

## Palisades

### Initiating Events



**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**A Non-Cited Violation Of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, And Drawings," Was Identified For Failure To Follow A Preventative Maintenance Procedure Step.**

Green. A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for failure to follow a preventative maintenance procedure step to inspect the head sprockets and sprocket tooth-inserts on the traveling screens for wear. Failure to follow this step contributed to the failure of the F-4B traveling screen. The issue was determined to be of very low significance (Green) by the significance determination process because, although the issue is a transient initiator contributor, the issue does not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, or the increase in likelihood of a fire or flood. (Section 1R07)

Inspection Report# : [2001016\(pdf\)](#)



**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation Of 10 CFR Part 50 Appendix B, Criterion XVI, "Corrective Action" Was Identified For Failure To Identify And Correct Deficiencies (Wear) Observed On The F-4B Traveling Screen Boot-Plate.**

Green. A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to promptly identify and correct deficiencies (wear) observed on the F-4B traveling screen boot-plate. Failure to promptly identify and correct these deficiencies contributed to the failure of the F-4B traveling screen. The issue was determined to be of very low significance (Green) by the significance determination process because, although the issue is a transient initiator contributor, the issue does not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, or the increase in likelihood of a fire or flood. (Section 1R07)

Inspection Report# : [2001016\(pdf\)](#)



**Significance:** Oct 12, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Fail To Promptly Correct Condition Adverse To Quality Involving The Instrument Air System**

The inspectors identified a failure to promptly correct conditions adverse to quality involving the instrument air system, an NCV of 10 CFR 50, Appendix B, Criterion XVI. The finding was determined to be of very low significance (Green) by the significance determination process because although the loss of instrument air is a transient initiator contributor, the issue does not contribute to the likelihood of a loss of coolant accident initiator, the likelihood that mitigation equipment or functions will not be available, or an increase in the likelihood of a fire or flood.

Inspection Report# : [2001013\(pdf\)](#)



**Significance:** Oct 12, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Fail To Take Effective Corrective Actions To Prevent Recurrence Of Freezing In The Sensing Lines For The Traveling Screen System**

The inspectors identified that the licensee did not assure that the cause of the condition was determined and that corrective action was taken to preclude repetition of the traveling screen sensing lines freezing during cold weather conditions, an NCV of 10 CFR 50, Appendix B, Criterion XVI. Corrective actions taken in response to a 1997 event, where the sensing lines had froze causing a decrease in service water bay level, were not effective to prevent recurrence as evidenced by the recurring freezing of the sensing lines during cold weather in 2000 and 2001. This issue was determined to be of very low significance because warm water was available from the mixing basin which ensured that mitigation equipment and functions would be available.

Inspection Report# : [2001013\(pdf\)](#)

**Significance:** N/A Feb 02, 2001

Identified By: NRC

Item Type: FIN Finding

**The Supplemental Inspection Was Performed to Assess The Licensee's Evaluation And Corrective Actions Pertaining To A White Performance Indicator For Unplanned Power Changes.**

This supplemental inspection was performed to assess the licensee's evaluation and corrective actions pertaining to a white performance indicator for unplanned power changes. The performance indicator crossed the green-white threshold of more than six unplanned power changes greater than 20 percent per 7,000 hours of critical operation following an unplanned power change in September 2000. Five of the unplanned power changes were self-revealing problems that resulted from failed main feedwater pump seals, elevated contaminants in secondary chemistry and a leak from a primary coolant pump seal leak-off line. The sixth unplanned power change was for a failed check valve in the Emergency Core Cooling System that was identified by licensee personnel. The unplanned power changes did not result in any adverse consequences to plant risk. The licensee did not adequately address human performance deficiencies which contributed to several of the problems. Also, neither quantitative or qualitative criteria had been developed generically to determine the effectiveness of corrective actions.

Inspection Report# : [2001003\(pdf\)](#)**Significance:** May 13, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Follow Procedures While Racking Out EDG 1-1 Output Breaker 152-107**

Control room operators manually tripped the reactor on April 4, 2000, in response to a loss of both main feedwater pumps. It was determined that an Auxiliary Operator failed to follow plant operating procedures while manipulating the Emergency Diesel Generator 1-1 output breaker, which resulted in the loss of both main feedwater pumps and the subsequent plant trip. All safety-related equipment operated as designed following the plant trip, and no plant equipment was damaged by the event. The event had very low risk significance. The inspectors identified a non-cited violation for the failure to accomplish activities affecting quality in accordance with prescribed procedures

Inspection Report# : [2000007\(pdf\)](#)

