Hope Creek 1
4Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: FIN Finding
INADEQUATE DESIGN CONTROL AND MAINTENANCE RESULTS IN UNRELIABLE RFPT OPERATION
An inadequate design change and incorrect calibration of an oil control switch reduced the reliability of the reactor feedwater pumps, such that a second pump did not remain in operation following the September 19, 2003 electrical transient. The reactor automatically scrammed on the resulting low reactor level. A self-revealing finding was identified, which did not involve a violation of regulatory requirements.

This finding was more than minor, because it affected the equipment performance attribute of the initiating events cornerstone. The finding is of very low safety significance, because mitigation systems were available and operators could have recovered the unavailable equipment.
Inspection Report# : 2003006*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CORRECTLY TRANSLATE DESIGN BASIS FOR SAFETY RELIEVE VALVE LEAKAGE LIMITS INTO PROCEDURE REQUIREMENTS
The inspectors identified that incorrect engineering analyses enabled an operating procedure to contain incorrect, non-conservative limits for shutting down the reactor when excessive safety relief valve (SRV) leakage exists. The finding was a non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control.

This finding was greater than minor, because it affected the initiating events cornerstone attribute of procedure adequacy. The inaccurate engineering analyses could have resulted in PSEG operating an SRV that could have opened prior to its setpoint being reached, causing a reactor pressure transient. The finding was of very low safety significance, because it did not increase the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment function, and did not increase the likelihood of a fire or internal/external flood.
Inspection Report# : 2003006*(pdf)*

Significance: G Dec 12, 2003
Identified By: NRC
Item Type: FIN Finding
ELECTRO-HYDRAULIC CONTROL OIL LEAK RESULTS IN MANUAL SCRAM
PSEG failed to promptly evaluate and correct deficiencies associated with the No. 4 combined intermediate valve (CIV) actuator resulting in an operational transient (manual reactor scram).

This self-revealing finding did not repersent a violation of NRC regulatory requirements, in that the performance deficiencies occurred on a nonsafety-related system. The finding is greater then minor because it had an actual impact on plant stability as it caused a manual reactor scram. The finding is of very low safety significance (Green) because, although it caused a reactor scram it did not contribute to a primary or secondary system loss of coolant accident initiator, did not contribute to a loss of mitigation equipment functions, and did not increase the likehood of a fire or internal/external flood.
Inspection Report# : 2003007*(pdf)*

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PSEG OPERATORS AND ENGINEERS FAILED TO PROMPTLY IDENTIFY AND INTIATE ACTIONS TO INVESTIGATE A MINOR POWER, PRESSURE, AND LEVEL EXCURSION
During a plant shutdown on March 17, PSEG operators and engineers did not promptly identify and initiate actions to evaluate a reactor pressure control deficiency, which had caused a small power, pressure, and level excursion. This deficiency subsequently resulted in a larger operational transient.

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Actions, for this performance deficiency. This self-revealing finding was considered to be more than minor, because it resulted in a perturbation in plant stability by causing a power transient. The inspectors determined that the finding was of very low safety significance, because although it caused a transient, it did not increase the likelihood of a primary or secondary system loss of coolant accident (LOCA) initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment function, and did not increase the likelihood of a fire or internal/external flood.
Inspection Report# : 2003003*(pdf)*

Mitigating Systems

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: FIN Finding
INEFFECTIVE IDENTIFICATION OF FEEDWATER SETDOWN SETPOINT FUNCTION
The inspectors identified a finding on a feedwater system workaround condition regarding the digital feedwater control system setdown function but one which did not involve a violation of regulatory requirements.

This finding was greater than minor, because it affected the design control attribute of the mitigating systems cornerstone. This finding is of very low risk significance, because it is a design deficiency confirmed not to result in loss of function. While the setdown setpoint function has not likely operated correctly since the system was installed, there has not been a loss of feedwater function due to this problem, and operator training and procedures provide for operating RFPs in manual mode where the setdown function is not used.
Inspection Report# : 2003006*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC

Item Type: FIN Finding
INEFFECTIVE RESOLUTION OF FEEDWATER SYSTEM WORKAROUND CONDITION
The inspectors determined a self-revealing finding regarding ineffective corrective actions to address an inadvertent feedwater heater isolation workaround condition that occurred after scrams from full power. The finding did not involve a violation of regulatory requirements.

