Salem 1
4Q/2010 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
13 Turbine Driven Auxiliary Feedwater Pump Trip Mechanism
A self-revealing NCV of Appendix B, Criterion V, “Instructions, Procedures, and Drawings”, was identified because of two unexpected trips of the turbine trip valve (1MS52) for the 13 turbine driven auxiliary feedwater (TDAFW) pump. Specifically, adjustments made to the overspeed linkage for the 13 TDAFW pump using a threaded rod, which was installed on the head lever, were not prescribed by documented procedures or drawings. These adjustments led to the increased sensitivity of the trip mechanism that resulted in the two unexpected trips. The issue was entered into the CAP as notification 20469586. PSEGs immediate corrective action was to remove the threaded rod from the 13 TDAFW head lever. An extent of condition inspection on the 23 TDAFW pump resulted in the removal of a threaded rod from the 23 TDAFW pump head lever.

The trips of the 1MS52 valve and repairs to the overspeed trip mechanism resulted in 41 hours of unavailability of the 13 TDAFW pump. In accordance with NRC IMC 0609, Attachment 4, the inspectors performed a Phase 1 SDP screening and determined the finding was of very low safety significance (Green) 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. This finding had a cross-cutting aspect in the area of human performance, resources, because PSEG did not ensure that complete accurate and up-to-date procedures and work packages were available and adequate to assure nuclear safety. Specifically, the procedure used to set the overspeed trip did not address adjustment of the threaded rod. (H.2(c)) (Section 1R12)

Inspection Report# : 2010005 *(pdf)*

Significance: G 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 inspectors identified an NCV of very low safety significance for PSEG’s failure to perform auxiliary feedwater (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 (ASME) Code, 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: G 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 under IMC 0609, Attachment 4, Phase 1 screening, and was determined to require additional evaluation. The finding was subsequently evaluated in Phase 3 utilizing the Salem Standardized Plant Analysis Risk (SPAR) Model, Revision 3.51 with the Graphical Interface Module (GEM) 7, 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 personnel did not use conservative assumptions in decision making and adopt a requirement that the proposed action is safe in order to proceed. 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 appropriately reconsider validating the low temperature trip set point in accordance with the step originally included in the complex troubleshooter documentation. (H.1(b))

Inspection Report# : 2010002 *(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

Last modified : March 03, 2011