

Palisades

Initiating Events

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

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: 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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.1 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: 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\(pdf\)](#)



Significance: G 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: G 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: G 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\(pdf\)](#)

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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\(pdf\)](#)

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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\(pdf\)](#)

G

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

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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 seal 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 4OA3.4).

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 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\(pdf\)](#)



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 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\(pdf\)](#)



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 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\(pdf\)](#)



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 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\(pdf\)](#)

G**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 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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Emergency Preparedness

G**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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

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\(pdf\)](#)

Miscellaneous

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : April 01, 2002

Palisades

Initiating Events

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

G

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\(pdf\)](#)

G

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\(pdf\)](#)

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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: 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\(pdf\)](#)

G

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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Barrier Integrity

G**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 seal 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 4OA3.4).

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

G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

Emergency Preparedness

G

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

G**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\(pdf\)](#)G**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\(pdf\)](#)

Miscellaneous

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : April 01, 2002

Palisades

Initiating Events

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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 Continuning 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.1 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 if 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: 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Barrier Integrity

G**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 seal 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 4OA3.4).

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

G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

Emergency Preparedness

G

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

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\(pdf\)](#)

Miscellaneous

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\(pdf\)](#)

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : March 29, 2002

Palisades

Initiating Events

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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 Continuning 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.1 of the NRC Enforcement Policy.

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

G

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 if 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\(pdf\)](#)

G

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\(pdf\)](#)

G

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: 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Barrier Integrity

G**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 seal 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 4OA3.4).

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

G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

Emergency Preparedness

G

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

G**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\(pdf\)](#)G**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\(pdf\)](#)

Miscellaneous

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\(pdf\)](#)

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : March 28, 2002

Palisades

Initiating Events

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

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\(pdf\)](#)G**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\(pdf\)](#)G**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: 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\(pdf\)](#)

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: 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Barrier Integrity

G**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 seal 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 4OA3.4).

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

G

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 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\(pdf\)](#)

G

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 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\(pdf\)](#)

G

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 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\(pdf\)](#)

G

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 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\(pdf\)](#)

G

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 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\(pdf\)](#)

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection



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\(pdf\)](#)



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\(pdf\)](#)

Miscellaneous

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\(pdf\)](#)

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : March 28, 2002

Palisades

Initiating Events

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: G 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: G 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: G 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

G**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\(pdf\)](#)G**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:** 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\(pdf\)](#)



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: 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: 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: 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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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.1 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: 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 seal 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 4OA3.4).

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 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\(pdf\)](#)



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 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\(pdf\)](#)



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 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\(pdf\)](#)



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 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\(pdf\)](#)

G**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 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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Emergency Preparedness

G**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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection



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\(pdf\)](#)



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\(pdf\)](#)

Miscellaneous

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\(pdf\)](#)

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : March 27, 2002

Palisades

Initiating Events

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: G 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: G 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: G 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)

Mitigating Systems

W**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\(pdf\)](#)G**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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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:** 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\(pdf\)](#)G**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\(pdf\)](#)

G

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\(pdf\)](#)

G

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: 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 4OA4.2)

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

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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

G

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 seal 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 4OA3.4).

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 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\(pdf\)](#)



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 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\(pdf\)](#)



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 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\(pdf\)](#)



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 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\(pdf\)](#)

G**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 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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

Emergency Preparedness

G**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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

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\(pdf\)](#)

Miscellaneous

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : March 26, 2002

Palisades

Initiating Events

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

Mitigating Systems

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

W

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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: 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\(pdf\)](#)



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: 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: 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: 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.

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.

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

G

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

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed and accomplished in accordance with documented instructions or procedures. Contrary to this, maintenance staff failed to accomplish the instructions in Work Order 24013763 on January 7, 2002, which resulted in the loss of approximately 300 gallons of component cooling water inventory. This violation is associated with an NRC identified inspection finding that is characterized by the significance determination process as having very low risk significance (Green) and is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, consistent with Section VI.A.1 of the NRC Enforcement Policy.

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

G

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.

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed and accomplished in accordance with documented instructions. Contrary to this, maintenance staff failed to accomplish the instructions in Work Order 24114415 on December 28, 2001, which resulted in the Fire Pump P-9A being unknowingly inoperable from December 28, 2001, until January 4, 2002. This violation is associated with a NRC identified inspection finding that is characterized by the significance determination process as having very low risk significance (Green) and is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, consistent with Section VI.A.1 of the NRC Enforcement Policy

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

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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

G**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

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed and accomplished in accordance with documented instructions. Contrary to this, maintenance staff failed to accomplish the instructions in Work Order 24013763 on December 5, 2001, which resulted in the failure of Control Room HVAC Condensing Unit, VC-11 Motor EMB-2524 on December 29, 2001. This violation is associated with a NRC identified inspection finding that is characterized by the significance determination process as having very low risk significance (Green) and is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, consistent with Section VI.A.1 of the NRC Enforcement Policy.

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.

This adverse human performance trend regarding maintenance of safety-related equipment is not suitable for a Significance Determination Process evaluation. However, this trend has been reviewed by NRC management and is determined to be a substantive cross-cutting issue not captured in individual issues indicating an adverse performance trend, and is a Finding characterized as "No Color."

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

Emergency Preparedness

G**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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

G**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\(pdf\)](#)

Miscellaneous

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 Feb 09, 2002

Identified By: Licensee

Item Type: NCV NonCited Violation

Licensee Identified Criterion XVI Violation For Failure To Promptly Identify And Correct Issues Related To Boric Acid On Primary Coolant Pump Carbon Steel Bolting.

10 CFR 50, Appendix B, Criterion XVI, requires, in part, that conditions adverse to quality are promptly identified and corrected. In December 2001, waste handling staff identified boric acid on the Primary Coolant Pump P-50C carbon steel studs and the licensee performed the required engineering evaluations which revealed two studs were degraded. However, licensee personnel also identified that in September 2000 and May 2001 boric acid was identified on the same studs, and that engineering evaluations of stud wastage were not performed and submitted to the NRC in accordance with ASME Section XI, Code Case N-566-1, as required.

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

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\(pdf\)](#)

Palisades

Initiating Events

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)G**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\(pdf\)](#)

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\(pdf\)](#)

 G

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\(pdf\)](#)

 G

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\(pdf\)](#)

 G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

W

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.1 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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)G**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

G**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 seal 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 4OA3.4).

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

G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)G**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 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\(pdf\)](#)

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

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\(pdf\)](#)

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\(pdf\)](#)

Palisades

Initiating Events

Significance:  Jun 30, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

TS 5.4.1, "Procedures," Licensee Personnel Did Not Maintain the Appropriate, Applicable Procedure for Electrical System Equipment Control

The inspectors identified one Green self-revealed finding that is being treated as a Non-Cited Violation of Technical Specifications 5.4, "Procedures," for the failure to establish and maintain System Operating Procedure 30, "Station Power." This procedure is used for electrical system equipment control, an activity contained in Appendix A to Regulatory Guide 1.33. Specifically, steps for the tag out of stored energy breakers did not provide adequate physical controls to prevent inadvertent system/component interactions. This resulted in the independent tripping of Cooling Tower Pump P-39B on June 11, 2002, while the plant was at full power. This self-revealed finding was determined to be of very low safety significance by the significance determination process, because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

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\(pdf\)](#)

Mitigating Systems

Significance:  Jun 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50, Appendix B, Criterion XVI, Licensee Personnel Failed to Promptly Identify and Correct the Condition Adverse to Quality in CPAL0103678

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding the licensee's review, acceptance, and approval of licensee contractor's procedures utilized to perform work and testing on all safety-related electrical components at the plant. This inspector identified finding was determined to be of very low safety significance 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; (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; and (5) the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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: 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:** 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:** 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 seal 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 4OA3.4).

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 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\(pdf\)](#)

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 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\(pdf\)](#)

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 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\(pdf\)](#)

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 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\(pdf\)](#)

G

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 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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

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\(pdf\)](#)

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : August 29, 2002

Palisades

Initiating Events

Significance:  Jun 30, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

TS 5.4.1, "Procedures," Licensee Personnel Did Not Maintain the Appropriate, Applicable Procedure for Electrical System Equipment Control

The inspectors identified one Green self-revealed finding that is being treated as a Non-Cited Violation of Technical Specifications 5.4, "Procedures," for the failure to establish and maintain System Operating Procedure 30, "Station Power." This procedure is used for electrical system equipment control, an activity contained in Appendix A to Regulatory Guide 1.33. Specifically, steps for the tag out of stored energy breakers did not provide adequate physical controls to prevent inadvertent system/component interactions. This resulted in the independent tripping of Cooling Tower Pump P-39B on June 11, 2002, while the plant was at full power. This self-revealed finding was determined to be of very low safety significance by the significance determination process, because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

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\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure the Inspection and Maintenance of the Safety-Related Expansion Joints Utilized as Flood and High Energy Line Break Barriers

The inspectors identified a 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 ensure activities affecting quality were prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the activities affecting quality dealt with the inspection and maintenance of the safety-related expansion joints utilized as flood and high energy line break barriers between the component cooling water and west engineered safeguards rooms. This issue was more than minor because if left uncorrected the safety-related expansion joints could degrade further, undetected, which could result in an inadequate flood and high energy line break barrier between the component cooling water and the west engineered safeguards rooms. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Conditions Adverse to Quality Regarding Flood Door-196A

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding Flood Door-196A which protected the safety-related equipment in the component cooling water room from a flood in the turbine building. This issue was more than minor because the licensee failed to take adequate corrective actions for a previously identified issue involving the degradation of Flood Door 196A which could potentially cause a flood in the turbine building to spread to the component cooling water room. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

Significance:  Jun 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50, Appendix B, Criterion XVI, Licensee Personnel Failed to Promptly Identify and Correct the Condition Adverse to Quality in CPAL0103678

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding the licensee's review, acceptance, and approval of licensee contractor's procedures utilized to perform work and testing on all safety-related electrical components at the plant. This inspector identified finding was determined to be of very low safety significance 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; (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; and (5) the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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



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\(pdf\)](#)

Inspection Report# : [2002008\(pdf\)](#)



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: 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:  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:  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 seal 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 4OA3.4).

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 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\(pdf\)](#)

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 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\(pdf\)](#)

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 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\(pdf\)](#)

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 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\(pdf\)](#)

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 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\(pdf\)](#)

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\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

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\(pdf\)](#)

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 4OA4.2)

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 4OA4.1)

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 4OA4).

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\(pdf\)](#)

Last modified : December 02, 2002

Palisades

Initiating Events

G**Significance:** Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Rigorously Evaluate Industry Operating Experience Information which Resulted in Inadequate Preventive Maintenance Activities being Developed for the 345 KV Transmission Lines

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to rigorously evaluate industry operating experience information which resulted in inadequate preventive maintenance activities being developed for the 345 Kilo-Volt (KV) transmission lines that connect the plant and the switchyard. Consequently, on December 1, 2002, a connector holding a static wire on the 345 KV transmission line towers between the plant and the switchyard failed. As a result, the static line contacted one phase of the 345 KV lines as well as all three phases of the 345 KV Rear Bus in the switchyard which caused an automatic plant trip on loss of generator load and a loss of startup power. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

Inspection Report# : [2002009\(pdf\)](#)G**Significance:** Jun 30, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

TS 5.4.1, "Procedures," Licensee Personnel Did Not Maintain the Appropriate, Applicable Procedure for Electrical System Equipment Control

The inspectors identified one Green self-revealed finding that is being treated as a Non-Cited Violation of Technical Specifications 5.4, "Procedures," for the failure to establish and maintain System Operating Procedure 30, "Station Power." This procedure is used for electrical system equipment control, an activity contained in Appendix A to Regulatory Guide 1.33. Specifically, steps for the tag out of stored energy breakers did not provide adequate physical controls to prevent inadvertent system/component interactions. This resulted in the independent tripping of Cooling Tower Pump P-39B on June 11, 2002, while the plant was at full power. This self-revealed finding was determined to be of very low safety significance by the significance determination process, because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

Mitigating Systems

G**Significance:** Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate the Root Cause of a Leak in 1992 on the Instrument Line for Safety Injection Tank T-82D

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to adequately evaluate the root cause in 1992 of a leak that occurred on the instrument line for Safety Injection Tank T-82D. Consequently, past corrective actions were not adequate to prevent the leak from recurring on November 11, 2002. As a result, T-82D was rendered inoperable and unavailable to perform the intended safety function of injecting borated water to the reactor during a large break loss of coolant accident. In addition, a NOED had to be issued to extend Technical Specification Limiting Condition 3.5.1, "Safety Injection Tanks," allowed outage time by 24 hours so that repairs could be completed to restore T-82D to an operable status without having to shut down the plant. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the safety injection tanks were only credited for large break loss of coolant accidents; and (2) the exposure time for the inoperable safety injection tank was less than 3 days.

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



Significance: Nov 22, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately implement procedural requirements for the control of scaffolding in the vicinity of safety-related equipment, contrary to the requirements of TS 5.4.1, "Procedures."

The inspectors identified a finding of very low safety significance that is being treated as a Non-Cited Violation of Technical Specification 5.4.1 "Procedures." The licensee failed to adequately implement scaffold control requirements contained in procedure MSM-M-43, "Scaffolding." Seismic scaffolding erected over Component Cooling Water (CCW) pump P-52A was anchored to a safety related pipe support for CCW pump P-52B without engineering evaluation and approval. The finding was greater than minor because the finding would become a more significant concern if left uncorrected. The failure of scaffolding installed in the vicinity of safety-related equipment during a seismic event could result in damage to mitigating equipment. The finding was of very low safety significance because it did not result in the actual loss of the safety function of the train or system.

Inspection Report# : [2002010\(pdf\)](#)



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure the Inspection and Maintenance of the Safety-Related Expansion Joints Utilized as Flood and High Energy Line Break Barriers

The inspectors identified a 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 ensure activities affecting quality were prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the activities affecting quality dealt with the inspection and maintenance of the safety-related expansion joints utilized as flood and high energy line break barriers between the component cooling water and west engineered safeguards rooms. This issue was more than minor because if left uncorrected the safety-related expansion joints could degrade further, undetected, which could result in an inadequate flood and high energy line break barrier between the component cooling water and the west engineered safeguards rooms. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Conditions Adverse to Quality Regarding Flood Door-196A

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding Flood Door-196A which protected the safety-related equipment in the component cooling water room from a flood in the turbine building. This issue was more than minor because the licensee failed to take adequate corrective actions for a previously identified issue involving the degradation of Flood Door 196A which could potentially cause a flood in the turbine building to spread to the component cooling water room. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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



Significance: Jun 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50, Appendix B, Criterion XVI, Licensee Personnel Failed to Promptly Identify and Correct the Condition Adverse to Quality in CPAL0103678

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding the licensee's review, acceptance, and approval of licensee contractor's procedures utilized to perform work and testing on all safety-related electrical components at the plant. This inspector identified finding was determined to be of very low safety significance 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; (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; and (5) the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G

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\(pdf\)](#)

G**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\(pdf\)](#)G**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\(pdf\)](#)

Barrier Integrity

G**Significance:** Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Problems Regarding the Operation of Mechanical Equipment Room Door-16

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct problems regarding the operation of Mechanical Equipment Room Door-16, which resulted in the door failing in the open position of October 10, 2002. This self-revealed finding was determined to be of very low safety significance by the significance determination process because the finding represented a degradation of only the radiological barrier function for the control room.

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

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Nov 22, 2002

Identified By: NRC

Item Type: FIN Finding

Summary Conclusion PI & R Inspection

In general, the plant identified issues and entered them into the corrective action process at an appropriate low-level, although some exceptions to this practice were identified. Nuclear Oversight assessment reports identified issues for the plant to resolve, including issues with corrective action follow through. The majority of issues reviewed were properly categorized and evaluated although some evaluations were narrowly focused, particularly for apparent cause evaluations and extent of condition reviews. Most corrective actions reviewed were appropriately implemented; however, some examples, including one inspection finding, were identified regarding corrective actions that were not fully implemented or fully effective in correcting the identified problem. Corrective action follow-through and effectiveness is one aspect of the corrective action process that could be strengthened to reduce repeat issues at the plant.

Inspection Report# : [2002010\(pdf\)](#)

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 4OA4.2)

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 4OA4.1)

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

Last modified : March 25, 2003

Palisades

1Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Rigorously Evaluate Industry Operating Experience Information which Resulted in Inadequate Preventive Maintenance Activities being Developed for the 345 KV Transmission Lines

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to rigorously evaluate industry operating experience information which resulted in inadequate preventive maintenance activities being developed for the 345 Kilo-Volt (KV) transmission lines that connect the plant and the switchyard. Consequently, on December 1, 2002, a connector holding a static wire on the 345 KV transmission line towers between the plant and the switchyard failed. As a result, the static line contacted one phase of the 345 KV lines as well as all three phases of the 345 KV Rear Bus in the switchyard which caused an automatic plant trip on loss of generator load and a loss of startup power. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

Significance:  Jun 30, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

TS 5.4.1, "Procedures," Licensee Personnel Did Not Maintain the Appropriate, Applicable Procedure for Electrical System Equipment Control

The inspectors identified one Green self-revealed finding that is being treated as a Non-Cited Violation of Technical Specifications 5.4, "Procedures," for the failure to establish and maintain System Operating Procedure 30, "Station Power." This procedure is used for electrical system equipment control, an activity contained in Appendix A to Regulatory Guide 1.33. Specifically, steps for the tag out of stored energy breakers did not provide adequate physical controls to prevent inadvertent system/component interactions. This resulted in the independent tripping of Cooling Tower Pump P-39B on June 11, 2002, while the plant was at full power. This self-revealed finding was determined to be of very low safety significance by the significance determination process, because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

Mitigating Systems

Significance:  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions to Address Scaffolding Control Problems

The inspectors identified a finding for the failure to implement adequate corrective actions to prevent recurrence of issues associated with the construction of seismic scaffolding near safety-related systems. This finding was more than minor because if left uncorrected it would become a more significant safety concern in that inadequately constructed scaffold could affect the availability of mitigating systems during a seismic event. The finding was of very low safety significance because the finding did not screen as potentially risk significant due to a seismic initiating event and did not involve the total loss of any safety function that contributes to core damage accident sequences initiated by seismic events. The inspectors also determined that this finding represented continued human performance deficiencies in the construction of seismic scaffolding near safety-related systems. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate the Root Cause of a Leak in 1992 on the Instrument Line for Safety Injection Tank T-82D

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to adequately evaluate the root cause in 1992 of a leak that occurred on the instrument line for Safety Injection Tank T-82D. Consequently, past corrective actions were not adequate to prevent the leak from recurring on November 11, 2002. As a result, T-82D was rendered inoperable and unavailable to perform the intended safety function of injecting borated water to the reactor during a large break loss of coolant accident. In addition, a NOED had to be issued to extend Technical Specification Limiting Condition 3.5.1, "Safety Injection Tanks," allowed outage time by 24 hours so that repairs could be completed to restore T-82D to an operable status without having to shut down the plant. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the safety injection tanks were only credited for large break loss of coolant accidents; and (2) the exposure time for the inoperable safety injection tank was less than 3 days.

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

Significance:  Nov 22, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately implement procedural requirements for the control of scaffolding in the vicinity of safety-related equipment, contrary to the requirements of TS 5.4.1, "Procedures."

The inspectors identified a finding of very low safety significance that is being treated as a Non-Cited Violation of Technical Specification 5.4.1 "Procedures." The licensee failed to adequately implement scaffold control requirements contained in procedure MSM-M-43, "Scaffolding." Seismic scaffolding erected over Component Cooling Water (CCW) pump P-52A was anchored to a safety related pipe support for CCW pump P-52B without engineering evaluation and approval. The finding was greater than minor because the finding would become a more significant concern if left uncorrected. The failure of scaffolding installed in the vicinity of safety-related equipment during a seismic event could result in damage to mitigating equipment. The finding was of very low safety significance because it did not result in the actual loss of the safety function of the train or system.

Inspection Report# : [2002010\(pdf\)](#)

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure the Inspection and Maintenance of the Safety-Related Expansion Joints Utilized as Flood and High Energy Line Break Barriers

The inspectors identified a 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 ensure activities affecting quality were prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the activities affecting quality dealt with the inspection and maintenance of the safety-related expansion joints utilized as flood and high energy line break barriers between the component cooling water and west engineered safeguards rooms. This issue was more than minor because if left uncorrected the safety-related expansion joints could degrade further, undetected, which could result in an inadequate flood and high energy line break barrier between the component cooling water and the west engineered safeguards rooms. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Conditions Adverse to Quality Regarding Flood Door-196A

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding Flood Door-196A which protected the safety-related equipment in the component cooling water room from a flood in the turbine building. This issue was more than minor because the licensee failed to take adequate corrective actions for a previously identified issue involving the degradation of Flood Door 196A which could potentially cause a flood in the turbine building to spread to the component cooling water room. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

Significance:  Jun 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50, Appendix B, Criterion XVI, Licensee Personnel Failed to Promptly Identify and Correct the Condition Adverse to Quality in CPAL0103678

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding the licensee's review, acceptance, and approval of licensee contractor's procedures utilized to perform work and testing on all safety-related electrical components at the plant. This inspector identified finding was determined to

be of very low safety significance 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; (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; and (5) the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

Barrier Integrity

Significance:  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of the Fueling Handling Area Ventilation System

The inspectors identified a finding for the failure to ensure that testing of the fuel handling area ventilation system was performed in accordance with test procedures which incorporated the appropriate requirements and acceptance limits specified in Technical Specification 5.5.10, "Ventilation Filter Testing Program." This finding was more than minor because if left uncorrected it would become a more significant safety concern in that the radiological barrier function provided by the fuel handling area ventilation system was degraded and was not being tested adequately. The finding was of very low safety significance because the finding represented a degradation of only the radiological barrier function provided for the spent fuel pool. The inspectors also determined that this finding was a result of human performance deficiencies related to developing and implementing the Technical Specification surveillance. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Mar 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Restore an Inoperable Channel of Hydrogen Monitoring

The inspectors determined that a self-revealed finding was associated with the failure to restore an inoperable channel of containment hydrogen monitoring within the allowed outage times specified in Technical Specification Action Statements 3.3.7.A and 3.3.7.D. The finding was more than minor because the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events was affected. The finding was determined to be of very low safety significance after a Region III Senior Reactor Analyst, in conjunction with the inspectors, performed a SDP Phase 3 assessment. Utilizing NUREG-1675, "Basis Document for Large Early Release Frequency Significance Determination Process," the analyst determined that the significance threshold for large early release frequency of 100 volume percent per day leak rate from containment would not be exceeded. The inspectors also noted that this finding was attributable to a latent human performance deficiency which occurred during the April 2001 refueling outage, but was self-revealed in December 2002. A Non-Cited Violation of Technical Specification Section 3.3.7 was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Problems Regarding the Operation of Mechanical Equipment Room Door-16

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct problems regarding the operation of Mechanical Equipment Room Door-16, which resulted in the door failing in the open position of October 10, 2002. This self-revealed finding was determined to be of very low safety significance by the significance determination process because the finding represented a degradation of only the radiological barrier function for the control room.

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

Emergency Preparedness

Significance:  Feb 07, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Critique Per 10 CFR 50.47 (b)(14) Two Instances in the First Quarter of 2002 as being Unsuccessful Drill and Exercise Performance (DEP) Indicator Data to NRC.

A finding of very low safety significance was identified. The finding was due to an inadequate critique of two DEP indicator opportunities that occurred during licensed operator training sessions in the first quarter of 2002. The licensee's critique process failed to identify that the completed emergency notification forms to simulated State and county officials were not marked to indicate whether the notification was associated with a drill or an actual emergency in accordance with regulatory guidance, NEI 99-02, Regulatory Assessment Performance Indicator Guideline, regarding the accuracy of such notifications. The critique failure was considered to be greater than minor because it involved the DEP indicator's value exceeding the threshold between the licensee response (Green) band and the regulatory response (White) band. The critique failure also affected the Emergency Response Organization Performance attribute of the Emergency Preparedness Cornerstone. Since the critique failure was in not identifying that the two notification forms were not marked to indicate whether the notification was associated with a drill or an actual emergency, rather than a risk significant topic (i.e., an incorrect emergency classification, an incorrect protective action recommendation, or an untimely notification), the critique failure is a finding of very low safety significance (Green). Because of the very low safety significance of the finding and because the licensee addressed the finding in its corrective action program, this violation of 10 CFR 50.47(b)(14) is being treated as a Non-Cited Violation.

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

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Nov 22, 2002

Identified By: NRC

Item Type: FIN Finding

Summary Conclusion PI & R Inspection

In general, the plant identified issues and entered them into the corrective action process at an appropriate low-level, although some exceptions to this practice were identified. Nuclear Oversight assessment reports identified issues for the plant to resolve, including issues with corrective action follow through. The majority of issues reviewed were properly categorized and evaluated although some evaluations were narrowly focused, particularly for apparent cause evaluations and extent of condition reviews. Most corrective actions reviewed were appropriately implemented; however, some examples, including one inspection finding, were identified regarding corrective actions that were not fully implemented or fully effective in correcting the identified problem. Corrective action follow-through and effectiveness is one aspect of the corrective action process that could be strengthened to reduce repeat issues at the plant.

Inspection Report# : [2002010\(pdf\)](#)

Last modified : May 30, 2003

Palisades

2Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Incorrect Potential Transformer Fuses Removed

A finding was self-revealed when work order instructions were not followed and incorrect potential transformer fuses were removed on safety-related 2400-Volt Bus 1D with the plant in Mode 6 (Refueling). Removal of the incorrect fuses caused a loss of service air to the steam generator nozzle dams and resulted in primary coolant system leakage past the nozzle dams. The primary cause of this finding was related to the cross-cutting area of human performance. This finding was more than minor because if left uncorrected it would become a more significant safety concern. The finding was of very low safety significance because the event did not result in an inadvertent change in primary coolant system temperature or a significant loss of refueling cavity level. One Non-Cited Violation of Technical Specification 5.4.1 was identified.

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

Significance:  Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

A finding of very low safety significance was self-revealed during an event when an operator failed to adhere to a procedure for operating the chemical volume control system and repeatedly attempted to close a charging pump breaker after the breaker tripped. In addition, the operator failed to trip primary coolant pumps before primary coolant system pressure dropped below the minimum pressure for primary coolant pump operation. The primary cause of this finding was related to the cross-cutting area of Human Performance. The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The repeated operation of an electrical breaker contrary to procedural requirements was a contributing cause to the March 18, 2003, cable spreading room fire. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of Technical Specification 5.4.1, which required the implementation of written procedures covering the chemical volume control system and the reactor coolant system.

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

Significance:  Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Have Adequate Maintenance Procedures

A finding of very low safety significance was self-revealed during an event when the licensee failed to have adequate maintenance procedures in place to ensure that when an electrical breaker was removed to be refurbished, that the arc chutes were reinstalled before the breaker was placed back in service. The finding was more than minor because it

could be reasonably viewed as a precursor to a significant event since a fire resulted in the P-55A charging pump breaker when the arc chutes were not reinstalled after the breaker had been refurbished. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

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

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Rigorously Evaluate Industry Operating Experience Information which Resulted in Inadequate Preventive Maintenance Activities being Developed for the 345 KV Transmission Lines

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to rigorously evaluate industry operating experience information which resulted in inadequate preventive maintenance activities being developed for the 345 Kilo-Volt (KV) transmission lines that connect the plant and the switchyard. Consequently, on December 1, 2002, a connector holding a static wire on the 345 KV transmission line towers between the plant and the switchyard failed. As a result, the static line contacted one phase of the 345 KV lines as well as all three phases of the 345 KV Rear Bus in the switchyard which caused an automatic plant trip on loss of generator load and a loss of startup power. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

Mitigating Systems

Significance:  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions to Address Scaffolding Control Problems

The inspectors identified a finding for the failure to implement adequate corrective actions to prevent recurrence of issues associated with the construction of seismic scaffolding near safety-related systems. This finding was more than minor because if left uncorrected it would become a more significant safety concern in that inadequately constructed scaffold could affect the availability of mitigating systems during a seismic event. The finding was of very low safety significance because the finding did not screen as potentially risk significant due to a seismic initiating event and did not involve the total loss of any safety function that contributes to core damage accident sequences initiated by seismic events. The inspectors also determined that this finding represented continued human performance deficiencies in the construction of seismic scaffolding near safety-related systems. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate the Root Cause of a Leak in 1992 on the Instrument Line for Safety Injection Tank T-82D

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to adequately evaluate the root cause in 1992 of a leak that occurred on the instrument line for Safety Injection Tank T-82D. Consequently, past corrective actions were not adequate to prevent the leak from recurring on November 11, 2002. As a result, T-82D was rendered inoperable and unavailable to perform the intended safety function of injecting borated water to the reactor during a large break loss of coolant accident. In addition, a NOED had to be issued to extend Technical Specification Limiting Condition 3.5.1, "Safety Injection Tanks," allowed outage time by 24 hours so that repairs could be completed to restore T-82D to an operable status without having to shut down the plant. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the safety injection tanks were only credited for large break loss of coolant accidents; and (2) the exposure time for the inoperable safety injection tank was less than 3 days.

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



Significance: Nov 22, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately implement procedural requirements for the control of scaffolding in the vicinity of safety-related equipment, contrary to the requirements of TS 5.4.1, "Procedures."

The inspectors identified a finding of very low safety significance that is being treated as a Non-Cited Violation of Technical Specification 5.4.1 "Procedures." The licensee failed to adequately implement scaffold control requirements contained in procedure MSM-M-43, "Scaffolding." Seismic scaffolding erected over Component Cooling Water (CCW) pump P-52A was anchored to a safety related pipe support for CCW pump P-52B without engineering evaluation and approval. The finding was greater than minor because the finding would become a more significant concern if left uncorrected. The failure of scaffolding installed in the vicinity of safety-related equipment during a seismic event could result in damage to mitigating equipment. The finding was of very low safety significance because it did not result in the actual loss of the safety function of the train or system.

Inspection Report# : [2002010\(pdf\)](#)



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure the Inspection and Maintenance of the Safety-Related Expansion Joints Utilized as Flood and High Energy Line Break Barriers

The inspectors identified a 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 ensure activities affecting quality were prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the activities affecting quality dealt with the inspection and maintenance of the safety-related expansion joints utilized as flood and high energy line break barriers between the component cooling water and west engineered safeguards rooms. This issue was more than minor because if left uncorrected the safety-related expansion joints could degrade further, undetected, which could result in an inadequate flood and high energy line break barrier between the component cooling water and the west engineered safeguards rooms. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not

represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Conditions Adverse to Quality Regarding Flood Door-196A

The inspectors identified a Green finding that is being treated as a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly identify and correct conditions adverse to quality regarding Flood Door-196A which protected the safety-related equipment in the component cooling water room from a flood in the turbine building. This issue was more than minor because the licensee failed to take adequate corrective actions for a previously identified issue involving the degradation of Flood Door 196A which could potentially cause a flood in the turbine building to spread to the component cooling water room. The finding was determined to be a licensee performance deficiency of very low safety significance (Green) by the significance determination process because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time; (4) did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

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

Barrier Integrity



Significance: Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of the Fueling Handling Area Ventilation System

The inspectors identified a finding for the failure to ensure that testing of the fuel handling area ventilation system was performed in accordance with test procedures which incorporated the appropriate requirements and acceptance limits specified in Technical Specification 5.5.10, "Ventilation Filter Testing Program." This finding was more than minor because if left uncorrected it would become a more significant safety concern in that the radiological barrier function provided by the fuel handling area ventilation system was degraded and was not being tested adequately. The finding was of very low safety significance because the finding represented a degradation of only the radiological barrier function provided for the spent fuel pool. The inspectors also determined that this finding was a result of human performance deficiencies related to developing and implementing the Technical Specification surveillance. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," was identified.

Inspection Report# : [2003002\(pdf\)](#)



Significance: Mar 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Restore an Inoperable Channel of Hydrogen Monitoring

The inspectors determined that a self-revealed finding was associated with the failure to restore an inoperable channel

of containment hydrogen monitoring within the allowed outage times specified in Technical Specification Action Statements 3.3.7.A and 3.3.7.D. The finding was more than minor because the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events was affected. The finding was determined to be of very low safety significance after a Region III Senior Reactor Analyst, in conjunction with the inspectors, performed a SDP Phase 3 assessment. Utilizing NUREG-1675, "Basis Document for Large Early Release Frequency Significance Determination Process," the analyst determined that the significance threshold for large early release frequency of 100 volume percent per day leak rate from containment would not be exceeded. The inspectors also noted that this finding was attributable to a latent human performance deficiency which occurred during the April 2001 refueling outage, but was self-revealed in December 2002. A Non-Cited Violation of Technical Specification Section 3.3.7 was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Problems Regarding the Operation of Mechanical Equipment Room Door-16

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct problems regarding the operation of Mechanical Equipment Room Door-16, which resulted in the door failing in the open position of October 10, 2002. This self-revealed finding was determined to be of very low safety significance by the significance determination process because the finding represented a degradation of only the radiological barrier function for the control room.

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

Emergency Preparedness

Significance:  Feb 07, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Critique Per 10 CFR 50.47 (b)(14) Two Instances in the First Quarter of 2002 as being Unsuccessful Drill and Exercise Performance (DEP) Indicator Data to NRC.

A finding of very low safety significance was identified. The finding was due to an inadequate critique of two DEP indicator opportunities that occurred during licensed operator training sessions in the first quarter of 2002. The licensee's critique process failed to identify that the completed emergency notification forms to simulated State and county officials were not marked to indicate whether the notification was associated with a drill or an actual emergency in accordance with regulatory guidance, NEI 99-02, Regulatory Assessment Performance Indicator Guideline, regarding the accuracy of such notifications. The critique failure was considered to be greater than minor because it involved the DEP indicator's value exceeding the threshold between the licensee response (Green) band and the regulatory response (White) band. The critique failure also affected the Emergency Response Organization Performance attribute of the Emergency Preparedness Cornerstone. Since the critique failure was in not identifying that the two notification forms were not marked to indicate whether the notification was associated with a drill or an actual emergency, rather than a risk significant topic (i.e., an incorrect emergency classification, an incorrect protective action recommendation, or an untimely notification), the critique failure is a finding of very low safety significance (Green). Because of the very low safety significance of the finding and because the licensee addressed the finding in its

corrective action program, this violation of 10 CFR 50.47(b)(14) is being treated as a Non-Cited Violation.
Inspection Report# : [2003003\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Nov 22, 2002

Identified By: NRC

Item Type: FIN Finding

Summary Conclusion PI & R Inspection

In general, the plant identified issues and entered them into the corrective action process at an appropriate low-level, although some exceptions to this practice were identified. Nuclear Oversight assessment reports identified issues for the plant to resolve, including issues with corrective action follow through. The majority of issues reviewed were properly categorized and evaluated although some evaluations were narrowly focused, particularly for apparent cause evaluations and extent of condition reviews. Most corrective actions reviewed were appropriately implemented; however, some examples, including one inspection finding, were identified regarding corrective actions that were not fully implemented or fully effective in correcting the identified problem. Corrective action follow-through and effectiveness is one aspect of the corrective action process that could be strengthened to reduce repeat issues at the plant.

Inspection Report# : [2002010\(pdf\)](#)

Last modified : September 04, 2003

Palisades

3Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Incorrect Potential Transformer Fuses Removed

A finding was self-revealed when work order instructions were not followed and incorrect potential transformer fuses were removed on safety-related 2400-Volt Bus 1D with the plant in Mode 6 (Refueling). Removal of the incorrect fuses caused a loss of service air to the steam generator nozzle dams and resulted in primary coolant system leakage past the nozzle dams. The primary cause of this finding was related to the cross-cutting area of human performance.

This finding was more than minor because if left uncorrected it would become a more significant safety concern. The finding was of very low safety significance because the event did not result in an inadvertent change in primary coolant system temperature or a significant loss of refueling cavity level. One Non-Cited Violation of Technical Specification 5.4.1 was identified.

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

Significance:  Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

A finding of very low safety significance was self-revealed during an event when an operator failed to adhere to a procedure for operating the chemical volume control system and repeatedly attempted to close a charging pump breaker after the breaker tripped. In addition, the operator failed to trip primary coolant pumps before primary coolant system pressure dropped below the minimum pressure for primary coolant pump operation. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The repeated operation of an electrical breaker contrary to procedural requirements was a contributing cause to the March 18, 2003, cable spreading room fire. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of Technical Specification 5.4.1, which required the implementation of written procedures covering the chemical volume control system and the reactor coolant system.

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

Significance:  Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Have Adequate Maintenance Procedures

A finding of very low safety significance was self-revealed during an event when the licensee failed to have adequate

maintenance procedures in place to ensure that when an electrical breaker was removed to be refurbished, that the arc chutes were reinstalled before the breaker was placed back in service.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event since a fire resulted in the P-55A charging pump breaker when the arc chutes were not reinstalled after the breaker had been refurbished. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

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

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Rigorously Evaluate Industry Operating Experience Information which Resulted in Inadequate Preventive Maintenance Activities being Developed for the 345 KV Transmission Lines

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to rigorously evaluate industry operating experience information which resulted in inadequate preventive maintenance activities being developed for the 345 Kilo-Volt (KV) transmission lines that connect the plant and the switchyard. Consequently, on December 1, 2002, a connector holding a static wire on the 345 KV transmission line towers between the plant and the switchyard failed. As a result, the static line contacted one phase of the 345 KV lines as well as all three phases of the 345 KV Rear Bus in the switchyard which caused an automatic plant trip on loss of generator load and a loss of startup power. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the finding did not contribute to the likelihood of a Primary or Secondary system Loss of Coolant Accident initiator; (2) the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) the finding did not increase the likelihood of a fire or internal/external flood.

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

Mitigating Systems

Significance:  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions to Address Scaffolding Control Problems

The inspectors identified a finding for the failure to implement adequate corrective actions to prevent recurrence of issues associated with the construction of seismic scaffolding near safety-related systems.

This finding was more than minor because if left uncorrected it would become a more significant safety concern in that inadequately constructed scaffold could affect the availability of mitigating systems during a seismic event. The finding was of very low safety significance because the finding did not screen as potentially risk significant due to a seismic initiating event and did not involve the total loss of any safety function that contributes to core damage accident sequences initiated by seismic events. The inspectors also determined that this finding represented continued human performance deficiencies in the construction of seismic scaffolding near safety-related systems. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate the Root Cause of a Leak in 1992 on the Instrument Line for Safety Injection Tank T-82D

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to adequately evaluate the root cause in 1992 of a leak that occurred on the instrument line for Safety Injection Tank T-82D. Consequently, past corrective actions were not adequate to prevent the leak from recurring on November 11, 2002. As a result, T-82D was rendered inoperable and unavailable to perform the intended safety function of injecting borated water to the reactor during a large break loss of coolant accident. In addition, a NOED had to be issued to extend Technical Specification Limiting Condition 3.5.1, "Safety Injection Tanks," allowed outage time by 24 hours so that repairs could be completed to restore T-82D to an operable status without having to shut down the plant. This self-revealed finding was determined to be of very low safety significance by the significance determination process because: (1) the safety injection tanks were only credited for large break loss of coolant accidents; and (2) the exposure time for the inoperable safety injection tank was less than 3 days.

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

Significance:  Nov 22, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately implement procedural requirements for the control of scaffolding in the vicinity of safety-related equipment, contrary to the requirements of TS 5.4.1, "Procedures."

The inspectors identified a finding of very low safety significance that is being treated as a Non-Cited Violation of Technical Specification 5.4.1 "Procedures." The licensee failed to adequately implement scaffold control requirements contained in procedure MSM-M-43, "Scaffolding." Seismic scaffolding erected over Component Cooling Water (CCW) pump P-52A was anchored to a safety related pipe support for CCW pump P-52B without engineering evaluation and approval.

The finding was greater than minor because the finding would become a more significant concern if left uncorrected. The failure of scaffolding installed in the vicinity of safety-related equipment during a seismic event could result in damage to mitigating equipment. The finding was of very low safety significance because it did not result in the actual loss of the safety function of the train or system.

Inspection Report# : [2002010\(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Degraded Motor Bearing in Containment Air Cooler Fan V-4A

A finding of very low safety significance was self-revealed when the Containment Air Cooler Fan V-4A motor bearing

failed and the fan tripped unexpectedly on July 1, 2003, after the fan was declared operable and returned to service following emergent repairs on June 20, 2003. A lack of rigor in the technical evaluation to determine the operability for Fan V-4A on June 20 resulted in the fan being declared operable and returned to service with more significant motor bearing degradation than recognized by licensee personnel. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because the finding was associated with the Human Performance attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective to provide reasonable assurance that the containment barrier protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because there was no adverse impact on the physical integrity of reactor containment and there was no adverse impact on the atmospheric pressure control function of the reactor containment. Corrective actions to address the issue included replacing the motor for Fan V-4A and entering all containment air cooler fans and motors into a predictive maintenance program. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003006\(pdf\)](#)



Significance: Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of the Fueling Handling Area Ventilation System

The inspectors identified a finding for the failure to ensure that testing of the fuel handling area ventilation system was performed in accordance with test procedures which incorporated the appropriate requirements and acceptance limits specified in Technical Specification 5.5.10, "Ventilation Filter Testing Program."

This finding was more than minor because if left uncorrected it would become a more significant safety concern in that the radiological barrier function provided by the fuel handling area ventilation system was degraded and was not being tested adequately. The finding was of very low safety significance because the finding represented a degradation of only the radiological barrier function provided for the spent fuel pool. The inspectors also determined that this finding was a result of human performance deficiencies related to developing and implementing the Technical Specification surveillance. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," was identified.

Inspection Report# : [2003002\(pdf\)](#)



Significance: Mar 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Restore an Inoperable Channel of Hydrogen Monitoring

The inspectors determined that a self-revealed finding was associated with the failure to restore an inoperable channel of containment hydrogen monitoring within the allowed outage times specified in Technical Specification Action Statements 3.3.7.A and 3.3.7.D.

The finding was more than minor because the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events was affected. The finding was determined to be of very low safety significance after a Region III Senior Reactor Analyst, in conjunction with the inspectors, performed a SDP Phase 3 assessment. Utilizing NUREG-1675, "Basis Document for Large Early Release Frequency Significance Determination Process," the analyst determined that the significance threshold for large early release frequency of 100 volume percent per day leak rate from containment would not be exceeded. The inspectors also noted that this finding was attributable to a latent human performance deficiency which

occurred during the April 2001 refueling outage, but was self-revealed in December 2002. A Non-Cited Violation of Technical Specification Section 3.3.7 was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Promptly Identify and Correct Problems Regarding the Operation of Mechanical Equipment Room Door-16

The inspectors determined that a self-revealed Green finding was associated with a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct problems regarding the operation of Mechanical Equipment Room Door-16, which resulted in the door failing in the open position of October 10, 2002. This self-revealed finding was determined to be of very low safety significance by the significance determination process because the finding represented a degradation of only the radiological barrier function for the control room.

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

Emergency Preparedness

Significance:  Feb 07, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Critique Per 10 CFR 50.47 (b)(14) Two Instances in the First Quarter of 2002 as being Unsuccessful Drill and Exercise Performance (DEP) Indicator Data to NRC.

A finding of very low safety significance was identified. The finding was due to an inadequate critique of two DEP indicator opportunities that occurred during licensed operator training sessions in the first quarter of 2002. The licensee's critique process failed to identify that the completed emergency notification forms to simulated State and county officials were not marked to indicate whether the notification was associated with a drill or an actual emergency in accordance with regulatory guidance, NEI 99-02, Regulatory Assessment Performance Indicator Guideline, regarding the accuracy of such notifications.

The critique failure was considered to be greater than minor because it involved the DEP indicator's value exceeding the threshold between the licensee response (Green) band and the regulatory response (White) band. The critique failure also affected the Emergency Response Organization Performance attribute of the Emergency Preparedness Cornerstone. Since the critique failure was in not identifying that the two notification forms were not marked to indicate whether the notification was associated with a drill or an actual emergency, rather than a risk significant topic (i.e., an incorrect emergency classification, an incorrect protective action recommendation, or an untimely notification), the critique failure is a finding of very low safety significance (Green). Because of the very low safety significance of the finding and because the licensee addressed the finding in its corrective action program, this violation of 10 CFR 50.47(b)(14) is being treated as a Non-Cited Violation.

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

Occupational Radiation Safety

Significance:G

Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Obtain a Radiological Briefing Prior to Entry into a High Radiation Area

A finding of very low safety significance was self-revealed when two workers entered a high radiation area to move a drum and trash bags of radioactive material out of the area without obtaining a briefing regarding the radiological conditions in the area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the workers were not sufficiently cognizant of the radiation fields they could have encountered while inside the high radiation area. The finding was of very low safety significance because the radiological conditions the workers could have encountered were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.e for the conduct of pre-entry high radiation area briefings was identified.

Inspection Report# : [2003006\(pdf\)](#)**Significance:**G

Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Meet Radiation Work Permit Requirements Upon Receipt of an Electronic Dosimetry Alarm

A finding of very low safety significance was self-revealed when a worker failed to stop work and contact radiation protection personnel upon receiving an electronic dosimetry dose rate alarm while rigging a drum of radioactive material to be removed from a posted high radiation area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the failure to appropriately act upon hearing the alarm was a failure of the radiation safety barrier against unplanned and unintended radiation exposures. The finding was of very low safety significance because the dose rates encountered and the worker's short time period within the dose rate field were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.b regarding the control of activities in a high radiation area through a radiation work permit was identified.

Inspection Report# : [2003006\(pdf\)](#)**Significance:**G

Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Barricade and Post a High Radiation Area

A finding of very low safety significance was self-revealed when a drum and trash bags of radioactive material were

moved and created an unposted and unbarricaded high radiation area.

The issue was associated with the Human Performance and Program and Process attributes of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the uncontrolled high radiation area created the potential for unplanned and unintended dose to individuals working in the proximity of the drum and trash bags. The finding was of very low safety significance because the dose rates were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. Upon discovery, the licensee took immediate corrective actions to properly post the high radiation area. Additionally, further surveys were conducted to verify that no other unknown radiological conditions existed. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.a regarding barricading and posting a high radiation area was identified.

Inspection Report# : [2003006\(pdf\)](#)

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Nov 22, 2002

Identified By: NRC

Item Type: FIN Finding

Summary Conclusion PI & R Inspection

In general, the plant identified issues and entered them into the corrective action process at an appropriate low-level, although some exceptions to this practice were identified. Nuclear Oversight assessment reports identified issues for the plant to resolve, including issues with corrective action follow through. The majority of issues reviewed were properly categorized and evaluated although some evaluations were narrowly focused, particularly for apparent cause evaluations and extent of condition reviews. Most corrective actions reviewed were appropriately implemented; however, some examples, including one inspection finding, were identified regarding corrective actions that were not fully implemented or fully effective in correcting the identified problem. Corrective action follow-through and effectiveness is one aspect of the corrective action process that could be strengthened to reduce repeat issues at the plant.

Inspection Report# : [2002010\(pdf\)](#)

Last modified : December 01, 2003

Palisades

4Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation

Incorrect Potential Transformer Fuses Removed

A finding was self-revealed when work order instructions were not followed and incorrect potential transformer fuses were removed on safety-related 2400-Volt Bus 1D with the plant in Mode 6 (Refueling). Removal of the incorrect fuses caused a loss of service air to the steam generator nozzle dams and resulted in primary coolant system leakage past the nozzle dams. The primary cause of this finding was related to the cross-cutting area of human performance.

This finding was more than minor because if left uncorrected it would become a more significant safety concern. The finding was of very low safety significance because the event did not result in an inadvertent change in primary coolant system temperature or a significant loss of refueling cavity level. One Non-Cited Violation of Technical Specification 5.4.1 was identified.

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

Significance:  Apr 04, 2003
Identified By: NRC
Item Type: FIN Finding

White Finding for a Loss of Offsite Power and Loss of Shutdown Cooling Due to Weak Controls for Digging and Excavating

On March 25, 2003, with the plant shutdown for a planned refueling outage, a loss of offsite power and loss of shutdown cooling event occurred when a signpost being installed in the plant parking lot damaged a cable which contained a combination of energized indication circuitry and de-energized protective relaying circuitry. The metal signpost cut and shorted together several of the conductors within the cable, generating a fault signal to the breakers supplying offsite power to the plant, causing the event.

The lack of established controls in the form of administrative policies and procedures for digging and excavating activities as well as the failure to address a problem of weak controls over excavation and digging activities directly led to this event. The finding was determined to have low to moderate safety significance based upon a Phase 3 Significance Determination Process assessment. However, no violation of regulatory requirements was identified since the act of driving the signpost into the ground was not an activity affecting quality.

On December 31, 2003, a final significance determination letter was issued for this White finding.

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

Significance:  Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

A finding of very low safety significance was self-revealed during an event when an operator failed to adhere to a procedure for operating the chemical volume control system and repeatedly attempted to close a charging pump breaker after the breaker tripped. In addition, the operator failed to trip primary coolant pumps before primary coolant system pressure dropped below the minimum pressure for primary coolant pump operation. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The repeated operation of an electrical breaker contrary to procedural requirements was a contributing cause to the March 18, 2003, cable spreading room fire. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of Technical Specification 5.4.1, which required the implementation of written procedures covering the chemical volume control system and the reactor coolant system.

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



Significance: Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Have Adequate Maintenance Procedures

A finding of very low safety significance was self-revealed during an event when the licensee failed to have adequate maintenance procedures in place to ensure that when an electrical breaker was removed to be refurbished, that the arc chutes were reinstalled before the breaker was placed back in service.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event since a fire resulted in the P-55A charging pump breaker when the arc chutes were not reinstalled after the breaker had been refurbished. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

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

Mitigating Systems



Significance: Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 to Open

A finding of very low safety significance was self-revealed when High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 failed to stroke open during surveillance testing. Licensee personnel improperly installed a flow control valve in the operating air system which contributed to the valve failing to stroke open. The finding was more than minor because the availability and capability of High Pressure Safety Injection Pump P-66B was adversely affected. The finding was of very low safety significance because there was not an actual loss of safety function for High Pressure Safety Injection Pump P-66B for greater than the Technical Specification allowed outage time.

Corrective actions to address this issue included reinstalling the flow control valve in the proper direction, testing CV-3070 during a mid-surveillance cycle stroke test, and generating a work order to inspect the CV-3070 valve internals at the earliest opportunity. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions to Address Scaffolding Control Problems

The inspectors identified a finding for the failure to implement adequate corrective actions to prevent recurrence of issues associated with the construction of seismic scaffolding near safety-related systems.

This finding was more than minor because if left uncorrected it would become a more significant safety concern in that inadequately constructed scaffold could affect the availability of mitigating systems during a seismic event. The finding was of very low safety significance because the finding did not screen as potentially risk significant due to a seismic initiating event and did not involve the total loss of any safety function that contributes to core damage accident sequences initiated by seismic events. The inspectors also determined that this finding represented continued human performance deficiencies in the construction of seismic scaffolding near safety-related systems. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003002\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of Containment Spray Pump P-54C Inboard Motor Bearing

A finding of very low safety significance was self-revealed when the Containment Spray Pump P-54C inboard motor bearing failed on August 21, 2003. Following a scheduled oil change on the motor bearing, the bearing housing drain plug was also replaced and enough oil was lost during this drain plug replacement to uncover the bearing; however, the vent on the oiler had been plugged when the pump was painted in June 2002 which resulted in an erroneous level indication in the oiler for the bearing housing. Consequently, the operator did not add sufficient oil through the oiler to the bearing housing after the drain plug was replaced. As a result, the inboard motor bearing was inadequately lubricated which caused the bearing to fail when Containment Spray Pump P-54C was started. This finding was more than minor because if left uncorrected, it would become a more significant safety concern. Specifically, the painted vent hole on the motor bearing oiler resulted in erroneous oil level indication and prevented the oiler from adding oil to the bearing housing when the level decreased. Consequently, an inadequately lubricated bearing would not be detected until the bearing failed. The finding was of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment.

Corrective actions to address this issue included clearing the vent hole on the bearing oiler, verifying that the oiler vent holes on other safety-related pump motors were not painted over and replacing the inboard motor bearing on Containment Spray Pump P-54C. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Sep 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Degraded Motor Bearing in Containment Air Cooler Fan V-4A

A finding of very low safety significance was self-revealed when the Containment Air Cooler Fan V-4A motor bearing failed and the fan tripped unexpectedly on July 1, 2003, after the fan was declared operable and returned to service following emergent repairs on June 20, 2003. A lack of rigor in the technical evaluation to determine the operability for Fan V-4A on June 20 resulted in the fan being declared operable and returned to service with more significant motor bearing degradation than recognized by licensee personnel. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because the finding was associated with the Human Performance attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective to provide reasonable assurance that the containment barrier protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because there was no adverse impact on the physical integrity of reactor containment and there was no adverse impact on the atmospheric pressure control function of the reactor containment. Corrective actions to address the issue included replacing the motor for Fan V-4A and entering all containment air cooler fans and motors into a predictive maintenance program. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of the Fueling Handling Area Ventilation System

The inspectors identified a finding for the failure to ensure that testing of the fuel handling area ventilation system was performed in accordance with test procedures which incorporated the appropriate requirements and acceptance limits specified in Technical Specification 5.5.10, "Ventilation Filter Testing Program."

This finding was more than minor because if left uncorrected it would become a more significant safety concern in that the radiological barrier function provided by the fuel handling area ventilation system was degraded and was not being tested adequately. The finding was of very low safety significance because the finding represented a degradation of only the radiological barrier function provided for the spent fuel pool. The inspectors also determined that this finding was a result of human performance deficiencies related to developing and implementing the Technical Specification surveillance. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," was identified.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Mar 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Restore an Inoperable Channel of Hydrogen Monitoring

The inspectors determined that a self-revealed finding was associated with the failure to restore an inoperable channel of containment hydrogen monitoring within the allowed outage times specified in Technical Specification Action Statements 3.3.7.A and 3.3.7.D.

The finding was more than minor because the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events was affected. The finding was determined to be of very low safety significance after a Region III Senior Reactor Analyst, in conjunction with the inspectors, performed a SDP Phase 3 assessment. Utilizing NUREG-1675, "Basis Document for Large Early Release Frequency Significance Determination Process," the analyst determined that the significance threshold for large early release frequency of 100 volume percent per day leak rate from containment would not be exceeded. The inspectors also noted that this finding was attributable to a latent human performance deficiency which occurred during the April 2001 refueling outage, but was self-revealed in December 2002. A Non-Cited Violation of Technical Specification Section 3.3.7 was identified.

Inspection Report# : [2003002\(pdf\)](#)

Emergency Preparedness

Significance:  Feb 07, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Critique Per 10 CFR 50.47 (b)(14) Two Instances in the First Quarter of 2002 as being Unsuccessful Drill and Exercise Performance (DEP) Indicator Data to NRC

A finding of very low safety significance was identified. The finding was due to an inadequate critique of two DEP indicator opportunities that occurred during licensed operator training sessions in the first quarter of 2002. The licensee's critique process failed to identify that the completed emergency notification forms to simulated State and county officials were not marked to indicate whether the notification was associated with a drill or an actual emergency in accordance with regulatory guidance, NEI 99-02, Regulatory Assessment Performance Indicator Guideline, regarding the accuracy of such notifications.

The critique failure was considered to be greater than minor because it involved the DEP indicator's value exceeding the threshold between the licensee response (Green) band and the regulatory response (White) band. The critique failure also affected the Emergency Response Organization Performance attribute of the Emergency Preparedness Cornerstone. Since the critique failure was in not identifying that the two notification forms were not marked to indicate whether the notification was associated with a drill or an actual emergency, rather than a risk significant topic (i.e., an incorrect emergency classification, an incorrect protective action recommendation, or an untimely notification), the critique failure is a finding of very low safety significance (Green). Because of the very low safety significance of the finding and because the licensee addressed the finding in its corrective action program, this violation of 10 CFR 50.47(b)(14) is being treated as a Non-Cited Violation.

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

Occupational Radiation Safety

Significance:  Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Obtain a Radiological Briefing Prior to Entry into a High Radiation Area

A finding of very low safety significance was self-revealed when two workers entered a high radiation area to move a drum and trash bags of radioactive material out of the area without obtaining a briefing regarding the radiological conditions in the area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the workers were not sufficiently cognizant of the radiation fields they could have encountered while inside the high radiation area. The finding was of very low safety significance because the radiological conditions the workers could have encountered were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.e for the conduct of pre-entry high radiation area briefings was identified.

Inspection Report# : [2003006\(pdf\)](#)



Significance: Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Meet Radiation Work Permit Requirements Upon Receipt of an Electronic Dosimetry Alarm

A finding of very low safety significance was self-revealed when a worker failed to stop work and contact radiation protection personnel upon receiving an electronic dosimetry dose rate alarm while rigging a drum of radioactive material to be removed from a posted high radiation area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the failure to appropriately act upon hearing the alarm was a failure of the radiation safety barrier against unplanned and unintended radiation exposures. The finding was of very low safety significance because the dose rates encountered and the worker's short time period within the dose rate field were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.b regarding the control of activities in a high radiation area through a radiation work permit was identified.

Inspection Report# : [2003006\(pdf\)](#)



Significance: Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Barricade and Post a High Radiation Area

A finding of very low safety significance was self-revealed when a drum and trash bags of radioactive material were moved and created an unposted and unbarricaded high radiation area.

The issue was associated with the Human Performance and Program and Process attributes of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the uncontrolled high radiation area created the

potential for unplanned and unintended dose to individuals working in the proximity of the drum and trash bags. The finding was of very low safety significance because the dose rates were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. Upon discovery, the licensee took immediate corrective actions to properly post the high radiation area. Additionally, further surveys were conducted to verify that no other unknown radiological conditions existed. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.a regarding barricading and posting a high radiation area was identified.

Inspection Report# : [2003006\(pdf\)](#)

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : March 02, 2004

Palisades

1Q/2004 Plant Inspection Findings

Initiating Events



Significance: Jun 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Incorrect Potential Transformer Fuses Removed

A finding was self-revealed when work order instructions were not followed and incorrect potential transformer fuses were removed on safety-related 2400-Volt Bus 1D with the plant in Mode 6 (Refueling). Removal of the incorrect fuses caused a loss of service air to the steam generator nozzle dams and resulted in primary coolant system leakage past the nozzle dams. The primary cause of this finding was related to the cross-cutting area of human performance.

This finding was more than minor because if left uncorrected it would become a more significant safety concern. The finding was of very low safety significance because the event did not result in an inadvertent change in primary coolant system temperature or a significant loss of refueling cavity level. One Non-Cited Violation of Technical Specification 5.4.1 was identified.

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



Significance: Apr 04, 2003

Identified By: NRC

Item Type: FIN Finding

White Finding for a Loss of Offsite Power and Loss of Shutdown Cooling Due to Weak Controls for Digging and Excavating

On March 25, 2003, with the plant shutdown for a planned refueling outage, a loss of offsite power and loss of shutdown cooling event occurred when a signpost being installed in the plant parking lot damaged a cable which contained a combination of energized indication circuitry and de-energized protective relaying circuitry. The metal signpost cut and shorted together several of the conductors within the cable, generating a fault signal to the breakers supplying offsite power to the plant, causing the event.

The lack of established controls in the form of administrative policies and procedures for digging and excavating activities as well as the failure to address a problem of weak controls over excavation and digging activities directly led to this event. The finding was determined to have low to moderate safety significance based upon a Phase 3 Significance Determination Process assessment. However, no violation of regulatory requirements was identified since the act of driving the signpost into the ground was not an activity affecting quality.

On December 31, 2003, a final significance determination letter was issued for this White finding.

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



Significance: Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

A finding of very low safety significance was self-revealed during an event when an operator failed to adhere to a procedure for operating the chemical volume control system and repeatedly attempted to close a charging pump breaker after the breaker tripped. In addition, the operator failed to trip primary coolant pumps before primary coolant system pressure dropped below the minimum pressure for primary coolant pump operation. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The repeated operation of an electrical breaker contrary to procedural requirements was a contributing cause to the March 18, 2003, cable spreading room fire. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of Technical Specification 5.4.1, which required the implementation of written procedures covering the chemical volume control system and the reactor coolant system.

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



Significance: Apr 04, 2003

Identified By: Self Disclosing
Item Type: NCV NonCited Violation

Failure to Have Adequate Maintenance Procedures

A finding of very low safety significance was self-revealed during an event when the licensee failed to have adequate maintenance procedures in place to ensure that when an electrical breaker was removed to be refurbished, that the arc chutes were reinstalled before the breaker was placed back in service.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event since a fire resulted in the P-55A charging pump breaker when the arc chutes were not reinstalled after the breaker had been refurbished. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."
Inspection Report# : [2003005\(pdf\)](#)

Mitigating Systems



Significance: Dec 31, 2003

Identified By: Self Disclosing
Item Type: NCV NonCited Violation

Failure of High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 to Open

A finding of very low safety significance was self-revealed when High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 failed to stroke open during surveillance testing. Licensee personnel improperly installed a flow control valve in the operating air system which contributed to the valve failing to stroke open. The finding was more than minor because the availability and capability of High Pressure Safety Injection Pump P-66B was adversely affected. The finding was of very low safety significance because there was not an actual loss of safety function for High Pressure Safety Injection Pump P-66B for greater than the Technical Specification allowed outage time.

Corrective actions to address this issue included reinstalling the flow control valve in the proper direction, testing CV-3070 during a mid-surveillance cycle stroke test, and generating a work order to inspect the CV-3070 valve internals at the earliest opportunity. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.
Inspection Report# : [2003008\(pdf\)](#)

Barrier Integrity



Significance: Dec 31, 2003

Identified By: Self Disclosing
Item Type: NCV NonCited Violation

Failure of Containment Spray Pump P-54C Inboard Motor Bearing

A finding of very low safety significance was self-revealed when the Containment Spray Pump P-54C inboard motor bearing failed on August 21, 2003. Following a scheduled oil change on the motor bearing, the bearing housing drain plug was also replaced and enough oil was lost during this drain plug replacement to uncover the bearing; however, the vent on the oiler had been plugged when the pump was painted in June 2002 which resulted in an erroneous level indication in the oiler for the bearing housing. Consequently, the operator did not add sufficient oil through the oiler to the bearing housing after the drain plug was replaced. As a result, the inboard motor bearing was inadequately lubricated which caused the bearing to fail when Containment Spray Pump P-54C was started. This finding was more than minor because if left uncorrected, it would become a more significant safety concern. Specifically, the painted vent hole on the motor bearing oiler resulted in erroneous oil level indication and prevented the oiler from adding oil to the bearing housing when the level decreased. Consequently, an inadequately lubricated bearing would not be detected until the bearing failed. The finding was of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment.

Corrective actions to address this issue included clearing the vent hole on the bearing oiler, verifying that the oiler vent holes on other safety-related pump motors were not painted over and replacing the inboard motor bearing on Containment Spray Pump P-54C. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.
Inspection Report# : [2003008\(pdf\)](#)



Significance: Sep 30, 2003

Identified By: Self Disclosing
Item Type: NCV NonCited Violation

Degraded Motor Bearing in Containment Air Cooler Fan V-4A

A finding of very low safety significance was self-revealed when the Containment Air Cooler Fan V-4A motor bearing failed and the fan tripped unexpectedly on July 1, 2003, after the fan was declared operable and returned to service following emergent repairs on June 20, 2003. A lack of rigor in the technical evaluation to determine the operability for Fan V-4A on June 20 resulted in the fan being declared operable and returned to service with more significant motor bearing degradation than recognized by licensee personnel. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because the finding was associated with the Human Performance attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective to provide reasonable assurance that the containment barrier protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because there was no adverse impact on the physical integrity of reactor containment and there was no adverse impact on the atmospheric pressure control function of the reactor containment. Corrective actions to address the issue included replacing the motor for Fan V-4A and entering all containment air cooler fans and motors into a predictive maintenance program. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003006\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety



Significance: Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Obtain a Radiological Briefing Prior to Entry into a High Radiation Area

A finding of very low safety significance was self-revealed when two workers entered a high radiation area to move a drum and trash bags of radioactive material out of the area without obtaining a briefing regarding the radiological conditions in the area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the workers were not sufficiently cognizant of the radiation fields they could have encountered while inside the high radiation area. The finding was of very low safety significance because the radiological conditions the workers could have encountered were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.e for the conduct of pre-entry high radiation area briefings was identified.

Inspection Report# : [2003006\(pdf\)](#)



Significance: Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Meet Radiation Work Permit Requirements Upon Receipt of an Electronic Dosimetry Alarm

A finding of very low safety significance was self-revealed when a worker failed to stop work and contact radiation protection personnel upon receiving an electronic dosimetry dose rate alarm while rigging a drum of radioactive material to be removed from a posted high radiation area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the failure to appropriately act upon hearing the alarm was a failure of the radiation safety barrier against unplanned and unintended radiation exposures. The finding was of very low safety significance because the dose rates encountered and the worker's short time period within the dose rate field were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.b regarding the control of activities in a high radiation area through a radiation work permit was identified.

Inspection Report# : [2003006\(pdf\)](#)

G**Significance:** Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Barricade and Post a High Radiation Area

A finding of very low safety significance was self-revealed when a drum and trash bags of radioactive material were moved and created an unposted and unbarricaded high radiation area.

The issue was associated with the Human Performance and Program and Process attributes of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the uncontrolled high radiation area created the potential for unplanned and unintended dose to individuals working in the proximity of the drum and trash bags. The finding was of very low safety significance because the dose rates were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. Upon discovery, the licensee took immediate corrective actions to properly post the high radiation area. Additionally, further surveys were conducted to verify that no other unknown radiological conditions existed. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.a regarding barricading and posting a high radiation area was identified.

Inspection Report# : [2003006\(pdf\)](#)

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : May 05, 2004

Palisades

2Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Evaluate Operating Experience Information Precluded Implementation of Effective Corrective Actions For Frazil Ice at the Intake Crib

The inspectors identified a finding of very low safety significance when licensee personnel failed to adequately review operating experience information. As a result, frazil ice formed on the intake crib in February 2003 which partially blocked flow from the ultimate heat sink to the intake structure. The finding was more than minor because the finding was associated with the Protection Against External Factors attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the risk significance of the sequences evaluated using the Significance Determination Process Worksheet for the Palisades Nuclear Plant were less than the 1E-6 Green-to-White threshold.

Corrective actions to address this issue included the removal of bar racks from the intake crib to create a large enough gap to minimize the potential for frazil ice to form; revising plant procedures to add alternate methods of supplying water to the intake structure; and implementing the Nuclear Management Company operating experience program fleet procedure at Palisades. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.
Inspection Report# : [2004007\(pdf\)](#)

Mitigating Systems

Significance:  May 20, 2004
Identified By: NRC
Item Type: NCV NonCited Violation

Licensed Operators Were Not Completing the Requirements of 10 CFR 55.53(f) to Reactivate Their licenses Prior to Resuming Watchstation Activities

The inspectors identified that the licensee was not completing the requirements of 10 CFR 55.53(f) prior to allowing inactive licensed operators to resume control room watchstanding duties. Because the Shift Engineer position did not meet the definition of "actively performing the functions of an operator or senior operator" per 10 CFR 55.4, "Definitions," operators inappropriately received credit for license proficiency when standing this watchstation. For licensees that stood this watch station exclusively, their licenses became inactive at the end of the next calendar quarter. When these licensees subsequently stood Shift Manager or Control Room Supervisor watches prior to completing the requirements of 10 CFR 55.53(f), a violation of 10 CFR 55.53(e) requirements occurred.

The finding was more than minor because the failure to satisfy license proficiency requirement increased the likelihood of an operator error involving systems used to mitigate an event. The Significance Determination Process (SDP) Appendix I flowchart focused on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. The sample review of 27 operators revealed that 7 operators had inactive senior operator licenses (26 percent). The inspectors determined from the SDP that this finding was of very low safety significance.
Inspection Report# : [2004008\(pdf\)](#)

Significance:  Apr 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Maintain AFW Design Basis Physical Separation

A finding of very low safety significance was identified for the failure to maintain the design basis configuration (i.e., physical separation) between Auxilliary Feedwater (AFW) system trains. Specifically, the licensee's facility change that converted the spare high pressure safety injection pump into the independent AFW train C was to be physically separated from the AFW trains A and B. However, the AFW trains' A and B common pump discharge header piping was routed through the west safeguards (WESG) room, where the AFW train C pump was located. The primary cause of this finding was that the licensee's facility change provided no engineering evaluation that demonstrated the as-built configuration was acceptable.

This issue was more than minor because the lack of physical separation between the AFW trains' A and B common pump discharge header piping and the AFW train C pump affected the mitigating systems cornerstone objective. Specifically, a common pump discharge header piping break in the WESG room could potentially cause a failure of the AFW train C pump. As a result, the cornerstone objective of ensuring the availability, reliability, and capability of the AFW system to respond to initiating events was affected. The issue was of very low safety significance because it did not represent an

actual loss of a safety function as determined by the licensee's subsequently documented engineering analysis. The issue was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain the design basis configuration (i.e., physical separation) between AFW system trains.

Inspection Report# : [2004003\(pdf\)](#)

Significance:  Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 to Open

A finding of very low safety significance was self-revealed when High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 failed to stroke open during surveillance testing. Licensee personnel improperly installed a flow control valve in the operating air system which contributed to the valve failing to stroke open. The finding was more than minor because the availability and capability of High Pressure Safety Injection Pump P-66B was adversely affected. The finding was of very low safety significance because there was not an actual loss of safety function for High Pressure Safety Injection Pump P-66B for greater than the Technical Specification allowed outage time.

Corrective actions to address this issue included reinstalling the flow control valve in the proper direction, testing CV-3070 during a mid-surveillance cycle stroke test, and generating a work order to inspect the CV-3070 valve internals at the earliest opportunity. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of Containment Spray Pump P-54C Inboard Motor Bearing

A finding of very low safety significance was self-revealed when the Containment Spray Pump P-54C inboard motor bearing failed on August 21, 2003. Following a scheduled oil change on the motor bearing, the bearing housing drain plug was also replaced and enough oil was lost during this drain plug replacement to uncover the bearing; however, the vent on the oiler had been plugged when the pump was painted in June 2002 which resulted in an erroneous level indication in the oiler for the bearing housing. Consequently, the operator did not add sufficient oil through the oiler to the bearing housing after the drain plug was replaced. As a result, the inboard motor bearing was inadequately lubricated which caused the bearing to fail when Containment Spray Pump P-54C was started. This finding was more than minor because if left uncorrected, it would become a more significant safety concern. Specifically, the painted vent hole on the motor bearing oiler resulted in erroneous oil level indication and prevented the oiler from adding oil to the bearing housing when the level decreased. Consequently, an inadequately lubricated bearing would not be detected until the bearing failed. The finding was of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment.