This finding was greater than minor, because feedwater system is a mitigating system and the finding is associated with the design control attribute of the mitigating systems cornerstone. The finding is of very low risk significance, because it is a design deficiency confirmed not to result in loss of function. While manual action was required it has not resulted in loss of feedwater flow.
Inspection Report# : 2003006*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER REACTIVATION OF LIMITED SENIOR REACTOR OPERATOR
The inspectors identified a non-cited violation when PSEG did not properly reactivate three limited senior reactor operator (LSRO) licenses prior to their involvement in refueling activities during the April 2003 refueling outage. This resulted in these individuals supervising fuel handling operations without being correctly verified as proficient to do so.

This finding was greater than minor, because it resulted in LSROs performing fuel movement while not in compliance with their license conditions regarding reactivation. This finding is of very low safety significance, because it is administrative in nature and the operators were otherwise current in requalification.
Inspection Report# : 2003006*(pdf)*

Significance: G Dec 12, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
RESIDUAL HEAT REMOVAL SYSTEM MINIMUM FLOW VALVE CYCLING
The team identified a non-citied violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Actions, for PSEG's failure to promptly address conditions adverse to quality concerning RHR minimum flow valve undesired cycling during RHR pump starts and erroneous RHR trip unit signals.

The finding was more than minor because it potentially affected the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events (i.e., loss of coolant accidents). The finding was associated with the attributes of equipment performance (RHR system availability and reliability). The finding was of very low safety significance (Green), because the problems did not result in a loss of the RHR system function.
Inspection Report# : 2003007*(pdf)*

Significance: G Dec 12, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE CORRECTIVE ACTIONS ON THE B CONTROL AREA ROOM CHILLER
PSEG failed to adequately implement identified corrective actions for a B control area chiller problem which resulted in a subsequent chiller trip when operators placed it in service.

The team identifed a non-cited violation of 10 CFR Part 50, Appendix B Criterion XVI, Corrective Actions, for this performance deficiency. This self-revealing finding was considered to be more than minor because it affected the Mitigating System cornerstone and was associated with the availability and reliability of the control area chiller. The finding was reviewed using a Phase 3 analysis and determined to be of very low risk significance based on reasonable assumptions which indicated the predicted increase in the core damage frequency (CDF) was negligible.
Inspection Report# : 2003007*(pdf)*

Significance: G Sep 27, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN COMPENSATORY FIRE WATCH WITH C EMERGENCY DIESEL GENERATOR CO2 FIRE PROTECTION SYSTEM AUTOMATIC START FUNCTION INOPERABLE
The inspectors determined that ineffective work control regarding the automatic fire suppression system (carbon dioxide-CO2) for the C EDG had resulted in the CO2 system being unnecessarily out of service for weeks, compensatory measures being terminated prior to the CO2 system's return to service, and control of transient combustibles being inadequate. These performance issues are violations of Hope Creek Technical Specification 6.8.1 to correctly implement fire protection program procedures. Additionally, these performance issues have a problem identification aspect, because PSEG operators did not initiate a corrective action notification when initial problems with the C EDG fire impairment were identified.

This finding is more than minor, because it adversely affects the mitigating system cornerstone attribute to maintain the availability of the C EDG room fire protection equipment. The finding is of very low risk significance, because the three hour fire barriers separating the B and D EDGs from the C EDG room were not affected and remained capable of ensuring the B and D EDGs were available for plant safe shutdown in the event of a fire in the C EDG room.
Inspection Report# : 2003005*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
NON-CONFORMING LOW PRESSURE COOLANT INJECTION SUCTION RELIEF VALVE
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Actions, for engineering's failure to promptly identify and take actions to address a condition adverse to quality concerning a non-conforming low pressure coolant injection (LPCI) suction relief valve. Engineering did not thoroughly evaluate the extent of condition relative to previous relief valve issues and did not promptly evaluate the C LPCI relief valve issue once identified.