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## Mitigating Systems

**Significance:** Mar 31, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Licensee Personnel Failed to Promptly Identify and Correct the Repetitive Failures of the High Pressure Air System Check Valve CK-CA476**

The inspectors identified one Green finding that is being treated as a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." Licensee personnel failed to promptly identify and correct repetitive failures of high pressure air system Check Valve CK-CA476, which had been occurring since the 1996 time frame. In addition, the most recent failure which occurred in April 2001, was a condition adverse to quality for which no apparent or root cause had been performed in accordance with the licensee's corrective action program. This inspector identified finding was determined to be of very low safety significance (Green) by the significance determination process, because: (1) the finding was not a design or qualification deficiency; (2) the finding did not represent an actual loss of safety function based on as-found check valve leakage; (3) the finding did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) the finding did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; (5) the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event; and (6) while the finding could potentially be a design or qualification deficiency, the licensee's operability determinations confirmed that the check valve leakage did not result in a loss of function per Generic Letter 91-18, Revision 1.

Inspection Report# : [2002002\(pdf\)](#)**Significance:** Mar 31, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Licensee Personnel Failed to Identify during an Apparent Cause Evaluation that Inadequate Post Maintenance Testing Activities**

Licensee personnel failed to identify during an apparent cause evaluation completed on February 4, 2002, for Condition Report CPAL0200059, "Fire Pump P-9A Tripped After Running For Approximately Three Minutes," that inadequate post maintenance testing activities were specified in a work order following electrical breaker maintenance for Fire Pump P-9A. Because the licensee's apparent cause failed to identify the inadequate post maintenance testing, there were no corrective actions developed to ensure that appropriate post maintenance testing would be specified on subsequent work orders for electrical breaker maintenance similar to

that conducted on Fire Pump P-9A. This inspector identified finding was determined to be of very low safety significance (Green) by the significance determination process, because: (1) the finding was not a design or qualification deficiency; (2) the finding did not represent an actual loss of safety function in that two other fire pumps were always available; (3) fire protection pumps are not in the Technical Specifications, and therefore the finding did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) the finding did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment in that two other fire pumps were always available; (5) the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event in that the finding did not involve the loss of degradation of equipment or function specifically designed to mitigate a seismic, flooding or severe weather initiating event; and (6) the finding did not involve the loss of a safety function that contributed to external event initiated core damage accident sequences from fires in that two fire pumps were always available.

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



**Significance:** Mar 31, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Licensee Failed to Assure that Measures for Checking the Adequacy of a Design Modification made to the Containment Sump Recirculation Check Valves**

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to ensure that the measures for verifying and checking the adequacy of the design for Specification Change SC-94-130 assured that the applicable regulatory requirements and the design basis of the containment sump check valves were met. This inspector identified finding was determined to be of very low safety significance (Green) by the significance determination process, because the finding was a design deficiency confirmed not to result in a loss of function per NRC Generic Letter 91-18, Revision 1. The licensee's past operability analysis credited the use of containment overpressure and calculated plant parameters following a design basis accident and concluded that the available net positive suction head was above that required for all engineered safeguards system pumps considering the most limiting design basis accident conditions. Therefore, the engineered safeguards system pumps would have been able to perform the intended safety function and were operable, but nonconforming in accordance with Generic Letter 91-18, Revision 1.

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



**Significance:** Jan 07, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**The Failure To Follow Approved Work Instructions And Procedures During Corrective Maintenance On A Primary Coolant Pump Oil Cooler Associated With The Component Cooling Water System**

Green. The inspectors identified one Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow approved work instructions and procedures during corrective maintenance on a primary coolant pump oil cooler associated with the component cooling water system. The failure to accomplish the activities affecting quality in accordance with approved work instructions resulted in a self-revealed event in which approximately 300 gallons of component cooling water was lost when the component cooling water system was restored to containment. This self-revealed issue was determined to be of very low significance (Green) by the significance determination process because (1) the issue did not increase the likelihood of a loss of primary coolant system inventory; (2) the issue did not degrade the licensee's ability to terminate a leak path or add Reactor Coolant System (RCS) inventory when needed; and (3) the issue did not degrade the licensee's ability to recover decay heat removal once lost. Although the component cooling water system was required to maintain shutdown cooling, operator action mitigated the inventory loss from the component cooling water system. Consequently, the Shutdown Cooling System was not adversely affected as evidenced by constant primary coolant system temperatures. (Section 1R14.1)

Inspection Report# : [2001017\(pdf\)](#)



