

Hope Creek 1

1Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADVERTENT FEEDWATER INJECTION THROUGH THE HIGH PRESSURE COOLANT INJECTION SYSTEM DUE TO AN INADEQUATE TEST PROCEDURE

A self-revealing, non-cited violation of Technical Specification 6.8.1, "Procedures and Programs," was identified because, during performance of post-modification testing for the high pressure coolant injection (HPCI) feedwater injection valve, PSEG inadvertently injected feedwater into the reactor vessel through the HPCI and core spray systems. Specifically, PSEG did not ensure that the post-modification test procedure established a system configuration appropriate for the plant's operating condition. This resulted in an unanticipated reactor pressure and power transient. PSEG's corrective actions included revising the test procedure and re-performing the test.

The finding is more than minor because it is associated with the procedure quality attribute of the Initiating Events cornerstone, and it affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, an inadequate procedure resulted in an injection of feedwater through the HPCI core spray injection valve, which caused a pressure and power transient. The finding screened as Green (very low safety significance) because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding has a cross-cutting aspect in the area of human performance because PSEG did not define and effectively communicate expectations regarding procedural compliance, and PSEG personnel did not follow procedures. Specifically, PSEG did not adequately implement the new procedure review process defined by PSEG procedure AD-AA-102-1001, "Station Qualified Reviewer's Guide," and, as a result, did not identify the adverse impact of the sequence of valve operations specified by the test procedure. (H.4(b))

Inspection Report# : [2008004](#) (*pdf*)

Mitigating Systems

Significance:  Jan 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS FOR SUSCEPTIBILITY OF AIR ACCUMULATION IN THE A CONTROL AREA CHILL WATER SYSTEM

A self-revealing Green NCV of 10 CFR 50, Appendix B, Criteria XVI, "Corrective Actions," was identified for PSEG's failure to implement corrective actions to address an identified condition adverse to quality which resulted in multiple trips of the 'A' Control Area Chilled Water (CACW) pump. In December 2008, the 'A' CACW pump tripped due to loss of suction pressure due to air accumulation. The 'A' CACW pump has had historical issues with air accumulation resulting in pump trips resulting in a loss of the 'A' train of control room ventilation. In 2008, this pump tripped in February following maintenance, in July, and again in December. After each trip a significant amount of air was vented from the system. PSEG's apparent cause evaluation of the July 2008 trip appropriately identified that the trip was due to air accumulation while the system was in a standby configuration. The evaluation also identified that PSEG did not have a program to monitor for air accumulation as it did for other susceptible systems. However, effective corrective actions were not developed to address the susceptibility, the condition adverse to

quality, and as a result the pump tripped again in December 2008. Subsequently, PSEG developed corrective actions which included a periodic venting of the system and proposed modifications to add additional vents to the system.

This finding is more than minor because it affects the equipment performance attribute of the Mitigating Systems Cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 'A' train of Control Room Ventilation's reliability and availability were adversely impacted. This finding was determined to be of very low safety significance because the system was not unavailable for greater than its allowed TS outage time. The finding has a cross-cutting aspect in the area of problem identification & resolution (PI&R) and the aspect of problem evaluation (P.I.C) because PSEG did not thoroughly evaluate problems such that resolutions address causes and extent of conditions as necessary. Specifically, appropriate corrective actions were not developed to address system susceptibility to air accumulation, an identified condition adverse to quality.

Inspection Report# : [2009006](#) (pdf)

Significance:  Jan 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

NON-CONSERVATIVE EMERGENCY DIESEL GENERATOR TEST ACCEPTANCE CRITERIA

The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for PSEG's failure to ensure that emergency diesel generator (EDG) surveillance test (ST) procedures had appropriate acceptance criteria that incorporated the limits from applicable design documents. Specifically, PSEG did not provide EDG ST acceptance criteria associated with the differential pressure (D/P) across the EDG lube oil strainers which would ensure the ability of the EDGs to provide their safety function for the duration of its designed 24-hour mission time when the procedure was changed in 2002. As a result, from October 2008 to January 2009, the 'B' EDG was declared operable when, in fact, operability was indeterminate. PSEG's corrective actions included declaring the 'B' EDG inoperable, replacing the EDG lube oil strainer, revising the EDG ST procedures, and performing an extent of condition review.

