

## Hope Creek 1

### Initiating Events



**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **PSEG NUCLEAR DID NOT IDENTIFY AND ADMINISTRATIVELY CONTROL TRANSIENT COMBUSTIBLES MATERIALS IN THE HPCI PUMP AND TURBINE ROOM**

The inspectors identified a non-cited violation for the failure to comply with the transient combustible control requirements in the HPCI pump room. The safety significance of this finding was very low because of the availability of safe shutdown capabilities that were physically independent of the fire area, area wide smoke detection, and effective fire brigade performance. This finding represented a non-cited violation for failure to identify and administratively control transient combustibles materials in the HPCI room in accordance with PSEG Nuclear procedure NC.NA-AP.ZZ-0025, Operational Fire Protection Program.

Inspection Report# : [2001011\(pdf\)](#)



**Significance:** Dec 29, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

#### **PSEG NUCLEAR DID NOT TAKE ADEQUATE CORRECTIVE ACTION TAKEN TO PRECLUDE REPETITION OF AN SRV INLET FLANGE LEAK**

10CFR50, Appendix B, Criterion XVI, Corrective Action, requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. Contrary to the above, PSEG Nuclear did not take adequate corrective action taken to preclude repetition of an safety relief valve (SRV) inlet flange leak. PSEG Nuclear identified a D SRV inlet flange leak during the refueling outage hydrostatic test (notification 20082123); however, failed to identify and correct a similar condition on the other 13 SRVs.

Inspection Report# : [2001011\(pdf\)](#)



**Significance:** Nov 11, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

#### **FAILURE TO ESTABLISH ADEQUATE BLOCKING POINTS FOR THE WORK BEING PERFORMED**

Technical Specification 6.8.1 requires, in part, that written procedures shall be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33 requires, in part, that procedures be developed for equipment control (e.g., locking and tagging). PSEG Nuclear procedure SH.OP-AP.ZZ-0015, SAP/WCM Tagging Operations, requires, in part, that personnel ensure the adequacy of the blocking points for the work being performed. On September 30, 2001, plant operators established blocking points on the A feedwater heater string that were not adequate for the scheduled feedwater work resulting in a challenge to the offgas system.

Inspection Report# : [2001010\(pdf\)](#)



**Significance:** Nov 11, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

#### **OPERATORS FAILED TO ADEQUATELY CHECK A FEEDWATER HEATER DRAIN VALVE TAG RESULTING IN THE TAGGING OF THE WRONG DRAIN VALVE**

Technical Specification 6.8.1 requires, in part, that written procedures shall be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33 requires, in part, that procedures be developed for equipment control (e.g., locking and tagging). PSEG Nuclear procedure SH.OP-AP.ZZ-0015, SAP/WCM Tagging Operations, requires, in part, that operators check the component to be tagged by comparing installed field labels with the tag and the Tagging Working List. On November 4, 2001, plant operators failed to adequately check a feedwater (FW) heater drain valve tag resulting in the tagging of the wrong drain valve (operators tagged open the drain valve to the in-service 5C FW heater, vice the out-of-service 5B FW heater) and potentially impacted FW flow to the reactor vessel.

Inspection Report# : [2001010\(pdf\)](#)

## Mitigating Systems



**Significance:** Mar 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

### **PSEG NUCLEAR DID NOT ESTABLISH ADEQUATE CORRECTIVE ACTIONS TO ASSURE THAT A SW INTAKE AREA SILT ACCUMULATION ISSUE WAS PROMPTLY IDENTIFIED AND CORRECTED**

The inspectors identified a non-cited violation for ineffective corrective actions for malfunctions regarding standby SW pump performance due to intake silt accumulation, in that poor standby pump performance in a 2001 incident recurred in 2002. The safety significance of this finding was very low, because the redundant SW pump in the affected loop remained operable and capable of performing its safety function, given considerable operator action.

Inspection Report# : [2002002\(pdf\)](#)



**Significance:** Mar 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

### **PSEG NUCLEAR DID NOT INCORPORATE A CHANGE IN THE TS MINIMUM RIVER LEVEL REQUIREMENT INTO THE C SW PMP IST PROCEDURE**

The inspectors identified a non-cited violation for PSEG Nuclear's failure to incorporate a change in the Technical Specification (TS) minimum river level requirement into SW pump inservice testing (IST) procedures. The safety significance of this finding was very low because the level measured during the test was above the TS required minimum limit and the control room operators recorded river level every two hours.

