

Salem 2

2Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Jun 28, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

SURVEILLANCE PROCEDURE FOR TESTING A PRESSURIZER SPRAY VALVE (2PS3) WHILE AT POWER WAS NOT FOLLOWED

A self-revealing finding identified a non-cited violation of Technical Specification 6.8.1 because a surveillance procedure for testing a pressurizer spray valve (2PS3)while at power was not followed. This resulted in the inadvertent initiation of continuous spray to the pressurizer. Equipment operators misunderstood the task instructions and prematurely unisolated 2PS3. Control room operators were ineffective in receiving communications from the field and did not question actions inconsistent with the pre-job brief. This finding is greater than minor because it had an actual impact on reactor coolant system pressure and operator manual actions were necessary to avert a reactor plant trip. The finding is of very low safety significance because mitigation systems were unaffected by the operator errors.

Inspection Report# : [2003005\(pdf\)](#)

Significance:  Mar 29, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

SALEM UNITS 1 AND 2 CONTROL AIR TRANSIENT

A self-revealing finding occurred when Salem Units 1 and 2 experienced a control air transient. Equipment anomalies during the transient revealed a valve configuration problem, an incomplete control air preventive maintenance item, and inadequate corrective action for a significant air leak. This finding was not a violation of NRC requirements, in that the performance deficiencies occurred on non-safety related systems. The finding had an actual impact on plant stability and operator actions were necessary to reseal a reactor coolant system letdown line relief valve. This finding screened to Green in phase 1 of the SDP, because mitigation equipment was not affected by the control air transient.

Inspection Report# : [2003003\(pdf\)](#)

Mitigating Systems

Significance:  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY EVALUATE AUXILIARY FEEDWATER PUMP SKID

The inspectors identified that temporary modifications to the 22 auxiliary feedwater (AFW) pump and the 13 AFW pump skids were not properly evaluated. This NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" was greater than minor, because it affected the mitigating system cornerstone and the reliability of two AFW pumps. This

finding was determined to be of very low safety significance, because pump shaft leakoff conditions were such that the unauthorized modifications had not impacted pump operation.

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Mar 29, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

EMERGENCY DIESEL GENERATOR DEFICIENT CORRECTIVE ACTIONS

A self-revealing finding was identified when the 1B emergency diesel generator (EDG) tripped during post-maintenance testing (PMT). The PMT was for separate test reasons and fortuitously revealed the EDG deficiency. The EDG deficiency involved a known electrical connector problem and inadequate interim corrective actions. This NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," is greater than minor, because it affected the mitigating systems cornerstone of equipment reliability. This finding was of very low significance, because the inadequate interim corrective actions did not cause any EDG to be inoperable for greater than the TS allowed outage time.

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Mar 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT CORRECTIVE ACTIONS

The team identified a non-cited violation involving two examples where PSEG failed to correct conditions adverse to quality as required by 10 CFR 50, Appendix B Criterion XVI, Corrective Actions. Specifically, PSEG failed to evaluate and correct an adverse condition involving the protection of wires located inside of control room panels from an over-current condition, and also failed to correct an adverse condition involving a degraded component cooling water system pipe support. These findings were evaluated using the Phase 1 worksheet of the significance determination process and found to be of very low significance (Green) since they did not result in the actual loss of a mitigating system.

Inspection Report# : [2003004\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

PSEG FAILED TO MAINTAIN COMPLETE AND ADEQUATE MAINTENANCE RECORDS

A non-cited violation of Technical Specification 6.10.1.b was identified for failure to maintain quality records of principal maintenance activities performed on the 1PR2 valve and on the 22 containment fan cooling unit. This finding was similar to a non-cited violation identified in Inspection Report 2001-12 and indicated that previous actions to correct this problem had not been effective. This finding was greater than minor since it impacted the inspectors ability to independently assess the condition of these components following maintenance activities. This finding was of very low significance because the components performed properly during the post-maintenance testing.

Inspection Report# : [2002009\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

SHUTDOWN COOLING LOOP INOPERABLE AND LESS THAN 3 FEET OF WATER ABOVE THE FUEL

A non-cited violation of Technical Specification 6.8.1 was identified for failure to establish and implement adequate procedures prior to the removal of the 11 CC pump room cooler fan from service for maintenance. This finding was greater than minor since it resulted in a condition where the two operable residual heat removal systems were not available when the reactor cavity water level was less than twenty-three feet above the top of the fuel as required by TS 3.9.8.2. The finding was evaluated by Regional and NRR Senior Reactor Analysts and determined to be of very low significance since the 11 CC pump remained functional during the period of time when the fan was out of service without the necessary compensatory measures.

Inspection Report# : [2002009\(pdf\)](#)



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

PSEG NUCLEAR FAILED TO PROPERLY MAINTAIN ROOM ISOLATION BARRIERS AND IMPROPERLY IMPLEMENTED A MODIFICATION TO THE SWITCHGEAR PENETRATION AREA VENTILATION SYSTEM

An unresolved item was identified in Inspection Report 2002-07 for failure to properly maintain the automatic fire suppression system in six safety-related electrical areas as required by the fire protection program. The item remained unresolved to complete the risk assessment. A non-cited violation was identified in this report for failure to maintain the fire protection program as discussed above as required by License Conditions 2.C.5 (Unit 1) and 2.C.10 (Unit 2). The finding adversely impacted fire suppression equipment capability, affecting the reactor safety mitigating system cornerstone objectives, and therefore was greater than minor. The finding was determined to be of very low significance due to the multiple trains of mitigating systems which would survive postulated fire events.