**Significance:** Jan 04, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**The Failure To Follow Approved Work Instructions And Procedures During Corrective Maintenance On The Safety-Related Breaker For Electric-Driven Fire Pump P-9A.**

Green. The inspectors identified one Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow approved work instructions and procedures during corrective maintenance on the safety-related breaker for electric-driven Fire Pump P-9A. The failure to accomplish the activities affecting quality in accordance with approved work instructions resulted in a self-revealed event in which the fire pump was inappropriately returned to service and declared operable with the long-time overcurrent breaker trip setpoints incorrectly set. Consequently, seven days after the pump was declared operable, the pump was started and tripped after running for only three minutes. This self-revealed issue was determined to be of very low significance (Green) by the significance determination process because (1) the issue did not increase the likelihood of a loss of primary coolant system inventory; (2) the issue did not degrade the

licensee's ability to terminate a leak path or add RCS inventory when needed; and (3) the issue did not degrade the licensee's ability to recover decay heat removal once lost. In addition, at least one fire pump was always operable and available to perform the designed safety function during the time that Pump P-9A was inoperable. (Section 1R19.1)

Inspection Report# : [2001017\(pdf\)](#)



**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure To Promptly Identify And Correct Deficiencies Associated With The Cold Weather Protection Of Level Instrumentation On The Condensate Storage Tank**

Green. A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to promptly identify and correct conditions adverse to quality associated with the cold weather protection of the Condensate Storage Tank level instrumentation. The deficiencies associated with the insulation of the level instruments was identified during the previous cold weather inspection conducted by the inspectors in December 2000 and the condition adverse to quality was not corrected. The finding was considered to be more than minor because this condition was initially identified in December 2000, and the licensee failed to promptly identify and correct the condition adverse to quality. In addition, the failure of the Condensate Storage Tank level instrumentation could have a credible impact on safety. The issue was determined to be of very low significance (Green) by the significance determination process because there was no actual failure of safety-related components associated with the mitigating systems cornerstone. (Section 1R01).

Inspection Report# : [2001016\(pdf\)](#)



**Significance:** Oct 12, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Fail To Identify And Correct A Continuing Trend In Equipment Configuration Control Deficiencies from January Through September 2001**

The inspectors identified a failure to promptly identify and correct a continuing adverse trend of equipment configuration control deficiencies from January through September 2001, a condition adverse to quality and Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI. The licensee initiated a condition report in November 2000 identifying an adverse trend from January through October 2000. The evaluation and corrective actions were completed but did not include an effectiveness review to determine if the trend continued in the future. The inspectors determined that the continuing trend of equipment configuration control deficiencies could credibly affect the operability, availability, reliability, or function of a system or train in a mitigating system. The failure to identify and correct the continuing trend of equipment configuration control issues was determined to be of very low significance (Green) by the significance determination process because the equipment was still capable of performing the intended safety function.

Inspection Report# : [2001013\(pdf\)](#)



**Significance:** Oct 12, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Fail To Identify And Correct The Human Performance Aspects Of Conditions Adverse To Quality**

The inspectors identified a failure to identify and correct the human performance aspects of conditions adverse to quality, an NCV of 10 CFR 50, Appendix B, Criterion XVI. The inspectors identified several examples where human performance deficiencies contributed to mitigating system unavailability. However, the licensee failed to identify through their problem, identification and resolution process these human performance problems. This condition was determined to be of very low safety significance because even though the issues may have resulted in decreased availability, reliability or function of mitigating system equipment, the equipment was still capable of performing the safety function.

Inspection Report# : [2001013\(pdf\)](#)



**Significance:** Jul 27, 2001

Identified By: NRC

Item Type: VIO Violation

**Smoke Detectors Inadequate - Northwest Portion of Cable Spreading Room**

The inspectors identified that smoke detectors in the northwest portion of the cable spreading room were not located and installed in accordance with the applicable National Fire Protection Association (NFPA) code. The smoke detector located in that area was not adequately evaluated to consider the effects of installed ventilation on the detector's performance and would not be able to quickly detect a fire, as required. The failure to have adequate detector placement in the area is a violation of the Palisades operating license. This issue has been determined to have low to moderate safety significance (White). As a result of the inadequate detector placement, detection of a fire in the northwest portion of the cable spreading room could be delayed and sufficient cable damage

could occur which would require a shutdown of the plant from outside the control room, significantly increasing the complexity of manual actions required to achieve safe shutdown.