Inspection Report# : [2002002\(pdf\)](#)



**Significance:** Mar 30, 2002

Identified By: Licensee

Item Type: NCV NonCited Violation

### **PSEG NUCLEAR FAILED TO MAINTAIN CONFIGURATION CONTROL OF THE B RHR MINIMUM FLOW MANUAL ISOLATION VALVE**

Technical Specification 6.8.1 requires that written procedures shall be established, implemented and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33 requires that procedures be developed for equipment control. PSEG Nuclear procedure NC.NA-OP.ZZ-0005, Station Operating Practices, requires that manually operated valves that do not have position indication in the control room and would render an ECCS inoperable shall be locked to prevent inadvertent or unauthorized valve operation. On March 20, 2002 plant operators found the B RHR minimum flow manual isolation valve, 1-BC-V032, unlocked and shut. The valve's required position is locked open. Based on an analysis of vendor information, operating experience feedback, emergency operating procedures, RHR design basis, and operating crew simulator response; PSEG Nuclear determined that B RHR remained capable of performing its design functions with BC-V032 closed. PSEG Nuclear entered this issue into their problem identification and corrective action system as notification 20094581.

Inspection Report# : [2002002\(pdf\)](#)



**Significance:** Mar 30, 2002

Identified By: Licensee

Item Type: NCV NonCited Violation

### **PSEG NUCLEAR FAILED TO IMPLEMENT AND MAINTAIN ALL PROVISIONS OF THE APPROVED FIRE PROTECTION PROGRAM**

Hope Creek Generating Station Facility Operating License Condition 2.C.7, requires PSEG Nuclear to implement and maintain all provisions of the approved Fire Protection Program as described in the UFSAR. USFAR Figure 9.5-13 and P&ID M-00, sheet 2, note 34, indicate that the motor driven fire pump suction strainer, TS112, was a temporary start-up strainer which was replaced by a removable spool piece. Contrary to this requirement, PSEG Nuclear identified that temporary start-up strainer was still installed. PSEG Nuclear entered this issue into their problem identification and corrective action system as notifications 20093648 and 20093714.

Inspection Report# : [2002002\(pdf\)](#)



**Significance:** Feb 09, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ESTABLISH ADEQUATE CORRECTIVE ACTIONS TO ASSURE DEGRADED CRANKCASE VACUUM CONDITION WAS PROMPTLY IDENTIFIED AND CORRECTED**

The inspectors identified that PSEG Nuclear's failed to establish adequate corrective actions to assure that a B emergency diesel generator degraded crankcase vacuum condition that existed on October 30, 2000, was promptly identified and corrected. The safety significance of this finding was very low, because PSEG Nuclear's resultant investigation and operability determination determined that the diesel engine was not experiencing excessive blowby and the engine did not exhibit any mechanical conditions that could generate the temperatures required to initiate a crankcase explosion.

Inspection Report# : [2001012\(pdf\)](#)**Significance:** Feb 09, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ESTABLISH ADEQUATE FME CONTROLS DURING B EDG MAINTENANCE CONDUCTED IN THE FALL 2001 REFUELING OUTAGE**

The inspectors identified that PSEG Nuclear failed to establish adequate foreign material exclusion controls during B emergency diesel generator (EDG) maintenance conducted in the Fall 2001 refueling outage (RF10). The safety significance of this finding was very low because PSEG Nuclear's resultant operability determination determined that the B EDG was operable and capable of performing its safety function.

Inspection Report# : [2001012\(pdf\)](#)**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**PSEG NUCLEAR DID NOT PROPERLY IMPLEMENT FIRE PROTECTION PROGRAM REQUIREMENTS FOR AN INOPERABLE FIRE DOOR**

The inspectors identified a non-cited violation for failure to properly implement fire protection program requirements for an inoperable fire door. Specifically, the fire door adjoining the D emergency diesel generator (EDG) room and electrical access area room 5339 was tied open without establishing the required fire protection compensatory measures. The safety significance of this finding was very low because of the availability of safe shutdown capabilities that were physically independent of the fire area, the availability of detection, automatic suppression capability, and the relative short duration of the condition. This finding represented a non-cited violation for failure to establish a daily fire watch within one hour in accordance with procedure HC.FP-AP.ZZ-0004, Actions For Inoperable Fire Protection.

Inspection Report# : [2001011\(pdf\)](#)**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**PSEG NUCLEAR DID NOT ESTABLISH AN ADEQUATE PROCEDURE TO CONTROL WATERTIGHT AND HIGH ENERGY LINE BREAK BARRIER DOORS IN HPCI AND RCIC ROOMS**

The inspectors identified a non-cited violation for the failure to establish an adequate procedure to control watertight and high energy line break barrier doors in the HPCI and RCIC rooms. The safety significance of this finding was very low because of the low frequency of HPCI/RCIC pipe breaks for the limited amount of steam piping in the rooms and the relative short duration of the condition. This finding represented a non-cited violation for failure to comply with Appendix B, Criterion V, Instructions, Procedures, and Drawings.

Inspection Report# : [2001011\(pdf\)](#)**Significance:** Dec 29, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**PSEG NUCLEAR IDENTIFIED THAT 3 OF THE 14 SAFETY SAFETY RELIEF VALVES EXPERIENCED SETPOINT DRIFT OUTSIDE OF THE TS 3.4.2.1 LIMIT**

Technical Specification (TS) 3.4.2.1 requires the safety valve function of at least 13 of the 14 safety relief valves (SRVs) with the lift setpoint within +/- 3 percent of the specified code safety valve function lift setting. Contrary to this requirement, PSEG Nuclear identified that 3 of the 14 SRVs experienced setpoint drift outside of the TS 3.4.2.1 limit.