The finding was more than minor because engineering failed to adequately evaluate a degraded condition with the potential to impact LPCI equipment performance and adversely affect LPCI availability and reliability. The issue was considered to be of very low safety significance because C LPCI remained operable and there was no loss of safety function.
Inspection Report# : 2003004*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PERFORMANCE MONITORING TESTING OF THE SAFETY AUXILIARIES COOLING SYSTEM HEAT

EXCHANGER DOES NOT PROVIDE ACCEPTANCE LIMITS
The inspectors identified that performance monitoring testing of heat exchangers in the safety auxiliaries cooling system (SACS) was inadequate, in that the procedure did not provide acceptance limits.

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control, for failure to develop and incorporate acceptance limits to assure that testing demonstrates that systems perform satisfactorily when in service. This finding was more than minor because it is a procedure testing quality issue that affects the mitigating systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events. Inadequate test controls could allow a degraded heat exchanger to go undetected. This finding is of very low safety significance because the SACS system remained operable and there was no actual loss of SACS safety system function and performance as verified by previously completed visual inspections of the SACS heat exchangers.
Inspection Report# : 2003004*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ENSURE EDG DESIGN SPECIFICATIONS WERE TRANSLATED INTO PLANT DESIGN DOCUMENTATION
The inspectors identified a green NCV for failure to ensure that EDG design specifications used in April 2003 to reassemble the B EDG were translated into design documentation and available on June 17 for troubleshooting of the A EDG intercooler pump leaking seal condition. Additionally, PSEG did not ensure a deviation from design specifications was controlled on June 17 when an on-the-spot procedure change accepted the excessive axial thrust without identifying this deviated from the design specification.
Inspection Report# : 2003004*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ASSURE THAT THE CAUSE OF SIGNIFICANT CONDITION ADVERSE TO QUALITY BE IDENTIFIED AND CORRECTIVE ACTIONS TAKEN
The inspectors identified that PSEG's failure to ensure that the cause of a significant condition adverse to quality was identified and corrected to preclude recurrence regarding use of an incorrect maintenance procedure to replace the A EDG intercooler pump seal.

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, for failure to assure that the cause of significant condition adverse to quality be identified and corrective actions taken to preclude recurrence regarding the use of the wrong procedure to disassemble and replace the EDG A intercooler pump seal on June 15. The finding was more than minor because, if left uncorrected, working safety related components to the incorrect maintenance procedure could become a more significant safety concern due to unreliable component performance. The issue affects the mitigating system cornerstone. However, the inspectors determined that the finding was of very low safety significance (Green) using the significance determination process (SDP) Phase 1 screen worksheet for mitigating systems because there was no actual loss of the A EDG safety function due to this finding.
Inspection Report# : 2003004*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY FOLLOW PROCEDURAL GUIDANCE ASSOCIATED WITH POST-SCRAM WATER LEVEL CONTROL
The inspectors identified a non-cited violation of Technical Specification (TS) 6.8.1 for operations' failure to adequately follow procedural guidance associated with post-scram water level control. In particular, a control room supervisor (CRS) issued an order that conflicted with the emergency operating procedure (EOP) guidance.

The inspectors determined that this finding was more than minor because operators failing to follow EOP procedures, if left uncorrected, would become a more significant safety concern. Specifically, in a symptoms-based approach to combating emergencies, operators must be relied upon to follow EOP guidance and not deviate without adequate justification. The inspectors determined that the finding was of very low safety significance because there was no actual loss of a TS required train, non-TS risk-significant train, or system safety function due to the low water level condition.
Inspection Report# : 2003004*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE TESTING TO COMPLETELY VERIFY THE EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP TRANSFER FEATURES
The inspectors identified a non-cited violation of TS 4.8.1.1.2.h.12 because of inadequate testing to completely verify the EDG fuel oil transfer pump (FOTP) transfer features. PSEG testing did not verify FOTP transfer capability from each fuel oil storage tank as specified in the TS.