Inspection Report# : [2001008\(pdf\)](#)



**Significance:** Jul 27, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Smoke Detectors Inadequate - Southern Portions of Cable**

The inspectors identified that the placement of smoke detectors for the beam pocket areas in the southern portions of the cable spreading room was not in accordance with the NFPA code. Specifically, no detector existed for the southeast beam pocket area and the detector for the southwest beam pocket area was inappropriately located in a "dead air space." The failure to have adequate detector placement in this area is a violation of the Palisades operating license. The finding was greater than minor because it affected the detection and suppression capability defense-in-depth element. As a result of the inadequate detector placement, detection of a fire in the south portion of the cable spreading room could be delayed. The finding was of very low safety significance because of the low ignition frequency. Because the finding is of very low safety significance, and the finding being captured in the licensee's corrective action system, this finding is being treated as a NCV, consistent with Section VI.A.I of the NRC Enforcement Policy.

Inspection Report# : [2001008\(pdf\)](#)



**Significance:** Jul 27, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Smoke Detectors Inadequate - 1-D Switchgear Room**

The inspectors identified that required area wide detection did not exist for the 1-D switchgear room. Specifically, no detectors existed in the high ceiling areas formed by vertical shaft above the cableway and the stairway. The failure to have area wide detection is a violation of 10 CFR Part 50, Appendix R, Section III.G.3. The finding was greater than minor because it affected the detection and suppression capability defense-in-depth element. As a result of the inadequate detector placement, detection of a fire in the 1-D Switchgear Room could be delayed. The finding was of very low safety significance because of the low ignition frequency and the mitigating equipment available which included, as a minimum, the power conversion system, make-up to the condensate storage tank, and recovery of auxiliary feedwater. Because the finding is of very low safety significance, and the finding being captured in the licensee's corrective action system, this finding is being treated as a NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy.

Inspection Report# : [2001008\(pdf\)](#)



**Significance:** May 19, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure To Construct And Maintain The Containment Sump Screen System**

The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the failure to construct and maintain the containment sump screen system in accordance with the original design and design basis. Gaps were identified between the sump screen frame and ceiling, which could have allowed particles, greater in size than that allowed by the original design of the sump screen system, to bypass the screens into the suction of the emergency core cooling system, following a recirculation actuation signal. The finding was determined to be of very low safety significance (Green) by the significance determination process. Although the as-found condition of the sump screen system could have credibly affected the operability, availability or function of components in mitigating systems, the amount of water and potentially debris which could bypass the screens through the identified gaps would be minimal.

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



**Significance:** May 19, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure To Have a Procedure Appropriate To The Circumstances Regarding Inadequate TS Surveillance Procedure QO-38**

The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Procedures," for the failure to have a procedure appropriate to the circumstances. Technical Specification Surveillance Procedure QO-38, "Containment Sump Check Valves Inservice Test" did not direct the operators to set the torque wrench display to read the peak value attained when measuring valve break away forces. Also, Procedure QO-38 did not clearly prescribe that the stroke test should be continued if the maximum acceptance criteria for required break away force was approached. This issue was determined to be of very low safety significance (Green). The inappropriate procedure had a credible impact on safety in that the testing method prescribed and implemented resulted in obtaining inaccurate as-found break away forces required to open the valves. Consequently, the containment sump

check valves ability to satisfy the surveillance test acceptance criteria and perform their safety function was questionable. However, this issue did not result in an actual loss of the safety function for the containment sump check valves.

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



**Significance:** Mar 31, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**10 CFR 50, Appendix B, Criterion III, "Design Control," Violation Regarding Inadequate Design Control During the Review and Approval of TM 2000-06**

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for a temporary modification design change. Specifically, the underground (backup) steam supply to the Turbine Driven Auxiliary Feedwater Pump P-8B was isolated and removed from service when Temporary Modification 2000-06 was implemented. Consequently, the design change did not identify, evaluate and reconcile that Auxiliary Feedwater Pump P-8B was not available to remove decay heat using the underground (backup) steam supply line as credited in the Post-Fire Safe Shutdown Analysis for a fire in the Turbine Building

Inspection Report# : [2001006\(pdf\)](#)

**Significance: SL-III** Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

**Failure to Provide the Commission Complete and Accurate Information**

The inspectors identified an apparent violation regarding the licensee's failure to provide the NRC complete and accurate information in a letter dated February 16, 2000, requesting enforcement discretion, and in a letter dated February 18, 2000, requesting a Technical Specification change. Specifically, complete and accurate information concerning the license basis specified in the Post-Fire Safe Shutdown Analysis regarding the underground (backup) steam supply line to the turbine driven auxiliary feedwater pump was not provided. This finding potentially impacted the NRC's ability to perform its regulatory function. Since this finding cannot be processed through the Significance Determination Process, the apparent violation will be processed using the traditional enforcement process. Update: The enforcement decision was made and a Notice of Violation and Proposed Imposition of Civil Penalty in the base amount of \$55,000 for the Severity Level III violation was communicated to the licensee in a letter dated June 27, 2001.