Inspection Report# : [2001011\(pdf\)](#)



**Significance:** Dec 29, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**PSEG NUCLEAR FAILED TO PERFORM A POST MAINTENANCE TEST FOLLOWING MAINTENANCE THAT AFFECTED THE STROKE TIME OF TWO AIR-OPERATED RCIC STEAM DRAIN ISOLATION VALVES**

Technical Specification 6.8.1 requires, in part, that written procedures shall be established, implemented and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33 requires, in part, that procedures be developed for performing maintenance. PSEG Nuclear procedure NC.NA-TS.ZZ-0050, Maintenance Testing Program Matrix, specifies the minimum testing requirements commensurate with the type and extent of maintenance performed. PSEG Nuclear failed to perform a post maintenance testing following maintenance that affected the stroke time of two air-operated RCIC steam drain isolation valves.

Inspection Report# : [2001011\(pdf\)](#)



**Significance:** Nov 11, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO ESTABLISH ADEQUATE MEASURES TO PRECLUDE INSTALLATION OF A SAFETY RELIEF VALVE WITH AN INCORRECT RELIEF SETPOINT DURING REFUELING OUTAGE NO. 9.**

10CFR50, Appendix B, Criterion VIII, Identification and Control of Materials, Parts, and Components, requires that measures be established for the identification and control of parts and components. These identification and control measures shall be designed to prevent the use of incorrect or defective material, parts, and components. Contrary to the above, PSEG Nuclear did not establish adequate measures to preclude installation of a safety relief valve (SRV) with an incorrect relief setpoint during refueling outage No. 9. Although the SRV was installed with the incorrect setpoint (1108 psig vice 1130 psig), the as-found lift pressure (1115 psig) was within the TS 3.4.2.1 acceptance criteria for the 1130 psig setpoint pressure.

Inspection Report# : [2001010\(pdf\)](#)



**Significance:** Sep 30, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ESTABLISH ADEQUATE MEASURES TO IDENTIFY AND TRACE THE PART NUMBER TO THE PROPER RELIEF VALVE TO PREVENT USE OF AN INCORRECT RELIEF VALVE**

The inspectors identified that PSEG Nuclear did not establish adequate measures to identify and trace the part number to the B core spray suction relief valve to preclude installation of an unqualified relief valve. The safety significance of this finding was very low because the resultant investigation determined that the valve was fully qualified for use in the core spray system. This finding represented a non-cited violation for failure to comply with 10CFR50, Appendix B, Criterion VIII, Identification and Control of Materials, Parts, and Components, requirements.

Inspection Report# : [2001009\(pdf\)](#)



**Significance:** Jun 30, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO ADEQUATELY IDENTIFY AND CONTROL A SACS RELIEF VALVE RESULTING IN THE USE OF AN INCORRECT COMPONENT THAT ADVERSELY IMPACTED SACS SYSTEM OPERABILITY**

PSEG Nuclear identified that they had failed to adequately identify and control a safety auxiliary cooling system (SACS) relief valve replacement activity, resulting in the use of an incorrect component that adversely impacted SACS system operability. This finding was determined to be of very low safety significance (GREEN) based on the remaining mitigation capability, operator recovery of the SACS loop, and limited duration. This violation of Appendix B, Criteria VIII, was treated as a Non-Cited Violation.

Inspection Report# : [2001007\(pdf\)](#)



**Significance:** May 11, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROMPTLY IDENTIFY AND CORRECT A DEGRADED CONDITION ON THE D EMERGENCY DIESEL GENERATOR**

The inspectors identified a non-cited violation for inadequate corrective actions for PSEG Nuclear's inability to promptly identify a degraded condition on the D emergency diesel generator (EDG). The safety significance of this finding was very low, based on the continued operability of the D EDG.

Inspection Report# : [2002004\(pdf\)](#)



**Significance:** May 11, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ADEQUATELY ASSESS AND MANAGE THE INCREASE IN RISK ASSOCIATED WITH PLANNED MAINTENANCE ON THE A EDG AND C SW PUMP**

The inspectors identified a non-cited violation for PSEG Nuclear's ineffective assessment and management of the increase in risk associated with planned maintenance on the A EDG and C service water (SW) pump. The safety significance of this finding was very low, because the components were not removed from service at the same time.

Inspection Report# : [2002004\(pdf\)](#)



**Significance:** May 11, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PERFORM ADEQUATE INSPECTIONS IN ACCORDANCE WITH PROCEDURES**

The inspectors identified a non-cited violation for PSEG Nuclear's failure to adequately perform post installation inspections on the high pressure coolant injection (HPCI) 250 volt DC battery. The safety significance of this finding was very low, because PSEG Nuclear was able to demonstrate that the HPCI battery remained operable in this circumstance.