Corrective actions to address this issue included clearing the vent hole on the bearing oiler, verifying that the oiler vent holes on other safety-related pump motors were not painted over and replacing the inboard motor bearing on Containment Spray Pump P-54C. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Sep 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Degraded Motor Bearing in Containment Air Cooler Fan V-4A

A finding of very low safety significance was self-revealed when the Containment Air Cooler Fan V-4A motor bearing failed and the fan tripped unexpectedly on July 1, 2003, after the fan was declared operable and returned to service following emergent repairs on June 20, 2003. A lack of rigor in the technical evaluation to determine the operability for Fan V-4A on June 20 resulted in the fan being declared operable and returned to service with more significant motor bearing degradation than recognized by licensee personnel. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because the finding was associated with the Human Performance attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective to provide reasonable assurance that the containment barrier protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because there was no adverse impact on the physical integrity of reactor containment and there was no adverse impact on the atmospheric pressure control function of the reactor containment. Corrective actions to address the issue included replacing the motor for Fan V-4A and entering all containment air cooler fans and motors into a predictive maintenance program. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003006\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Aug 29, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Obtain a Radiological Briefing Prior to Entry into a High Radiation Area

A finding of very low safety significance was self-revealed when two workers entered a high radiation area to move a drum and trash bags of radioactive material out of the area without obtaining a briefing regarding the radiological conditions in the area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the workers were not sufficiently cognizant of the radiation fields they could have encountered while inside the high radiation area. The finding was of very low safety significance because the radiological conditions the workers could have encountered were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.e for the conduct of pre-entry high radiation area briefings was identified.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Aug 29, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Meet Radiation Work Permit Requirements Upon Receipt of an Electronic Dosimetry Alarm

A finding of very low safety significance was self-revealed when a worker failed to stop work and contact radiation protection personnel upon receiving an electronic dosimetry dose rate alarm while rigging a drum of radioactive material to be removed from a posted high radiation area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the failure to appropriately act upon hearing the alarm was a failure of the radiation safety barrier against unplanned and unintended radiation exposures. The finding was of very low safety significance because the dose rates encountered and the worker's short time period within the dose rate field were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.b regarding the control of activities in a high radiation area through a radiation work permit was identified.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Aug 29, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Barricade and Post a High Radiation Area

A finding of very low safety significance was self-revealed when a drum and trash bags of radioactive material were moved and created an unposted and unbarricaded high radiation area.

The issue was associated with the Human Performance and Program and Process attributes of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the uncontrolled high radiation area created the potential for unplanned and unintended dose to individuals working in the proximity of the drum and trash bags. The finding was of very low safety significance because the dose rates were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. Upon discovery, the licensee took immediate corrective actions to properly post the high radiation area. Additionally, further surveys were conducted to verify that no other unknown radiological conditions existed. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.a regarding barricading and posting a high radiation area was identified.

Inspection Report# : [2003006\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : September 08, 2004

Palisades

3Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2004
Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Opening of Pressurizer Power Operated Relief Valve 1042B

A finding of very low safety significance was self-revealed when testing of the reactor protection system by maintenance personnel caused pressurizer power operated relief valve (PORV) 1042B to open while the plant was in a water solid condition. The primary cause of this finding was related to the cross-cutting area of human performance. The finding was more than minor because it was related to the human performance and procedure quality attributes of the Initiating Events cornerstone. Also, the finding affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations since plant stability was upset while shutdown during solid plant operations with shutdown cooling in service.

A Phase 2 Significance Determination Process analysis was performed by the regional Senior Reactor Analyst which evaluated the key safety functions including core heat removal capability, power availability, containment control, reactivity controls, and inventory control. The Phase 2 analysis determined that all standby injection sources were available to preclude a loss of inventory and there was no possibility that residual heat removal would have been lost. Consequently, the finding screened as Green and therefore was of very low safety significance.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included revising the work order to properly complete the testing activities and completion of an engineering evaluation to verify that no adverse impact on plant equipment resulted from the inadvertent opening of the PORV.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Sep 30, 2004
Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Lift of Main Steam Safety Valve RV-0709

A finding of very low safety significance was self-revealed when main steam safety valve RV-0709 inadvertently lifted on September 14, 2004. Main steam safety valve setpoint testing on RV-0709 was conducted with the plant at power using hydraulic test equipment attached to the valve spindle. The test equipment required an adjustment for final verification testing but was unable to be moved due to residual hydraulic pressure from previous test steps. However, test personnel failed to turn off the hydraulic pump prior to attempting to bleed off the residual pressure. Consequently, hydraulic pressure continued to increase and RV-0709 inadvertently lifted. The primary cause of this finding was related to the cross-cutting area of human performance.

The finding was determined to be more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone. Also, the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations was affected since actions taken during testing activities increased the likelihood of opening a main steam safety valve and upsetting plant stability due to an increased steam demand while at power. However, the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available and therefore screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to licensee procedures to include steps from the vendor test equipment instructions on securing the hydraulic pump.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Jun 30, 2004
Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Operating Experience Information Precluded Implementation of Effective Corrective Actions For Frazil Ice at the Intake Crib

The inspectors identified a finding of very low safety significance when licensee personnel failed to adequately review operating experience information. As a result, frazil ice formed on the intake crib in February 2003 which partially blocked flow from the ultimate heat sink to the intake structure. The finding was more than minor because the finding was associated with the Protection Against External Factors attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the risk significance of the sequences

evaluated using the Significance Determination Process Worksheet for the Palisades Nuclear Plant were less than the 1E-6 Green-to-White threshold.

Corrective actions to address this issue included the removal of bar racks from the intake crib to create a large enough gap to minimize the potential for frazil ice to form; revising plant procedures to add alternate methods of supplying water to the intake structure; and implementing the Nuclear Management Company operating experience program fleet procedure at Palisades. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.
Inspection Report# : [2004007\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure of Auxiliary Packing on High Pressure Safety Injection Pump P-66B

A finding of very low safety significance was self-revealed when the auxiliary packing on high pressure safety injection pump P-66B failed on June 3, 2004, immediately after the pump was started for surveillance testing. During a maintenance activity in March 2004 to replace the auxiliary packing, the procedure that was utilized did not contain adequate guidance. Consequently, the packing was excessively compressed and failed during the inservice surveillance test.

The finding was determined to be more than minor because it was related to the procedure quality attribute of the Mitigating Systems cornerstone. Also, the finding affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences since high pressure safety injection pump P-66A had to be removed from service to replace the auxiliary packing only 3 months after it had been replaced previously. However, because the finding was (1) not a design or qualification deficiency that had been confirmed to result in a loss of function per Generic Letter 91-18; (2) did not represent an actual loss of a safety function; and (3) did not screen as potentially risk significant due to a seismic, flooding, or severe weather event, the finding screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to the maintenance procedure to provide additional guidance on the installation of the auxiliary packing to preclude excessive compression.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  May 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Licensed Operators Were Not Completing the Requirements of 10 CFR 55.53(f) to Reactivate Their licenses Prior to Resuming Watchstation Activities

The inspectors identified that the licensee was not completing the requirements of 10 CFR 55.53(f) prior to allowing inactive licensed operators to resume control room watchstanding duties. Because the Shift Engineer position did not meet the definition of "actively performing the functions of an operator or senior operator" per 10 CFR 55.4, "Definitions," operators inappropriately received credit for license proficiency when standing this watch station. For licensees that stood this watch station exclusively, their licenses became inactive at the end of the next calendar quarter. When these licensees subsequently stood Shift Manager or Control Room Supervisor watches prior to completing the requirements of 10 CFR 55.53(f), a violation of 10 CFR 55.53(e) requirements occurred.

The finding was more than minor because the failure to satisfy license proficiency requirement increased the likelihood of an operator error involving systems used to mitigate an event. The Significance Determination Process (SDP) Appendix I flowchart focused on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. The sample review of 27 operators revealed that 7 operators had inactive senior operator licenses (26 percent). The inspectors determined from the SDP that this finding was of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

Significance:  Apr 09, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain AFW Design Basis Physical Separation

A finding of very low safety significance was identified for the failure to maintain the design basis configuration (i.e., physical separation) between Auxilliary Feedwater (AFW) system trains. Specifically, the licensee's facility change that converted the spare high pressure safety injection pump into the independent AFW train C was to be physically separated from the AFW trains A and B. However, the AFW trains' A and B common pump discharge header piping was routed through the west safeguards (WESG) room, where the AFW train C pump was

located. The primary cause of this finding was that the licensee's facility change provided no engineering evaluation that demonstrated the as-built configuration was acceptable.

This issue was more than minor because the lack of physical separation between the AFW trains' A and B common pump discharge header piping and the AFW train C pump affected the mitigating systems cornerstone objective. Specifically, a common pump discharge header piping break in the WESG room could potentially cause a failure of the AFW train C pump. As a result, the cornerstone objective of ensuring the availability, reliability, and capability of the AFW system to respond to initiating events was affected. The issue was of very low safety significance because it did not represent an actual loss of a safety function as determined by the licensee's subsequently documented engineering analysis. The issue was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain the design basis configuration (i.e., physical separation) between AFW system trains.

Inspection Report# : [2004003\(pdf\)](#)

G

Significance: Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 to Open

A finding of very low safety significance was self-revealed when High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 failed to stroke open during surveillance testing. Licensee personnel improperly installed a flow control valve in the operating air system which contributed to the valve failing to stroke open. The finding was more than minor because the availability and capability of High Pressure Safety Injection Pump P-66B was adversely affected. The finding was of very low safety significance because there was not an actual loss of safety function for High Pressure Safety Injection Pump P-66B for greater than the Technical Specification allowed outage time.

Corrective actions to address this issue included reinstalling the flow control valve in the proper direction, testing CV-3070 during a mid-surveillance cycle stroke test, and generating a work order to inspect the CV-3070 valve internals at the earliest opportunity. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Barrier Integrity

G

Significance: Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of Containment Spray Pump P-54C Inboard Motor Bearing

A finding of very low safety significance was self-revealed when the Containment Spray Pump P-54C inboard motor bearing failed on August 21, 2003. Following a scheduled oil change on the motor bearing, the bearing housing drain plug was also replaced and enough oil was lost during this drain plug replacement to uncover the bearing; however, the vent on the oiler had been plugged when the pump was painted in June 2002 which resulted in an erroneous level indication in the oiler for the bearing housing. Consequently, the operator did not add sufficient oil through the oiler to the bearing housing after the drain plug was replaced. As a result, the inboard motor bearing was inadequately lubricated which caused the bearing to fail when Containment Spray Pump P-54C was started. This finding was more than minor because if left uncorrected, it would become a more significant safety concern. Specifically, the painted vent hole on the motor bearing oiler resulted in erroneous oil level indication and prevented the oiler from adding oil to the bearing housing when the level decreased. Consequently, an inadequately lubricated bearing would not be detected until the bearing failed. The finding was of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment.

Corrective actions to address this issue included clearing the vent hole on the bearing oiler, verifying that the oiler vent holes on other safety-related pump motors were not painted over and replacing the inboard motor bearing on Containment Spray Pump P-54C. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : December 29, 2004

Palisades

4Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Pump Motor Bearing Fire Resulted in Manual Reactor Trip

A finding of very low safety significance was self-revealed on August 31, 2004, when a fire occurred on the lower bearing of the condensate pump P-2B motor. The motor and pump were misaligned during reassembly following maintenance in July 2004 which was not identified when the pump was returned to service. Consequently, the fire was caused by heat that was generated around the bearing due to an overload condition caused by an excessive radial offset between the motor and pump.

This finding was more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Control room operators commenced a rapid downpower in response to the fire and manually tripped the reactor so that the condensate pump motor could be secured. The finding was of very low safety significance because all mitigating systems were available during the event, and the fire was of short duration and was isolated to the motor. No violation of NRC requirements occurred. Planned corrective actions included the development of a written procedure for aligning vertical pumps and motors that specified a method for obtaining alignment data and associated acceptance criteria.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Reject Valve Failed Full Open During Maintenance Activities Resulted In Operator Action to Mitigate Transient

A finding of very low safety significance was self-revealed when condensate reject valve CV-0731 unexpectedly opened during maintenance activities on December 1, 2004, resulting in a low suction pressure to the main feedwater pumps. The primary cause of this finding was related to the cross-cutting area of human performance because licensee personnel failed to follow appropriate administrative procedure requirements when completing minor maintenance activities.

This finding was more than minor because it was related to the human performance attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available during the transient. No violation of NRC requirements occurred. Corrective actions included evaluating all open work requests designated as minor maintenance to ensure that plant operations would not be impacted.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Opening of Pressurizer Power Operated Relief Valve 1042B

A finding of very low safety significance was self-revealed when testing of the reactor protection system by maintenance personnel caused pressurizer power operated relief valve (PORV) 1042B to open while the plant was in a water solid condition. The primary cause of this finding was related to the cross-cutting area of human performance. The finding was more than minor because it was related to the human performance and procedure quality attributes of the Initiating Events cornerstone. Also, the finding affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations since plant stability was upset while shutdown during solid plant operations with shutdown cooling in service.

A Phase 2 Significance Determination Process analysis was performed by the regional Senior Reactor Analyst which evaluated the key safety functions including core heat removal capability, power availability, containment control, reactivity controls, and inventory control. The Phase 2 analysis determined that all standby injection sources were available to preclude a loss of inventory and there was no possibility that residual heat removal would have been lost. Consequently, the finding screened as Green and therefore was of very low safety significance.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included revising the work order to properly complete the testing activities and completion of an engineering evaluation to verify that no adverse impact on plant equipment resulted from the inadvertent opening of the PORV.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Lift of Main Steam Safety Valve RV-0709

A finding of very low safety significance was self-revealed when main steam safety valve RV-0709 inadvertently lifted on September 14, 2004. Main steam safety valve setpoint testing on RV-0709 was conducted with the plant at power using hydraulic test equipment attached to the valve spindle. The test equipment required an adjustment for final verification testing but was unable to be moved due to residual hydraulic pressure from previous test steps. However, test personnel failed to turn off the hydraulic pump prior to attempting to bleed off the residual pressure. Consequently, hydraulic pressure continued to increase and RV-0709 inadvertently lifted. The primary cause of this finding was related to the cross-cutting area of human performance.

The finding was determined to be more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone. Also, the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations was affected since actions taken during testing activities increased the likelihood of opening a main steam safety valve and upsetting plant stability due to an increased steam demand while at power. However, the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available and therefore screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to licensee procedures to include steps from the vendor test equipment instructions on securing the hydraulic pump.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Operating Experience Information Precluded Implementation of Effective Corrective Actions For Frazil Ice at the Intake Crib

The inspectors identified a finding of very low safety significance when licensee personnel failed to adequately review operating experience information. As a result, frazil ice formed on the intake crib in February 2003 which partially blocked flow from the ultimate heat sink to the intake structure. The finding was more than minor because the finding was associated with the Protection Against External Factors attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the risk significance of the sequences evaluated using the Significance Determination Process Worksheet for the Palisades Nuclear Plant were less than the 1E-6 Green-to-White threshold.

Corrective actions to address this issue included the removal of bar racks from the intake crib to create a large enough gap to minimize the potential for frazil ice to form; revising plant procedures to add alternate methods of supplying water to the intake structure; and implementing the Nuclear Management Company operating experience program fleet procedure at Palisades. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2004007\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure of Auxiliary Packing on High Pressure Safety Injection Pump P-66B

A finding of very low safety significance was self-revealed when the auxiliary packing on high pressure safety injection pump P-66B failed on June 3, 2004, immediately after the pump was started for surveillance testing. During a maintenance activity in March 2004 to replace the auxiliary packing, the procedure that was utilized did not contain adequate guidance. Consequently, the packing was excessively compressed and failed during the inservice surveillance test.

The finding was determined to be more than minor because it was related to the procedure quality attribute of the Mitigating Systems cornerstone. Also, the finding affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences since high pressure safety injection pump P-66A had to be removed from service to replace the auxiliary packing only 3 months after it had been replaced previously. However, because the finding was (1) not a design or qualification deficiency that had been confirmed to result in a loss of function per Generic Letter 91-18; (2) did not represent an actual loss of a safety function; and (3) did not screen as potentially risk significant due to a seismic, flooding, or severe weather event, the finding screened

out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to the maintenance procedure to provide additional guidance on the installation of the auxiliary packing to preclude excessive compression.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  May 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Licensed Operators Were Not Completing the Requirements of 10 CFR 55.53(f) to Reactivate Their licenses Prior to Resuming Watchstation Activities

The inspectors identified that the licensee was not completing the requirements of 10 CFR 55.53(f) prior to allowing inactive licensed operators to resume control room watchstanding duties. Because the Shift Engineer position did not meet the definition of "actively performing the functions of an operator or senior operator" per 10 CFR 55.4, "Definitions," operators inappropriately received credit for license proficiency when standing this watch station. For licensees that stood this watch station exclusively, their licenses became inactive at the end of the next calendar quarter. When these licensees subsequently stood Shift Manager or Control Room Supervisor watches prior to completing the requirements of 10 CFR 55.53(f), a violation of 10 CFR 55.53(e) requirements occurred.

The finding was more than minor because the failure to satisfy license proficiency requirement increased the likelihood of an operator error involving systems used to mitigate an event. The Significance Determination Process (SDP) Appendix I flowchart focused on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. The sample review of 27 operators revealed that 7 operators had inactive senior operator licenses (26 percent). The inspectors determined from the SDP that this finding was of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

Significance:  Apr 09, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain AFW Design Basis Physical Separation

A finding of very low safety significance was identified for the failure to maintain the design basis configuration (i.e., physical separation) between Auxilliary Feedwater (AFW) system trains. Specifically, the licensee's facility change that converted the spare high pressure safety injection pump into the independent AFW train C was to be physically separated from the AFW trains A and B. However, the AFW trains' A and B common pump discharge header piping was routed through the west safeguards (WESG) room, where the AFW train C pump was located. The primary cause of this finding was that the licensee's facility change provided no engineering evaluation that demonstrated the as-built configuration was acceptable.

This issue was more than minor because the lack of physical separation between the AFW trains' A and B common pump discharge header piping and the AFW train C pump affected the mitigating systems cornerstone objective. Specifically, a common pump discharge header piping break in the WESG room could potentially cause a failure of the AFW train C pump. As a result, the cornerstone objective of ensuring the availability, reliability, and capability of the AFW system to respond to initiating events was affected. The issue was of very low safety significance because it did not represent an actual loss of a safety function as determined by the licensee's subsequently documented engineering analysis. The issue was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain the design basis configuration (i.e., physical separation) between AFW system trains.

Inspection Report# : [2004003\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Heavy Load Lift of Primary Coolant Pump Outside of Required Path

The inspectors identified a finding of very low safety significance when the defined heavy load path inside containment was not followed on September 28, 2004, when a primary coolant pump motor was lifted and moved using the polar crane. Consequently, a portion of the motor passed over the refueling cavity during the move.

This finding was more than minor because a portion of the heavy load traveled over the open reactor vessel that contained irradiated fuel and therefore could be reasonably viewed as a precursor to a significant event. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review

by NRC management. This finding was of very low safety significance because: (1) the estimated likelihood of dropping the load was only about 1E-5 per crane operation based on a study in NUREG CR-4982 performed for spent fuel pool accidents; (2) the polar crane was in good working condition and had no known deficiencies that would have adversely impacted the crane's ability to lift the load; (3) the duration of the heavy load lift over the reactor cavity was short; and, (4) only a portion of the heavy load passed over the reactor cavity. One Non-Cited Violation of Technical Specification 5.4, "Procedures," was identified. Corrective actions included planned changes to the heavy load procedure and training of personnel involved with heavy load lifts to clearly define that the entire load, regardless of orientation, must be maintained within the heavy load path.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Code UT Calibration Requirements in Procedure of Examination of Nozzle Repair Welds

The inspectors identified a finding of very low safety significance when American Society of Mechanical Engineers Code requirements were not met for an ultrasonic examination procedure associated with the non-destructive examinations of the weld repairs to reactor vessel head penetration nozzles No. 29 and No. 30. Specifically, the licensee failed to incorporate the Code requirements related to the timing, acceptance criteria, and corrective actions for unsatisfactory calibration checks into the ultrasonic examination procedure used for examination of these repair welds. The cause of this finding was related to the cross-cutting area of human performance because the cause of this error was due to a lack of rigor in the review of procedures.

This finding was more than minor because if left uncorrected, unacceptable weld flaws could be allowed to remain in service. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. The finding was of very low safety significance because these errors did not affect the quality of the ultrasonic examination data recorded. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified. As part of their immediate corrective actions, licensee personnel verified that the inadequate procedure had no actual impact on the quality of the weld examination.

Inspection Report# : [2004012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Mar 05, 2004

Identified By: NRC

Item Type: FIN Finding

Problem Identification and Resolution

The inspectors concluded that the licensee's corrective action program attributes enabled timely problem identification commensurate with the significance level and that the threshold for problem identification was sufficiently low. Nuclear Oversight assessment reports appropriately identified problems, including issues associated with corrective action implementation. The majority of issues reviewed during the inspection were properly categorized and evaluated, although some evaluations were narrowly focused and of limited effectiveness.

Overall, the corrective actions reviewed during the inspection were appropriately implemented; however, some examples were identified where

corrective actions were not fully implemented or fully effective in correcting the identified problems. During this inspection, the inspectors found similar examples of corrective action program implementation weaknesses to those identified during the previous Problem Identification and Resolution Inspection. However, the examples were limited in number and significance relative to this previous inspection. The inspectors noted that improvements have been demonstrated in the licensee's corrective action program over the past year. It was also apparent during the review of internal assessments that the licensee was properly focused on improving the corrective action program.

Inspection Report# : [2004004\(pdf\)](#)

Last modified : March 09, 2005

Palisades

1Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Pump Motor Bearing Fire Resulted in Manual Reactor Trip

A finding of very low safety significance was self-revealed on August 31, 2004, when a fire occurred on the lower bearing of the condensate pump P-2B motor. The motor and pump were misaligned during reassembly following maintenance in July 2004 which was not identified when the pump was returned to service. Consequently, the fire was caused by heat that was generated around the bearing due to an overload condition caused by an excessive radial offset between the motor and pump.

This finding was more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Control room operators commenced a rapid downpower in response to the fire and manually tripped the reactor so that the condensate pump motor could be secured. The finding was of very low safety significance because all mitigating systems were available during the event, and the fire was of short duration and was isolated to the motor. No violation of NRC requirements occurred. Planned corrective actions included the development of a written procedure for aligning vertical pumps and motors that specified a method for obtaining alignment data and associated acceptance criteria.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Reject Valve Failed Full Open During Maintenance Activities Resulted In Operator Action to Mitigate Transient

A finding of very low safety significance was self-revealed when condensate reject valve CV-0731 unexpectedly opened during maintenance activities on December 1, 2004, resulting in a low suction pressure to the main feedwater pumps. The primary cause of this finding was related to the cross-cutting area of human performance because licensee personnel failed to follow appropriate administrative procedure requirements when completing minor maintenance activities.

This finding was more than minor because it was related to the human performance attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available during the transient. No violation of NRC requirements occurred. Corrective actions included evaluating all open work requests designated as minor maintenance to ensure that plant operations would not be impacted.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Opening of Pressurizer Power Operated Relief Valve 1042B

A finding of very low safety significance was self-revealed when testing of the reactor protection system by maintenance personnel caused pressurizer power operated relief valve (PORV) 1042B to open while the plant was in a water solid condition. The primary cause of this finding was related to the cross-cutting area of human performance. The finding was more than minor because it was related to the human performance and procedure quality attributes of the Initiating Events cornerstone. Also, the finding affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations since plant stability was upset while shutdown during solid plant operations with shutdown cooling in service.

A Phase 2 Significance Determination Process analysis was performed by the regional Senior Reactor Analyst which evaluated the key safety functions including core heat removal capability, power availability, containment control, reactivity controls, and inventory control. The Phase 2 analysis determined that all standby injection sources were available to preclude a loss of inventory and there was no possibility that residual heat removal would have been lost. Consequently, the finding screened as Green and therefore was of very low safety significance.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included revising the work order to properly complete the testing activities and completion of an engineering evaluation to verify that no adverse impact on plant equipment resulted from the inadvertent opening of the PORV.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Lift of Main Steam Safety Valve RV-0709

A finding of very low safety significance was self-revealed when main steam safety valve RV-0709 inadvertently lifted on September 14, 2004. Main steam safety valve setpoint testing on RV-0709 was conducted with the plant at power using hydraulic test equipment attached to the valve spindle. The test equipment required an adjustment for final verification testing but was unable to be moved due to residual hydraulic pressure from previous test steps. However, test personnel failed to turn off the hydraulic pump prior to attempting to bleed off the residual pressure. Consequently, hydraulic pressure continued to increase and RV-0709 inadvertently lifted. The primary cause of this finding was related to the cross-cutting area of human performance.

The finding was determined to be more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone. Also, the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations was affected since actions taken during testing activities increased the likelihood of opening a main steam safety valve and upsetting plant stability due to an increased steam demand while at power. However, the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available and therefore screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to licensee procedures to include steps from the vendor test equipment instructions on securing the hydraulic pump.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Operating Experience Information Precluded Implementation of Effective Corrective Actions For Frazil Ice at the Intake Crib

The inspectors identified a finding of very low safety significance when licensee personnel failed to adequately review operating experience information. As a result, frazil ice formed on the intake crib in February 2003 which partially blocked flow from the ultimate heat sink to the intake structure. The finding was more than minor because the finding was associated with the Protection Against External Factors attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the risk significance of the sequences evaluated using the Significance Determination Process Worksheet for the Palisades Nuclear Plant were less than the 1E-6 Green-to-White threshold.

Corrective actions to address this issue included the removal of bar racks from the intake crib to create a large enough gap to minimize the potential for frazil ice to form; revising plant procedures to add alternate methods of supplying water to the intake structure; and implementing the Nuclear Management Company operating experience program fleet procedure at Palisades. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2004007\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure of Auxiliary Packing on High Pressure Safety Injection Pump P-66B

A finding of very low safety significance was self-revealed when the auxiliary packing on high pressure safety injection pump P-66B failed on June 3, 2004, immediately after the pump was started for surveillance testing. During a maintenance activity in March 2004 to replace the auxiliary packing, the procedure that was utilized did not contain adequate guidance. Consequently, the packing was excessively compressed and failed during the inservice surveillance test.

The finding was determined to be more than minor because it was related to the procedure quality attribute of the Mitigating Systems cornerstone. Also, the finding affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences since high pressure safety injection pump P-66A had to be removed from service to replace the auxiliary packing only 3 months after it had been replaced previously. However, because the finding was (1) not a design or qualification deficiency that had been confirmed to result in a loss of function per Generic Letter 91-18; (2) did not represent an actual loss of a safety function; and (3) did not screen as potentially risk significant due to a seismic, flooding, or severe weather event, the finding screened

out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to the maintenance procedure to provide additional guidance on the installation of the auxiliary packing to preclude excessive compression.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  May 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Licensed Operators Were Not Completing the Requirements of 10 CFR 55.53(f) to Reactivate Their licenses Prior to Resuming Watchstation Activities

The inspectors identified that the licensee was not completing the requirements of 10 CFR 55.53(f) prior to allowing inactive licensed operators to resume control room watchstanding duties. Because the Shift Engineer position did not meet the definition of "actively performing the functions of an operator or senior operator" per 10 CFR 55.4, "Definitions," operators inappropriately received credit for license proficiency when standing this watch station. For licensees that stood this watch station exclusively, their licenses became inactive at the end of the next calendar quarter. When these licensees subsequently stood Shift Manager or Control Room Supervisor watches prior to completing the requirements of 10 CFR 55.53(f), a violation of 10 CFR 55.53(e) requirements occurred.

The finding was more than minor because the failure to satisfy license proficiency requirement increased the likelihood of an operator error involving systems used to mitigate an event. The Significance Determination Process (SDP) Appendix I flowchart focused on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. The sample review of 27 operators revealed that 7 operators had inactive senior operator licenses (26 percent). The inspectors determined from the SDP that this finding was of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

Significance:  Apr 09, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain AFW Design Basis Physical Separation

A finding of very low safety significance was identified for the failure to maintain the design basis configuration (i.e., physical separation) between Auxilliary Feedwater (AFW) system trains. Specifically, the licensee's facility change that converted the spare high pressure safety injection pump into the independent AFW train C was to be physically separated from the AFW trains A and B. However, the AFW trains' A and B common pump discharge header piping was routed through the west safeguards (WESG) room, where the AFW train C pump was located. The primary cause of this finding was that the licensee's facility change provided no engineering evaluation that demonstrated the as-built configuration was acceptable.

This issue was more than minor because the lack of physical separation between the AFW trains' A and B common pump discharge header piping and the AFW train C pump affected the mitigating systems cornerstone objective. Specifically, a common pump discharge header piping break in the WESG room could potentially cause a failure of the AFW train C pump. As a result, the cornerstone objective of ensuring the availability, reliability, and capability of the AFW system to respond to initiating events was affected. The issue was of very low safety significance because it did not represent an actual loss of a safety function as determined by the licensee's subsequently documented engineering analysis. The issue was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain the design basis configuration (i.e., physical separation) between AFW system trains.

Inspection Report# : [2004003\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Heavy Load Lift of Primary Coolant Pump Outside of Required Path

The inspectors identified a finding of very low safety significance when the defined heavy load path inside containment was not followed on September 28, 2004, when a primary coolant pump motor was lifted and moved using the polar crane. Consequently, a portion of the motor passed over the refueling cavity during the move.

This finding was more than minor because a portion of the heavy load traveled over the open reactor vessel that contained irradiated fuel and therefore could be reasonably viewed as a precursor to a significant event. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review

by NRC management. This finding was of very low safety significance because: (1) the estimated likelihood of dropping the load was only about 1E-5 per crane operation based on a study in NUREG CR-4982 performed for spent fuel pool accidents; (2) the polar crane was in good working condition and had no known deficiencies that would have adversely impacted the crane's ability to lift the load; (3) the duration of the heavy load lift over the reactor cavity was short; and, (4) only a portion of the heavy load passed over the reactor cavity. One Non-Cited Violation of Technical Specification 5.4, "Procedures," was identified. Corrective actions included planned changes to the heavy load procedure and training of personnel involved with heavy load lifts to clearly define that the entire load, regardless of orientation, must be maintained within the heavy load path.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Code UT Calibration Requirements in Procedure of Examination of Nozzle Repair Welds

The inspectors identified a finding of very low safety significance when American Society of Mechanical Engineers Code requirements were not met for an ultrasonic examination procedure associated with the non-destructive examinations of the weld repairs to reactor vessel head penetration nozzles No. 29 and No. 30. Specifically, the licensee failed to incorporate the Code requirements related to the timing, acceptance criteria, and corrective actions for unsatisfactory calibration checks into the ultrasonic examination procedure used for examination of these repair welds. The cause of this finding was related to the cross-cutting area of human performance because the cause of this error was due to a lack of rigor in the review of procedures.

This finding was more than minor because if left uncorrected, unacceptable weld flaws could be allowed to remain in service. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. The finding was of very low safety significance because these errors did not affect the quality of the ultrasonic examination data recorded. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified. As part of their immediate corrective actions, licensee personnel verified that the inadequate procedure had no actual impact on the quality of the weld examination.

Inspection Report# : [2004012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : June 17, 2005

Palisades

2Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Pump Motor Bearing Fire Resulted in Manual Reactor Trip

A finding of very low safety significance was self-revealed on August 31, 2004, when a fire occurred on the lower bearing of the condensate pump P-2B motor. The motor and pump were misaligned during reassembly following maintenance in July 2004 which was not identified when the pump was returned to service. Consequently, the fire was caused by heat that was generated around the bearing due to an overload condition caused by an excessive radial offset between the motor and pump.

This finding was more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Control room operators commenced a rapid downpower in response to the fire and manually tripped the reactor so that the condensate pump motor could be secured. The finding was of very low safety significance because all mitigating systems were available during the event, and the fire was of short duration and was isolated to the motor. No violation of NRC requirements occurred. Planned corrective actions included the development of a written procedure for aligning vertical pumps and motors that specified a method for obtaining alignment data and associated acceptance criteria.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Reject Valve Failed Full Open During Maintenance Activities Resulted In Operator Action to Mitigate Transient

A finding of very low safety significance was self-revealed when condensate reject valve CV-0731 unexpectedly opened during maintenance activities on December 1, 2004, resulting in a low suction pressure to the main feedwater pumps. The primary cause of this finding was related to the cross-cutting area of human performance because licensee personnel failed to follow appropriate administrative procedure requirements when completing minor maintenance activities.

This finding was more than minor because it was related to the human performance attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available during the transient. No violation of NRC requirements occurred. Corrective actions included evaluating all open work requests designated as minor maintenance to ensure that plant operations would not be impacted.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Opening of Pressurizer Power Operated Relief Valve 1042B

A finding of very low safety significance was self-revealed when testing of the reactor protection system by maintenance personnel caused pressurizer power operated relief valve (PORV) 1042B to open while the plant was in a water solid condition. The primary cause of this finding was related to the cross-cutting area of human performance. The finding was more than minor because it was related to the human performance and procedure quality attributes of the Initiating Events cornerstone. Also, the finding affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations since plant stability was upset while shutdown during solid plant operations with shutdown cooling in service.

A Phase 2 Significance Determination Process analysis was performed by the regional Senior Reactor Analyst which evaluated the key safety functions including core heat removal capability, power availability, containment control, reactivity controls, and inventory control. The Phase 2 analysis determined that all standby injection sources were available to preclude a loss of inventory and there was no possibility that residual heat removal would have been lost. Consequently, the finding screened as Green and therefore was of very low safety significance.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included revising the work order to properly complete the testing activities and completion of an engineering evaluation to verify that no adverse impact on plant equipment resulted from the inadvertent opening of the PORV.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Lift of Main Steam Safety Valve RV-0709

A finding of very low safety significance was self-revealed when main steam safety valve RV-0709 inadvertently lifted on September 14, 2004. Main steam safety valve setpoint testing on RV-0709 was conducted with the plant at power using hydraulic test equipment attached to the valve spindle. The test equipment required an adjustment for final verification testing but was unable to be moved due to residual hydraulic pressure from previous test steps. However, test personnel failed to turn off the hydraulic pump prior to attempting to bleed off the residual pressure. Consequently, hydraulic pressure continued to increase and RV-0709 inadvertently lifted. The primary cause of this finding was related to the cross-cutting area of human performance.

The finding was determined to be more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone. Also, the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations was affected since actions taken during testing activities increased the likelihood of opening a main steam safety valve and upsetting plant stability due to an increased steam demand while at power. However, the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available and therefore screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to licensee procedures to include steps from the vendor test equipment instructions on securing the hydraulic pump.

Inspection Report# : [2004010\(pdf\)](#)

Mitigating Systems

Significance:  Apr 02, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Corrective Actions Which Impaired the Ability to Identify the Cause of CV-0823 and CV-0826 Failing to Open

The inspectors identified a finding of very low safety significance (Green) regarding the failure to implement corrective actions in a timely manner to identify why the component cooling water heat exchanger service water outlet valves failed to open in February 2003 and March 2003. Consequently, the cause was not identified and on January 16, 2005, CV-0826, "Component Cooling Water Heat Exchanger E-54B Service Water Outlet Valve," again failed to open when control room operators initially attempted to open the valve. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution for failing to implement corrective actions.

This finding was more than minor because it was related to the equipment performance attribute of the mitigating systems cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences was adversely impacted. Specifically, the reliability and capability of CV-0826 to automatically open on a recirculation actuation signal and provide the required flow to the component cooling water heat exchangers was not ensured when CV-0826 failed to open on January 16, 2005.

The finding was of very low safety significance because the safety function was not lost. A non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified. As an interim corrective action, both CV-0823 and CV-0826 are being cycled on an increased frequency to verify the valves will stroke open. Other planned corrective actions included installing a larger spring in the valve actuators to increase the opening force to overcome high frictional forces and to evaluate and implement appropriate modifications for the valves.

Inspection Report# : [2005004\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure of Auxiliary Packing on High Pressure Safety Injection Pump P-66B

A finding of very low safety significance was self-revealed when the auxiliary packing on high pressure safety injection pump P-66B failed on June 3, 2004, immediately after the pump was started for surveillance testing. During a maintenance activity in March 2004 to replace the auxiliary packing, the procedure that was utilized did not contain adequate guidance. Consequently, the packing was excessively compressed and failed during the inservice surveillance test.

The finding was determined to be more than minor because it was related to the procedure quality attribute of the Mitigating Systems cornerstone. Also, the finding affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences since high pressure safety injection pump P-66A had to be removed from service to

replace the auxiliary packing only 3 months after it had been replaced previously. However, because the finding was (1) not a design or qualification deficiency that had been confirmed to result in a loss of function per Generic Letter 91-18; (2) did not represent an actual loss of a safety function; and (3) did not screen as potentially risk significant due to a seismic, flooding, or severe weather event, the finding screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to the maintenance procedure to provide additional guidance on the installation of the auxiliary packing to preclude excessive compression.

Inspection Report# : [2004010\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Heavy Load Lift of Primary Coolant Pump Outside of Required Path

The inspectors identified a finding of very low safety significance when the defined heavy load path inside containment was not followed on September 28, 2004, when a primary coolant pump motor was lifted and moved using the polar crane. Consequently, a portion of the motor passed over the refueling cavity during the move.

This finding was more than minor because a portion of the heavy load traveled over the open reactor vessel that contained irradiated fuel and therefore could be reasonably viewed as a precursor to a significant event. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. This finding was of very low safety significance because: (1) the estimated likelihood of dropping the load was only about 1E-5 per crane operation based on a study in NUREG CR-4982 performed for spent fuel pool accidents; (2) the polar crane was in good working condition and had no known deficiencies that would have adversely impacted the crane's ability to lift the load; (3) the duration of the heavy load lift over the reactor cavity was short; and, (4) only a portion of the heavy load passed over the reactor cavity. One Non-Cited Violation of Technical Specification 5.4, "Procedures," was identified. Corrective actions included planned changes to the heavy load procedure and training of personnel involved with heavy load lifts to clearly define that the entire load, regardless of orientation, must be maintained within the heavy load path.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Code UT Calibration Requirements in Procedure of Examination of Nozzle Repair Welds

The inspectors identified a finding of very low safety significance when American Society of Mechanical Engineers Code requirements were not met for an ultrasonic examination procedure associated with the non-destructive examinations of the weld repairs to reactor vessel head penetration nozzles No. 29 and No. 30. Specifically, the licensee failed to incorporate the Code requirements related to the timing, acceptance criteria, and corrective actions for unsatisfactory calibration checks into the ultrasonic examination procedure used for examination of these repair welds. The cause of this finding was related to the cross-cutting area of human performance because the cause of this error was due to a lack of rigor in the review of procedures.

This finding was more than minor because if left uncorrected, unacceptable weld flaws could be allowed to remain in service. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. The finding was of very low safety significance because these errors did not affect the quality of the ultrasonic examination data recorded. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified. As part of their immediate corrective actions, licensee personnel verified that the inadequate procedure had no actual impact on the quality of the weld examination.

Inspection Report# : [2004012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : August 24, 2005

Palisades

3Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Maintenance Activities in the Switchyard

A finding of very low safety significance was self-revealed on April 25, 2005, when the 345 kilovolt rear bus in the switchyard was unexpectedly de-energized during planned breaker testing. Consequently, one qualified offsite power source to the onsite electrical distribution system was rendered inoperable for about 30 minutes. Plant administrative procedures did not establish an adequate level of oversight by licensee personnel for activities in the switchyard by personnel working for the switchyard owner.

This finding was more than minor because it was related to the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available while the rear bus was de-energized, and the bus was de-energized for only about 30 minutes. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Contractors Modifying Turbine Drains

A finding of very low safety significance was self-revealed on January 9, 2005, when there was an unexpected lowering of condenser vacuum which resulted in a manual reactor trip. Licensee personnel found that a low pressure turbine bearing drain line had failed which caused the lowering of condenser vacuum. This drain line was to have been permanently plugged in 2003 along with three other drain lines as directed by a permanent modification, but was not included in the work package that was implemented.

The finding was more than minor because it was associated with the design control attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation functions would not be available. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Loss of Primary Coolant Due to Unseated Check Valve

A finding of very low safety significance was self-revealed on May 9, 2005, when the licensee created an unexpected loss of primary coolant inventory while depressurizing a portion of a safety injection line.

The inspectors determined that the finding was more than minor because the finding was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operation. Specifically, the event resulted in an unexpected loss of coolant in excess of Technical Specifications allowable leakage; however, the finding was of very low safety significance since the leakage was within the capacity of the centrifugal charging pumps. This finding represented a Non-Cited Violation of Technical Specification 5.4, "Procedures", in that procedures were not adequate to perform the evolution. Corrective actions included isolating the leak.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Reject Valve Failed Full Open During Maintenance Activities Resulted In Operator Action to Mitigate Transient

A finding of very low safety significance was self-revealed when condensate reject valve CV-0731 unexpectedly opened during maintenance

activities on December 1, 2004, resulting in a low suction pressure to the main feedwater pumps. The primary cause of this finding was related to the cross-cutting area of human performance because licensee personnel failed to follow appropriate administrative procedure requirements when completing minor maintenance activities.

This finding was more than minor because it was related to the human performance attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available during the transient. No violation of NRC requirements occurred. Corrective actions included evaluating all open work requests designated as minor maintenance to ensure that plant operations would not be impacted.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

Condensate Pump Motor Bearing Fire Resulted in Manual Reactor Trip

A finding of very low safety significance was self-revealed on August 31, 2004, when a fire occurred on the lower bearing of the condensate pump P-2B motor. The motor and pump were misaligned during reassembly following maintenance in July 2004 which was not identified when the pump was returned to service. Consequently, the fire was caused by heat that was generated around the bearing due to an overload condition caused by an excessive radial offset between the motor and pump.

This finding was more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Control room operators commenced a rapid downpower in response to the fire and manually tripped the reactor so that the condensate pump motor could be secured. The finding was of very low safety significance because all mitigating systems were available during the event, and the fire was of short duration and was isolated to the motor. No violation of NRC requirements occurred. Planned corrective actions included the development of a written procedure for aligning vertical pumps and motors that specified a method for obtaining alignment data and associated acceptance criteria.

Inspection Report# : [2004012\(pdf\)](#)

Mitigating Systems

G

Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Instruction for Proper Breaker Reassembly

A finding of very low significance (Green) was self-revealed on June 6, 2005, when the licensee discovered that a safety injection valve failed to close as expected. The licensee determined that the procedure used to reassemble the safety-related breaker for the valve was inadequate. This finding represented a Non-Cited Violation of Technical Specifications 5.4, "Procedures," in that procedures were not adequate to ensure the safety related breaker was adequately reassembled after maintenance. Corrective actions included correcting the breaker and looking at other possible breakers with similar failure mechanisms. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of problem identification and resolution in that a previous event investigation from the same valve failing, and corrective actions from the event, were not effective.

The inspectors determined the issue was more than minor because the issue impacted the cornerstone attributes of equipment performance and procedure quality. The deficiency affected the mitigating system objective to ensure availability and reliability of systems that respond to events to prevent core damage. Specifically, some alternate functions, where the valve was shut in the Emergency Operating Procedures to control charging or ensure adequate hot leg injection, would not be available based on this deficiency.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Apr 02, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Corrective Actions Which Impaired the Ability to Identify the Cause of CV-0823 and CV-0826 Failing to Open

The inspectors identified a finding of very low safety significance (Green) regarding the failure to implement corrective actions in a timely manner to identify why the component cooling water heat exchanger service water outlet valves failed to open in February 2003 and March 2003. Consequently, the cause was not identified and on January 16, 2005, CV-0826, "Component Cooling Water Heat Exchanger E-54B Service Water Outlet Valve," again failed to open when control room operators initially attempted to open the valve. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution for failing to implement corrective actions.

This finding was more than minor because it was related to the equipment performance attribute of the mitigating systems cornerstone and the

cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences was adversely impacted. Specifically, the reliability and capability of CV-0826 to automatically open on a recirculation actuation signal and provide the required flow to the component cooling water heat exchangers was not ensured when CV-0826 failed to open on January 16, 2005.

The finding was of very low safety significance because the safety function was not lost. A non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified. As an interim corrective action, both CV-0823 and CV-0826 are being cycled on an increased frequency to verify the valves will stroke open. Other planned corrective actions included installing a larger spring in the valve actuators to increase the opening force to overcome high frictional forces and to evaluate and implement appropriate modifications for the valves.

Inspection Report# : [2005004\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Heavy Load Lift of Primary Coolant Pump Outside of Required Path

The inspectors identified a finding of very low safety significance when the defined heavy load path inside containment was not followed on September 28, 2004, when a primary coolant pump motor was lifted and moved using the polar crane. Consequently, a portion of the motor passed over the refueling cavity during the move.

This finding was more than minor because a portion of the heavy load traveled over the open reactor vessel that contained irradiated fuel and therefore could be reasonably viewed as a precursor to a significant event. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. This finding was of very low safety significance because: (1) the estimated likelihood of dropping the load was only about 1E-5 per crane operation based on a study in NUREG CR-4982 performed for spent fuel pool accidents; (2) the polar crane was in good working condition and had no known deficiencies that would have adversely impacted the crane's ability to lift the load; (3) the duration of the heavy load lift over the reactor cavity was short; and, (4) only a portion of the heavy load passed over the reactor cavity. One Non-Cited Violation of Technical Specification 5.4, "Procedures," was identified. Corrective actions included planned changes to the heavy load procedure and training of personnel involved with heavy load lifts to clearly define that the entire load, regardless of orientation, must be maintained within the heavy load path.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Code UT Calibration Requirements in Procedure of Examination of Nozzle Repair Welds

The inspectors identified a finding of very low safety significance when American Society of Mechanical Engineers Code requirements were not met for an ultrasonic examination procedure associated with the non-destructive examinations of the weld repairs to reactor vessel head penetration nozzles No. 29 and No. 30. Specifically, the licensee failed to incorporate the Code requirements related to the timing, acceptance criteria, and corrective actions for unsatisfactory calibration checks into the ultrasonic examination procedure used for examination of these repair welds. The cause of this finding was related to the cross-cutting area of human performance because the cause of this error was due to a lack of rigor in the review of procedures.

This finding was more than minor because if left uncorrected, unacceptable weld flaws could be allowed to remain in service. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. The finding was of very low safety significance because these errors did not affect the quality of the ultrasonic examination data recorded. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified. As part of their immediate corrective actions, licensee personnel verified that the inadequate procedure had no actual impact on the quality of the weld examination.

Inspection Report# : [2004012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

G**Significance:** Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain Collective Doses ALARA for RWP No. P046005

An NRC-identified finding of very low safety significance was identified when the collective dose for RWP P046005, "Engineered Safeguards Room Cooler Maintenance," conducted during the RO17 refueling outage, exceeded 5 person-rem and exceeded the dose estimate by more than 50 percent.

This finding was more than minor because it was associated with the ALARA planning/dose projection attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The licensee's current 3-year rolling collective dose average was greater than 135 person-rem per unit; however, the actual dose expended for the work activity was not greater than 25 person-rem, and there were no additional ALARA findings identified during the assessment period. Therefore, the finding was of very low safety significance. No violation of regulatory requirements occurred.

Inspection Report# : [2005006\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : November 30, 2005

Palisades

4Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Spent Fuel Pool Crane Manipulated Outside bounds of Approved Procedures

The inspectors identified one finding of very low safety significance and an associated non-cited violation when plant personnel performed activities outside the scope of the work package used to inspect the spent fuel pool crane. On October 11, 2005, while raising a dry fuel storage (DFS) cask from the spent fuel pool following loading of the cask, the emergency brake on the crane engaged. The engaged emergency brake stopped movement of the load resulting in suspension of the load partially out of the pool. During troubleshooting activities, the workers exceeded the bounds of the approved work package by manipulating the brake release. This finding represented a violation of the license by performing work contrary to requirements specified by NUREG-0612. Corrective actions included reinforcing site standards for procedural adherence as well as successfully lowering the DFS cask. The licensee entered the item in the Corrective Action Program.

The finding was not suitable for evaluation under the SDP. However, because the actions by the worker did not result in any load motion and both crane brakes remained set, NRC management determined the finding to be of very low safety significance (Green). This finding also affected the cross cutting area of human performance.

Inspection Report# : [2005012\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Maintenance Activities in the Switchyard

A finding of very low safety significance was self-revealed on April 25, 2005, when the 345 kilovolt rear bus in the switchyard was unexpectedly de-energized during planned breaker testing. Consequently, one qualified offsite power source to the onsite electrical distribution system was rendered inoperable for about 30 minutes. Plant administrative procedures did not establish an adequate level of oversight by licensee personnel for activities in the switchyard by personnel working for the switchyard owner.

This finding was more than minor because it was related to the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available while the rear bus was de-energized, and the bus was de-energized for only about 30 minutes. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Contractors Modifying Turbine Drains

A finding of very low safety significance was self-revealed on January 9, 2005, when there was an unexpected lowering of condenser vacuum which resulted in a manual reactor trip. Licensee personnel found that a low pressure turbine bearing drain line had failed which caused the lowering of condenser vacuum. This drain line was to have been permanently plugged in 2003 along with three other drain lines as directed by a permanent modification, but was not included in the work package that was implemented.

The finding was more than minor because it was associated with the design control attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation functions would not be available. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Loss of Primary Coolant Due to Unseated Check Valve

A finding of very low safety significance was self-revealed on May 9, 2005, when the licensee created an unexpected loss of primary coolant inventory while depressurizing a portion of a safety injection line.

The inspectors determined that the finding was more than minor because the finding was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operation. Specifically, the event resulted in a unexpected loss of coolant in excess of Technical Specifications allowable leakage; however, the finding was of very low safety significance since the leakage was within the capacity of the centrifugal charging pumps. This finding represented a Non-Cited Violation of Technical Specification 5.4, "Procedures", in that procedures were not adequate to perform the evolution. Corrective actions included isolating the leak.

Inspection Report# : [2005006\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Instruction for Proper Breaker Reassembly

A finding of very low significance (Green) was self-revealed on June 6, 2005, when the licensee discovered that a safety injection valve failed to close as expected. The licensee determined that the procedure used to reassemble the safety-related breaker for the valve was inadequate. This finding represented a Non-Cited Violation of Technical Specifications 5.4, "Procedures," in that procedures were not adequate to ensure the safety related breaker was adequately reassembled after maintenance. Corrective actions included correcting the beaker and looking at other possible breakers with similar failure mechanisms. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of problem identification and resolution in that a previous event investigation from the same valve failing, and corrective actions from the event, were not effective.

The inspectors determined the issue was more than minor because the issue impacted the cornerstone attributes of equipment performance and procedure quality. The deficiency affected the mitigating system objective to ensure availability and reliability of systems that respond to events to prevent core damage. Specifically, some alternate functions, where the valve was shut in the Emergency Operating Procedures to control charging or ensure adequate hot leg injection, would not be available based on this deficiency.

Inspection Report# : [2005008\(pdf\)](#)

Significance:  Apr 02, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Corrective Actions Which Impaired the Ability to Identify the Cause of CV-0823 and CV-0826 Failing to Open

The inspectors identified a finding of very low safety significance (Green) regarding the failure to implement corrective actions in a timely manner to identify why the component cooling water heat exchanger service water outlet valves failed to open in February 2003 and March 2003. Consequently, the cause was not identified and on January 16, 2005, CV-0826, "Component Cooling Water Heat Exchanger E-54B Service Water Outlet Valve," again failed to open when control room operators initially attempted to open the valve. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution for failing to implement corrective actions.

This finding was more than minor because it was related to the equipment performance attribute of the mitigating systems cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences was adversely impacted. Specifically, the reliability and capability of CV-0826 to automatically open on a recirculation actuation signal and provide the required flow to the component cooling water heat exchangers was not ensured when CV-0826 failed to open on January 16, 2005.

The finding was of very low safety significance because the safety function was not lost. A non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified. As an interim corrective action, both CV-0823 and CV-0826 are being cycled on an increased frequency to verify the valves will stroke open. Other planned corrective actions included installing a larger spring in the valve actuators to increase the opening force to overcome high frictional forces and to evaluate and implement appropriate modifications for the valves.

Inspection Report# : [2005004\(pdf\)](#)

Barrier Integrity

G**Significance:** Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Declare VHX-4 Cooler Inoperable with a Through-wall Piping Leak

The inspectors identified a finding of very low significance (Green) when the licensee failed to declare the containment air cooler, VHX-4, SW piping inoperable and take action in accordance with licensee procedures and technical specifications when a through-wall (pressure boundary) leak existed. This finding represented a non-cited violation of Technical Specifications 5.4, "Procedures," in that procedures were not properly implemented which would have resulted in declaration of inoperability of component. Corrective actions included conducting repairs to stop the leak. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of human performance in that personnel did not properly follow the procedure for determining operability.

The inspectors determined that the issue was more than minor because the finding impacted the barrier integrity cornerstone attribute for containment barrier performance. The deficiency affected the barrier integrity objective of providing reasonable assurance that physical design barriers for the containment protect the public from radionuclide releases in that part of the boundary to a closed system for a containment penetration was breached. The finding was of very low safety significance since the breach in the containment boundary was small and would have very little impact on offsite dose evaluations.

Inspection Report# : [2005012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

G**Significance:** Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain Collective Doses ALARA for RWP No. P046005

An NRC-identified finding of very low safety significance was identified when the collective dose for RWP P046005, "Engineered Safeguards Room Cooler Maintenance," conducted during the RO17 refueling outage, exceeded 5 person-rem and exceeded the dose estimate by more than 50 percent.

This finding was more than minor because it was associated with the ALARA planning/dose projection attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The licensee's current 3-year rolling collective dose average was greater than 135 person-rem per unit; however, the actual dose expended for the work activity was not greater than 25 person-rem, and there were no additional ALARA findings identified during the assessment period. Therefore, the finding was of very low safety significance. No violation of regulatory requirements occurred.

Inspection Report# : [2005006\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : March 03, 2006

Palisades

1Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Spent Fuel Pool Crane Manipulated Outside bounds of Approved Procedures

The inspectors identified one finding of very low safety significance and an associated non-cited violation when plant personnel performed activities outside the scope of the work package used to inspect the spent fuel pool crane. On October 11, 2005, while raising a dry fuel storage (DFS) cask from the spent fuel pool following loading of the cask, the emergency brake on the crane engaged. The engaged emergency brake stopped movement of the load resulting in suspension of the load partially out of the pool. During troubleshooting activities, the workers exceeded the bounds of the approved work package by manipulating the brake release. This finding represented a violation of the license by performing work contrary to requirements specified by NUREG-0612. Corrective actions included reinforcing site standards for procedural adherence as well as successfully lowering the DFS cask. The licensee entered the item in the Corrective Action Program.

The finding was not suitable for evaluation under the SDP. However, because the actions by the worker did not result in any load motion and both crane brakes remained set, NRC management determined the finding to be of very low safety significance (Green). This finding also affected the cross cutting area of human performance.

Inspection Report# : [2005012\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Maintenance Activities in the Switchyard

A finding of very low safety significance was self-revealed on April 25, 2005, when the 345 kilovolt rear bus in the switchyard was unexpectedly de-energized during planned breaker testing. Consequently, one qualified offsite power source to the onsite electrical distribution system was rendered inoperable for about 30 minutes. Plant administrative procedures did not establish an adequate level of oversight by licensee personnel for activities in the switchyard by personnel working for the switchyard owner.

This finding was more than minor because it was related to the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available while the rear bus was de-energized, and the bus was de-energized for only about 30 minutes. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Contractors Modifying Turbine Drains

A finding of very low safety significance was self-revealed on January 9, 2005, when there was an unexpected lowering of condenser vacuum which resulted in a manual reactor trip. Licensee personnel found that a low pressure turbine bearing drain line had failed which caused the lowering of condenser vacuum. This drain line was to have been permanently plugged in 2003 along with three other drain lines as directed by a permanent modification, but was not included in the work package that was implemented.

The finding was more than minor because it was associated with the design control attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation functions would not be available. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Loss of Primary Coolant Due to Unseated Check Valve

A finding of very low safety significance was self-revealed on May 9, 2005, when the licensee created an unexpected loss of primary coolant inventory while depressurizing a portion of a safety injection line.

The inspectors determined that the finding was more than minor because the finding was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operation. Specifically, the event resulted in an unexpected loss of coolant in excess of Technical Specifications allowable leakage; however, the finding was of very low safety significance since the leakage was within the capacity of the centrifugal charging pumps. This finding represented a Non-Cited Violation of Technical Specification 5.4, "Procedures", in that procedures were not adequate to perform the evolution. Corrective actions included isolating the leak.

Inspection Report# : [2005006\(pdf\)](#)

Mitigating Systems

Significance:  Feb 17, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failed Swagelok Fitting on High Pressure Safety Injection Flow Transmitter FT-0312

A finding of very low safety significance was self-revealed on January 4, 2006, when an incorrectly installed swagelok fitting on high pressure safety injection flow transmitter FT-0312 failed. A Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," was associated with this finding for the failure to have prescribed instructions when the swagelok fitting was originally installed during field change FC-731 in 1988. Corrective actions included: the swagelok fitting on FT-0312 was repaired and verified to be installed correctly; two other swagelok fittings on high pressure safety injection flow transmitters were disassembled, inspected and repaired as necessary; other swagelok fittings installed in 1988 during field change FC-731 were visually inspected to verify that there was no evidence of leakage. Additional swagelok fittings were scheduled to be disassembled and inspected during the 2006 refueling outage to further address extent of condition.

This finding was more than minor because it was associated with the equipment performance attribute for mitigating systems and the cornerstone objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences was affected. Specifically, a leak from the failed swagelok fitting on the high pressure safety injection system flow transmitter FT-0312 would have decreased the capability of the high pressure safety injection system to inject water to the reactor core during a small break loss of coolant accident. The finding is of very low safety significance because the high pressure safety injection system's safety function was not lost.

Inspection Report# : [2006003\(pdf\)](#)

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Instruction for Proper Breaker Reassembly

A finding of very low significance (Green) was self-revealed on June 6, 2005, when the licensee discovered that a safety injection valve failed to close as expected. The licensee determined that the procedure used to reassemble the safety-related breaker for the valve was inadequate. This finding represented a Non-Cited Violation of Technical Specifications 5.4, "Procedures," in that procedures were not adequate to ensure the safety related breaker was adequately reassembled after maintenance. Corrective actions included correcting the beaker and looking at other possible breakers with similar failure mechanisms. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of problem identification and resolution in that a previous event investigation from the same valve failing, and corrective actions from the event, were not effective.

The inspectors determined the issue was more than minor because the issue impacted the cornerstone attributes of equipment performance and procedure quality. The deficiency affected the mitigating system objective to ensure availability and reliability of systems that respond to events to prevent core damage. Specifically, some alternate functions, where the valve was shut in the Emergency Operating Procedures to control charging or ensure adequate hot leg injection, would not be available based on this deficiency.

Inspection Report# : [2005008\(pdf\)](#)

Significance:  Apr 02, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Corrective Actions Which Impaired the Ability to Identify the Cause of CV-0823 and CV-0826 Failing to Open

The inspectors identified a finding of very low safety significance (Green) regarding the failure to implement corrective actions in a timely manner to identify why the component cooling water heat exchanger service water outlet valves failed to open in February 2003 and March 2003. Consequently, the cause was not identified and on January 16, 2005, CV-0826, "Component Cooling Water Heat Exchanger E-54B

Service Water Outlet Valve," again failed to open when control room operators initially attempted to open the valve. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution for failing to implement corrective actions.

This finding was more than minor because it was related to the equipment performance attribute of the mitigating systems cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences was adversely impacted. Specifically, the reliability and capability of CV-0826 to automatically open on a recirculation actuation signal and provide the required flow to the component cooling water heat exchangers was not ensured when CV-0826 failed to open on January 16, 2005.

The finding was of very low safety significance because the safety function was not lost. A non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified. As an interim corrective action, both CV-0823 and CV-0826 are being cycled on an increased frequency to verify the valves will stroke open. Other planned corrective actions included installing a larger spring in the valve actuators to increase the opening force to overcome high frictional forces and to evaluate and implement appropriate modifications for the valves.

Inspection Report# : [2005004\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Declare VHX-4 Cooler Inoperable with a Through-wall Piping Leak

The inspectors identified a finding of very low significance (Green) when the licensee failed to declare the containment air cooler, VHX-4, SW piping inoperable and take action in accordance with licensee procedures and technical specifications when a through-wall (pressure boundary) leak existed. This finding represented a non-cited violation of Technical Specifications 5.4, "Procedures," in that procedures were not properly implemented which would have resulted in declaration of inoperability of component. Corrective actions included conducting repairs to stop the leak. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of human performance in that personnel did not properly follow the procedure for determining operability.

The inspectors determined that the issue was more than minor because the finding impacted the barrier integrity cornerstone attribute for containment barrier performance. The deficiency affected the barrier integrity objective of providing reasonable assurance that physical design barriers for the containment protect the public from radionuclide releases in that part of the boundary to a closed system for a containment penetration was breached. The finding was of very low safety significance since the breach in the containment boundary was small and would have very little impact on offsite dose evaluations.

Inspection Report# : [2005012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain Collective Doses ALARA for RWP No. P046005

An NRC-identified finding of very low safety significance was identified when the collective dose for RWP P046005, "Engineered Safeguards Room Cooler Maintenance," conducted during the RO17 refueling outage, exceeded 5 person-rem and exceeded the dose estimate by more than 50 percent.

This finding was more than minor because it was associated with the ALARA planning/dose projection attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The licensee's current 3-year rolling collective dose average was greater than 135 person-rem per unit; however, the actual dose expended for the work activity was not greater than 25 person-rem, and there were no additional ALARA findings identified during the assessment period. Therefore, the finding was of very low safety significance. No violation of regulatory requirements occurred.

Inspection Report# : [2005006\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : May 25, 2006

Palisades

2Q/2006 Plant Inspection Findings

Initiating Events

G**Significance:** Apr 02, 2006

Identified By: NRC

Item Type: FIN Finding

Moisture Separator Reheater Relief Valve Could Not Be Reseated

The inspectors determined that a finding of very low safety significance (Green) was self-revealed when a Moisture Separator Reheater relief valve failed to reseal during testing. This failure resulted in a slight power rise due to the additional steam demand. Although the operations staff believed a method existed to manually close the valve, a manual method did not exist and a power reduction was needed to reseal the valve. This finding also affected the cross-cutting area of human performance. The licensee stopped use of the procedure and entered the item into their corrective action program.

The inspectors determined that not having adequate planning, contingency plans and procedures in place to reseal the relief valve is more than minor because the failure affected the initiating event cornerstone attribute of procedure quality and increased the likelihood an initiating event due to the increased steam demand of an unseated relief valve. The finding is of very low safety significance since the event did not impact LOCA initiators, mitigation equipment or external event initiators. Corrective action included placing a hold on all relief valve testing until completion of a formal cause evaluation as well as placing this in the CAP system. No violation of NRC requirements occurred.

Inspection Report# : [2006002\(pdf\)](#)G**Significance:** Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Spent Fuel Pool Crane Manipulated Outside bounds of Approved Procedures

The inspectors identified one finding of very low safety significance and an associated non-cited violation when plant personnel performed activities outside the scope of the work package used to inspect the spent fuel pool crane. On October 11, 2005, while raising a dry fuel storage (DFS) cask from the spent fuel pool following loading of the cask, the emergency brake on the crane engaged. The engaged emergency brake stopped movement of the load resulting in suspension of the load partially out of the pool. During troubleshooting activities, the workers exceeded the bounds of the approved work package by manipulating the brake release. This finding represented a violation of the license by performing work contrary to requirements specified by NUREG-0612. Corrective actions included reinforcing site standards for procedural adherence as well as successfully lowering the DFS cask. The licensee entered the item in the Corrective Action Program.

The finding was not suitable for evaluation under the SDP. However, because the actions by the worker did not result in any load motion and both crane brakes remained set, NRC management determined the finding to be of very low safety significance (Green). This finding also affected the cross cutting area of human performance.

Inspection Report# : [2005012\(pdf\)](#)

Mitigating Systems

G**Significance:** Apr 02, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to comply with TS 5.4.1, "Procedures," for an Inadequate Procedure Installing a commercial grade, portable ground detector

The inspectors identified a finding of very low safety significance (Green) when the procedure used to install commercial grade portable ground detection equipment did not provide adequate Class 1E to non-Class 1E separation. During this installation, the licensee did not declare the affected bus inoperable. This finding represented a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure related to installing a commercial grade, portable ground detector which was not appropriate for the circumstances. The licensee entered the item in the corrective action program and has restricted use of the procedure. The portable ground detection equipment has been removed.

This finding is more than minor because the installation of this temporary equipment impacted the DC bus and made the bus more susceptible to a fault thus degrading a mitigating system function. The finding is of very low safety significance because the improper installation did not result in loss of availability of the bus and only one bus was affected at a time.

Inspection Report# : [2006002\(pdf\)](#)



Significance: Apr 02, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Test the Emergency Diesel Generators Resulting in Preconditioning

The inspectors identified a finding of very low safety significance (Green) when the Emergency Diesel Generators (EDGs) were unacceptably preconditioned prior to testing. This finding represented a non-cited violation of 10 CFR 50 Appendix B, Criterion XI in that the tests were not performed under suitable environmental conditions. The licensee entered the item in the corrective action program.

This finding is more than minor because unacceptable preconditioning can change the as-found condition of the EDG system and therefore mask potential performance issues. The finding is of very low safety significance due to the limited impact that the preconditioning had on the EDG performance. All indications after the testing was performed with an acceptable test is that the machine performance is currently acceptable.

Inspection Report# : [2006002\(pdf\)](#)



Significance: Feb 17, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failed Swagelok Fitting on High Pressure Safety Injection Flow Transmitter FT-0312

A finding of very low safety significance was self-revealed on January 4, 2006, when an incorrectly installed swagelok fitting on high pressure safety injection flow transmitter FT-0312 failed. A Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," was associated with this finding for the failure to have prescribed instructions when the swagelok fitting was originally installed during field change FC-731 in 1988. Corrective actions included: the swagelok fitting on FT-0312 was repaired and verified to be installed correctly; two other swagelok fittings on high pressure safety injection flow transmitters were disassembled, inspected and repaired as necessary; other swagelok fittings installed in 1988 during field change FC-731 were visually inspected to verify that there was no evidence of leakage. Additional swagelok fittings were scheduled to be disassembled and inspected during the 2006 refueling outage to further address extent of condition.

This finding was more than minor because it was associated with the equipment performance attribute for mitigating systems and the cornerstone objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences was affected. Specifically, a leak from the failed swagelok fitting on the high pressure safety injection system flow transmitter FT-0312 would have decreased the capability of the high pressure safety injection system to inject water to the reactor core during a small break loss of coolant accident. The finding is of very low safety significance because the high pressure safety injection system's safety function was not lost.

Inspection Report# : [2006003\(pdf\)](#)



Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Instruction for Proper Breaker Reassembly

A finding of very low significance (Green) was self-revealed on June 6, 2005, when the licensee discovered that a safety injection valve failed to close as expected. The licensee determined that the procedure used to reassemble the safety-related breaker for the valve was inadequate. This finding represented a Non-Cited Violation of Technical Specifications 5.4, "Procedures," in that procedures were not adequate to ensure the safety related breaker was adequately reassembled after maintenance. Corrective actions included correcting the breaker and looking at other possible breakers with similar failure mechanisms. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of problem identification and resolution in that a previous event investigation from the same valve failing, and corrective actions from the event, were not effective.

The inspectors determined the issue was more than minor because the issue impacted the cornerstone attributes of equipment performance and procedure quality. The deficiency affected the mitigating system objective to ensure availability and reliability of systems that respond to events to prevent core damage. Specifically, some alternate functions, where the valve was shut in the Emergency Operating Procedures to control charging or ensure adequate hot leg injection, would not be available based on this deficiency.

Inspection Report# : [2005008\(pdf\)](#)

Barrier Integrity



Significance: Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Declare VHX-4 Cooler Inoperable with a Through-wall Piping Leak

The inspectors identified a finding of very low significance (Green) when the licensee failed to declare the containment air cooler, VHX-4, SW piping inoperable and take action in accordance with licensee procedures and technical specifications when a through-wall (pressure boundary) leak existed. This finding represented a non-cited violation of Technical Specifications 5.4, "Procedures," in that procedures were not properly

implemented which would have resulted in declaration of inoperability of component. Corrective actions included conducting repairs to stop the leak. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of human performance in that personnel did not properly follow the procedure for determining operability.

The inspectors determined that the issue was more than minor because the finding impacted the barrier integrity cornerstone attribute for containment barrier performance. The deficiency affected the barrier integrity objective of providing reasonable assurance that physical design barriers for the containment protect the public from radionuclide releases in that part of the boundary to a closed system for a containment penetration was breached. The finding was of very low safety significance since the breach in the containment boundary was small and would have very little impact on offsite dose evaluations.

Inspection Report# : [2005012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety



Significance: Apr 19, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Develop Adequate Procedure For Cask And Liner Reuse

The licensee failed to develop an adequate procedure for controlling reuse of a carbon steel liner that was used for storing highly radioactive incore instrument remnants. The liner was subjected to a boric acid environment without properly accounting for its design, material composition and the manufacturers intended use.

Inspection Report# : [2006008\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : August 25, 2006

Palisades

3Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Power Operations with One Rod Unlatched Due to an Inadequate Procedure

A self-revealed Non-Cited Violation (NCV) of Technical Specification (TS) 5.4 of very low safety significance was identified on May 11, 2006, when abnormal flux distribution prevented the licensee from continuing power ascension. The licensee determined a rod was not latched. The licensee violated TS 5.4, "Procedures," during performance of rod latching activities. The licensee's procedures were not adequate to latch the rod, and ensure the rod was latched prior to power operations. The licensee entered the item into the corrective action program. This finding also affected the cross cutting aspect of human performance. Immediate corrective actions included shutting down the reactor and latching the rod.

The inspectors determined the finding is more than minor since the finding affected cornerstone objectives for both initiating events and mitigating systems. Specifically, the inserted rod reduced available shutdown reactivity and shifted core flux to reduce margin to thermal limits. The finding was of very low safety significance because power remained very low, less than 25 percent, core thermal limits were not violated, and adequate shutdown margin existed.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Jun 30, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Polar Crane Struck Jib Crane

A self-revealed NCV of TS 5.4 occurred on April 22, 2006, when the polar crane bridge struck and severely damaged the jib crane. The licensee violated TS 5.4 for failing to have adequate procedures in place during maintenance that could affect safety-related equipment. The licensee entered the finding into their corrective action program. Immediate corrective actions included safely lowering attached loads, removing the crane from service, and inspecting affected equipment. This finding affected the cross cutting aspect of human performance.

The inspectors determined the finding is more than minor since the finding could reasonably be seen as a precursor to more significant events. Specifically, failure to control load movements could result in heavy load drops. The finding is of very low safety significance since no loads were dropped and the damage that did occur did not affect inservice safety systems.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: FIN Finding

Moisture Separator Reheater Relief Valve Could Not Be Reseated

The inspectors determined that a finding of very low safety significance (Green) was self-revealed when a Moisture Separator Reheater relief valve failed to reseal during testing. This failure resulted in a slight power rise due to the additional steam demand. Although the operations staff believed a method existed to manually close the valve, a manual method did not exist and a power reduction was needed to reseal the valve. This finding also affected the cross-cutting area of human performance. The licensee stopped use of the procedure and entered the item into their corrective action program.