The finding is more than minor because the performance deficiency is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems (EDGs) that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance because it represented the loss of the safety function of a single train for less than the Technical Specification allowed outage time. This finding was not assigned a cross-cutting aspect because the underlying cause was not indicative of current performance.

Inspection Report# : [2009006](#) (pdf)

Significance:  Jan 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES CONTRIBUTES TO EMERGENCY DIESEL GENERATOR INOPERABILITY

The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for PSEG's failure to adequately implement procedure requirements related to the maintenance and operation of the emergency diesel generators (EDGs). Specifically, between February 2008 and January 2009, operators repeatedly documented that the 'B' EDG LO strainer D/P was greater than 7 psid; however, they did not initiate a new notification (NOTF) as required by PSEG procedure HC.OP-ST-KJ-0002, "Emergency Diesel Generator 1BG400 Operability Test – Monthly." As a result, an out of specification system parameter was not re-screened for operability following a substantive change in this parameter resulting in the 'B' EDG being declared inoperable. PSEG's corrective actions included replacing the EDG lube oil strainer, revising procedures, and performing an extent of condition review.

The finding is more than minor because the performance deficiency is associated with the human performance

attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems (EDGs) that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance based on a Phase 3 SDP evaluation based on a bounding case analysis considering the period of unavailability, a conservative estimate of time to failure, and operator recovery credit. The finding has a cross-cutting aspect in the area of Human Performance and the aspect of work practices, procedural compliance, in that PSEG personnel are to follow procedures [H.2.(b)]. Specifically, PSEG personnel did not follow procedure HC.OP-ST-KJ-0002, and write a NOTF each time EDG lube oil strainer D/P was greater than 7 psid.

Inspection Report# : [2009006](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS FOR TRAVELING WATER SCREEN SUPPORT STRUCTURE

The inspectors identified a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, for inadequate corrective actions to address previously identified corrosion of service water traveling screen seismic class 1 support structures. The actions were insufficient to address the corrosion on the D traveling water screen support structure, such that a seismic support I-beam was determined to be inoperable in May 2008. PSEG's corrective actions included replacing corroded I-beams and inspecting other support structure components.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone, and it affected the cornerstone objective of ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the corrective actions did not assure operability of a seismic support for the D service water traveling water screen. The inspectors determined that the finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of problem identification and resolution because PSEG did not take appropriate corrective actions to address safety issues in a timely manner commensurate with their safety significance and complexity (P.1.(d)). Specifically, PSEG did not take adequate corrective actions to ensure that the operability of the degraded D TWS structural support steel was maintained.

Inspection Report# : [2008003](#) (*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: SL-IV Dec 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

UNTIMELY LICENSEE EVENT REPORT FOR A LOSS OF SAFETY FUNCTION OF THE CONTROL ROOM EMERGENCY FILTRATION SYSTEM

The inspectors identified a non-cited, Severity Level IV violation of 10 CFR 50.73(a)(1) for a failure to submit a licensee event report (LER) within 60 days after the discovery of an event requiring a report. On April 22, 2008, PSEG determined that both trains of the control room emergency filtration (CREF) system were inoperable, which is reportable as a loss of safety function of a system that is designed to mitigate the consequences of an accident. Additionally, operators entered Technical Specification 3.0.3 and commenced a plant shutdown, which is reportable as a condition prohibited by Technical Specifications. PSEG did not submit an LER for this event until October 17, 2008. PSEG's corrective actions included revising the applicable procedure for assessing whether an LER is required.

Traditional enforcement applies because a failure to report an event in a timely manner has the potential to impact the NRC's ability to perform its regulatory function. This violation was determined to be a Severity Level IV violation consistent with Section IV.A.3 and Supplement I.D of the NRC Enforcement Policy. The finding has a cross-cutting aspect in the area of problem identification and resolution, because PSEG did not properly evaluate a condition adverse to quality for reportability. Specifically, PSEG did not correctly evaluate the reportability of both trains of CREF being inoperable. As a result, PSEG failed to submit an LER in a timely manner. (P.1(c))

Inspection Report# : [2008005](#) (*pdf*)

Last modified : May 28, 2009