Inspection Report# : [2002004\(pdf\)](#)



**Significance:** May 11, 2002

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO MAINTAIN SECONDARY CONTAINMENT INTEGRITY IN ACCORDANCE WITH TS 3.6.5.1**

Technical Specification 3.6.5.1 requires secondary containment integrity maintained. On April 30, an in-field SRO identified that a 1-inch SW emergency makeup line breached secondary containment. Operators determined that a tagged open SW vent valve in the control/diesel building provided an air leakage path to a SW emergency makeup line drain valve in the reactor building. Engineering determined that the leakage path would not have prevented the filtration, recirculation and ventilation system from performing its intended safety function. PSEG Nuclear entered this issue into their corrective action system as notification 20098464.

Inspection Report# : [2002004\(pdf\)](#)



**Significance:** Mar 31, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROVIDE A THREE-HOUR RATED FIRE BARRIER TO ENSURE APPENDIX R SEPARATION BETWEEN TWO SHUTDOWN TRAINS.**

The inspectors identified a fire damper configuration which did not provide a three-hour fire barrier between redundant shutdown equipment trains. A fire damper was installed in a gypsum board wall (both three-hour rated components), but PSEG Nuclear could not demonstrate that the installed damper/barrier configuration had been properly qualified as three-hour rated. The safety significance of this finding was very low because of the availability of detection, automatic suppression, and manual fire fighting capability. This finding represented a non-cited violation for failure to comply with the facility license regarding the fire protection program.

Inspection Report# : [2001004\(pdf\)](#)



**Significance:** Feb 10, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ERECT SCAFFOLDING IN ACCORDANCE WITH PROCEDURAL REQUIREMENTS**

The inspectors identified a non-cited violation for failure to erect scaffolds in accordance with procedural requirements. Two scaffolds were found attached to four instrument racks containing safety-related instruments. Additional loading to the instrument racks could impact the seismic qualification of those racks. The finding was of very low safety significance because the post-safe shutdown earthquake shutdown capability would not be affected.

Inspection Report# : [2001003\(pdf\)](#)

**Significance:** Jan 26, 2001

Identified By: NRC

Item Type: FIN Finding

**SHUTDOWN OUTSIDE CONTROL ROOM PROCEDURE COULD NOT BE PERFORMED AS WRITTEN**

NRC Team identified a deficiency in the procedure for shutdown from outside the control room, which could have hampered the start of shutdown cooling to achieve cold shutdown. The procedure could not have been implemented as written because it did not provide instructions for securing the 'A' recirculation loop from outside of the control room. This finding was determined to be of very low safety significance (Green) because the procedure deficiency would not have prevented the operators from achieving cold shutdown with 72 hours.

Inspection Report# : [2001002\(pdf\)](#)Inspection Report# : [2002004\(pdf\)](#)**Significance:** Nov 11, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROPERLY IMPLEMENT FIRE PROTECTION PROGRAM REQUIREMENTS FOR INOPERABLE FIRE DOORS**

The inspectors identified a non-cited violation for failure to properly implement a procedural requirement governing the opening of more than one fire door in an area at a time. The safety significance of this finding was very low because of the availability of detection, low combustible loading in the area, and the relative short duration of the condition.

Inspection Report# : [2000010\(pdf\)](#)**Significance:** Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

**HIGH PRESSURE COOLANT INJECTION SYSTEM OUTAGE PLANNING SHORTCOMINGS**

NRC inspectors determined that PSEG Nuclear did not effectively manage the risk associated with a planned high pressure coolant injection system outage, in that the PSEG risk categorization was reduced by questionable qualitative evaluations and little was done to address the control of the work. The inspectors determined that this shortcoming was of very low safety significance (GREEN) based on the availability of the remaining emergency core cooling systems, the availability of the reactor core isolation cooling system, and the relatively short duration of the outage.

Inspection Report# : [2000007\(pdf\)](#)**Significance:** Sep 30, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATE CORRECTIVE ACTIONS FOLLOWING A RESIDUAL HEAT REMOVAL SYSTEM FUNCTIONAL FAILURE**

NRC inspectors identified a non-cited violation for inadequate corrective actions following a functional failure of a residual heat removal suppression pool cooling valve. The improper torque switch setting was corrected, but the failure was not evaluated for maintenance rule, extent of condition, or performance indicator purposes. This deficiency was of very low safety significance (GREEN) based on the continued operability of the redundant train.