Inspection Report# : [2001006\(pdf\)](#)

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



**Significance:** Mar 31, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Satisfy Seismic Requirements Specified in Plant Procedures for Scaffolding and Storage Racks Constructed Near Safety-Related Equipment**

Green. The inspectors identified a non-cited violation with three examples for the failure to construct seismically qualified scaffolds and storage racks near safety-related equipment. The finding was determined to be of very low safety significance (Green) by the significance determination process. Although the non-seismically qualified scaffold and storage racks could have credibly affected the operability, availability or function of components in mitigating systems during a seismic event, no seismic event occurred. Also, the as-found condition of the scaffolds did not impair the operation of the mitigating system components with the plant at power.

Inspection Report# : [2001006\(pdf\)](#)



**Significance:** Feb 10, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform and Verify the Required Torque on an Emergency Diesel Generator Fuel Oil Line Connection**

A non-cited violation was identified for the failure to perform and independently verify the required torque on an Emergency Diesel Generator fuel oil line connection during maintenance. Consequently, the connection leaked which unnecessarily delayed returning the emergency diesel generator to service. The inspectors concluded that this self-revealed issue could be reasonably viewed as a precursor to a significant event due to the potential generic adverse consequences that could result from ineffective independent verifications by maintenance personnel during work activities on safety related equipment. As a consequence, the operability, availability, reliability, or function of a system or train in a mitigating system could be affected. The finding was determined to be of very low safety significance (Green) by the significance determination process. Although maintenance personnel failed to perform and independently verify the torque on the fuel oil line connection, a self-revealing leak resulted that allowed the problem to be corrected before emergency diesel generator operability was affected.

Inspection Report# : [2001002\(pdf\)](#)

**Significance:** Sep 30, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**The Failure to Implement a Fire Protection Pump Capacity Surveillance Test**

The inspectors identified a noncited violation for the failure to implement a fire protection pump capacity surveillance test in accordance with the approved procedure. Plant procedures required further testing to be stopped if one pump did not meet test acceptance criteria. However, licensee personnel failed to identify that the first pump tested had failed to meet the acceptance criteria, and proceeded to testing of the second pump. Consequently, contrary to procedural requirements, testing continued on the second pump which also failed to meet the acceptance criteria. Therefore, two fire protection system pumps were inoperable simultaneously. The licensee's subsequent engineering analyses and operability determination concluded that while the two fire protection system pumps failed to meet test acceptance criteria, the pumps were in fact operable, but degraded, in accordance with NRC Generic Letter 91-18.

Inspection Report# : [2000014\(pdf\)](#)**Significance:** Jun 21, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

**Inoperable Check Valve in Minimum Flow ECCS Recirculation Line**

The licensee discovered that a check valve in a minimum flow recirculation line in the Train "A" Emergency Core Cooling System was inoperable for a period which exceeded the Technical Specification allowed outage time, a condition prohibited by Technical Specifications. The causes for the check valve condition were attributed to a failure to properly assemble the check valve during original plant construction and non-intrusive testing which did not identify the actual condition of the check valve. One Non-Cited Violation was identified. The safety significance of this finding was very low because all mitigation systems remained operable and the licensee entered the finding into the corrective action program.

Inspection Report# : [2000016\(pdf\)](#)**Significance:** May 11, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Include Required Steps In EOP-4.0, Loss of Coolant Accident Recovery**

The failure to include steps required to ensure operability of the high pressure recirculation function of emergency core cooling systems in Emergency Operating Procedure (EOP) 4.0 (Loss of Coolant Accident Recovery) rendered the procedure inappropriate to the circumstances (i.e., mitigation of a design basis accident). This is a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V. This violation was identified by the licensee and entered in the corrective action program as CPAL0001274. This deficiency had a very low risk significance because it hypothesized the extremely low probability, simultaneous occurrence of a Loss of Coolant Accident, Loss of Offsite Power, and the loss of the specific diesel generator which supplied power for two of the three containment spray pumps.

