Salem 1
1Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Jul 21, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Untimely Completion of Corrective Actions Results in No. 11 Service Water Strainer Trip Due To Grassing
The inspectors identified a self-revealing Green non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," because the 11 service water strainer overloads tripped on February 9, 2011, due to binding of the strainer rotating drum, which rendered the 11 service water pump inoperable and unavailable. The binding occurred because PSEG did not complete timely corrective actions for a condition adverse to quality identified following an April 4, 2010, 11 service water strainer trip. Specifically, PSEG did not repair excessive grooves on the strainer body wear surface by taking the actions specified in the corrective action program in January 2011. The grooves caused river grass to become trapped between the rotating strainer drum and body wear surface, which eventually bound and tripped the strainer overloads. (4OA2.1c(3))

This performance deficiency was more than minor because PSEG did not complete timely corrective actions for excessive grooving identified on 11 strainer's body wear ring in January 2011, which degraded the availability and reliability of the 11 service water pump. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix A. A Phase 3 analysis was required because the Salem Pre-solved Risk-Informed Inspection Notebook does not address the loss of one train of SW. An external event evaluation was also conducted, because the internal event increase in core damage frequency (?CDF) was in the E-7 range. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because PSEG did not implement timely actions to repair excessive grooves identified in the 11 service water strainer body wear ring in January 2011 because work control documents were not correctly coded in July 2010 (P.1(d)).
Inspection Report# : 2011004 *(pdf)*
Inspection Report# : 2011009 *(pdf)*

Significance: G Jun 30, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
INADEQUATE CONTROL OF SWITCHYARD MAINTENANCE
A self-revealing finding of very low safety significance was identified on April 1, 2011, because a 500 KV load break disconnect 3T60 failed to operate upon the restoration of switchyard maintenance. This caused a four-hour delay in the restoration from a single source of offsite power, the exit from a 72-hour limiting condition for operation (LCO), and the extension of a yellow probability risk assessment condition. PSEG investigation revealed that the vendor, who was conducting maintenance on the 3T60 disconnect, removed the motor control fuse holder that was not a part of the tagout for the maintenance. PSEG determined that the cause of the disconnect not closing was that PSEG did not adequately brief and control the maintenance evolution. PSEG entered this event into their CAP as notification 20503254. PSEG's immediate corrective actions were to reinstall the fuses and close the 3T60 disconnect.

The inspectors determined that the failure of PSEG to assign a supplemental workforce supervisor or task manager to provide in-field supervision of the 3T60 disconnect maintenance in accordance with AD-AA-2001, "Management and Oversight of Supplemental Workforce", was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because it is associated with the human 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. The finding was evaluated under IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings", and the inspectors concluded that a Phase 2 evaluation was required since the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigating systems would not have been available. This conclusion was based upon the potential for emergency diesel generator

(EDG) operation to be challenged upon the loss of all offsite power. A regional Senior Reactor Analyst completed a Phase 3 evaluation under the SDP. The performance deficiency was characterized as of very low safety significance (Green) based upon the results of this evaluation. The inspectors determined that this finding has a cross-cutting aspect in the area of human performance, because PSEG did not ensure supervisory and management oversight of the vendor work activity. Specifically, PSEG personnel did not did not assign a supervisor to provide in-field supervision, conduct an adequate pre-job brief with the vendor, and did not conduct an adequate post-maintenance restoration walkdown of the 3T60 switchyard maintenance. (H.4(c))

Inspection Report# : 2011003 *(pdf)*

Mitigating Systems

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER CONTROL OF TRANSIENT COMBUSTIBLE MATERIAL
The inspectors identified a NCV of Salem Operating License condition 2.C.5, that requires PSEG implement all provisions of the Fire Protection Program as described in the Updated Final Safety Analysis Report (UFSAR). Specifically, PSEG stored a rod drive motor generator (MG) set in a CCZ without an engineering evaluation that assessed risk and established compensatory measures. This finding was determined to be of very low safety significance (Green). This issue was entered into PSEG's CAP as notification 20509419. PSEG's immediate corrective actions were to issue a valid TCP and remove the transient combustibles from the CCZ within the next three days.

PSEG procedure MA-AA-716-010, "Maintenance Planning Process", required that TCPs necessary to complete work be identified by maintenance planning and procedure FP-AA-011, "Control of Transient Combustible Material", required a TCP for transient combustibles be staged in a CCZ. The inspectors determined that this was a performance deficiency because PSEG procedure FP-AA-011 stated that transient combustible material was prohibited in a CCZ when not constantly attended or approved by a TCP. This finding was more than minor because it is associated with the external factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the identified transient combustibles were located in a CCZ that was required to limit challenges to physical separation afforded by steel floor hatches above the CCZ. Using IMC 0609, Appendix F, "Fire Protection SDP", the inspectors determined that this issue involved the finding category, "Fire Prevention and Administrative Controls". Referencing IMC 0609, Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements", the inspectors assigned a low degradation rating to the issues involving the failure to comply with PSEG's transient combustible program. The inspectors' conclusions were based on the fact that none of the items found in the combustible free zone could be considered transient combustibles of significance, as described in IMC 0609, Appendix F, Attachment 2. This attachment defined transient combustibles of significance as low flash point liquids (below 200°F) and self-igniting combustibles (oily rags). Because this item was assigned a "low degradation" rating this issue was of very low safety significance (Green) in accordance with IMC 0609, Appendix F, Task 1.3.1. This finding had a cross-cutting aspect in human performance in the area of work control, because PSEG personnel did not coordinate work activities consistent with nuclear safety. Specifically, work groups did not communicate, coordinate, and cooperate with each other during the replacement and removal of the 22 rod drive MG set in order to minimize fire risk and comply with the plant operating license. (H.3(b))

Inspection Report# : 2011003 *(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 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.

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Last modified : May 29, 2012