The inspectors determined that not having adequate planning, contingency plans and procedures in place to reseal the relief valve is more than minor because the failure affected the initiating event cornerstone attribute of procedure quality and

increased the likelihood an initiating event due to the increased steam demand of an unseated relief valve. The finding is of very low safety significance since the event did not impact LOCA initiators, mitigation equipment or external event initiators. Corrective action included placing a hold on all relief valve testing until completion of a formal cause evaluation as well as placing this in the CAP system. No violation of NRC requirements occurred.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Spent Fuel Pool Crane Manipulated Outside bounds of Approved Procedures

The inspectors identified one finding of very low safety significance and an associated non-cited violation when plant personnel performed activities outside the scope of the work package used to inspect the spent fuel pool crane. On October 11, 2005, while raising a dry fuel storage (DFS) cask from the spent fuel pool following loading of the cask, the emergency brake on the crane engaged. The engaged emergency brake stopped movement of the load resulting in suspension of the load partially out of the pool. During troubleshooting activities, the workers exceeded the bounds of the approved work package by manipulating the brake release. This finding represented a violation of the license by performing work contrary to requirements specified by NUREG-0612. Corrective actions included reinforcing site standards for procedural adherence as well as successfully lowering the DFS cask. The licensee entered the item in the Corrective Action Program.

The finding was not suitable for evaluation under the SDP. However, because the actions by the worker did not result in any load motion and both crane brakes remained set, NRC management determined the finding to be of very low safety significance (Green). This finding also affected the cross cutting area of human performance.

Inspection Report# : [2005012\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

The licensee failed to demonstrate that the performance or condition of High Pressure Injection System had been effectively controlled per 10 CFR 50.65

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50.65 "Requirements for monitoring effectiveness of maintenance at nuclear power plants." Specifically, contrary to 50.65(a)(2), the licensee failed to demonstrate that the performance or condition of the HPSI System had been effectively controlled through performance of appropriate maintenance, and did not place the system in 50.65(a)(1) status when system performance deteriorated. The licensee subsequently placed the HPSI system in 50.65(a)(1) status and entered the finding into their corrective action program.

The inspectors determined that not placing the system in (a)(1) status when performance deteriorated is more than minor because it matched an example in IMC 0612, Appendix E, "Examples of Minor Violations," as being more than minor. The finding is of very low safety significance because the finding did not result in loss of a safety function.

Inspection Report# : [2006006\(pdf\)](#)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Control Valve CV-3070 Failed to Stroke

A Green Non-Cited Violation was self-revealed on March 29, 2006, when control valve CV-3070, left train HPSI sub-cooling valve for HPSI pump P-66B, failed to open during preventive maintenance. Subsequent investigation by the licensee identified that a design change had removed a support for the valve. The removal of this support caused the valve

to bind. The finding is a violation of 10 CFR 50, Appendix B, Criterion III. The licensee entered the finding into the corrective action program, repaired the valve and added additional support to prevent recurrence.

The inspectors concluded that the issue is more than minor because it affected the operability, reliability, and availability of a mitigating system. The inspectors concluded a phase 3 assessment was required based on the results of phase 1 and 2 assessments. Following a phase 3 assessment, the Senior Reactor Analyst concluded that the finding is of very low safety significance.

Inspection Report# : [2006006\(pdf\)](#)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with 10 CFR 50.59 for P-5 Removal from the FSAR

The inspectors identified a Severity Level IV NCV of 10 CFR 50.59 for improperly removing commitments to maintain a keep warm pump from the Final Safety Analysis Report (FSAR). The licensee had committed to maintaining this pump in lieu of inspections of the intake structure. The licensee entered the item in the corrective action program and performed immediate corrective actions, including inspections of the intake structure.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function. Specifically, the licensee changed the FSAR in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to comply with TS 5.4.1, "Procedures," for an Inadequate Procedure Installing a commercial grade, portable ground detector

The inspectors identified a finding of very low safety significance (Green) when the procedure used to install commercial grade portable ground detection equipment did not provide adequate Class 1E to non-Class 1E separation. During this installation, the licensee did not declare the affected bus inoperable. This finding represented a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure related to installing a commercial grade, portable ground detector which was not appropriate for the circumstances. The licensee entered the item in the corrective action program and has restricted use of the procedure. The portable ground detection equipment has been removed.

This finding is more than minor because the installation of this temporary equipment impacted the DC bus and made the bus more susceptible to a fault thus degrading a mitigating system function. The finding is of very low safety significance because the improper installation did not result in loss of availability of the bus and only one bus was affected at a time.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Test the Emergency Diesel Generators Resulting in Preconditioning

The inspectors identified a finding of very low safety significance (Green) when the Emergency Diesel Generators (EDGs) were unacceptably preconditioned prior to testing. This finding represented a non-cited violation of 10 CFR 50 Appendix B, Criterion XI in that the tests were not performed under suitable environmental conditions. The licensee entered the item in the corrective action program.

This finding is more than minor because unacceptable preconditioning can change the as-found condition of the EDG system and therefore mask potential performance issues. The finding is of very low safety significance due to the limited impact that the preconditioning had on the EDG performance. All indications after the testing was performed with an acceptable test is that the machine performance is currently acceptable.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Feb 17, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failed Swagelok Fitting on High Pressure Safety Injection Flow Transmitter FT-0312

A finding of very low safety significance was self-revealed on January 4, 2006, when an incorrectly installed swagelok fitting on high pressure safety injection flow transmitter FT-0312 failed. A Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," was associated with this finding for the failure to have prescribed instructions when the swagelok fitting was originally installed during field change FC-731 in 1988. Corrective actions included: the swagelok fitting on FT-0312 was repaired and verified to be installed correctly; two other swagelok fittings on high pressure safety injection flow transmitters were disassembled, inspected and repaired as necessary; other swagelok fittings installed in 1988 during field change FC-731 were visually inspected to verify that there was no evidence of leakage. Additional swagelok fittings were scheduled to be disassembled and inspected during the 2006 refueling outage to further address extent of condition.

This finding was more than minor because it was associated with the equipment performance attribute for mitigating systems and the cornerstone objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences was affected. Specifically, a leak from the failed swagelok fitting on the high pressure safety injection system flow transmitter FT-0312 would have decreased the capability of the high pressure safety injection system to inject water to the reactor core during a small break loss of coolant accident. The finding is of very low safety significance because the high pressure safety injection system's safety function was not lost.

Inspection Report# : [2006003\(pdf\)](#)

Barrier Integrity

Significance:  Jun 30, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with 10 CFR 50 Appendix B, Criterion XVI for Recurring Fuel Assembly Cladding Failure

A self-revealed NCV of Criterion XVI was identified when damage to a fuel pin was found. The finding of very low safety significance (Green) occurred because the licensee failed to assure adequate corrective actions were implemented to prevent recurrence of fuel cladding damage to a fuel assembly. This finding represented an NCV of 10 CFR 50, Appendix B, Criterion XVI, in that the appropriate actions were not in place for a significant condition adverse to quality. The licensee entered the item into the corrective action program. Immediate corrective action included changing the core design and replacing susceptible fuel rods with stainless steel pins.

The inspectors determined that the finding is more than minor since the finding impacted the Barrier Integrity cornerstone objective of fuel clad integrity. Specifically, the clad on one fuel element had fretted away exposing the fuel plenum and plenum spring. The finding is of very low safety significance because only the fuel barrier was affected and plant TSs were not exceeded for fission product activity in the coolant.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Declare VHX-4 Cooler Inoperable with a Through-wall Piping Leak

The inspectors identified a finding of very low significance (Green) when the licensee failed to declare the containment air cooler, VHX-4, SW piping inoperable and take action in accordance with licensee procedures and technical specifications when a through-wall (pressure boundary) leak existed. This finding represented a non-cited violation of Technical Specifications 5.4, "Procedures," in that procedures were not properly implemented which would have resulted in declaration of inoperability of component. Corrective actions included conducting repairs to stop the leak. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of human

performance in that personnel did not properly follow the procedure for determining operability.

The inspectors determined that the issue was more than minor because the finding impacted the barrier integrity cornerstone attribute for containment barrier performance. The deficiency affected the barrier integrity objective of providing reasonable assurance that physical design barriers for the containment protect the public from radionuclide releases in that part of the boundary to a closed system for a containment penetration was breached. The finding was of very low safety significance since the breach in the containment boundary was small and would have very little impact on offsite dose evaluations.

Inspection Report# : [2005012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Apr 19, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Faliure To Develop an Adequate Procedure For Cask And Liner Reuse

A self-revealing finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4 "Procedures," were identified. On April 19, 2006, while lowering a shielded cask and its liner into the reactor cavity in preparation for placing additional incore (irradiated) instruments into the liner, the liner failed to displace air and adequately flood-up with water. As a result, the liner, which housed highly radioactive irradiated incore detectors, floated up to the pool surface where it remained for about 12 seconds before sinking back down into the pool. The incident created transient elevated radiation levels on the refueling deck of the containment building resulting in radiological exposure to the workers in the area. The primary cause of this finding was an inadequate procedure for the work activity and the procedure change review process that failed to identify deficiencies with the procedure and with its development. The procedure allowed a carbon steel liner to be used on multiple occasions in a boric acid environment without properly accounting for its design, its material composition, and the manufacturer's intended use. Licensee corrective actions included a procedure revision to preclude the repeated use of carbon steel liners in harsh environments, and an action to evaluate the current procedure change review processes.

The finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the Cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding was of very low safety significance because it did not involve significant radiation exposure or a substantial potential for an overexposure, nor was the licensee's ability to assess worker dose associated with the event compromised. The issue was a Non-Cited Violation of Technical Specification 5.4 which required, in part, that procedures appropriate to the circumstances be developed.

Inspection Report# : [2006008\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : December 21, 2006

Palisades

4Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Reduction in Fast Bus Transfer Capability

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to evaluate the potentially adverse effects that a modification to add an automatic load tap changer to the startup transformer would have on the independence of the two circuits from the offsite power supply to the Class 1E Buses required by technical specifications and on the fast transfer capabilities described in the final safety analysis report. Following discovery, the licensee performed preliminary calculations to assess the issue.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to perform a calculation resulted in a modification to the plant which was not in accordance with the design basis and the modification required revision to ensure the design basis was met. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.2)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Power Operations with One Rod Unlatched Due to an Inadequate Procedure

A self-revealed Non-Cited Violation (NCV) of Technical Specification (TS) 5.4 of very low safety significance was identified on May 11, 2006, when abnormal flux distribution prevented the licensee from continuing power ascension. The licensee determined a rod was not latched. The licensee violated TS 5.4, "Procedures," during performance of rod latching activities. The licensee's procedures were not adequate to latch the rod, and ensure the rod was latched prior to power operations. The licensee entered the item into the corrective action program. This finding also affected the cross cutting aspect of human performance. Immediate corrective actions included shutting down the reactor and latching the rod.

The inspectors determined the finding is more than minor since the finding affected cornerstone objectives for both initiating events and mitigating systems. Specifically, the inserted rod reduced available shutdown reactivity and shifted core flux to reduce margin to thermal limits. The finding was of very low safety significance because power remained very low, less than 25 percent, core thermal limits were not violated, and adequate shutdown margin existed.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Polar Crane Struck Jib Crane

A self-revealed NCV of TS 5.4 occurred on April 22, 2006, when the polar crane bridge struck and severely damaged the jib crane. The licensee violated TS 5.4 for failing to have adequate procedures in place during maintenance that could affect safety-related equipment. The licensee entered the finding into their corrective action program. Immediate corrective actions included safely lowering attached loads, removing the crane from service, and inspecting affected equipment. This finding affected the cross cutting aspect of human performance.

The inspectors determined the finding is more than minor since the finding could reasonably be seen as a precursor to more significant events. Specifically, failure to control load movements could result in heavy load drops. The finding is of very low safety significance since no loads were dropped and the damage that did occur did not affect inservice safety systems. Inspection Report# : [2006004](#) (*pdf*)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: FIN Finding

Moisture Separator Reheater Relief Valve Could Not Be Reseated

The inspectors determined that a finding of very low safety significance (Green) was self-revealed when a Moisture Separator Reheater relief valve failed to reseat during testing. This failure resulted in a slight power rise due to the additional steam demand. Although the operations staff believed a method existed to manually close the valve, a manual method did not exist and a power reduction was needed to reseat the valve. This finding also affected the cross-cutting area of human performance. The licensee stopped use of the procedure and entered the item into their corrective action program.

The inspectors determined that not having adequate planning, contingency plans and procedures in place to reseat the relief valve is more than minor because the failure affected the initiating event cornerstone attribute of procedure quality and increased the likelihood an initiating event due to the increased steam demand of an unseated relief valve. The finding is of very low safety significance since the event did not impact LOCA initiators, mitigation equipment or external event initiators. Corrective action included placing a hold on all relief valve testing until completion of a formal cause evaluation as well as placing this in the CAP system. No violation of NRC requirements occurred.

Inspection Report# : [2006002](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure of Component on 1-2 Emergency Diesel Generator Causes Surveillance Failure

A Green self-revealing NCV of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures needed to prevent the use of defective parts. Specifically, a fuel leak developed due to the incorrect part on the 1-2 Emergency Diesel Generator (EDG) on November 20, 2005, that resulted in aborting a surveillance test. The cause was related to a defective part which had been installed 28 days earlier. The part has been replaced, and there are no other susceptible parts in the diesel engines on site.

The finding is more than minor since the defective part impacted the cornerstone for availability, reliability and capability of the class 1E, on site EDG system and is an associated attribute of equipment performance. The finding screened as very low safety significance, Green, since there was no loss of safety function for the 1-2 EDG.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Voltage Drop Calculations for Motor Control Center Control Circuits

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to include the voltage drop across control power transformers, did not account for loading due to auxiliary equipment such as relays and indicating lights, did not consider increased cable resistance due to increased temperature in accident environments, used a unverified assumption that calculations for motor control centers 1 and 2 bounded other safety related motor control centers, and failed to account for previously identified non-conservatisms in associated voltage calculations. Following discovery, the licensee performed

preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.3)

Inspection Report# : [2006009](#) (pdf)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Effect of Accident Temperatures on Cable Resistance Not Evaluated

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to consider the effects of accident temperatures on cable resistance in voltage drop calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.4)

Inspection Report# : [2006009](#) (pdf)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Molded-Case Circuit Breaker Testing Program Deficiencies

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." for the licensee's failure to ensure that the molded-case circuit breaker (MCCB) testing program remained current with industry and NRC operating experience thus ensuring that the installed safety-related and important-to-safety MCCBs did not degrade and would perform satisfactorily in service. Following discovery, the licensee entered the issue into its corrective action program and was evaluating an update to the testing program.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events. Specifically, the testing program did not ensure the reliability of the installed MCCBs because the program did not include test methods or failure assessment that would accurately and conclusively demonstrate MCCB continued operability. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.5)

Inspection Report# : [2006009](#) (pdf)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Battery Terminals Not Coated with Anti-Corrosion Material

The inspectors identified a finding having very low significance and an associated non cited violation of Technical Specification Surveillance Requirement 3.8.4.4. Specifically the licensee failed to verify that the 125V DC battery cable-to-terminal plate connections (cells 1, 35, 36, and 59) were coated with anti-corrosion material. Following discovery, the licensee coated all the terminal plate connections with an anti-corrosion material.

This issue was more than minor in accordance with IMC 0612, Appendix B, because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of the DC power system. The purpose of the technical specification surveillance was to ensure good electrical connections and to reduce terminal deterioration. Specifically, corrosion in connections could potentially result in unacceptable connection resistance and decreased battery capacity, rendering the DC system incapable of performing its required safety function. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.6)

Inspection Report# : [2006009](#) (pdf)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Diesel Generator Frequency Variation not Considered in Loading Calculations

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to take into account the effect of emergency diesel generator frequency variation in the diesel loading calculations. Following discovery, the licensee performed preliminary calculations and determined that emergency diesel generator 1-2 was still within its load rating.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to account for frequency variations had more than a minimal effect on the outcome of the calculation; specifically it resulted in reducing the available margin for the two hour loading on emergency diesel generator 1-2 by approximately 75 percent. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the diesels. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the diesels. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.7)

Inspection Report# : [2006009](#) (pdf)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Diesel Generator Automatic Fuel Transfer Equipment not Rated for Expected Max Temp

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to verify that eight components involved with transferring diesel fuel to the emergency diesel generators were rated for the temperature in which they had to operate. Following discovery, the licensee performed a preliminary calculation to demonstrate that the equipment would function if called upon. The primary cause of this violation was related to the cross-cutting area of human performance.

This issue was more than minor in accordance with IMC 0612, Appendix B because the finding was associated with the equipment performance (availability and reliability) attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the equipment that was required for the function of automatically transferring fuel to the emergency diesel generator belly tanks was not initially rated for the temperature in which it was required to operate, hence affecting the capability of the emergency diesel generators to respond to an initiating event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.8)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

High Pressure Safety Injection Pump Vortex Limit Calculation Inaccuracies

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee incorrectly interpreted a graph used to determine the percent air ingestion as a function of the Froude number, resulting in a non-conservative air entrainment value for the high pressure safety injection pumps when taking suction from the safety injection refueling water tank at the point of switching over to the containment sump. Following discovery, the licensee performed preliminary calculations to show that the pumps would continue to operate with the correct air entrainment value.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the calculation error was significant enough to require reanalysis of the accident analysis setpoint, including requesting the pump manufacturer to analyze the capability of the pumps to perform at the higher percent of air entrainment, and required the engineers to reanalyze the pumps safety function in light of the reduced net positive suction head, as well as reduced flow and discharge head at the time the vortex formed. Additionally, the error appeared to be programmatic as a similar error was made in calculating the air entrainment to the auxiliary feedwater pumps. Therefore this performance deficiency impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the high pressure safety injection pumps. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.9)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Potential for Safety Injection and Refueling Water Tank Level Switch Setpoints to be Outside TS Limit

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to establish a proper setpoint for safety injection and refueling water tank level switch such that, when instrument uncertainty was taken into account, the setpoint could be set outside the technical specification limits. Following discovery, the licensee verified the actual set points.

This issue was more than minor in accordance with IMC 0612, Appendix B because, if left uncorrected, the technical specification limit for the safety injection refueling water tank level set points could have been exceeded without the licensee being aware of it. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.10)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification 5.4.1a for an operator failing to comply with the site quality procedure for Conduct of Operations by manipulating safety related components without any procedure guidance. The operator placed all Auxiliary Feedwater (AFW) pumps out of automatic control, causing the pumps to be inoperable and placing the plant outside of the licensing basis. Corrective actions to address this finding included removing the operator who made the error from shift and briefing each operating crew on this event.

This finding was of more than minor safety significance because the operator did not follow procedural guidance which resulted in the inoperability of all three AFW pumps. This finding is of very low significance because the evaluation of

increased risk associated with this error concluded that the total change in core damage frequency (delta CDF) considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance, because the licensee did not use human error techniques, such as self or peer checking, or proper documentation of activities for placing the AFW switches to manual.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specifications

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification (TS) 3.7.5 for the licensee's failure to comply with the required action time to be in Mode 4 in 30 hours with no Auxiliary Feedwater (AFW) pumps operable. In addition, the inspectors identified the failure to comply with the action of TS 3.0.4 in that the licensee ascended from Mode 3 to Mode 2 with no AFW pumps operable. The licensee's failure to detect and correct, using appropriate board walk-downs and turnover techniques, that all three AFW pumps were in manual directly caused the violation of Technical Specifications. Corrective actions to address this finding included requiring the use of a checklist to verify correct control room switch alignment, and increasing management oversight of the control room.

This finding was of more than minor safety significance because numerous operators failed to identify that all three AFW pumps were inoperable. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency (LERF) was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance. Specifically, personnel who had the knowledge of the issue failed to evaluate the condition in accordance with procedure guidance and failed to ensure that the proper procedure for tracking and resolving safety related equipment issues were followed.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate procedures, appropriate for the circumstances of plant startup and shutdown. Specifically, procedures were not adequate to place the Auxiliary Feedwater (AFW) system in service for a plant shutdown. In addition, inadequate procedural guidance existed for safety system alignment checks prior to reactor startup from Mode 3. Corrective actions to address this finding included initiating a root cause analysis and actions to upgrade start-up and shutdown procedures.

This finding was of more than minor safety significance because the inadequate procedural guidance resulted in operators not placing or maintaining the AFW system in an operable condition. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not plan or coordinate shutdown activities relating to AFW operation. The licensee inappropriately relied on pre-job briefings as a compensatory action in lieu of written instructions.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

The licensee failed to demonstrate that the performance or condition of High Pressure Injection System had been effectively controlled per 10 CFR 50.65

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50.65 "Requirements for monitoring effectiveness of maintenance at nuclear power plants." Specifically, contrary to

50.65(a)(2), the licensee failed to demonstrate that the performance of condition of the HPSI System had been effectively controlled through performance of appropriate maintenance, and did not place the system in 50.65(a)(1) status when system performance deteriorated. The licensee subsequently placed the HPSI system in 50.65(a)(1) status and entered the finding into their corrective action program.

The inspectors determined that not placing the system in (a)(1) status when performance deteriorated is more than minor because it matched an example in IMC 0612, Appendix E, "Examples of Minor Violations," as being more than minor. The finding is of very low safety significance because the finding did not result in loss of a safety function.

Inspection Report# : [2006006](#) (*pdf*)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Control Valve CV-3070 Failed to Stroke

A Green Non-Cited Violation was self-revealed on March 29, 2006, when control valve CV-3070, left train HPSI sub-cooling valve for HPSI pump P-66B, failed to open during preventive maintenance. Subsequent investigation by the licensee identified that a design change had removed a support for the valve. The removal of this support caused the valve to bind. The finding is a violation of 10 CFR 50, Appendix B, Criterion III. The licensee entered the finding into the corrective action program, repaired the valve and added additional support to prevent recurrence.

The inspectors concluded that the issue is more than minor because it affected the operability, reliability, and availability of a mitigating system. The inspectors concluded a phase 3 assessment was required based on the results of phase 1 and 2 assessments. Following a phase 3 assessment, the Senior Reactor Analyst concluded that the finding is of very low safety significance.

Inspection Report# : [2006006](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with 10 CFR 50.59 for P-5 Removal from the FSAR

The inspectors identified a Severity Level IV NCV of 10 CFR 50.59 for improperly removing commitments to maintain a keep warm pump from the Final Safety Analysis Report (FSAR). The licensee had committed to maintaining this pump in lieu of inspections of the intake structure. The licensee entered the item in the corrective action program and performed immediate corrective actions, including inspections of the intake structure.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function. Specifically, the licensee changed the FSAR in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to comply with TS 5.4.1, "Procedures," for an Inadequate Procedure Installing a commercial grade, portable ground detector

The inspectors identified a finding of very low safety significance (Green) when the procedure used to install commercial grade portable ground detection equipment did not provide adequate Class 1E to non-Class 1E separation. During this installation, the licensee did not declare the affected bus inoperable. This finding represented a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure related to installing a commercial grade, portable ground detector which was not appropriate for the circumstances. The licensee entered the item in the corrective action program and has restricted use of the procedure. The portable ground detection equipment has been removed.

This finding is more than minor because the installation of this temporary equipment impacted the DC bus and made the bus more susceptible to a fault thus degrading a mitigating system function. The finding is of very low safety significance

because the improper installation did not result in loss of availability of the bus and only one bus was affected at a time.

Inspection Report# : [2006002](#) (*pdf*)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Test the Emergency Diesel Generators Resulting in Preconditioning

The inspectors identified a finding of very low safety significance (Green) when the Emergency Diesel Generators (EDGs) were unacceptably preconditioned prior to testing. This finding represented a non-cited violation of 10 CFR 50 Appendix B, Criterion XI in that the tests were not performed under suitable environmental conditions. The licensee entered the item in the corrective action program.

This finding is more than minor because unacceptable preconditioning can change the as-found condition of the EDG system and therefore mask potential performance issues. The finding is of very low safety significance due to the limited impact that the preconditioning had on the EDG performance. All indications after the testing was performed with an acceptable test is that the machine performance is currently acceptable.

Inspection Report# : [2006002](#) (*pdf*)

Significance:  Feb 17, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failed Swagelok Fitting on High Pressure Safety Injection Flow Transmitter FT-0312

A finding of very low safety significance was self-revealed on January 4, 2006, when an incorrectly installed swagelok fitting on high pressure safety injection flow transmitter FT-0312 failed. A Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," was associated with this finding for the failure to have prescribed instructions when the swagelok fitting was originally installed during field change FC-731 in 1988. Corrective actions included: the swagelok fitting on FT-0312 was repaired and verified to be installed correctly; two other swagelok fittings on high pressure safety injection flow transmitters were disassembled, inspected and repaired as necessary; other swagelok fittings installed in 1988 during field change FC-731 were visually inspected to verify that there was no evidence of leakage. Additional swagelok fittings were scheduled to be disassembled and inspected during the 2006 refueling outage to further address extent of condition.

This finding was more than minor because it was associated with the equipment performance attribute for mitigating systems and the cornerstone objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences was affected. Specifically, a leak from the failed swagelok fitting on the high pressure safety injection system flow transmitter FT-0312 would have decreased the capability of the high pressure safety injection system to inject water to the reactor core during a small break loss of coolant accident. The finding is of very low safety significance because the high pressure safety injection system's safety function was not lost.

Inspection Report# : [2006003](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inaccurate Surveillance Procedure for Primary Coolant System Leakrate Calculation

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control" for the failure to have an accurate Technical Specification (TS) surveillance procedure for primary coolant leakage measurement. Specifically, the licensee did not provide an accurate calculation or accurate acceptance criteria over all the temperature ranges and other plant conditions under which the surveillance procedure could be used. This issue was entered into the licensee's corrective action system and the licensee developed interim guidance on

leak rate calculations pending a procedure revision.

The finding is more than minor because it can reasonably be viewed as a precursor to a more significant event because the errors can prevent recognition of leakage in excess of the TS and licensing basis. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of IMC 0609, Appendix A, since no actual cases were found where unidentified leakage exceeded the TS.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: FIN Finding

Failure to Correctly Apply Pressure Locking Thrust in MOV Performance Test Procedures

The inspectors identified a finding having very low significance. Specifically, the licensee failed to correctly apply the effect due to pressure locking in the valve actuator capability margin to open for the boric acid gravity feed motor operated valves MO-2169 and MO-2170. Following discovery, the licensee performed preliminary calculations to ensure valve operability.

This issue was more than minor in accordance with IMC 0612, Appendix B because, if left uncorrected, then motor operated valve actuators would have deteriorated over time without being detected, resulting in the valves being unable to perform their required functions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. No violation of NRC requirements occurred. (Section 1R21.3.b.11)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with 10 CFR 50 Appendix B, Criterion XVI for Recurring Fuel Assembly Cladding Failure

A self-revealed NCV of Criterion XVI was identified when damage to a fuel pin was found. The finding of very low safety significance (Green) occurred because the licensee failed to assure adequate corrective actions were implemented to prevent recurrence of fuel cladding damage to a fuel assembly. This finding represented an NCV of 10 CFR 50, Appendix B, Criterion XVI, in that the appropriate actions were not in place for a significant condition adverse to quality. The licensee entered the item into the corrective action program. Immediate corrective action included changing the core design and replacing susceptible fuel rods with stainless steel pins.

The inspectors determined that the finding is more than minor since the finding impacted the Barrier Integrity cornerstone objective of fuel clad integrity. Specifically, the clad on one fuel element had fretted away exposing the fuel plenum and plenum spring. The finding is of very low safety significance because only the fuel barrier was affected and plant TSs were not exceeded for fission product activity in the coolant.

Inspection Report# : [2006004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Adequately Implement Radiological Dose Controls

A Green finding was self-revealed for failure to adequately implement radiological dose controls during Refueling Outage 18 (RO18). Specifically, work control and planning issues (worker fatigue, worker proficiency, and material condition) contributed to additional worker doses. The total sum of the occupational radiation doses (collective dose) received by individuals for one work activity was found in excess of that collective dose planned or intended (i.e., that dose the licensee determined was ALARA for those work activities).

The finding was more than minor because the issue was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of the worker's health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The inspectors concluded that the finding did not result in an occupational overexposure, a substantial potential for an overexposure, or a compromised ability to assess dose. The inspectors determined that the finding involved ALARA planning and work controls. Considering the licensee's current 3-year rolling collective dose average exceeds 135 person-rem per unit, the actual dose was less than 25 person-rem and there are no other occurrences, the inspectors concluded that the SDP assessment for this finding was of very low safety significance, Green. The inspectors also determined that this finding had a cross-cutting aspect in the area of human performance because the licensee failed to appropriately coordinate work activities.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Apr 19, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Faliure To Develop an Adequate Procedure For Cask And Liner Reuse

A self-revealing finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4 "Procedures," were identified. On April 19, 2006, while lowering a shielded cask and its liner into the reactor cavity in preparation for placing additional incore (irradiated) instruments into the liner, the liner failed to displace air and adequately flood-up with water. As a result, the liner, which housed highly radioactive irradiated incore detectors, floated up to the pool surface where it remained for about 12 seconds before sinking back down into the pool. The incident created transient elevated radiation levels on the refueling deck of the containment building resulting in radiological exposure to the workers in the area. The primary cause of this finding was an inadequate procedure for the work activity and the procedure change review process that failed to identify deficiencies with the procedure and with its development. The procedure allowed a carbon steel liner to be used on multiple occasions in a boric acid environment without properly accounting for its design, its material composition, and the manufacturer's intended use. Licensee corrective actions included a procedure revision to preclude the repeated use of carbon steel liners in harsh environments, and an action to evaluate the current procedure change review processes.

The finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the Cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding was of very low safety significance because it did not involve significant radiation exposure or a substantial potential for an overexposure, nor was the licensee's ability to assess worker dose associated with the event compromised. The issue was a Non-Cited Violation of Technical Specification 5.4 which required, in part, that procedures appropriate to the circumstances be developed.

Inspection Report# : [2006008](#) (*pdf*)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: SL-IV Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Startup Transformer not Evaluated for Past Operability and Reportability

The inspectors identified a finding of very low safety significance and an associated Severity Level IV non-cited violation of 10 CFR 50.73 (a)(2). Specifically, the licensee failed to analyze past operability and submit a licensee event report when the startup transformer 1-2 tap changer control was found to be non-operational. Once analyzed, the licensee determined that one of the two required circuits from the offsite power supply was inoperable on at least three non-consecutive occasions between May 17 and May 22, 2006.

Because violations of 10 CFR 50.73 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.4, "Failure to Make a Required Licensee Event Report" for a Severity Level IV violation. (Section 1R21.3.b.1)

Inspection Report# : [2006009](#) (*pdf*)

Last modified : March 01, 2007

Palisades

1Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Dec 15, 2006
Identified By: NRC
Item Type: NCV NonCited Violation

Reduction in Fast Bus Transfer Capability

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to evaluate the potentially adverse effects that a modification to add an automatic load tap changer to the startup transformer would have on the independence of the two circuits from the offsite power supply to the Class 1E Buses required by technical specifications and on the fast transfer capabilities described in the final safety analysis report. Following discovery, the licensee performed preliminary calculations to assess the issue.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to perform a calculation resulted in a modification to the plant which was not in accordance with the design basis and the modification required revision to ensure the design basis was met. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.2)"
Inspection Report# : [2006009](#) (*pdf*)

Significance:  Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation

Power Operations with One Rod Unlatched Due to an Inadequate Procedure

A self-revealed Non-Cited Violation of Technical Specification (TS) 5.4 of very low safety significance was identified on May 11, 2006, when abnormal flux distribution prevented the licensee from continuing power ascension. The licensee determined a rod was not latched. The licensee violated TS 5.4, "Procedures," during performance of rod latching activities. The licensee's procedures were not adequate to latch the rod, and ensure the rod was latched prior to power operations. The licensee entered the item into the corrective action program. This finding also affected the cross-cutting aspect of human performance. Immediate corrective actions included shutting down the reactor and latching the rod.

The inspectors determined the finding is more than minor since the finding affected cornerstone objectives for both initiating events and mitigating systems. Specifically, the inserted rod reduced available shutdown reactivity and shifted core flux to reduce margin to thermal limits. The finding was of very low safety significance because power remained very low, less than 25 percent, core thermal limits were not violated, and adequate shutdown margin existed.
Inspection Report# : [2006004](#) (*pdf*)

Significance:  Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation

Polar Crane Struck Jib Crane

A self-revealed Non-Cited Violation of Technical Specification (TS) 5.4 occurred on April 22, 2006, when the polar crane bridge struck and severely damaged the jib crane. The licensee violated TS 5.4 for failing to have adequate procedures in place during maintenance that could affect safety-related equipment. The licensee entered the finding into their corrective action program. Immediate corrective actions included safely lowering attached loads, removing the crane from service, and inspecting affected equipment. This finding affected the cross cutting aspect of human performance.

The inspectors determined the finding is more than minor since the finding could reasonably be seen as a precursor to more

significant events. Specifically, failure to control load movements could result in heavy load drops. The finding is of very low safety significance since no loads were dropped and the damage that did occur did not affect inservice safety systems. Inspection Report# : [2006004](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CV-0821 Corrective Actions Not Effective to Prevent Repeat Failure

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI for failing to take adequate corrective action to prevent recurrence of a significant condition adverse to quality. Specifically, valve CV-0821, a safety-related valve which positions automatically on a safety actuation signal, would not position on demand. The licensee discovered sand and silt had caused the valve to stick in a non-safety position. The same condition occurred less than a year ago. This latest issue was entered into the licensee's corrective action system as AR 01080435 and an Operability Evaluation was completed with compensatory actions to maintain component operability.

The finding is more than minor because it is related to the equipment performance attribute of the mitigating system cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Both trains are potentially impacted since the valve arrangement is similar and susceptible to sand and silt. The finding screened as very low safety significance, using the Phase 1 worksheet of IMC 0609, Appendix A, since the actual loss of function was less than the allowed outage time. The inspectors also determined that this finding has a cross-cutting aspect in the area of Problem Identification and Resolution, because the licensee failed to take the appropriate corrective actions to address safety issues. (IMC 0305, P.1.(d))

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Control Rod Drive Mechanism Testing Practice Violates TS 3.1.4

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specifications for the failure to take actions for the appropriate Limiting Condition for Operation (LCO) not being met when surveillance testing exceeded the allowed interval. Specifically, the failure to verify control rod freedom of movement every 92 days (plus a 25 percent grace period) required entry into the Actions of LCO 3.1.4 Condition E, which stipulated the shutdown of the plant within six hours. This was not done on several occasions in the last three years. This issue was entered into the licensee's corrective action system as Action Request 01072543 and the inspectors verified that the rods subsequently had freedom of movement.

The finding is more than minor because, if left uncorrected, the finding could become a more significant safety concern; namely, the inability to detect rod binding could impact reactor shutdown margin in certain events. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of Inspection Manual Chapter 0609, Appendix A, since no actual cases were found where the rods were bound after subsequent cycling.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Comply with Technical Specification 3.9.5

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 3.9.5 for removing a train of safety equipment without complying with the required action and completion

time when the Limiting Condition for Operability was not met. Specifically, the licensee removed one train of shutdown cooling (by removing one shutdown cooling heat exchanger - (SDCHX)) for planned maintenance while the reactor was in Mode 6 with cavity level below 647 feet. The Action required was to "immediately" initiate action to restore the train to Operable. The train was inoperable for over four days. This issue was entered into the licensee's corrective action system as Action Request 01082854.

The finding is more than minor since it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. The finding is associated with the cornerstone attribute of equipment performance (unavailability of the SDCHX). The inspectors evaluated this finding in accordance with Appendix G, "Shutdown Operations Significance Determination Process" to IMC 0609. Although only one Decay Heat Removal (DHR) train was operable, other items for defense in depth including backup injection flowpaths, pump sources, vent paths and water sources were available for use. The inspectors completed a Phase 2 assessment and determined that a loss of DHR had a low frequency. The finding is of very low safety significance.

Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specification 5.5.12 TS Basis Control Program

The inspectors identified a Severity Level IV Non-Cited Violation of Technical Specification (TS) 5.5.12 for the failure to comply with the TS Basis Control Program. Specifically, the licensee made a change to the TS bases for TS 3.9.5 which altered the TS definition of "two SDC trains" described in TS 3.9.5. The licensee changed the bases to allow a single SDC to be a member of two trains with cavity level less than 647 feet. A distinct SDCHX is required for each train. This change required prior NRC approval as a change to the TS. This issue was entered into the licensee's corrective action system.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition having a very low safety significance (i.e., green). Specifically, the licensee changed the TS bases in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy. The inspectors also determined that this finding has a cross-cutting aspect in the area of human performance, because the licensee failed to use conservative assumptions in changing the TS bases. (IMC 0305 H.1(b))

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Auxiliary Feedwater Vortex Limit Calculation

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to use a conservative value for auxiliary pump air entrainment in vortex limit calculations. Specifically, the licensee misinterpreted a graph used to determine the percent air ingestion as a function of the Froude number, which resulted in a pump air entrainment value above a value supported by the vendor. This issue was entered into the licensee's corrective action system and the licensee made procedure changes and provided operator training to ensure that the auxiliary pumps were tripped prior to entraining excessive air.

This issue was more than minor because the calculational error was significant enough to require reanalysis of the pumps' ability to perform their design function and because changes to plant procedures were necessary in order to ensure pump operability. The error also appeared to be programmatic as a similar error was made in calculating the air entrainment to the high pressure safety injection pumps. The issue was of very low safety significance because although it was a design issue, there was not a loss of function of the auxiliary feedwater pumps.

Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Addition of Manual Operator Action Not Evaluated in Accordance with 10 CFR 50.59

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for a failure to seek a license amendment. Specifically, when Setpoint Change 96-012 involving the low suction pressure trip of the auxiliary feedwater pumps was implemented, no safety evaluation

was performed. When the evaluation was performed in December 2006 the licensee failed to evaluate known deficiencies.

Because violations of 10 CFR 50.59 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.5, "Violations of 10 CFR 50.59 that result in conditions evaluated as having very low safety significance by the SDP," for a Severity Level IV Violation.

Inspection Report# : [2007002](#) (pdf)

Significance:  Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Valve Body Inadvertently Discarded Due to Ineffective Quarantine

The inspectors identified an Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately quarantine a component for failure analysis as required by the licensee's procedures. The licensee discarded a valve body, which resulted in the failure to complete a corrective action assigned in an associated root cause evaluation. The finding was associated with the work practices component of the human performance cross-cutting area because licensee personnel failed to use appropriate human error prevention techniques to ensure the valve body was effectively quarantined. After the issue was identified by the NRC, the licensee entered the issue into their corrective action program as Action Requests 01076153 and 01076213.

This finding was determined to be more than minor based on a review of the list of more than minor issues in Inspection Manual Chapter 0612, Appendix E, in that the valve body was irretrievably lost. Additionally, if left uncorrected, the failure to quarantine items could become a more significant safety concern since the failure to do so could impede the identification of root and/or contributing causes for conditions adverse to quality and prevent the implementation of appropriate corrective actions. The finding was of very low safety significance because the finding was not a design or qualification deficiency resulting in a loss of function per Generic Letter 91-18; did not represent an actual loss of safety function of a system or the loss of safety function of a train of equipment; and was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2007003](#) (pdf)

Significance:  Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Extent of Condition for High Pressure Safety Injection Valve Failure

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to assure that conditions adverse to quality were promptly corrected. Specifically, the inspectors concluded that the licensee failed to develop adequate actions to correct conditions adverse to quality identified during root cause evaluation activities for a valve failure on March 29, 2006. This finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution area because licensee personnel failed to promptly perform an adequate extent of condition for the valve failure. The licensee entered this performance deficiency into the corrective action program as AR 01076287 for resolution.

The finding was more than minor because, if left uncorrected, future conditions adverse to quality would not be fully evaluated or corrected. The inspectors assessed the significance of this finding as very low safety significance because, upon completing an adequate extent of condition review, no additional examples of improperly supported equipment were identified.

Inspection Report# : [2007003](#) (pdf)

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure of Component on 1-2 Emergency Diesel Generator Causes Surveillance Failure

A Green self-revealing Non-Cited Violation of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures needed to prevent the use of defective parts. Specifically, a fuel leak developed due to the incorrect part on the 1-2 Emergency Diesel Generator (EDG)

on November 20, 2005, that resulted in aborting a surveillance test. The cause was related to a defective part which had been installed 28 days earlier. The part has been replaced, and there are no other susceptible parts in the diesel engines on site.

The finding is more than minor since the defective part impacted the cornerstone for availability, reliability and capability of the class 1E, on site EDG system and is an associated attribute of equipment performance. The finding screened as very low safety significance, Green, since there was no loss of safety function for the 1-2 EDG.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Voltage Drop Calculations for Motor Control Center Control Circuits

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to include the voltage drop across control power transformers, did not account for loading due to auxiliary equipment such as relays and indicating lights, did not consider increased cable resistance due to increased temperature in accident environments, used a unverified assumption that calculations for motor control centers 1 and 2 bounded other safety related motor control centers, and failed to account for previously identified non-conservatisms in associated voltage calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.3)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Effect of Accident Temperatures on Cable Resistance Not Evaluated

The inspectors identified a finding having very low significance and an associated Non-Ccited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to consider the effects of accident temperatures on cable resistance in voltage drop calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.4)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Molded-Case Circuit Breaker Testing Program Deficiencies

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." for the licensee's failure to ensure that the molded-case circuit breaker (MCCB) testing program remained current with industry and NRC operating experience thus ensuring that the installed safety-related and important-to-safety MCCBs did not degrade and would perform satisfactorily in service. Following discovery, the licensee entered the issue into its corrective action program and was evaluating an update to the testing program.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events. Specifically, the testing program did not ensure the reliability of the installed MCCBs because the program did not include test methods or failure assessment that would accurately and conclusively demonstrate MCCB continued operability. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.5)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Battery Terminals Not Coated with Anti-Corrosion Material

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of Technical Specification Surveillance Requirement 3.8.4.4. Specifically the licensee failed to verify that the 125V DC battery cable-to-terminal plate connections (cells 1, 35, 36, and 59) were coated with anti-corrosion material. Following discovery, the licensee coated all the terminal plate connections with an anti-corrosion material.

This issue was more than minor in accordance with IMC 0612, Appendix B, because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of the DC power system. The purpose of the technical specification surveillance was to ensure good electrical connections and to reduce terminal deterioration. Specifically, corrosion in connections could potentially result in unacceptable connection resistance and decreased battery capacity, rendering the DC system incapable of performing its required safety function. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.6)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Diesel Generator Frequency Variation not Considered in Loading Calculations

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to take into account the effect of emergency diesel generator frequency variation in the diesel loading calculations. Following discovery, the licensee performed preliminary calculations and determined that emergency diesel generator 1-2 was still within its load rating.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to account for frequency variations had more than a minimal effect on the outcome of the calculation; specifically it resulted in reducing the available margin for the two hour loading on emergency diesel generator 1-2 by approximately 75 percent. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the diesels. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the diesels. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.7)

Inspection Report# : [2006009](#) (*pdf*)

G**Significance:** Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Diesel Generator Automatic Fuel Transfer Equipment not Rated for Expected Max Temp

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to verify that eight components involved with transferring diesel fuel to the emergency diesel generators were rated for the temperature in which they had to operate. Following discovery, the licensee performed a preliminary calculation to demonstrate that the equipment would function if called upon. The primary cause of this violation was related to the cross-cutting area of human performance.

This issue was more than minor in accordance with IMC 0612, Appendix B because the finding was associated with the equipment performance (availability and reliability) attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the equipment that was required for the function of automatically transferring fuel to the emergency diesel generator belly tanks was not initially rated for the temperature in which it was required to operate, hence affecting the capability of the emergency diesel generators to respond to an initiating event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.8) Inspection Report# : [2006009](#) (*pdf*)

G**Significance:** Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

High Pressure Safety Injection Pump Vortex Limit Calculation Inaccuracies

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee incorrectly interpreted a graph used to determine the percent air ingestion as a function of the Froude number, resulting in a non-conservative air entrainment value for the high pressure safety injection pumps when taking suction from the safety injection refueling water tank at the point of switching over to the containment sump. Following discovery, the licensee performed preliminary calculations to show that the pumps would continue to operate with the correct air entrainment value.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the calculation error was significant enough to require reanalysis of the accident analysis setpoint, including requesting the pump manufacturer to analyze the capability of the pumps to perform at the higher percent of air entrainment, and required the engineers to reanalyze the pumps safety function in light of the reduced net positive suction head, as well as reduced flow and discharge head at the time the vortex formed. Additionally, the error appeared to be programmatic as a similar error was made in calculating the air entrainment to the auxiliary feedwater pumps. Therefore this performance deficiency impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the high pressure safety injection pumps. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.9) Inspection Report# : [2006009](#) (*pdf*)

G**Significance:** Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Potential for Safety Injection and Refueling Water Tank Level Switch Setpoints to be Outside TS Limit

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to establish a proper setpoint for safety injection and refueling water tank level switch such that, when instrument uncertainty was taken into account, the setpoint could be set outside the technical specification limits. Following discovery, the licensee verified the actual set points.

This issue was more than minor in accordance with IMC 0612, Appendix B because, if left uncorrected, the technical specification limit for the safety injection refueling water tank level set points could have been exceeded without the licensee being aware of it. The issue was of very low safety significance based on a Phase 1 screening in accordance with

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification 5.4.1a for an operator failing to comply with the site quality procedure for Conduct of Operations by manipulating safety related components without any procedure guidance. The operator placed all Auxiliary Feedwater (AFW) pumps out of automatic control, causing the pumps to be inoperable and placing the plant outside of the licensing basis. Corrective actions to address this finding included removing the operator who made the error from shift and briefing each operating crew on this event.

This finding was of more than minor safety significance because the operator did not follow procedural guidance which resulted in the inoperability of all three AFW pumps. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total change in core damage frequency (delta CDF) considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance, because the licensee did not use human error techniques, such as self or peer checking, or proper documentation of activities for placing the AFW switches to manual.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specifications

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification (TS) 3.7.5 for the licensee's failure to comply with the required action time to be in Mode 4 in 30 hours with no Auxiliary Feedwater (AFW) pumps operable. In addition, the inspectors identified the failure to comply with the action of TS 3.0.4 in that the licensee ascended from Mode 3 to Mode 2 with no AFW pumps operable. The licensee's failure to detect and correct, using appropriate board walk-downs and turnover techniques, that all three AFW pumps were in manual directly caused the violation of Technical Specifications. Corrective actions to address this finding included requiring the use of a checklist to verify correct control room switch alignment, and increasing management oversight of the control room.

This finding was of more than minor safety significance because numerous operators failed to identify that all three AFW pumps were inoperable. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency (LERF) was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance. Specifically, personnel who had the knowledge of the issue failed to evaluate the condition in accordance with procedure guidance and failed to ensure that the proper procedure for tracking and resolving safety related equipment issues were followed.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate procedures, appropriate for the circumstances of plant startup and shutdown. Specifically, procedures were not adequate to place the Auxiliary Feedwater (AFW) system in service for a plant shutdown. In addition, inadequate procedural guidance existed for safety system alignment checks prior to reactor startup from Mode 3. Corrective actions to address this finding included initiating a root cause analysis and actions to upgrade start-up and shutdown procedures.

This finding was of more than minor safety significance because the inadequate procedural guidance resulted in operators not placing or maintaining the AFW system in an operable condition. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not plan or coordinate shutdown activities relating to AFW operation. The licensee inappropriately relied on pre-job briefings as a compensatory action in lieu of written instructions.

Inspection Report# : [2006014](#) (pdf)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

The licensee failed to demonstrate that the performance or condition of High Pressure Injection System had been effectively controlled per 10 CFR 50.65

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50.65 "Requirements for monitoring effectiveness of maintenance at nuclear power plants." Specifically, contrary to 50.65(a)(2), the licensee failed to demonstrate that the performance or condition of the HPSI System had been effectively controlled through performance of appropriate maintenance, and did not place the system in 50.65(a)(1) status when system performance deteriorated. The licensee subsequently placed the HPSI system in 50.65(a)(1) status and entered the finding into their corrective action program.

The inspectors determined that not placing the system in (a)(1) status when performance deteriorated is more than minor because it matched an example in IMC 0612, Appendix E, "Examples of Minor Violations," as being more than minor. The finding is of very low safety significance because the finding did not result in loss of a safety function.

Inspection Report# : [2006006](#) (pdf)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Control Valve CV-3070 Failed to Stroke

A Green Non-Cited Violation was self-revealed on March 29, 2006, when control valve CV-3070, left train HPSI sub-cooling valve for HPSI pump P-66B, failed to open during preventive maintenance. Subsequent investigation by the licensee identified that a design change had removed a support for the valve. The removal of this support caused the valve to bind. The finding is a violation of 10 CFR 50, Appendix B, Criterion III. The licensee entered the finding into the corrective action program, repaired the valve and added additional support to prevent recurrence.

The inspectors concluded that the issue is more than minor because it affected the operability, reliability, and availability of a mitigating system. The inspectors concluded a phase 3 assessment was required based on the results of phase 1 and 2 assessments. Following a phase 3 assessment, the Senior Reactor Analyst concluded that the finding is of very low safety significance.

Inspection Report# : [2006006](#) (pdf)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with 10 CFR 50.59 for P-5 Removal from the FSAR

The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59 for improperly removing commitments to maintain a keep warm pump from the Final Safety Analysis Report (FSAR). The licensee had committed to maintaining this pump in lieu of inspections of the intake structure. The licensee entered the item in the corrective action program and performed immediate corrective actions, including inspections of the intake structure.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function. Specifically, the licensee changed the FSAR in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy.

Inspection Report# : [2006004](#) (pdf)

Barrier Integrity

G

Significance: Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inaccurate Surveillance Procedure for Primary Coolant System Leakrate Calculation

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control" for the failure to have an accurate Technical Specification (TS) surveillance procedure for primary coolant leakage measurement. Specifically, the licensee did not provide an accurate calculation or accurate acceptance criteria over all the temperature ranges and other plant conditions under which the surveillance procedure could be used. This issue was entered into the licensee's corrective action system and the licensee developed interim guidance on leak rate calculations pending a procedure revision.

The finding is more than minor because it can reasonably be viewed as a precursor to a more significant event because the errors can prevent recognition of leakage in excess of the TS and licensing basis. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of IMC 0609, Appendix A, since no actual cases were found where unidentified leakage exceeded the TS.

Inspection Report# : [2006013](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: FIN Finding

Failure to Correctly Apply Pressure Locking Thrust in MOV Performance Test Procedures

The inspectors identified a finding having very low significance. Specifically, the licensee failed to correctly apply the effect due to pressure locking in the valve actuator capability margin to open for the boric acid gravity feed motor operated valves MO-2169 and MO-2170. Following discovery, the licensee performed preliminary calculations to ensure valve operability.

This issue was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, then motor operated valve actuators would have deteriorated over time without being detected, resulting in the valves being unable to perform their required functions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. No violation of NRC requirements occurred. (Section 1R21.3.b.11)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with 10 CFR 50 Appendix B, Criterion XVI for Recurring Fuel Assembly Cladding Failure

A self-revealed NCV of Criterion XVI was identified when damage to a fuel pin was found. The finding of very low safety significance (Green) occurred because the licensee failed to assure adequate corrective actions were implemented to prevent recurrence of fuel cladding damage to a fuel assembly. This finding represented an NCV of 10 CFR 50, Appendix B, Criterion XVI, in that the appropriate actions were not in place for a significant condition adverse to quality. The licensee entered the item into the corrective action program. Immediate corrective action included changing the core design and replacing susceptible fuel rods with stainless steel pins.

The inspectors determined that the finding is more than minor since the finding impacted the Barrier Integrity cornerstone objective of fuel clad integrity. Specifically, the clad on one fuel element had fretted away exposing the fuel plenum and plenum spring. The finding is of very low safety significance because only the fuel barrier was affected and plant TSs were not exceeded for fission product activity in the coolant.

Inspection Report# : [2006004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Adequately Implement Radiological Dose Controls

A Green finding was self-revealed for failure to adequately implement radiological dose controls during Refueling Outage 18 (RO18). Specifically, work control and planning issues (worker fatigue, worker proficiency, and material condition) contributed to additional worker doses. The total sum of the occupational radiation doses (collective dose) received by individuals for one work activity was found in excess of that collective dose planned or intended (i.e., that dose the licensee determined was ALARA for those work activities).

The finding was more than minor because the issue was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of the worker's health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The inspectors concluded that the finding did not result in an occupational overexposure, a substantial potential for an overexposure, or a compromised ability to assess dose. The inspectors determined that the finding involved ALARA planning and work controls. Considering the licensee's current 3-year rolling collective dose average exceeds 135 person-rem per unit, the actual dose was less than 25 person-rem and there are no other occurrences, the inspectors concluded that the SDP assessment for this finding was of very low safety significance, Green. The inspectors also determined that this finding had a cross-cutting aspect in the area of human performance because the licensee failed to appropriately coordinate work activities.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Apr 19, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Faliure To Develop an Adequate Procedure For Cask And Liner Reuse

A self-revealing finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4 "Procedures," were identified. On April 19, 2006, while lowering a shielded cask and its liner into the reactor cavity in preparation for placing additional incore (irradiated) instruments into the liner, the liner failed to displace air and adequately flood-up with water. As a result, the liner, which housed highly radioactive irradiated incore detectors, floated up to the pool surface where it remained for about 12 seconds before sinking back down into the pool. The incident created transient elevated radiation levels on the refueling deck of the containment building resulting in radiological exposure to the workers in the area. The primary cause of this finding was an inadequate procedure for the work activity and the procedure change review process that failed to identify deficiencies with the procedure and with its development. The procedure allowed a carbon steel liner to be used on multiple occasions in a boric acid environment without properly accounting for its design, its material composition, and the manufacturer's intended use. Licensee corrective actions included a procedure revision to preclude the repeated use of carbon steel liners in harsh environments, and an action to evaluate the current procedure change review processes.

The finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the Cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding was of very low safety significance because it did not involve significant radiation exposure or a substantial potential for an overexposure, nor was the licensee's ability to assess worker dose associated with the event compromised. The issue was a Non-Cited Violation of Technical Specification 5.4 which required, in part, that procedures appropriate to the circumstances be developed.

Inspection Report# : [2006008](#) (*pdf*)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: SL-IV Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Startup Transformer Not Evaluated for Past Operability and Reportability

The inspectors identified a finding of very low safety significance and an associated Severity Level IV Non-Cited Violation of 10 CFR 50.73 (a)(2). Specifically, the licensee failed to analyze past operability and submit a licensee event report when the startup transformer 1-2 tap changer control was found to be non-operational. Once analyzed, the licensee determined that one of the two required circuits from the offsite power supply was inoperable on at least three non-consecutive occasions between May 17 and May 22, 2006.

Because violations of 10 CFR 50.73 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.4, "Failure to Make a Required Licensee Event Report" for a Severity Level IV violation. (Section 1R21.3.b.1)

Inspection Report# : [2006009](#) (*pdf*)

Last modified : June 01, 2007

Palisades

2Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: FIN Finding

Reactor Trip Caused by Human Performance Error

A self-revealing finding was identified for the licensee's failure to follow work order instructions when performing maintenance on a main feedwater regulating valve position indicator. As a result, an automatic reactor trip occurred on a Reactor Protection System (RPS) actuation for steam generator low feedwater level. The licensee performed a cause analysis for the event and entered the event into their corrective action program.

The finding was more than minor because the failure to follow instructions caused an actual transient (i.e., reactor trip). This finding did not constitute a violation of NRC requirements and is considered very low safety significance (Green) since there was no impact on safety-related equipment or mitigation function and availability. The finding also has a cross-cutting aspect in the area of human performance, because the licensee failed to use adequate human error prevention techniques. (H.4(a))

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Reduction in Fast Bus Transfer Capability

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to evaluate the potentially adverse effects that a modification to add an automatic load tap changer to the startup transformer would have on the independence of the two circuits from the offsite power supply to the Class 1E Buses required by technical specifications and on the fast transfer capabilities described in the final safety analysis report. Following discovery, the licensee performed preliminary calculations to assess the issue.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to perform a calculation resulted in a modification to the plant which was not in accordance with the design basis and the modification required revision to ensure the design basis was met. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.2)

Inspection Report# : [2006009](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to preclude Water Hammer in HPSI Injection Piping

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to control system parameters in the HPSI system injection lines to preclude water hammer from occurring during either routine or accident conditions. As a result, the injection lines experienced water hammer on multiple occasions. The licensee has entered the condition into the corrective action program and changed procedures to limit the potential for water

hammer.

The inspectors concluded that the condition is more than minor, because if left uncorrected, the finding would become a more significant safety concern. Specifically, the cause of the water hammer would continue to worsen without additional action. Also, the periodic water hammering of the injection line could weaken piping supports. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the problem such that the resolution addressed causes and the extent of condition prior to the NRC raising concerns. (P.1(c))

Inspection Report# : [2007004](#) (*pdf*)

G

Significance: Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Pump 7A Shaft Degraded

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to establish adequate measures to ensure suitability of the application of the material for the 7A Service Water (SW) pump. Specifically the shaft for the A SW pump was constructed of carbon steel and was susceptible to wear due to sand and silt from the ultimate heat sink. The licensee has entered the condition into the corrective action program and has replaced the shaft with a stainless steel shaft.

The inspectors concluded that the condition is more than minor, because if left uncorrected the finding would become a more significant safety concern. Specifically, without prompting by the NRC, the wear on the 'A' SW pump shaft would have continued and would have reduced the margin of safety for the allowable stresses on the pump shaft. The finding was not of more than very low safety significance because in the current condition the 'A' SW pump remained operable, although degraded. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to implement a corrective action program with a low threshold for identifying issues. (P.1(a))

Inspection Report# : [2007004](#) (*pdf*)

G

Significance: Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Defective Part Installed on 1-2 EDG

A self-revealing NCV of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures to prevent the use of defective parts. Specifically, a fuel leak developed due to failure of a defective part on the 1-2 emergency diesel generator (EDG) on February 22, 2007. In 2005, a snubber on the same EDG had failed in the same manner. The failed part has been replaced, and there are no other suspect snubbers in the diesel engines on site.

The inspectors concluded the finding was more than minor because the EDG was inoperable for greater than the Technical Specification allowed outage time. The finding was not of more than very low safety significance because, while the EDG was inoperable, it did not represent an actual loss of safety function for greater than the Technical Specification allowed outage time. In addition, the inspectors concluded this finding had an associated cross cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the 2005 snubber failure such that the resolution addressed the extent of condition. (P.1(c))

Inspection Report# : [2007004](#) (*pdf*)

G

Significance: Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CV-0821 Corrective Actions Not Effective to Prevent Repeat Failure

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI for failing to take adequate corrective action to prevent recurrence of a significant condition adverse to quality. Specifically, valve CV-0821, a safety-related valve which positions automatically on a safety actuation signal, would not position on demand. The licensee discovered sand and silt had caused the valve to

stick in a non-safety position. The same condition occurred less than a year ago. This latest issue was entered into the licensee's corrective action system as AR 01080435 and an Operability Evaluation was completed with compensatory actions to maintain component operability.

The finding is more than minor because it is related to the equipment performance attribute of the mitigating system cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Both trains are potentially impacted since the valve arrangement is similar and susceptible to sand and silt. The finding screened as very low safety significance, using the Phase 1 worksheet of IMC 0609, Appendix A, since the actual loss of function was less than the allowed outage time. The inspectors also determined that this finding has a cross-cutting aspect in the area of Problem Identification and Resolution, because the licensee failed to take the appropriate corrective actions to address safety issues. (IMC 0305, P.1.(d))

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Control Rod Drive Mechanism Testing Practice Violates TS 3.1.4

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specifications for the failure to take actions for the appropriate Limiting Condition for Operation (LCO) not being met when surveillance testing exceeded the allowed interval. Specifically, the failure to verify control rod freedom of movement every 92 days (plus a 25 percent grace period) required entry into the Actions of LCO 3.1.4 Condition E, which stipulated the shutdown of the plant within six hours. This was not done on several occasions in the last three years. This issue was entered into the licensee's corrective action system as Action Request 01072543 and the inspectors verified that the rods subsequently had freedom of movement.

The finding is more than minor because, if left uncorrected, the finding could become a more significant safety concern; namely, the inability to detect rod binding could impact reactor shutdown margin in certain events. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of Inspection Manual Chapter 0609, Appendix A, since no actual cases were found where the rods were bound after subsequent cycling.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Comply with Technical Specification 3.9.5

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 3.9.5 for removing a train of safety equipment without complying with the required action and completion time when the Limiting Condition for Operability was not met. Specifically, the licensee removed one train of shutdown cooling (by removing one shutdown cooling heat exchanger - (SDCHX)) for planned maintenance while the reactor was in Mode 6 with cavity level below 647 feet. The Action required was to "immediately" initiate action to restore the train to Operable. The train was inoperable for over four days. This issue was entered into the licensee's corrective action system as Action Request 01082854.

The finding is more than minor since it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. The finding is associated with the cornerstone attribute of equipment performance (unavailability of the SDCHX). The inspectors evaluated this finding in accordance with Appendix G, "Shutdown Operations Significance Determination Process" to IMC 0609. Although only one Decay Heat Removal (DHR) train was operable, other items for defense in depth including backup injection flowpaths, pump sources, vent paths and water sources were available for use. The inspectors completed a Phase 2 assessment and determined that a loss of DHR had a low frequency. The finding is of very low safety significance.

Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specification 5.5.12 TS Basis Control Program

The inspectors identified a Severity Level IV Non-Cited Violation of Technical Specification (TS) 5.5.12 for the failure to comply with the TS Basis Control Program. Specifically, the licensee made a change to the TS bases for TS 3.9.5 which altered the TS definition of "two SDC trains" described in TS 3.9.5. The licensee changed the bases to allow a single SDC to be a member of two trains with cavity level less than 647 feet. A distinct SDCHX is required for each train. This change required prior NRC approval as a change to the TS. This issue was entered into the licensee's corrective action system.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition having a very low safety significance (i.e., green). Specifically, the licensee changed the TS bases in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy. The inspectors also determined that this finding has a cross-cutting aspect in the area of human performance, because the licensee failed to use conservative assumptions in changing the TS bases. (IMC 0305 H.1(b))

Inspection Report# : [2007002](#) (*pdf*)

G

Significance: Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Auxiliary Feedwater Vortex Limit Calculation

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to use a conservative value for auxiliary pump air entrainment in vortex limit calculations. Specifically, the licensee misinterpreted a graph used to determine the percent air ingestion as a function of the Froude number, which resulted in a pump air entrainment value above a value supported by the vendor. This issue was entered into the licensee's corrective action system and the licensee made procedure changes and provided operator training to ensure that the auxiliary pumps were tripped prior to entraining excessive air.

This issue was more than minor because the calculational error was significant enough to require reanalysis of the pumps' ability to perform their design function and because changes to plant procedures were necessary in order to ensure pump operability. The error also appeared to be programmatic as a similar error was made in calculating the air entrainment to the high pressure safety injection pumps. The issue was of very low safety significance because although it was a design issue, there was not a loss of function of the auxiliary feedwater pumps.

Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Addition of Manual Operator Action Not Evaluated in Accordance with 10 CFR 50.59

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for a failure to seek a license amendment. Specifically, when Setpoint Change 96-012 involving the low suction pressure trip of the auxiliary feedwater pumps was implemented, no safety evaluation was performed. When the evaluation was performed in December 2006 the licensee failed to evaluate known deficiencies.

Because violations of 10 CFR 50.59 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.5, "Violations of 10 CFR 50.59 that result in conditions evaluated as having very low safety significance by the SDP," for a Severity Level IV Violation.

Inspection Report# : [2007002](#) (*pdf*)

G

Significance: Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Valve Body Inadvertently Discarded Due to Ineffective Quarantine

The inspectors identified an Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately quarantine a component for failure analysis as required by the licensee's procedures. The licensee discarded a valve body, which resulted in the failure to complete a corrective action assigned in an associated root cause evaluation. The finding was associated with the work practices component of the human performance cross-cutting area because licensee personnel failed to use appropriate human error prevention techniques to ensure the valve body was effectively quarantined. After the issue was identified by the NRC, the licensee entered the issue into their corrective action program as Action Requests 01076153 and 01076213.

This finding was determined to be more than minor based on a review of the list of more than minor issues in Inspection Manual Chapter 0612, Appendix E, in that the valve body was irretrievably lost. Additionally, if left uncorrected, the failure to quarantine items could become a more significant safety concern since the failure to do so could impede the identification of root and/or contributing causes for conditions adverse to quality and prevent the implementation of appropriate corrective actions. The finding was of very low safety significance because the finding was not a design or qualification deficiency resulting in a loss of function per Generic Letter 91-18; did not represent an actual loss of safety function of a system or the loss of safety function of a train of equipment; and was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Extent of Condition for High Pressure Safety Injection Valve Failure

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to assure that conditions adverse to quality were promptly corrected. Specifically, the inspectors concluded that the licensee failed to develop adequate actions to correct conditions adverse to quality identified during root cause evaluation activities for a valve failure on March 29, 2006. This finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution area because licensee personnel failed to promptly perform an adequate extent of condition for the valve failure. The licensee entered this performance deficiency into the corrective action program as AR 01076287 for resolution.

The finding was more than minor because, if left uncorrected, future conditions adverse to quality would not be fully evaluated or corrected. The inspectors assessed the significance of this finding as very low safety significance because, upon completing an adequate extent of condition review, no additional examples of improperly supported equipment were identified.

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure of Component on 1-2 Emergency Diesel Generator Causes Surveillance Failure

A Green self-revealing Non-Cited Violation of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures needed to prevent the use of defective parts. Specifically, a fuel leak developed due to the incorrect part on the 1-2 Emergency Diesel Generator (EDG) on November 20, 2005, that resulted in aborting a surveillance test. The cause was related to a defective part which had been installed 28 days earlier. The part has been replaced, and there are no other susceptible parts in the diesel engines on site.

The finding is more than minor since the defective part impacted the cornerstone for availability, reliability and capability of the class 1E, on site EDG system and is an associated attribute of equipment performance. The finding screened as very low safety significance, Green, since there was no loss of safety function for the 1-2 EDG.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Voltage Drop Calculations for Motor Control Center Control Circuits

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to include the voltage drop across control power transformers, did not account for loading due to auxiliary equipment such as relays and indicating lights, did not consider increased cable resistance due to increased temperature in accident environments, used an unverified assumption that calculations for motor control centers 1 and 2 bounded other safety related motor control centers, and failed to account for previously identified non-conservatisms in associated voltage calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.3)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Effect of Accident Temperatures on Cable Resistance Not Evaluated

The inspectors identified a finding having very low significance and an associated Non-Ccited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to consider the effects of accident temperatures on cable resistance in voltage drop calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.4)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Molded-Case Circuit Breaker Testing Program Deficiencies

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." for the licensee's failure to ensure that the molded-case circuit breaker (MCCB) testing program remained current with industry and NRC operating experience thus ensuring that the installed safety-related and important-to-safety MCCBs did not degrade and would perform satisfactorily in service. Following discovery, the licensee entered the issue into its corrective action program and was evaluating an update to the testing program.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events. Specifically, the testing program did not ensure the reliability of the installed MCCBs because the program did not include test methods or failure assessment that would accurately and conclusively demonstrate MCCB continued operability. The

issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.5)
Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Battery Terminals Not Coated with Anti-Corrosion Material

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of Technical Specification Surveillance Requirement 3.8.4.4. Specifically the licensee failed to verify that the 125V DC battery cable-to-terminal plate connections (cells 1, 35, 36, and 59) were coated with anti-corrosion material. Following discovery, the licensee coated all the terminal plate connections with an anti-corrosion material.

This issue was more than minor in accordance with IMC 0612, Appendix B, because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of the DC power system. The purpose of the technical specification surveillance was to ensure good electrical connections and to reduce terminal deterioration. Specifically, corrosion in connections could potentially result in unacceptable connection resistance and decreased battery capacity, rendering the DC system incapable of performing its required safety function. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.6)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Diesel Generator Frequency Variation not Considered in Loading Calculations

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to take into account the effect of emergency diesel generator frequency variation in the diesel loading calculations. Following discovery, the licensee performed preliminary calculations and determined that emergency diesel generator 1-2 was still within its load rating.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to account for frequency variations had more than a minimal effect on the outcome of the calculation; specifically it resulted in reducing the available margin for the two hour loading on emergency diesel generator 1-2 by approximately 75 percent. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the diesels. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the diesels. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.7)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Diesel Generator Automatic Fuel Transfer Equipment not Rated for Expected Max Temp

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to verify that eight components involved with transferring diesel fuel to the emergency diesel generators were rated for the temperature in which they had to operate. Following discovery, the licensee performed a preliminary calculation to demonstrate that the equipment would function if called upon. The primary cause of this violation was related to the cross-cutting area of human performance.

This issue was more than minor in accordance with IMC 0612, Appendix B because the finding was associated with the equipment performance (availability and reliability) attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the equipment that was required for the function of automatically transferring fuel to the emergency diesel generator belly tanks was not initially rated for the temperature in which it was required to operate, hence affecting the capability of the emergency diesel generators to respond to an initiating event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.8)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

High Pressure Safety Injection Pump Vortex Limit Calculation Inaccuracies

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee incorrectly interpreted a graph used to determine the percent air ingestion as a function of the Froude number, resulting in a non-conservative air entrainment value for the high pressure safety injection pumps when taking suction from the safety injection refueling water tank at the point of switching over to the containment sump. Following discovery, the licensee performed preliminary calculations to show that the pumps would continue to operate with the correct air entrainment value.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the calculation error was significant enough to require reanalysis of the accident analysis setpoint, including requesting the pump manufacturer to analyze the capability of the pumps to perform at the higher percent of air entrainment, and required the engineers to reanalyze the pumps safety function in light of the reduced net positive suction head, as well as reduced flow and discharge head at the time the vortex formed. Additionally, the error appeared to be programmatic as a similar error was made in calculating the air entrainment to the auxiliary feedwater pumps. Therefore this performance deficiency impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the high pressure safety injection pumps. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.9)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Potential for Safety Injection and Refueling Water Tank Level Switch Setpoints to be Outside TS Limit

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to establish a proper setpoint for safety injection and refueling water tank level switch such that, when instrument uncertainty was taken into account, the setpoint could be set outside the technical specification limits. Following discovery, the licensee verified the actual set points.

This issue was more than minor in accordance with IMC 0612, Appendix B because, if left uncorrected, the technical specification limit for the safety injection refueling water tank level set points could have been exceeded without the licensee being aware of it. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.10)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification 5.4.1a for an operator failing to comply with the site quality procedure for Conduct of Operations by manipulating safety related components without any procedure guidance. The operator placed all Auxiliary Feedwater (AFW) pumps out of automatic control, causing the pumps to be inoperable and placing the plant outside of the licensing basis. Corrective actions to address this finding included removing the operator who made the error from shift and briefing each operating crew on this event.

This finding was of more than minor safety significance because the operator did not follow procedural guidance which resulted in the inoperability of all three AFW pumps. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total change in core damage frequency (delta CDF) considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance, because the licensee did not use human error techniques, such as self or peer checking, or proper documentation of activities for placing the AFW switches to manual.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specifications

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification (TS) 3.7.5 for the licensee's failure to comply with the required action time to be in Mode 4 in 30 hours with no Auxiliary Feedwater (AFW) pumps operable. In addition, the inspectors identified the failure to comply with the action of TS 3.0.4 in that the licensee ascended from Mode 3 to Mode 2 with no AFW pumps operable. The licensee's failure to detect and correct, using appropriate board walk-downs and turnover techniques, that all three AFW pumps were in manual directly caused the violation of Technical Specifications. Corrective actions to address this finding included requiring the use of a checklist to verify correct control room switch alignment, and increasing management oversight of the control room.