Inspection Report# : [2000007\(pdf\)](#)**Significance:** Aug 25, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATE DESIGN INPUTS AND ASSUMPTIONS IN ENGINEERING CALCULATIONS**

The inspectors found that PSEG had failed to control the inputs and assumptions used in the calculations for determining motor operated valve (MOV) thermal overload (TOL) protection, the accuracy of the station service water (SSW) system ultrasonic flow meters, the loop accuracy of the safety auxiliaries cooling system (SACS) temperature instrumentation, and the leakage past the seat of two SACS isolation valves associated with the residual heat removal heat exchangers. Also, the inspectors found that PSEG had failed to provide adequate design review of the logic diagrams and P&ID drawings for the SSW and SACS systems. These failures to correctly provide adequate design inputs and assumptions in calculations and properly review design drawings were determined to be of very low risk significance. This conclusion was primarily based on the MOV TOL issue which was a programmatic problem with credible potential to impact safety and was more than isolated. While the sizing and the settings of the TOLs could impact the functionality of several SSW system MOVs, no immediate impact to the operability of the system was apparent due to compensating margins and testing. The examples noted above were considered to be a non-cited violation of 10CFR50, Appendix B, Criterion III, "Design Control", and were included in the licensee's corrective action program.

Inspection Report# : [2000009\(pdf\)](#)**Significance:** Aug 25, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO TEST AND CALIBRATE PLANT INSTRUMENTS**

The inspectors found that PSEG had missed their prescribed calibration of the ultrasonic flow meter instruments used during the station service water (SSW) pump in-service tests and the temperature transmitter/temperature switch for the safety auxiliaries cooling system (SACS) heat exchanger bypass isolation valve. These failures to test and calibrate these instruments as required to support testing and demonstrate their operational readiness were determined to be of very low risk significance. This conclusion was primarily based on the SSW flow meter issue which was a programmatic problem with credible potential to impact safety and was more than isolated. The operability of the A SSW pump was questioned during the inspection due, in part, to the operation of the SSW flow meters. However, this operability question was ultimately resolved after rezeroing the flow meters and achieving a satisfactory retest. The lack of testing and calibrating these instruments was a non-cited violation of 10CFR50, Appendix B, Criterion XI, "Test Control." The issues associated with this violation are in the licensee's corrective action program.

Inspection Report# : [2000009\(pdf\)](#)**Significance:** Aug 25, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATE REVIEWS AND CORRECTIVE ACTIONS TAKEN IN RESPONSE TO OPERATING EXPERIENCE INFORMATION**

The inspectors identified that PSEG missed two opportunities to question the use of the ultrasonic flow meters in the station service water (SSW) system through their operating experience program. The failure to provide adequate review of operating experience notifications was determined to be of very low risk significance. The examples suggested a programmatic problem concerning operating experience information with credible potential to impact safety and was more than isolated. There was no immediate impact to the operability of the system based on the satisfactory retest of the A SSW pump. The licensee's failure to adequately assess the operating experience notifications after they had been entered into their corrective action system was an example of a non-cited violation of 10CFR50, Appendix B, Criterion XVI, "Corrective Action." The issues associated with this violation are in the licensee's corrective action program.

Inspection Report# : [2000009\(pdf\)](#)**Significance:** Jul 01, 2000

Identified By: NRC

Item Type: FIN Finding

**SHUTDOWN COOLING MODE LOOP RISK MANAGEMENT**

NRC inspectors identified that PSEG had failed to establish measures to ensure the reliability of three large normally closed manual valves needed for the designated alternate decay heat removal method. There was no plant impact caused by this lineup and the operating shutdown cooling loop remained reliable. The inspectors determined that the finding was not a violation of regulatory requirements, but evaluated the finding using the SDP considering the potential impact on shutdown plant risk, and determined it to be of very low safety significance.

Inspection Report# : [2000005\(pdf\)](#)**Significance:** Feb 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROPERLY INSTALL AND CONTROL SCAFFOLDING, RESULTING IN AN ADVERSE IMPACT ON SAFETY-RELATED EQUIPMENT**

The inspectors identified a long-standing degraded condition involving scaffolding interferences with emergency core cooling system (ECCS) room blowout panels. The scaffolding in the torus room could potentially have interfered with the proper operation of blowout panels associated with the A residual heat removal room and the high pressure coolant injection (HPCI) room. Subsequently, PSEG engineering determined that although the scaffolding would have prevented the blowout panels from fully opening as designed, the panels would have opened far enough to provide adequate ECCS room overpressure protection. The finding was determined to be GREEN as the risk significance of this issue was very low.

Inspection Report# : [2000001\(pdf\)](#)**Significance:** Feb 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO FOLLOW PROCEDURE, RESULTING IN A SW VALVE MISALIGNMENT**

The inspectors identified that control room operators did not adequately align the service water system in accordance with operating procedures following a manual service valve manipulation to control safety auxiliary cooling system (SACS) temperature. Operators had closed the service water valve and maintained the valve controls in manual vice automatic position. The inspectors used the SDP and determined that this procedural error had minimal impact on safety based on the availability of the redundant SACS and service water systems and the limited duration. This finding was determined to be GREEN as it posed very low risk significance.