Inspection Report# : [2000005\(pdf\)](#)

## Barrier Integrity

**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of Technical Specification 3.4.13 was identified for operation of the plant with pressure boundary leakage from a through-wall crack in the control rod drive 22 seal housing.**

Green. A Non-Cited Violation of Technical Specification 3.4.13 was identified for operation of the plant with pressure boundary leakage from a through-wall crack in the control rod drive 22 housing. Although the time that the pressure boundary leakage from control rod drive 22 housing began could not be precisely determined, it is clear that leakage existed for greater than the 6 hour time limit to place the plant in Mode 3. This self-revealing finding affected the barrier integrity and initiating events cornerstones and was greater than minor because, if left uncorrected, it could have resulted in further degradation of the reactor coolant pressure boundary. Based on insights from fracture mechanics and leak-before-break perspectives, operation with this degraded CRDM seal housing would not substantially increase initiating event frequency. Therefore the risk significance was very low (Section 40A3.4).

Inspection Report# : [2001015\(pdf\)](#)



Dec 29, 2001

**Significance:**

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of 10 CFR Part 50 Appendix B, Criterion XVI, "Corrective Action" was identified for failure to implement corrective actions to prevent recurrence of cracking in 347 SS control rod housings**

A non-cited violation of 10 CFR Part 50 Appendix B, Criterion XVI, "Corrective Action" was identified for failure to implement corrective actions to prevent recurrence of cracking identified in the type 347 stainless steel control rod drive seal housings. Specifically, the service life of the housings was in question and no demonstration of service life had been documented. This finding had the potential to affect the barrier integrity and initiating events cornerstones and was greater than minor because, if left uncorrected, it could have resulted in breach of the reactor coolant pressure boundary. Fortunately, the licensee operated for only one month after placing these housings back in service. Therefore, no actual degradation of the primary pressure boundary occurred and the risk significance was very low (Green) as determined by the Reactor Safety Significance Determination Process (Section 4OA3.4).

Inspection Report# : [2001015\(pdf\)](#)



Dec 29, 2001

**Significance:**

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for use of a nonconservative crack growth rate in a calculation supporting a CRD weld overlay repair.**

A non-cited violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for use of a nonconservative crack growth rate in a calculation supporting a weld overlay repair design change for the control rod drive mechanism housings. This finding had the potential to affect the barrier integrity and initiating events cornerstones and was greater than minor because, if left uncorrected, it could have resulted in installation of an inadequate overlay repair for a degraded the primary coolant pressure boundary. Subsequently, the control rod drive housings were replaced and the weld overlay design change was not implemented. Therefore, the integrity of the primary coolant system boundary was not affected and this finding was determined to be of very low risk significance (Green) by the Reactor Safety Significance Determination Process (Section 4OA3.5).

Inspection Report# : [2001015\(pdf\)](#)



Dec 29, 2001

**Significance:**

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for failure to consider bending loads for the missile shield initial operability evaluation**

A non-cited violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for failure to consider bending loads at the I-beam's web in the initial operability evaluation of the discrepant missile shield support structure. This finding had the potential to affect the barrier integrity and initiating events cornerstones and was greater than minor because it had a credible impact on safety, in that, the operability of the reactor missile shield support structure was not adequately justified. Subsequently, the licensee provided a basis for past operability that relied on a coefficient of friction. Therefore, because the missile shield was considered operable, this finding was of very low risk significance (Green) as determined by the Reactor Safety Significance Determination Process (Section 4OA3.6).

Inspection Report# : [2001015\(pdf\)](#)



Dec 29, 2001

**Significance:**

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for errors made in the calculation supporting the missile shield modification.**

A non-cited violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for errors made in the calculation supporting the modification to resolve the discrepant missile shield support structure. This finding had the potential to affect the barrier integrity and initiating events cornerstones and was greater than minor because it had a credible impact on safety, in that, the modification as first proposed, did not adequately restore the design basis. Because the missile shield was considered operable with this inadequate design change, this finding is of very low risk significance (Green) as determined by the Reactor Safety Significance Determination Process (Section 4OA3.6).

Inspection Report# : [2001015\(pdf\)](#)



Dec 29, 2001

**Significance:**

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for failure to apply a design basis load in the initial modification to replace the CRD housing**

A non-cited violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for failure to apply a design basis load in the initial modification to replace the control rod drive mechanism housing and in the calculation to determine the critical crack size for the housings. This finding had the potential to affect the barrier integrity and initiating events cornerstones and was greater than minor because it had a credible impact on safety, in that, the modified housing may not have performed its safety function during a seismic event and the calculated critical crack size was not conservative. Subsequently, all of the CRDM housings were replaced with newly fabricated housings, instead of installing the modified housing. Therefore, this finding did not result in an actual degradation of the primary coolant boundary and is of very low risk significance (Green) as determined by the Reactor Safety Significance Determination Process (Section 4OA3.6).