This finding was of more than minor safety significance because numerous operators failed to identify that all three AFW pumps were inoperable. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency (LERF) was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance. Specifically, personnel who had the knowledge of the issue failed to evaluate the condition in accordance with procedure guidance and failed to ensure that the proper procedure for tracking and resolving safety related equipment issues were followed.

Inspection Report# : [2006014](#) (*pdf*)

Significance:  Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate procedures, appropriate for the circumstances of plant startup and shutdown. Specifically, procedures were not adequate to place the Auxiliary Feedwater (AFW) system in service for a plant shutdown. In addition, inadequate procedural guidance existed for safety system alignment checks prior to reactor startup from Mode 3. Corrective actions to address this finding included initiating a root cause analysis and actions to upgrade start-up and shutdown procedures.

This finding was of more than minor safety significance because the inadequate procedural guidance resulted in operators not placing or maintaining the AFW system in an operable condition. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had

a cross-cutting aspect in the area of Human Performance because the licensee did not plan or coordinate shutdown activities relating to AFW operation. The licensee inappropriately relied on pre-job briefings as a compensatory action in lieu of written instructions.

Inspection Report# : [2006014](#) (*pdf*)

G

Significance: Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

The licensee failed to demonstrate that the performance or condition of High Pressure Injection System had been effectively controlled per 10 CFR 50.65

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50.65 "Requirements for monitoring effectiveness of maintenance at nuclear power plants." Specifically, contrary to 50.65(a)(2), the licensee failed to demonstrate that the performance or condition of the HPSI System had been effectively controlled through performance of appropriate maintenance, and did not place the system in 50.65(a)(1) status when system performance deteriorated. The licensee subsequently placed the HPSI system in 50.65(a)(1) status and entered the finding into their corrective action program.

The inspectors determined that not placing the system in (a)(1) status when performance deteriorated is more than minor because it matched an example in IMC 0612, Appendix E, "Examples of Minor Violations," as being more than minor. The finding is of very low safety significance because the finding did not result in loss of a safety function.

Inspection Report# : [2006006](#) (*pdf*)

G

Significance: Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Control Valve CV-3070 Failed to Stroke

A Green Non-Cited Violation was self-revealed on March 29, 2006, when control valve CV-3070, left train HPSI sub-cooling valve for HPSI pump P-66B, failed to open during preventive maintenance. Subsequent investigation by the licensee identified that a design change had removed a support for the valve. The removal of this support caused the valve to bind. The finding is a violation of 10 CFR 50, Appendix B, Criterion III. The licensee entered the finding into the corrective action program, repaired the valve and added additional support to prevent recurrence.

The inspectors concluded that the issue is more than minor because it affected the operability, reliability, and availability of a mitigating system. The inspectors concluded a phase 3 assessment was required based on the results of phase 1 and 2 assessments. Following a phase 3 assessment, the Senior Reactor Analyst concluded that the finding is of very low safety significance.

Inspection Report# : [2006006](#) (*pdf*)

Barrier Integrity

G

Significance: Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inaccurate Surveillance Procedure for Primary Coolant System Leakrate Calculation

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control" for the failure to have an accurate Technical Specification (TS) surveillance procedure for primary coolant leakage measurement. Specifically, the licensee did not provide an accurate calculation or accurate acceptance criteria over all the temperature ranges and other plant conditions under which the surveillance procedure could be used. This issue was entered into the licensee's corrective action system and the licensee developed interim guidance on leak rate calculations pending a procedure revision.

The finding is more than minor because it can reasonably be viewed as a precursor to a more significant event because

the errors can prevent recognition of leakage in excess of the TS and licensing basis. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of IMC 0609, Appendix A, since no actual cases were found where unidentified leakage exceeded the TS.

Inspection Report# : [2006013](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: FIN Finding

Failure to Correctly Apply Pressure Locking Thrust in MOV Performance Test Procedures

The inspectors identified a finding having very low significance. Specifically, the licensee failed to correctly apply the effect due to pressure locking in the valve actuator capability margin to open for the boric acid gravity feed motor operated valves MO-2169 and MO-2170. Following discovery, the licensee performed preliminary calculations to ensure valve operability.

This issue was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, then motor operated valve actuators would have deteriorated over time without being detected, resulting in the valves being unable to perform their required functions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. No violation of NRC requirements occurred. (Section 1R21.3.b.11)

Inspection Report# : [2006009](#) (*pdf*)

Emergency Preparedness

G

Significance: Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Implement Approved EAL Scheme

The inspectors identified a Green NCV of 10 CFR 50.47 for failure to properly implement approved Emergency Action Levels (EAL). As a result of the improper EAL implementation, site personnel responsible for EAL declarations could improperly classify some Alerts as Site Area Emergencies (SAEs). The licensee has provided training to site personnel regarding correct declaration of this EAL.

The inspectors determined that the licensee's failure to properly implement the EALs represented a performance deficiency that warranted a significance determination. The inspectors concluded that the finding affected the Emergency Preparedness Cornerstone objective for the attribute of Emergency Response Organization (ERO) readiness in that the licensee improperly implemented an EAL. In addition, the finding had a cross-cutting aspect in the area of human performance, resource component. Specifically, the training of personnel resulted in improperly classifying the drill scenario. (H.2.(b))

Inspection Report# : [2007004](#) (*pdf*)

Occupational Radiation Safety

G

Significance: Dec 31, 2006

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Adequately Implement Radiological Dose Controls

A Green finding was self-revealed for failure to adequately implement radiological dose controls during Refueling Outage 18 (RO18). Specifically, work control and planning issues (worker fatigue, worker proficiency, and material condition) contributed to additional worker doses. The total sum of the occupational radiation doses (collective dose) received by individuals for one work activity was found in excess of that collective dose planned or intended (i.e., that

dose the licensee determined was ALARA for those work activities).

The finding was more than minor because the issue was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of the worker's health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The inspectors concluded that the finding did not result in an occupational overexposure, a substantial potential for an overexposure, or a compromised ability to assess dose. The inspectors determined that the finding involved ALARA planning and work controls. Considering the licensee's current 3-year rolling collective dose average exceeds 135 person-rem per unit, the actual dose was less than 25 person-rem and there are no other occurrences, the inspectors concluded that the SDP assessment for this finding was of very low safety significance, Green. The inspectors also determined that this finding had a cross-cutting aspect in the area of human performance because the licensee failed to appropriately coordinate work activities.

Inspection Report# : [2006013](#) (*pdf*)

Public Radiation Safety

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to effectively survey slings before granting unconditional release from the RCA

A self-revealed finding of very low safety significance and an associated violation of NRC requirements was identified for the failure to effectively survey slings before granting unconditional release from the Radiologically Controlled Area (RCA). This was first identified when a sling alarmed the PM-7 (portal radiation monitor) at the security building on October 13, 2006. A few days later, an individual working outside of the RCA became contaminated after handling a rigging/lifting sling. Extent of condition surveys identified 17 additional slings outside the RCA and/or Protected Area that alarmed the tool monitor. Radioactive material was also identified on two of these slings using a conventional hand-held frisker survey instrument.

The issue was more than minor because it was associated with the Program/Process attribute of the Public Radiation Safety Cornerstone and affected the cornerstone objective to ensure the adequate protection of the public domain as a result of routine civilian nuclear reactor operation. A Green NCV of 10 CFR 20.1501 was identified for the failure to adequately survey materials to evaluate the presence of radioactive material. The cause of this deficiency is a legacy issue and does not represent current licensee performance. Therefore, this deficiency does not have any cross-cutting aspects.

Inspection Report# : [2007004](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: SL-IV Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Startup Transformer Not Evaluated for Past Operability and Reportability

The inspectors identified a finding of very low safety significance and an associated Severity Level IV Non-Cited

Violation of 10 CFR 50.73 (a)(2). Specifically, the licensee failed to analyze past operability and submit a licensee event report when the startup transformer 1-2 tap changer control was found to be non-operational. Once analyzed, the licensee determined that one of the two required circuits from the offsite power supply was inoperable on at least three non-consecutive occasions between May 17 and May 22, 2006.

Because violations of 10 CFR 50.73 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.4, "Failure to Make a Required Licensee Event Report" for a Severity Level IV violation. (Section 1R21.3.b.1)

Inspection Report# : [2006009](#) (*pdf*)

Last modified : August 24, 2007

Palisades

3Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: FIN Finding

Reactor Trip Caused by Human Performance Error

A self-revealing finding was identified for the licensee's failure to follow work order instructions when performing maintenance on a main feedwater regulating valve position indicator. As a result, an automatic reactor trip occurred on a Reactor Protection System (RPS) actuation for steam generator low feedwater level. The licensee performed a cause analysis for the event and entered the event into their corrective action program.

The finding was more than minor because the failure to follow instructions caused an actual transient (i.e., reactor trip). This finding did not constitute a violation of NRC requirements and is considered very low safety significance (Green) since there was no impact on safety-related equipment or mitigation function and availability. The finding also has a cross-cutting aspect in the area of human performance, because the licensee failed to use adequate human error prevention techniques. (H.4(a))

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Reduction in Fast Bus Transfer Capability

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to evaluate the potentially adverse effects that a modification to add an automatic load tap changer to the startup transformer would have on the independence of the two circuits from the offsite power supply to the Class 1E Buses required by technical specifications and on the fast transfer capabilities described in the final safety analysis report. Following discovery, the licensee performed preliminary calculations to assess the issue.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to perform a calculation resulted in a modification to the plant which was not in accordance with the design basis and the modification required revision to ensure the design basis was met. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.2)

Inspection Report# : [2006009](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Plant Radiation Monitors Not Fully Scoped into the Maintenance Rule

The inspectors identified a Green NCV of 10 CFR 50.65(b)(2) because the licensee did not scope all plant radiation monitors used in site emergency operating procedures into the maintenance rule monitoring program. The licensee entered the item into their corrective action program and placed the radiation monitoring system in the a(1) status.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was considered to have very low safety significance (Green) because the finding did not cause a loss of mitigation equipment functions and did not increase the likelihood of a fire or flooding event.

Inspection Report# : [2007006](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment for Safety Injection Actuation Test

The inspectors identified a Green NCV of 10 CFR Part 50.65(a)(4), because the licensee did not adequately assess and manage online risk while performing a safety injection system actuation test. Specifically, prior to performance of the safety injection test, the inspectors identified that the test did not account for unavailability of a high pressure safety injection (HPSI) train. Accounting for the HPSI unavailability resulted in yellow risk. The licensee implemented appropriate risk mitigation actions prior to entering yellow risk. The licensee entered the item into their corrective action process and updated the risk assessment.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure availability of systems and the risk assessment failed to consider risk-significant systems, structures, components (i.e., high pressure safety injection pumps) which were unavailable during on-line maintenance. The inspectors concluded that the finding was of very low safety significance because the incremental core damage probability deficit was less than 1×10^{-6} (green) in accordance with IMC 0609, Appendix K. The finding included a cross-cutting aspect in the area of human performance, work controls, in that the licensee failed to incorporate appropriate risk insights when coordinating work activities.

Inspection Report# : [2007006](#) (*pdf*)

Significance: SL-IV Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Temporary Modification for Augmented Cooling of SW

The inspectors identified a severity level (SL) IV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments" for the licensee's failure to perform a written evaluation prior to implementing a temporary modification to compensate for the absence of containment air cooler VHX-4. Specifically the modification adversely impacted the service water (SW) system and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action process, added structural elements to minimize fouling of the service water system, evaluated the change in accordance with 10 CFR 50.59, and performed a written evaluation. The revised modification did not require prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition which reduced the reliability of the SW system, a mitigating system. The inspectors concluded the original modification may have required prior NRC approval. The issue screened green in the phase 3 assessment for the equipment degradation and therefore was of very low safety significance, and therefore, SLIV. The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to use conservative assumptions in decision making and failed to identify possible unintended consequences when implementing the augmented cooling for service water modification. (H.1.(b))

Inspection Report# : [2007006](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

AFW Pumps Inoperable Due to High Energy Line Breaks in the Turbine Building

The inspectors identified a Green non-cited violation NCV of 10 CFR 50, Appendix B, Criteria III, "Design Control" for failing to adequately translate the design and licensing basis requirements into equipment specifications for the 8A and 8B Auxiliary Feedwater (AFW) pumps and controls. Specifically, the 8A and 8B pumps have a licensing basis to be operable during a High Energy Line Break (HELB) event in the turbine building; however, in some HELB

scenarios the pumps would experience a harsh environment. The licensee did not qualify the pumps and associated equipment for a harsh environment. The licensee wrote a condition report and an operability recommendation (OPR) with compensatory actions to address the issue.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the AFW system to respond to initiating events. A phase 2 screening was required since the design qualification deficiency resulted in a loss of function for one train of AFW per Generic Letter 91-18. The SRA concluded in a phase 3 evaluation, which included external events, that the finding was of very low safety significance (Green).
Inspection Report# : [2007006](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to preclude Water Hammer in HPSI Injection Piping

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to control system parameters in the HPSI system injection lines to preclude water hammer from occurring during either routine or accident conditions. As a result, the injection lines experienced water hammer on multiple occasions. The licensee has entered the condition into the corrective action program and changed procedures to limit the potential for water hammer.

The inspectors concluded that the condition is more than minor, because if left uncorrected, the finding would become a more significant safety concern. Specifically, the cause of the water hammer would continue to worsen without additional action. Also, the periodic water hammering of the injection line could weaken piping supports. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the problem such that the resolution addressed causes and the extent of condition prior to the NRC raising concerns. (P.1(c))
Inspection Report# : [2007004](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Pump 7A Shaft Degraded

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to establish adequate measures to ensure suitability of the application of the material for the 7A Service Water (SW) pump. Specifically the shaft for the A SW pump was constructed of carbon steel and was susceptible to wear due to sand and silt from the ultimate heat sink. The licensee has entered the condition into the corrective action program and has replaced the shaft with a stainless steel shaft.

The inspectors concluded that the condition is more than minor, because if left uncorrected the finding would become a more significant safety concern. Specifically, without prompting by the NRC, the wear on the 'A' SW pump shaft would have continued and would have reduced the margin of safety for the allowable stresses on the pump shaft. The finding was not of more than very low safety significance because in the current condition the 'A' SW pump remained operable, although degraded. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to implement a corrective action program with a low threshold for identifying issues. (P.1(a))
Inspection Report# : [2007004](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Defective Part Installed on 1-2 EDG

A self-revealing NCV of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures to prevent the use of defective parts. Specifically, a fuel leak developed due to failure of a defective part on the 1-2 emergency diesel generator (EDG) on

February 22, 2007. In 2005, a snubber on the same EDG had failed in the same manner. The failed part has been replaced, and there are no other suspect snubbers in the diesel engines on site.

The inspectors concluded the finding was more than minor because the EDG was inoperable for greater than the Technical Specification allowed outage time. The finding was not of more than very low safety significance because, while the EDG was inoperable, it did not represent an actual loss of safety function for greater than the Technical Specification allowed outage time. In addition, the inspectors concluded this finding had an associated cross cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the 2005 snubber failure such that the resolution addressed the extent of condition. (P.1(c))

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CV-0821 Corrective Actions Not Effective to Prevent Repeat Failure

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI for failing to take adequate corrective action to prevent recurrence of a significant condition adverse to quality. Specifically, valve CV-0821, a safety-related valve which positions automatically on a safety actuation signal, would not position on demand. The licensee discovered sand and silt had caused the valve to stick in a non-safety position. The same condition occurred less than a year ago. This latest issue was entered into the licensee's corrective action system as AR 01080435 and an Operability Evaluation was completed with compensatory actions to maintain component operability.

The finding is more than minor because it is related to the equipment performance attribute of the mitigating system cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Both trains are potentially impacted since the valve arrangement is similar and susceptible to sand and silt. The finding screened as very low safety significance, using the Phase 1 worksheet of IMC 0609, Appendix A, since the actual loss of function was less than the allowed outage time. The inspectors also determined that this finding has a cross-cutting aspect in the area of Problem Identification and Resolution, because the licensee failed to take the appropriate corrective actions to address safety issues. (IMC 0305, P.1.(d))

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Control Rod Drive Mechanism Testing Practice Violates TS 3.1.4

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specifications for the failure to take actions for the appropriate Limiting Condition for Operation (LCO) not being met when surveillance testing exceeded the allowed interval. Specifically, the failure to verify control rod freedom of movement every 92 days (plus a 25 percent grace period) required entry into the Actions of LCO 3.1.4 Condition E, which stipulated the shutdown of the plant within six hours. This was not done on several occasions in the last three years. This issue was entered into the licensee's corrective action system as Action Request 01072543 and the inspectors verified that the rods subsequently had freedom of movement.

The finding is more than minor because, if left uncorrected, the finding could become a more significant safety concern; namely, the inability to detect rod binding could impact reactor shutdown margin in certain events. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of Inspection Manual Chapter 0609, Appendix A, since no actual cases were found where the rods were bound after subsequent cycling.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Comply with Technical Specification 3.9.5

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 3.9.5 for removing a train of safety equipment without complying with the required action and completion time when the Limiting Condition for Operability was not met. Specifically, the licensee removed one train of shutdown cooling (by removing one shutdown cooling heat exchanger - (SDCHX)) for planned maintenance while the reactor was in Mode 6 with cavity level below 647 feet. The Action required was to "immediately" initiate action to restore the train to Operable. The train was inoperable for over four days. This issue was entered into the licensee's corrective action system as Action Request 01082854.

The finding is more than minor since it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. The finding is associated with the cornerstone attribute of equipment performance (unavailability of the SDCHX). The inspectors evaluated this finding in accordance with Appendix G, "Shutdown Operations Significance Determination Process" to IMC 0609. Although only one Decay Heat Removal (DHR) train was operable, other items for defense in depth including backup injection flowpaths, pump sources, vent paths and water sources were available for use. The inspectors completed a Phase 2 assessment and determined that a loss of DHR had a low frequency. The finding is of very low safety significance. Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specification 5.5.12 TS Basis Control Program

The inspectors identified a Severity Level IV Non-Cited Violation of Technical Specification (TS) 5.5.12 for the failure to comply with the TS Basis Control Program. Specifically, the licensee made a change to the TS bases for TS 3.9.5 which altered the TS definition of "two SDC trains" described in TS 3.9.5. The licensee changed the bases to allow a single SDC to be a member of two trains with cavity level less than 647 feet. A distinct SDCHX is required for each train. This change required prior NRC approval as a change to the TS. This issue was entered into the licensee's corrective action system.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition having a very low safety significance (i.e., green). Specifically, the licensee changed the TS bases in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy. The inspectors also determined that this finding has a cross-cutting aspect in the area of human performance, because the licensee failed to use conservative assumptions in changing the TS bases. (IMC 0305 H.1(b))
Inspection Report# : [2007002](#) (*pdf*)



Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Auxiliary Feedwater Vortex Limit Calculation

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to use a conservative value for auxiliary pump air entrainment in vortex limit calculations. Specifically, the licensee misinterpreted a graph used to determine the percent air ingestion as a function of the Froude number, which resulted in a pump air entrainment value above a value supported by the vendor. This issue was entered into the licensee's corrective action system and the licensee made procedure changes and provided operator training to ensure that the auxiliary pumps were tripped prior to entraining excessive air.

This issue was more than minor because the calculational error was significant enough to require reanalysis of the pumps' ability to perform their design function and because changes to plant procedures were necessary in order to ensure pump operability. The error also appeared to be programmatic as a similar error was made in calculating the air entrainment to the high pressure safety injection pumps. The issue was of very low safety significance because although it was a design issue, there was not a loss of function of the auxiliary feedwater pumps. Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Addition of Manual Operator Action Not Evaluated in Accordance with 10 CFR 50.59

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for a failure to seek a license amendment. Specifically, when Setpoint Change 96-012 involving the low suction pressure trip of the auxiliary feedwater pumps was implemented, no safety evaluation was performed. When the evaluation was performed in December 2006 the licensee failed to evaluate known deficiencies.

Because violations of 10 CFR 50.59 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.5, "Violations of 10 CFR 50.59 that result in conditions evaluated as having very low safety significance by the SDP," for a Severity Level IV Violation.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Valve Body Inadvertently Discarded Due to Ineffective Quarantine

The inspectors identified an Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately quarantine a component for failure analysis as required by the licensee's procedures. The licensee discarded a valve body, which resulted in the failure to complete a corrective action assigned in an associated root cause evaluation. The finding was associated with the work practices component of the human performance cross-cutting area because licensee personnel failed to use appropriate human error prevention techniques to ensure the valve body was effectively quarantined. After the issue was identified by the NRC, the licensee entered the issue into their corrective action program as Action Requests 01076153 and 01076213.

This finding was determined to be more than minor based on a review of the list of more than minor issues in Inspection Manual Chapter 0612, Appendix E, in that the valve body was irretrievably lost. Additionally, if left uncorrected, the failure to quarantine items could become a more significant safety concern since the failure to do so could impede the identification of root and/or contributing causes for conditions adverse to quality and prevent the implementation of appropriate corrective actions. The finding was of very low safety significance because the finding was not a design or qualification deficiency resulting in a loss of function per Generic Letter 91-18; did not represent an actual loss of safety function of a system or the loss of safety function of a train of equipment; and was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Extent of Condition for High Pressure Safety Injection Valve Failure

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to assure that conditions adverse to quality were promptly corrected. Specifically, the inspectors concluded that the licensee failed to develop adequate actions to correct conditions adverse to quality identified during root cause evaluation activities for a valve failure on March 29, 2006. This finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution area because licensee personnel failed to promptly perform an adequate extent of condition for the valve failure. The licensee entered this performance deficiency into the corrective action program as AR 01076287 for resolution.

The finding was more than minor because, if left uncorrected, future conditions adverse to quality would not be fully evaluated or corrected. The inspectors assessed the significance of this finding as very low safety significance because, upon completing an adequate extent of condition review, no additional examples of improperly supported equipment were identified.

Inspection Report# : [2007003](#) (*pdf*)

G**Significance:** Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure of Component on 1-2 Emergency Diesel Generator Causes Surveillance Failure

A Green self-revealing Non-Cited Violation of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures needed to prevent the use of defective parts. Specifically, a fuel leak developed due to the incorrect part on the 1-2 Emergency Diesel Generator (EDG) on November 20, 2005, that resulted in aborting a surveillance test. The cause was related to a defective part which had been installed 28 days earlier. The part has been replaced, and there are no other susceptible parts in the diesel engines on site.

The finding is more than minor since the defective part impacted the cornerstone for availability, reliability and capability of the class 1E, on site EDG system and is an associated attribute of equipment performance. The finding screened as very low safety significance, Green, since there was no loss of safety function for the 1-2 EDG.

Inspection Report# : [2006013](#) (*pdf*)**G****Significance:** Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Voltage Drop Calculations for Motor Control Center Control Circuits

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to include the voltage drop across control power transformers, did not account for loading due to auxiliary equipment such as relays and indicating lights, did not consider increased cable resistance due to increased temperature in accident environments, used a unverified assumption that calculations for motor control centers 1 and 2 bounded other safety related motor control centers, and failed to account for previously identified non-conservatisms in associated voltage calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.3)

Inspection Report# : [2006009](#) (*pdf*)**G****Significance:** Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Effect of Accident Temperatures on Cable Resistance Not Evaluated

The inspectors identified a finding having very low significance and an associated Non-Ccited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to consider the effects of accident temperatures on cable resistance in voltage drop calculations. Following discovery, the licensee performed preliminary calculations verify operability of the circuits.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in

accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.4)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Molded-Case Circuit Breaker Testing Program Deficiencies

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." for the licensee's failure to ensure that the molded-case circuit breaker (MCCB) testing program remained current with industry and NRC operating experience thus ensuring that the installed safety-related and important-to-safety MCCBs did not degrade and would perform satisfactorily in service. Following discovery, the licensee entered the issue into its corrective action program and was evaluating an update to the testing program.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events. Specifically, the testing program did not ensure the reliability of the installed MCCBs because the program did not include test methods or failure assessment that would accurately and conclusively demonstrate MCCB continued operability. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.5)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Battery Terminals Not Coated with Anti-Corrosion Material

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of Technical Specification Surveillance Requirement 3.8.4.4. Specifically the licensee failed to verify that the 125V DC battery cable-to-terminal plate connections (cells 1, 35, 36, and 59) were coated with anti-corrosion material. Following discovery, the licensee coated all the terminal plate connections with an anti-corrosion material.

This issue was more than minor in accordance with IMC 0612, Appendix B, because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the reliability of the DC power system. The purpose of the technical specification surveillance was to ensure good electrical connections and to reduce terminal deterioration. Specifically, corrosion in connections could potentially result in unacceptable connection resistance and decreased battery capacity, rendering the DC system incapable of performing its required safety function. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.6)

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Diesel Generator Frequency Variation not Considered in Loading Calculations

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to take into account the effect of emergency diesel generator frequency variation in the diesel loading calculations. Following discovery, the licensee performed preliminary calculations and determined that emergency diesel generator 1-2 was still within its load rating.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the failure to account for frequency variations had more than a minimal effect

on the outcome of the calculation; specifically it resulted in reducing the available margin for the two hour loading on emergency diesel generator 1-2 by approximately 75 percent. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the diesels. Therefore this performance deficiency also impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the diesels. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.7)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Diesel Generator Automatic Fuel Transfer Equipment not Rated for Expected Max Temp

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to verify that eight components involved with transferring diesel fuel to the emergency diesel generators were rated for the temperature in which they had to operate. Following discovery, the licensee performed a preliminary calculation to demonstrate that the equipment would function if called upon. The primary cause of this violation was related to the cross-cutting area of human performance.

This issue was more than minor in accordance with IMC 0612, Appendix B because the finding was associated with the equipment performance (availability and reliability) attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the equipment that was required for the function of automatically transferring fuel to the emergency diesel generator belly tanks was not initially rated for the temperature in which it was required to operate, hence affecting the capability of the emergency diesel generators to respond to an initiating event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.8)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

High Pressure Safety Injection Pump Vortex Limit Calculation Inaccuracies

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee incorrectly interpreted a graph used to determine the percent air ingestion as a function of the Froude number, resulting in a non-conservative air entrainment value for the high pressure safety injection pumps when taking suction from the safety injection refueling water tank at the point of switching over to the containment sump. Following discovery, the licensee performed preliminary calculations to show that the pumps would continue to operate with the correct air entrainment value.

This issue was more than minor based on review of IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," because the calculation error was significant enough to require reanalysis of the accident analysis setpoint, including requesting the pump manufacturer to analyze the capability of the pumps to perform at the higher percent of air entrainment, and required the engineers to reanalyze the pumps safety function in light of the reduced net positive suction head, as well as reduced flow and discharge head at the time the vortex formed. Additionally, the error appeared to be programmatic as a similar error was made in calculating the air entrainment to the auxiliary feedwater pumps. Therefore this performance deficiency impacted the Mitigating Systems Cornerstone objective of ensuring the capability of the high pressure safety injection pumps. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.9)

Inspection Report# : [2006009](#) (*pdf*)

G**Significance:** Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Potential for Safety Injection and Refueling Water Tank Level Switch Setpoints to be Outside TS Limit

The inspectors identified a finding having very low significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to establish a proper setpoint for safety injection and refueling water tank level switch such that, when instrument uncertainty was taken into account, the setpoint could be set outside the technical specification limits. Following discovery, the licensee verified the actual set points.

This issue was more than minor in accordance with IMC 0612, Appendix B because, if left uncorrected, the technical specification limit for the safety injection refueling water tank level set points could have been exceeded without the licensee being aware of it. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. (Section 1R21.3.b.10)

Inspection Report# : [2006009](#) (*pdf*)**G****Significance:** Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Operating Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification 5.4.1a for an operator failing to comply with the site quality procedure for Conduct of Operations by manipulating safety related components without any procedure guidance. The operator placed all Auxiliary Feedwater (AFW) pumps out of automatic control, causing the pumps to be inoperable and placing the plant outside of the licensing basis. Corrective actions to address this finding included removing the operator who made the error from shift and briefing each operating crew on this event.

This finding was of more than minor safety significance because the operator did not follow procedural guidance which resulted in the inoperability of all three AFW pumps. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total change in core damage frequency (delta CDF) considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance, because the licensee did not use human error techniques, such as self or peer checking, or proper documentation of activities for placing the AFW switches to manual.

Inspection Report# : [2006014](#) (*pdf*)**G****Significance:** Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specifications

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of Technical Specification (TS) 3.7.5 for the licensee's failure to comply with the required action time to be in Mode 4 in 30 hours with no Auxiliary Feedwater (AFW) pumps operable. In addition, the inspectors identified the failure to comply with the action of TS 3.0.4 in that the licensee ascended from Mode 3 to Mode 2 with no AFW pumps operable. The licensee's failure to detect and correct, using appropriate board walk-downs and turnover techniques, that all three AFW pumps were in manual directly caused the violation of Technical Specifications. Corrective actions to address this finding included requiring the use of a checklist to verify correct control room switch alignment, and increasing management oversight of the control room.

This finding was of more than minor safety significance because numerous operators failed to identify that all three AFW pumps were inoperable. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency (LERF) was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance.

Specifically, personnel who had the knowledge of the issue failed to evaluate the condition in accordance with procedure guidance and failed to ensure that the proper procedure for tracking and resolving safety related equipment issues were followed.

Inspection Report# : [2006014](#) (*pdf*)

G

Significance: Dec 01, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Procedures

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate procedures, appropriate for the circumstances of plant startup and shutdown. Specifically, procedures were not adequate to place the Auxiliary Feedwater (AFW) system in service for a plant shutdown. In addition, inadequate procedural guidance existed for safety system alignment checks prior to reactor startup from Mode 3. Corrective actions to address this finding included initiating a root cause analysis and actions to upgrade start-up and shutdown procedures.

This finding was of more than minor safety significance because the inadequate procedural guidance resulted in operators not placing or maintaining the AFW system in an operable condition. This finding is of very low significance because the evaluation of increased risk associated with this error concluded that the total delta CDF considering internal events, external events, and large early release frequency was less than 1×10^{-6} . This finding had a cross-cutting aspect in the area of Human Performance because the licensee did not plan or coordinate shutdown activities relating to AFW operation. The licensee inappropriately relied on pre-job briefings as a compensatory action in lieu of written instructions.

Inspection Report# : [2006014](#) (*pdf*)

Barrier Integrity

G

Significance: Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

LPSI Check Valve Unseated

A self-revealed finding and associated NCV of Technical Specification 5.4.1 was identified for failure by the licensee to follow procedural requirements. On May 13, 2007, the licensee failed to monitor for leakage across a Low Pressure Safety Injection (LPSI) check valve as required by procedure and a protective relief valve lifted. Following lifting of the relief valve, the licensee seated the check valve to prevent further back leakage and entered the deficiency onto their corrective action program.

In accordance with IMC 0612, the inspectors concluded that the issue was more than minor because the failure to limit pressure in the LPSI piping until a protective device actuated increased the likelihood of an initiating event. After consultation with the Senior Risk Analyst (SRA), the inspectors concluded that the finding was of very low safety significance because of the extremely low frequency of the Interfacing System Loss of Coolant Accident initiating event. This finding included a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)) were not effective in preventing lifting of the relief valve.

Inspection Report# : [2007006](#) (*pdf*)

G

Significance: Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inaccurate Surveillance Procedure for Primary Coolant System Leakrate Calculation

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control" for the failure to have an accurate Technical Specification (TS)

surveillance procedure for primary coolant leakage measurement. Specifically, the licensee did not provide an accurate calculation or accurate acceptance criteria over all the temperature ranges and other plant conditions under which the surveillance procedure could be used. This issue was entered into the licensee's corrective action system and the licensee developed interim guidance on leak rate calculations pending a procedure revision.

The finding is more than minor because it can reasonably be viewed as a precursor to a more significant event because the errors can prevent recognition of leakage in excess of the TS and licensing basis. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of IMC 0609, Appendix A, since no actual cases were found where unidentified leakage exceeded the TS.

Inspection Report# : [2006013](#) (*pdf*)

Significance:  Dec 15, 2006

Identified By: NRC

Item Type: FIN Finding

Failure to Correctly Apply Pressure Locking Thrust in MOV Performance Test Procedures

The inspectors identified a finding having very low significance. Specifically, the licensee failed to correctly apply the effect due to pressure locking in the valve actuator capability margin to open for the boric acid gravity feed motor operated valves MO-2169 and MO-2170. Following discovery, the licensee performed preliminary calculations to ensure valve operability.

This issue was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, then motor operated valve actuators would have deteriorated over time without being detected, resulting in the valves being unable to perform their required functions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations. No violation of NRC requirements occurred. (Section 1R21.3.b.11)

Inspection Report# : [2006009](#) (*pdf*)

Emergency Preparedness

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Implement Approved EAL Scheme

The inspectors identified a Green NCV of 10 CFR 50.47 for failure to properly implement approved Emergency Action Levels (EAL). As a result of the improper EAL implementation, site personnel responsible for EAL declarations could improperly classify some Alerts as Site Area Emergencies (SAEs). The licensee has provided training to site personnel regarding correct declaration of this EAL.

The inspectors determined that the licensee's failure to properly implement the EALs represented a performance deficiency that warranted a significance determination. The inspectors concluded that the finding affected the Emergency Preparedness Cornerstone objective for the attribute of Emergency Response Organization (ERO) readiness in that the licensee improperly implemented an EAL. In addition, the finding had a cross-cutting aspect in the area of human performance, resource component. Specifically, the training of personnel resulted in improperly classifying the drill scenario. (H.2.(b))

Inspection Report# : [2007004](#) (*pdf*)

Occupational Radiation Safety

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Adequately Implement Radiological Dose Controls

A Green finding was self-revealed for failure to adequately implement radiological dose controls during Refueling Outage 18 (RO18). Specifically, work control and planning issues (worker fatigue, worker proficiency, and material condition) contributed to additional worker doses. The total sum of the occupational radiation doses (collective dose) received by individuals for one work activity was found in excess of that collective dose planned or intended (i.e., that dose the licensee determined was ALARA for those work activities).

The finding was more than minor because the issue was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of the worker's health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The inspectors concluded that the finding did not result in an occupational overexposure, a substantial potential for an overexposure, or a compromised ability to assess dose. The inspectors determined that the finding involved ALARA planning and work controls. Considering the licensee's current 3-year rolling collective dose average exceeds 135 person-rem per unit, the actual dose was less than 25 person-rem and there are no other occurrences, the inspectors concluded that the SDP assessment for this finding was of very low safety significance, Green. The inspectors also determined that this finding had a cross-cutting aspect in the area of human performance because the licensee failed to appropriately coordinate work activities.

Inspection Report# : [2006013](#) (*pdf*)

Public Radiation Safety

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to effectively survey slings before granting unconditional release from the RCA

A self-revealed finding of very low safety significance and an associated violation of NRC requirements was identified for the failure to effectively survey slings before granting unconditional release from the Radiologically Controlled Area (RCA). This was first identified when a sling alarmed the PM-7 (portal radiation monitor) at the security building on October 13, 2006. A few days later, an individual working outside of the RCA became contaminated after handling a rigging/lifting sling. Extent of condition surveys identified 17 additional slings outside the RCA and/or Protected Area that alarmed the tool monitor. Radioactive material was also identified on two of these slings using a conventional hand-held frisker survey instrument.

The issue was more than minor because it was associated with the Program/Process attribute of the Public Radiation Safety Cornerstone and affected the cornerstone objective to ensure the adequate protection of the public domain as a result of routine civilian nuclear reactor operation. A Green NCV of 10 CFR 20.1501 was identified for the failure to adequately survey materials to evaluate the presence of radioactive material. The cause of this deficiency is a legacy issue and does not represent current licensee performance. Therefore, this deficiency does not have any cross-cutting aspects.

Inspection Report# : [2007004](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: SL-IV Dec 15, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Startup Transformer Not Evaluated for Past Operability and Reportability

The inspectors identified a finding of very low safety significance and an associated Severity Level IV Non-Cited Violation of 10 CFR 50.73 (a)(2). Specifically, the licensee failed to analyze past operability and submit a licensee event report when the startup transformer 1-2 tap changer control was found to be non-operational. Once analyzed, the licensee determined that one of the two required circuits from the offsite power supply was inoperable on at least three non-consecutive occasions between May 17 and May 22, 2006.

Because violations of 10 CFR 50.73 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.4, "Failure to Make a Required Licensee Event Report" for a Severity Level IV violation. (Section 1R21.3.b.1)

Inspection Report# : [2006009](#) (*pdf*)

Last modified : December 07, 2007

Palisades

4Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: FIN Finding

Reactor Trip Caused by Human Performance Error

A self-revealing finding was identified for the licensee's failure to follow work order instructions when performing maintenance on a main feedwater regulating valve position indicator. As a result, an automatic reactor trip occurred on a Reactor Protection System (RPS) actuation for steam generator low feedwater level. The licensee performed a cause analysis for the event and entered the event into their corrective action program.

The finding was more than minor because the failure to follow instructions caused an actual transient (i.e., reactor trip). This finding did not constitute a violation of NRC requirements and is considered very low safety significance (Green) since there was no impact on safety-related equipment or mitigation function and availability. The finding also has a cross-cutting aspect in the area of human performance, because the licensee failed to use adequate human error prevention techniques. (H.4(a))

Inspection Report# : [2007004](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Plant Radiation Monitors Not Fully Scoped into the Maintenance Rule

The inspectors identified a Green NCV of 10 CFR 50.65(b)(2) because the licensee did not scope all plant radiation monitors used in site emergency operating procedures into the maintenance rule monitoring program. The licensee entered the item into their corrective action program and placed the radiation monitoring system in the a(1) status.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was considered to have very low safety significance (Green) because the finding did not cause a loss of mitigation equipment functions and did not increase the likelihood of a fire or flooding event.

Inspection Report# : [2007006](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment for Safety Injection Actuation Test

The inspectors identified a Green NCV of 10 CFR Part 50.65(a)(4), because the licensee did not adequately assess and manage online risk while performing a safety injection system actuation test. Specifically, prior to performance of the safety injection test, the inspectors identified that the test did not account for unavailability of a high pressure safety injection (HPSI) train. Accounting for the HPSI unavailability resulted in yellow risk. The licensee implemented appropriate risk mitigation actions prior to entering yellow risk. The licensee entered the item into their corrective action process and updated the risk assessment.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure availability of systems and the risk assessment failed to consider risk-significant systems, structures, components (i.e., high pressure safety injection pumps) which were unavailable during on-line maintenance. The inspectors concluded that the finding was of very low safety significance because the incremental core damage probability deficit was less than 1×10^{-6} (green) in accordance with IMC 0609, Appendix K. The finding included a cross-cutting aspect in the area of human performance, work controls, in that the licensee failed to incorporate appropriate risk insights when coordinating work activities.

Inspection Report# : [2007006](#) (pdf)

Significance: SL-IV Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Temporary Modification for Augmented Cooling of SW

The inspectors identified a severity level (SL) IV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments" for the licensee's failure to perform a written evaluation prior to implementing a temporary modification to compensate for the absence of containment air cooler VHX-4. Specifically the modification adversely impacted the service water (SW) system and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action process, added structural elements to minimize fouling of the service water system, evaluated the change in accordance with 10 CFR 50.59, and performed a written evaluation. The revised modification did not require prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition which reduced the reliability of the SW system, a mitigating system. The inspectors concluded the original modification may have required prior NRC approval. The issue screened green in the phase 3 assessment for the equipment degradation and therefore was of very low safety significance, and therefore, SLIV. The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to use conservative assumptions in decision making and failed to identify possible unintended consequences when implementing the augmented cooling for service water modification. (H.1.(b))

Inspection Report# : [2007006](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

AFW Pumps Inoperable Due to High Energy Line Breaks in the Turbine Building

The inspectors identified a Green non-cited violation NCV of 10 CFR 50, Appendix B, Criteria III, "Design Control" for failing to adequately translate the design and licensing basis requirements into equipment specifications for the 8A and 8B Auxiliary Feedwater (AFW) pumps and controls. Specifically, the 8A and 8B pumps have a licensing basis to be operable during a High Energy Line Break (HELB) event in the turbine building; however, in some HELB scenarios the pumps would experience a harsh environment. The licensee did not qualify the pumps and associated equipment for a harsh environment. The licensee wrote a condition report and an operability recommendation (OPR) with compensatory actions to address the issue.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the AFW system to respond to initiating events. A phase 2 screening was required since the design qualification deficiency resulted in a loss of function for one train of AFW per Generic Letter 91-18. The SRA concluded in a phase 3 evaluation, which included external events, that the finding was of very low safety significance (Green).

Inspection Report# : [2007006](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to preclude Water Hammer in HPSI Injection Piping

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to control system parameters in the HPSI system injection lines to preclude water hammer from occurring during either routine or accident conditions. As a result, the injection lines experienced water hammer on multiple occasions. The licensee has

entered the condition into the corrective action program and changed procedures to limit the potential for water hammer.

The inspectors concluded that the condition is more than minor, because if left uncorrected, the finding would become a more significant safety concern. Specifically, the cause of the water hammer would continue to worsen without additional action. Also, the periodic water hammering of the injection line could weaken piping supports. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the problem such that the resolution addressed causes and the extent of condition prior to the NRC raising concerns. (P.1(c))

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Pump 7A Shaft Degraded

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to establish adequate measures to ensure suitability of the application of the material for the 7A Service Water (SW) pump. Specifically the shaft for the A SW pump was constructed of carbon steel and was susceptible to wear due to sand and silt from the ultimate heat sink. The licensee has entered the condition into the corrective action program and has replaced the shaft with a stainless steel shaft.

The inspectors concluded that the condition is more than minor, because if left uncorrected the finding would become a more significant safety concern. Specifically, without prompting by the NRC, the wear on the 'A' SW pump shaft would have continued and would have reduced the margin of safety for the allowable stresses on the pump shaft. The finding was not of more than very low safety significance because in the current condition the 'A' SW pump remained operable, although degraded. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to implement a corrective action program with a low threshold for identifying issues. (P.1(a))

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Defective Part Installed on 1-2 EDG

A self-revealing NCV of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures to prevent the use of defective parts. Specifically, a fuel leak developed due to failure of a defective part on the 1-2 emergency diesel generator (EDG) on February 22, 2007. In 2005, a snubber on the same EDG had failed in the same manner. The failed part has been replaced, and there are no other suspect snubbers in the diesel engines on site.

The inspectors concluded the finding was more than minor because the EDG was inoperable for greater than the Technical Specification allowed outage time. The finding was not of more than very low safety significance because, while the EDG was inoperable, it did not represent an actual loss of safety function for greater than the Technical Specification allowed outage time. In addition, the inspectors concluded this finding had an associated cross cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the 2005 snubber failure such that the resolution addressed the extent of condition. (P.1(c))

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CV-0821 Corrective Actions Not Effective to Prevent Repeat Failure

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI for failing to take adequate corrective action to prevent recurrence of a significant condition adverse to quality. Specifically, valve CV-0821, a safety-related valve which positions automatically on a

safety actuation signal, would not position on demand. The licensee discovered sand and silt had caused the valve to stick in a non-safety position. The same condition occurred less than a year ago. This latest issue was entered into the licensee's corrective action system as AR 01080435 and an Operability Evaluation was completed with compensatory actions to maintain component operability.

The finding is more than minor because it is related to the equipment performance attribute of the mitigating system cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Both trains are potentially impacted since the valve arrangement is similar and susceptible to sand and silt. The finding screened as very low safety significance, using the Phase 1 worksheet of IMC 0609, Appendix A, since the actual loss of function was less than the allowed outage time. The inspectors also determined that this finding has a cross-cutting aspect in the area of Problem Identification and Resolution, because the licensee failed to take the appropriate corrective actions to address safety issues. (IMC 0305, P.1.(d))

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Control Rod Drive Mechanism Testing Practice Violates TS 3.1.4

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specifications for the failure to take actions for the appropriate Limiting Condition for Operation (LCO) not being met when surveillance testing exceeded the allowed interval. Specifically, the failure to verify control rod freedom of movement every 92 days (plus a 25 percent grace period) required entry into the Actions of LCO 3.1.4 Condition E, which stipulated the shutdown of the plant within six hours. This was not done on several occasions in the last three years. This issue was entered into the licensee's corrective action system as Action Request 01072543 and the inspectors verified that the rods subsequently had freedom of movement.

The finding is more than minor because, if left uncorrected, the finding could become a more significant safety concern; namely, the inability to detect rod binding could impact reactor shutdown margin in certain events. The finding screened as very low safety significance, Green, using the Phase 1 worksheet of Inspection Manual Chapter 0609, Appendix A, since no actual cases were found where the rods were bound after subsequent cycling.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Comply with Technical Specification 3.9.5

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 3.9.5 for removing a train of safety equipment without complying with the required action and completion time when the Limiting Condition for Operability was not met. Specifically, the licensee removed one train of shutdown cooling (by removing one shutdown cooling heat exchanger - (SDCHX)) for planned maintenance while the reactor was in Mode 6 with cavity level below 647 feet. The Action required was to "immediately" initiate action to restore the train to Operable. The train was inoperable for over four days. This issue was entered into the licensee's corrective action system as Action Request 01082854.

The finding is more than minor since it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. The finding is associated with the cornerstone attribute of equipment performance (unavailability of the SDCHX). The inspectors evaluated this finding in accordance with Appendix G, "Shutdown Operations Significance Determination Process" to IMC 0609. Although only one Decay Heat Removal (DHR) train was operable, other items for defense in depth including backup injection flowpaths, pump sources, vent paths and water sources were available for use. The inspectors completed a Phase 2 assessment and determined that a loss of DHR had a low frequency. The finding is of very low safety significance.

Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specification 5.5.12 TS Basis Control Program

The inspectors identified a Severity Level IV Non-Cited Violation of Technical Specification (TS) 5.5.12 for the failure to comply with the TS Basis Control Program. Specifically, the licensee made a change to the TS bases for TS 3.9.5 which altered the TS definition of "two SDC trains" described in TS 3.9.5. The licensee changed the bases to allow a single SDC to be a member of two trains with cavity level less than 647 feet. A distinct SDCHX is required for each train. This change required prior NRC approval as a change to the TS. This issue was entered into the licensee's corrective action system.

The inspectors concluded this finding is more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition having a very low safety significance (i.e., green). Specifically, the licensee changed the TS bases in a manner that required prior NRC approval. The finding is a Severity Level IV violation consistent with the NRC Enforcement Policy. The inspectors also determined that this finding has a cross-cutting aspect in the area of human performance, because the licensee failed to use conservative assumptions in changing the TS bases. (IMC 0305 H.1(b))

Inspection Report# : [2007002](#) (*pdf*)

G

Significance: Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Auxiliary Feedwater Vortex Limit Calculation

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to use a conservative value for auxiliary pump air entrainment in vortex limit calculations. Specifically, the licensee misinterpreted a graph used to determine the percent air ingestion as a function of the Froude number, which resulted in a pump air entrainment value above a value supported by the vendor. This issue was entered into the licensee's corrective action system and the licensee made procedure changes and provided operator training to ensure that the auxiliary pumps were tripped prior to entraining excessive air.

This issue was more than minor because the calculational error was significant enough to require reanalysis of the pumps' ability to perform their design function and because changes to plant procedures were necessary in order to ensure pump operability. The error also appeared to be programmatic as a similar error was made in calculating the air entrainment to the high pressure safety injection pumps. The issue was of very low safety significance because although it was a design issue, there was not a loss of function of the auxiliary feedwater pumps.

Inspection Report# : [2007002](#) (*pdf*)

Significance: SL-IV Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Addition of Manual Operator Action Not Evaluated in Accordance with 10 CFR 50.59

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for a failure to seek a license amendment. Specifically, when Setpoint Change 96-012 involving the low suction pressure trip of the auxiliary feedwater pumps was implemented, no safety evaluation was performed. When the evaluation was performed in December 2006 the licensee failed to evaluate known deficiencies.

Because violations of 10 CFR 50.59 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process. The performance deficiency met Supplement I.D.5, "Violations of 10 CFR 50.59 that result in conditions evaluated as having very low safety significance by the SDP," for a Severity Level IV Violation.

Inspection Report# : [2007002](#) (*pdf*)

G

Significance: Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Valve Body Inadvertently Discarded Due to Ineffective Quarantine

The inspectors identified an Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately quarantine a component for failure analysis as required by the licensee's procedures. The licensee discarded a valve body, which resulted in the failure to complete a corrective action assigned in an associated root cause evaluation. The finding was associated with the work practices component of the human performance cross-cutting area because licensee personnel failed to use appropriate human error prevention techniques to ensure the valve body was effectively quarantined. After the issue was identified by the NRC, the licensee entered the issue into their corrective action program as Action Requests 01076153 and 01076213.

This finding was determined to be more than minor based on a review of the list of more than minor issues in Inspection Manual Chapter 0612, Appendix E, in that the valve body was irretrievably lost. Additionally, if left uncorrected, the failure to quarantine items could become a more significant safety concern since the failure to do so could impede the identification of root and/or contributing causes for conditions adverse to quality and prevent the implementation of appropriate corrective actions. The finding was of very low safety significance because the finding was not a design or qualification deficiency resulting in a loss of function per Generic Letter 91-18; did not represent an actual loss of safety function of a system or the loss of safety function of a train of equipment; and was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Feb 27, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Extent of Condition for High Pressure Safety Injection Valve Failure

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to assure that conditions adverse to quality were promptly corrected. Specifically, the inspectors concluded that the licensee failed to develop adequate actions to correct conditions adverse to quality identified during root cause evaluation activities for a valve failure on March 29, 2006. This finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution area because licensee personnel failed to promptly perform an adequate extent of condition for the valve failure. The licensee entered this performance deficiency into the corrective action program as AR 01076287 for resolution.

The finding was more than minor because, if left uncorrected, future conditions adverse to quality would not be fully evaluated or corrected. The inspectors assessed the significance of this finding as very low safety significance because, upon completing an adequate extent of condition review, no additional examples of improperly supported equipment were identified.

Inspection Report# : [2007003](#) (*pdf*)

Barrier Integrity

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

LPSI Check Valve Unseated

A self-revealed finding and associated NCV of Technical Specification 5.4.1 was identified for failure by the licensee to follow procedural requirements. On May 13, 2007, the licensee failed to monitor for leakage across a Low Pressure Safety Injection (LPSI) check valve as required by procedure and a protective relief valve lifted. Following lifting of the relief valve, the licensee seated the check valve to prevent further back leakage and entered the deficiency onto their corrective action program.

In accordance with IMC 0612, the inspectors concluded that the issue was more than minor because the failure to limit pressure in the LPSI piping until a protective device actuated increased the likelihood of an initiating event. After consultation with the Senior Risk Analyst (SRA), the inspectors concluded that the finding was of very low safety significance because of the extremely low frequency of the Interfacing System Loss of Coolant Accident initiating

event. This finding included a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)) were not effective in preventing lifting of the relief valve.

Inspection Report# : [2007006](#) (*pdf*)

Emergency Preparedness

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Implement Approved EAL Scheme

The inspectors identified a Green NCV of 10 CFR 50.47 for failure to properly implement approved Emergency Action Levels (EAL). As a result of the improper EAL implementation, site personnel responsible for EAL declarations could improperly classify some Alerts as Site Area Emergencies (SAEs). The licensee has provided training to site personnel regarding correct declaration of this EAL.

The inspectors determined that the licensee's failure to properly implement the EALs represented a performance deficiency that warranted a significance determination. The inspectors concluded that the finding affected the Emergency Preparedness Cornerstone objective for the attribute of Emergency Response Organization (ERO) readiness in that the licensee improperly implemented an EAL. In addition, the finding had a cross-cutting aspect in the area of human performance, resource component. Specifically, the training of personnel resulted in improperly classifying the drill scenario. (H.2.(b))

Inspection Report# : [2007004](#) (*pdf*)

Occupational Radiation Safety

Public Radiation Safety

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to effectively survey slings before granting unconditional release from the RCA

A self-revealed finding of very low safety significance and an associated violation of NRC requirements was identified for the failure to effectively survey slings before granting unconditional release from the Radiologically Controlled Area (RCA). This was first identified when a sling alarmed the PM-7 (portal radiation monitor) at the security building on October 13, 2006. A few days later, an individual working outside of the RCA became contaminated after handling a rigging/lifting sling. Extent of condition surveys identified 17 additional slings outside the RCA and/or Protected Area that alarmed the tool monitor. Radioactive material was also identified on two of these slings using a conventional hand-held frisker survey instrument.

The issue was more than minor because it was associated with the Program/Process attribute of the Public Radiation Safety Cornerstone and affected the cornerstone objective to ensure the adequate protection of the public domain as a result of routine civilian nuclear reactor operation. A Green NCV of 10 CFR 20.1501 was identified for the failure to adequately survey materials to evaluate the presence of radioactive material. The cause of this deficiency is a legacy issue and does not represent current licensee performance. Therefore, this deficiency does not have any cross-cutting aspects.

Inspection Report# : [2007004](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : February 04, 2008

Palisades

1Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: FIN Finding

Main Feed Pump trip due to Inadequate Configuration

Introduction: A Green self-revealed finding occurred on January 13 when the 'B' Main Feed Pump failed. The failure occurred due to improper maintenance on the lube oil pump associated with the Main Feed Pump that resulted in a loss of lube oil flow and trip of the Main Feed Pump.

Description: On January 13, with the plant at 100% power, the 'B' Main Feed Pump tripped due to a loss of lube oil pressure. In accordance with Off- Normal Procedure ONP-12, Loss of main Feedwater, operators manually tripped the reactor. Following the trip, the licensee formed an incident response team to determine what caused the feed pump trip. The team identified that the drive coupling between the shaft driven lube oil pump and the feed pump failed causing a loss of lube oil pressure and subsequent Main Feed Pump trip. A root cause team determined that following maintenance in the fall 2007 outage, the pump coupling had been reassembled with insufficient engagement between the shaft coupling hub and outer sleeve. The lack of engagement resulted in rapid wear of the hub and coupling splines eventually leading to the coupling's failure.

The root cause team determined the improper reassembly resulted from use of an improper key between the drive shaft and the hub. The proper key includes a foot to limit the distance the hub can be slid up the shaft. The work instructions used for reassembly of the pump lacked sufficient detail to ensure the proper key was used. In addition, the key in use had either been modified during previous pump maintenance to remove the foot or a key without a foot was substituted for the correct key.

Analysis: The inspectors determined the failure to use the proper key in the Main Feed Pump was a performance deficiency that warranted a safety significance determination. The inspectors concluded that the finding was more than minor in accordance with Inspection Manual Chapter 0609 because the finding is associated with the reactor safety cornerstone objective of reducing the likelihood of an initiating event. Specifically, the improper pump assembly led to a partial loss of feed and subsequent plant trip. The inspectors reviewed the finding in accordance with Inspection Manual Chapter 0612. In accordance with the phase one screening checklist, because the finding did not affect a mitigating system in addition to being a transient initiator, the finding was of very low safety significance, i.e. Green. Since the finding occurred because the documentation of the key lacked sufficient detail to ensure proper assembly, the finding included a cross-cutting aspect in the area of Human Performance, Resources, Complete and Accurate Documentation (H.2(c)).

Enforcement: The finding does not represent a violation of NRC requirements. However, since it represents a failure to meet a self imposed requirement, the inspectors concluded the deficiency constituted a finding consistent with Section VI.A.1 of the NRC Enforcement Policy. Specifically, FP-WM-PLA-01, Work Order planning process, stipulates that task instructions should match the complexity of the activity commensurate with the qualifications of the workers. Contrary to this, the task instruction did not include sufficient detail to properly reassemble the Main Feed Pump lube oil pump coupling. Therefore, this finding is identified as Finding (FIN)-05000355/2008002-08, Improper Main Feed Pump Coupling Assembly. This issue is in the licensee's corrective action program as CR-PLP-2008-0151.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Operating Requirements Manual Restrictions on Heavy Load Movement

NRC identified violations of Technical Specification (TS) 5.4.1 occurred on October 4, and October 13, 2007 when the licensee violated Operational Requirements Manuals limits on movement of heavy loads. On October 4, the licensee moved a heavy load in the Spent Fuel Pool (SFP) with irradiated fuel less than 30 days old in the SFP. On October 13, the licensee moved a heavy load in containment with pressurizer temperature greater than 225F. The licensee successfully landed the loads and entered the issues into the corrective action program.

The finding was more than minor because the failure to comply with the Operating Requirements Manual requirements affected the initiating event cornerstone objective of maintaining the availability and reliability of the primary coolant boundary and the SFP. The issue screened as green because no load drops occurred and the loads were suspended for a short time. The finding has a cross cutting aspect in the area of human performance, coordination of work activities

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: FIN Finding

Reactor Trip Caused by Human Performance Error

A self-revealing finding was identified for the licensee's failure to follow work order instructions when performing maintenance on a main feedwater regulating valve position indicator. As a result, an automatic reactor trip occurred on a Reactor Protection System (RPS) actuation for steam generator low feedwater level. The licensee performed a cause analysis for the event and entered the event into their corrective action program.

The finding was more than minor because the failure to follow instructions caused an actual transient (i.e., reactor trip). This finding did not constitute a violation of NRC requirements and is considered very low safety significance (Green) since there was no impact on safety-related equipment or mitigation function and availability. The finding also has a cross-cutting aspect in the area of human performance, because the licensee failed to use adequate human error prevention techniques. (H.4(a))

Inspection Report# : [2007004](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Fire Door Was Closed

Introduction: The inspectors identified a Green Non-Cited Violation (NCV) of License Condition 2.C.(3), Fire Protection, for failure to ensure a fire door between an emergency diesel generator room and a vital switchgear room was closed. This partially open door degraded the fire containment capability assumed in the fire hazards analysis.

Description: On January 8, 2008 while conducting a tour, the inspectors noted door 71, the fire door between the C bus safety-related switchgear room and the 1-1 Emergency Diesel Generator (EDG) room, open about two inches. The fire door is a three-hour door which separates Fire Area 4 from Fire Area 5. Although there is an auto-closure mechanism on the door, when the ventilation system cycles on, the door will not close without assistance. This known condition is stated on a sign which is affixed to the door which says: "Attention Varying Air Pressures Affect Door Closing Please Manually Close Door Completely." In this case, the door was found partially open, and the ventilation fan was running in the 1-1 EDG room, resulting in the door being held partially open. The inspector saw no one in the immediate vicinity and closed the door. The inspectors looked in the adjacent vital areas and found no one. The inspectors informed the operations shift of the issue and the shift initiated CR-PLP-2008-00075.

The investigation determined the last known entry was 12 minutes earlier by security personnel conducting fire tours for unrelated issues. The inspectors concluded the fire door was not closed and should have been closed in accordance with the licensee's fire hazards analysis to provide a three hour fire barrier between a 2400v vital bus and an emergency diesel generator.

Analysis: The failure of an automatic fire door to close and the failure to close the door is a performance deficiency that warrants a significance determination. The inspectors reviewed the minor examples in Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," and none were found which related to this issue. The finding is more than minor because it is associated with the protection against external factors (fires) attribute of the mitigating system cornerstone and affects the objective to maintain the reliability and capability of systems that respond to events to prevent undesirable consequences. In accordance with Inspection Manual Chapter 0609, Appendix F, "Fire Protection SDP", the inspectors conducted a Phase I Significance Determination Process screening. The inspectors determined this finding was in the fire confinement category and the barrier was moderately degraded because the door was not latched and was partially open. The inspectors determined the finding was of very low safety significance (Green), because both fire areas had fully functional, automatic water-based fire suppression which provided adequate coverage in both rooms. No transient combustible loads were present in either room. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case adequate self checking, were not effective in ensuring this door was closed after use.

Enforcement: Palisades License Condition 2.C.(3), Fire Protection, states, in part, that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and approved in various Safety Evaluation Reports. Updated Final Safety Analysis Report chapter 9.6, "Fire Protection", states, in part, that building structures have been designed and arranged to prevent the spread of fire. The Updated Final Safety Analysis Report references the complete description of fire areas and barriers as being contained in the Fire Hazards Analysis Report. The Fire Hazards Analysis Report, revision 7, requires fire barrier protection between Fire Areas 4 and 5 with three-hour fire walls and three-hour doors. Contrary to this, on January 8, 2008 licensee personnel failed to assure that openings in the fire barrier walls were protected with doors with a rating equivalent to that of the barriers. Specifically, door 71 was partially open and unlatched which made the fire door inoperable and invalidated the 3 hour fire rating of the fire barrier. The corrective actions to restore compliance included immediately ensuring the door was properly closed and latched. Because the finding is of very low safety significance and has been entered into the licensee's corrective action process as CR-PLP-2008-00075, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy: NCV 05000255/2008002-01, "Failure to Ensure Fire Door Was Closed."

Inspection Report# : [2008002](#) (pdf)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor the Feedwater System Under 10 CFR 50.65a(1)

Introduction: The inspectors identified a Green Non-Cited Violation of 10 CFR 50.65(a)(1) for the failure to include a 'B' feed regulating valve deficiency to close during startup operations as a functional failure in the maintenance rule program. The inspectors noted that the failure would have placed the feedwater system into maintenance rule 10 CFR 50.65(a)(1) status in the fourth quarter of 2007. The failure to properly categorize the failure of the valve to close resulted in a delay in establishing appropriate system monitoring and goal setting to maintain system reliability.

Description: The inspectors reviewed the apparent cause for a plant transient that occurred on October 20, 2007. While the plant was in mode 2 at about 3% power following a refueling outage, the operations' staff attempted to transfer from auxiliary feedwater to main feedwater. When the B feed regulating valve, CV-0703, was un-isolated, primary coolant temperature dropped and steam generator level began to rise. Although CV-0703 was believed to be closed, it was partially open. Temperature dropped to within .3 degrees Fahrenheit of the minimum temperature for critical operations required by Technical Specification and Steam Generator level rose to 86%. The operations staff backed out of the procedure, isolated the valve, and took action to repair the valve.

The licensee determined that during the outage, maintenance testing on the valve positioner caused the bias spring to shift and offset the zero for the valve positioner. As a result, the valve remained partially open even though the control signal demanded a full close position. Even though the post maintenance test did not detect the condition the cause evaluation did not evaluate why the post maintenance test failed to detect this deficiency. In addition, the apparent cause determined that the condition did not affect any maintenance rule functions. The inspectors reviewed the maintenance rule scoping document and found the valve's closing function is listed in the scoping document. The inspectors provided this information to engineering and engineering wrote CR 2008-00562. On February 5, 2008, the inspectors reviewed the system health report of record dated July 11, 2007. The report identified there was 1 maintenance preventable functional failure in the previous 24 months; and established a performance criterion of <2

maintenance preventable functional failure in a 24 month period. One additional maintenance preventable functional failure would place the system in a(1) status. On February 27, 2008 the expert panel met and determined the failure of B feed regulation valve CV-0703 was a maintenance preventable functional failure. In addition, the panel reviewed this maintenance preventable functional failure and subsequent items and placed the system in a(1) status.

Analysis: The inspectors concluded that the failure to categorize the B feed regulating valve failure to close as a maintenance preventable functional failure was a performance deficiency and warranted an assessment in the Significance Determination Process. The inspectors determined that once the licensee included the valve's failure to close as a maintenance preventable functional failure, the system should have been placed in a(1). Because of the failure to properly categorizing the failure, the licensee delayed placement of the system into a(1) for several months. The issue is more than minor because, in accordance with Inspection Manual Chapter 0612, Appendix E, Examples of Minor Issues (example 7b) and Enforcement Manual section 8.1.11, Maintenance Rule a(1) and a(2) violations are not minor because they involve Systems, Structures and Components that have demonstrated some degraded performance or condition. The finding is of very low safety significance because there was no design deficiency, the finding did not represent an actual loss of a safety function, nor does this involve a risk significant system for mitigating fire, flood, seismic, or severe weather events. This finding also had cross-cutting aspects in the area of problem identification and resolution associated with the corrective action program (P.1(c)) because the licensee failed to thoroughly evaluate the cause and extent of condition of the failed feed regulating valve.

Enforcement: 10 CFR 50.65, "Maintenance Rule", paragraph a(1) states, in part, that the performance or condition of systems shall be monitored against established goals to provide reasonable assurance that the systems are capable of performing their intended functions. Paragraph a(2) of 10 CFR 50.65 requires, in part, that monitoring as specified in paragraph a(1) is not required where it has been demonstrated that the performance or condition of a system is being effectively controlled through the performance of appropriate preventive maintenance such that the system remains capable of performing its intended function. Contrary to the above, although the licensee had sufficient information on November 11, 2007 (the date the cause evaluation indicated the failure was not a maintenance preventable functional failure) to classify the failure to close as a maintenance preventable functional failure, the licensee failed to properly evaluate the system under the maintenance rule process. This resulted in a delay in monitoring performance of the main feedwater system to provide assurance that the maintenance on the system was effective in maintaining the system capable of performing its intended function. Specifically, the inspectors determined that the performance of the main feedwater system was such that it was necessary to monitor system performance against established goals under a(1) when an additional functional failure occurred for B feed regulating valve CV-0703. The licensee failed to place the system in a(1) and therefore failed to establish goals and/or monitor the performance of the system against such goals. The failure to establish goals and monitor feedwater system under a(1), is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy and is identified as NCV 05000255/2008002-02: Failure to Monitor the Feedwater System Under 10 CFR 50.65a(1) . This issue is in the licensee's corrective action program as CR-PLP-2008-00562. The licensee placed the system in a(1) status.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate General Operating Procedure for Mode Transition

Introduction: The inspectors identified a Green Non-Cited Violation (NCV) of Technical Specification (TS) 5.4.1 for the failure to have adequate procedure guidance for the general operating procedures for mode transition to power operations. Specifically, the general plant operating procedure for mode transition did not have adequate guidance to ensure the actions required by TS 3.0.4 were completed for a failure of a radiation monitor required by TS.

Description: On January 14, 2008 with the plant in mode 3, during startup inspection activities in the morning, the inspectors noted radiation monitor RIA-1805, a safety-related monitor, was listed on the Limiting Condition for Operation (LCO) board as being inoperable. RIA 1805 is one of four containment radiation monitors required by TS 3.3.3 (Function # 6 of table 3.3.3-1, applicable in modes 1-4). The monitors are part of engineered safety features and have a 2 out of 4 coincidence logic to actuate to isolate the containment based on high radiation. The inspectors questioned the operations team if the monitor was to be restored to operable prior to start-up or placed in trip (transition from mode 3 to mode 2) since TS 3.0.4, in general, required systems to be operable prior to an upward mode transition unless the actions entered allowed for unlimited period of time. The start-up was scheduled to occur within the hour. The operations shift indicated the issue had been reviewed by their on-site review committee, the

Plant Oversight Review Committee and signed off as acceptable in General Operating Procedure (GOP), GOP-2, “Mode 3> 525F to Mode 2”, step 1.14. The rationale was that the channel could be placed in trip and once the channel was placed in trip, the plant could be operated for an unlimited period of time. The site assumed they had 7 days to place the unit in trip (the required completion time) and that it did not have to be completed prior to the mode ascension. The inspectors noted that since the action had not been taken (tripping the channel would change the coincidence logic from 2 out of 4 channels to 1 out of 3 channels to actuate the engineered safety features), the plant was still in a shutdown action statement. The required action has 7 days to be completed, but if it is not completed or the time is not met, the plant must be shutdown (action E of TS 3.3.3). Because of the inspectors’ concerns, operations decided to complete the repair of the radiation channel. At 0532 the licensee declared RIA-1805 operable.

The reactor startup was delayed for reasons not related to RIA-1805; however, RIA-1805 failed again at 1303. After the other startup delays were resolved, with another operations shift in the control room, the reactor startup procedure was about to be started. The inspectors asked if they were planning to place the channel in trip or repair the channel prior to startup. The assistant operations manager indicated that the issue was previously reviewed by the Plant Oversight Review Committee and that there was no actual requirement to take the action which allows operations for an unlimited period of time prior to using TS 3.0.4a provision for mode transition. The inspectors discussed the issue with the shift manager as well. After discussing with plant management, the shift indicated they would place the channel in trip and then proceed with the startup. The shift determined the correct methodology for tripping the channel; tripped the channel at time 1423; and then proceeded with the start-up at 1426. The licensee wrote CR PLP-2008-00180 to address the issue.

The inspectors reviewed TS 3.0.4 and the basis for TS 3.0.4a and concluded that since the objective of TS 3.0.4 was to assure that adequate safety was maintained during mode ascension, the required actions must be completed prior to mode transition. While it would be optimum to have all equipment operable, TS 3.0.4a allows mode ascension if the actions to be entered allowed unlimited period of time. The basis says: “Compliance with the required Actions that permit continued operations of the plant for unlimited period of time in a mode or other specified condition provides an acceptable level of safety for continued operation.” Since the action to change the coincidence from the engineered safety features actuation from 2 out of 3 (since one is failed) to 1 out of 3, is the item which provides the acceptable level of safety, the inspectors concluded until the licensee completed the required action, TS 3.0.4a was not satisfied. The inspectors concluded the licensee’s assessment was not accurate.

The inspectors requested the assistance of the region and Nuclear Reactor Regulation for the TS interpretation for TS 3.0.4 a. The single item to be addressed: Do the associated actions which permit continued operation for an unlimited period of time (in this case placing the bistable in the trip condition for radiation monitor, RI 1805, pursuant to TS 3.3.3 Action A) need to be completed before the mode transition from mode 3 to mode 2 occurs; or can it be done anytime in the 7 day completion time? The group evaluated the TS and concurred in TIA -2008-002 which validated for mode ascension the actions that allow operating for an unlimited period of time (i.e. placing the instrument in the tripped condition) must be completed prior to the mode ascension. Otherwise the plant remains in a shutdown LCO and the TS 3.0.4a can not be applied. The team concluded that the licensee was not properly applying TS 3.0.4.

The inspectors concluded that the licensee’s assessment, including their sign-off in GOP-2, step 1.14 was not appropriate; and that a mode transition would have been conducted with RIA 1805 inoperable if the inspectors had not intervened. The inspector’s review of the procedure determined the guidance in the General Operating Procedure was not adequate to ensure the action, which subsequently allows unlimited operating time, was completed prior to mode transition.

Analysis: The inspectors determined the failure to have adequate procedures for mode transition to ensure compliance with technical specifications required a significance determination in accordance with the Inspection Manual Chapter 0609. The minor examples of Inspection Manual Chapter 0612 Appendix E were reviewed. Example k was pertinent and provided an example of a minor item where there were not programmatic concerns which could lead to worse errors if uncorrected. Since validation of compliance with TS 3.0.4 is not adequately captured and multiple groups reviewed the issue; the inspectors concluded this issue was programmatic. Therefore, the finding is more than minor because, if left uncorrected, the finding would become a more significant safety concern in that the licensee would have transitioned modes in a manner prohibited by technical specifications. The finding was considered to have very low safety significance (Green), because the correct actions were completed prior to mode transition based on the response to the inspector’s concerns. The finding included a cross-cutting aspect in the area of human performance in that licensee did not adequately use conservative assumptions in decision-making to demonstrate the proposed action is safe (H.1(b)). Specifically, taking actions to restore systems to an operable status prior to mode transition is critical to conservative decision-making.

