

Hope Creek 1 1Q/2013 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

A Technical Specification Surveillance Procedure for Remote Shutdown Panel Instrumentation was Inadequately Established and Implemented

A self-revealing NCV of very low safety significance of technical specification (TS) 6.8.1 and TS 3.3.7.4 resulted because PSEG did not properly perform the monthly channel check required by TS surveillance requirement (SR) 4.3.7.4.1 to demonstrate operability of the remote shutdown system instrumentation and controls. Specifically, operators that performed PSEG procedure HC.OP-ST.SV-0001 did not identify that the reactor core isolation cooling (RCIC) turbine bearing oil pressure low indication was inoperable and, as a result, PSEG did not take the action required within the TS allowed outage time. PSEG's immediate corrective actions included entering the issue into their corrective action program as notifications 20567832 and 20567743, replacing the failed relay and initiating an apparent cause evaluation (ACE).

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, when tested, the RCIC turbine bearing oil pressure low indication on the remote shutdown panel (RSP) was inoperable, and this condition went undetected for approximately one month. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its TS allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The NRC determined the finding had a cross-cutting aspect in the human performance area associated with work practices - procedural compliance, because PSEG did not ensure that personnel work practices support human performance, in that, a licensed reactor operator (RO) incorrectly documented HC.OP-ST.SV-0001 as satisfactory when it was not. Additionally, the senior reactor operator (SRO) that reviewed the test did not identify the procedure performance error. (H.4(b)) (Section 40A3.2)

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Follow Procedures to Ensure Cables Within the Scope of the Cable Monitoring Program Do Not Remain Submerged

The inspectors identified a Green finding for failure to follow the PSEG procedure (ER-AA-3003) for the cable monitoring and aging management of medium and low voltage cables at PSEG nuclear plants. Specifically, Hope Creek Generating Station did not perform adequate inspections to ensure cables were kept clear of water that could submerge cables, and to implement adequate corrective actions to eliminate the condition. The issue was entered into PSEG's corrective action program as notification 20588385.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and the associated cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, extended submergence of the non-safety related power cables supplying the offsite power transformers could lead to cable failure and cause an event that affects the availability, reliability, and capability of systems relying, in part, on power from these transformers. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, this finding was determined to be of very low safety significance because it did not represent an actual loss of system and/or function. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action component, because PSEG did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, the development of, and the frequency assigned to, cable vault inspections for non-safety related cables within the scope of 10 CFR 50.65 was insufficient to ensure that cables did not remain submerged.

Inspection Report# : [2012005](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Average Power Range Monitor Flow Unit Summers out of Tech Spec Tolerance

The inspectors identified an NCV of very low safety significance of TSs 3.3.1 and 6.8.1 because PSEG's written procedure (HC.IC-CC.SE-0032) was not adequately established and implemented for performing the weekly channel test and calibration of the flow biased APRMs that input into the simulated thermal power upscale RPS trip. Specifically, the procedure provided inadequate instructions for calculating total reactor recirculation drive flow while in single loop operation (SLO). PSEG's corrective actions included revision of the appropriate procedures and development of a schedule template (including required surveillances) for entry into and return from SLO. The violation was entered into the CAP as notification 20549760.

The performance deficiency was more than minor because it is associated with the procedure quality attribute of the Mitigating Systems and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, incorrect calibration of the APRM flow units resulted in the APRM flow biased setpoint being non-conservative and exceeding the associated TS limiting safety system setpoint (LSSS) allowable value for a period of time that was considered a condition prohibited by TS. The inspectors performed a Phase I screening of the finding using IMC 0609, Attachment 0609.04, Table 4a, Mitigating Systems cornerstone, and determined the issue was of very low safety significance (Green) because the finding 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. The finding had a cross-cutting aspect in the area of human performance, resources component, because PSEG did not ensure that a TS-required RPS calibration procedure was complete, accurate, and adequate to assure nuclear safety. Specifically, the formula provided in the APRM flow unit summer procedure that calculated the drive flow was incorrect. The formula provided in the procedure was for dual loop operation, not for SLO.

Inspection Report# : [2012003](#) (*pdf*)

Barrier Integrity

Significance:  Feb 15, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Conduct Maintenance on the CR HVAC System in Accordance with the Procedure

A self-revealing, Green NCV of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified because PSEG failed to perform maintenance on the A control room air conditioning train in accordance with the documented procedure steps. Specifically, PSEG personnel failed to follow the maintenance procedure as written by stopping and restarting the A control room ventilation train prior to completing the monitoring period and obtaining the tuning parameters required by the procedure. PSEG’s corrective actions included entering this issue into its corrective action program as notification 20575256, conducting an apparent cause investigation, restoring the system to an operable status, conducting a training needs analysis, and revising the maintenance procedure.