Inspection Report# : [2001015\(pdf\)](#)**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for failure to consider flow affects on control rod function in the calculation of critical crack size**

A non-cited violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control" was identified for failure to consider flow affects on control rod function in the calculation of critical crack size for the housings. This finding had the potential to affect the barrier integrity and initiating events cornerstones and was greater than minor because it had a credible impact on safety, in that, the operability of a control rod was not justifiable given the leak rate from a postulated crack associated with a weld overlay repair for the CRDM housing. Subsequently, the licensee revised the calculation and concluded that control rod function would not have been affected by the postulated leak. Therefore, this finding was determined to be of very low risk significance (Green) by the Reactor Safety Significance Determination Process (Section 4OA3.6).

Inspection Report# : [2001015\(pdf\)](#)**Significance:** Dec 29, 2001

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**The Failure To Follow Approved Work Instructions And Procedures During Corrective Maintenance On The Safety-Related Motor EMB-2524 for HVAC Condensing Unit VC-11**

Green. The inspectors identified one Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow approved work instructions and procedures during corrective maintenance on the safety-related Motor EMB-2524 for control room heating, ventilation, and air conditioning (HVAC) Condensing Unit VC-11. This self-revealed issue was determined to be of very low significance (Green) by the significance determination process because (1) the issue did not increase the likelihood of a loss of primary coolant system inventory; (2) the issue did not degrade the licensee's ability to terminate a leak path or add RCS inventory when needed; and (3) the issue did not degrade the licensee's ability to recover decay heat removal once lost. Although the Control Room Heating Ventilation and Air Conditioning (HVAC) system is part of the control room barrier, the motor failure did not represent a degradation of the radiological barrier function for the control room and did not represent degradation of the barrier function of the control room against smoke or a toxic atmosphere. In addition, the six days that the "A" Train of Control Room HVAC was out of service to correct this problem, the "B" Train of Control Room HVAC was in service and available. (Section 1R14.2)

Inspection Report# : [2001017\(pdf\)](#)


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## Emergency Preparedness

**Significance:** Feb 10, 2001

Identified By: NRC

Item Type: FIN Finding

**Senior Operator Failed to Notify County and State Officials for a Declared Unusual Event during an Emergency Preparedness Drill**

The inspectors identified that a licensed senior operator failed to notify county and state officials for a declared unusual event during an emergency preparedness drill. Licensee evaluators indicated that the declaration and notification of the unusual event would not be counted as opportunities for performance indicator data. However, the inspectors identified that, during the drill, the criteria for an unusual event were met by simulated plant conditions, an unusual event was declared, and the required notifications were not made. The inspectors determined that this issue could directly impact public health and safety if notifications to county, state and

NRC officials were not completed in a timely manner following an actual declared emergency. The finding was determined to be of very low safety significance (Green) by the emergency preparedness significant determination process. Although the Shift Supervisor failed to make required notifications for a declared unusual event, the issue was a drill critique problem in which licensee personnel failed to identify the problem.

Inspection Report# : [2001002\(pdf\)](#)

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection



**Significance:** Aug 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure Of A Metal Detector To Detect A Test Weapon**

The inspectors identified a Non-Cited Violation of the approved licensee's security plan for the failure of a metal detector to detect a licensee's test device. A detection gap was identified in one zone, which during testing, allowed the licensee's test weapon to pass through undetected on five of five tests. Also, the licensee test procedure was not adequate to identify this detection vulnerability. This finding was determined to be of very low safety significance (Green) by the significance determination process. This issue could have a credible impact on safety because a weapon could enter the protected area undetected. The failure to detect a weapon was contrary to NRC and licensee security plan requirements. This was a Green finding because no malevolent act had occurred, and there had not been greater than two findings in the last four quarters.

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



**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: FIN Finding

### **The Potential That Some Repeatable Performance Issues Regarding Security Force-On-Force Tactical Drills**

The inspectors' determined the potential that some repeatable performance issues regarding security force-on-force tactical drills may not have been properly documented, and that corrective actions may not have been adequately taken to resolve identified deficiencies. This issue, if left uncorrected, could become more safety significant because an identified contingency response problem may not be appropriately identified or corrected. The licensee's corrective action process (CAP) indicates that test failures, adverse trends, and lessons to be learned should be documented in the CAP. The problems identified during these force-on-force drills included lessons to be learned, and failures, which indicated the CAP process was not being followed (bypassed) as it relates to some contingency response activities. This is a finding of very low safety significance because no intrusions had occurred, and there had not been greater than two findings in the last four quarters.