Enforcement: Technical Specification 5.4.1 requires, in part, that written procedures shall be established, implemented and maintained covering applicable procedures recommended in Appendix A of Regulatory Guide 1.33. Appendix A item 2a is an applicable written procedures for Hot Standby to Minimum Load (nuclear start-up). Procedure GOP-3, General Operating Procedure Mode 3 > 525 to Mode 2, revision 25 is the site's written procedure to conduct this evolution. Contrary to the above on January 14, 2008, the site's guidance for mode transition for review of TS 3.0.4 (specifically step 1.14) was not adequately maintained in that it did not provide adequate guidance to assess what actions need to be completed to ensure TS 3.0.4a could be applied. Because this finding was of very low safety significance, the finding was entered into the licensee's corrective action program as CR-PLP-2008-00180; this finding is being dispositioned as an NCV (NCV 0500255/2008002-03, Inadequate General Operating Procedure) consistent with Section VI.A of the NRC Enforcement Policy.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.8.4 B and C

Introduction: A self revealing NCV of TS 3.8.4 B and C was identified for failing to recognize that battery cell parameters were not within Technical Specification (TS) limits and for failing to take actions in accordance with TS for an inoperable battery. Specifically, cell 43 of the right train safety-related battery (ED02,) was below technical specifications limits for individual cell voltage without recognition by the site staff. As a result, compensatory actions and a plant shutdown required by technical specifications were not completed as required.

Description: On December 27, 2007, during the performance of TS surveillance testing of the main station batteries, the float voltage of battery cell 43 on the right train station battery was below the allowable TS limit for this parameter. However, at the time of this discovery, the performer did not recognize that the as-found value fell below the specified TS battery cell limit. On December 28, 2007, during review of the surveillance data and discussion with members of the electrical maintenance department who had performed the surveillance, an on-duty senior reactor operator recognized the low reading for battery cell 43. The delay of over 24 hours in recognizing that battery cell 43 float voltage was below the TS limit for this parameter resulted in not meeting the TS completion time for required actions in accordance with TS 3.8.6.A and TS 3.8.6.B, that were applicable from the initial discovery time.

The required action to immediately declare the right train station battery inoperable was not met. Additionally, with the right train station battery inoperable, TS 3.8.4.B requires a verification that both the directly connected and cross-connected battery chargers are supplying power to the affected train with a completion time of 2 hours, and that the station battery be restored to operable status within 24 hours. This action was not completed in the two hours. With these required actions and associated completion times not met, the required actions of TS 3.8.4.C requiring Mode 3 entry in 6 hours was also not met.

The shift manager declared the battery inoperable after being informed of the condition of cell 43. The licensee completed the required actions of 3.8.4 B within two hours. The licensee replaced the cell and verified acceptable performance during a post maintenance test. The licensee determined the cause of the failure to recognize the surveillance failure was an inadequate pre-job brief.

Analysis: The inspectors determined that the failure of the site to initially recognize that battery cell 43 voltage was below the TS was within the licensee's ability to foresee and correct. The failure to take required actions in accordance with technical specifications was more than minor because the TS actions increase reliability of the Direct Current (DC) bus. Therefore, the finding impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the objective to ensure availability, reliability and capability of the systems which respond to initiating events. The finding is of very low safety significance (Green), because the finding did not cause a loss of safety function for the right train battery. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case a pre-job brief, were not effective in preventing the delay in notification of the senior reactor operators.

Enforcement: TS 3.8.4 Action B requires, in part, that in two hours an operable cross-connected and directly connected charger be connected to the affected DC bus when one power source battery is in operable. In addition TS 3.8.4 Action C requires the plant be placed in mode 3 in six hours when the required action and associated completion times are not met. Contrary to this, on December 28, 2008 with the right train battery (ED02) inoperable, both battery

chargers were not placed in service in two hours; and the plant was not placed in mode 3 within six hours. Once the shift manager became aware of the status of the battery, the licensee completed the required actions. The failure to take actions required by TS is being treated as a non-cited violation (NCV), consistent with Section VI.A.1 of the NRC Enforcement Policy and is identified as NCV 05000255/20008002-09: Failure to Comply with TS 3.8.4 B and C. This issue is in the licensee's corrective action program as CR-PLP-2007-06496. The licensee replaced cell 43 for battery ED02.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.5.2 B and C

Introduction: A self revealing non-cited violation (NCV) of TS 3.5.2 B and C was identified for the inability of an automatic valve in the Emergency Core Cooling System (ECCS), CV-3047, to reposition fully closed on an actuation signal. As a result, one train of ECCS was inoperable for longer than allowed by technical specifications.

Description: On November 26, 2007, CV-3047 (a normally closed, automatic valve which is opened periodically for safety injection tank operations; and which closes on safety system actuation) exceeded its stroke time to close during testing. CV-3047 is intended to close, along with other valves to ensure ECCS flow through the core is not bypassed in the event of a postulated loss of coolant accident. The valve was declared inoperable; and pending further troubleshooting, administrative controls were established with the intent to maintain CV-3047 closed in its safety position. The administrative action was to place a tag indicating the valve should not be opened. The site investigated possible actions to repair the valve, but believed that the radiation field was too high to repair the valve. They did not look at actions or activities to either verify the valve was closed locally or to verify no flow was occurring through the valve.

Subsequently, on December 18, 2007, during safety injection tank operations, investigation determined that CV-3047, although indicating closed, was not fully closed. TS Surveillance Requirements 3.5.2.2 and 3.5.2.5 require that each ECCS automatic valve in the flow path be verified to be in the correct position, and to actuate to the correct position, respectively. Since CV-3047 was not fully closed, it was incapable of meeting Surveillance Requirements 3.5.2.2 and 3.5.2.5. This rendered one train of ECCS inoperable. The licensee wrote a Condition Report (CR-PLP-2007-06351) and manually isolated the flow path to comply with TS. The licensee repaired the valve, successfully retested it, and restored the valve to service. The time the valve was partially open between November 26 and December 18, 2007, about 23 days, exceeded TS requirements of 72 hours.

Analysis: The inspectors determined the failure to ensure the valve was closed was within the licensee's ability to foresee and correct. The failure to take required actions in accordance with TS was more than minor because the finding impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the objective to ensure availability, reliability and capability of the systems which respond to initiating events. More flow would bypass than core with the valve approximately 18% open than if the valve had been fully closed. The licensee performed analyses to determine the ECCS flow with the valve partially open. The bypass flow would not have prevented the ECCS safety function from being maintained based on current plant analysis. Therefore the finding was considered to have very low safety significance (Green). The finding included a cross-cutting aspect in the area of human performance in that licensee did not adequately coordinate work activities to address the impact of actions needed to ensure the valve was closed when the valve was declared inoperable. The consideration of using cameras, surveys, alternate methods for ensuring the valve was closed was not followed through on by the site team to ensure adequate equipment performance. (H.3(b)).

Enforcement: TS Surveillance Requirements 3.5.2.2 and 3.5.2.5 require, in part, that each ECCS automatic valve in the flow path be verified to be in the correct position, and to actuate to the correct position, respectively. Surveillance Requirement 3.0.1 states, in part, failure to meet a surveillance, shall be failure to meet the Limiting Condition for Operation (LCO). LCO for TS 3.5.2 requires two ECCS trains operable. TS 3.5.2 Action B requires, in part, that with one ECCS train inoperable, the inoperable train be restored to operable in 72 hours. In addition TS 3.5.2 Action C requires the plant to be placed in mode 3 in six hours when the required action and associated completion times are not met. Contrary to this, on November 29, 2007 with one train of ECCS inoperable, due to the inability of CV-3047 to meet the above surveillances with the valve not in its correct position, the train was not restored to service in 72 hours nor was the plant placed in mode 3 in the required time. The failure to take actions required by TS is being

treated as a Non-Cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy and is identified as NCV 05000255/20008002-10: Failure to Comply with TS 3.5.2 B and C. This issue is in the licensee's corrective action program as CR-PLP-2007-06351. The licensee completed repairs to CV-3047.

Inspection Report# : [2008002](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Post Maintenance Testing for High Pressure Safety Injection Pumps

The inspectors identified a Green Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawing" for failure by the licensee to follow procedural requirements for testing safety-related pumps after bearing replacement. Specifically, the licensee's post-maintenance testing plan and work order for both High Pressure Safety Injection (HPSI) pumps was not in accordance with the site's post-maintenance test (PMT) procedure, and did not have adequate re-tests for bearing replacement. Following identification, the licensee entered the item into their corrective action program and revised the post-maintenance testing for the pumps.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern in the area of PMTs. The inspectors determined this finding did not result in a loss of function, because the HPSI pump bearings were adequately tested after the inspectors brought the issue to the licensee. Therefore, the finding was considered to be of very low safety significance

Inspection Report# : [2007007](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Containment sump Debris Found during NRC Closeout

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings" failure by the licensee to follow procedural requirements for closing out the containment sump. Specifically, the licensee failed to comply with the containment sump closeout procedure. After closeout by the site, the inspectors found metal debris of greater than 1/8" in the sump area. Following identification, the licensee entered the item into their corrective action program and removed all debris prior to mode 4 operations.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern in the area of containment sump performance. The inspectors determined this finding did not result in a loss of function, because the sump was properly cleaned after the inspectors brought the issue to the licensee. Therefore, the finding was considered to be of very low safety significance (Green). The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to effectively communicate expectations regarding procedural compliance and personnel following procedures. (H.4(b))

Inspection Report# : [2007007](#) (pdf)

Significance: SL-IV Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Revised Dose Calculation

The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments" for the licensee's failure to perform a written evaluation prior to implementing a calculation change based on raising the acceptance criteria for back leakage from valves which leak containment activity. Specifically, the change of back leakage affected the post accident dose impact to control room operators and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action program. After removing margin from other components, the licensee determined the change to acceptance criteria could be implemented without prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC's ability to perform its regulatory function and if left uncorrected would have raised the dose to control room operators above the level requiring NRC approval. The inspectors concluded the original calculation would have required prior NRC approval. The issue screened as SL IV since the inspectors brought the issue to the attention of the licensee before plant start-up,

so there was no actual impact with the plant at power. In addition, the issue was not repetitive or willful. Therefore, it was of very low safety significance.

Inspection Report# : [2007007](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inoperable Safety Systems Due to Improper Door Positioning

NRC identified violations of Technical Specification 5.4.1 occurred on October 1, 2007; October 28, 2007 and November 19, 2007 due to licensee personnel failing to maintain doors in the proper configuration to support operability of TS required systems. The failure to maintain doors in the proper configuration resulted in unplanned entries into Limiting Conditions for Operation. After identification of the discrepant door status, the licensee restored each of the doors to the proper configuration to support operability.

The finding was more than minor because it impacted the mitigating event cornerstone objective of configuration control. The issue was not of more than very low safety significance due to the short duration the doors were improperly positioned. The finding had a cross cutting aspect in human performance error prevention techniques (H.4. (a))

Inspection Report# : [2007007](#) (pdf)

Significance:  Dec 12, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to establish correct Tech Spec Limits

Green. The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" requirements. Specifically, the licensee failed to incorporate a number of uncertainties when calculating the technical specification (TS) limits for the emergency diesel generator (EDG) fuel oil volume. This resulted in a non-conservative TS value. Once identified by the inspectors, the licensee issued a standing order in the "SRO Shift Turnover Items Shift Checklist" to ensure that adequate margin existed for the EDG seven-day fuel oil requirement to account for the uncertainties and planned to address the issue further through their corrective action process.

Inspection Report# : [2007008](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Plant Radiation Monitors Not Fully Scoped into the Maintenance Rule

The inspectors identified a Green NCV of 10 CFR 50.65(b)(2) because the licensee did not scope all plant radiation monitors used in site emergency operating procedures into the maintenance rule monitoring program. The licensee entered the item into their corrective action program and placed the radiation monitoring system in the a(1) status.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was considered to have very low safety significance (Green) because the finding did not cause a loss of mitigation equipment functions and did not increase the likelihood of a fire or flooding event.

Inspection Report# : [2007006](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment for Safety Injection Actuation Test

The inspectors identified a Green NCV of 10 CFR Part 50.65(a)(4), because the licensee did not adequately assess and manage online risk while performing a safety injection system actuation test. Specifically, prior to performance of the

safety injection test, the inspectors identified that the test did not account for unavailability of a high pressure safety injection (HPSI) train. Accounting for the HPSI unavailability resulted in yellow risk. The licensee implemented appropriate risk mitigation actions prior to entering yellow risk. The licensee entered the item into their corrective action process and updated the risk assessment.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure availability of systems and the risk assessment failed to consider risk-significant systems, structures, components (i.e., high pressure safety injection pumps) which were unavailable during on-line maintenance. The inspectors concluded that the finding was of very low safety significance because the incremental core damage probability deficit was less than 1×10^{-6} (green) in accordance with IMC 0609, Appendix K. The finding included a cross-cutting aspect in the area of human performance, work controls, in that the licensee failed to incorporate appropriate risk insights when coordinating work activities.

Inspection Report# : [2007006](#) (pdf)

Significance: SL-IV Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Temporary Modification for Augmented Cooling of SW

The inspectors identified a severity level (SL) IV NCV of 10 CFR 50.59, “Changes, Tests, and Experiments” for the licensee’s failure to perform a written evaluation prior to implementing a temporary modification to compensate for the absence of containment air cooler VHX-4. Specifically the modification adversely impacted the service water (SW) system and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action process, added structural elements to minimize fouling of the service water system, evaluated the change in accordance with 10 CFR 50.59, and performed a written evaluation. The revised modification did not require prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC’s ability to perform its regulatory function and resulted in a condition which reduced the reliability of the SW system, a mitigating system.

The inspectors concluded the original modification may have required prior NRC approval. The issue screened green in the phase 3 assessment for the equipment degradation and therefore was of very low safety significance, and therefore, SLIV. The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to use conservative assumptions in decision making and failed to identify possible unintended consequences when implementing the augmented cooling for service water modification. (H.1.(b))

Inspection Report# : [2007006](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

AFW Pumps Inoperable Due to High Energy Line Breaks in the Turbine Building

The inspectors identified a Green non-cited violation NCV of 10 CFR 50, Appendix B, Criteria III, “Design Control” for failing to adequately translate the design and licensing basis requirements into equipment specifications for the 8A and 8B Auxiliary Feedwater (AFW) pumps and controls. Specifically, the 8A and 8B pumps have a licensing basis to be operable during a High Energy Line Break (HELB) event in the turbine building; however, in some HELB scenarios the pumps would experience a harsh environment. The licensee did not qualify the pumps and associated equipment for a harsh environment. The licensee wrote a condition report and an operability recommendation (OPR) with compensatory actions to address the issue.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the AFW system to respond to initiating events. A phase 2 screening was required since the design qualification deficiency resulted in a loss of function for one train of AFW per Generic Letter 91-18. The SRA concluded in a phase 3 evaluation, which included external events, that the finding was of very low safety significance (Green).

Inspection Report# : [2007006](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to preclude Water Hammer in HPSI Injection Piping

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to control system parameters in the HPSI system injection lines to preclude water hammer from occurring during either routine or accident conditions. As a result, the injection lines experienced water hammer on multiple occasions. The licensee has entered the condition into the corrective action program and changed procedures to limit the potential for water hammer.

The inspectors concluded that the condition is more than minor, because if left uncorrected, the finding would become a more significant safety concern. Specifically, the cause of the water hammer would continue to worsen without additional action. Also, the periodic water hammering of the injection line could weaken piping supports. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the problem such that the resolution addressed causes and the extent of condition prior to the NRC raising concerns. (P.1(c))

Inspection Report# : [2007004](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Pump 7A Shaft Degraded

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to establish adequate measures to ensure suitability of the application of the material for the 7A Service Water (SW) pump. Specifically the shaft for the A SW pump was constructed of carbon steel and was susceptible to wear due to sand and silt from the ultimate heat sink. The licensee has entered the condition into the corrective action program and has replaced the shaft with a stainless steel shaft.

The inspectors concluded that the condition is more than minor, because if left uncorrected the finding would become a more significant safety concern. Specifically, without prompting by the NRC, the wear on the 'A' SW pump shaft would have continued and would have reduced the margin of safety for the allowable stresses on the pump shaft. The finding was not of more than very low safety significance because in the current condition the 'A' SW pump remained operable, although degraded. The finding included a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to implement a corrective action program with a low threshold for identifying issues. (P.1(a))

Inspection Report# : [2007004](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Defective Part Installed on 1-2 EDG

A self-revealing NCV of 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts and Components" was identified for failing to have adequate control measures to prevent the use of defective parts. Specifically, a fuel leak developed due to failure of a defective part on the 1-2 emergency diesel generator (EDG) on February 22, 2007. In 2005, a snubber on the same EDG had failed in the same manner. The failed part has been replaced, and there are no other suspect snubbers in the diesel engines on site.

The inspectors concluded the finding was more than minor because the EDG was inoperable for greater than the Technical Specification allowed outage time. The finding was not of more than very low safety significance because, while the EDG was inoperable, it did not represent an actual loss of safety function for greater than the Technical Specification allowed outage time. In addition, the inspectors concluded this finding had an associated cross cutting aspect in the area of problem identification and resolution in that the licensee failed to thoroughly evaluate the 2005 snubber failure such that the resolution addressed the extent of condition. (P.1(c))

Inspection Report# : [2007004](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

LPSI Check Valve Unseated

A self-revealed finding and associated NCV of Technical Specification 5.4.1 was identified for failure by the licensee to follow procedural requirements. On May 13, 2007, the licensee failed to monitor for leakage across a Low Pressure Safety Injection (LPSI) check valve as required by procedure and a protective relief valve lifted. Following lifting of the relief valve, the licensee seated the check valve to prevent further back leakage and entered the deficiency onto their corrective action program.

In accordance with IMC 0612, the inspectors concluded that the issue was more than minor because the failure to limit pressure in the LPSI piping until a protective device actuated increased the likelihood of an initiating event. After consultation with the Senior Risk Analyst (SRA), the inspectors concluded that the finding was of very low safety significance because of the extremely low frequency of the Interfacing System Loss of Coolant Accident initiating event. This finding included a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)) were not effective in preventing lifting of the relief valve.

Inspection Report# : [2007006](#) (*pdf*)

Emergency Preparedness

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Implement Approved EAL Scheme

The inspectors identified a Green NCV of 10 CFR 50.47 for failure to properly implement approved Emergency Action Levels (EAL). As a result of the improper EAL implementation, site personnel responsible for EAL declarations could improperly classify some Alerts as Site Area Emergencies (SAEs). The licensee has provided training to site personnel regarding correct declaration of this EAL.

The inspectors determined that the licensee's failure to properly implement the EALs represented a performance deficiency that warranted a significance determination. The inspectors concluded that the finding affected the Emergency Preparedness Cornerstone objective for the attribute of Emergency Response Organization (ERO) readiness in that the licensee improperly implemented an EAL. In addition, the finding had a cross-cutting aspect in the area of human performance, resource component. Specifically, the training of personnel resulted in improperly classifying the drill scenario. (H.2.(b))

Inspection Report# : [2007004](#) (*pdf*)

Occupational Radiation Safety

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Procedures for the Maintenance of PAPR Batteries

Introduction: A Green NRC-identified finding of very low safety significance and associated Non-Cited Violation of 10 CFR 20.1703 was identified for the failure to maintain adequate written procedures regarding the storage, issuance, and maintenance of respiratory protection equipment.

Description: The reactor head O-ring was removed during the (1R19) refueling outage. This work was planned and controlled under Radiation Work Permit (RWP) 754, Refuel Project – Reactor Vessel Disassembly. The RWP required the use of respiratory protection, specifically, a powered air purifying respirator (PAPR), for this evolution. On September 9, 2007, the reactor head O-ring was removed, as planned. However, during the job evolution the

battery that supplied power to the PAPR failed while the respirator was being worn. The user immediately notified the radiation protection technician who replaced the battery, then the user continued to work. The second battery failed about one hour after it was placed in service. The second failure caused the worker to immediately exit the work area. The radiation protection technician observed that the worker exhibited signs of distress and took immediate actions to remove the PAPR quickly by tearing it down and away from the worker's head. The unordinary method of removal was required because of worker distress but contributed to the intake of radioactive material by the worker. The licensee performed an assessment of the worker's internal dose and verified the dose was well below regulatory limits.

The licensee performed an apparent cause evaluation and determined that the two failures of the PAPR were caused by incomplete charging of the batteries prior to being placed in service. The manufacturer of the battery charger provided instructions for battery maintenance, indicating that the battery should be charged for two times the length of the previous use. However, the licensee had not included this guidance in its procedures, training, or practice. Specifically, the licensee had not established a method to identify the length of time a battery was used or the length of time that the battery was charged. Additionally, the charger used by the licensee did not provide any indication whether the battery was fully charged.

The inspectors reviewed the corrective actions taken to prevent batteries from being issued before being completely charged. Specifically, the licensee's apparent cause evaluation recommended that the licensee purchase new chargers (dual rate chargers) and replace the older chargers used during the outage with the dual rate design. The dual rate chargers provided a light emitting diode to indicate that the battery is fully charged and ready for use. During the inspection, the inspectors observed most of the batteries were still being charged with the old style chargers after the corrective action was to have been completed. The inspectors informed the respiratory protection program owner of the corrective action and its scheduled completion date. The respiratory protection program owner removed all of old style chargers after validating this observation. Additionally, the licensee planned to revise respiratory protection procedures and training to prevent recurrence.

Analysis: The inspectors determined that this finding was a performance deficiency because licensees are required to adhere to the regulations contained in Subpart H of 10 CFR Part 20, which requires licensees to implement and maintain applicable respiratory protection procedures. The inspectors also determined that the performance deficiency was reasonably within the licensee's ability to foresee and correct. In accordance with NRC Inspection Manual Chapter 0612, the inspectors determined that the finding was more than minor because it impacted the equipment and instrumentation attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not providing adequate procedures for control of PAPR battery charging resulted in an unplanned exposure to radioactive material. The finding was assessed using the Occupational Radiation Safety Significance Determination Process and was determined to be of very low safety significance (Green) because it was not an As Low As Reasonably Achievable planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised.

The inspectors did not identify a cross-cutting aspect associated with this finding.

Enforcement: Title 10 CFR 20.1703(c) requires, in part, that the licensee implement and maintain a respiratory protection program that includes written procedures regarding the storage, issuance, maintenance of respiratory protection equipment. Contrary to this, as of January 16, 2008, the licensee failed to maintain procedures regarding the charging and proper maintenance of PAPR batteries. Because the failure to comply with 10 CFR 20.1703(c) was of very low safety significance and was entered into the licensee's corrective action program as CR-PLP-2007-04149 and CR PLP-2008-00229, the violation is being treated as an NCV, (NCV 05000255/2008002-04: Failure to Maintain Procedures for the Maintenance of PAPR Batteries) consistent with Section VI.A of the NRC Enforcement Policy.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Use, to the Extent Practical, Process or Other Engineering Controls to Control the Concentration of Radioactive Material in Air

Introduction: A Green self revealed finding of very low safety significance and associated Non-Cited Violation (NCV) of 10 CFR 20.1701 was identified for failure to use, to the extent practical, process or other engineering

controls to control the concentration of radioactive material in air.

Description: The licensee experienced instances of elevated airborne radioactivity in the Containment Building during the Fall 2007 refueling outage (1R19). The cause for these conditions was attributed to known fuel element failures identified early in the operating cycle.

On September 9, 2007, the licensee shut-down the reactor for commencement of the planned refueling outage. The licensee monitored parameters of the reactor coolant system during the shutdown/cool-down process, including concentrations of key radionuclides. Radioactive noble gases were released to the containment atmosphere when the pressurizer manway was opened to support scheduled work. That activity created a short term condition where workers had difficulty leaving the radiologically controlled area (RCA) due to radioactive noble gases that would cling to the modesty clothing of the workers. Approximately 24 hours later, the licensee opened the steam generator manways to support scheduled work, which released more radioactive noble gases and later radioactive iodine to the containment atmosphere. When this event occurred, the licensee assessed the concentration of radioactive iodine in containment and assessed the impact on internal dose to workers. Additionally, the licensee expected that the installed engineering controls, which consisted of a charcoal filtered ventilation system, would remove the radioactive iodine from the atmosphere.

The duration of the elevated airborne radioactive iodine was much longer than anticipated by the licensee. The licensee's root cause evaluation determined that the charcoal media in the installed filtration system was depleted before the system was placed in service or shortly after the radioactive iodine was released to the containment atmosphere, thereby rendering the installed engineering controls ineffective. Prior to the outage, the licensee had elected not to replace the charcoal media within the installed plant equipment at the beginning of this refueling outage (1R19), as was performed during previous refueling outages. That decision was made after reviewing the results of a charcoal sample that was analyzed from the end of the previous refueling outage (1R18).

After the steam generator manways were removed, a local air filtration system was placed in service as prescribed during the As Low As Reasonably Achievable (ALARA) planning process. The filtration system was a high-efficiency particulate air filter and a charcoal bank to remove radioactive iodine. The filter system was intended to draw air from the steam generator and into to the plant removal system. However, the system components were installed backwards on the "A" steam generator. Instead of removing the radioactivity from the steam generator, the system effectively pushed unfiltered air out of the steam generator and into the containment atmosphere that created a localized increase in airborne radioactivity.

The prolonged, elevated airborne conditions that resulted from the exhaustion of the installed plant charcoal filtration units and the misalignment of the local high efficiency particulate air unit resulted in extended delays for workers as they attempted to leave the Radiation Controlled Area and attributed to small but measurable intakes of radioactive iodine (I-131) to several hundred workers during 1R19. The licensee performed an assessment of each worker's internal dose and verified that all doses were well below regulatory limits. The licensee was considering various actions to prevent reoccurrences for future outages based on root cause evaluation recommendations.

Analysis: The inspectors determined that this finding was a performance deficiency because the licensee failed to meet the requirements contained in Subpart H of 10 CFR Part 20 and because the deficiency was reasonably within the licensee's ability to foresee and correct. The finding was more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of protecting worker health and safety from exposure to radiation, in that not implementing adequate engineering controls resulted in unplanned exposures to radioactive material. The finding was assessed using the Occupational Radiation Safety Significance Determination Process and was determined to be of very low safety significance (Green) because it was not an ALARA planning issue, there was no overexposure or potential for overexposure, and the licensee's ability to assess dose was not compromised.

As described above, the engineering controls that were planned to be used to control the concentration of radioactive material in air were either depleted soon after being placed in service or installed improperly. Consequently, the cause of this deficiency had a cross-cutting aspect in the area of Human Performance related to work control. Specifically, the licensee failed to plan and coordinate work activities with planned contingencies and compensatory actions. (H.3 (a))

Enforcement: Title 10 CFR 20.1701 requires that licensees use, to the extent practical, process or other engineering controls (e. g., containment, decontamination, or ventilation) to control the concentration of radioactive material in air. Contrary to this, between September 10-12, 2007, the licensee failed to implement effective engineering controls to

control the concentration of radioactive material in air. Because the failure to comply with 10 CFR 20.1701 was of very low safety significance and has been entered into the licensee's corrective action program as CR-PLP-2007-04002, the violation is being treated as an NCV (NCV 05000255/2008002-05: Failure to Use, to the Extent Practical, Process or Other Engineering Controls to Control the Concentration of Radioactive Material in Air) consistent with Section VI.A of the NRC Enforcement Policy.

Inspection Report# : [2008002](#) (pdf)

Public Radiation Safety

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Control the Release of Radioactive Material

Introduction: A Green self revealed finding of very low safety significance and associated Non-Cited Violation (NCV) of 10 CFR 20.1501 was identified for the failure to conduct an adequate radiological evaluation in the form of surveys of contaminated workers.

Description: On January 17, 2008, the NRC notified the licensee that radioactive material was identified on workers entering another NRC licensed facility. The workers indicated that they had last been employed at the Palisades refueling outage (1R19) in September 2007. That licensed facility identified six pairs of footwear and other personal items with contamination levels between 6,000 and 20,000 disintegrations per minute. Subsequent analysis identified that the contamination was iodine-131, a radionuclide with an 8-day half life, and was linked to work activities at the Palisades site. The affected materials were confiscated by the other licensee after identification.

Prior to the release of the workers from the site, Palisades' staff had also identified two occurrences of inadequate surveys that were performed during the refueling outage that had resulted in the inadvertent release of licensed radioactive material from the restricted area. The incidents occurred approximately one week before the workers left Palisades to work at the other NRC licensed facility (described above). The immediate corrective actions taken by the licensee for these two events included communications to all radiation protection technicians that reinforced procedural compliance and the proper survey techniques for the release of individuals alarming contamination monitors. Additionally, a radiation protection supervisor was assigned (dayshift and nightshift) to provide additional oversight at access control.

As described in Section 20S1.2, the licensee experienced elevated airborne radioactivity during the Fall 2007 refueling outage (1R19). The elevated airborne conditions resulted in low level intakes of radioactive material for numerous workers. Since the personal contamination monitors at the control points were not capable of differentiating any external contamination from the radioiodine intakes that caused them to alarm, the licensee relied on hand frisking to release the individuals and their personal items. The workers undergarments, shoes and socks were not independently surveyed and the licensee assumed that internal deposition of radioactive material was the only cause of the personal contamination monitor alarms. The requirement to perform manual surveys resulted in delays for workers as they attempted to leave the RCA and resulted in hundreds of worker being surveyed by radiation protection technicians using a pancake probe survey instrument, a technique also known as a hand frisk. The additional oversight provided by radiation protection supervisors was not fully effective because it did not provide adequate quality control that was warranted for the large number of personnel affected by the elevated airborne radioactivity. Consequently, contaminated personal items were released from the site undetected and were identified at another NRC licensed facility.

Analysis: The inspectors determined that this finding was a performance deficiency because licensees are required to adhere to the regulations of 10 CFR Part 20 and that the deficiency was reasonably within the licensee's ability to foresee and correct. The finding was more than minor because it impacted the program and process attribute of the Public Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive material released into the public domain, in that inadequate surveys resulted in the failure to control radioactive material. The finding was assessed using Public Radiation Safety Significance Determination Process and was determined to be of very low safety significance (Green). The finding was not a transportation issue, and the radioactive material found offsite was of low activity and would not have

produced a dose to a member of the public in excess of 0.005 rem.

As described above, the actions required to survey the large number of workers that alarmed the personal contamination monitor overwhelmed the ability of the radiation protection staff to conduct effective hand frisks. Consequently, the cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to make risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained. (H.1(a))

Enforcement: Title 10 CFR 20.1501 requires that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present. Pursuant to 10 CFR 20.1003, survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

Contrary to these requirements, on various dates in September 2007, the licensee did not perform adequate surveys to assure compliance with 10 CFR 20.1802, which requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled area or unrestricted areas and that is not in storage. Specifically, between September 21, 2007, and September 30, 2007, licensee surveys of workers were not adequate to control licensed material from inadvertently being carried by the workers outside of the controlled and restricted areas of the site. Because this finding is of very low safety significance and has been entered into the licensee's corrective action program (Condition Reports CR-PLP-2007-04338 and CR-PLP-2008-01180), this violation is being treated as an NCV (NCV 05000255/2008002-07, Failure to Control the Release of Radioactive Material), consistent with Section VI.A of the NRC Enforcement Policy:.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to effectively survey slings before granting unconditional release from the RCA

A self-revealed finding of very low safety significance and an associated violation of NRC requirements was identified for the failure to effectively survey slings before granting unconditional release from the Radiologically Controlled Area (RCA). This was first identified when a sling alarmed the PM-7 (portal radiation monitor) at the security building on October 13, 2006. A few days later, an individual working outside of the RCA became contaminated after handling a rigging/lifting sling. Extent of condition surveys identified 17 additional slings outside the RCA and/or Protected Area that alarmed the tool monitor. Radioactive material was also identified on two of these slings using a conventional hand-held frisker survey instrument.

The issue was more than minor because it was associated with the Program/Process attribute of the Public Radiation Safety Cornerstone and affected the cornerstone objective to ensure the adequate protection of the public domain as a result of routine civilian nuclear reactor operation. A Green NCV of 10 CFR 20.1501 was identified for the failure to adequately survey materials to evaluate the presence of radioactive material. The cause of this deficiency is a legacy issue and does not represent current licensee performance. Therefore, this deficiency does not have any cross-cutting aspects.

Inspection Report# : [2007004](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : June 05, 2008

Palisades

2Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain and Implement Procedure Guidance for Offset Power Source Operability

The inspectors identified an NCV of Technical Specification (TS) 5.4.1 for the failure to maintain and implement procedure guidance for offsite power source operability. Specifically, the procedure guidance for the transmission system operator (TSO) to notify the site when alarm thresholds were reached was not adequately implemented. The alarm set points and guidance in the interface documents between the site and the TSO are inaccurate and were not updated when modifications were made to a site transformer in 2006. The licensee wrote Condition Report (CR) CR-PLP-2008-2303 to address the issue.

The finding is more than minor because it is associated with the reactor safety initiating events cornerstone attribute of grid stability and affects the objective of limiting the likelihood of events that challenge critical safety functions. The inspectors determined that the finding is of very low safety significance (Green), because there were no identified instances which indicated the grid was stressed or the offsite source was inoperable. The finding includes a cross-cutting aspect in the area of human performance in that licensee failed to have accurate procedures for offsite power source operability (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: FIN Finding

Main Feed Pump trip due to Inadequate Configuration

Introduction: A Green self-revealed finding occurred on January 13 when the 'B' Main Feed Pump failed. The failure occurred due to improper maintenance on the lube oil pump associated with the Main Feed Pump that resulted in a loss of lube oil flow and trip of the Main Feed Pump. The failure was not a violation of NRC requirements. The licensee manually tripped the reactor in accordance with procedures and repaired the Main Feed Pump. The licensee entered the issue into the corrective action program as Concition Report (CR)-PLP-2008-0151 and repaired the pump.

The inspectors concluded that this finding is more than minor in accorcance with Inspection Manual Chapter 0609 because the finding is associated with the increase in the likelihood of an initiating event. specifically, the improper pump assembly led to a partial loss of feed and subsequent plant trip. The inpsectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because the finding did not affect a mitigating system in addition to being a transient initiator. The finding does not represent a violation of NRC requirements' however, it does represent a failure to meet self imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performace, Resources due to an inadequate work package (H.2(c)).

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Operating Requirements Manual Restrictions on Heavy Load Movement

NRC identified violations of Technical Specification (TS) 5.4.1 occurred on October 4, and October 13, 2007 when the licensee violated Operational Requirements Manuals limits on movement of heavy loads. On October 4, the licensee moved a heavy load in the Spent Fuel Pool (SFP) with irradiated fuel less than 30 days old in the SFP. On

October 13, the licensee moved a heavy load in containment with pressurizer temperature greater than 225F. The licensee successfully landed the loads and entered the issues into the corrective action program.

The finding was more than minor because the failure to comply with the Operating Requirements Manual requirements affected the initiating event cornerstone objective of maintaining the availability and reliability of the primary coolant boundary and the SFP. The issue screened as green because no load drops occurred and the loads were suspended for a short time. The finding has a cross cutting aspect in the area of human performance, coordination of work activities

Inspection Report# : [2007007](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

High Pressure Safety Injection Train Inoperable

A self-revealed finding and associated NCV of 10 CFR 50 Appendix B Criteria III was identified on March 26 when the licensee attempted to remove the breaker for the 'A' High Pressure Safety Injection (HPSI) pump from its cubicle. An inspection of the Mechanism Operated Cell (MOC) switch revealed that the brazed connection of the bayonet arm to the shaft had failed. This failure prevented automatic opening of an associated HPSI valve. An investigation showed the licensee failed to select equipment that is compatible with installed equipment during modifications to a certain style of breaker. The licensee entered it into their corrective action program as CR-PLP-2008-01392 and corrected the deficiency.

The finding is more than minor because it is associated with the mitigating system attribute of design control and affects the cornerstone objective to ensure availability of systems that respond to initiating events. The inspectors evaluated the finding in accordance with IMC 0609 and determined that although the finding represented inoperability of a TS required system in excess of the allowed outage time, the finding did not represent a loss of safety function for the train. Specifically, the operators could open the affected valve manually from the control and applicable emergency procedures provided direction to open the valve if it did not automatically open on a recirculation action signal. The inspectors consulted with a region III Senior Risk Analyst and confirmed the finding was of very low safety significance, i.e. Green. No cross-cutting aspect is associated with this finding.

Inspection Report# : [2008003](#) (pdf)

Significance:  Jun 30, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Improper Maintenance of Safeguards Transformer

A self-revealed finding occurred on April 1 when a non-safety related, offsite transformer was declared inoperable due to evidence of internal arcing based on gas testing of the load tap change oil reservoir of the transformer. The failure occurred due to improper maintenance on the tap changer during the last outage. The failure was not a violation of NRC requirements. The licensee repaired the safeguards transformer and returned it to service. The licensee entered the issue into the corrective action program as CR-PLP-2008-1500.

The finding is more than minor in accordance with Inspection Manual Chapter 0609 because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of systems which respond to initiating events. Specifically, the improper assembly of parts for the load tap changer led to the arcing in the tap changer oil reservoir, the removal of the transformer from service and declaration of one offsite power source being inoperable and unavailable. The inspectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because even though the tap changer had one contact on one phase that was not available, the tap changer would have been available to perform its function and tap change during licensed basis events. The finding does not represent a

violation of NRC requirements; however, it does represent a failure to meet self-imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performance, Resources, due to an inadequate work package (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

1-1 Emergency Diesel Generator Fuel Header Leak

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criteria V, "Instructions, Procedures and Drawing" for failure of the licensee to have documented instructions for maintenance of the 1-1 emergency diesel generator (EDG). Specifically, the licensee's procedure for tightening the connection between the fuel oil header and the fuel pump did not require the fasteners to be torqued. Previous corrective action documents and operating experience demonstrated a torque was required. The fuel oil fasteners disconnected from the connection during a run of the EDG requiring engine shutdown. The licensee entered the item into the corrective action process as CR-PLP-2007-04078 and torqued all susceptible bolts on both EDGs.

The inspectors determined the finding is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. Because this deficiency could have an impact on the EDG ability to adequately deliver fuel to the cylinders required in an accident, and because this condition may have existed (in some state where the bolts could loosen) for some time, the issue required a detailed assessment to evaluate the condition. The inspectors reviewed the licensee's past operability assessment. The assessment concluded the EDG could reasonably perform its safety function for its required mission with some operator intervention around 24 hrs into the event. The inspectors concluded the evaluation was reasonable. Therefore, the inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function and the item screened out in phase I of IMC 0609. The finding includes a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to communicate operating experience (OE) to the internal stakeholders in a timely manner for relevant issues (P.2(a)).

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Fire Door Was Closed

The inspectors identified a Green Non-Cited Violation (NCV) of License Condition 2.C.(3), Fire Protection, for failure to ensure a fire door between an emergency diesel generator room and a vital switchgear room was closed. This partially open door degraded the fire containment capability assumed in the fire hazards analysis. The fire door was closed and this issue was entered into the licensee's corrective action program as CR-PLP-2008-00075.

The finding is more than minor because it is associated with the protection against external factors (fires) attribute of the mitigating system cornerstone and affected the objective to maintain the reliability and capability of systems that respond to events to prevent undesirable consequences. In accordance with Inspection Manual Chapter 0609, Appendix F, Fire Protection SDP, the inspectors conducted a Phase I SDP screening. The inspectors determined the finding is of very low safety significance (Green), because the fire areas had fully functional, automatic water-based fire suppression which provided adequate coverage in both rooms and no transient combustible loads were present in either room. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case adequate self checking, were not effective in ensuring this door was closed after use.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor the Feedwater System Under 10 CFR 50.65a(1)

The inspectors identified a Green NCV of Title 10, Code of Federal Regulations (CFR) 50.65 for the failure to include a 'B' feed regulating valve deficiency to close during startup operations as a functional failure in the maintenance rule program. The inspectors noted that the failure should have placed the feedwater system into maintenance rule 10 CFR 50.65a(1) status in the fourth quarter of 2007. This caused a lapse in the determination of appropriate system monitoring and goal setting to maintain system reliability. This issue was entered into the licensee's corrective action program as CR-PLP-2008-00562 and the licensee placed the system in a(1) status.

The finding is more than minor because, in accordance with Inspection Manual Chapter 0612, Appendix E, Examples of Minor Issues (example 7b) and Enforcement Manual Section 8.1.11, Maintenance Rule a(1) and a(2) violations are not minor because they involve structures, systems, and components (SSCs) that have demonstrated some degraded performance or condition. The finding is of very low safety significance because there was no design deficiency, the finding did not represent an actual loss of a safety function, nor does this involve a risk significant system for mitigating fire, flood, seismic, or severe weather events. This finding also has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program (P.1(c)) because the licensee failed to thoroughly evaluate the cause and extent of condition of the failed feed regulating valve.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008
Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate General Operating Procedure for Mode Transition

The inspectors identified a NCV of Technical Specification (TS) 5.4.1 for the failure to have adequate procedure guidance for the general operating procedures for mode transition to power operations. Specifically the general plant operating procedure for mode transition did not have adequate guidance to ensure the actions required by TS 3.0.4 were completed for failure of a radiation monitor required by TS prior to mode transition. Prior to the mode transition, the licensee completed the required action based on the inspectors' concerns and wrote a CR.

The inspectors determined the failure to have adequate procedures for mode transition in accordance with TS is more than minor because, if left uncorrected, this and other mode transitions could have occurred with less than the required equipment operable or appropriate actions completed, which could become a more significant safety concern. The inspectors determined the finding is of very low safety significance (Green), because the actual mode transition occurred only after completion of the required actions based on the response to the inspectors' concerns. The finding includes a cross-cutting aspect in the area of human performance in that licensee did not adequately use conservative assumptions in decision-making to demonstrate the proposed action was safe (H.1(b)).

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008
Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.8.4 B and C

A self revealing NCV of TS 3.8.4 B and C was identified for failing to recognize that battery cell parameters were not within TS limits and for failing to take actions in accordance with TS for an inoperable battery. Specifically, cell 43 of the right train safety-related battery (ED02) was below technical specifications for individual cell voltage without recognition by the site staff. As a result, compensatory actions and a plant shutdown required by TSs were not completed as required. As an immediate action, the licensee completed the required actions required by TS including restoration of the battery to an operable status.

The inspectors determined the failure to take required actions in accordance with TSs is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. The inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function for the right train battery. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case an adequate pre-job brief, were not effective in ensuring prompt notification of the shift manager.

Inspection Report# : [2008002](#) (*pdf*)

Significance: **G** Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.5.2 B and C

A self revealing NCV of TS 3.5.2 B and C was identified for the inability of an automatic valve in the Emergency Core Cooling System (ECCS), CV-3047, to reposition fully closed on an actuation signal. As a result, one train of ECCS was inoperable for longer than allowed by technical specifications. When the licensee identified that the valve would not fully close, the licensee took the actions required by TS and repaired the valve.

The inspectors determined the failure to take required actions in accordance with TSs is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of systems which respond to initiating events. During the injection phase of an accident, more flow would bypass the core with the valve approximately 18 percent open, than if the valve had been fully closed. The inspectors determined the finding is of very low safety significance (Green) because the finding is not associated with a loss of safety function for the ECCS system. The finding includes a cross-cutting aspect in the area of human performance in that the licensee did not adequately coordinate work activities to address the impact of actions needed to ensure the valve was closed when the valve was declared inoperable (H.3(b)).

Inspection Report# : [2008002](#) (*pdf*)

Significance: **G** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Post Maintenance Testing for High Pressure Safety Injection Pumps

The inspectors identified a Green Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawing" for failure by the licensee to follow procedural requirements for testing safety-related pumps after bearing replacement. Specifically, the licensee's post-maintenance testing plan and work order for both High Pressure Safety Injection (HPSI) pumps was not in accordance with the site's post-maintenance test (PMT) procedure, and did not have adequate re-tests for bearing replacement. Following identification, the licensee entered the item into their corrective action program and revised the post-maintenance testing for the pumps.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern in the area of PMTs. The inspectors determined this finding did not result in a loss of function, because the HPSI pump bearings were adequately tested after the inspectors brought the issue to the licensee. Therefore, the finding was considered to be of very low safety significance

Inspection Report# : [2007007](#) (*pdf*)

Significance: **G** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Containment sump Debris Found during NRC Closeout

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings" failure by the licensee to follow procedural requirements for closing out the containment sump. Specifically, the licensee failed to comply with the containment sump closeout procedure. After closeout by the site, the inspectors found metal debris of greater than 1/8" in the sump area. Following identification, the licensee entered the item into their corrective action program and removed all debris prior to mode 4 operations.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern in the area of containment sump performance. The inspectors determined this finding did not result in a loss of function, because the sump was properly cleaned after the inspectors brought the issue to the licensee. Therefore, the finding was considered to be of very low safety significance (Green). The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to effectively communicate expectations regarding procedural compliance and personnel following procedures. (H.4(b))

Inspection Report# : [2007007](#) (*pdf*)

Significance: **SL-IV** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Revised Dose Calculation

The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59, “Changes, Tests, and Experiments” for the licensee’s failure to perform a written evaluation prior to implementing a calculation change based on raising the acceptance criteria for back leakage from valves which leak containment activity. Specifically, the change of back leakage affected the post accident dose impact to control room operators and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action program. After removing margin from other components, the licensee determined the change to acceptance criteria could be implemented without prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC’s ability to perform its regulatory function and if left uncorrected would have raised the dose to control room operators above the level requiring NRC approval. The inspectors concluded the original calculation would have required prior NRC approval. The issue screened as SL IV since the inspectors brought the issue to the attention of the licensee before plant start-up, so there was no actual impact with the plant at power. In addition, the issue was not repetitive or willful. Therefore, it was of very low safety significance.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inoperable Safety Systems Due to Improper Door Positioning

NRC identified violations of Technical Specification 5.4.1 occurred on October 1, 2007; October 28, 2007 and November 19, 2007 due to licensee personnel failing to maintain doors in the proper configuration to support operability of TS required systems. The failure to maintain doors in the proper configuration resulted in unplanned entries into Limiting Conditions for Operation. After identification of the discrepant door status, the licensee restored each of the doors to the proper configuration to support operability.

The finding was more than minor because it impacted the mitigating event cornerstone objective of configuration control. The issue was not of more than very low safety significance due to the short duration the doors were improperly positioned. The finding had a cross cutting aspect in human performance error prevention techniques (H.4. (a))

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Dec 12, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to establish correct Tech Spec Limits

Green. The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control” requirements. Specifically, the licensee failed to incorporate a number of uncertainties when calculating the technical specification (TS) limits for the emergency diesel generator (EDG) fuel oil volume. This resulted in a non-conservative TS value. Once identified by the inspectors, the licensee issued a standing order in the “SRO Shift Turnover Items Shift Checklist” to ensure that adequate margin existed for the EDG seven-day fuel oil requirement to account for the uncertainties and planned to address the issue further through their corrective action process.

Inspection Report# : [2007008](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Plant Radiation Monitors Not Fully Scoped into the Maintenance Rule

The inspectors identified a Green NCV of 10 CFR 50.65(b)(2) because the licensee did not scope all plant radiation monitors used in site emergency operating procedures into the maintenance rule monitoring program. The licensee entered the item into their corrective action program and placed the radiation monitoring system in the a(1) status.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was considered to have very low safety significance (Green) because the finding did not cause a loss of mitigation equipment functions and did not increase the likelihood of a fire or flooding event.

Inspection Report# : [2007006](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment for Safety Injection Actuation Test

The inspectors identified a Green NCV of 10 CFR Part 50.65(a)(4), because the licensee did not adequately assess and manage online risk while performing a safety injection system actuation test. Specifically, prior to performance of the safety injection test, the inspectors identified that the test did not account for unavailability of a high pressure safety injection (HPSI) train. Accounting for the HPSI unavailability resulted in yellow risk. The licensee implemented appropriate risk mitigation actions prior to entering yellow risk. The licensee entered the item into their corrective action process and updated the risk assessment.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure availability of systems and the risk assessment failed to consider risk-significant systems, structures, components (i.e., high pressure safety injection pumps) which were unavailable during on-line maintenance. The inspectors concluded that the finding was of very low safety significance because the incremental core damage probability deficit was less than 1×10^{-6} (green) in accordance with IMC 0609, Appendix K. The finding included a cross-cutting aspect in the area of human performance, work controls, in that the licensee failed to incorporate appropriate risk insights when coordinating work activities.

Inspection Report# : [2007006](#) (pdf)

Significance: SL-IV Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Temporary Modification for Augmented Cooling of SW

The inspectors identified a severity level (SL) IV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments" for the licensee's failure to perform a written evaluation prior to implementing a temporary modification to compensate for the absence of containment air cooler VHX-4. Specifically the modification adversely impacted the service water (SW) system and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action process, added structural elements to minimize fouling of the service water system, evaluated the change in accordance with 10 CFR 50.59, and performed a written evaluation. The revised modification did not require prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC's ability to perform its regulatory function and resulted in a condition which reduced the reliability of the SW system, a mitigating system.

The inspectors concluded the original modification may have required prior NRC approval. The issue screened green in the phase 3 assessment for the equipment degradation and therefore was of very low safety significance, and therefore, SLIV. The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to use conservative assumptions in decision making and failed to identify possible unintended consequences when implementing the augmented cooling for service water modification. (H.1.(b))

Inspection Report# : [2007006](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

AFW Pumps Inoperable Due to High Energy Line Breaks in the Turbine Building

The inspectors identified a Green non-cited violation NCV of 10 CFR 50, Appendix B, Criteria III, "Design Control" for failing to adequately translate the design and licensing basis requirements into equipment specifications for the 8A and 8B Auxiliary Feedwater (AFW) pumps and controls. Specifically, the 8A and 8B pumps have a licensing basis to be operable during a High Energy Line Break (HELB) event in the turbine building; however, in some HELB scenarios the pumps would experience a harsh environment. The licensee did not qualify the pumps and associated

equipment for a harsh environment. The licensee wrote a condition report and an operability recommendation (OPR) with compensatory actions to address the issue.

The finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the AFW system to respond to initiating events. A phase 2 screening was required since the design qualification deficiency resulted in a loss of function for one train of AFW per Generic Letter 91-18. The SRA concluded in a phase 3 evaluation, which included external events, that the finding was of very low safety significance (Green).
Inspection Report# : [2007006](#) (*pdf*)

Barrier Integrity

Significance:  Sep 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
LPSI Check Valve Unseated

A self-revealed finding and associated NCV of Technical Specification 5.4.1 was identified for failure by the licensee to follow procedural requirements. On May 13, 2007, the licensee failed to monitor for leakage across a Low Pressure Safety Injection (LPSI) check valve as required by procedure and a protective relief valve lifted. Following lifting of the relief valve, the licensee seated the check valve to prevent further back leakage and entered the deficiency onto their corrective action program.

In accordance with IMC 0612, the inspectors concluded that the issue was more than minor because the failure to limit pressure in the LPSI piping until a protective device actuated increased the likelihood of an initiating event. After consultation with the Senior Risk Analyst (SRA), the inspectors concluded that the finding was of very low safety significance because of the extremely low frequency of the Interfacing System Loss of Coolant Accident initiating event. This finding included a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)) were not effective in preventing lifting of the relief valve.
Inspection Report# : [2007006](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Maintain Procedures for the Maintenance of PAPR Batteries

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 20.1703(c) for the failure to implement written procedures to ensure batteries for powered air purifying respirators (PAPRs) are adequately charged before use. As of January 16, 2008, the licensee failed to maintain procedures that provided adequate instructions concerning the charging of PAPR batteries, which resulted in two failures of a PAPR unit to properly function and in the intake of radioactive material on September 9, 2007. As corrective actions, the licensee revised procedures and replaced the battery chargers with a model that indicates battery charge condition. The licensee entered the issue into the corrective action program as CR PLP-2007-04149 and CR-PLP-2008-00229.

The finding is more than minor because it impacted the equipment and instrumentation attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not providing adequate procedures for control of PAPR battery charging resulted in an unplanned exposure to radioactive material. The finding was determined to be of very low safety

significance because it was not an As Low As Reasonably Achievable (ALARA) planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The inspectors did not identify a cross-cutting aspect associated with this finding.

Inspection Report# : [2008002](#) (pdf)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Use, to the Extent Practical, Process or Other Engineering Controls to Control the Concentration of Radioactive Material in Air

A self-revealed finding of very low safety significance and associated NCV of 10 CFR 20.1701 was identified for the failure to use, to the extent practical, process or other engineering controls to control the concentration of radioactive material in air. On September 12, 2007, the licensee failed to implement effective engineering controls in the reactor containment to reduce the levels of radioactive iodine gases. The failure resulted in elevated levels of airborne radioactivity and the intakes of radioactive material by the licensee's staff. As corrective actions, the licensee conducted a root cause evaluation and has entered the problem in the corrective action program as CR PLP-2007-04002.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not implementing adequate engineering controls resulted in unplanned exposures to radioactive material. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The engineering controls comprised of a charcoal filtration ventilation system that were planned to be used to control the concentration of radioactive material in air were either depleted soon after placed in service or installed backwards. Consequently, the cause of this deficiency had a cross-cutting aspect (H.3(a)) in the area of Human Performance related to work control. Specifically, the licensee failed to plan and coordinate work activities with planned contingencies and compensatory actions.

Inspection Report# : [2008002](#) (pdf)

Public Radiation Safety

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Control the Release of Radioactive Material

A self-revealed finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform an adequate radiological survey to assure compliance with 10 CFR 20.1802, which requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled area or unrestricted areas and that is not in storage. On January 17, 2008, the NRC notified the licensee that radioactive material was identified by another NRC licensed facility when workers arrived following Palisades refueling outage 1R19. That licensee identified six pairs of footwear and other personal items with radioactive contamination levels between 6,000 and 20,000 disintegrations per minute, which had been improperly released from the Palisades site. As immediate corrective actions, the affected materials were confiscated by the other site. Additionally, the licensee identified two earlier occurrences of inappropriate surveys that were performed early in the refueling outage that resulted in the inadvertent release of radioactive material. As corrective actions, the licensee planned to implement new procedure documents, and the issue was entered into the licensee's corrective action program as Condition Reports CR-PLP-2007-04338 and CR-PLP-2008-01180.

The finding is more than minor because it impacted the program and process attribute of the Public Radiation Safety Cornerstone and it adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive material released into the public domain, in that inadequate surveys resulted in the failure to control radioactive material. The finding was determined to be of very low safety significance because it was a radioactive material control finding, it was not a transportation finding, and it did not result in public dose

greater than 0.005 rem. The finding was caused by the decision to allow manual release surveys of a large number of workers that alarmed the personal contamination monitor, which overwhelmed the ability of the radiation protection staff to conduct effective monitoring of personnel. Consequently, the cause of this deficiency had a cross-cutting aspect (H.1(a)) in the area of Human Performance related to decision making. Specifically, the licensee failed to make risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained.

Inspection Report# : [2008002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : August 29, 2008

Palisades

3Q/2008 Plant Inspection Findings

Initiating Events

G

Significance: Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain and Implement Procedure Guidance for Offset Power Source Operability

The inspectors identified an NCV of Technical Specification (TS) 5.4.1 for the failure to maintain and implement procedure guidance for offsite power source operability. Specifically, the procedure guidance for the transmission system operator (TSO) to notify the site when alarm thresholds were reached was not adequately implemented. The alarm set points and guidance in the interface documents between the site and the TSO are inaccurate and were not updated when modifications were made to a site transformer in 2006. The licensee wrote Condition Report (CR) CR-PLP-2008-2303 to address the issue.

The finding is more than minor because it is associated with the reactor safety initiating events cornerstone attribute of grid stability and affects the objective of limiting the likelihood of events that challenge critical safety functions. The inspectors determined that the finding is of very low safety significance (Green), because there were no identified instances which indicated the grid was stressed or the offsite source was inoperable. The finding includes a cross-cutting aspect in the area of human performance in that licensee failed to have accurate procedures for offsite power source operability (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

G

Significance: Mar 31, 2008

Identified By: NRC

Item Type: FIN Finding

Main Feed Pump trip due to Inadequate Configuration

Introduction: A Green self-revealed finding occurred on January 13 when the 'B' Main Feed Pump failed. The failure occurred due to improper maintenance on the lube oil pump associated with the Main Feed Pump that resulted in a loss of lube oil flow and trip of the Main Feed Pump. The failure was not a violation of NRC requirements. The licensee manually tripped the reactor in accordance with procedures and repaired the Main Feed Pump. The licensee entered the issue into the corrective action program as Concition Report (CR)-PLP-2008-0151 and repaired the pump.

The inspectors concluded that this finding is more than minor in accorcance with Inspection Manual Chapter 0609 because the finding is associated with the increase in the likelihood of an initiating event. specifically, the improper pump assembly led to a partial loss of feed and subsequent plant trip. The inpsectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because the finding did not affect a mitigating system in addition to being a transient initiator. The finding does not represent a violation of NRC requirements' however, it does represent a failure to meet self imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performace, Resources due to an inadequate work package (H.2(c)).

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Operating Requirements Manual Restrictions on Heavy Load Movement

NRC identified violations of Technical Specification (TS) 5.4.1 occurred on October 4, and October 13, 2007 when the licensee violated Operational Requirements Manuals limits on movement of heavy loads. On October 4, the licensee moved a heavy load in the Spent Fuel Pool (SFP) with irradiated fuel less than 30 days old in the SFP. On October 13, the licensee moved a heavy load in containment with pressurizer temperature greater than 225F. The licensee successfully landed the loads and entered the issues into the corrective action program.

The finding was more than minor because the failure to comply with the Operating Requirements Manual requirements affected the initiating event cornerstone objective of maintaining the availability and reliability of the primary coolant boundary and the SFP. The issue screened as green because no load drops occurred and the loads were suspended for a short time. The finding has a cross cutting aspect in the area of human performance, coordination of work activities

Inspection Report# : [2007007](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Degradation of the 3-hour Fire Barrier

The inspectors identified a Green NCV of License condition 2.C.(3), Fire Protection, for failure to maintain a three hour barrier between two safety related rooms. Specifically, the inspectors noted a through-wall crack in the htree hour fire wall between the 1-1 and 1-2 diesel rooms. The licensee entered the issue in the corrective action program as CR-PLP-2008-02696 and repaired the crack.
Inspection Report# : [2008004](#) (pdf)

Significance:  Sep 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Inadequate Auxilliary Feed Water Low Suction Pressure Trip Setpoints

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part50, Appendix B, Criterion III, "Design Control, " for the tank damage from tornado born missiles. Specifically, the licensee used low CST level trips to protect the Auxiliary Feedwater (AFW) pumps but the trips did not protect the pump during certain sever weather conditions (tornado). This issue was entered into teh licensee's corrective action program as CR-PLP-2006-00659 and CR-PLP-2006-00961; and the licensee has implemented compensatory actions to ensure the AFW function is available during severe weather.
Inspection Report# : [2008004](#) (pdf)

Significance:  Sep 25, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Establish and Implement Procedures Controlling Access to Containment

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1 for failure to implement procedures required to control access into containment. The corrective actions planned by the licensee include developing and implementing a comprehensive containment access control procedure. The issue was entered in the licensee's corrective action program as Condition Report (CR) CR-PLP-2008 3334.

The finding was considered more than minor, because given the need to access containment for licensing basis events, if left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating events. This finding involved many recent opportunities to identify that a containment access procedure was not established, implemented, or maintained. Consequently, this finding has a cross-cutting aspect in the area of Problem Identification and Resolution (P.1(a)) because the licensee failed to identify issues completely, accurately, and in a timely manner commensurate with their safety significance.

Inspection Report# : [2008010](#) (pdf)

Significance:  Sep 25, 2008
Identified By: Self-Revealing
Item Type: FIN Finding

Failure to Properly Maintain the Emergency Escape Hatch as an Escape Hatch

A self-revealed finding of very low significance was identified for the failure to ensure the emergency escape hatch would operate as designed when needed. The licensee failed to maintain the hatch in a condition that it could be operated as an emergency escape hatch. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on door operations, printed operating instructions, and a requirement to have a hammer for hatch operation. This is not a violation of NRC requirements.

The finding was considered more than minor, because the failure to maintain configuration control for the emergency escape hatch could have a credible impact on the licensee's ability to promptly ingress and egress the containment during emergency operations such as fire inside the containment. If left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating event.

Inspection Report# : [2008010](#) (pdf)

G

Significance: Sep 25, 2008

Identified By: NRC

Item Type: FIN Finding

Organizational Evaluation of Shutdown Risk for the Forced Outage.

The inspectors identified a finding of very low safety significance for failure to implement procedure EN-OU-101, "Forced Outage Planning and Preparation." This procedure stated, in part, that forced outages should undergo a risk assessment in accordance with station risk assessment guidance. Upon questioning by the inspectors, it was identified that the station risk assessment group did not review the outage template for risk for the forced outage started on August 5, 2008. The licensee wrote CR-PLP-2008-03485 to address the issue. This is not a violation of NRC requirements, because the licensee's formal method for risk assessment is contained in another procedure. EN-OU-101 provides defense in depth. See section 4OA7 for details on the formal risk assessment.

The inspectors determined that this issue was more than minor, because if left uncorrected the item could become a more significant safety concern. In this case, the licensee failed to realize during their review required by other procedures that partial draining of the pressurizer with a primary vent path open and a short time to core boiling resulted in an Orange risk path. It is reasonable to conclude the review in EN-OU-101 would have detected the Orange path. This finding was screened as very low safety significance (Green) since the plant was not in reduced inventory and all containment penetrations were capable of prompt closure. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Work Control (H.3(a)), since the licensee did not appropriately plan work activities by incorporating risk insights as recommended by a station procedure.

Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Jun 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

High Pressure Safety Injection Train Inoperable

A self-revealed finding and associated NCV of 10 CFR 50 Appendix B Criteria III was identified on March 26 when the licensee attempted to remove the breaker for the 'A' High Pressure Safety Injection (HPSI) pump from its cubicle. An inspection of the Mechanism Operated Cell (MOC) switch revealed that the brazed connection of the bayonet arm to the shaft had failed. This failure prevented automatic opening of an associated HPSI valve. An investigation showed the licensee failed to select equipment that is compatible with installed equipment during modifications to a certain style of breaker. The licensee entered it into their corrective action program as CR-PLP-2008-01392 and corrected the deficiency.

The finding is more than minor because it is associated with the mitigating system attribute of design control and affects the cornerstone objective to ensure availability of systems that respond to initiating events. The inspectors evaluated the finding in accordance with IMC 0609 and determined that although the finding represented inoperability of a TS required system in excess of the allowed outage time, the finding did not represent a loss of safety function for the train. Specifically, the operators could open the affected valve manually from the control and applicable emergency procedures provided direction to open the valve if it did not automatically open on a recirculation action signal. The inspectors consulted with a region III Senior Risk Analyst and confirmed the finding was of very low safety significance, i.e. Green. No cross-cutting aspect is associated with this finding.

Inspection Report# : [2008003](#) (*pdf*)

G

Significance: Jun 30, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Improper Maintenance of Safeguards Transformer

A self-revealed finding occurred on April 1 when a non-safety related, offsite transformer was declared inoperable due to evidence of internal arcing based on gas testing of the load tap change oil reservoir of the transformer. The failure occurred due to improper maintenance on the tap changer during the last outage. The failure was not a violation of NRC requirements. The licensee repaired the safeguards transformer and returned it to service. The licensee entered the issue into the corrective action program as CR-PLP-2008-1500.

The finding is more than minor in accordance with Inspection Manual Chapter 0609 because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of systems which respond to initiating events. Specifically, the improper assembly of parts for the load tap changer led to the arcing in the tap changer oil reservoir, the removal of the transformer from service and declaration of one offsite power source being inoperable and unavailable. The inspectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because even though the tap changer had one contact on one phase that was not available, the tap changer would have been available to perform its function and tap change during licensed basis events. The finding does not represent a violation of NRC requirements; however, it does represent a failure to meet self-imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performance, Resources, due to an inadequate work package (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

G

Significance: Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

1-1 Emergency Diesel Generator Fuel Header Leak

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criteria V, "Instructions, Procedures and Drawing" for failure of the licensee to have documented instructions for maintenance of the 1-1 emergency diesel generator (EDG). Specifically, the licensee's procedure for tightening the connection between the fuel oil header and the fuel pump did not require the fasteners to be torqued. Previous corrective action documents and operating experience demonstrated a torque was required. The fuel oil fasteners disconnected from the connection during a run of the EDG requiring engine shutdown. The licensee entered the item into the corrective action process as CR-PLP-2007-04078 and torqued all susceptible bolts on both EDGs.

The inspectors determined the finding is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. Because this deficiency could have an impact on the EDG ability to adequately deliver fuel to the cylinders required in an accident, and because this condition may have existed (in some state where the bolts could loosen) for some time, the issue required a detailed assessment to evaluate the condition. The inspectors reviewed the licensee's past operability assessment. The assessment concluded the EDG could reasonably perform its safety function for its required mission with some operator intervention around 24 hrs into the event. The inspectors concluded the evaluation was reasonable. Therefore, the inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function and the item screened out in phase I of IMC 0609. The finding includes a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to communicate operating experience (OE) to the internal stakeholders in a timely manner for relevant issues (P.2(a)).

Inspection Report# : [2008003](#) (*pdf*)

G

Significance: Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Fire Door Was Closed

The inspectors identified a Green Non-Cited Violation (NCV) of License Condition 2.C.(3), Fire Protection, for failure to ensure a fire door between an emergency diesel generator room and a vital switchgear room was closed. This partially open door degraded the fire containment capability assumed in the fire hazards analysis. The fire door was closed and this issue was entered into the licensee's corrective action program as CR-PLP-2008-00075.

The finding is more than minor because it is associated with the protection against external factors (fires) attribute of the mitigating system cornerstone and affected the objective to maintain the reliability and capability of systems that respond to events to prevent undesirable consequences. In accordance with Inspection Manual Chapter 0609, Appendix F, Fire Protection SDP, the inspectors conducted a Phase I SDP screening. The inspectors determined the finding is of very low safety significance (Green), because the fire areas had fully functional, automatic water-based fire suppression which provided adequate coverage in both rooms and no transient combustible loads were present in either room. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case adequate self checking, were not effective in ensuring this door was closed after use.

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor the Feedwater System Under 10 CFR 50.65a(1)

The inspectors identified a Green NCV of Title 10, Code of Federal Regulations (CFR) 50.65 for the failure to include a 'B' feed regulating valve deficiency to close during startup operations as a functional failure in the maintenance rule program. The inspectors noted that the failure should have placed the feedwater system into maintenance rule 10 CFR 50.65a(1) status in the fourth quarter of 2007. This caused a lapse in the determination of appropriate system monitoring and goal setting to maintain system reliability. This issue was entered into the licensee's corrective action program as CR-PLP-2008-00562 and the licensee placed the system in a(1) status.

The finding is more than minor because, in accordance with Inspection Manual Chapter 0612, Appendix E, Examples of Minor Issues (example 7b) and Enforcement Manual Section 8.1.11, Maintenance Rule a(1) and a(2) violations are not minor because they involve structures, systems, and components (SSCs) that have demonstrated some degraded performance or condition. The finding is of very low safety significance because there was no design deficiency, the finding did not represent an actual loss of a safety function, nor does this involve a risk significant system for mitigating fire, flood, seismic, or severe weather events. This finding also has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program (P.1(c)) because the licensee failed to thoroughly evaluate the cause and extent of condition of the failed feed regulating valve.

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate General Operating Procedure for Mode Transition

The inspectors identified a NCV of Technical Specification (TS) 5.4.1 for the failure to have adequate procedure guidance for the general operating procedures for mode transition to power operations. Specifically the general plant operating procedure for mode transition did not have adequate guidance to ensure the actions required by TS 3.0.4 were completed for failure of a radiation monitor required by TS prior to mode transition. Prior to the mode transition, the licensee completed the required action based on the inspectors' concerns and wrote a CR. The inspectors determined the failure to have adequate procedures for mode transition in accordance with TS is more than minor because, if left uncorrected, this and other mode transitions could have occurred with less than the required equipment operable or appropriate actions completed, which could become a more significant safety concern. The inspectors determined the finding is of very low safety significance (Green), because the actual mode transition occurred only after completion of the required actions based on the response to the inspectors' concerns. The finding includes a cross-cutting aspect in the area of human performance in that licensee did not adequately use conservative assumptions in decision-making to demonstrate the proposed action was safe (H.1(b)).

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.8.4 B and C

A self revealing NCV of TS 3.8.4 B and C was identified for failing to recognize that battery cell parameters were not within TS limits and for failing to take actions in accordance with TS for an inoperable battery. Specifically, cell 43 of the right train safety-related battery (ED02) was below technical specifications for individual cell voltage without recognition by the site staff. As a result, compensatory actions and a plant shutdown required by TSs were not completed as required. As an immediate action, the licensee completed the required actions required by TS including restoration of the battery to an operable status.

The inspectors determined the failure to take required actions in accordance with TSs is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. The inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function for the right train battery. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case an adequate pre-job brief, were not effective in ensuring prompt notification of the shift manager.

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.5.2 B and C

A self revealing NCV of TS 3.5.2 B and C was identified for the inability of an automatic valve in the Emergency Core Cooling System (ECCS), CV-3047, to reposition fully closed on an actuation signal. As a result, one train of ECCS was inoperable for longer than allowed by technical specifications. When the licensee identified that the valve would not fully close, the licensee took the actions required by TS and repaired the valve.

The inspectors determined the failure to take required actions in accordance with TSs is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of systems which respond to initiating events. During the injection phase of an accident, more flow would bypass the core with the valve approximately 18 percent open, than if the valve had been fully closed. The inspectors determined the finding is of very low safety significance (Green) because the finding is not associated with a loss of safety function for the ECCS system. The finding includes a cross-cutting aspect in the area of human performance in that the licensee did not adequately coordinate work activities to address the impact of actions needed to ensure the valve was closed when the valve was declared inoperable (H.3(b)).

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Post Maintenance Testing for High Pressure Safety Injection Pumps

The inspectors identified a Green Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawing" for failure by the licensee to follow procedural requirements for testing safety-related pumps after bearing replacement. Specifically, the licensee's post-maintenance testing plan and work order for both High Pressure Safety Injection (HPSI) pumps was not in accordance with the site's post-maintenance test (PMT) procedure, and did not have adequate re-tests for bearing replacement. Following identification, the licensee entered the item into their corrective action program and revised the post-maintenance testing for the pumps.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern in the area of PMTs. The inspectors determined this finding did not result in a loss of function, because the HPSI pump bearings were adequately tested after the inspectors brought the issue to the licensee. Therefore, the finding was considered to be of very low safety significance

Inspection Report# : [2007007](#) (*pdf*)

G

Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Containment sump Debris Found during NRC Closeout

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings" failure by the licensee to follow procedural requirements for closing out the containment sump. Specifically, the licensee failed to comply with the containment sump closeout procedure. After closeout by the site, the inspectors found metal debris of greater than 1/8" in the sump area. Following identification, the licensee entered the item into their corrective action program and removed all debris prior to mode 4 operations.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern in the area of containment sump performance. The inspectors determined this finding did not result in a loss of function, because the sump was properly cleaned after the inspectors brought the issue to the licensee. Therefore, the finding was considered to be of very low safety significance (Green). The finding has a cross-cutting aspect in the area of human performance in that the licensee failed to effectively communicate expectations regarding procedural compliance and personnel following procedures. (H.4(b))

Inspection Report# : [2007007](#) (*pdf*)

Significance: SL-IV Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for a Revised Dose Calculation

The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments" for the licensee's failure to perform a written evaluation prior to implementing a calculation change based on raising the acceptance criteria for back leakage from valves which leak containment activity. Specifically, the change of back leakage affected the post accident dose impact to control room operators and this was not evaluated in accordance with 10 CFR 50.59. The licensee entered the item into their corrective action program. After removing margin from other components, the licensee determined the change to acceptance criteria could be implemented without prior NRC approval.

