiency was identified associated with timely notification to state and local government agencies during an actual event. PSEG did not notify Delaware and New Jersey state government agencies within the specified 15 minutes after declaring a UE. The finding was greater than minor because it is associated with the Emergency Planning cornerstone attribute of Emergency Response Organization performance during actual event response. The finding affected the cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors reviewed this finding using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2, "Actual Event Implementation Problem." This finding was determined to be of very low safety significance because it was a failure to implement a risk significant planning standard during an actual event associated with the declaration of a UE. This finding had a cross-cutting aspect in the area of human performance, work practices, because PSEG personnel did not ensure supervisory and management oversight of work activities, such that nuclear safety is supported. Specifically, the Shift Manager was distracted from his supervisory oversight role and did not direct the communicators to perform state notifications within the required 15 minute time period. (H.4(c))

Inspection Report# : [2011004](#) (pdf)

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Jul 21, 2011

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Summary Assessment

The inspectors concluded that 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 and cause, generic issues, and previous occurrences. The inspectors also determined that PSEG typically implemented corrective actions to address identified problems in a timely manner. However, for one issue reviewed by the inspectors, the corrective actions completed by PSEG were not timely and the inspectors determined that this was a violation of NRC requirements, in the area of corrective action implementation.

The inspectors concluded that, in general, PSEG adequately identified, reviewed, and applied relevant industry operating experience to Salem operations and identified appropriate corrective actions. In addition, based on those items selected for review, the inspectors determined that PSEG self-assessments and audits were thorough and appropriately used the corrective action program to initiate corrective actions for identified issues.

With respect to safety conscious work environment, based on interviews and reviews of the corrective action program and the employees concerns program (ECP) the inspectors did not identify conditions that negatively impacted the site's safety conscious work environment and determined that site personnel were willing to raise safety issues through multiple means.

Inspection Report# : [2011009](#) (*pdf*)

Last modified : September 12, 2012