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

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## Miscellaneous

**Significance:** N/A Feb 09, 2002

Identified By: NRC

Item Type: FIN Finding

### **Corrective Action Cross-Cutting Finding For Six Previous Findings Impacting the Initiating Events And Mitigating Systems Cornerstones.**

No Color. Issues with the implementation of the corrective action program were identified in the initiating event and mitigating system cornerstone areas. The inspectors determined that six findings in the past six months indicated an adverse performance trend regarding the implementation of corrective actions. The causal relationships regarding the findings were: (1) conditions adverse to quality were not promptly identified or corrected; and (2) corrective actions failed to preclude repetition of significant conditions

adverse to quality. While the risk of the individual findings was very low (Green), the number of corrective action findings indicated an adverse performance trend pertaining to the implementation of the corrective action program. (Section 40A4.2)

Inspection Report# : [2001017\(pdf\)](#)

**Significance: N/A** Feb 09, 2002

Identified By: NRC

Item Type: FIN Finding

**Human Performance Cross-Cutting Finding For Maintenance Work Performed On Safety-Related Equipment, Six Previous Findings Impacting The Initiating Events, Mitigating Systems And Barriers Cornerstones.**

No Color. Several human performance errors were identified in the initiating event, mitigating system and barrier cornerstone areas. The inspectors determined that six findings in the past twelve months indicated an adverse performance trend regarding maintenance on safety related equipment. The trend indicated common causal factors for the issues with respect to the implementation of work performed, the control of work performed through work instructions or procedures, and the review and oversight of maintenance work performed. While the risk of the individual findings was very low (Green), the number of maintenance-related incidents indicated an adverse human performance trend pertaining to the implementation, control, review and oversight of maintenance activities on safety-related equipment. (Section 40A4.1)

Inspection Report# : [2001017\(pdf\)](#)

**Significance: N/A** Dec 29, 2001

Identified By: NRC

Item Type: FIN Finding

**Human performance finding was identified associated with multiple examples of inadequate engineering products**

No Color. A significant cross-cutting human performance finding was identified associated with multiple examples of inadequate engineering products that provided a technical bases for modifications, operability evaluations and corrective actions. This performance deficiency reflected a lack of rigor applied to performing and verifying mechanical, structural, and metallurgical engineering products that affected the reactor safety cornerstones for initiating event frequency, barrier integrity, and mitigating systems. The NRC is concerned that without inspector intervention, inadequate modifications would have been installed and that degraded equipment would have been returned to service without an adequate basis to confirm operability. At the conclusion of this inspection, the licensee was in the process of performing a comprehensive review to identify and correct the causes of this adverse trend in human performance (Section 40A4).

Inspection Report# : [2001015\(pdf\)](#)

**Significance: N/A** Oct 12, 2001

Identified By: NRC

Item Type: FIN Finding

**Annual Problem Identification and Resolution Inspection**

The inspectors identified that the licensee was generally effective at identifying problems and placing them into the corrective action program. The licensee's corrective action program processes have evolved throughout the past year and progress has been made since the last major revision to the program in March 2001. The program itself contained all the necessary attributes of an acceptable corrective action program and was generally successful in correcting identified issues. Also, based on the interviews conducted during this inspection, workers at the site felt free to input safety issues into the problem identification and resolution programs. However, the inspectors identified several weaknesses regarding the licensee's identification and resolution of problems, prioritization and evaluation of issues, and the effectiveness of corrective actions. Specifically, the inspectors identified issues involving the licensee's failure to promptly identify and correct conditions adverse to quality involving an adverse trend of equipment configuration control, human performance aspects of conditions adverse to quality, instrument air system deficiencies, and repetitive freezing of the traveling screen system sensing lines during cold weather.

Inspection Report# : [2001013\(pdf\)](#)

**Significance: N/A** Jul 28, 2000

Identified By: NRC

Item Type: FIN Finding

**PROBLEM IDENTIFICATION AND RESOLUTION**

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. Also, the inspectors concluded that the licensee personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. However, the inspectors identified several examples of minor problems that did not result in any adverse consequences which were similar to problems identified by licensee personnel during recent self-assessments. Identified problems included conditions adverse to quality that were not being entered into the corrective action program, narrowly focused condition report evaluations, and corrective actions that were ineffectively tracked or had not occurred. Licensee personnel had not completed the evaluations for the condition reports that were initiated for the self-assessment findings when the inspection period ended. Consequently, the inspectors could not assess the effectiveness of any resultant corrective actions. Also, no self-assessments had been completed in accordance with recently revised procedures and therefore the inspectors could not assess the licensee's current program.

Inspection Report# : [2000012\(pdf\)](#)