The inspectors concluded this finding was more than minor since it impacted the NRC's ability to perform its regulatory function and if left uncorrected would have raised the dose to control room operators above the level requiring NRC approval. The inspectors concluded the original calculation would have required prior NRC approval. The issue screened as SL IV since the inspectors brought the issue to the attention of the licensee before plant start-up, so there was no actual impact with the plant at power. In addition, the issue was not repetitive or willful. Therefore, it was of very low safety significance.

Inspection Report# : [2007007](#) (*pdf*)

G

Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inoperable Safety Systems Due to Improper Door Positioning

NRC identified violations of Technical Specification 5.4.1 occurred on October 1, 2007; October 28, 2007 and November 19, 2007 due to licensee personnel failing to maintain doors in the proper configuration to support operability of TS required systems. The failure to maintain doors in the proper configuration resulted in unplanned entries into Limiting Conditions for Operation. After identification of the discrepant door status, the licensee restored each of the doors to the proper configuration to support operability.

The finding was more than minor because it impacted the mitigating event cornerstone objective of configuration control. The issue was not of more than very low safety significance due to the short duration the doors were improperly positioned. The finding had a cross cutting aspect in human performance error prevention techniques (H.4.(a))

Inspection Report# : [2007007](#) (*pdf*)

G

Significance: Dec 12, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to establish correct Tech Spec Limits

Green. The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" requirements. Specifically, the licensee failed to incorporate a number of uncertainties when calculating the technical specification (TS) limits for the emergency diesel generator (EDG) fuel oil volume. This resulted in a non-conservative TS value. Once identified by the inspectors, the licensee issued a standing order in the "SRO Shift Turnover Items Shift Checklist" to ensure that adequate margin existed for the EDG seven-

Barrier Integrity

Significance:  Sep 25, 2008
Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Develop and Maintain Containment Personnel and Emergency Escape Hatch Procedures

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1.a, for the failure to ensure the personnel and emergency escape hatch instructions were adequately maintained and properly implemented for use during a time when the containment was occupied. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on the hatch operations; printed operating instructions for the personnel and emergency escape hatches including proper closing techniques, a picture of where to hit the lever on the emergency escape hatch; and a hammer to take into containment.

The finding was determined to be more than minor, because the issue contributed to the failure of personnel to properly close the outer personnel hatch as well as the inability to close the outer escape hatch while it was required to be closed for containment integrity. This finding was similar to IMC 0612, Appendix E, Section 4, example d, in that the performance deficiency was shown to significantly impact the operator's ability to do the task. The finding affects the Reactor Safety Cornerstone objective of containment integrity, and the Barrier Integrity attribute of Procedure Quality. This finding was of very low safety significance because the inner personnel hatch and the inner emergency escape hatch were closed and maintained the containment boundary. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Resources (H.2(c)), because the licensee failed to update written instructions for manipulating plant equipment.

Inspection Report# : [2008010](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2008
Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Procedures for the Maintenance of PAPR Batteries

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 20.1703(c) for the failure to implement written procedures to ensure batteries for powered air purifying respirators (PAPRs) are adequately charged before use. As of January 16, 2008, the licensee failed to maintain procedures that provided adequate instructions concerning the charging of PAPR batteries, which resulted in two failures of a PAPR unit to properly function and in the intake of radioactive material on September 9, 2007. As corrective actions, the licensee revised procedures and replaced the battery chargers with a model that indicates battery charge condition. The licensee entered the issue into the corrective action program as CR PLP-2007-04149 and CR-PLP-2008-00229.

The finding is more than minor because it impacted the equipment and instrumentation attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not providing adequate procedures for control of PAPR battery charging resulted in an unplanned exposure to radioactive material. The finding was determined to be of very low safety significance because it was not an As Low As Reasonably Achievable (ALARA) planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The inspectors did not identify a cross-cutting aspect associated with this finding.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008
Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Use, to the Extent Practical, Process or Other Engineering Controls to Control the Concentration of Radioactive Material

in Air

A self-revealed finding of very low safety significance and associated NCV of 10 CFR 20.1701 was identified for the failure to use, to the extent practical, process or other engineering controls to control the concentration of radioactive material in air. On September 12, 2007, the licensee failed to implement effective engineering controls in the reactor containment to reduce the levels of radioactive iodine gases. The failure resulted in elevated levels of airborne radioactivity and the intakes of radioactive material by the licensee’s staff. As corrective actions, the licensee conducted a root cause evaluation and has entered the problem in the corrective action program as CR PLP-2007-04002. The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not implementing adequate engineering controls resulted in unplanned exposures to radioactive material. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee’s ability to assess dose was not compromised. The engineering controls comprised of a charcoal filtration ventilation system that were planned to be used to control the concentration of radioactive material in air were either depleted soon after placed in service or installed backwards. Consequently, the cause of this deficiency had a cross-cutting aspect (H.3(a)) in the area of Human Performance related to work control. Specifically, the licensee failed to plan and coordinate work activities with planned contingencies and compensatory actions.

Inspection Report# : [2008002](#) (pdf)

Public Radiation Safety

Significance:  Sep 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to incorporate results from the annual land use census

The inspector identified a finding of very low safety significance (Green) and an NCV of Technical Specification 5.5.1 and ODCM Appendix A, Section J.3.c associated with the failure to incorporate the annual land use census in the Radioactive Environmental Monitoring Program. Inspection Report# : [2008004](#) (pdf)

Significance:  Mar 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Control the Release of Radioactive Material

A self-revealed finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform an adequate radiological survey to assure compliance with 10 CFR 20.1802, which requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled area or unrestricted areas and that is not in storage. On January 17, 2008, the NRC notified the licensee that radioactive material was identified by another NRC licensed facility when workers arrived following Palisades refueling outage 1R19. That licensee identified six pairs of footwear and other personal items with radioactive contamination levels between 6,000 and 20,000 disintegrations per minute, which had been improperly released from the Palisades site. As immediate corrective actions, the affected materials were confiscated by the other site. Additionally, the licensee identified two earlier occurrences of inappropriate surveys that were performed early in the refueling outage that resulted in the inadvertent release of radioactive material. As corrective actions, the licensee planned to implement new procedure documents, and the issue was entered into the licensee’s corrective action program as Condition Reports CR-PLP-2007-04338 and CR-PLP-2008-01180.

The finding is more than minor because it impacted the program and process attribute of the Public Radiation Safety Cornerstone and it adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive material released into the public domain, in that inadequate surveys resulted in the failure to control radioactive material. The finding was determined to be of very low safety significance because it was a radioactive material control finding, it was not a transportation finding, and it did not result in public dose greater than 0.005 rem. The finding was caused by the decision to allow manual release surveys of a large number of workers that alarmed the personal contamination monitor, which overwhelmed the ability of the radiation protection staff to conduct effective monitoring of personnel. Consequently, the cause of this deficiency had a cross-cutting aspect (H.1(a)) in the area of Human Performance related to decision making. Specifically, the licensee failed to make risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained.

Inspection Report# : [2008002](#) (pdf)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : November 26, 2008

Palisades

4Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Maintain and Implement Procedure Guidance for Offset Power Source Operability

The inspectors identified an NCV of Technical Specification (TS) 5.4.1 for the failure to maintain and implement procedure guidance for offsite power source operability. Specifically, the procedure guidance for the transmission system operator (TSO) to notify the site when alarm thresholds were reached was not adequately implemented. The alarm set points and guidance in the interface documents between the site and the TSO are inaccurate and were not updated when modifications were made to a site transformer in 2006. The licensee wrote Condition Report (CR) CR-PLP-2008-2303 to address the issue.

The finding is more than minor because it is associated with the reactor safety initiating events cornerstone attribute of grid stability and affects the objective of limiting the likelihood of events that challenge critical safety functions. The inspectors determined that the finding is of very low safety significance (Green), because there were no identified instances which indicated the grid was stressed or the offsite source was inoperable. The finding includes a cross-cutting aspect in the area of human performance in that licensee failed to have accurate procedures for offsite power source operability (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Mar 31, 2008
Identified By: NRC
Item Type: FIN Finding

Main Feed Pump trip due to Inadequate Configuration

Introduction: A Green self-revealed finding occurred on January 13 when the 'B' Main Feed Pump failed. The failure occurred due to improper maintenance on the lube oil pump associated with the Main Feed Pump that resulted in a loss of lube oil flow and trip of the Main Feed Pump. The failure was not a violation of NRC requirements. The licensee manually tripped the reactor in accordance with procedures and repaired the Main Feed Pump. The licensee entered the issue into the corrective action program as Concition Report (CR)-PLP-2008-0151 and repaired the pump.

The inspectors concluded that this finding is more than minor in accorcance with Inspection Manual Chapter 0609 because the finding is associated with the increase in the likelihood of an initiating event. specifically, the improper pump assembly led to a partial loss of feed and subsequent plant trip. The inpsectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because the finding did not affect a mitigating system in addition to being a transient initiator. The finding does not represent a violation of NRC requirements' however, it does represent a failure to meet self imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performace, Resources due to an inadequate work package (H.2(c)).

Inspection Report# : [2008002](#) (*pdf*)

Mitigating Systems

G

Significance: Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of Control Room Chillers

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control", for the inadequate testing of the heat removal capacity of the CR HVAC system. Specifically, the licensee isolated refrigerant hot gas bypass flow during the test which increases the heat removal capability of the Chiller. The licensee entered the issue into their corrective action program as CR-PLP-2008-3993 and re-performed portions of the engineering basis calculation to demonstrate margin to account for the hot gas bypass flow.

The finding is more than minor because in accordance with IMC 0612, Appendix E, "Examples of Minor Issues," the inspectors determined that the finding was similar to Example j and resulted in a reasonable doubt as to the operability of the chiller. Based upon a review of the licensee's revised calculation for the CR HVAC system acceptance criteria and the technical specification requirements, the finding screens as very low safety significance (green) using the Phase 1 significance determination process worksheets. The inspectors determined that the finding included a cross cutting aspect in the area of human performance, resources, complete and accurate procedures (H2c) because the surveillance procedure unacceptably preconditioned the chiller.

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

G

Significance: Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Emergency Diesel Generator Inoperable in Excess of Technical Specification Requirements

A self-revealed finding of very low safety significance (Green) and an associated NCV of technical specification requirement 3.8.1.b was discovered when metal fragments were found in the valve assembly area of the 1-2 Emergency Diesel Generator (EDG) cylinder 2L. The source of the fragments was a failed spring lock for one of the exhaust valves. Subsequently, the licensee inspected the remaining spring locks on the 1-2 EDG and did an extent of condition analysis for the 1-1 EDG. Inspections of the 1-1 EDG spring locks are planned.

The finding is more than minor because it affected the mitigating system cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. A failure analysis performed by the vendor in conjunction with an apparent cause analysis by the licensee led to an evaluation that the diesel could perform its safety function for at least the 24 hour Probabilistic Risk Assessment (PRA) mission time. Therefore, the finding screens as Green using the significance determination process phase 1 worksheets.

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

G

Significance: Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis of Emergency Diesel Generator 1-2 Loading During Design Basis Events.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to assure the loading on emergency diesel generator 1 2 was maintained within the 2-hour rating. Specifically, the licensee failed to evaluate the worst case design loading and procedurally allowed manual loading conditions when determining the emergency diesel generator load required for design basis loss-of-coolant-accident and loss-of-offsite-power conditions. The licensee entered the issue into their corrective action program and performed an operability review to verify that the diesel generator would be capable of supplying the calculated load.

The finding was more than minor because it was similar to IMC 0612, Appendix E, Example 3.j, in that there was a

reasonable doubt on the operability of emergency diesel generator 1–2, since emergency diesel generator loading conditions above the 2-hour rating were neither adequately calculated nor periodically tested. The inspectors determined the finding was of very low safety significance because it was a design deficiency that did not result in actual loss of safety function. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

G

Significance: Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Correct Technical Specification Limits.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to correctly translate the applicable design basis into the Technical Specifications limit for the emergency diesel generator, day tank fuel oil volume. Specifically, the licensee failed to incorporate the appropriate emergency diesel generator load profile when calculating the emergency diesel generator fuel oil consumption. The Technical Specifications requirement for the day tank fuel oil volume assured an allowed outage time for the limiting fuel oil transfer pump. This finding resulted in a non-conservative Technical Specifications value. As a result, the licensee implemented compensatory actions to administratively limit the allowed outage time for the limiting fuel oil transfer pump that corresponded to the available day tank fuel.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the emergency diesel generator to respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

G

Significance: Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of the 3-hour Fire Barrier

The inspectors identified a Green NCV of License condition 2.C.(3), Fire Protection, for failure to maintain a three hour barrier between two safety related rooms. Specifically, the inspectors noted a through-wall crack in the three hour fire wall between the 1-1 and 1-2 diesel rooms. The licensee entered the issue in the corrective action program as CR-PLP-2008-02696 and repaired the crack.

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

G

Significance: Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Auxilliary Feed Water Low Suction Pressure Trip Setpoints

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the tank damage from tornado born missiles. Specifically, the licensee used low CST level trips to protect the Auxiliary Feedwater (AFW) pumps but the trips did not protect the pump during certain severe weather conditions (tornado). This issue was entered into the licensee's corrective action program as CR-PLP-2006-00659 and CR-PLP-2006-00961; and the licensee has implemented compensatory actions to ensure the AFW function is available during severe weather.

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

G

Significance: Sep 25, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish and Implement Procedures Controlling Access to Containment

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1 for failure to implement procedures required to control access into containment. The corrective actions planned by the licensee include developing and implementing a comprehensive containment access control procedure. The issue was entered in the licensee's corrective action program as Condition Report (CR) CR-PLP-2008 3334.

The finding was considered more than minor, because given the need to access containment for licensing basis events, if left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating events. This finding involved many recent opportunities to identify that a containment access procedure was not established, implemented, or maintained. Consequently, this finding has a cross-cutting aspect in the area of Problem Identification and Resolution (P.1(a)) because the licensee failed to identify issues completely, accurately, and in a timely manner commensurate with their safety significance.

Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Sep 25, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Properly Maintain the Emergency Escape Hatch as an Escape Hatch

A self-revealed finding of very low significance was identified for the failure to ensure the emergency escape hatch would operate as designed when needed. The licensee failed to maintain the hatch in a condition that it could be operated as an emergency escape hatch. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on door operations, printed operating instructions, and a requirement to have a hammer for hatch operation. This is not a violation of NRC requirements.

The finding was considered more than minor, because the failure to maintain configuration control for the emergency escape hatch could have a credible impact on the licensee's ability to promptly ingress and egress the containment during emergency operations such as fire inside the containment. If left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating event.

Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Sep 25, 2008

Identified By: NRC

Item Type: FIN Finding

Organizational Evaluation of Shutdown Risk for the Forced Outage.

The inspectors identified a finding of very low safety significance for failure to implement procedure EN-OU-101, "Forced Outage Planning and Preparation." This procedure stated, in part, that forced outages should undergo a risk assessment in accordance with station risk assessment guidance. Upon questioning by the inspectors, it was identified that the station risk assessment group did not review the outage template for risk for the forced outage started on August 5, 2008. The licensee wrote CR-PLP-2008-03485 to address the issue. This is not a violation of NRC requirements, because the licensee's formal method for risk assessment is contained in another procedure. EN-OU-101 provides defense in depth. See section 4OA7 for details on the formal risk assessment.

The inspectors determined that this issue was more than minor, because if left uncorrected the item could become a more significant safety concern. In this case, the licensee failed to realize during their review required by other procedures that partial draining of the pressurizer with a primary vent path open and a short time to core boiling resulted in an Orange risk path. It is reasonable to conclude the review in EN-OU-101 would have detected the

Orange path. This finding was screened as very low safety significance (Green) since the plant was not in reduced inventory and all containment penetrations were capable of prompt closure. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Work Control (H.3(a)), since the licensee did not appropriately plan work activities by incorporating risk insights as recommended by a station procedure. Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Aug 01, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security related item - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

G

Significance: Jun 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

High Pressure Safety Injection Train Inoperable

A self-revealed finding and associated NCV of 10 CFR 50 Appendix B Criteria III was identified on March 26 when the licensee attempted to remove the breaker for the 'A' High Pressure Safety Injection (HPSI) pump from its cubicle. An inspection of the Mechanism Operated Cell (MOC) switch revealed that the brazed connection of the bayonet arm to the shaft had failed. This failure prevented automatic opening of an associated HPSI valve. An investigation showed the licensee failed to select equipment that is compatible with installed equipment during modifications to a certain style of breaker. The licensee entered it into their corrective action program as CR-PLP-2008-01392 and corrected the deficiency.

The finding is more than minor because it is associated with the mitigating system attribute of design control and affects the cornerstone objective to ensure availability of systems that respond to initiating events. The inspectors evaluated the finding in accordance with IMC 0609 and determined that although the finding represented inoperability of a TS required system in excess of the allowed outage time, the finding did not represent a loss of safety function for the train. Specifically, the operators could open the affected valve manually from the control and applicable emergency procedures provided direction to open the valve if it did not automatically open on a recirculation action signal. The inspectors consulted with a region III Senior Risk Analyst and confirmed the finding was of very low safety significance, i.e. Green. No cross-cutting aspect is associated with this finding.

Inspection Report# : [2008003](#) (*pdf*)

G

Significance: Jun 30, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Improper Maintenance of Safeguards Transformer

A self-revealed finding occurred on April 1 when a non-safety related, offsite transformer was declared inoperable due to evidence of internal arcing based on gas testing of the load tap change oil reservoir of the transformer. The failure occurred due to improper maintenance on the tap changer during the last outage. The failure was not a violation of NRC requirements. The licensee repaired the safeguards transformer and returned it to service. The licensee entered the issue into the corrective action program as CR-PLP-2008-1500.

The finding is more than minor in accordance with Inspection Manual Chapter 0609 because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure

availability, reliability and capability of systems which respond to initiating events. Specifically, the improper assembly of parts for the load tap changer led to the arcing in the tap changer oil reservoir, the removal of the transformer from service and declaration of one offsite power source being inoperable and unavailable. The inspectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because even though the tap changer had one contact on one phase that was not available, the tap changer would have been available to perform its function and tap change during licensed basis events. The finding does not represent a violation of NRC requirements; however, it does represent a failure to meet self-imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performance, Resources, due to an inadequate work package (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

1-1 Emergency Diesel Generator Fuel Header Leak

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criteria V, "Instructions, Procedures and Drawing" for failure of the licensee to have documented instructions for maintenance of the 1-1 emergency diesel generator (EDG). Specifically, the licensee's procedure for tightening the connection between the fuel oil header and the fuel pump did not require the fasteners to be torqued. Previous corrective action documents and operating experience demonstrated a torque was required. The fuel oil fasteners disconnected from the connection during a run of the EDG requiring engine shutdown. The licensee entered the item into the corrective action process as CR-PLP-2007-04078 and torqued all susceptible bolts on both EDGs.

The inspectors determined the finding is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. Because this deficiency could have an impact on the EDG ability to adequately deliver fuel to the cylinders required in an accident, and because this condition may have existed (in some state where the bolts could loosen) for some time, the issue required a detailed assessment to evaluate the condition. The inspectors reviewed the licensee's past operability assessment. The assessment concluded the EDG could reasonably perform its safety function for its required mission with some operator intervention around 24 hrs into the event. The inspectors concluded the evaluation was reasonable. Therefore, the inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function and the item screened out in phase I of IMC 0609. The finding includes a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to communicate operating experience (OE) to the internal stakeholders in a timely manner for relevant issues (P.2(a)).

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Fire Door Was Closed

The inspectors identified a Green Non-Cited Violation (NCV) of License Condition 2.C.(3), Fire Protection, for failure to ensure a fire door between an emergency diesel generator room and a vital switchgear room was closed. This partially open door degraded the fire containment capability assumed in the fire hazards analysis. The fire door was closed and this issue was entered into the licensee's corrective action program as CR-PLP-2008-00075.

The finding is more than minor because it is associated with the protection against external factors (fires) attribute of the mitigating system cornerstone and affected the objective to maintain the reliability and capability of systems that respond to events to prevent undesirable consequences. In accordance with Inspection Manual Chapter 0609, Appendix F, Fire Protection SDP, the inspectors conducted a Phase I SDP screening. The inspectors determined the finding is of very low safety significance (Green), because the fire areas had fully functional, automatic water-based fire suppression which provided adequate coverage in both rooms and no transient combustible loads were present in

either room. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case adequate self checking, were not effective in ensuring this door was closed after use.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor the Feedwater System Under 10 CFR 50.65a(1)

The inspectors identified a Green NCV of Title 10, Code of Federal Regulations (CFR) 50.65 for the failure to include a 'B' feed regulating valve deficiency to close during startup operations as a functional failure in the maintenance rule program. The inspectors noted that the failure should have placed the feedwater system into maintenance rule 10 CFR 50.65a(1) status in the fourth quarter of 2007. This caused a lapse in the determination of appropriate system monitoring and goal setting to maintain system reliability. This issue was entered into the licensee's corrective action program as CR-PLP-2008-00562 and the licensee placed the system in a(1) status.

The finding is more than minor because, in accordance with Inspection Manual Chapter 0612, Appendix E, Examples of Minor Issues (example 7b) and Enforcement Manual Section 8.1.11, Maintenance Rule a(1) and a(2) violations are not minor because they involve structures, systems, and components (SSCs) that have demonstrated some degraded performance or condition. The finding is of very low safety significance because there was no design deficiency, the finding did not represent an actual loss of a safety function, nor does this involve a risk significant system for mitigating fire, flood, seismic, or severe weather events. This finding also has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program (P.1(c)) because the licensee failed to thoroughly evaluate the cause and extent of condition of the failed feed regulating valve.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate General Operating Procedure for Mode Transition

The inspectors identified a NCV of Technical Specification (TS) 5.4.1 for the failure to have adequate procedure guidance for the general operating procedures for mode transition to power operations. Specifically the general plant operating procedure for mode transition did not have adequate guidance to ensure the actions required by TS 3.0.4 were completed for failure of a radiation monitor required by TS prior to mode transition. Prior to the mode transition, the licensee completed the required action based on the inspectors' concerns and wrote a CR.

The inspectors determined the failure to have adequate procedures for mode transition in accordance with TS is more than minor because, if left uncorrected, this and other mode transitions could have occurred with less than the required equipment operable or appropriate actions completed, which could become a more significant safety concern. The inspectors determined the finding is of very low safety significance (Green), because the actual mode transition occurred only after completion of the required actions based on the response to the inspectors' concerns. The finding includes a cross-cutting aspect in the area of human performance in that licensee did not adequately use conservative assumptions in decision-making to demonstrate the proposed action was safe (H.1(b)).

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.8.4 B and C

A self revealing NCV of TS 3.8.4 B and C was identified for failing to recognize that battery cell parameters were not within TS limits and for failing to take actions in accordance with TS for an inoperable battery. Specifically, cell 43 of the right train safety-related battery (ED02) was below technical specifications for individual cell voltage without

recognition by the site staff. As a result, compensatory actions and a plant shutdown required by TSs were not completed as required. As an immediate action, the licensee completed the required actions required by TS including restoration of the battery to an operable status.

The inspectors determined the failure to take required actions in accordance with TSs is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. The inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function for the right train battery. The finding includes a cross-cutting aspect in the area of human performance in that human error prevention techniques (H.4(a)), in this case an adequate pre-job brief, were not effective in ensuring prompt notification of the shift manager.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with TS 3.5.2 B and C

A self revealing NCV of TS 3.5.2 B and C was identified for the inability of an automatic valve in the Emergency Core Cooling System (ECCS), CV-3047, to reposition fully closed on an actuation signal. As a result, one train of ECCS was inoperable for longer than allowed by technical specifications. When the licensee identified that the valve would not fully close, the licensee took the actions required by TS and repaired the valve.

The inspectors determined the failure to take required actions in accordance with TSs is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of systems which respond to initiating events. During the injection phase of an accident, more flow would bypass the core with the valve approximately 18 percent open, than if the valve had been fully closed. The inspectors determined the finding is of very low safety significance (Green) because the finding is not associated with a loss of safety function for the ECCS system. The finding includes a cross-cutting aspect in the area of human performance in that the licensee did not adequately coordinate work activities to address the impact of actions needed to ensure the valve was closed when the valve was declared inoperable (H.3(b)).

Inspection Report# : [2008002](#) (*pdf*)

Barrier Integrity

Significance:  Sep 25, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Develop and Maintain Containment Personnel and Emergency Escape Hatch Procedures

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1.a, for the failure to ensure the personnel and emergency escape hatch instructions were adequately maintained and properly implemented for use during a time when the containment was occupied. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on the hatch operations; printed operating instructions for the personnel and emergency escape hatches including proper closing techniques, a picture of where to hit the lever on the emergency escape hatch; and a hammer to take into containment.

The finding was determined to be more than minor, because the issue contributed to the failure of personnel to properly close the outer personnel hatch as well as the inability to close the outer escape hatch while it was required to be closed for containment integrity. This finding was similar to IMC 0612, Appendix E, Section 4, example d, in that the performance deficiency was shown to significantly impact the operator's ability to do the task. The finding affects the Reactor Safety Cornerstone objective of containment integrity, and the Barrier Integrity attribute of Procedure Quality. This finding was of very low safety significance because the inner personnel hatch and the inner emergency escape hatch were closed and maintained the containment boundary. The inspectors determined the finding was

associated with a cross-cutting aspect in the area of Human Performance, Resources (H.2(c)), because the licensee failed to update written instructions for manipulating plant equipment.

Inspection Report# : [2008010](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Nov 19, 2008
Identified By: NRC
Item Type: VIO Violation

Failure To Assess Dose To Three Workers After A Known Change In Radiological Conditions Near The Spent Fuel Pool

The inspector identified a finding and associated Apparent Violation of 10 CFR 20.1501 for the failure to perform adequate radiological evaluations necessary to properly quantify the radiological hazards to assess the dose from the conditions that were identified through electronic dosimeter alarms (dose rate). On October 4, 2007, after the licensee was notified of unexpected radiological conditions through electronic dosimeter alarms (dose rate), the licensee failed to recognize radiological hazards in the work place associated with the handling and disassembly of fuel reconstitution equipment. Specifically, the licensee failed to recognize the presence of high beta dose rate discrete radioactive particles (DRPs), and alpha contamination and, therefore, failed to assess the radiological hazard associated with the work activity and the dose to the three workers involved. The licensee failed to account for the workers' extremity doses associated with handling the temporary storage baskets (TSBs) and the exposure to the particles. Additionally, the licensee failed to assess the total organ doses to the bone surface from potential intakes of alpha contamination. As corrective actions, the licensee revised monitoring practices for spent fuel pool work.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the failure to perform evaluations for discrete radioactive particles and alpha contamination impacted the licensee's ability to assess dose to the workers. The inspector determined that this finding was not related to as-low-as-is-reasonably-achievable (ALARA) Planning or Work Controls. The NRC could not determine that there was an overexposure. Additionally, the NRC could not determine that there was a substantial potential for overexposure. The inspector determined that the ability to assess dose was compromised. Specifically, DRPs and alpha contamination were identified following the incident; however, the licensee failed to account for the workers' extremity dose associated with handling temporary storage baskets (TSBs) and to assess the total organ dose to the bone surface from potential intakes of alpha contamination. Based on the Occupational Radiation Safety Significance Determination Process (SDP), the inspector preliminarily determined that the finding is White. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to utilize conservative assumptions in decision making and did not adopt a requirement to demonstrate that the proposed action is safe in order to proceed (H.1(b)).

Final Significance Determination letter issued 1/30/2009 as a White.
Inspection Report# : [2008011](#) (pdf)

Significance:  Nov 19, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Implement Effective Radiological Controls For Working With Equipment In Contact With Failed Fuel

An NRC-identified finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform adequate radiological evaluations necessary to properly assess the radiological hazards and prescribe appropriate radiological controls necessary to minimize dose to workers associated with failed fuel. Fuel reconstitution, a planned activity for the refueling outage, had a high potential to result in discrete radioactive particles and alpha contamination from the degraded fuel pins. The licensee failed to anticipate these radiological hazards and to implement appropriate controls to minimize exposure to radiation. As corrective actions, the license revised all radiation work permits (RWPs) associated with work in the spent fuel pool.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, the licensee did not implement radiological controls necessary to minimize dose to workers. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, the NRC could not identify an overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including environmental conditions, which may impact radiological safety (H.3(a)).

Inspection Report# : [2008011](#) (*pdf*)

Significance:  Nov 19, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Post and Control Access to High Radiation Area

A self-revealed finding of very low safety significance and associated NCV of Technical Specification 5.7.1 was identified for the failure to post and control an area with dose rates greater than 100 millirem/hour as a high radiation area. Specifically, the area of the refuel floor that contained the fuel reconstitution equipment was not posted as a high radiation area. Dose rates of approximately 450 millirem/hour were measured 30 centimeters (cm) from the equipment after three workers received electronic dosimeter alarms (dose rate). As corrective actions, the licensee corrected the radiological posting and controls for the area.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, job specific radiological surveys failed to identify elevated dose rates around the spent fuel pool during fuel reconstitution demobilization. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. This finding appeared to be caused by inadequate coordination of work activities between the radiation protection staff and the contractors. Consequently, the cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately coordinates work activities by incorporating actions to communicate, coordinate, and cooperate with each other during activities in which inter-departmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2008011](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Procedures for the Maintenance of PAPR Batteries

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 20.1703(c) for the failure to implement written procedures to ensure batteries for powered air purifying respirators (PAPRs) are adequately charged before use. As of January 16, 2008, the licensee failed to maintain procedures that provided adequate instructions concerning the charging of PAPR batteries, which resulted in two failures of a PAPR unit to properly function and in the intake of radioactive material on September 9, 2007. As corrective actions, the licensee revised procedures and replaced the battery chargers with a model that indicates battery charge condition. The licensee entered the issue into the corrective action program as CR PLP-2007-04149 and CR-PLP-2008-00229.

The finding is more than minor because it impacted the equipment and instrumentation attribute of the Occupational

Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not providing adequate procedures for control of PAPR battery charging resulted in an unplanned exposure to radioactive material. The finding was determined to be of very low safety significance because it was not an As Low As Reasonably Achievable (ALARA) planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The inspectors did not identify a cross-cutting aspect associated with this finding.

Inspection Report# : [2008002](#) (pdf)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Use, to the Extent Practical, Process or Other Engineering Controls to Control the Concentration of Radioactive Material in Air

A self-revealed finding of very low safety significance and associated NCV of 10 CFR 20.1701 was identified for the failure to use, to the extent practical, process or other engineering controls to control the concentration of radioactive material in air. On September 12, 2007, the licensee failed to implement effective engineering controls in the reactor containment to reduce the levels of radioactive iodine gases. The failure resulted in elevated levels of airborne radioactivity and the intakes of radioactive material by the licensee's staff. As corrective actions, the licensee conducted a root cause evaluation and has entered the problem in the corrective action program as CR PLP-2007-04002.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that not implementing adequate engineering controls resulted in unplanned exposures to radioactive material. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The engineering controls comprised of a charcoal filtration ventilation system that were planned to be used to control the concentration of radioactive material in air were either depleted soon after placed in service or installed backwards. Consequently, the cause of this deficiency had a cross-cutting aspect (H.3(a)) in the area of Human Performance related to work control. Specifically, the licensee failed to plan and coordinate work activities with planned contingencies and compensatory actions.

Inspection Report# : [2008002](#) (pdf)

Public Radiation Safety

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to incorporate results from the annual land use census

The inspector identified a finding of very low safety significance (Green) and an NCV of Technical Specification 5.5.1 and ODCM Appendix A, Section J.3.c associated with the failure to incorporate the annual land use census in the Radioactive Environmental Monitoring Program.

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

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Control the Release of Radioactive Material

A self-revealed finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform an adequate radiological survey to assure compliance with 10 CFR 20.1802, which requires that the

licensee control and maintain constant surveillance of licensed material that is in a controlled area or unrestricted areas and that is not in storage. On January 17, 2008, the NRC notified the licensee that radioactive material was identified by another NRC licensed facility when workers arrived following Palisades refueling outage 1R19. That licensee identified six pairs of footwear and other personal items with radioactive contamination levels between 6,000 and 20,000 disintegrations per minute, which had been improperly released from the Palisades site. As immediate corrective actions, the affected materials were confiscated by the other site. Additionally, the licensee identified two earlier occurrences of inappropriate surveys that were performed early in the refueling outage that resulted in the inadvertent release of radioactive material. As corrective actions, the licensee planned to implement new procedure documents, and the issue was entered into the licensee's corrective action program as Condition Reports CR-PLP-2007-04338 and CR-PLP-2008-01180.

The finding is more than minor because it impacted the program and process attribute of the Public Radiation Safety Cornerstone and it adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive material released into the public domain, in that inadequate surveys resulted in the failure to control radioactive material. The finding was determined to be of very low safety significance because it was a radioactive material control finding, it was not a transportation finding, and it did not result in public dose greater than 0.005 rem. The finding was caused by the decision to allow manual release surveys of a large number of workers that alarmed the personal contamination monitor, which overwhelmed the ability of the radiation protection staff to conduct effective monitoring of personnel. Consequently, the cause of this deficiency had a cross-cutting aspect (H.1(a)) in the area of Human Performance related to decision making. Specifically, the licensee failed to make risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained.

Inspection Report# : [2008002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Apr 18, 2008

Identified By: NRC

Item Type: FIN Finding

PI&R Inspection Summary

The inspection team concluded that, based on the samples reviewed, the corrective action (CA) program was capable of effectively identifying, evaluating, and resolving issues. Minor examples of inadequate implementation of the processes were observed and the inspection record indicated that several issues were self-revealed or identified by external organizations. The transition from Nuclear Management Company (NMC) to Entergy had presented challenges, however no significant problems occurred and new management has taken actions to improve CA program performance. Licensee performance with operating experience, self assessments, audits and maintaining a safety conscious work environment was effective.

Inspection Report# : [2008006](#) (*pdf*)

Last modified : April 07, 2009

Palisades

1Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Technical Specification

On February 20, 2009 the inspectors identified a Green NCV of TS 5.4, "Procedures". Specifically, the licensee failed to revise procedures needed to implement Technical Specification (TS) amendment 236; although, the licensee notified the NRC via letter on February 11 that the amendment had been implemented.

In response to NRC concerns related to swelling of Spent Fuel Pool (SFP) storage racks, the licensee performed testing of the neutron absorption capability of the spent fuel pool storage racks. Based on this testing, the licensee determined that the neutron absorption capability no longer met assumptions in their criticality analysis. Therefore, the licensee determined that design features TS 4.3 no longer provided adequate assurance that the spent fuel pool would remain subcritical for all required conditions. On August 27, 2008, the licensee sent a letter to the NRC identifying interim actions to ensure the SFP remained critically safe. On September 20, the NRC approved a Confirmatory Action letter (CAL) in response to that letter to confirm licensee actions. As part of the actions to restore compliance, the licensee developed TS amendment 236 to codify necessary controls to ensure the safety of the SFP. By letter dated February 11, the licensee informed the NRC that Amendment 236 had been implemented. The NRC inspected the actions taken by the licensee to implement the amendment and concluded that the licensee had failed to take actions required by licensee procedures to implement the amendment.

Since the CAL prohibited addition of new fuel to the SFP, the licensee needed the NRC to lift that CAL to support outage activities. In addition, loading of new fuel into the SFP required extensive use of two procedures directly affected by the amendment. Procedure EM 04 29 provides instruction on development of fuel loading sheets used to establish a safe and compliant SFP load pattern. The amendment added a new TS surveillance requirement, SR 3.7.16.1, which required verifying, by administrative means, that each fuel assembly meets the requirements given in TS 3.7.16. The licensee failed to revise this procedure to include the requirements of the amendment. Procedure SOP 28 provides instructions on moving fuel in the SFP and procedure ADM 10.51, "Writer's Guideline for Site Procedures," governs the format and content of the procedure. Required content includes identification of affected TS precautions and limitations that could result in non compliance with TS. The licensee failed to revise procedure SOP 28 to reflect those requirements.

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain and Implement Procedure Guidance for Offset Power Source Operability

The inspectors identified an NCV of Technical Specification (TS) 5.4.1 for the failure to maintain and implement procedure guidance for offsite power source operability. Specifically, the procedure guidance for the transmission system operator (TSO) to notify the site when alarm thresholds were reached was not adequately implemented. The alarm set points and guidance in the interface documents between the site and the TSO are inaccurate and were not updated when modifications were made to a site transformer in 2006. The licensee wrote Condition Report (CR) CR-PLP-2008-2303 to address the issue.

The finding is more than minor because it is associated with the reactor safety initiating events cornerstone attribute of grid stability and affects the objective of limiting the likelihood of events that challenge critical safety functions. The

inspectors determined that the finding is of very low safety significance (Green), because there were no identified instances which indicated the grid was stressed or the offsite source was inoperable. The finding includes a cross-cutting aspect in the area of human performance in that licensee failed to have accurate procedures for offsite power source operability (H.2(c)).

Inspection Report# : [2008003](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inoperability of HPSI Valve Due to Foreign Material

On February 7, 2009, while attempting to fill the T 82C safety injection tank during routine operations, control room operators attempted to throttle open MO 3064, one of two HPSI isolation valves to primary coolant loop 2A. The valve did not reposition. The licensee declared the right train of HPSI inoperable and began troubleshooting to determine the cause of the failure. The valve had successfully operated earlier in the evolution. Later in the day, during troubleshooting of the valve motor's circuit breaker, electricians discovered a small strand from a Scotch Brite cleaning pad in one of the auxiliary contacts. The contacts are normally closed and act as a permissive for the valve motor to open the valve if the valve has a demand to open. The licensee determined that the foreign material became stuck between two contacts, thus preventing the contact from closing and the valve from operating. This condition also would have prevented the valve from opening as designed during a safety injection actuation signal. The licensee last performed maintenance in December 2008. During the maintenance, electricians cleaned and lightly buffed the contacts using a Scotch-Brite pad. The breaker passed post-maintenance testing. After evaluating the failure, the licensee concluded that the Scotch-Brite strand was introduced to the circuit breaker through the cleaning process. The licensee subsequently removed the strand and retested the valve satisfactorily.

A review of the work instruction and maintenance procedure for FME controls revealed only a general reference to take precautions when moving or storing breakers and parts. The fleet FME procedure, EN MA 118, did have several applicable examples of when certain FME controls should be employed and examples of how to incorporate them into maintenance procedures and work instructions. A licensee search for relevant operating experience yielded some examples applicable to this issue as well.

Inspection Report# : [2009002](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of Fire Doors

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Condition 2.C.(3), "Fire Protection," during performance of a surveillance procedure inspection in accordance with IP 71111.22. Specifically, the inspectors noted numerous fire doors that did not conform to the requirements of NFPA 80.

As part of the licensee's fire protection strategy, the licensee credits numerous fire doors to limit the spread of fire between adjacent fire zones. NFPA 80, which the licensee's fire hazards analysis invokes for acceptability of fire doors, provides criteria for the acceptability of fire doors. Generic Letter 86 10 permits evaluation of deviations from NFPA requirements by a fire protection engineer to determine if the condition provides adequate protection based on the hazards present. The licensee's analysis failed to demonstrate the barriers would be effective based on the hazards present and, in some cases, provided generic deviations from NFPA 80 requirements. After discussions with the inspectors, the licensee impaired numerous fire doors and re-evaluated the condition of the discrepant doors. The inspectors reviewed the licensee's evaluation and concluded that none of the degradation was of more than very low safety significance.

Inspection Report# : [2009002](#) (pdf)

G

Significance: Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of Control Room Chillers

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control", for the inadequate testing of the heat removal capacity of the CR HVAC system. Specifically, the licensee isolated refrigerant hot gas bypass flow during the test which increases the heat removal capability of the Chiller. The licensee entered the issue into their corrective action program as CR-PLP-2008-3993 and re-performed portions of the engineering basis calculation to demonstrate margin to account for the hot gas bypass flow.

The finding is more than minor because in accordance with IMC 0612, Appendix E, "Examples of Minor Issues," the inspectors determined that the finding was similar to Example j and resulted in a reasonable doubt as to the operability of the chiller. Based upon a review of the licensee's revised calculation for the CR HVAC system acceptance criteria and the technical specification requirements, the finding screens as very low safety significance (green) using the Phase 1 significance determination process worksheets. The inspectors determined that the finding included a cross cutting aspect in the area of human performance, resources, complete and accurate procedures (H2c) because the surveillance procedure unacceptably preconditioned the chiller.

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

G

Significance: Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Emergency Diesel Generator Inoperable in Excess of Technical Specification Requirements

A self-revealed finding of very low safety significance (Green) and an associated NCV of technical specification requirement 3.8.1.b was discovered when metal fragments were found in the valve assembly area of the 1-2 Emergency Diesel Generator (EDG) cylinder 2L. The source of the fragments was a failed spring lock for one of the exhaust valves. Subsequently, the licensee inspected the remaining spring locks on the 1-2 EDG and did an extent of condition analysis for the 1-1 EDG. Inspections of the 1-1 EDG spring locks are planned.

The finding is more than minor because it affected the mitigating system cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. A failure analysis performed by the vendor in conjunction with an apparent cause analysis by the licensee led to an evaluation that the diesel could perform its safety function for at least the 24 hour Probabilistic Risk Assessment (PRA) mission time. Therefore, the finding screens as Green using the significance determination process phase 1 worksheets.

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

G

Significance: Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis of Emergency Diesel Generator 1-2 Loading During Design Basis Events.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to assure the loading on emergency diesel generator 1 2 was maintained within the 2-hour rating. Specifically, the licensee failed to evaluate the worst case design loading and procedurally allowed manual loading conditions when determining the emergency diesel generator load required for design basis loss-of-coolant-accident and loss-of-offsite-power conditions. The licensee entered the issue into their corrective action program and performed an operability review to verify that the diesel generator would be capable of

supplying the calculated load.

The finding was more than minor because it was similar to IMC 0612, Appendix E, Example 3.j, in that there was a reasonable doubt on the operability of emergency diesel generator 1–2, since emergency diesel generator loading conditions above the 2-hour rating were neither adequately calculated nor periodically tested. The inspectors determined the finding was of very low safety significance because it was a design deficiency that did not result in actual loss of safety function. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

Significance:  Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Correct Technical Specification Limits.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to correctly translate the applicable design basis into the Technical Specifications limit for the emergency diesel generator, day tank fuel oil volume. Specifically, the licensee failed to incorporate the appropriate emergency diesel generator load profile when calculating the emergency diesel generator fuel oil consumption. The Technical Specifications requirement for the day tank fuel oil volume assured an allowed outage time for the limiting fuel oil transfer pump. This finding resulted in a non-conservative Technical Specifications value. As a result, the licensee implemented compensatory actions to administratively limit the allowed outage time for the limiting fuel oil transfer pump that corresponded to the available day tank fuel.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the emergency diesel generator to respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of the 3-hour Fire Barrier

The inspectors identified a Green NCV of License condition 2.C.(3), Fire Protection, for failure to maintain a three hour barrier between two safety related rooms. Specifically, the inspectors noted a through-wall crack in the three hour fire wall between the 1-1 and 1-2 diesel rooms. The licensee entered the issue in the corrective action program as CR-PLP-2008-02696 and repaired the crack.

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

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Auxilliary Feed Water Low Suction Pressure Trip Setpoints

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control, " for the tank damage from tornado born missiles. Specifically, the licensee used low CST level trips to protect the Auxiliary Feedwater (AFW) pumps but the trips did not protect the pump during certain severe weather conditions (tornado). This issue was entered into the licensee's corrective action program as CR-PLP-2006-00659 and CR-PLP-2006-00961; and the licensee has implemented compensatory actions to ensure the AFW function is available during severe weather.

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

Significance:  Sep 25, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish and Implement Procedures Controlling Access to Containment

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1 for failure to implement procedures required to control access into containment. The corrective actions planned by the licensee include developing and implementing a comprehensive containment access control procedure. The issue was entered in the licensee's corrective action program as Condition Report (CR) CR-PLP-2008 3334.

The finding was considered more than minor, because given the need to access containment for licensing basis events, if left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating events. This finding involved many recent opportunities to identify that a containment access procedure was not established, implemented, or maintained. Consequently, this finding has a cross-cutting aspect in the area of Problem Identification and Resolution (P.1(a)) because the licensee failed to identify issues completely, accurately, and in a timely manner commensurate with their safety significance.

Inspection Report# : [2008010](#) (pdf)

Significance:  Sep 25, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Properly Maintain the Emergency Escape Hatch as an Escape Hatch

A self-revealed finding of very low significance was identified for the failure to ensure the emergency escape hatch would operate as designed when needed. The licensee failed to maintain the hatch in a condition that it could be operated as an emergency escape hatch. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on door operations, printed operating instructions, and a requirement to have a hammer for hatch operation. This is not a violation of NRC requirements.

The finding was considered more than minor, because the failure to maintain configuration control for the emergency escape hatch could have a credible impact on the licensee's ability to promptly ingress and egress the containment during emergency operations such as fire inside the containment. If left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating event.

Inspection Report# : [2008010](#) (pdf)

Significance:  Sep 25, 2008

Identified By: NRC

Item Type: FIN Finding

Organizational Evaluation of Shutdown Risk for the Forced Outage.

The inspectors identified a finding of very low safety significance for failure to implement procedure EN-OU-101, "Forced Outage Planning and Preparation." This procedure stated, in part, that forced outages should undergo a risk assessment in accordance with station risk assessment guidance. Upon questioning by the inspectors, it was identified that the station risk assessment group did not review the outage template for risk for the forced outage started on August 5, 2008. The licensee wrote CR-PLP-2008-03485 to address the issue. This is not a violation of NRC requirements, because the licensee's formal method for risk assessment is contained in another procedure. EN-OU-101 provides defense in depth. See section 4OA7 for details on the formal risk assessment.

The inspectors determined that this issue was more than minor, because if left uncorrected the item could become a more significant safety concern. In this case, the licensee failed to realize during their review required by other

procedures that partial draining of the pressurizer with a primary vent path open and a short time to core boiling resulted in an Orange risk path. It is reasonable to conclude the review in EN-OU-101 would have detected the Orange path. This finding was screened as very low safety significance (Green) since the plant was not in reduced inventory and all containment penetrations were capable of prompt closure. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Work Control (H.3(a)), since the licensee did not appropriately plan work activities by incorporating risk insights as recommended by a station procedure. Inspection Report# : [2008010](#) (*pdf*)

Significance:  Aug 01, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security related item - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in respons to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this findng are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

High Pressure Safety Injection Train Inoperable

A self-revealed finding and associated NCV of 10 CFR 50 Appendix B Criteria III was identified on March 26 when the licensee attempted to remove the breaker for the 'A' High Pressure Safety Injection (HPSI) pump from its cubicle. An inspection of the Mechanism Operated Cell (MOC) switch revealed that the brazed connection of the bayonet arm to the shaft had failed. This failure prevented automatic opening of an associated HPSI valve. An investigation showed the licensee failed to select equipment that is compatible with installed equipment during modifications to a certain style of breaker. The licensee entered it into their corrective action program as CR-PLP-2008-01392 and corrected the deficiency.

The finding is more than minor because it is associated with the mitigating system attribute of design control and affects the cornerstone objective to ensure availability of systems that respond to initiating events. The inspectors evaluated the finding in accordance with IMC 0609 and determined that although the finding represented inoperability of a TS required system in excess of the allowed outage time, the finding did not represent a loss of safety function for the train. Specifically, the operators could open the affected valve manually from the control and applicable emergency procedures provided direction to open the valve if it did not automatically open on a recirculation action signal. The inspectors consulted with a region III Senior Risk Analyst and confirmed the finding was of very low safety significance, i.e. Green. No cross-cutting aspect is associated with this finding.

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Jun 30, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Improper Maintenance of Safeguards Transformer

A self-revealed finding occurred on April 1 when a non-safety related, offsite transformer was declared inoperable due to evidence of internal arcing based on gas testing of the load tap change oil reservoir of the transformer. The failure occurred due to improper maintenance on the tap changer during the last outage. The failure was not a violation of NRC requirements. The licensee repaired the safeguards transformer and returned it to service. The licensee entered the issue into the corrective action program as CR-PLP-2008-1500.

The finding is more than minor in accordance with Inspection Manual Chapter 0609 because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of systems which respond to initiating events. Specifically, the improper assembly of parts for the load tap changer led to the arcing in the tap changer oil reservoir, the removal of the transformer from service and declaration of one offsite power source being inoperable and unavailable. The inspectors determined the finding is of very low safety significance, Green, in accordance with the phase one screening checklist because even though the tap changer had one contact on one phase that was not available, the tap changer would have been available to perform its function and tap change during licensed basis events. The finding does not represent a violation of NRC requirements; however, it does represent a failure to meet self-imposed requirements to provide task instructions commensurate with the complexity of the work and qualifications of the workers. The finding includes a cross-cutting aspect in the area of Human Performance, Resources, due to an inadequate work package (H.2(c)).

Inspection Report# : [2008003](#) (pdf)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

1-1 Emergency Diesel Generator Fuel Header Leak

The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criteria V, “Instructions, Procedures and Drawing” for failure of the licensee to have documented instructions for maintenance of the 1-1 emergency diesel generator (EDG). Specifically, the licensee’s procedure for tightening the connection between the fuel oil header and the fuel pump did not require the fasteners to be torqued. Previous corrective action documents and operating experience demonstrated a torque was required. The fuel oil fasteners disconnected from the connection during a run of the EDG requiring engine shutdown. The licensee entered the item into the corrective action process as CR-PLP-2007-04078 and torqued all susceptible bolts on both EDGs.

The inspectors determined the finding is more than minor because the finding impacts the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the objective to ensure availability, reliability and capability of the systems which respond to initiating events. Because this deficiency could have an impact on the EDG ability to adequately deliver fuel to the cylinders required in an accident, and because this condition may have existed (in some state where the bolts could loosen) for some time, the issue required a detailed assessment to evaluate the condition. The inspectors reviewed the licensee’s past operability assessment. The assessment concluded the EDG could reasonably perform its safety function for its required mission with some operator intervention around 24 hrs into the event. The inspectors concluded the evaluation was reasonable. Therefore, the inspectors determined the finding is of very low safety significance (Green), because the finding did not cause a loss of safety function and the item screened out in phase I of IMC 0609. The finding includes a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to communicate operating experience (OE) to the internal stakeholders in a timely manner for relevant issues (P.2(a)).

Inspection Report# : [2008003](#) (pdf)

Barrier Integrity

Significance:  Sep 25, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Develop and Maintain Containment Personnel and Emergency Escape Hatch Procedures

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1.a, for the failure to ensure the personnel and emergency escape hatch instructions were adequately maintained and properly implemented for use during a time when the containment was occupied. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on the hatch operations; printed operating instructions for the personnel and emergency escape hatches including proper closing techniques, a picture of where

to hit the lever on the emergency escape hatch; and a hammer to take into containment.

The finding was determined to be more than minor, because the issue contributed to the failure of personnel to properly close the outer personnel hatch as well as the inability to close the outer escape hatch while it was required to be closed for containment integrity. This finding was similar to IMC 0612, Appendix E, Section 4, example d, in that the performance deficiency was shown to significantly impact the operator’s ability to do the task. The finding affects the Reactor Safety Cornerstone objective of containment integrity, and the Barrier Integrity attribute of Procedure Quality. This finding was of very low safety significance because the inner personnel hatch and the inner emergency escape hatch were closed and maintained the containment boundary. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Resources (H.2(c)), because the licensee failed to update written instructions for manipulating plant equipment.

Inspection Report# : [2008010](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Significance: **W** Nov 19, 2008

Identified By: NRC

Item Type: VIO Violation

Failure To Assess Dose To Three Workers After A Known Change In Radiological Conditions Near The Spent Fuel Pool

The inspector identified a finding and associated Apparent Violation of 10 CFR 20.1501 for the failure to perform adequate radiological evaluations necessary to properly quantify the radiological hazards to assess the dose from the conditions that were identified through electronic dosimeter alarms (dose rate). On October 4, 2007, after the licensee was notified of unexpected radiological conditions through electronic dosimeter alarms (dose rate), the licensee failed to recognize radiological hazards in the work place associated with the handling and disassembly of fuel reconstitution equipment. Specifically, the licensee failed to recognize the presence of high beta dose rate discrete radioactive particles (DRPs), and alpha contamination and, therefore, failed to assess the radiological hazard associated with the work activity and the dose to the three workers involved. The licensee failed to account for the workers’ extremity doses associated with handling the temporary storage baskets (TSBs) and the exposure to the particles. Additionally, the licensee failed to assess the total organ doses to the bone surface from potential intakes of alpha contamination. As corrective actions, the licensee revised monitoring practices for spent fuel pool work.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the failure to perform evaluations for discrete radioactive particles and alpha contamination impacted the licensee’s ability to assess dose to the workers. The inspector determined that this finding was not related to as-low-as-is-reasonably-achievable (ALARA) Planning or Work Controls. The NRC could not determine that there was an overexposure. Additionally, the NRC could not determine that there was a substantial potential for overexposure. The inspector determined that the ability to assess dose was compromised. Specifically, DRPs and alpha contamination were identified following the incident; however, the licensee failed to account for the workers’ extremity dose associated with handling temporary storage baskets (TSBs) and to assess the total organ dose to the bone surface from potential intakes of alpha contamination. Based on the Occupational Radiation Safety Significance Determination Process (SDP), the inspector preliminarily determined that the finding is White. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to utilize conservative assumptions in decision making and did not adopt a requirement to demonstrate that the proposed action is safe in order to proceed (H.1(b)).

G

Significance: Nov 19, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Implement Effective Radiological Controls For Working With Equipment In Contact With Failed Fuel

An NRC-identified finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform adequate radiological evaluations necessary to properly assess the radiological hazards and prescribe appropriate radiological controls necessary to minimize dose to workers associated with failed fuel. Fuel reconstitution, a planned activity for the refueling outage, had a high potential to result in discrete radioactive particles and alpha contamination from the degraded fuel pins. The licensee failed to anticipate these radiological hazards and to implement appropriate controls to minimize exposure to radiation. As corrective actions, the license revised all radiation work permits (RWPs) associated with work in the spent fuel pool.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, the licensee did not implement radiological controls necessary to minimize dose to workers. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, the NRC could not identify an overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including environmental conditions, which may impact radiological safety (H.3(a)).

Inspection Report# : [2008011](#) (pdf)

G

Significance: Nov 19, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Post and Control Access to High Radiation Area

A self-revealed finding of very low safety significance and associated NCV of Technical Specification 5.7.1 was identified for the failure to post and control an area with dose rates greater than 100 millirem/hour as a high radiation area. Specifically, the area of the refuel floor that contained the fuel reconstitution equipment was not posted as a high radiation area. Dose rates of approximately 450 millirem/hour were measured 30 centimeters (cm) from the equipment after three workers received electronic dosimeter alarms (dose rate). As corrective actions, the licensee corrected the radiological posting and controls for the area.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, job specific radiological surveys failed to identify elevated dose rates around the spent fuel pool during fuel reconstitution demobilization. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. This finding appeared to be caused by inadequate coordination of work activities between the radiation protection staff and the contractors. Consequently, the cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately coordinates work activities by incorporating actions to communicate, coordinate, and cooperate with each other during activities in which inter-departmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2008011](#) (pdf)

G

Significance: Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to incorporate results from the annual land use census

The inspector identified a finding of very low safety significance (Green) and an NCV of Technical Specification 5.5.1 and ODCM Appendix A, Section J.3.c associated with the failure to incorporate the annual land use census in the Radioactive Environmental Monitoring Program.

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

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Apr 18, 2008

Identified By: NRC

Item Type: FIN Finding

PI&R Inspection Summary

The inspection team concluded that, based on the samples reviewed, the corrective action (CA) program was capable of effectively identifying, evaluating, and resolving issues. Minor examples of inadequate implementation of the processes were observed and the inspection record indicated that several issues were self-revealed or identified by external organizations. The transition from Nuclear Management Company (NMC) to Entergy had presented challenges, however no significant problems occurred and new management has taken actions to improve CA program performance. Licensee performance with operating experience, self assessments, audits and maintaining a safety conscious work environment was effective.

Inspection Report# : [2008006](#) (*pdf*)

Last modified : May 28, 2009

Palisades

2Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to conduct an adequate risk assessment for an orange risk condition

The inspectors identified a finding of very low safety significance (Green) without an associated NCV for failure to conduct an adequate risk assessment and recognize a procedurally required orange risk condition for the vacuum fill of the primary coolant system (PCS) during outage activities. In response to this issue, the licensee changed their risk assessment before performing the vacuum fill evolution. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 02079.

The finding is more than minor in accordance with IMC 0612, Appendix E, Example 7.e, because the planned evolution would have put the plant into a higher risk category per procedure GOP- 14 Attachment 19. In addition, if left uncorrected, the issue had the potential to lead to a more significant safety concern. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. Using IMC 0609, Appendix M, this finding is of very low safety significance (Green) because the licensee performed the risk management actions for the orange risk condition prior to performing the orange risk evolution. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance, Work Control (H.3 (a)), because the licensee did not appropriately plan the work activities by properly incorporating risk insights by following the requirements of procedure GOP-14.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Manage Risk in Reduced Inventory

The inspectors identified a Green NCV of 10 CFR 50.65 (a)(4) for the licensee's failure to manage the increase in risk by minimizing the plant's exposure to elevated risk during the 1R20 refueling outage. Specifically, during the first period of reduced inventory after shutdown with a reduced time to boil, the licensee's failure to appropriately manage and execute maintenance activities led to extended time being spent in the reduced inventory condition. Later in the outage, two unplanned entries into reduced inventory were required to diagnose and correct issues stemming from the 'D' Primary coolant pump impeller replacement. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 03392.

The inspectors determined that a significant portion of the additional time spent in reduced inventory was within licensee control. The issue is greater than minor in that the licensee failed to manage activities in such a way as to minimize the time spent in reduced inventory. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. The finding is of very low safety significance (Green) using Appendix M because it did not involve a loss of control nor did it require a quantitative analysis per IMC 0609 Appendix G, Attachment 1. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance because a primary cause of the finding is associated with the human performance cross cutting component of work practices, in that the licensee failed to provide appropriate oversight for work activities consistent with nuclear safety.

Inspection Report# : [2009003](#) (*pdf*)

G**Significance:** Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Technical Specification

On February 20, 2009 the inspectors identified a Green NCV of TS 5.4, "Procedures". Specifically, the licensee failed to revise procedures needed to implement Technical Specification (TS) amendment 236; although, the licensee notified the NRC via letter on February 11 that the amendment had been implemented.

In response to NRC concerns related to swelling of Spent Fuel Pool (SFP) storage racks, the licensee performed testing of the neutron absorption capability of the spent fuel pool storage racks. Based on this testing, the licensee determined that the neutron absorption capability no longer met assumptions in their criticality analysis. Therefore, the licensee determined that design features TS 4.3 no longer provided adequate assurance that the spent fuel pool would remain subcritical for all required conditions. On August 27, 2008, the licensee sent a letter to the NRC identifying interim actions to ensure the SFP remained critically safe. On September 20, the NRC approved a Confirmatory Action letter (CAL) in response to that letter to confirm licensee actions. As part of the actions to restore compliance, the licensee developed TS amendment 236 to codify necessary controls to ensure the safety of the SFP. By letter dated February 11, the licensee informed the NRC that Amendment 236 had been implemented. The NRC inspected the actions taken by the licensee to implement the amendment and concluded that the licensee had failed to take actions required by licensee procedures to implement the amendment.

Since the CAL prohibited addition of new fuel to the SFP, the licensee needed the NRC to lift that CAL to support outage activities. In addition, loading of new fuel into the SFP required extensive use of two procedures directly affected by the amendment. Procedure EM 04 29 provides instruction on development of fuel loading sheets used to establish a safe and compliant SFP load pattern. The amendment added a new TS surveillance requirement, SR 3.7.16.1, which required verifying, by administrative means, that each fuel assembly meets the requirements given in TS 3.7.16. The licensee failed to revise this procedure to include the requirements of the amendment. Procedure SOP 28 provides instructions on moving fuel in the SFP and procedure ADM 10.51, "Writer's Guideline for Site Procedures," governs the format and content of the procedure. Required content includes identification of affected TS precautions and limitations that could result in non compliance with TS. The licensee failed to revise procedure SOP 28 to reflect those requirements.

Inspection Report# : [2009002](#) (*pdf*)

Mitigating Systems

G**Significance:** Mar 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inoperability of HPSI Valve Due to Foreign Material

On February 7, 2009, while attempting to fill the T 82C safety injection tank during routine operations, control room operators attempted to throttle open MO 3064, one of two HPSI isolation valves to primary coolant loop 2A. The valve did not reposition. The licensee declared the right train of HPSI inoperable and began troubleshooting to determine the cause of the failure. The valve had successfully operated earlier in the evolution. Later in the day, during troubleshooting of the valve motor's circuit breaker, electricians discovered a small strand from a Scotch Brite cleaning pad in one of the auxiliary contacts. The contacts are normally closed and act as a permissive for the valve motor to open the valve if the valve has a demand to open. The licensee determined that the foreign material became stuck between two contacts, thus preventing the contact from closing and the valve from operating. This condition also would have prevented the valve from opening as designed during a safety injection actuation signal. The licensee last performed maintenance in December 2008. During the maintenance, electricians cleaned and lightly buffed the contacts using a Scotch-Brite pad. The breaker passed post-maintenance testing. After evaluating the failure, the licensee concluded that the Scotch-Brite strand was introduced to the circuit breaker through the cleaning process. The licensee subsequently removed the strand and retested the valve satisfactorily.

A review of the work instruction and maintenance procedure for FME controls revealed only a general reference to take precautions when moving or storing breakers and parts. The fleet FME procedure, EN MA 118, did have several applicable examples of when certain FME controls should be employed and examples of how to incorporate them into maintenance procedures and work instructions. A licensee search for relevant operating experience yielded some examples applicable to this issue as well.

Inspection Report# : [2009002](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of Fire Doors

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Condition 2.C.(3), "Fire Protection," during performance of a surveillance procedure inspection in accordance with IP 71111.22. Specifically, the inspectors noted numerous fire doors that did not conform to the requirements of NFPA 80.

As part of the licensee's fire protection strategy, the licensee credits numerous fire doors to limit the spread of fire between adjacent fire zones. NFPA 80, which the licensee's fire hazards analysis invokes for acceptability of fire doors, provides criteria for the acceptability of fire doors. Generic Letter 86 10 permits evaluation of deviations from NFPA requirements by a fire protection engineer to determine if the condition provides adequate protection based on the hazards present. The licensee's analysis failed to demonstrate the barriers would be effective based on the hazards present and, in some cases, provided generic deviations from NFPA 80 requirements. After discussions with the inspectors, the licensee impaired numerous fire doors and re-evaluated the condition of the discrepant doors. The inspectors reviewed the licensee's evaluation and concluded that none of the degradation was of more than very low safety significance.

Inspection Report# : [2009002](#) (pdf)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of Control Room Chillers

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control", for the inadequate testing of the heat removal capacity of the CR HVAC system. Specifically, the licensee isolated refrigerant hot gas bypass flow during the test which increases the heat removal capability of the Chiller. The licensee entered the issue into their corrective action program as CR-PLP-2008-3993 and re-performed portions of the engineering basis calculation to demonstrate margin to account for the hot gas bypass flow.

The finding is more than minor because in accordance with IMC 0612, Appendix E, "Examples of Minor Issues," the inspectors determined that the finding was similar to Example j and resulted in a reasonable doubt as to the operability of the chiller. Based upon a review of the licensee's revised calculation for the CR HVAC system acceptance criteria and the technical specification requirements, the finding screens as very low safety significance (green) using the Phase 1 significance determination process worksheets. The inspectors determined that the finding included a cross cutting aspect in the area of human performance, resources, complete and accurate procedures (H2c) because the surveillance procedure unacceptably preconditioned the chiller.

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

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Emergency Diesel Generator Inoperable in Excess of Technical Specification Requirements

A self-revealed finding of very low safety significance (Green) and an associated NCV of technical specification requirement 3.8.1.b was discovered when metal fragments were found in the valve assembly area of the 1-2 Emergency Diesel Generator (EDG) cylinder 2L. The source of the fragments was a failed spring lock for one of the exhaust valves. Subsequently, the licensee inspected the remaining spring locks on the 1-2 EDG and did an extent of condition analysis for the 1-1 EDG. Inspections of the 1-1 EDG spring locks are planned.

The finding is more than minor because it affected the mitigating system cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. A failure analysis performed by the vendor in conjunction with an apparent cause analysis by the licensee led to an evaluation that the diesel could perform its safety function for at least the 24 hour Probabilistic Risk Assessment (PRA) mission time. Therefore, the finding screens as Green using the significance determination process phase 1 worksheets.

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

Significance:  Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis of Emergency Diesel Generator 1-2 Loading During Design Basis Events.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to assure the loading on emergency diesel generator 1 2 was maintained within the 2-hour rating. Specifically, the licensee failed to evaluate the worst case design loading and procedurally allowed manual loading conditions when determining the emergency diesel generator load required for design basis loss-of-coolant-accident and loss-of-offsite-power conditions. The licensee entered the issue into their corrective action program and performed an operability review to verify that the diesel generator would be capable of supplying the calculated load.

The finding was more than minor because it was similar to IMC 0612, Appendix E, Example 3.j, in that there was a reasonable doubt on the operability of emergency diesel generator 1–2, since emergency diesel generator loading conditions above the 2-hour rating were neither adequately calculated nor periodically tested. The inspectors determined the finding was of very low safety significance because it was a design deficiency that did not result in actual loss of safety function. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

Significance:  Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Correct Technical Specification Limits.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to correctly translate the applicable design basis into the Technical Specifications limit for the emergency diesel generator, day tank fuel oil volume. Specifically, the licensee failed to incorporate the appropriate emergency diesel generator load profile when calculating the emergency diesel generator fuel oil consumption. The Technical Specifications requirement for the day tank fuel oil volume assured an allowed outage time for the limiting fuel oil transfer pump. This finding resulted in a non-conservative Technical Specifications value. As a result, the licensee implemented compensatory actions to administratively limit the allowed outage time for the limiting fuel oil transfer pump that corresponded to the available day tank fuel.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the emergency diesel generator to respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding was a design or qualification deficiency

confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

G

Significance: Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of the 3-hour Fire Barrier

The inspectors identified a Green NCV of License condition 2.C.(3), Fire Protection, for failure to maintain a three hour barrier between two safety related rooms. Specifically, the inspectors noted a through-wall crack in the three hour fire wall between the 1-1 and 1-2 diesel rooms. The licensee entered the issue in the corrective action program as CR-PLP-2008-02696 and repaired the crack.

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

G

Significance: Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Auxilliary Feed Water Low Suction Pressure Trip Setpoints

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part50, Appendix B, Criterion III, "Design Control, " for the tank damage from tornado born missiles. Specifically, the licensee used low CST level trips to protect the Auxiliary Feedwater (AFW) pumps but the trips did not protect the pump during certain severe weather conditions (tornado). This issue was entered into the licensee's corrective action program as CR-PLP-2006-00659 and CR-PLP-2006-00961; and the licensee has implemented compensatory actions to ensure the AFW function is available during severe weather.

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

G

Significance: Sep 25, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish and Implement Procedures Controlling Access to Containment

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1 for failure to implement procedures required to control access into containment. The corrective actions planned by the licensee include developing and implementing a comprehensive containment access control procedure. The issue was entered in the licensee's corrective action program as Condition Report (CR) CR-PLP-2008 3334.

The finding was considered more than minor, because given the need to access containment for licensing basis events, if left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating events. This finding involved many recent opportunities to identify that a containment access procedure was not established, implemented, or maintained. Consequently, this finding has a cross-cutting aspect in the area of Problem Identification and Resolution (P.1(a)) because the licensee failed to identify issues completely, accurately, and in a timely manner commensurate with their safety significance.

Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Sep 25, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Properly Maintain the Emergency Escape Hatch as an Escape Hatch

A self-revealed finding of very low significance was identified for the failure to ensure the emergency escape hatch would operate as designed when needed. The licensee failed to maintain the hatch in a condition that it could be

operated as an emergency escape hatch. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on door operations, printed operating instructions, and a requirement to have a hammer for hatch operation. This is not a violation of NRC requirements.

The finding was considered more than minor, because the failure to maintain configuration control for the emergency escape hatch could have a credible impact on the licensee's ability to promptly ingress and egress the containment during emergency operations such as fire inside the containment. If left uncorrected, the finding could become a more significant safety concern. The inspectors determined the finding was of very low safety significance, (Green), because no event occurred where access to the containment affected the response to any initiating event.

Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Sep 25, 2008

Identified By: NRC

Item Type: FIN Finding

Organizational Evaluation of Shutdown Risk for the Forced Outage.

The inspectors identified a finding of very low safety significance for failure to implement procedure EN-OU-101, "Forced Outage Planning and Preparation." This procedure stated, in part, that forced outages should undergo a risk assessment in accordance with station risk assessment guidance. Upon questioning by the inspectors, it was identified that the station risk assessment group did not review the outage template for risk for the forced outage started on August 5, 2008. The licensee wrote CR-PLP-2008-03485 to address the issue. This is not a violation of NRC requirements, because the licensee's formal method for risk assessment is contained in another procedure. EN-OU-101 provides defense in depth. See section 4OA7 for details on the formal risk assessment.

The inspectors determined that this issue was more than minor, because if left uncorrected the item could become a more significant safety concern. In this case, the licensee failed to realize during their review required by other procedures that partial draining of the pressurizer with a primary vent path open and a short time to core boiling resulted in an Orange risk path. It is reasonable to conclude the review in EN-OU-101 would have detected the Orange path. This finding was screened as very low safety significance (Green) since the plant was not in reduced inventory and all containment penetrations were capable of prompt closure. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Work Control (H.3(a)), since the licensee did not appropriately plan work activities by incorporating risk insights as recommended by a station procedure.

Inspection Report# : [2008010](#) (*pdf*)

G

Significance: Aug 01, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security related item - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Barrier Integrity

G

Significance: Sep 25, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Develop and Maintain Containment Personnel and Emergency Escape Hatch Procedures

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1.a, for the failure to ensure the personnel and emergency escape hatch instructions were adequately maintained and properly implemented for use during a time when the containment was occupied. The licensee entered this issue into their corrective action program. Immediate corrective actions included a pre-entry brief on the hatch operations; printed operating instructions for the personnel and emergency escape hatches including proper closing techniques, a picture of where to hit the lever on the emergency escape hatch; and a hammer to take into containment.

The finding was determined to be more than minor, because the issue contributed to the failure of personnel to properly close the outer personnel hatch as well as the inability to close the outer escape hatch while it was required to be closed for containment integrity. This finding was similar to IMC 0612, Appendix E, Section 4, example d, in that the performance deficiency was shown to significantly impact the operator’s ability to do the task. The finding affects the Reactor Safety Cornerstone objective of containment integrity, and the Barrier Integrity attribute of Procedure Quality. This finding was of very low safety significance because the inner personnel hatch and the inner emergency escape hatch were closed and maintained the containment boundary. The inspectors determined the finding was associated with a cross-cutting aspect in the area of Human Performance, Resources (H.2(c)), because the licensee failed to update written instructions for manipulating plant equipment.