Inspection Report# : [2000001\(pdf\)](#)**Significance:** Aug 29, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**DEGRADED FIRE PROTECTION BARRIER IN THE 117' ELEVATION CABLE SPREADING ROOM**

NRC inspectors identified a long-standing degraded fire protection barrier in the 117' elevation cable spreading room (CSR). The inspectors identified an open 4 inch floor drain valve that provided a vent path and would have degraded the effectiveness of the automatic CO2 fire suppression system. The NRC staff used the significance determination process (SDP) and determined that this longstanding problem had a minimal impact on safety due to the alternative safe shutdown and additional firefighting capabilities which existed, a conservative assumption for medium degradation of the automatic CO2 suppression system, and the low likelihood of a fire in the CSR. This issue was treated as a non-cited violation. This problem was characterized as a "green" finding due to its very low safety significance.

Inspection Report# : [1999005\(pdf\)](#)**Significance:** Aug 29, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO IMPLEMENT APPROPRIATE FIRE PROTECTION IMPAIRMENT COMPENSATORY ACTIONS**

NRC inspectors identified improper fire protection compensatory actions for a degraded condition in the 117' elevation cable spreading room (CSR). PSEG had implemented an hourly firewatch for a degraded fire protection alarm in the 117' elevation CSR, but the Hope Creek fire protection procedures specified a continuous fire watch. This issue was characterized as a "green" finding as it had minimal impact on safety due to the frequency of the existing fire watch and the low likelihood of a fire in the CSR.

Inspection Report# : [1999005\(pdf\)](#)**Significance:** Aug 29, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

**LICENSE CONDITION VIOLATION - CLASS-1E BATTERY CHARGING OPERATION**

Technicians did not provide adequate fuse protection and isolation for a non-safety-related single cell battery charger installed on the safety-related batteries. This self-identified violation was reported in LER 99-007-00 and was treated as a non-cited violation. This issue was characterized as a "green" finding as the issue had minimal impact on safety as determined by the SDP because the batteries were able to properly perform their safety function.

Inspection Report# : [1999005\(pdf\)](#)

## Barrier Integrity

**Significance:** Nov 11, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO ESTABLISH ADEQUATE MEASURES TO ASSURE THAT THE REACTOR BUILDING FILTRATION, RECIRCULATION, AND VENTILATION SYSTEM VENT FAN D/P CONTROLLERS SET PROPERLY**

10CFR50, Appendix B, Criterion III, Design Control, requires that measures be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Contrary to the above, PSEG Nuclear did not establish adequate measures to assure that the reactor building filtration, recirculation, and ventilation system (FRVS) vent fan differential pressure controllers were set properly to allow the FRVS vent fans to adequately establish secondary containment integrity.

Inspection Report# : [2001010\(pdf\)](#)



**Significance:** Sep 30, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ADEQUATELY IMPLEMENT ALL THE NEW FUEL INSPECTION REQUIREMENTS**

The inspectors identified that reactor engineers were not following the new fuel inspection procedure with respect to tripped accelerometer guidance. Safety significance of this finding was very low because of the documented inspection of accelerometer condition during initial new fuel receipt, control of the transport of the storage containers within the reactor building, and satisfactory fuel inspection results. This finding represented a non-cited violation for failure to comply with a procedure controlling a safety-related activity.

Inspection Report# : [2001009\(pdf\)](#)**Significance:** Sep 30, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**PLANT OPERATORS FAILED TO FOLLOW THE REACTIVITY PLAN, PROVIDED BY REACTOR ENGINEERING, DURING A REACTOR POWER CHANGE**

On September 19, 2001, plant operators failed to follow the reactivity plan, provided by reactor engineering, during a reactor power change. This PSEG Nuclear identified violation of their nuclear procedure HC.OP-IO.ZZ-0006(Q), Power Changes During Operations, requires, in part, that power changes shall be done with directions provided by reactor engineering is being treated as a Non-Cited Violation.

Inspection Report# : [2001009\(pdf\)](#)**Significance:** Dec 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO ESTABLISH AN ADEQUATE PROCEDURE TO CONTROL THE INPUT AND VERIFICATION OF THE RECIRCULATION PUMP SPEED LIMIT SETTINGS**

PSEG Nuclear failed to establish an adequate procedure to control the input and verification of the recirculation pump speed limit settings. The safety significance of this finding was very low because the electrical and mechanical high-speed stops, although scaled incorrectly, would have limited core flow within technical specification limits. This PSEG Nuclear identified violation of Appendix B, Criteria V, was treated as a Non-Cited Violation.

Inspection Report# : [2000011\(pdf\)](#)**Significance:** Jul 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**FILTRATION, RECIRCULATION AND VENTILATION SYSTEM DAMPER FAILURE**

PSEG failed to ensure a filtration, recirculation and ventilation system (FRVS) manual damper was securely fastened after realigning the reactor building ventilation system. The loosely secured manual damper closed and rendered the entire FRVS recirculation system inoperable. The FRVS ventilation system remained operable and maintained the secondary containment at a negative pressure. The inspectors identified a noncited violation for inadequate measures to ensure the FRVS manual dampers were securely fastened in accordance with design drawings. This NCV was classified as a Green finding as it was of very low safety significance.