This issue was more than minor because a TS required test was not adequately performed (Question 1.c. in Appendix E of NRC Manual Chapter 0612). The inspectors determined that the finding was of very low safety significance because there was no actual loss of EDG safety system function as subsequent testing verified FOTP design functions.
Inspection Report# : 2003004*(pdf)*

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: FIN Finding
PSEG FAILED TO PROMPTLY FOLLOW THROUGH ON CORRECTIVE ACTIONS TO ENSURE ADEQUATE STROKING OF ALL APPLICABLE ADHR VALVES
The inspectors identified that PSEG did not follow through on corrective actions regarding adequate stroking of all applicable alternate decay heat removal (ADHR) valves prior to refueling outage 10 (RF10) in October 2001. In addition, inspector follow-up was needed to preclude a similar occurrence in RF11, planned for April 2003.

The finding was more than minor, because it potentially affected the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events (i.e., loss of normal decay heat removal). The finding was associated with the attribute of equipment performance (availability and reliability of ADHR). The issue was considered to be of very low safety significance based on PSEG's subsequent demonstration of no loss of safety function (ADHR).
Inspection Report# : 2003003*(pdf)*

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PSEG ENGINEERING FAILED TO PROMPTLY IDENTIFY AND TAKE ACTIONS TO ADDRESS A

CONDITION ADVERSE TO QUALITY CONCERNING DEGRADED HPCI SYSTEM LO PRESSURES
The high pressure coolant injection (HPCI) system lubricating oil (LO) pressures were degraded in multiple tests but were not corrected. The inspectors noted that the auxiliary and shaft-driven LO pump discharge pressures were both outside of the required range during numerous surveillance testing; however, engineering did not initiate any corrective actions to further evaluate or correct the condition.

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Actions, for PSEG engineering's failure to promptly identify and take actions to address a condition adverse to quality. The finding was more than minor because PSEG engineering failed to adequately evaluate a degraded condition with the potential to impact HPCI equipment performance and adversely affect HPCI availability and reliability. The issue was considered to be of very low safety significance, because HPCI remained operable.
Inspection Report# : 2003003*(pdf)*

Significance: G Dec 16, 2002
Identified By: NRC
Item Type: AV Apparent Violation
INADEQUATE EMERGENCY DIESEL GENERATOR LOCKOUT RELAY TESTING FREQUENCY
NRC Team identified an apparent violation of Technical Specification (TS) 4.8.1.1.2.h.14 (a, b, and c) because of inadequate testing to verify that the emergency diesel generator (EDG) features associated with the 86R, 86B, and 86F lockout relays prevent EDG starting only when required. The licensee failed, in several cases, to test that the actual lockout features (i.e., lockout relay inputs) tripped the specific lockout relays as specified in the TS.

This issue was more than minor because a TS required test was not performed within the required periodicity (Question 1.C in Appendix E of NRC Manual Chapter 0612). There was no actual loss of the safety system function, and subsequent testing indicated that the lockout features would have been able to accomplish their design safety functions. Enforcement action for this apparent violation will be handled by separate correspondence at a later date.
Inspection Report# : 2003002*(pdf)*

Barrier Integrity

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PSEG FAILED TO PROPERLY PLAN A WORK ACTIVITY ASSOCIATED WITH SCHEDULED MAINTENANCE ON THE A CRVS
PSEG did not properly plan scheduled maintenance on the A control room ventilation system (CRVS), which resulted in the inoperability of both the A and B control room emergency filtration (CREF) subsystems. Work planning did not identify that a ductwork hatch affected both trains prior to its removal.

The inspectors identified a non-cited violation of TS 3.7.2, Control Room Emergency Filtration System, for this performance deficiency. This self-revealing finding was considered to be more than minor because it affected the Barrier Integrity cornerstone and was associated with the configuration control attribute as it impacted the control room envelope. The inspectors determined that the finding was of very low safety significance because: (1) the likelihood of an initiating event that would challenge the control room barrier function was low; (2) the B CRVS and CREF subsystem was recoverable; (3) full faced, self-contained breathing apparatus and protective clothing were available for

use by control room operators; and (4) the duration that the condition existed was very short, approximately 10 minutes.
Inspection Report# : 2003003*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : March 02, 2004