Inspection Report# : [2002007\(pdf\)](#)

Inspection Report# : [2002009\(pdf\)](#)



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

PSEG FAILED TO TAKE ADEQUATE CORRECTIVE ACTIONS FOR A 2001 DILUTION EVENT ON THE UNIT 2 SAT AND FAILED TO PRECLUDE REPEATING THE EVENT ON UNIT 1 SAT

PSEG Nuclear failed to identify the adverse consequences associated with a Unit 1 containment spray additive tank (SAT) increasing level trend that occurred over a several month period. This resulted in dilution of the Unit 1 SAT sodium hydroxide (NaOH) below the TS required minimum concentration value. The inspectors determined that the failure to take adequate corrective actions to preclude repetition of a significant condition adverse to quality constituted a violation of 10 CFR 50 Appendix B, Criterion XVI. Specifically, PSEG Nuclear failed to take adequate corrective actions for a 2001 dilution event on the Unit 2 SAT and failed to preclude repeating the event on the Unit 1 SAT. The risk significance of this finding was very low because the tank concentration was below the TS limit, but was above the minimum calculated NaOH concentration of 28 percent required for the SAT to perform its accident mitigation function. This very low risk violation has been entered into PSEG Nuclear's corrective action program as notification 20101881 and is being treated as a non-cited violation consistent with the NRC's enforcement policy

Inspection Report# : [2002007\(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

PSEG FAILED TO IMPLEMENT PROMPT AND EFFECTIVE CORRECTIVE ACTIONS SUBSEQUENT TO A JANUARY 2001 SURVEILLANCE TEST

PSEG Nuclear failed to implement effective corrective actions subsequent to January 2001 surveillance testing that indicated that the Unit 1 auxiliary building ventilation (ABV) system charcoal adsorber bank was degraded. The charcoal bank failed the next scheduled test conducted in August 2002 and placed the unit into a twenty-four hour shutdown action statement. This finding was evaluated using the Phase 1 SDP worksheet and determined to be of very low risk significance (Green), because the problem only affected the radiological barrier function of the auxiliary building. Additionally the test results indicated that the charcoal performance would have met the design analysis assumptions. This very low risk significance violation has been entered into PSEG Nuclear's corrective action program as notification 20101881 and is being treated as a non-cited violation consistent with the NRC's enforcement policy. The charcoal bank failed the next scheduled test conducted in August 2002 and placed the unit into a twenty-four hour shutdown action statement. This finding was evaluated using the Phase 1 SDP worksheet and determined to be of very low risk significance (Green), because the problem only affected the radiological barrier function of the auxiliary building. Additionally the test results indicated that the charcoal performance would have met the design analysis assumptions. This very low risk significance violation has been entered into PSEG Nuclear's corrective action program as notification 20101881 and is being treated as a non-cited violation consistent with the NRC's enforcement policy.

Inspection Report# : [2002007\(pdf\)](#)

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

PSEG FAILED TO PROMPTLY IDENTIFY AND CORRECT THE CAUSE FOR AN IMPROPER AIRFLOW CONDITION THAT DEGRADED THE RADIOACTIVE REMOVAL CAPABILITY OF THE ABV SYSTEM

PSEG Nuclear failed to properly evaluate and correct a degraded ABV system condition that adversely affected the radiological barrier function of the system. Specifically, the inspectors identified that airflow was out of the residual heat removal room and into the auxiliary building stairwell. This provided a pathway for radioactive effluents to bypass the auxiliary building ventilation charcoal filters. The inspectors reviewed the SDP Phase 1 screening worksheet and noted that findings that adversely affect the radiological barrier function of the auxiliary building are of very low risk significance. This very low risk significance violation has been entered into PSEG Nuclear's corrective action program as notification 20116935 and is being treated as a non-cited violation consistent with the NRC's enforcement policy.

Inspection Report# : [2002007\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Mar 28, 2003

Identified By: NRC

Item Type: FIN Finding

PI&R BIENNIAL SUMMARY CONCLUSION

The team determined that PSEG was generally effective at identifying discrepant conditions and entering them into the corrective action system. However, the findings identified by this team supported the conclusion in the Annual Assessment Letter (NRC Inspection Report 50-272, 311/2003-01) of the existence of a substantive cross cutting issue in the area of problem identification and resolution. The team identified four examples where conditions adverse to quality were not entered into the corrective action system. The team determined that PSEG was generally effective at classifying and performing operability evaluations for discrepant conditions, however, some examples were noted where problem evaluations did not contain sufficient detail to support the conclusions. The team identified a finding with two examples where PSEG failed to correct conditions adverse to quality. The team noted that PSEG performed a root cause evaluation to indentify areas to improve the corrective action program. The team was not able to assess the effectiveness of this effort since the corrective actions had not been completed. On the basis of interviews conducted during the inspection, workers at the site felt free to input safety findings into the corrective action program.

Inspection Report# : [2003004\(pdf\)](#)

Last modified : September 04, 2003