Inspection Report# : [2000005\(pdf\)](#)**Significance:** Nov 28, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATE ACCEPTANCE CRITERIA FOR THE CLOSING TIME FOR THE INBOARD MAIN STEAM LINE ISOLATION VALVES (MSIVs)**

NRC inspectors identified inadequate acceptance criteria for the closing time for the inboard main steam line isolation valves (MSIVs). PSEG had performed a design change and lowered the primary containment instrument gas compressor start set point. The design change calculated a more restrictive MSIV closing time during test conditions to ensure that the MSIVs could close within technical specification (TS) requirements. However, the stroke time test acceptance criteria was not updated. This issue was a non-cited violation. The safety significance of this issue was low because the actual closing times were within the new calculated value.

Inspection Report# : [1999007\(pdf\)](#)

**Significance:** Nov 28, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

**OPERATORS FAILED TO ADEQUATELY PERFORM PRIMARY CONTAINMENT INTEGRITY VERIFICATIONS FOR 11 VALVES DURING SEVERAL MONTHLY VERIFICATIONS**

Operators identified that they failed to adequately perform primary containment integrity verifications for 11 valves during several monthly verifications within the last year. This was a non-cited violation of TS 4.6.1.1.b The NRC staff determined that this deficiency had low safety significance based on the valves being closed when properly verified later and other administrative systems confirming the valves' closed positions during the period of improper verifications.

Inspection Report# : [1999007\(pdf\)](#)**Significance:** Aug 29, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

**LICENSE CONDITION VIOLATION - OPERATION AT REDUCED FEEDWATER INLET TEMPERATURE**

Control room operators failed to appropriately identify abnormal lineups in the primary containment instrument gas (PCIG) and feedwater heating systems after a reactor recirculation runback. The operators' failure to promptly correct these abnormal lineups placed the plant outside of its licensing basis. In the case of the feedwater heating system abnormal lineup, the plant was returned to 100% power with feedwater inlet temperature at a reduced temperature. The reduced feedwater inlet temperature affected the core thermal performance and placed additional strain on the fuel barrier during the recovery to full power. Reactor engineers did not effectively monitor the plant recovery and contributed to the error in operation with reduced feedwater inlet temperature. The NRC inspectors noted that operation at reduced feedwater temperature is prohibited to protect the fuel barrier integrity. In the case of the abnormal PCIG lineup, operators were indirectly alerted to this lineup by a different alarm 45 minutes after the fact. The abnormal PCIG lineup was then promptly corrected by the operators. This event was characterized as a "green" issue; an NRC risk analyst conducted an assessment of the risk associated with the abnormal PCIG lineup and concluded that the overall plant risk was minimal. The problem related to the fuel barrier had a minimal impact on safety as determined by the SDP because no immediate or long-term degradation of the fuel barrier occurred.

Inspection Report# : [1999005\(pdf\)](#)

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:** Mar 31, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO CONTROL ACCESS TO VERY HIGH RADIATION AREAS**

On February 28, 2001, during work in the spent fuel pool, a radiation protection technician issued a key utilized to gain access to a posted very high radiation area (VHRA) without first having obtained approval of the radiation protection manager. Radiation Protection entered this issue into the PSEG Nuclear problem identification and corrective action system and reported this condition as an Occupational Radiation Safety Performance Indicator item for the 1st Quarter 2001. No actual or potential safety consequence resulted and no unintended occupational exposure occurred due to this condition. This PSEG Nuclear identified violation of their VHRA control procedure (NC.RP-71.ZZ-0203) is being treated as a Non-Cited Violation.

Inspection Report# : [2001004\(pdf\)](#)**Significance:** Aug 12, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

**RADIATION BARRIER FAILURE**

On June 20, 2000, radiation protection technicians identified a high radiation area in the turbine building where dose rates were equal to 1 rem per hour 30 centimeters from the source of radiation, which was not posted or controlled in accordance with plant technical specifications for locked high radiation areas (Technical Specification 6.12.2). Identification of the dose rates was made following a worker entering the area and receiving a high dose rate alarm on his alarming dosimeter. Upon notification, RP

technicians promptly posted, barricaded and locked the area as required by TS 6.12.2. The event was subsequently added to PSEG Nuclear's corrective action system on July 25, 2000.

Inspection Report# : [2000006\(pdf\)](#)



**Significance:** May 13, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

#### **FAILURE TO PROPERLY BARRICADE A POSTED HIGH RADIATION**

The inspector identified a posted high radiation area on the radiation area on the refueling floor which was not appropriately barricaded in accordance with Technical Specification 6.12.1. A portion of the area was not posted or barricaded, i.e., a three foot wide opening in the barricade existed in front of the step-off pad used to access the area. When informed, PSEG appropriately barricaded the area and entered the deficiency into their corrective action system as notification 20028576. This finding was treated as a non-cited violation.