Inspection Report# : [2008010](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance: **W** Nov 19, 2008
Identified By: NRC
Item Type: VIO Violation

Failure To Assess Dose To Three Workers After A Known Change In Radiological Conditions Near The Spent Fuel Pool

The inspector identified a finding and associated Apparent Violation of 10 CFR 20.1501 for the failure to perform adequate radiological evaluations necessary to properly quantify the radiological hazards to assess the dose from the conditions that were identified through electronic dosimeter alarms (dose rate). On October 4, 2007, after the licensee was notified of unexpected radiological conditions through electronic dosimeter alarms (dose rate), the licensee failed to recognize radiological hazards in the work place associated with the handling and disassembly of fuel reconstitution equipment. Specifically, the licensee failed to recognize the presence of high beta dose rate discrete radioactive particles (DRPs), and alpha contamination and, therefore, failed to assess the radiological hazard associated with the work activity and the dose to the three workers involved. The licensee failed to account for the workers’ extremity doses associated with handling the temporary storage baskets (TSBs) and the exposure to the particles. Additionally, the licensee failed to assess the total organ doses to the bone surface from potential intakes of alpha contamination. As corrective actions, the licensee revised monitoring practices for spent fuel pool work.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the failure to perform evaluations for discrete radioactive particles and alpha contamination impacted the licensee’s ability to assess dose to the workers. The inspector determined that this finding was not related to as-low-as-is-reasonably-achievable (ALARA) Planning or Work Controls. The NRC could not determine that there was an overexposure. Additionally, the NRC could not determine that there was a substantial potential for overexposure. The inspector determined that the ability to assess dose was compromised. Specifically, DRPs and alpha contamination were identified following the incident; however, the licensee failed to account for the workers’ extremity dose associated with handling temporary storage baskets (TSBs) and to assess the total organ dose

to the bone surface from potential intakes of alpha contamination. Based on the Occupational Radiation Safety Significance Determination Process (SDP), the inspector preliminarily determined that the finding is White. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to utilize conservative assumptions in decision making and did not adopt a requirement to demonstrate that the proposed action is safe in order to proceed (H.1(b)).

Final Significance Determination letter issued 1/30/2009 as a White.

Inspection Report# : [2008011](#) (*pdf*)

Significance:  Nov 19, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Implement Effective Radiological Controls For Working With Equipment In Contact With Failed Fuel

An NRC-identified finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform adequate radiological evaluations necessary to properly assess the radiological hazards and prescribe appropriate radiological controls necessary to minimize dose to workers associated with failed fuel. Fuel reconstitution, a planned activity for the refueling outage, had a high potential to result in discrete radioactive particles and alpha contamination from the degraded fuel pins. The licensee failed to anticipate these radiological hazards and to implement appropriate controls to minimize exposure to radiation. As corrective actions, the license revised all radiation work permits (RWP) associated with work in the spent fuel pool.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, the licensee did not implement radiological controls necessary to minimize dose to workers. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, the NRC could not identify an overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including environmental conditions, which may impact radiological safety (H.3(a)).

Inspection Report# : [2008011](#) (*pdf*)

Significance:  Nov 19, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Post and Control Access to High Radiation Area

A self-revealed finding of very low safety significance and associated NCV of Technical Specification 5.7.1 was identified for the failure to post and control an area with dose rates greater than 100 millirem/hour as a high radiation area. Specifically, the area of the refuel floor that contained the fuel reconstitution equipment was not posted as a high radiation area. Dose rates of approximately 450 millirem/hour were measured 30 centimeters (cm) from the equipment after three workers received electronic dosimeter alarms (dose rate). As corrective actions, the licensee corrected the radiological posting and controls for the area.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, job specific radiological surveys failed to identify elevated dose rates around the spent fuel pool during fuel reconstitution demobilization. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. This finding appeared to be caused by inadequate coordination of work activities between the radiation protection staff and the contractors. Consequently, the cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately coordinate work activities by incorporating actions to communicate, coordinate, and cooperate with each other during activities in which inter-departmental coordination is necessary to assure plant and human performance (H.3(b)).

Public Radiation Safety

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to incorporate results from the annual land use census

The inspector identified a finding of very low safety significance (Green) and an NCV of Technical Specification 5.5.1 and ODCM Appendix A, Section J.3.c associated with the failure to incorporate the annual land use census in the Radioactive Environmental Monitoring Program.

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

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : August 31, 2009

Palisades

3Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: FIN Finding

Inadequate analysis of reheater drain tank T-4B Drain Line Vibration

A finding of very low safety significance without an associated violation was identified by the inspectors for the licensee's operation of the moisture separator reheater (MSR) system outside of its design such that significant vibration occurred in the drain tank T-4B drain line. The licensee entered this issue into its corrective action program as condition report CR-PLP-2008-4020, evaluated vibration of the drain line vibration, and performed repairs and modifications that eliminated the excessive vibratory motion in the drain line. No violation of NRC requirements occurred.

The finding was determined to be more than minor because the finding was associated with the Initiating Events cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Initiating Events cornerstone. Based on a "No" answer to all the questions in the Initiating Events cornerstone column of Table 4a, the finding was determined to be of very low safety significance (Green) because the finding does not affect mitigation equipment. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to ensure that issues potentially impacting nuclear safety are promptly identified, fully evaluated, and that actions are taken to address safety issues in a timely manner, commensurate with their significance.

Inspection Report# : [2009004](#) (*pdf*)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failures of the shutdown cooling flow bypass valve CV-3006

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Technical Specifications (TS) 5.4.1, Procedures, for the failure to implement procedures to properly align the positioner feedback arm for the shutdown cooling (SDC) flow control valve CV-3006. As a result, the valve failed shut twice during the most recent refueling outage. Each occurrence caused a temperature excursion in the SDC system and a reduction in SDC flow. The licensee placed a more robust retaining clip on the feedback arm and scheduled work during the next outage to realign the arm. The licensee also entered the issue into their corrective action program as CR PLP-2009-01763.

The issue was more than minor per IMC 0612 Appendix B as it affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure of CV-3006 due to the misalignment caused temperature excursions in the SDC system and reduced SDC flow below TS required values. The issue screened as Green in IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, based on the remaining mitigation factors and the determination that the issue did not represent a "loss of control." The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the failure recurred. Specifically, the licensee failed to take appropriate corrective actions to address safety issues.

Inspection Report# : [2009004](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to conduct an adequate risk assessment for an orange risk condition

The inspectors identified a finding of very low safety significance (Green) without an associated NCV for failure to conduct an adequate risk assessment and recognize a procedurally required orange risk condition for the vacuum fill of the primary coolant system (PCS) during outage activities. In response to this issue, the licensee changed their risk assessment before performing the vacuum fill evolution. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 02079.

The finding is more than minor in accordance with IMC 0612, Appendix E, Example 7.e, because the planned evolution would have put the plant into a higher risk category per procedure GOP- 14 Attachment 19. In addition, if left uncorrected, the issue had the potential to lead to a more significant safety concern. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. Using IMC 0609, Appendix M, this finding is of very low safety significance (Green) because the licensee performed the risk management actions for the orange risk condition prior to performing the orange risk evolution. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance, Work Control (H.3 (a)), because the licensee did not appropriately plan the work activities by properly incorporating risk insights by following the requirements of procedure GOP-14.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Manage Risk in Reduced Inventory

The inspectors identified a Green NCV of 10 CFR 50.65 (a)(4) for the licensee's failure to manage the increase in risk by minimizing the plant's exposure to elevated risk during the 1R20 refueling outage. Specifically, during the first period of reduced inventory after shutdown with a reduced time to boil, the licensee's failure to appropriately manage and execute maintenance activities led to extended time being spent in the reduced inventory condition. Later in the outage, two unplanned entries into reduced inventory were required to diagnose and correct issues stemming from the 'D' Primary coolant pump impeller replacement. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 03392.

The inspectors determined that a significant portion of the additional time spent in reduced inventory was within licensee control. The issue is greater than minor in that the licensee failed to manage activities in such a way as to minimize the time spent in reduced inventory. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. The finding is of very low safety significance (Green) using Appendix M because it did not involve a loss of control nor did it require a quantitative analysis per IMC 0609 Appendix G, Attachment 1. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance because a primary cause of the finding is associated with the human performance cross cutting component of work practices, in that the licensee failed to provide appropriate oversight for work activities consistent with nuclear safety.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Technical Specification

On February 20, 2009 the inspectors identified a Green NCV of TS 5.4, "Procedures". Specifically, the licensee failed to revise procedures needed to implement Technical Specification (TS) amendment 236; although, the licensee notified the NRC via letter on February 11 that the amendment had been implemented.

In response to NRC concerns related to swelling of Spent Fuel Pool (SFP) storage racks, the licensee performed

testing of the neutron absorption capability of the spent fuel pool storage racks. Based on this testing, the licensee determined that the neutron absorption capability no longer met assumptions in their criticality analysis. Therefore, the licensee determined that design features TS 4.3 no longer provided adequate assurance that the spent fuel pool would remain subcritical for all required conditions. On August 27, 2008, the licensee sent a letter to the NRC identifying interim actions to ensure the SFP remained critically safe. On September 20, the NRC approved a Confirmatory Action letter (CAL) in response to that letter to confirm licensee actions. As part of the actions to restore compliance, the licensee developed TS amendment 236 to codify necessary controls to ensure the safety of the SFP. By letter dated February 11, the licensee informed the NRC that Amendment 236 had been implemented. The NRC inspected the actions taken by the licensee to implement the amendment and concluded that the licensee had failed to take actions required by licensee procedures to implement the amendment.

Since the CAL prohibited addition of new fuel to the SFP, the licensee needed the NRC to lift that CAL to support outage activities. In addition, loading of new fuel into the SFP required extensive use of two procedures directly affected by the amendment. Procedure EM 04 29 provides instruction on development of fuel loading sheets used to establish a safe and compliant SFP load pattern. The amendment added a new TS surveillance requirement, SR 3.7.16.1, which required verifying, by administrative means, that each fuel assembly meets the requirements given in TS 3.7.16. The licensee failed to revise this procedure to include the requirements of the amendment. Procedure SOP 28 provides instructions on moving fuel in the SFP and procedure ADM 10.51, "Writer's Guideline for Site Procedures," governs the format and content of the procedure. Required content includes identification of affected TS precautions and limitations that could result in non compliance with TS. The licensee failed to revise procedure SOP 28 to reflect those requirements.

Inspection Report# : [2009002](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Gas Void in High Pressure Safety Injection Suction Line

The inspectors identified an NCV of TS 5.4.1 for failure to implement and maintain procedural guidance for filling the High Pressure Safety Injection (HPSI) lines. Specifically, the licensee used procedure ESSO-01 to fill the Emergency Core Cooling System (ECCS) piping following a system outage ending in September 2007. The procedure failed to ensure that the sub-cooling line to the HPSI suction was filled and the remaining void created reasonable doubt regarding the operability of the ECCS system. The licensee located the void on July 1, 2009, as part of actions related to Generic Letter 2008, declared the train inoperable and successfully eliminated the void on July 2, 2009. Additionally, the issue was placed in the corrective action program as CR PLP-2009-3377

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically the void impacted the reliability of a high pressure safety injection pump. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using the Phase 1 worksheets because the finding did not result in loss of operability. This finding has a cross-cutting aspect in the area of problem identification and resolution, operating experience, because the licensee failed to implement operating experience through changes to station processes.

Inspection Report# : [2009004](#) (*pdf*)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Reduction in containment spray header level during maintenance

A finding of very low safety significance (Green) and associated NCV of TS 5.4.1, Procedures, was self-revealed when operators incorrectly implemented a procedure that connected a temporary pump to a containment spray header while attempting to fill the header. Specifically, the suction and discharge connections were swapped so that when the pump was turned on, water was pumped out of the header instead of into the header, reducing level below the TS required minimum value. The licensee corrected the connections and refilled the header to an acceptable level. Additionally, the issue was placed in the corrective action program as CR-PLP-2009-04080.

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the improper connection of the pump lowered header level below the TS allowed value which resulted in an inadvertent TS action statement entry. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using the Phase 1 worksheets based on answering 'no' to all questions under the Mitigating Systems cornerstone in Table 4a. The finding had an associated cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area; namely, the licensee failed to appropriately communicate and use proper human error prevention techniques.

Inspection Report# : [2009004](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inoperability of HPSI Valve Due to Foreign Material

On February 7, 2009, while attempting to fill the T 82C safety injection tank during routine operations, control room operators attempted to throttle open MO 3064, one of two HPSI isolation valves to primary coolant loop 2A. The valve did not reposition. The licensee declared the right train of HPSI inoperable and began troubleshooting to determine the cause of the failure. The valve had successfully operated earlier in the evolution. Later in the day, during troubleshooting of the valve motor's circuit breaker, electricians discovered a small strand from a Scotch Brite cleaning pad in one of the auxiliary contacts. The contacts are normally closed and act as a permissive for the valve motor to open the valve if the valve has a demand to open. The licensee determined that the foreign material became stuck between two contacts, thus preventing the contact from closing and the valve from operating. This condition also would have prevented the valve from opening as designed during a safety injection actuation signal. The licensee last performed maintenance in December 2008. During the maintenance, electricians cleaned and lightly buffed the contacts using a Scotch-Brite pad. The breaker passed post-maintenance testing. After evaluating the failure, the licensee concluded that the Scotch-Brite strand was introduced to the circuit breaker through the cleaning process. The licensee subsequently removed the strand and retested the valve satisfactorily.

A review of the work instruction and maintenance procedure for FME controls revealed only a general reference to take precautions when moving or storing breakers and parts. The fleet FME procedure, EN MA 118, did have several applicable examples of when certain FME controls should be employed and examples of how to incorporate them into maintenance procedures and work instructions. A licensee search for relevant operating experience yielded some examples applicable to this issue as well.

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of Fire Doors

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Condition 2.C.(3), "Fire Protection," during performance of a surveillance procedure inspection in accordance with IP 71111.22. Specifically, the inspectors noted numerous fire doors that did not conform to the requirements of NFPA 80.

As part of the licensee's fire protection strategy, the licensee credits numerous fire doors to limit the spread of fire between adjacent fire zones. NFPA 80, which the licensee's fire hazards analysis invokes for acceptability of fire

doors, provides criteria for the acceptability of fire doors. Generic Letter 86 10 permits evaluation of deviations from NFPA requirements by a fire protection engineer to determine if the condition provides adequate protection based on the hazards present. The licensee's analysis failed to demonstrate the barriers would be effective based on the hazards present and, in some cases, provided generic deviations from NFPA 80 requirements. After discussions with the inspectors, the licensee impaired numerous fire doors and re-evaluated the condition of the discrepant doors. The inspectors reviewed the licensee's evaluation and concluded that none of the degradation was of more than very low safety significance.

Inspection Report# : [2009002](#) (pdf)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Testing of Control Room Chillers

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control", for the inadequate testing of the heat removal capacity of the CR HVAC system. Specifically, the licensee isolated refrigerant hot gas bypass flow during the test which increases the heat removal capability of the Chiller. The licensee entered the issue into their corrective action program as CR-PLP-2008-3993 and re-performed portions of the engineering basis calculation to demonstrate margin to account for the hot gas bypass flow.

The finding is more than minor because in accordance with IMC 0612, Appendix E, "Examples of Minor Issues," the inspectors determined that the finding was similar to Example j and resulted in a reasonable doubt as to the operability of the chiller. Based upon a review of the licensee's revised calculation for the CR HVAC system acceptance criteria and the technical specification requirements, the finding screens as very low safety significance (green) using the Phase 1 significance determination process worksheets. The inspectors determined that the finding included a cross cutting aspect in the area of human performance, resources, complete and accurate procedures (H2c) because the surveillance procedure unacceptably preconditioned the chiller.

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

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Emergency Diesel Generator Inoperable in Excess of Technical Specification Requirements

A self-revealed finding of very low safety significance (Green) and an associated NCV of technical specification requirement 3.8.1.b was discovered when metal fragments were found in the valve assembly area of the 1-2 Emergency Diesel Generator (EDG) cylinder 2L. The source of the fragments was a failed spring lock for one of the exhaust valves. Subsequently, the licensee inspected the remaining spring locks on the 1-2 EDG and did an extent of condition analysis for the 1-1 EDG. Inspections of the 1-1 EDG spring locks are planned.

The finding is more than minor because it affected the mitigating system cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. A failure analysis performed by the vendor in conjunction with an apparent cause analysis by the licensee led to an evaluation that the diesel could perform its safety function for at least the 24 hour Probabilistic Risk Assessment (PRA) mission time. Therefore, the finding screens as Green using the significance determination process phase 1 worksheets.

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

Significance:  Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis of Emergency Diesel Generator 1-2 Loading During Design Basis Events.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the failure to assure the loading on emergency diesel generator 1 2 was maintained within the 2-hour rating. Specifically, the licensee failed to evaluate the worst case design loading and procedurally allowed manual loading conditions when determining the emergency diesel generator load required for design basis loss-of-coolant-accident and loss-of-offsite-power conditions. The licensee entered the issue into their corrective action program and performed an operability review to verify that the diesel generator would be capable of supplying the calculated load.

The finding was more than minor because it was similar to IMC 0612, Appendix E, Example 3.j, in that there was a reasonable doubt on the operability of emergency diesel generator 1–2, since emergency diesel generator loading conditions above the 2-hour rating were neither adequately calculated nor periodically tested. The inspectors determined the finding was of very low safety significance because it was a design deficiency that did not result in actual loss of safety function. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

Significance:  Dec 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Correct Technical Specification Limits.

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the failure to correctly translate the applicable design basis into the Technical Specifications limit for the emergency diesel generator, day tank fuel oil volume. Specifically, the licensee failed to incorporate the appropriate emergency diesel generator load profile when calculating the emergency diesel generator fuel oil consumption. The Technical Specifications requirement for the day tank fuel oil volume assured an allowed outage time for the limiting fuel oil transfer pump. This finding resulted in a non-conservative Technical Specifications value. As a result, the licensee implemented compensatory actions to administratively limit the allowed outage time for the limiting fuel oil transfer pump that corresponded to the available day tank fuel.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the emergency diesel generator to respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross-cutting aspect associated with this finding because the performance deficiency was related to a historical design issue and not indicative of current licensee performance.

Inspection Report# : [2008009](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entering a High Radiation Area without an adequate awareness of radiological conditions

A self-revealed finding of very low safety-significance and an associated NCV of TS 5.7 were identified for workers entering a high radiation area (HRA) without an adequate awareness of radiological conditions and while working under a Radiation Work Permit (RWP) that did not allow entry into a high radiation area. The electronic dosimetry worn by the workers alarmed when they entered an area of elevated dose rates. Corrective actions taken by the licensee included denial of their access into the radiologically controlled area. The issue was entered in the licensee's corrective action program as CR-PLP-2009-01884.

The issue was more than minor because it is similar to Example 6.h in IMC 0612 Appendix E "Examples of Minor Issues" for an issue that is more than minor. The inspectors determined that the violation affected the Occupational Radiation Safety Cornerstone. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety-significance (Green). Additionally, this finding has a cross-cutting aspect in the area of human performance, work practices component, because the supervisor that performed the pre-job brief for the job failed to provide clear guidance on the requirements for entry into a high radiation area.

Inspection Report# : [2009004](#) (*pdf*)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform work-in-progress reviews

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1 for failure to implement procedures required to conduct timely reviews of job progress and implement actions necessary to reduce workers' exposure. Specifically, the inspectors identified that work in progress reviews for jobs greater than 5 rem were not completed and therefore the licensee did not implement additional actions necessary to reduce workers' exposure. The issue was entered in the licensee's corrective action program as CR-PLP-2009-004074.

The finding is more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the licensee neither fully evaluated the cause for additional exposure nor prescribed exposure mitigation actions. Therefore, additional exposure was received by the plant staff. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety significance (Green). Additionally, this finding has a crosscutting aspect in the area of human performance, work practices component, because the ALARA supervisor did not provide adequate oversight of the ALARA work activities.

Inspection Report# : [2009004](#) (*pdf*)

Significance: SL-IV Sep 04, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Violation or Title 10 CFR 50.9 Completeness and Accuracy of Information regarding in Support of 10 CFR 20.2106 "Records of Individual Monitoring Results."

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9, "Completeness and Accuracy of Information." The inspectors identified that the licensee, on April 17, 2008, submitted to the NRC inadequate NRC Form 5s, "Occupational Dose Record for a Monitoring Period" for three individuals that were involved in the demobilization of spent fuel reconstitution equipment in October 2007. The NRC Form 5s were not complete and accurate in all material respects. Specifically, the NRC Form 5s did not include pertinent information relative to the radiological implications to these individuals regarding their personal involvement in the demobilization of spent fuel reconstitution equipment under circumstances when the licensee's ability to assess the worker's dose was compromised. In particular, the NRC Form 5s failed to document the uncertainties associated with the workers' radiation doses, as was necessary in this instance consistent with the instructions on the Form 5. When the NRC questioned the licensee on the accuracy of these NRC Form 5 submittals, the licensee submitted revised NRC Form 5s.

The violation was more than minor because the missing information was material to the NRC. Specifically, this information is used by the NRC in its evaluation of the risk of radiation exposure associated with the licensed activity and in exercising its statutory authority to monitor and regulate the safety and health practices of its licensees. This Severity Level IV violation is of very low safety-significance because if the information had been complete and accurate when reviewed by the NRC, it likely would not have resulted in a reconsideration of a regulatory position or substantial further inquiry, such as an additional inspection or a formal request for information. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program [Condition Report (CR)-PLP-2009-04213], the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. No cross-cutting aspects were identified with this violation.

Inspection Report# : [2009007](#) (pdf)

Significance: **W** Nov 19, 2008

Identified By: NRC

Item Type: VIO Violation

Failure To Assess Dose To Three Workers After A Known Change In Radiological Conditions Near The Spent Fuel Pool

The inspector identified a finding and associated Apparent Violation of 10 CFR 20.1501 for the failure to perform adequate radiological evaluations necessary to properly quantify the radiological hazards to assess the dose from the conditions that were identified through electronic dosimeter alarms (dose rate). On October 4, 2007, after the licensee was notified of unexpected radiological conditions through electronic dosimeter alarms (dose rate), the licensee failed to recognize radiological hazards in the work place associated with the handling and disassembly of fuel reconstitution equipment. Specifically, the licensee failed to recognize the presence of high beta dose rate discrete radioactive particles (DRPs), and alpha contamination and, therefore, failed to assess the radiological hazard associated with the work activity and the dose to the three workers involved. The licensee failed to account for the workers' extremity doses associated with handling the temporary storage baskets (TSBs) and the exposure to the particles. Additionally, the licensee failed to assess the total organ doses to the bone surface from potential intakes of alpha contamination. As corrective actions, the licensee revised monitoring practices for spent fuel pool work.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the failure to perform evaluations for discrete radioactive particles and alpha contamination impacted the licensee's ability to assess dose to the workers. The inspector determined that this finding was not related to as-low-as-is-reasonably-achievable (ALARA) Planning or Work Controls. The NRC could not determine that there was an overexposure. Additionally, the NRC could not determine that there was a substantial potential for overexposure. The inspector determined that the ability to assess dose was compromised. Specifically, DRPs and alpha contamination were identified following the incident; however, the licensee failed to account for the workers' extremity dose associated with handling temporary storage baskets (TSBs) and to assess the total organ dose to the bone surface from potential intakes of alpha contamination. Based on the Occupational Radiation Safety Significance Determination Process (SDP), the inspector preliminarily determined that the finding is White. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to utilize conservative assumptions in decision making and did not adopt a requirement to demonstrate that the proposed action is safe in order to proceed (H.1(b)).

Final Significance Determination letter issued 1/30/2009 as a White.

Inspection Report# : [2008011](#) (pdf)

Inspection Report# : [2009007](#) (pdf)

Significance: **G** Nov 19, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Implement Effective Radiological Controls For Working With Equipment In Contact With Failed Fuel

An NRC-identified finding of very low safety significance and associated NCV of 10 CFR 20.1501 was identified for failure to perform adequate radiological evaluations necessary to properly assess the radiological hazards and

prescribe appropriate radiological controls necessary to minimize dose to workers associated with failed fuel. Fuel reconstitution, a planned activity for the refueling outage, had a high potential to result in discrete radioactive particles and alpha contamination from the degraded fuel pins. The licensee failed to anticipate these radiological hazards and to implement appropriate controls to minimize exposure to radiation. As corrective actions, the license revised all radiation work permits (RWPs) associated with work in the spent fuel pool.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, the licensee did not implement radiological controls necessary to minimize dose to workers. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, the NRC could not identify an overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. The cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including environmental conditions, which may impact radiological safety (H.3(a)).

Inspection Report# : [2008011](#) (*pdf*)

Significance:  Nov 19, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Post and Control Access to High Radiation Area

A self-revealed finding of very low safety significance and associated NCV of Technical Specification 5.7.1 was identified for the failure to post and control an area with dose rates greater than 100 millirem/hour as a high radiation area. Specifically, the area of the refuel floor that contained the fuel reconstitution equipment was not posted as a high radiation area. Dose rates of approximately 450 millirem/hour were measured 30 centimeters (cm) from the equipment after three workers received electronic dosimeter alarms (dose rate). As corrective actions, the licensee corrected the radiological posting and controls for the area.

The finding is more than minor because it impacted the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, job specific radiological surveys failed to identify elevated dose rates around the spent fuel pool during fuel reconstitution demobilization. The finding was determined to be of very low safety significance because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee's ability to assess dose was not compromised. This finding appeared to be caused by inadequate coordination of work activities between the radiation protection staff and the contractors. Consequently, the cause of this deficiency had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately coordinates work activities by incorporating actions to communicate, coordinate, and cooperate with each other during activities in which inter-departmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2008011](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : December 10, 2009

Palisades

4Q/2009 Plant Inspection Findings

Initiating Events

Significance: **W** Nov 09, 2009

Identified By: NRC

Item Type: VIO Violation

Loss of Spent Fuel Pool Neutron Absorption Capability

The inspectors identified a finding and associated violation of the Design Feature for fuel storage in Technical Specification 4.3.1 due to loss of neutron absorption capability in the spent fuel pool (SFP) racks. Over the life of the facility, the neutron absorber in the SFP had degraded such that the Region I of the SFP could no longer maintain an effective neutron multiplication factor (Keff) of less than .95 without credit for soluble boron. Specifically, the licensee did not evaluate the effects of spent fuel pool rack swelling or available operating experience to validate the neutron absorber in the SFP continued to meet the assumptions in the criticality analysis. After testing revealed that the SFP no longer met assumptions in the criticality analysis, the licensee implemented compensatory actions to ensure the SFP remained subcritical.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; in addition, the finding impacted the initiating event cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for this finding, the inspectors evaluated the finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the finding was preliminarily of low to moderate safety significance (White). The inspectors determined that the performance deficiency did not reflect current licensee performance due to its age; therefore, the finding does not include a cross-cutting aspect.

Final WHITE determination issued in report 2010-007 dated January 20, 2010.

Inspection Report# : [2009008](#) (*pdf*)

Inspection Report# : [2010007](#) (*pdf*)

Significance: **G** Sep 30, 2009

Identified By: NRC

Item Type: FIN Finding

Inadequate analysis of reheater drain tank T-4B Drain Line Vibration

A finding of very low safety significance without an associated violation was identified by the inspectors for the licensee's operation of the moisture separator reheater (MSR) system outside of its design such that significant vibration occurred in the drain tank T-4B drain line. The licensee entered this issue into its corrective action program as condition report CR-PLP-2008-4020, evaluated vibration of the drain line vibration, and performed repairs and modifications that eliminated the excessive vibratory motion in the drain line. No violation of NRC requirements occurred.

The finding was determined to be more than minor because the finding was associated with the Initiating Events cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Initiating Events cornerstone. Based on a "No" answer to all the questions in the Initiating Events cornerstone column of Table 4a, the finding was determined to be of very low safety significance (Green) because the finding does not affect mitigation equipment. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to ensure that issues potentially impacting nuclear safety are promptly identified, fully evaluated, and that actions are taken to address safety issues in a timely manner, commensurate with their significance.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failures of the shutdown cooling flow bypass valve CV-3006

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Technical Specifications (TS) 5.4.1, Procedures, for the failure to implement procedures to properly align the positioner feedback arm for the shutdown cooling (SDC) flow control valve CV-3006. As a result, the valve failed shut twice during the most recent refueling outage. Each occurrence caused a temperature excursion in the SDC system and a reduction in SDC flow. The licensee placed a more robust retaining clip on the feedback arm and scheduled work during the next outage to realign the arm. The licensee also entered the issue into their corrective action program as CR PLP-2009-01763.

The issue was more than minor per IMC 0612 Appendix B as it affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure of CV-3006 due to the misalignment caused temperature excursions in the SDC system and reduced SDC flow below TS required values. The issue screened as Green in IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, based on the remaining mitigation factors and the determination that the issue did not represent a “loss of control.” The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the failure recurred. Specifically, the licensee failed to take appropriate corrective actions to address safety issues.

Inspection Report# : [2009004](#) (pdf)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to conduct an adequate risk assessment for an orange risk condition

The inspectors identified a finding of very low safety significance (Green) without an associated NCV for failure to conduct an adequate risk assessment and recognize a procedurally required orange risk condition for the vacuum fill of the primary coolant system (PCS) during outage activities. In response to this issue, the licensee changed their risk assessment before performing the vacuum fill evolution. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 02079.

The finding is more than minor in accordance with IMC 0612, Appendix E, Example 7.e, because the planned evolution would have put the plant into a higher risk category per procedure GOP- 14 Attachment 19. In addition, if left uncorrected, the issue had the potential to lead to a more significant safety concern. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. Using IMC 0609, Appendix M, this finding is of very low safety significance (Green) because the licensee performed the risk management actions for the orange risk condition prior to performing the orange risk evolution. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance, Work Control (H.3 (a)), because the licensee did not appropriately plan the work activities by properly incorporating risk insights by following the requirements of procedure GOP-14.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Manage Risk in Reduced Inventory

The inspectors identified a Green NCV of 10 CFR 50.65 (a)(4) for the licensee’s failure to manage the increase in risk

by minimizing the plant's exposure to elevated risk during the 1R20 refueling outage. Specifically, during the first period of reduced inventory after shutdown with a reduced time to boil, the licensee's failure to appropriately manage and execute maintenance activities led to extended time being spent in the reduced inventory condition. Later in the outage, two unplanned entries into reduced inventory were required to diagnose and correct issues stemming from the 'D' Primary coolant pump impeller replacement. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 03392.

The inspectors determined that a significant portion of the additional time spent in reduced inventory was within licensee control. The issue is greater than minor in that the licensee failed to manage activities in such a way as to minimize the time spent in reduced inventory. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. The finding is of very low safety significance (Green) using Appendix M because it did not involve a loss of control nor did it require a quantitative analysis per IMC 0609 Appendix G, Attachment 1. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance because a primary cause of the finding is associated with the human performance cross cutting component of work practices, in that the licensee failed to provide appropriate oversight for work activities consistent with nuclear safety.

Inspection Report# : [2009003](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Technical Specification

On February 20, 2009 the inspectors identified a Green NCV of TS 5.4, "Procedures". Specifically, the licensee failed to revise procedures needed to implement Technical Specification (TS) amendment 236; although, the licensee notified the NRC via letter on February 11 that the amendment had been implemented.

In response to NRC concerns related to swelling of Spent Fuel Pool (SFP) storage racks, the licensee performed testing of the neutron absorption capability of the spent fuel pool storage racks. Based on this testing, the licensee determined that the neutron absorption capability no longer met assumptions in their criticality analysis. Therefore, the licensee determined that design features TS 4.3 no longer provided adequate assurance that the spent fuel pool would remain subcritical for all required conditions. On August 27, 2008, the licensee sent a letter to the NRC identifying interim actions to ensure the SFP remained critically safe. On September 20, the NRC approved a Confirmatory Action letter (CAL) in response to that letter to confirm licensee actions. As part of the actions to restore compliance, the licensee developed TS amendment 236 to codify necessary controls to ensure the safety of the SFP. By letter dated February 11, the licensee informed the NRC that Amendment 236 had been implemented. The NRC inspected the actions taken by the licensee to implement the amendment and concluded that the licensee had failed to take actions required by licensee procedures to implement the amendment.

Since the CAL prohibited addition of new fuel to the SFP, the licensee needed the NRC to lift that CAL to support outage activities. In addition, loading of new fuel into the SFP required extensive use of two procedures directly affected by the amendment. Procedure EM 04 29 provides instruction on development of fuel loading sheets used to establish a safe and compliant SFP load pattern. The amendment added a new TS surveillance requirement, SR 3.7.16.1, which required verifying, by administrative means, that each fuel assembly meets the requirements given in TS 3.7.16. The licensee failed to revise this procedure to include the requirements of the amendment. Procedure SOP 28 provides instructions on moving fuel in the SFP and procedure ADM 10.51, "Writer's Guideline for Site Procedures," governs the format and content of the procedure. Required content includes identification of affected TS precautions and limitations that could result in non compliance with TS. The licensee failed to revise procedure SOP 28 to reflect those requirements.

Inspection Report# : [2009002](#) (pdf)

Mitigating Systems

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Agastat Time Delay Relays Design, Testing and Configuration Control Issues

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III "Design Control," was identified by the inspectors for the licensee's failure to translate the design bases into design drawings, procedures and appropriate test instructions. Specifically, the design basis requirements for Agastat Time Delay Relays (TDR) settings, as well as vendor tolerances, were not accurately reflected in the design drawings, procedures and test instructions for numerous TDR calibrations. This issue was entered into the licensee's corrective action program.

The inspectors determined that the finding was more than minor because it was associated with the Mitigating System Cornerstone attribute of "Design Control," and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to ensure that safety-related TDRs would operate, within the design specified setpoints and allowed tolerances, could lead to the inability of safety-related systems and components to respond to design basis events (e.g., during load sequencing onto the EDG). The finding screened as being of very low safety-significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee's subsequent evaluation of the TDRs tolerances showed that available margin remained for satisfactory completion of the required safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee did not incorporate operating experience (OE) information, including internally generated lessons learned, to support plant safety. Specifically, even though the licensee was aware of the potential inadequacies of the Agastat TDR setpoints through internal OE, the licensee failed to adequately respond to the OE by implementing appropriate changes to station processes, procedures, equipment, and training program.

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

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Translate the Design Basis for the CV-11 Control Room HVAC Chiller Into Specifications and Drawings

A finding of very low safety-significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to translate and incorporate design basis criteria that ensured the functionality of TDRs for the CR HVAC chillers into design drawings, procedures and work instructions for implementation. Specifically, even though the licensee reduced the replacement interval frequency for the chiller mounted TDRs due to high vibration levels to ensure functionality, and then initiated Work Orders (WOs) to perform this replacement, one WO was closed without replacing the TDRs as intended, and the second WO was not approved for implementation. This issue was entered into the licensee's corrective action program.

The inspectors determined that the finding was more than minor because this failure to establish measures to translate and incorporate design basis criteria to ensure the functionality of TDRs for the CR HVAC chillers could lead to the inability of the chillers to respond to design basis events. Specifically, the finding screened as of very low safety-significance (Green) because the finding did not represent loss of system safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such as that the resolution addresses causes and extent of condition, as necessary. This includes properly evaluating for operability conditions adverse to quality.

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

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Gas Void in High Pressure Safety Injection Suction Line

The inspectors identified an NCV of TS 5.4.1 for failure to implement and maintain procedural guidance for filling the

High Pressure Safety Injection (HPSI) lines. Specifically, the licensee used procedure ESSO-01 to fill the Emergency Core Cooling System (ECCS) piping following a system outage ending in September 2007. The procedure failed to ensure that the sub-cooling line to the HPSI suction was filled and the remaining void created reasonable doubt regarding the operability of the ECCS system. The licensee located the void on July 1, 2009, as part of actions related to Generic Letter 2008, declared the train inoperable and successfully eliminated the void on July 2, 2009. Additionally, the issue was placed in the corrective action program as CR PLP-2009-3377

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically the void impacted the reliability of a high pressure safety injection pump. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using the Phase 1 worksheets because the finding did not result in loss of operability. This finding has a cross-cutting aspect in the area of problem identification and resolution, operating experience, because the licensee failed to implement operating experience through changes to station processes.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Reduction in containment spray header level during maintenance

A finding of very low safety significance (Green) and associated NCV of TS 5.4.1, Procedures, was self-revealed when operators incorrectly implemented a procedure that connected a temporary pump to a containment spray header while attempting to fill the header. Specifically, the suction and discharge connections were swapped so that when the pump was turned on, water was pumped out of the header instead of into the header, reducing level below the TS required minimum value. The licensee corrected the connections and refilled the header to an acceptable level. Additionally, the issue was placed in the corrective action program as CR-PLP-2009-04080.

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the improper connection of the pump lowered header level below the TS allowed value which resulted in an inadvertent TS action statement entry. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using the Phase 1 worksheets based on answering 'no' to all questions under the Mitigating Systems cornerstone in Table 4a. The finding had an associated cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area; namely, the licensee failed to appropriately communicate and use proper human error prevention techniques.

Inspection Report# : [2009004](#) (pdf)

Significance:  Mar 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inoperability of HPSI Valve Due to Foreign Material

On February 7, 2009, while attempting to fill the T 82C safety injection tank during routine operations, control room operators attempted to throttle open MO 3064, one of two HPSI isolation valves to primary coolant loop 2A. The valve did not reposition. The licensee declared the right train of HPSI inoperable and began troubleshooting to determine the cause of the failure. The valve had successfully operated earlier in the evolution. Later in the day, during troubleshooting of the valve motor's circuit breaker, electricians discovered a small strand from a Scotch Brite cleaning pad in one of the auxiliary contacts. The contacts are normally closed and act as a permissive for the valve motor to open the valve if the valve has a demand to open. The licensee determined that the foreign material became stuck between two contacts, thus preventing the contact from closing and the valve from operating. This condition also would have prevented the valve from opening as designed during a safety injection actuation signal. The licensee last performed maintenance in December 2008. During the maintenance, electricians cleaned and lightly buffed the

contacts using a Scotch-Brite pad. The breaker passed post-maintenance testing. After evaluating the failure, the licensee concluded that the Scotch-Brite strand was introduced to the circuit breaker through the cleaning process. The licensee subsequently removed the strand and retested the valve satisfactorily.

A review of the work instruction and maintenance procedure for FME controls revealed only a general reference to take precautions when moving or storing breakers and parts. The fleet FME procedure, EN MA 118, did have several applicable examples of when certain FME controls should be employed and examples of how to incorporate them into maintenance procedures and work instructions. A licensee search for relevant operating experience yielded some examples applicable to this issue as well.

Inspection Report# : [2009002](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Degradation of Fire Doors

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Condition 2.C.(3), "Fire Protection," during performance of a surveillance procedure inspection in accordance with IP 71111.22. Specifically, the inspectors noted numerous fire doors that did not conform to the requirements of NFPA 80.

As part of the licensee's fire protection strategy, the licensee credits numerous fire doors to limit the spread of fire between adjacent fire zones. NFPA 80, which the licensee's fire hazards analysis invokes for acceptability of fire doors, provides criteria for the acceptability of fire doors. Generic Letter 86 10 permits evaluation of deviations from NFPA requirements by a fire protection engineer to determine if the condition provides adequate protection based on the hazards present. The licensee's analysis failed to demonstrate the barriers would be effective based on the hazards present and, in some cases, provided generic deviations from NFPA 80 requirements. After discussions with the inspectors, the licensee impaired numerous fire doors and re-evaluated the condition of the discrepant doors. The inspectors reviewed the licensee's evaluation and concluded that none of the degradation was of more than very low safety significance.

Inspection Report# : [2009002](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entering a High Radiation Area without an adequate awareness of radiological conditions

A self-revealed finding of very low safety-significance and an associated NCV of TS 5.7 were identified for workers entering a high radiation area (HRA) without an adequate awareness of radiological conditions and while working under a Radiation Work Permit (RWP) that did not allow entry into a high radiation area. The electronic dosimetry worn by the workers alarmed when they entered an area of elevated dose rates. Corrective actions taken by the licensee included denial of their access into the radiologically controlled area. The issue was entered in the licensee's corrective action program as CR-PLP-2009-01884.

The issue was more than minor because it is similar to Example 6.h in IMC 0612 Appendix E “Examples of Minor Issues” for an issue that is more than minor. The inspectors determined that the violation affected the Occupational Radiation Safety Cornerstone. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety-significance (Green). Additionally, this finding has a cross-cutting aspect in the area of human performance, work practices component, because the supervisor that performed the pre-job brief for the job failed to provide clear guidance on the requirements for entry into a high radiation area.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform work-in-progress reviews

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1 for failure to implement procedures required to conduct timely reviews of job progress and implement actions necessary to reduce workers’ exposure. Specifically, the inspectors identified that work in progress reviews for jobs greater than 5 rem were not completed and therefore the licensee did not implement additional actions necessary to reduce workers’ exposure. The issue was entered in the licensee’s corrective action program as CR-PLP-2009-004074.

The finding is more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the licensee neither fully evaluated the cause for additional exposure nor prescribed exposure mitigation actions. Therefore, additional exposure was received by the plant staff. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety significance (Green). Additionally, this finding has a crosscutting aspect in the area of human performance, work practices component, because the ALARA supervisor did not provide adequate oversight of the ALARA work activities.

Inspection Report# : [2009004](#) (pdf)

Significance: SL-IV Sep 04, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Violation or Title 10 CFR 50.9 Completeness and Accuracy of Information regarding in Support of 10 CFR 20.2106 “Records of Individual Monitoring Results.”

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9, “Completeness and Accuracy of Information.” The inspectors identified that the licensee, on April 17, 2008, submitted to the NRC inadequate NRC Form 5s, “Occupational Dose Record for a Monitoring Period” for three individuals that were involved in the demobilization of spent fuel reconstitution equipment in October 2007. The NRC Form 5s were not complete and accurate in all material respects. Specifically, the NRC Form 5s did not include pertinent information relative to the radiological implications to these individuals regarding their personal involvement in the demobilization of spent fuel reconstitution equipment under circumstances when the licensee’s ability to assess the worker’s dose was compromised. In particular, the NRC Form 5s failed to document the uncertainties associated with the workers’ radiation doses, as was necessary in this instance consistent with the instructions on the Form 5. When the NRC questioned the licensee on the accuracy of these NRC Form 5 submittals, the licensee submitted revised NRC Form 5s.

The violation was more than minor because the missing information was material to the NRC. Specifically, this information is used by the NRC in its evaluation of the risk of radiation exposure associated with the licensed activity and in exercising its statutory authority to monitor and regulate the safety and health practices of its licensees. This Severity Level IV violation is of very low safety-significance because if the information had been complete and accurate when reviewed by the NRC, it likely would not have resulted in a reconsideration of a regulatory position or substantial further inquiry, such as an additional inspection or a formal request for information. Because this violation

was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program [Condition Report (CR)-PLP-2009-04213], the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. No cross-cutting aspects were identified with this violation.

Inspection Report# : [2009007](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : March 01, 2010

Palisades

1Q/2010 Plant Inspection Findings

Initiating Events

Significance: **W** Nov 09, 2009

Identified By: NRC

Item Type: VIO Violation

Loss of Spent Fuel Pool Neutron Absorption Capability

The inspectors identified a finding and associated violation of the Design Feature for fuel storage in Technical Specification 4.3.1 due to loss of neutron absorption capability in the spent fuel pool (SFP) racks. Over the life of the facility, the neutron absorber in the SFP had degraded such that the Region I of the SFP could no longer maintain an effective neutron multiplication factor (Keff) of less than .95 without credit for soluble boron. Specifically, the licensee did not evaluate the effects of spent fuel pool rack swelling or available operating experience to validate the neutron absorber in the SFP continued to meet the assumptions in the criticality analysis. After testing revealed that the SFP no longer met assumptions in the criticality analysis, the licensee implemented compensatory actions to ensure the SFP remained subcritical.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; in addition, the finding impacted the initiating event cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for this finding, the inspectors evaluated the finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the finding was preliminarily of low to moderate safety significance (White). The inspectors determined that the performance deficiency did not reflect current licensee performance due to its age; therefore, the finding does not include a cross-cutting aspect.

Final WHITE determination issued in report 2010-007 dated January 20, 2010.

Inspection Report# : [2009008](#) (*pdf*)

Inspection Report# : [2010007](#) (*pdf*)

Significance: **G** Sep 30, 2009

Identified By: NRC

Item Type: FIN Finding

Inadequate analysis of reheater drain tank T-4B Drain Line Vibration

A finding of very low safety significance without an associated violation was identified by the inspectors for the licensee's operation of the moisture separator reheater (MSR) system outside of its design such that significant vibration occurred in the drain tank T-4B drain line. The licensee entered this issue into its corrective action program as condition report CR-PLP-2008-4020, evaluated vibration of the drain line vibration, and performed repairs and modifications that eliminated the excessive vibratory motion in the drain line. No violation of NRC requirements occurred.

The finding was determined to be more than minor because the finding was associated with the Initiating Events cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Initiating Events cornerstone. Based on a "No" answer to all the questions in the Initiating Events cornerstone column of Table 4a, the finding was determined to be of very low safety significance (Green) because the finding does not affect mitigation equipment. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to ensure that issues potentially impacting nuclear safety are promptly identified, fully evaluated, and that actions are taken to address safety issues in a timely manner, commensurate with their significance.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failures of the shutdown cooling flow bypass valve CV-3006

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Technical Specifications (TS) 5.4.1, Procedures, for the failure to implement procedures to properly align the positioner feedback arm for the shutdown cooling (SDC) flow control valve CV-3006. As a result, the valve failed shut twice during the most recent refueling outage. Each occurrence caused a temperature excursion in the SDC system and a reduction in SDC flow. The licensee placed a more robust retaining clip on the feedback arm and scheduled work during the next outage to realign the arm. The licensee also entered the issue into their corrective action program as CR PLP-2009-01763.

The issue was more than minor per IMC 0612 Appendix B as it affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure of CV-3006 due to the misalignment caused temperature excursions in the SDC system and reduced SDC flow below TS required values. The issue screened as Green in IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, based on the remaining mitigation factors and the determination that the issue did not represent a “loss of control.” The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the failure recurred. Specifically, the licensee failed to take appropriate corrective actions to address safety issues.

Inspection Report# : [2009004](#) (pdf)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to conduct an adequate risk assessment for an orange risk condition

The inspectors identified a finding of very low safety significance (Green) without an associated NCV for failure to conduct an adequate risk assessment and recognize a procedurally required orange risk condition for the vacuum fill of the primary coolant system (PCS) during outage activities. In response to this issue, the licensee changed their risk assessment before performing the vacuum fill evolution. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 02079.

The finding is more than minor in accordance with IMC 0612, Appendix E, Example 7.e, because the planned evolution would have put the plant into a higher risk category per procedure GOP- 14 Attachment 19. In addition, if left uncorrected, the issue had the potential to lead to a more significant safety concern. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. Using IMC 0609, Appendix M, this finding is of very low safety significance (Green) because the licensee performed the risk management actions for the orange risk condition prior to performing the orange risk evolution. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance, Work Control (H.3 (a)), because the licensee did not appropriately plan the work activities by properly incorporating risk insights by following the requirements of procedure GOP-14.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Manage Risk in Reduced Inventory

The inspectors identified a Green NCV of 10 CFR 50.65 (a)(4) for the licensee’s failure to manage the increase in risk

by minimizing the plant's exposure to elevated risk during the 1R20 refueling outage. Specifically, during the first period of reduced inventory after shutdown with a reduced time to boil, the licensee's failure to appropriately manage and execute maintenance activities led to extended time being spent in the reduced inventory condition. Later in the outage, two unplanned entries into reduced inventory were required to diagnose and correct issues stemming from the 'D' Primary coolant pump impeller replacement. The licensee entered this issue into their corrective action program as Condition Report (CR) PLP 2009 03392.

The inspectors determined that a significant portion of the additional time spent in reduced inventory was within licensee control. The issue is greater than minor in that the licensee failed to manage activities in such a way as to minimize the time spent in reduced inventory. The inspectors determined the finding impacted the Initiating Events cornerstone whose objective is to, in part, limit those events that upset plant stability. The finding is of very low safety significance (Green) using Appendix M because it did not involve a loss of control nor did it require a quantitative analysis per IMC 0609 Appendix G, Attachment 1. The inspectors concluded that this finding has a cross cutting aspect in the area of human performance because a primary cause of the finding is associated with the human performance cross cutting component of work practices, in that the licensee failed to provide appropriate oversight for work activities consistent with nuclear safety.

Inspection Report# : [2009003](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Fire Barrier

The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation (NCV) of License Section 2.C(3), Fire Protection Program for failing to maintain in effect all provisions of the Fire Protection Program. Specifically, the fire protection plan requires 3-hour fire barriers, unless there is adequate justification that a fire barrier, which is less than 3 hours is acceptable. The licensee credited a 2-hour fire barrier in lieu of a 3-hour barrier based on less than two hours of combustible material in the cable spreading room. In 2006, the licensee determined the cable spreading room contained in excess of two hours worth of combustible material. As an immediate action, the licensee implemented compensatory actions and performed fire tours in the area.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the licensee had an invalid basis for the adequacy of a firewall protecting safety related equipment. The finding screened as Green because the fire barrier retained at least a two hour rating and the seismic issues did not impact both trains. The finding does not include an associated cross cutting aspect due to the issue dating back greater than three years and not reflective of current performance.

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Construction of Scaffolding

Introduction: A finding of very low safety significance (Green) and associated NCV of Palisades Technical Specification (TS) 5.4.1, Procedures, was identified by the inspectors for failing to adequately implement a procedure to construct a scaffold near the 1 2 emergency diesel generator (EDG). Specifically, the scaffold was approved for use without the appropriate seismic or fire protection evaluations being done.

Description: While touring the EDG rooms, the inspectors observed a scaffold approved for use in the 1 2 EDG room. Some scaffold poles were routed through a cable tray and there were several points where it appeared the scaffold was in close proximity to safety related components. A seismic evaluation tag could not be found. Additionally, it

appeared that the platform was obstructing a fire sprinkler located in the overhead. The inspectors informed the operating crew of the issues. Subsequent investigation by the licensee identified numerous areas where the scaffold was within the two inches of safety related equipment. Per the licensee's scaffolding procedure, an engineering evaluation should have been done to evaluate potential effects on safety related equipment. Similarly, a fire protection evaluation should have been completed for the potential effects on the fire sprinkler. Although the completed checklist the site used to evaluate the scaffold indicated such evaluations were necessary, the evaluations were not done until after the issues were raised by the inspectors approximately three days later.

As an immediate action, the licensee precluded use of the scaffold pending resolution of the above issues and instituted a compensatory fire tour. Engineering was asked if the scaffold could be evaluated and approved as it was currently constructed. After consultation, it was decided the scaffold should be modified before an engineering evaluation would be done. The scaffold was modified to address some of the concerns, and subsequent fire and seismic evaluations were performed before work utilizing the scaffolding recommenced.

Analysis: The inspectors determined that the improperly constructed scaffold was a performance deficiency warranting further evaluation with the SDP. The issue was more than minor because it affected the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, contrary to site procedures, a fire protection feature (sprinkler) in a safety related area was affected without appropriate evaluations or compensatory measures. Additionally, seismic evaluations were not performed with the scaffold in close proximity to safety related equipment.

The inspectors used IMC 0609 Appendix F, "Fire Protection Significance Determination Process," Task 1.3.2: Supplemental Screening for Fire Confinement Findings, question 3, to determine the significance of the finding for the fire related aspects. The finding screened as Green, or very low safety significance, based on only one of ten sprinklers in the room being affected by the scaffold. Additionally, the inspectors utilized IMC 0609, "Significance Determination Process," to evaluate the significance of the finding for the seismic-related aspects. The finding screened as Green using the worksheets of Attachment 4. Specifically, Table 4b was utilized to determine if the finding was potentially risk significant based on seismic, flooding, or severe weather screening criteria. With no degradation of equipment specifically designed to mitigate seismic events and no complete loss of any safety function, the finding screened as Green. The finding had an associated cross cutting aspect in the Human Performance area, Work Control component in that the licensee failed to appropriately plan work activities by incorporating the need for compensatory actions (H.3(a)).

Enforcement: Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained covering site fire protection program implementation and the procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A. Regulatory Guide 1.33 states, in part, that maintenance that can affect the performance of safety related equipment should be properly pre planned and performed in accordance with written procedures appropriate to the circumstances. Procedure EN MA 133, "Control of Scaffolding," implements these requirements for constructing scaffolds near safety-related equipment. Procedure EN MA 133 requires construction of the scaffold so it does not impact safety-related equipment with an allowance that requires evaluations for seismic impacts and other possible impairments when the scaffold is in close vicinity to the equipment. Contrary to TS 5.4.1, from January 16 to 19, 2010, a scaffold constructed in close proximity to the 1 2 EDG was without the appropriate evaluations and compensatory measures established as required by procedure EN MA 133. The licensee modified the scaffold and performed the appropriate evaluations. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as CR PLP 2010 00264, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy: NCV 05000255/2010002 02, Improper Construction of Scaffolding.

Inspection Report# : [2010002](#) (pdf)

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Agastat Time Delay Relays Design, Testing and Configuration Control Issues

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III "Design Control," was identified by the inspectors for the licensee's failure to translate the design bases into design drawings, procedures and appropriate test instructions. Specifically, the design basis requirements for Agastat Time Delay Relays (TDR) settings, as well as vendor tolerances, were not accurately reflected in the

design drawings, procedures and test instructions for numerous TDR calibrations. This issue was entered into the licensee's corrective action program.

The inspectors determined that the finding was more than minor because it was associated with the Mitigating System Cornerstone attribute of "Design Control," and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to ensure that safety-related TDRs would operate, within the design specified setpoints and allowed tolerances, could lead to the inability of safety-related systems and components to respond to design basis events (e.g., during load sequencing onto the EDG). The finding screened as being of very low safety-significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee's subsequent evaluation of the TDRs tolerances showed that available margin remained for satisfactory completion of the required safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee did not incorporate operating experience (OE) information, including internally generated lessons learned, to support plant safety. Specifically, even though the licensee was aware of the potential inadequacies of the Agastat TDR setpoints through internal OE, the licensee failed to adequately respond to the OE by implementing appropriate changes to station processes, procedures, equipment, and training program.

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

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Translate the Design Basis for the CV-11 Control Room HVAC Chiller Into Specifications and Drawings

A finding of very low safety-significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to translate and incorporate design basis criteria that ensured the functionality of TDRs for the CR HVAC chillers into design drawings, procedures and work instructions for implementation. Specifically, even though the licensee reduced the replacement interval frequency for the chiller mounted TDRs due to high vibration levels to ensure functionality, and then initiated Work Orders (WOs) to perform this replacement, one WO was closed without replacing the TDRs as intended, and the second WO was not approved for implementation. This issue was entered into the licensee's corrective action program.

The inspectors determined that the finding was more than minor because this failure to establish measures to translate and incorporate design basis criteria to ensure the functionality of TDRs for the CR HVAC chillers could lead to the inability of the chillers to respond to design basis events. Specifically, the finding screened as of very low safety-significance (Green) because the finding did not represent loss of system safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such as that the resolution addresses causes and extent of condition, as necessary. This includes properly evaluating for operability conditions adverse to quality.

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

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Gas Void in High Pressure Safety Injection Suction Line

The inspectors identified an NCV of TS 5.4.1 for failure to implement and maintain procedural guidance for filling the High Pressure Safety Injection (HPSI) lines. Specifically, the licensee used procedure ESSO-01 to fill the Emergency Core Cooling System (ECCS) piping following a system outage ending in September 2007. The procedure failed to ensure that the sub-cooling line to the HPSI suction was filled and the remaining void created reasonable doubt regarding the operability of the ECCS system. The licensee located the void on July 1, 2009, as part of actions related to Generic Letter 2008, declared the train inoperable and successfully eliminated the void on July 2, 2009.

Additionally, the issue was placed in the corrective action program as CR PLP-2009-3377

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of

ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically the void impacted the reliability of a high pressure safety injection pump. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations,” using the Phase 1 worksheets because the finding did not result in loss of operability. This finding has a cross-cutting aspect in the area of problem identification and resolution, operating experience, because the licensee failed to implement operating experience through changes to station processes.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Reduction in containment spray header level during maintenance

A finding of very low safety significance (Green) and associated NCV of TS 5.4.1, Procedures, was self-revealed when operators incorrectly implemented a procedure that connected a temporary pump to a containment spray header while attempting to fill the header. Specifically, the suction and discharge connections were swapped so that when the pump was turned on, water was pumped out of the header instead of into the header, reducing level below the TS required minimum value. The licensee corrected the connections and refilled the header to an acceptable level. Additionally, the issue was placed in the corrective action program as CR-PLP-2009-04080.

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the improper connection of the pump lowered header level below the TS allowed value which resulted in an inadvertent TS action statement entry. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations,” using the Phase 1 worksheets based on answering ‘no’ to all questions under the Mitigating Systems cornerstone in Table 4a. The finding had an associated cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area; namely, the licensee failed to appropriately communicate and use proper human error prevention techniques.

Inspection Report# : [2009004](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Evaluation of Interface with State and Local Governments

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(t), “Conditions of licenses,” for the failure to complete an independent review of all program elements of the emergency preparedness program. The independent assessment did not evaluate and document the adequacy of the interfaces with State and local governments at an interval not to exceed 12 months for all groups. Specifically, Quality Assurance’s assessment failed to evaluate the adequacy of interface with one of the counties in 2008, and the interface with the State and two counties was not evaluated in 2009. The licensee entered the issue in their corrective action program as CR-PLP-2009-04915.

The deficiency did not meet the criteria for traditional enforcement, therefore, was screened using the Emergency Preparedness (EP) SDP. The finding was determined to be more than minor because the finding adversely affected the

EP cornerstone objective to ensure the licensee is capable of implementing adequate measures to protect the health and safety of the public in a radiological emergency. The failure to conduct the audit to evaluate the effectiveness of the EP program had the attribute associated with Offsite EP, specifically, the evaluation of the working relationship between the offsite and onsite emergency response organizations and programs. The inspector evaluated the finding using with IMC 0609, Appendix B, Sheet I, Failure to Comply flowchart. The audit program was noncompliant with a regulatory requirement not involving an EP planning standard or a risk significant planning standard; therefore, the finding was determined to be of very low safety significance (Green).

The finding has a cross-cutting component in the Problem Identification and Resolution area with the component of Self and Independent Assessments. The licensee did not conduct the self-assessments in sufficient depth to evaluate the interfaces for all offsite governments. (P.3(a)) (Section 1EP5)

Inspection Report# : [2010502](#) (pdf)

Occupational Radiation Safety

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entering a High Radiation Area without an adequate awareness of radiological conditions

A self-revealed finding of very low safety-significance and an associated NCV of TS 5.7 were identified for workers entering a high radiation area (HRA) without an adequate awareness of radiological conditions and while working under a Radiation Work Permit (RWP) that did not allow entry into a high radiation area. The electronic dosimetry worn by the workers alarmed when they entered an area of elevated dose rates. Corrective actions taken by the licensee included denial of their access into the radiologically controlled area. The issue was entered in the licensee's corrective action program as CR-PLP-2009-01884.

The issue was more than minor because it is similar to Example 6.h in IMC 0612 Appendix E "Examples of Minor Issues" for an issue that is more than minor. The inspectors determined that the violation affected the Occupational Radiation Safety Cornerstone. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety-significance (Green). Additionally, this finding has a cross-cutting aspect in the area of human performance, work practices component, because the supervisor that performed the pre-job brief for the job failed to provide clear guidance on the requirements for entry into a high radiation area.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform work-in-progress reviews

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1 for failure to implement procedures required to conduct timely reviews of job progress and implement actions necessary to reduce workers' exposure. Specifically, the inspectors identified that work in progress reviews for jobs greater than 5 rem were not completed and therefore the licensee did not implement additional actions necessary to reduce workers' exposure. The issue was entered in the licensee's corrective action program as CR-PLP-2009-004074.

The finding is more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the licensee neither fully evaluated the cause for additional exposure nor prescribed exposure mitigation actions. Therefore, additional exposure was received by the plant staff. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety significance (Green). Additionally, this finding has a crosscutting

aspect in the area of human performance, work practices component, because the ALARA supervisor did not provide adequate oversight of the ALARA work activities.

Inspection Report# : [2009004](#) (pdf)

Significance: SL-IV Sep 04, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Violation or Title 10 CFR 50.9 Completeness and Accuracy of Information regarding in Support of 10 CFR 20.2106 “Records of Individual Monitoring Results.”

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9, “Completeness and Accuracy of Information.” The inspectors identified that the licensee, on April 17, 2008, submitted to the NRC inadequate NRC Form 5s, “Occupational Dose Record for a Monitoring Period” for three individuals that were involved in the demobilization of spent fuel reconstitution equipment in October 2007. The NRC Form 5s were not complete and accurate in all material respects. Specifically, the NRC Form 5s did not include pertinent information relative to the radiological implications to these individuals regarding their personal involvement in the demobilization of spent fuel reconstitution equipment under circumstances when the licensee’s ability to assess the worker’s dose was compromised. In particular, the NRC Form 5s failed to document the uncertainties associated with the workers’ radiation doses, as was necessary in this instance consistent with the instructions on the Form 5. When the NRC questioned the licensee on the accuracy of these NRC Form 5 submittals, the licensee submitted revised NRC Form 5s.

The violation was more than minor because the missing information was material to the NRC. Specifically, this information is used by the NRC in its evaluation of the risk of radiation exposure associated with the licensed activity and in exercising its statutory authority to monitor and regulate the safety and health practices of its licensees. This Severity Level IV violation is of very low safety-significance because if the information had been complete and accurate when reviewed by the NRC, it likely would not have resulted in a reconsideration of a regulatory position or substantial further inquiry, such as an additional inspection or a formal request for information. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee’s corrective action program [Condition Report (CR)-PLP-2009-04213], the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. No cross-cutting aspects were identified with this violation.

Inspection Report# : [2009007](#) (pdf)

Public Radiation Safety

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately manage Changes to the ODCM

The inspectors identified a finding of very low-safety-significance and an associated non-cited violation (NCV) for the failure to implement TS requirement 5.5.1, Offsite Dose Calculation Manual (ODCM). Specifically, the inspectors determined that the evaluation written to support the 2004 change to eliminate drinking water well sampling from the ODCM was not correct. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. Corrective actions were being developed in the corrective action program (condition report (CR) PLP 2010 01013) and senior plant management expressed the understanding that sampling was important and the condition would be corrected.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. The finding was assessed using Inspection Manual Chapter 0609, Attachment D for the Public Radiation Safety Significance Determination process and determined to be of very low safety significance because it involved the

environmental monitoring program. The finding was not associated with a cross cutting aspect because the flawed evaluation occurred in 2004 and appeared to be a legacy issue which did not represent current licensee performance.

Inspection Report# : [2010002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : May 26, 2010

Palisades

2Q/2010 Plant Inspection Findings

Initiating Events

Significance: **W** Nov 09, 2009

Identified By: NRC

Item Type: VIO Violation

Loss of Spent Fuel Pool Neutron Absorption Capability

The inspectors identified a finding and associated violation of the Design Feature for fuel storage in Technical Specification 4.3.1 due to loss of neutron absorption capability in the spent fuel pool (SFP) racks. Over the life of the facility, the neutron absorber in the SFP had degraded such that the Region I of the SFP could no longer maintain an effective neutron multiplication factor (Keff) of less than .95 without credit for soluble boron. Specifically, the licensee did not evaluate the effects of spent fuel pool rack swelling or available operating experience to validate the neutron absorber in the SFP continued to meet the assumptions in the criticality analysis. After testing revealed that the SFP no longer met assumptions in the criticality analysis, the licensee implemented compensatory actions to ensure the SFP remained subcritical.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; in addition, the finding impacted the initiating event cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for this finding, the inspectors evaluated the finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the finding was preliminarily of low to moderate safety significance (White). The inspectors determined that the performance deficiency did not reflect current licensee performance due to its age; therefore, the finding does not include a cross-cutting aspect.

Final WHITE determination issued in report 2010-007 dated January 20, 2010.

Inspection Report# : [2009008](#) (*pdf*)

Inspection Report# : [2010007](#) (*pdf*)

Significance: **G** Sep 30, 2009

Identified By: NRC

Item Type: FIN Finding

Inadequate analysis of reheater drain tank T-4B Drain Line Vibration

A finding of very low safety significance without an associated violation was identified by the inspectors for the licensee's operation of the moisture separator reheater (MSR) system outside of its design such that significant vibration occurred in the drain tank T-4B drain line. The licensee entered this issue into its corrective action program as condition report CR-PLP-2008-4020, evaluated vibration of the drain line vibration, and performed repairs and modifications that eliminated the excessive vibratory motion in the drain line. No violation of NRC requirements occurred.

The finding was determined to be more than minor because the finding was associated with the Initiating Events cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Initiating Events cornerstone. Based on a "No" answer to all the questions in the Initiating Events cornerstone column of Table 4a, the finding was determined to be of very low safety significance (Green) because the finding does not affect mitigation equipment. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to ensure that issues potentially impacting nuclear safety are promptly identified, fully evaluated, and that actions are taken to address safety issues in a timely manner, commensurate with their significance.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failures of the shutdown cooling flow bypass valve CV-3006

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Technical Specifications (TS) 5.4.1, Procedures, for the failure to implement procedures to properly align the positioner feedback arm for the shutdown cooling (SDC) flow control valve CV-3006. As a result, the valve failed shut twice during the most recent refueling outage. Each occurrence caused a temperature excursion in the SDC system and a reduction in SDC flow. The licensee placed a more robust retaining clip on the feedback arm and scheduled work during the next outage to realign the arm. The licensee also entered the issue into their corrective action program as CR PLP-2009-01763.

The issue was more than minor per IMC 0612 Appendix B as it affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure of CV-3006 due to the misalignment caused temperature excursions in the SDC system and reduced SDC flow below TS required values. The issue screened as Green in IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, based on the remaining mitigation factors and the determination that the issue did not represent a “loss of control.” The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the failure recurred. Specifically, the licensee failed to take appropriate corrective actions to address safety issues.

Inspection Report# : [2009004](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Fire Barrier

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Section 2.C(3), Fire Protection Program for failing to maintain in effect all provisions of the Fire Protection Program. Specifically, the fire protection plan requires 3-hour fire barriers, unless there is adequate justification that a fire barrier, which is less than 3 hours is acceptable. The licensee credited a 2-hour fire barrier in lieu of a 3-hour barrier based on less than two hours of combustible material in the cable spreading room. In 2006, the licensee determined the cable spreading room contained in excess of two hours worth of combustible material. As an immediate action, the licensee implemented compensatory actions and performed fire tours in the area.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the licensee had an invalid basis for the adequacy of a firewall protecting safety related equipment. The finding screened as Green because the fire barrier retained at least a two hour rating and the seismic issues did not impact both trains. The finding does not include an associated cross cutting aspect due to the issue dating back greater than three years and not reflective of current performance. (1R05)

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Construction of Scaffolding

A finding of very low safety significance (Green) and associated NCV of Palisades Technical Specification (TS) 5.4.1, Procedures, was identified by the inspectors for failing to adequately implement a procedure to construct a scaffold near the 1 2 emergency diesel generator (EDG). Specifically, a fire sprinkler was impaired without the proper fire protection evaluation; and required seismic evaluations were not performed despite being in close proximity to safety related equipment. The issue was entered into the licensee's corrective action program and the scaffold was modified.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically a fire protection feature (sprinkler) in a safety related area was affected without compensatory measures. Additionally, the scaffold was in close proximity to safety related equipment, and the equipment could have been impacted by a seismic event. The finding screened as Green based on remaining sprinkler capability and the fact that only one EDG could be affected by the scaffold during a seismic event. The finding had an associated cross cutting aspect in the area of Human Performance (Planning) in that the licensee failed to appropriately plan work activities by incorporating the need for compensatory actions (H.3(a)).

(1R05)

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Agastat Time Delay Relays Design, Testing and Configuration Control Issues

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III "Design Control," was identified by the inspectors for the licensee's failure to translate the design bases into design drawings, procedures and appropriate test instructions. Specifically, the design basis requirements for Agastat Time Delay Relays (TDR) settings, as well as vendor tolerances, were not accurately reflected in the design drawings, procedures and test instructions for numerous TDR calibrations. This issue was entered into the licensee's corrective action program.

The inspectors determined that the finding was more than minor because it was associated with the Mitigating System Cornerstone attribute of "Design Control," and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to ensure that safety-related TDRs would operate, within the design specified setpoints and allowed tolerances, could lead to the inability of safety-related systems and components to respond to design basis events (e.g., during load sequencing onto the EDG). The finding screened as being of very low safety-significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee's subsequent evaluation of the TDRs tolerances showed that available margin remained for satisfactory completion of the required safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee did not incorporate operating experience (OE) information, including internally generated lessons learned, to support plant safety. Specifically, even though the licensee was aware of the potential inadequacies of the Agastat TDR setpoints through internal OE, the licensee failed to adequately respond to the OE by implementing appropriate changes to station processes, procedures, equipment, and training program.

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

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Translate the Design Basis for the CV-11 Control Room HVAC Chiller Into Specifications and Drawings

A finding of very low safety-significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to translate and incorporate design basis criteria that ensured the functionality of TDRs for the CR HVAC chillers into design drawings, procedures and work

instructions for implementation. Specifically, even though the licensee reduced the replacement interval frequency for the chiller mounted TDRs due to high vibration levels to ensure functionality, and then initiated Work Orders (WOs) to perform this replacement, one WO was closed without replacing the TDRs as intended, and the second WO was not approved for implementation. This issue was entered into the licensee's corrective action program.

The inspectors determined that the finding was more than minor because this failure to establish measures to translate and incorporate design basis criteria to ensure the functionality of TDRs for the CR HVAC chillers could lead to the inability of the chillers to respond to design basis events. Specifically, the finding screened as of very low safety-significance (Green) because the finding did not represent loss of system safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such as that the resolution addresses causes and extent of condition, as necessary. This includes properly evaluating for operability conditions adverse to quality.

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

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Gas Void in High Pressure Safety Injection Suction Line

The inspectors identified an NCV of TS 5.4.1 for failure to implement and maintain procedural guidance for filling the High Pressure Safety Injection (HPSI) lines. Specifically, the licensee used procedure ESSO-01 to fill the Emergency Core Cooling System (ECCS) piping following a system outage ending in September 2007. The procedure failed to ensure that the sub-cooling line to the HPSI suction was filled and the remaining void created reasonable doubt regarding the operability of the ECCS system. The licensee located the void on July 1, 2009, as part of actions related to Generic Letter 2008, declared the train inoperable and successfully eliminated the void on July 2, 2009.