This finding is more than minor because it is associated with the human performance attribute of the barrier integrity cornerstone, and affected the cornerstone objective of maintaining the radiological barrier functionality of the control room. In accordance with IMC 0609.04, “Initial Characterization of Findings,” and Exhibit 3 of IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” issued June 19, 2012, the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency represents a degradation of only the radiological barrier function provided for the control room. This finding has a cross-cutting aspect in the area of human performance, work control, because PSEG did not appropriately control work activities by incorporating actions to address the need for work groups to communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance. Specifically, maintenance personnel did not communicate to operations personnel that the maintenance activity was not completed or that the A control room ventilation should not be stopped and restarted. (H.3(b)) (Section 4OA2.1.c (1))

Inspection Report# : [2013007](#) (*pdf*)

Significance:  Feb 15, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Timely Corrective Action for an Identified Design Deficiency with the CR HVAC System

The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” because PSEG failed to promptly correct a design deficiency in the control room chilled water circulating low flow pump trip logic. Specifically, PSEG failed to take timely action to develop and implement a modification to add a 10-second time delay to the pump trip logic. PSEG’s corrective actions included entering this issue into their corrective action program as notification 20567269, conducting an apparent cause investigation, and developing and implementing design change packages to modify the low flow control room air conditioning chilled water circulating pump trip logic.

This finding is more than minor because it is associated with the systems, structures, and components (SSC) and barrier performance attribute of the barrier integrity cornerstone, and affected the cornerstone objective of maintaining the radiological barrier functionality of the control room. In accordance with IMC 0609.04, “Initial Characterization of Findings,” and Exhibit 3 of IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” issued June 19, 2012, the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency represents a degradation of only the radiological barrier function provided for the control room. This finding does not have a cross-cutting aspect associated with it because, although the performance

deficiency occurred within the last three years, the performance characteristic associated with the untimely corrective action for this deficiency is not indicative of PSEG's current performance. PSEG demonstrated improved performance in response to trips of the A control room ventilation in June and July 2012 caused by chilled water pump low flow by taking timely corrective action to develop and implement a design change package for the modification to the low flow trip logic that had been identified in 2011. PSEG also identified an additional deficiency in the low flow trip logic and took timely action to correct it in mid-2012. Additionally, since PSEG identified that a modification to the low flow pump trip logic was necessary, PSEG has implemented a new station process in the fall of 2012, ER-AA-2001-1001, "Evaluation of Equipment Reliability Strategies," to evaluate the timeliness, effectiveness, and mitigating actions of proposed strategies developed for equipment reliability based on risk significance. Based on demonstrated improved performance in recent months as well as this new station process, which would have increased the priority and accelerated the implementation of these modifications, it is unlikely that this performance deficiency would occur again under similar circumstances. (Section 40A2.1.c(2))

Inspection Report# : [2013007](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Preconditioning of the Reactor Building to Torus Vacuum Relief Valves

The inspectors identified a NCV of very low safety significance of 10 CFR 50, Appendix B, Criterion XI, "Test Control," because PSEG conducted unacceptable preconditioning of the reactor building to torus vacuum relief valve. Specifically, PSEG's surveillance test procedure for these valves cycled the valve (H1GS-1GSPSV-5032) prior to recording the as-found opening setpoint required to meet Technical Specification (TS) Surveillance Requirement (SR) 4.6.4.2.b.2.a. PSEG's immediate corrective actions included revising the surveillance test procedure to record the as-found setpoint before cycling the valve manually. The violation was entered into the CAP as notification 20554080.

The performance deficiency was more than minor because it was associated with the procedure quality attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective of providing reasonable assurance that physical design barriers (containment) protect the public from radionuclide releases caused by accidents or events. Specifically, preconditioning of the reactor building to torus vacuum relief opening setpoint could mask its actual as-found condition and result in an inability to verify its operability and potentially make it difficult to determine whether the vacuum breaker would perform its intended safety function during an event. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Initial Screening and Characterization of Findings," and determined the finding was of very low safety significance (Green) because it was not a degradation of the radiological barrier function provided for the control room, auxiliary building, spent fuel pool, or standby gas treatment system, did not represent a degradation of the barrier function of the control room against smoke or toxic atmosphere, did not represent an actual open pathway in the physical integrity of reactor containment and heat removal components, and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The finding had a cross-cutting aspect in the area of problem identification and resolution, corrective action component, because PSEG did not thoroughly evaluate a prior problem such that the problem resolution addressed the extent of condition. Specifically, PSEG's extent of condition for notification 20370021, Potential Preconditioning BJHV-F004, did not go beyond operations' procedures and review maintenance procedures for unacceptable preconditioning. Therefore, PSEG did not identify the unacceptable preconditioning of the reactor building to torus vacuum relief valve opening setpoint because the surveillance test was in a maintenance procedure.

Inspection Report# : [2012003](#) (*pdf*)

Emergency Preparedness

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

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