Inspection Report# : [2000003\(pdf\)](#)

## Public Radiation Safety

## Physical Protection

## Miscellaneous

**Significance:** N/A Dec 30, 2000

Identified By: NRC

Item Type: FIN Finding

#### **WRITTEN EXAMINATION OVERLAP DURING BIENNIAL EXAM CYCLE REACHED 70% WHICH COULD RESULT IN REDUCED DISCRIMINATION VALIDITY OF OPERATOR REQUAL EXAMS**

Written examination overlap during the biennial exam cycle reached about 70 percent which could result in reduced discrimination validity of operator requalification examinations. Such a large overlap does not appear to meet the intent of the guidance of ES-601, Paragraph E.3.b.(6). No evidence of a reduction of examination validity was identified. The safety significance of this finding is very low (no color) because there was no evidence of a reduction of examination validity. The finding is more than minor and has extenuating circumstances because if left uncorrected, it has the potential for impacting the NRC's ability to perform its regulatory function related to allowing facility requalification evaluation of licensed operator performance.

Inspection Report# : [2000011\(pdf\)](#)

**Significance:** N/A May 13, 2000

Identified By: NRC

Item Type: FIN Finding

#### **CROSS-CUTTING ISSUES**

The inspectors noted that several shortcomings in work planning, configuration control, attention to detail, operator awareness, work control, and communication resulted in a technical specification non-compliance, three inadvertent engineered safety feature actuations, unexpected equipment alignments, and a bumped fuel bundle. Although these occurrences challenged the organization during the refueling outage, the problems involved very low shutdown risk, no consequential impact on the plant, and violations of minor significance. Collectively, the events highlighted weaknesses in work control during periods of high maintenance activity. In each case, the operations and maintenance departments documented the associated human performance issues within their corrective action process.

Inspection Report# : [2000003\(pdf\)](#)

**Significance:** N/A Nov 28, 1999

Identified By: NRC

Item Type: FIN Finding

#### **INSPECTORS IDENTIFIED TWO ERRORS IN THE REPORTED DATA FOR THE REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY PI**

The inspectors identified two errors in the reported data for the Reactor Coolant System Specific Activity PI. PSEG reported the maximum activity for July 1999 conservatively high due to a data acquisition error. In addition, PSEG used an incorrect value for the TS limit in calculating the PI. PSEG documented these errors in their corrective action process and corrected the TS limit error in

their October 1999 PI package submittal. The errors were not significant and the PI remained green.  
Inspection Report# : [1999007\(pdf\)](#)

**Significance: N/A** Oct 28, 1999

Identified By: NRC

Item Type: FIN Finding

**PROBLEM IDENTIFICATION AND RESOLUTION**

No significant findings were identified. There was however, some concern regarding the number of human performance errors that have occurred within all departments at the station over the past two years. The team noted that during the inspection, previously identified human performance issues were all rolled up into one station notification that addressed the human performance issue. Along these lines, but under a separate notification, the team noted a roll up of another human performance issue that dealt specifically with station personnel failing to follow procedures. As identified by the licensee and the team, it was determined that ineffective corrective actions, regarding human performance errors, were attributable to some narrowly focused root cause analyses or to poor correlation of causes with corrective actions. These causes were similar to that noted in the training area (exam quality and written test results). Since improvement plans were being developed to address this area as of the end of the inspection, it was too early to assess the resolution to these problems and subsequent corrective actions. Follow up action is warranted in this area.  
Inspection Report# : [1999008\(pdf\)](#)

**Significance: N/A** Aug 29, 1999

Identified By: NRC

Item Type: FIN Finding

**INSPECTORS IDENTIFIED SEVERAL ERRORS IN HISTORICAL PI DATA AND ONE ERROR IN RECENT DATA FOR THE SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM PI**

The inspectors identified several errors in historical data and one error in recent data (since the start of the pilot program and NRC PI submittal) for the Safety System Unavailability, Residual Heat Removal System performance indicator (PI). The NRC inspectors determined that the RHR unavailability remained green (less than 2%) and changed to about 1.3% from 0.8%. The historical errors were carried forward from an old PSEG performance indicator database and were submitted to the NRC on a "best faith effort." The one error in recent data was a failure to include a support system unavailability, specifically station service water, into the RHR unavailability. PSEG initiated Notification 20003722 to correct the RHR unavailability PI, verify all previous NRC PI submittals, and improve the verification processes and validity of future PIs. The Significance Determination Process does not apply to this finding.  
Inspection Report# : [1999005\(pdf\)](#)

**Significance: N/A** Jul 11, 1999

Identified By: NRC

Item Type: FIN Finding

**HISTORICAL DATA FOR THE SAFETY SYSTEM UNAVAILABILITY REPORTING ERROR**

The inspectors identified a reporting error in historical data for the safety system unavailability, heat removal system performance indicator (PI). The error related to an inaccurate estimate of the time the system was required to be available in 1997. The error caused a small increase in this white PI and did not result in the yellow threshold being exceeded. PSEG corrected the error in the next PI submittal. The Significance Determination Process does not apply to this item.  
Inspection Report# : [1999004\(pdf\)](#)

Last modified : July 22, 2002