Additionally, the issue was placed in the corrective action program as CR PLP-2009-3377

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically the void impacted the reliability of a high pressure safety injection pump. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using the Phase 1 worksheets because the finding did not result in loss of operability. This finding has a cross-cutting aspect in the area of problem identification and resolution, operating experience, because the licensee failed to implement operating experience through changes to station processes.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Reduction in containment spray header level during maintenance

A finding of very low safety significance (Green) and associated NCV of TS 5.4.1, Procedures, was self-revealed when operators incorrectly implemented a procedure that connected a temporary pump to a containment spray header while attempting to fill the header. Specifically, the suction and discharge connections were swapped so that when the pump was turned on, water was pumped out of the header instead of into the header, reducing level below the TS required minimum value. The licensee corrected the connections and refilled the header to an acceptable level.

Additionally, the issue was placed in the corrective action program as CR-PLP-2009-04080.

The inspectors determined the issue was more than minor per IMC 0612 Appendix B because it affected the Configuration Control attribute of the Mitigating Systems cornerstone in that it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the improper connection of the pump lowered header level below the TS allowed value which resulted in an inadvertent TS action statement entry. The finding screened as Green, or very low safety significance, in IMC 0609 Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using the Phase 1 worksheets based on answering 'no' to all questions under the Mitigating Systems cornerstone in Table 4a. The finding had an associated cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area;

namely, the licensee failed to appropriately communicate and use proper human error prevention techniques.

Inspection Report# : [2009004](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Evaluation of Interface with State and Local Governments

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(t), “Conditions of licenses,” for the failure to complete an independent review of all program elements of the emergency preparedness program. The independent assessment did not evaluate and document the adequacy of the interfaces with State and local governments at an interval not to exceed 12 months for all groups. Specifically, Quality Assurance’s assessment failed to evaluate the adequacy of interface with one of the counties in 2008, and the interface with the State and two counties was not evaluated in 2009. The licensee entered the issue in their corrective action program as CR-PLP-2009-04915.

The deficiency did not meet the criteria for traditional enforcement, therefore, was screened using the Emergency Preparedness (EP) SDP. The finding was determined to be more than minor because the finding adversely affected the EP cornerstone objective to ensure the licensee is capable of implementing adequate measures to protect the health and safety of the public in a radiological emergency. The failure to conduct the audit to evaluate the effectiveness of the EP program had the attribute associated with Offsite EP, specifically, the evaluation of the working relationship between the offsite and onsite emergency response organizations and programs. The inspector evaluated the finding using with IMC 0609, Appendix B, Sheet I, Failure to Comply flowchart. The audit program was noncompliant with a regulatory requirement not involving an EP planning standard or a risk significant planning standard; therefore, the finding was determined to be of very low safety significance (Green).

The finding has a cross-cutting component in the Problem Identification and Resolution area with the component of Self and Independent Assessments. The licensee did not conduct the self-assessments in sufficient depth to evaluate the interfaces for all offsite governments. (P.3(a)) (Section 1EP5)

Inspection Report# : [2010502](#) (pdf)

Occupational Radiation Safety

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entering a High Radiation Area without an adequate awareness of radiological conditions

A self-revealed finding of very low safety-significance and an associated NCV of TS 5.7 were identified for workers entering a high radiation area (HRA) without an adequate awareness of radiological conditions and while working under a Radiation Work Permit (RWP) that did not allow entry into a high radiation area. The electronic dosimetry worn by the workers alarmed when they entered an area of elevated dose rates. Corrective actions taken by the licensee included denial of their access into the radiologically controlled area. The issue was entered in the licensee’s corrective action program as CR-PLP-2009-01884.

The issue was more than minor because it is similar to Example 6.h in IMC 0612 Appendix E “Examples of Minor Issues” for an issue that is more than minor. The inspectors determined that the violation affected the Occupational Radiation Safety Cornerstone. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety-significance (Green). Additionally, this finding has a cross-cutting aspect in the area of human performance, work practices component, because the supervisor that performed the pre-job brief for the job failed to provide clear guidance on the requirements for entry into a high radiation area.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform work-in-progress reviews

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.4.1 for failure to implement procedures required to conduct timely reviews of job progress and implement actions necessary to reduce workers’ exposure. Specifically, the inspectors identified that work in progress reviews for jobs greater than 5 rem were not completed and therefore the licensee did not implement additional actions necessary to reduce workers’ exposure. The issue was entered in the licensee’s corrective action program as CR-PLP-2009-004074.

The finding is more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the licensee neither fully evaluated the cause for additional exposure nor prescribed exposure mitigation actions. Therefore, additional exposure was received by the plant staff. The inspectors determined that this finding did not involve: (1) an ALARA finding; (2) an overexposure; (3) a substantial potential for overexposure; or (4) an impaired ability to assess doses. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety significance (Green). Additionally, this finding has a crosscutting aspect in the area of human performance, work practices component, because the ALARA supervisor did not provide adequate oversight of the ALARA work activities.

Inspection Report# : [2009004](#) (pdf)

Significance: SL-IV Sep 04, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Violation or Title 10 CFR 50.9 Completeness and Accuracy of Information regarding in Support of 10 CFR 20.2106 “Records of Individual Monitoring Results.”

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9, “Completeness and Accuracy of Information.” The inspectors identified that the licensee, on April 17, 2008, submitted to the NRC inadequate NRC Form 5s, “Occupational Dose Record for a Monitoring Period” for three individuals that were involved in the demobilization of spent fuel reconstitution equipment in October 2007. The NRC Form 5s were not complete and accurate in all material respects. Specifically, the NRC Form 5s did not include pertinent information relative to the radiological implications to these individuals regarding their personal involvement in the demobilization of spent fuel reconstitution equipment under circumstances when the licensee’s ability to assess the worker’s dose was compromised. In particular, the NRC Form 5s failed to document the uncertainties associated with the workers’ radiation doses, as was necessary in this instance consistent with the instructions on the Form 5. When the NRC questioned the licensee on the accuracy of these NRC Form 5 submittals, the licensee submitted revised NRC Form 5s.

The violation was more than minor because the missing information was material to the NRC. Specifically, this information is used by the NRC in its evaluation of the risk of radiation exposure associated with the licensed activity and in exercising its statutory authority to monitor and regulate the safety and health practices of its licensees. This Severity Level IV violation is of very low safety-significance because if the information had been complete and accurate when reviewed by the NRC, it likely would not have resulted in a reconsideration of a regulatory position or substantial further inquiry, such as an additional inspection or a formal request for information. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee’s corrective

action program [Condition Report (CR)-PLP-2009-04213], the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. No cross-cutting aspects were identified with this violation.

Inspection Report# : [2009007](#) (pdf)

Public Radiation Safety

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately manage Changes to the ODCM

The inspectors identified a finding of very low-safety-significance and an associated NCV for the failure to implement TS requirement 5.5.1, Offsite Dose Calculation Manual (ODCM). Specifically, the inspectors determined that the evaluation written to support the 2004 change to eliminate drinking water well sampling from the ODCM was not correct. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. Corrective actions were being developed in the corrective action program (condition report (CR) PLP 2010 01013) and senior plant management expressed the understanding that sampling was important and the condition would be corrected.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. The finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low safety significance because it involved the environmental monitoring program. The finding was not associated with a cross cutting aspect because the flawed evaluation occurred in 2004 and appeared to be a legacy issue which did not represent current licensee performance. (Section 40A5)

Inspection Report# : [2010002](#) (pdf)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : September 02, 2010

Palisades

3Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Code Requirements Met When Performing VT-2 Exams

The inspectors identified a finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to ensure that American Society of Mechanical Engineers (ASME) Code and site procedural requirements were understood and incorporated during the performance of VT 2 in service inspections. Specifically, the illumination requirements specified in the Code had not been properly incorporated into all site examination procedures, nor were Operations personnel aware of the specific requirements. The licensee disseminated guidance clarifying the requirements and entered the issue into corrective action program (CAP) as CR PLP 2010 03756.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, VT 2 exams performed without fundamental knowledge of Code and procedural requirements could lead to erroneous examination results. The finding screened as Green because no known actual component degradation went undetected as a result of improperly performed exams. The finding had an associated cross cutting aspect in the area of Human Performance (Procedures), in that the licensee failed to have complete, accurate, and up to date procedures and work packages for the VT 2 examinations.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Action to Prevent Recurrence Failed to Address Root Causes

The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades Technical Specification 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a Corrective Action to Prevent Recurrence (CAPR) to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee. This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate corrective action to prevent recurrence of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to additional NRC findings have been adequate to prevent recurrence. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. (P.1(c))

Significance:  Nov 09, 2009

Identified By: NRC

Item Type: VIO Violation

Loss of Spent Fuel Pool Neutron Absorption Capability

The inspectors identified a finding and associated violation of the Design Feature for fuel storage in Technical Specification 4.3.1 due to loss of neutron absorption capability in the spent fuel pool (SFP) racks. Over the life of the facility, the neutron absorber in the SFP had degraded such that the Region I of the SFP could no longer maintain an effective neutron multiplication factor (Keff) of less than .95 without credit for soluble boron. Specifically, the licensee did not evaluate the effects of spent fuel pool rack swelling or available operating experience to validate the neutron absorber in the SFP continued to meet the assumptions in the criticality analysis. After testing revealed that the SFP no longer met assumptions in the criticality analysis, the licensee implemented compensatory actions to ensure the SFP remained subcritical.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; in addition, the finding impacted the initiating event cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for this finding, the inspectors evaluated the finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the finding was preliminarily of low to moderate safety significance (White). The inspectors determined that the performance deficiency did not reflect current licensee performance due to its age; therefore, the finding does not include a cross-cutting aspect.

Final WHITE determination issued in report 2010-007 dated January 20, 2010.

Inspection Report# : [2009008](#) (pdf)

Inspection Report# : [2010007](#) (pdf)

Inspection Report# : [2010009](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Risk Assessment for Maintenance Activities

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50.65 a(4) for failing to properly assess and manage the risk associated with the removal of the auxiliary feedwater (AFW) pump room floor plug during emergent maintenance activities. Specifically, the impact of the floor plug was not considered in the risk assessment and licensee personnel were unaware of resources needed to restore configuration. The performance deficiency was identified after the floor plug had been reinstalled. Prior to the next maintenance activity involving floor plugs, the licensee ensured appropriate actions were taken in accordance with their procedures. The issue was entered into the licensee's CAP as CR PLP 2010 03434.

The issue was more than minor because it adversely affected the Protection from External Factors attribute of the Mitigating Systems cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events. Additionally, the inspectors compared the issue to examples in IMC 0612 Appendix E, and concluded it was similar to example 7.e. for more than minor in that the risk assessment was not adequate for a situation where licensee procedures required risk management actions to be taken to address plant configuration. Specifically, the licensee did not perform a risk assessment for removal of the AFW pump room floor plug and did not establish adequate risk management actions to reinstall it in the event of flooding. The finding screened as Green based on an evaluation performed by a Senior Risk Analyst (SRA) using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," with a bounding risk evaluation which estimated a relatively low increase in risk for the given configuration. The finding had an associated cross cutting aspect in the area of Human

Performance (Resources) in that the licensee failed to provide complete, accurate, and up to date procedures that are adequate to ensure nuclear safety.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Actions Required by LCO 3.0.3 and 3.3.1

The inspectors identified a finding of very low safety significance (Green) and associated NCV of TS 3.3.1 and 3.0.3 for failure to comply with required TS actions. Specifically, on August 23, the licensee lost the automatic Loss of Load Trip but neither placed a trip unit in trip nor placed the plant in Mode 3 as required by TS 3.3.1 and TS 3.0.3 respectively. The licensee has restored the Loss of Load trip to operable status and entered the issue into the CAP as CR PLP 2010 03579.

The inspectors concluded that this issue was more than minor because it adversely affected the Mitigating System Cornerstone objective of ensuring the availability of systems that respond to initiating events. In addition, the inspectors reviewed IMC 0612 Appendix E and determined the issue was not similar to those items listed. The inspectors used IMC 0609 Attachment 4, Phase 1 screening, and discussed the issue with the regional SRA. The inspectors determined that the finding was of very low safety significance, Green, since the Reactor Protection System Safety Function was not lost. The finding had an associated cross cutting aspect in the area of Human Performance (Decision Making) in that the licensee failed to verify the validity of underlying assumptions.

Inspection Report# : [2010004](#) (pdf)

Significance: SL-IV Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Make an 8 Hour Report Pursuant to 10 CFR 50.72

The inspectors identified an NCV for failure to make an 8 hour report as required by 10 CFR 50.72. On August 23, the licensee lost the trip function associated with the Loss of Turbine Load but did not recognize that this condition was a loss of a safety function and reportable within 8 hours as required by 10 CFR 50.72. After discussions with the residents, the licensee reported the condition pursuant to 10 CFR 50.72. The licensee entered this condition into the CAP as CR PLP 2010 3752.

The inspectors concluded that the issue was more than minor because the failure to make the required report impacted the regulatory process. The finding affected the Mitigating System Cornerstone because the intent of the reporting is to capture events where there would have been failure of a safety system to properly operate. The Finding was processed through the traditional enforcement process. The inspectors concluded that the finding was of SL IV because failure to make a required 10 CFR 50.72 report is an example of a SL IV violation in the Enforcement Policy. The underlying cause of this issue is the same as the Green NCV listed in 1R15 so no additional cross-cutting aspect was assigned.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Ground on Preferred AC Bus Due to Improperly Installed electrical Bushing

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V for failure to accomplish activities affecting quality as prescribed by the documented instructions, procedures, or drawings. Specifically, the licensee replaced a solenoid valve on a safety related chiller in a manner that permitted a ground to develop on a preferred electrical bus after two years of operations. The licensee repaired the solenoid valve and entered the issue into the CAP as CR PLP 2010 03234.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the ground reduced the reliability of the

associated safety related electrical bus. Further, correction of the ground rendered the control room Heating, Ventilation and Air Conditioning (HVAC) chiller inoperable. The finding screened as Green because there was no loss of system safety function. The licensee determined the cause to be an improperly tightened electrical bushing, and that the proper tightening of bushings was part of electrical maintenance training. Therefore, human error prevention techniques used by the craft during assembly were not sufficient to preclude the bushing from being improperly tightened.

Inspection Report# : [2010004](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Fire Barrier

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Section 2.C(3), Fire Protection Program for failing to maintain in effect all provisions of the Fire Protection Program. Specifically, the fire protection plan requires 3-hour fire barriers, unless there is adequate justification that a fire barrier, which is less than 3 hours is acceptable. The licensee credited a 2-hour fire barrier in lieu of a 3-hour barrier based on less than two hours of combustible material in the cable spreading room. In 2006, the licensee determined the cable spreading room contained in excess of two hours worth of combustible material. As an immediate action, the licensee implemented compensatory actions and performed fire tours in the area.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the licensee had an invalid basis for the adequacy of a firewall protecting safety related equipment. The finding screened as Green because the fire barrier retained at least a two hour rating and the seismic issues did not impact both trains. The finding does not include an associated cross cutting aspect due to the issue dating back greater than three years and not reflective of current performance. (1R05)
Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Construction of Scaffolding

A finding of very low safety significance (Green) and associated NCV of Palisades Technical Specification (TS) 5.4.1, Procedures, was identified by the inspectors for failing to adequately implement a procedure to construct a scaffold near the 1 2 emergency diesel generator (EDG). Specifically, a fire sprinkler was impaired without the proper fire protection evaluation; and required seismic evaluations were not performed despite being in close proximity to safety related equipment. The issue was entered into the licensee's corrective action program and the scaffold was modified.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically a fire protection feature (sprinkler) in a safety related area was affected without compensatory measures. Additionally, the scaffold was in close proximity to safety related equipment, and the equipment could have been impacted by a seismic event. The finding screened as Green based on remaining sprinkler capability and the fact that only one EDG could be affected by the scaffold during a seismic event. The finding had an associated cross cutting aspect in the area of Human Performance (Planning) in that the licensee failed to appropriately plan work activities by incorporating the need for compensatory actions (H.3(a)). (1R05)

Inspection Report# : [2010002](#) (pdf)

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Agastat Time Delay Relays Design, Testing and Configuration Control Issues

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III “Design Control,” was identified by the inspectors for the licensee’s failure to translate the design bases into design drawings, procedures and appropriate test instructions. Specifically, the design basis requirements for Agastat Time Delay Relays (TDR) settings, as well as vendor tolerances, were not accurately reflected in the design drawings, procedures and test instructions for numerous TDR calibrations. This issue was entered into the licensee’s corrective action program.

The inspectors determined that the finding was more than minor because it was associated with the Mitigating System Cornerstone attribute of “Design Control,” and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to ensure that safety-related TDRs would operate, within the design specified setpoints and allowed tolerances, could lead to the inability of safety-related systems and components to respond to design basis events (e.g., during load sequencing onto the EDG). The finding screened as being of very low safety-significance because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee’s subsequent evaluation of the TDRs tolerances showed that available margin remained for satisfactory completion of the required safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee did not incorporate operating experience (OE) information, including internally generated lessons learned, to support plant safety. Specifically, even though the licensee was aware of the potential inadequacies of the Agastat TDR setpoints through internal OE, the licensee failed to adequately respond to the OE by implementing appropriate changes to station processes, procedures, equipment, and training program.

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

Significance:  Dec 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Translate the Design Basis for the CV-11 Control Room HVAC Chiller Into Specifications and Drawings

A finding of very low safety-significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the licensee’s failure to translate and incorporate design basis criteria that ensured the functionality of TDRs for the CR HVAC chillers into design drawings, procedures and work instructions for implementation. Specifically, even though the licensee reduced the replacement interval frequency for the chiller mounted TDRs due to high vibration levels to ensure functionality, and then initiated Work Orders (WOs) to perform this replacement, one WO was closed without replacing the TDRs as intended, and the second WO was not approved for implementation. This issue was entered into the licensee’s corrective action program.

The inspectors determined that the finding was more than minor because this failure to establish measures to translate and incorporate design basis criteria to ensure the functionality of TDRs for the CR HVAC chillers could lead to the inability of the chillers to respond to design basis events. Specifically, the finding screened as of very low safety-significance (Green) because the finding did not represent loss of system safety function.

This finding has an associated cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such as that the resolution addresses causes and extent of condition, as necessary. This includes properly evaluating for operability conditions adverse to quality.

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

Barrier Integrity

Emergency Preparedness

Significance:  Mar 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Evaluation of Interface with State and Local Governments

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(t), "Conditions of licenses," for the failure to complete an independent review of all program elements of the emergency preparedness program. The independent assessment did not evaluate and document the adequacy of the interfaces with State and local governments at an interval not to exceed 12 months for all groups. Specifically, Quality Assurance's assessment failed to evaluate the adequacy of interface with one of the counties in 2008, and the interface with the State and two counties was not evaluated in 2009. The licensee entered the issue in their corrective action program as CR-PLP-2009-04915.

The deficiency did not meet the criteria for traditional enforcement, therefore, was screened using the Emergency Preparedness (EP) SDP. The finding was determined to be more than minor because the finding adversely affected the EP cornerstone objective to ensure the licensee is capable of implementing adequate measures to protect the health and safety of the public in a radiological emergency. The failure to conduct the audit to evaluate the effectiveness of the EP program had the attribute associated with Offsite EP, specifically, the evaluation of the working relationship between the offsite and onsite emergency response organizations and programs. The inspector evaluated the finding using with IMC 0609, Appendix B, Sheet I, Failure to Comply flowchart. The audit program was noncompliant with a regulatory requirement not involving an EP planning standard or a risk significant planning standard; therefore, the finding was determined to be of very low safety significance (Green).

The finding has a cross-cutting component in the Problem Identification and Resolution area with the component of Self and Independent Assessments. The licensee did not conduct the self-assessments in sufficient depth to evaluate the interfaces for all offsite governments. (P.3(a)) (Section 1EP5)

Inspection Report# : [2010502](#) (*pdf*)

Occupational Radiation Safety

Public Radiation Safety

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately manage Changes to the ODCM

The inspectors identified a finding of very low-safety-significance and an associated NCV for the failure to implement TS requirement 5.5.1, Offsite Dose Calculation Manual (ODCM). Specifically, the inspectors determined that the evaluation written to support the 2004 change to eliminate drinking water well sampling from the ODCM was not correct. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. Corrective actions were being developed in the corrective action program (condition report (CR) PLP 2010 01013) and senior plant management expressed the understanding that sampling was important and the condition would be corrected.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. The finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low safety significance because it involved the environmental monitoring program. The finding was not associated with a cross cutting aspect because the flawed evaluation occurred in 2004 and appeared to be a legacy issue which did not represent current licensee performance. (Section 40A5)

Inspection Report# : [2010002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : November 29, 2010

Palisades

4Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Examination of Head Penetration Nozzles Nos. 1 and 3

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” were identified by the inspectors for the licensee’s failure to follow Procedure CEP-NDE-0955, “Visual Examination of Bare-Metal Surfaces,” and perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within 4 feet. Instead, the licensee performed the examination at approximately 5 feet and the illumination level at this distance had not been demonstrated as adequate to detect primary coolant system leakage. As a corrective action, the licensee’s examiner repeated the bare metal visual examination of nozzles Nos. 1 and 3 and surrounding head surfaces at a distance of less than 4 feet. The violation was entered into the licensee’s corrective action program as condition report (CR) PLP-2010-05188.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would have continued to perform inadequate examinations of the surfaces of the vessel head near nozzles Nos. 1 and 3, which could allow through-wall nozzle cracks to go undetected. Undetected cracks returned to service would place the vessel head at increased risk for leakage and/or nozzle failure, which affected the Initiating Events Cornerstone attribute of Equipment Performance (barrier integrity). The licensee promptly corrected this issue by repeating the examination of nozzles Nos. 1 and 3 in accordance with the procedure to confirm that no evidence of nozzle leakage existed. The inspectors answered “No” to the Significance Determination Process Phase I screening question “Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any Primary Coolant System (PCS) leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation”? Therefore, the finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, the failure to perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within four feet occurred because the licensee’s management staff did not adequately stress or enforce procedure adherence for this activity. In particular, procedure CEP-NDE-0955 was issued as an “Informational Use” type procedure that was not required to be present at the worksite and thus allowed licensee staff to rely on memory to perform the procedural steps.

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Low Pressure Alarms During Reduced Inventory Operations

A finding of very low safety significance and associated NCV of 10 CFR 50.65a(4) was self-revealed for the failure to properly assess and manage risk when service water low pressure alarms were received during orange risk reduced inventory operations. The work control center authorized a non-critical service water valve to be stroked with the belief that the system was filled and vented thus precluding an impact on the service water system. However, that portion of the system had not been filled yet. As a result, opening the valve caused a pressure drop in the system. The licensee started a standby service water pump to restore pressure. The issue was also entered into the corrective action program.

The inspectors determined the finding was more than minor based in-part on example 7g of IMC 0612, Appendix E, which describes a condition where a safety function is significantly degraded without sufficient compensation.

Additionally, as described in IMC 0612 Appendix B, the issue is associated with the configuration control attribute and impacted the Initiating Events Cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions in that proper configuration control was not maintained over the shutdown equipment lineup. Utilizing IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, the inspectors determined the issue was Green in Phase I screening since there was adequate mitigation capability and there was no loss of control. The finding had a cross cutting aspect in the area of Human Performance, Work Control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities to assure plant performance. Specifically, the licensee failed to determine the current status of the service water system and did not evaluate potential impacts during a period of elevated plant risk.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Daily Crane Checks

The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program. The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities. (H.3(b))The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities.

Inspection Report# : [2010005](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Code Requirements Met When Performing VT-2 Exams

The inspectors identified a finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to ensure that American Society of Mechanical Engineers

(ASME) Code and site procedural requirements were understood and incorporated during the performance of VT 2 in service inspections. Specifically, the illumination requirements specified in the Code had not been properly incorporated into all site examination procedures, nor were Operations personnel aware of the specific requirements. The licensee disseminated guidance clarifying the requirements and entered the issue into corrective action program (CAP) as CR PLP 2010 03756.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, VT 2 exams performed without fundamental knowledge of Code and procedural requirements could lead to erroneous examination results. The finding screened as Green because no known actual component degradation went undetected as a result of improperly performed exams. The finding had an associated cross cutting aspect in the area of Human Performance (Procedures), in that the licensee failed to have complete, accurate, and up to date procedures and work packages for the VT 2 examinations.

Inspection Report# : [2010004](#) (*pdf*)

Significance:  Sep 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Action to Prevent Recurrence Failed to Address Root Causes

The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades Technical Specification 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a Corrective Action to Prevent Recurrence (CAPR) to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee. This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate corrective action to prevent recurrence of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to additional NRC findings have been adequate to prevent recurrence. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. (P.1(c))

Inspection Report# : [2010009](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Pipe Welds Not Incorporated into the ISI Program

A finding of very low safety significance and associated NCV of 10 CFR 50.55a(g)4 was identified by the inspectors for the licensee's failure to establish a weld reference system for 11 welds in the cross-tie line between the chemical and volume control system and the containment spray system. Consequently, these welds had not been entered into the inservice inspection weld database used to schedule followup surface or volumetric examinations. To correct this

issue, the licensee implemented changes to the applicable Inservice Inspection isometric drawings and entered these welds into the Inservice Inspection database. The violation was entered into the licensee's corrective action program as CR PLP-2010-05229.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would not have examined a sample of these welds, which could have allowed service induced cracks to go undetected. Undetected cracks would place the cross-tie pipe segment at increased risk for through-wall leakage and/or failure, which affected the Mitigating System Cornerstone attribute of Equipment Performance (reliability). The licensee promptly corrected this issue and scheduled weld examinations to ensure cracks would be detected. The inspectors answered "Yes" to the Significance Determination Process Phase I screening question; "Is the finding a design or qualification deficiency confirmed not to result in loss of operability or functionality"? Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide complete, accurate, and up-to-date procedures, or work packages for the correct labeling of components. Specifically, the licensee staff failed to establish a weld reference system because up-to-date procedures were not developed to ensure identification and labeling of new welds installed in safety-related systems.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Required Quality Control Inspections

Inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion X, "Inspection," for the failure to ensure that Quality Control (QC) verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee's conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of QC verification inspections. This issue was entered into the corrective action program under CRs CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems Cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether QC verification inspections were appropriate.

Inspection Report# : [2010005](#) (pdf)

Significance: SL-IV Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide Complete and Accurate Information

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 for the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, in a letter on dated October 5, 2009, the licensee inaccurately stated new couplings for a service water pump were independently tested prior to installation. The licensee provided this information as part of a request for a Notice of Enforcement Discretion (NOED). The licensee requested the NOED due to a failure of a service water pump coupling that had not been properly heat

treated. The licensee subsequently informed the NRC that the tests had not been performed and entered the condition into the corrective action program.

The inspectors concluded that the licensee had reasonable opportunity to foresee and correct the inaccurate/incomplete information prior to the information being submitted to the NRC. As a result, this issue was considered a performance deficiency. Using the information provided in IMC 0612, Appendix B, "Issue Screening," the inspectors determined that traditional enforcement was warranted, because violations of 10 CFR 50.9 are considered to potentially impede or impact the regulatory process. Specifically, in order to determine the acceptability of granting discretion, the NRC needed assurance that the replacement couplings met hardness requirements. Using the information provided in the Enforcement Policy, Section 6.9, this issue was determined to be a Severity Level (SL) IV NCV, as it did not meet the definition for a Severity Level I, II, or III Violation. Specifically the violation was not greater than SL IV, because the inspectors concluded that the lack of hardness testing did not impact the NRC's conclusion since the licensee did not enter the period of enforcement discretion. The inspectors also evaluated the underlying performance deficiency under the ROP. Since the licensee did not enter the period of enforcement discretion and all the questions for more than minor in Appendix B were answered no, the inspectors concluded that there was no ROP finding and therefore no cross-cutting aspect.

Inspection Report# : [2010005](#) (pdf)

Significance:  Oct 22, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures.

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor examiner for Non-Destructive Examination (NDE) failed to perform an ultrasonic (UT) wall thickness (one-time inspection) examination in accordance with procedures on the T-81, Primary System Makeup Storage Tank. The licensee initiated corrective action document CR-PLP-2010-04653 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation. This finding is of very low safety-significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of IMC 0609.04. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures [H.4 (b)]. (Section 40A5.1.b (1))

Inspection Report# : [2010010](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Risk Assessment for Maintenance Activities

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50.65 a(4) for failing to properly assess and manage the risk associated with the removal of the auxiliary feedwater (AFW) pump room floor plug during emergent maintenance activities. Specifically, the impact of the floor plug was not considered in the risk assessment and licensee personnel were unaware of resources needed to restore configuration. The performance deficiency was identified after the floor plug had been reinstalled. Prior to the next maintenance activity involving floor plugs, the licensee ensured appropriate actions were taken in accordance with their procedures. The issue was entered into the licensee's CAP as CR PLP 2010 03434.

The issue was more than minor because it adversely affected the Protection from External Factors attribute of the Mitigating Systems cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that

respond to initiating events. Additionally, the inspectors compared the issue to examples in IMC 0612 Appendix E, and concluded it was similar to example 7.e. for more than minor in that the risk assessment was not adequate for a situation where licensee procedures required risk management actions to be taken to address plant configuration. Specifically, the licensee did not perform a risk assessment for removal of the AFW pump room floor plug and did not establish adequate risk management actions to reinstall it in the event of flooding. The finding screened as Green based on an evaluation performed by a Senior Risk Analyst (SRA) using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," with a bounding risk evaluation which estimated a relatively low increase in risk for the given configuration. The finding had an associated cross cutting aspect in the area of Human Performance (Resources) in that the licensee failed to provide complete, accurate, and up to date procedures that are adequate to ensure nuclear safety.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Actions Required by LCO 3.0.3 and 3.3.1

The inspectors identified a finding of very low safety significance (Green) and associated NCV of TS 3.3.1 and 3.0.3 for failure to comply with required TS actions. Specifically, on August 23, the licensee lost the automatic Loss of Load Trip but neither placed a trip unit in trip nor placed the plant in Mode 3 as required by TS 3.3.1 and TS 3.0.3 respectively. The licensee has restored the Loss of Load trip to operable status and entered the issue into the CAP as CR PLP 2010 03579.

The inspectors concluded that this issue was more than minor because it adversely affected the Mitigating System Cornerstone objective of ensuring the availability of systems that respond to initiating events. In addition, the inspectors reviewed IMC 0612 Appendix E and determined the issue was not similar to those items listed. The inspectors used IMC 0609 Attachment 4, Phase 1 screening, and discussed the issue with the regional SRA. The inspectors determined that the finding was of very low safety significance, Green, since the Reactor Protection System Safety Function was not lost. The finding had an associated cross cutting aspect in the area of Human Performance (Decision Making) in that the licensee failed to verify the validity of underlying assumptions.

This is related to traditional enforcement item 2010-004-03.

Inspection Report# : [2010004](#) (pdf)

Significance: SL-IV Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Make an 8 Hour Report Pursuant to 10 CFR 50.72

The inspectors identified an NCV for failure to make an 8 hour report as required by 10 CFR 50.72. On August 23, the licensee lost the trip function associated with the Loss of Turbine Load but did not recognize that this condition was a loss of a safety function and reportable within 8 hours as required by 10 CFR 50.72. After discussions with the residents, the licensee reported the condition pursuant to 10 CFR 50.72. The licensee entered this condition into the CAP as CR PLP 2010 3752.

The inspectors concluded that the issue was more than minor because the failure to make the required report impacted the regulatory process. The finding affected the Mitigating System Cornerstone because the intent of the reporting is to capture events where there would have been failure of a safety system to properly operate. The Finding was processed through the traditional enforcement process. The inspectors concluded that the finding was of SL IV because failure to make a required 10 CFR 50.72 report is an example of a SL IV violation in the Enforcement Policy. The underlying cause of this issue is the same as the Green NCV listed in 1R15 so no additional cross-cutting aspect was assigned.

This is related to performance deficiency 2010-004-02.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Ground on Preferred AC Bus Due to Improperly Installed electrical Bushing

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V for failure to accomplish activities affecting quality as prescribed by the documented instructions, procedures, or drawings. Specifically, the licensee replaced a solenoid valve on a safety related chiller in a manner that permitted a ground to develop on a preferred electrical bus after two years of operations. The licensee repaired the solenoid valve and entered the issue into the CAP as CR PLP 2010 03234.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the ground reduced the reliability of the associated safety related electrical bus. Further, correction of the ground rendered the control room Heating, Ventilation and Air Conditioning (HVAC) chiller inoperable. The finding screened as Green because there was no loss of system safety function. The licensee determined the cause to be an improperly tightened electrical bushing, and that the proper tightening of bushings was part of electrical maintenance training. Therefore, human error prevention techniques used by the craft during assembly were not sufficient to preclude the bushing from being improperly tightened.

Inspection Report# : [2010004](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Fire Barrier

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of License Section 2.C(3), Fire Protection Program for failing to maintain in effect all provisions of the Fire Protection Program. Specifically, the fire protection plan requires 3-hour fire barriers, unless there is adequate justification that a fire barrier, which is less than 3 hours is acceptable. The licensee credited a 2-hour fire barrier in lieu of a 3-hour barrier based on less than two hours of combustible material in the cable spreading room. In 2006, the licensee determined the cable spreading room contained in excess of two hours worth of combustible material. As an immediate action, the licensee implemented compensatory actions and performed fire tours in the area.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the licensee had an invalid basis for the adequacy of a firewall protecting safety related equipment. The finding screened as Green because the fire barrier retained at least a two hour rating and the seismic issues did not impact both trains. The finding does not include an associated cross cutting aspect due to the issue dating back greater than three years and not reflective of current performance. (1R05)

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Construction of Scaffolding

A finding of very low safety significance (Green) and associated NCV of Palisades Technical Specification (TS) 5.4.1, Procedures, was identified by the inspectors for failing to adequately implement a procedure to construct a scaffold near the 1 2 emergency diesel generator (EDG). Specifically, a fire sprinkler was impaired without the proper fire protection evaluation; and required seismic evaluations were not performed despite being in close proximity to safety related equipment. The issue was entered into the licensee's corrective action program and the scaffold was modified.

The issue is more than minor because it affects the Protection Against External Events attribute of the Mitigating Systems Cornerstone in that it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically a fire protection feature (sprinkler) in a safety related area was affected without compensatory measures. Additionally, the scaffold was in close proximity to safety related

equipment, and the equipment could have been impacted by a seismic event. The finding screened as Green based on remaining sprinkler capability and the fact that only one EDG could be affected by the scaffold during a seismic event. The finding had an associated cross cutting aspect in the area of Human Performance (Planning) in that the licensee failed to appropriately plan work activities by incorporating the need for compensatory actions (H.3(a)). (1R05)
Inspection Report# : [2010002](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Evaluation of Interface with State and Local Governments

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(t), “Conditions of licenses,” for the failure to complete an independent review of all program elements of the emergency preparedness program. The independent assessment did not evaluate and document the adequacy of the interfaces with State and local governments at an interval not to exceed 12 months for all groups. Specifically, Quality Assurance’s assessment failed to evaluate the adequacy of interface with one of the counties in 2008, and the interface with the State and two counties was not evaluated in 2009. The licensee entered the issue in their corrective action program as CR-PLP-2009-04915.

The deficiency did not meet the criteria for traditional enforcement, therefore, was screened using the Emergency Preparedness (EP) SDP. The finding was determined to be more than minor because the finding adversely affected the EP cornerstone objective to ensure the licensee is capable of implementing adequate measures to protect the health and safety of the public in a radiological emergency. The failure to conduct the audit to evaluate the effectiveness of the EP program had the attribute associated with Offsite EP, specifically, the evaluation of the working relationship between the offsite and onsite emergency response organizations and programs. The inspector evaluated the finding using with IMC 0609, Appendix B, Sheet I, Failure to Comply flowchart. The audit program was noncompliant with a regulatory requirement not involving an EP planning standard or a risk significant planning standard; therefore, the finding was determined to be of very low safety significance (Green).

The finding has a cross-cutting component in the Problem Identification and Resolution area with the component of Self and Independent Assessments. The licensee did not conduct the self-assessments in sufficient depth to evaluate the interfaces for all offsite governments. (P.3(a)) (Section 1EP5)

Inspection Report# : [2010502](#) (pdf)

Occupational Radiation Safety

Public Radiation Safety

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately manage Changes to the ODCM

The inspectors identified a finding of very low-safety-significance and an associated NCV for the failure to implement TS requirement 5.5.1, Offsite Dose Calculation Manual (ODCM). Specifically, the inspectors determined that the evaluation written to support the 2004 change to eliminate drinking water well sampling from the ODCM was not correct. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. Corrective actions were being developed in the corrective action program (condition report (CR) PLP 2010 01013) and senior plant management expressed the understanding that sampling was important and the condition would be corrected.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. The finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low safety significance because it involved the environmental monitoring program. The finding was not associated with a cross cutting aspect because the flawed evaluation occurred in 2004 and appeared to be a legacy issue which did not represent current licensee performance. (Section 4OA5)

Inspection Report# : [2010002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : March 03, 2011

Palisades

1Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Switchgear Weather Proof

A finding of very low safety significance without an associated NCV was self-revealed when a loss of the rear bus and loss of one cooling tower occurred. The licensee failed to maintain the enclosure for F and G busses weatherproof as stipulated in the design basis documents for the 4160V electrical system. In addition, the licensee cancelled a preventive maintenance task to inspect the enclosure's caulking. Due to degradation of the seals, water intruded into the F bus switchgear and caused a short and explosion resulting in loss of one qualified circuit of offsite power. This resulted in entry into an Emergency Action Level (EAL) of an Usual Event (the lowest emergency classification). As an immediate action, the licensee reduced power to about 55 percent. The licensee entered the finding into their corrective action program (CAP).

The finding was more than minor because it impacted the initiating event cornerstone objective of limiting the likelihood of those events that upset plant stability and is associated with the attribute of equipment performance. Using IMC 0609 Appendix A the inspectors determined the finding was of very low safety significance because even though the issue impacted the transient initiating event frequency, it did not impact the mitigating system availability. The inspectors determined there was no cross-cutting aspect because the causes of the failure to maintain the switchgear enclosure are not reflective of current performance. There was no violation of NRC requirements.

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Examination of Head Penetration Nozzles Nos. 1 and 3

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the licensee's failure to follow Procedure CEP-NDE-0955, "Visual Examination of Bare-Metal Surfaces," and perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within 4 feet. Instead, the licensee performed the examination at approximately 5 feet and the illumination level at this distance had not been demonstrated as adequate to detect primary coolant system leakage. As a corrective action, the licensee's examiner repeated the bare metal visual examination of nozzles Nos. 1 and 3 and surrounding head surfaces at a distance of less than 4 feet. The violation was entered into the licensee's corrective action program as condition report (CR) PLP-2010-05188.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would have continued to perform inadequate examinations of the surfaces of the vessel head near nozzles Nos. 1 and 3, which could allow through-wall nozzle cracks to go undetected. Undetected cracks returned to service would place the vessel head at increased risk for leakage and/or nozzle failure, which affected the Initiating Events Cornerstone attribute of Equipment Performance (barrier integrity). The licensee promptly corrected this issue by repeating the examination of nozzles Nos. 1 and 3 in accordance with the procedure to confirm that no evidence of nozzle leakage existed. The inspectors answered "No" to the Significance Determination Process Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any Primary Coolant System (PCS) leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation"? Therefore, the finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not

effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, the failure to perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within four feet occurred because the licensee's management staff did not adequately stress or enforce procedure adherence for this activity. In particular, procedure CEP-NDE-0955 was issued as an "Informational Use" type procedure that was not required to be present at the worksite and thus allowed licensee staff to rely on memory to perform the procedural steps.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Low Pressure Alarms During Reduced Inventory Operations

A finding of very low safety significance and associated NCV of 10 CFR 50.65a(4) was self-revealed for the failure to properly assess and manage risk when service water low pressure alarms were received during orange risk reduced inventory operations. The work control center authorized a non-critical service water valve to be stroked with the belief that the system was filled and vented thus precluding an impact on the service water system. However, that portion of the system had not been filled yet. As a result, opening the valve caused a pressure drop in the system. The licensee started a standby service water pump to restore pressure. The issue was also entered into the corrective action program.

The inspectors determined the finding was more than minor based in-part on example 7g of IMC 0612, Appendix E, which describes a condition where a safety function is significantly degraded without sufficient compensation. Additionally, as described in IMC 0612 Appendix B, the issue is associated with the configuration control attribute and impacted the Initiating Events Cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions in that proper configuration control was not maintained over the shutdown equipment lineup. Utilizing IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, the inspectors determined the issue was Green in Phase I screening since there was adequate mitigation capability and there was no loss of control. The finding had a cross cutting aspect in the area of Human Performance, Work Control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities to assure plant performance. Specifically, the licensee failed to determine the current status of the service water system and did not evaluate potential impacts during a period of elevated plant risk.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Daily Crane Checks

The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program. The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities. (H.3(b))The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The

procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities.

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Code Requirements Met When Performing VT-2 Exams

The inspectors identified a finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to ensure that American Society of Mechanical Engineers (ASME) Code and site procedural requirements were understood and incorporated during the performance of VT 2 in service inspections. Specifically, the illumination requirements specified in the Code had not been properly incorporated into all site examination procedures, nor were Operations personnel aware of the specific requirements. The licensee disseminated guidance clarifying the requirements and entered the issue into corrective action program (CAP) as CR PLP 2010 03756.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, VT 2 exams performed without fundamental knowledge of Code and procedural requirements could lead to erroneous examination results. The finding screened as Green because no known actual component degradation went undetected as a result of improperly performed exams. The finding had an associated cross cutting aspect in the area of Human Performance (Procedures), in that the licensee failed to have complete, accurate, and up to date procedures and work packages for the VT 2 examinations.

Inspection Report# : [2010004](#) (*pdf*)

Significance:  Sep 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Action to Prevent Recurrence Failed to Address Root Causes

The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades Technical Specification 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a Corrective Action to Prevent Recurrence (CAPR) to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee. This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate corrective action to prevent recurrence of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate

safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to additional NRC findings have been adequate to prevent recurrence. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. (P.1(c))

Inspection Report# : [2010009](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Account for Potential Age-Related Degradation in EDG Governors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, for the failure to recognize and account for potential age-related degradation of capacitors in the emergency diesel generator (EDG) digital reference units design controls. Specifically, the installed capacitors were found beyond industry and vendor recommended useful life and if they were to degrade, could impact safety-related functions of the EDGs. The licensee entered the issue into their Corrective Action Program and replaced the digital reference units.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern because the capacitors would continue to degrade. The finding affected the Mitigating Systems Cornerstone and screened as very low safety significance (Green) based on the assessment that the operability of the EDG was maintained, and answering 'no' to all questions for that cornerstone in IMC 0609 Attachment 4, table 4a. The finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution. Specifically, the licensee did not use operating experience information, including vendor recommendations, to support plant safety in that relevant information was not collected, evaluated, and communicated in a timely manner. Although the part 21 was issued in 2001, the licensee had the opportunity to identify the condition in March 2011 when evaluating the acceptability for continued use of EDG governor components that were also impacted by the 2001 part 21.

Inspection Report# : [2011002](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Assure Adequate Resolution for Remote Visual Examinations

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure of a licensee non-destructive examination examiner to accomplish activities affecting quality in accordance with procedures. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor, because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to perform an adequate visual testing examination on liquid Freon piping of refrigeration condensing unit VC 10 did not assure that the intended function of the unit would be maintained consistent with the current licensing basis through the period of ended operation. The finding was of very low safety significance based on a Phase I screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 4a because the licensee's re-examination confirmed operability and no loss of safety function. The finding has a cross-cutting aspect in the area of human performance, work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported.

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Test Results for Diesel Fuel Oil Tanks Not Evaluated

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” was identified by the inspectors for the failure to evaluate test results for tank wall thickness under the scope of the Diesel Fuel Quality and Storage Monitoring Program. Specifically, the licensee did not evaluate the test results associated with the ultrasonic measurement of thickness of the bottom of the ‘A’ emergency diesel generator day tank and both diesel fire pump day tanks. In addition, the licensee had not developed acceptance criteria for this activity. The licensee entered this issue into their corrective action program. The corrective actions that were been considered at the time of this inspection were the development of an acceptance criteria for tank wall thickness and performing an apparent cause evaluation.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the ultrasonic examination results showed that the wall thicknesses of the inspected tanks were close to the nominal thickness or greater. The finding had a cross-cutting aspect in the area of human performance because the licensee did not have complete design documentation, procedures, and work packages for performing non-destructive examinations of the bottom walls of the tanks under the scope of the Diesel Fuel Monitoring and Storage Aging Management Program.

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Tank T-10A Not Age Managed for Effect of Identified Water

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified by the inspectors for the failure to promptly correct a condition adverse to quality associated with the emergency diesel generator fuel oil storage tank, T-10A. Specifically, the licensee did not follow Procedure No 3.26 when addressing the accumulated water in between the partial double wall and on the exterior wall of T-10A. The associated aging effects of the water were not properly managed because these conditions were not evaluated. The licensee entered this issue into the corrective action program. The corrective actions that were been considered at the time of this inspection were to perform an assessment of methods used to integrate operating experiences to their aging management programs, evaluate the cause of not evaluating the potential effects of the water on tank T-10A, and remove the accumulated water.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the accumulated water in the annulus and on the exterior wall of T-10A had not resulted in the loss of functionality of the tank because there is no indication that either water is leaking from the annulus to the tank interior or fuel oil is leaking into the annulus. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely because the associated corrective actions focused on the removal of the water and did not consider potential age management of the component.

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Flow Accelerated Corrosion Program Acceptance Limits Not in Accordance with Design Standard

A finding of very low safety significance was identified by the inspectors for the failure to assure an engineering evaluation was initiated if pipe wall thickness measurements fall below 87.5 percent of nominal pipe wall thickness. Specifically, computer software utilized by the flow accelerated corrosion program was not modified to initiate an engineering evaluation if degraded pipe wall thickness measurements were less than 87.5 percent of nominal pipe wall thickness. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, the finding would become a more safety significant concern. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred because the affected piping was non-safety-related. The finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee failed to provide effective supervisory oversight of work activities such that nuclear safety is supported.

Inspection Report# : [2011008](#) (*pdf*)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Adequate Oil Sampling and Analysis Aging Management Program

A finding of very low safety significance was identified by the inspectors for the failure to: (1) develop and implement an oil sampling and analysis aging management program with specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation. The licensee entered these issues into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to: (1) provide specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation did not assure that plant equipment within the scope of the oil sampling and analysis aging management program would be maintained consistent with the current design basis through the extended period of operation. The inspectors screened the finding using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred. The finding has a cross-cutting aspect in the area of Human Performance for the resources component because the implementing procedures did not include guidance defining parameters of the program.

Inspection Report# : [2011008](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Pipe Welds Not Incorporated into the ISI Program

A finding of very low safety significance and associated NCV of 10 CFR 50.55a(g)4 was identified by the inspectors for the licensee's failure to establish a weld reference system for 11 welds in the cross-tie line between the chemical and volume control system and the containment spray system. Consequently, these welds had not been entered into the inservice inspection weld database used to schedule followup surface or volumetric examinations. To correct this issue, the licensee implemented changes to the applicable Inservice Inspection isometric drawings and entered these welds into the Inservice Inspection database. The violation was entered into the licensee's corrective action program as CR PLP-2010-05229.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would not have examined a sample of these welds, which could have allowed service induced cracks to go undetected. Undetected cracks would place the cross-tie pipe segment at increased risk for through-wall leakage and/or failure, which affected the Mitigating System Cornerstone attribute of Equipment Performance (reliability). The licensee promptly corrected this issue and scheduled weld examinations to ensure cracks would be detected. The inspectors answered “Yes” to the Significance Determination Process Phase I screening question; “Is the finding a design or qualification deficiency confirmed not to result in loss of operability or functionality”? Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide complete, accurate, and up-to-date procedures, or work packages for the correct labeling of components. Specifically, the licensee staff failed to establish a weld reference system because up-to-date procedures were not developed to ensure identification and labeling of new welds installed in safety-related systems.

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Required Quality Control Inspections

Inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion X, “Inspection,” for the failure to ensure that Quality Control (QC) verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee’s conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of QC verification inspections. This issue was entered into the corrective action program under CRs CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems Cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether QC verification inspections were appropriate.

Inspection Report# : [2010005](#) (*pdf*)

Significance: SL-IV Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide Complete and Accurate Information

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 for the licensee’s failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, in a letter on dated October 5, 2009, the licensee inaccurately stated new couplings for a service water pump were independently tested prior to installation. The licensee provided this information as part of a request for a Notice of Enforcement Discretion (NOED). The licensee requested the NOED due to a failure of a service water pump coupling that had not been properly heat treated. The licensee subsequently informed the NRC that the tests had not been performed and entered the condition into the corrective action program.

The inspectors concluded that the licensee had reasonable opportunity to foresee and correct the inaccurate/incomplete information prior to the information being submitted to the NRC. As a result, this issue was considered a performance deficiency. Using the information provided in IMC 0612, Appendix B, "Issue Screening," the inspectors determined that traditional enforcement was warranted, because violations of 10 CFR 50.9 are considered to potentially impede or impact the regulatory process. Specifically, in order to determine the acceptability of granting discretion, the NRC needed assurance that the replacement couplings met hardness requirements. Using the information provided in the Enforcement Policy, Section 6.9, this issue was determined to be a Severity Level (SL) IV NCV, as it did not meet the definition for a Severity Level I, II, or III Violation. Specifically the violation was not greater than SL IV, because the inspectors concluded that the lack of hardness testing did not impact the NRC's conclusion since the licensee did not enter the period of enforcement discretion. The inspectors also evaluated the underlying performance deficiency under the ROP. Since the licensee did not enter the period of enforcement discretion and all the questions for more than minor in Appendix B were answered no, the inspectors concluded that there was no ROP finding and therefore no cross-cutting aspect.

Inspection Report# : [2010005](#) (pdf)

Significance:  Oct 22, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures.

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor examiner for Non-Destructive Examination (NDE) failed to perform an ultrasonic (UT) wall thickness (one-time inspection) examination in accordance with procedures on the T-81, Primary System Makeup Storage Tank. The licensee initiated corrective action document CR-PLP-2010-04653 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation. This finding is of very low safety-significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of IMC 0609.04. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures [H.4 (b)]. (Section 4OA5.1.b (1))

Inspection Report# : [2010010](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Risk Assessment for Maintenance Activities

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50.65 a(4) for failing to properly assess and manage the risk associated with the removal of the auxiliary feedwater (AFW) pump room floor plug during emergent maintenance activities. Specifically, the impact of the floor plug was not considered in the risk assessment and licensee personnel were unaware of resources needed to restore configuration. The performance deficiency was identified after the floor plug had been reinstalled. Prior to the next maintenance activity involving floor plugs, the licensee ensured appropriate actions were taken in accordance with their procedures. The issue was entered into the licensee's CAP as CR PLP 2010 03434.

The issue was more than minor because it adversely affected the Protection from External Factors attribute of the Mitigating Systems cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events. Additionally, the inspectors compared the issue to examples in IMC 0612 Appendix E, and concluded it was similar to example 7.e. for more than minor in that the risk assessment was not adequate for a situation where licensee procedures required risk management actions to be taken to address plant configuration.

Specifically, the licensee did not perform a risk assessment for removal of the AFW pump room floor plug and did not establish adequate risk management actions to reinstall it in the event of flooding. The finding screened as Green based on an evaluation performed by a Senior Risk Analyst (SRA) using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," with a bounding risk evaluation which estimated a relatively low increase in risk for the given configuration. The finding had an associated cross cutting aspect in the area of Human Performance (Resources) in that the licensee failed to provide complete, accurate, and up to date procedures that are adequate to ensure nuclear safety.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Actions Required by LCO 3.0.3 and 3.3.1

The inspectors identified a finding of very low safety significance (Green) and associated NCV of TS 3.3.1 and 3.0.3 for failure to comply with required TS actions. Specifically, on August 23, the licensee lost the automatic Loss of Load Trip but neither placed a trip unit in trip nor placed the plant in Mode 3 as required by TS 3.3.1 and TS 3.0.3 respectively. The licensee has restored the Loss of Load trip to operable status and entered the issue into the CAP as CR PLP 2010 03579.

The inspectors concluded that this issue was more than minor because it adversely affected the Mitigating System Cornerstone objective of ensuring the availability of systems that respond to initiating events. In addition, the inspectors reviewed IMC 0612 Appendix E and determined the issue was not similar to those items listed. The inspectors used IMC 0609 Attachment 4, Phase 1 screening, and discussed the issue with the regional SRA. The inspectors determined that the finding was of very low safety significance, Green, since the Reactor Protection System Safety Function was not lost. The finding had an associated cross cutting aspect in the area of Human Performance (Decision Making) in that the licensee failed to verify the validity of underlying assumptions.

This is related to traditional enforcement item 2010-004-03.

Inspection Report# : [2010004](#) (pdf)

Significance: SL-IV Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Make an 8 Hour Report Pursuant to 10 CFR 50.72

The inspectors identified an NCV for failure to make an 8 hour report as required by 10 CFR 50.72. On August 23, the licensee lost the trip function associated with the Loss of Turbine Load but did not recognize that this condition was a loss of a safety function and reportable within 8 hours as required by 10 CFR 50.72. After discussions with the residents, the licensee reported the condition pursuant to 10 CFR 50.72. The licensee entered this condition into the CAP as CR PLP 2010 3752.

The inspectors concluded that the issue was more than minor because the failure to make the required report impacted the regulatory process. The finding affected the Mitigating System Cornerstone because the intent of the reporting is to capture events where there would have been failure of a safety system to properly operate. The Finding was processed through the traditional enforcement process. The inspectors concluded that the finding was of SL IV because failure to make a required 10 CFR 50.72 report is an example of a SL IV violation in the Enforcement Policy. The underlying cause of this issue is the same as the Green NCV listed in 1R15 so no additional cross-cutting aspect was assigned.

This is related to performance deficiency 2010-004-02.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Ground on Preferred AC Bus Due to Improperly Installed electrical Bushing

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V for failure to accomplish activities affecting quality as prescribed by the documented instructions, procedures, or drawings. Specifically, the licensee replaced a solenoid valve on a safety related chiller in a manner that permitted a ground to develop on a preferred electrical bus after two years of operations. The licensee repaired the solenoid valve and entered the issue into the CAP as CR PLP 2010 03234.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the ground reduced the reliability of the associated safety related electrical bus. Further, correction of the ground rendered the control room Heating, Ventilation and Air Conditioning (HVAC) chiller inoperable. The finding screened as Green because there was no loss of system safety function. The licensee determined the cause to be an improperly tightened electrical bushing, and that the proper tightening of bushings was part of electrical maintenance training. Therefore, human error prevention techniques used by the craft during assembly were not sufficient to preclude the bushing from being improperly tightened.

Inspection Report# : [2010004](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Violation of Fatigue Rule Requirements

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 26.205(d) for the failure to control the work hours of covered workers. Specifically, contract workers violated the minimum days off requirements during the October 2010 refueling outage and were not being tracked and controlled in accordance with licensee procedures. The licensee entered the issue into their Corrective Action Program and reviewed the hours worked and jobs performed by the contract workers.

The issue affected the Barrier Cornerstone because the work being performed involved reactor fuel and was more than minor because if left uncorrected, it could become a more significant safety concern. The finding screened as very low safety significance (Green) based on no known effects to the plant caused by possible worker fatigue. The finding had an associated cross-cutting aspect in the human performance area. Specifically, the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, the licensee did not ensure work hours were tracked appropriately for personnel doing covered work.

Inspection Report# : [2011002](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedural Controls for Liquid Radioactive Waste

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 for failure to establish and implement procedures recommended by Regulatory guide 1.33. Specifically, the licensee failed to establish procedures for liquid radioactive waste and emergency procedures for abnormal releases of radioactivity related to tank T-90 and 91. The licensee has revised procedures to control concentrations of tritium in tanks T-90 and 91 and entered the condition into the Corrective Action Program (CAP).

The inspectors concluded that the failure to maintain procedures as required by TS 5.4 was a performance deficiency that warranted a significance determination. The inspectors determined the finding was more than minor because it impacted the public radiation safety cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation, in that, the licensee failed to meet the program and process attribute of procedures. Since the finding resulted in less than .005 rem exposure to members of the public, the inspectors concluded the finding was of very low safety significance (green) in accordance with IMC 0609, Appendix D. There was no cross-cutting aspect in that the procedures and Updated Final Safety Analysis Review (UFSAR) content have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : June 07, 2011

Palisades

2Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Corrosion During Reactor Vessel Visual Examination

A finding of very low safety significance and associated NCV of 10 CFR Part 50.55a(g)(6)(ii)(D)(1), “Reactor Vessel Head Inspections,” was identified by the inspectors for the licensee’s failure to evaluate corrosion present on the reactor vessel head during a Code Case (CC) N-729-1 VE visual examination. The licensee entered the condition into the corrective action program. As a corrective action the licensee compared pictures taken during the 2010 head visual examination with video records from a 2003 visual head examination. Based upon this comparison, the licensee determined that no indication of significant wall loss or structural degradation had occurred. Further, the licensee determined that the surface irregularities observed were caused by a combination of scaling (e.g., rusting) due to high humidity and a rough surface condition caused by the original head forging process and were not the result of boric acid induced corrosion or wastage. Additionally, the licensee determined that the “white spots” on the head were the result of boron staining, white mastic residue used to attach insulation to the head, or chromate water deposits from a previous component cooling water leak. The licensee did not identify any evidence of leakage of boron or boric acid on the head since the 2003 visual head examination. Based upon these observations and conclusions, the licensee determined that the reactor vessel head was operable and acceptable for continued service. The licensee also assigned a corrective action to ensure that an appropriate evaluation of relevant indications was incorporated into the vessel head VE examination procedure.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the failure to evaluate head corrosion could have allowed unacceptable wastage to be returned to service. If areas of corrosion reduced vessel head strength, it could place the reactor coolant system at increased risk for through-wall leakage and/or failure. The licensee completed actions to assess the corrosion and surface irregularities observed and determined that no indication of significant wall loss or structural degradation had occurred. The inspectors answered “No” to the SDP Phase I screening question “Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any reactor coolant system leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?” Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Decision Making because the licensee staff failed to make conservative assumptions in decisions affecting the integrity of the reactor vessel head. Specifically, the decision to not evaluate areas of corrosion present on the vessel head was not based sufficient information to demonstrate that the proposed action/decision was safe (H.1(b)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Switchgear Weather Proof

A finding of very low safety significance without an associated NCV was self-revealed when a loss of the rear bus and loss of one cooling tower occurred. The licensee failed to maintain the enclosure for F and G busses weatherproof as stipulated in the design basis documents for the 4160V electrical system. In addition, the licensee cancelled a preventive maintenance task to inspect the enclosure’s caulking. Due to degradation of the seals, water intruded into the F bus switchgear and caused a short and explosion resulting in loss of one qualified circuit of offsite power. This resulted in entry into an Emergency Action Level (EAL) of an Usual Event (the lowest emergency classification). As

an immediate action, the licensee reduced power to about 55 percent. The licensee entered the finding into their corrective action program (CAP).

The finding was more than minor because it impacted the initiating event cornerstone objective of limiting the likelihood of those events that upset plant stability and is associated with the attribute of equipment performance. Using IMC 0609 Appendix A the inspectors determined the finding was of very low safety significance because even though the issue impacted the transient initiating event frequency, it did not impact the mitigating system availability. The inspectors determined there was no cross-cutting aspect because the causes of the failure to maintain the switchgear enclosure are not reflective of current performance. There was no violation of NRC requirements.

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Examination of Head Penetration Nozzles Nos. 1 and 3

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the licensee's failure to follow Procedure CEP-NDE-0955, "Visual Examination of Bare-Metal Surfaces," and perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within 4 feet. Instead, the licensee performed the examination at approximately 5 feet and the illumination level at this distance had not been demonstrated as adequate to detect primary coolant system leakage. As a corrective action, the licensee's examiner repeated the bare metal visual examination of nozzles Nos. 1 and 3 and surrounding head surfaces at a distance of less than 4 feet. The violation was entered into the licensee's corrective action program as condition report (CR) PLP-2010-05188.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would have continued to perform inadequate examinations of the surfaces of the vessel head near nozzles Nos. 1 and 3, which could allow through-wall nozzle cracks to go undetected. Undetected cracks returned to service would place the vessel head at increased risk for leakage and/or nozzle failure, which affected the Initiating Events Cornerstone attribute of Equipment Performance (barrier integrity). The licensee promptly corrected this issue by repeating the examination of nozzles Nos. 1 and 3 in accordance with the procedure to confirm that no evidence of nozzle leakage existed. The inspectors answered "No" to the Significance Determination Process Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any Primary Coolant System (PCS) leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation"? Therefore, the finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, the failure to perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within four feet occurred because the licensee's management staff did not adequately stress or enforce procedure adherence for this activity. In particular, procedure CEP-NDE-0955 was issued as an "Informational Use" type procedure that was not required to be present at the worksite and thus allowed licensee staff to rely on memory to perform the procedural steps.

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Low Pressure Alarms During Reduced Inventory Operations

A finding of very low safety significance and associated NCV of 10 CFR 50.65a(4) was self-revealed for the failure to properly assess and manage risk when service water low pressure alarms were received during orange risk reduced inventory operations. The work control center authorized a non-critical service water valve to be stroked with the belief that the system was filled and vented thus precluding an impact on the service water system. However, that portion of the system had not been filled yet. As a result, opening the valve caused a pressure drop in the system. The licensee started a standby service water pump to restore pressure. The issue was also entered into the corrective action

program.

The inspectors determined the finding was more than minor based in-part on example 7g of IMC 0612, Appendix E, which describes a condition where a safety function is significantly degraded without sufficient compensation. Additionally, as described in IMC 0612 Appendix B, the issue is associated with the configuration control attribute and impacted the Initiating Events Cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions in that proper configuration control was not maintained over the shutdown equipment lineup. Utilizing IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, the inspectors determined the issue was Green in Phase I screening since there was adequate mitigation capability and there was no loss of control. The finding had a cross cutting aspect in the area of Human Performance, Work Control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities to assure plant performance. Specifically, the licensee failed to determine the current status of the service water system and did not evaluate potential impacts during a period of elevated plant risk.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Daily Crane Checks

The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities. (H.3(b))The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities.

Inspection Report# : [2010005](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Code Requirements Met When Performing VT-2 Exams

The inspectors identified a finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to ensure that American Society of Mechanical Engineers (ASME) Code and site procedural requirements were understood and incorporated during the performance of VT 2 in service inspections. Specifically, the illumination requirements specified in the Code had not been properly incorporated into all site examination procedures, nor were Operations personnel aware of the specific requirements. The licensee disseminated guidance clarifying the requirements and entered the issue into corrective action program (CAP) as CR PLP 2010 03756.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, VT 2 exams performed without fundamental knowledge of Code and procedural requirements could lead to erroneous examination results. The finding screened as Green because no known actual component degradation went undetected as a result of improperly performed exams. The finding had an associated cross cutting aspect in the area of Human Performance (Procedures), in that the licensee failed to have complete, accurate, and up to date procedures and work packages for the VT 2 examinations.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Action to Prevent Recurrence Failed to Address Root Causes

The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades Technical Specification 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a Corrective Action to Prevent Recurrence (CAPR) to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee. This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate corrective action to prevent recurrence of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to additional NRC findings have been adequate to prevent recurrence. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. (P.1(c))

Inspection Report# : [2010009](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Inspect ASME Class 2 Piping

A self-revealed finding of very-low safety significance with an associated NCV of TS 5.4.1, Procedures, occurred for the licensee's failure to properly implement the procedure for inspection of American Society of Mechanical Engineers (ASME) Class 2 piping associated with the Safety Injection and Refueling Water tank. Specifically, while investigating roof leakage into the control room and auxiliary building, boric acid deposits and an active flange leak discovered on piping under the tank roof indicated that this ASME Class 2 piping had not been inspected per the site procedure for approximately 20 years. Upon discovery, this leak would require ASME Code Section XI corrective actions to confirm the structural integrity of the connection. Although the licensee considered the area with the piping inaccessible, while investigating the roof leakage issue, the licensee was able to construct a scaffold and reach the area of concern. The licensee initiated condition reports, cleaned off all of the deposits and completed VT-2 inspections of piping in the area.

The issue was more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, boric acid accumulations and leakage impacting a Class 2 system requiring ASME Code Section XI corrective actions could go undetected during further code inspection intervals. Inspection Manual Chapter 0609, Appendix E, example 2c, helped inform that determination because the example states that a finding would be more than minor if degradation existed following periods of missed testing. The finding screened as very low safety significance (Green) by answering 'no' to questions in the Mitigating Systems column of IMC 0609, Attachment 4, Table 4a, since the boric acid accumulations did not result in a loss of function for the impacted components. The inspectors determined that there was no associated cross-cutting aspect due to the age of the issue.

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Account for Potential Age-Related Degradation in EDG Governors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, for the failure to recognize and account for potential age-related degradation of capacitors in the emergency diesel generator (EDG) digital reference units design controls. Specifically, the installed capacitors were found beyond industry and vendor recommended useful life and if they were to degrade, could impact safety-related functions of the EDGs. The licensee entered the issue into their Corrective Action Program and replaced the digital reference units.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern because the capacitors would continue to degrade. The finding affected the Mitigating Systems Cornerstone and screened as very low safety significance (Green) based on the assessment that the operability of the EDG was maintained, and answering 'no' to all questions for that cornerstone in IMC 0609 Attachment 4, table 4a. The finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution. Specifically, the licensee did not use operating experience information, including vendor recommendations, to support plant safety in that relevant information was not collected, evaluated, and communicated in a timely manner. Although the part 21 was issued in 2001, the licensee had the opportunity to identify the condition in March 2011 when evaluating the acceptability for continued use of EDG governor components that were also impacted by the 2001 part 21.

Inspection Report# : [2011002](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Assure Adequate Resolution for Remote Visual Examinations

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure of a licensee non-destructive examination examiner to accomplish activities affecting quality in accordance with procedures. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor, because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to perform an adequate visual testing examination on liquid Freon piping of refrigeration condensing unit VC 10 did not assure that the intended function of the unit would be maintained consistent with the current licensing basis through the period of ended operation. The finding was of very low safety significance based on a Phase I screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 4a because the licensee's re-examination confirmed operability and no loss of safety function. The finding has a cross-cutting aspect in the area of human performance, work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Test Results for Diesel Fuel Oil Tanks Not Evaluated

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to evaluate test results for tank wall thickness under the scope of the Diesel Fuel Quality and Storage Monitoring Program. Specifically, the licensee did not evaluate the test results associated with the ultrasonic measurement of thickness of the bottom of the 'A' emergency diesel generator day tank and both diesel fire pump day tanks. In addition, the licensee had not developed acceptance criteria for this activity. The licensee entered this issue into their corrective action program. The corrective actions that were been considered at the time of this inspection were the development of an acceptance criteria for tank wall thickness and performing an apparent cause evaluation.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the ultrasonic examination results showed that the wall thicknesses of the inspected tanks were close to the nominal thickness or greater. The finding had a cross-cutting aspect in the area of human performance because the licensee did not have complete design documentation, procedures, and work packages for performing non-destructive examinations of the bottom walls of the tanks under the scope of the Diesel Fuel Monitoring and Storage Aging Management Program.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Tank T-10A Not Age Managed for Effect of Identified Water

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to promptly correct a condition adverse to quality associated with the emergency diesel generator fuel oil storage tank, T-10A. Specifically, the licensee did not follow Procedure No 3.26 when addressing the accumulated water in between the partial double wall and on the exterior wall of T-10A. The associated aging effects of the water were not properly managed because these conditions were not evaluated. The licensee entered this issue into the corrective action program. The corrective actions that were been considered at the time of this inspection were to perform an assessment of methods used to integrate operating experiences to their aging management programs, evaluate the cause of not evaluating the potential effects of the water on tank T-10A, and remove the accumulated water.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a

loss of operability or functionality. Specifically, the accumulated water in the annulus and on the exterior wall of T-10A had not resulted in the loss of functionality of the tank because there is no indication that either water is leaking from the annulus to the tank interior or fuel oil is leaking into the annulus. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely because the associated corrective actions focused on the removal of the water and did not consider potential age management of the component.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Flow Accelerated Corrosion Program Acceptance Limits Not in Accordance with Design Standard

A finding of very low safety significance was identified by the inspectors for the failure to assure an engineering evaluation was initiated if pipe wall thickness measurements fall below 87.5 percent of nominal pipe wall thickness. Specifically, computer software utilized by the flow accelerated corrosion program was not modified to initiate an engineering evaluation if degraded pipe wall thickness measurements were less than 87.5 percent of nominal pipe wall thickness. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, the finding would become a more safety significant concern. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred because the affected piping was non-safety-related. The finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee failed to provide effective supervisory oversight of work activities such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Adequate Oil Sampling and Analysis Aging Management Program

A finding of very low safety significance was identified by the inspectors for the failure to: (1) develop and implement an oil sampling and analysis aging management program with specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation. The licensee entered these issues into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to: (1) provide specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation did not assure that plant equipment within the scope of the oil sampling and analysis aging management program would be maintained consistent with the current design basis through the extended period of operation. The inspectors screened the finding using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred. The finding has a cross-cutting aspect in the area of Human Performance for the resources component because the implementing procedures did not include guidance defining parameters of the program.

Inspection Report# : [2011008](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Pipe Welds Not Incorporated into the ISI Program

A finding of very low safety significance and associated NCV of 10 CFR 50.55a(g)4 was identified by the inspectors for the licensee's failure to establish a weld reference system for 11 welds in the cross-tie line between the chemical and volume control system and the containment spray system. Consequently, these welds had not been entered into the inservice inspection weld database used to schedule followup surface or volumetric examinations. To correct this issue, the licensee implemented changes to the applicable Inservice Inspection isometric drawings and entered these welds into the Inservice Inspection database. The violation was entered into the licensee's corrective action program as CR PLP-2010-05229.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would not have examined a sample of these welds, which could have allowed service induced cracks to go undetected. Undetected cracks would place the cross-tie pipe segment at increased risk for through-wall leakage and/or failure, which affected the Mitigating System Cornerstone attribute of Equipment Performance (reliability). The licensee promptly corrected this issue and scheduled weld examinations to ensure cracks would be detected. The inspectors answered "Yes" to the Significance Determination Process Phase I screening question; "Is the finding a design or qualification deficiency confirmed not to result in loss of operability or functionality"? Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide complete, accurate, and up-to-date procedures, or work packages for the correct labeling of components. Specifically, the licensee staff failed to establish a weld reference system because up-to-date procedures were not developed to ensure identification and labeling of new welds installed in safety-related systems.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Required Quality Control Inspections

Inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion X, "Inspection," for the failure to ensure that Quality Control (QC) verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee's conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of QC verification inspections. This issue was entered into the corrective action program under CRs CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems Cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether QC verification inspections were appropriate.

Inspection Report# : [2010005](#) (pdf)

Significance: SL-IV Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide Complete and Accurate Information

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 for the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, in a letter on dated October 5, 2009, the licensee inaccurately stated new couplings for a service water pump were independently tested prior to installation. The licensee provided this information as part of a request for a Notice of Enforcement Discretion (NOED). The licensee requested the NOED due to a failure of a service water pump coupling that had not been properly heat treated. The licensee subsequently informed the NRC that the tests had not been performed and entered the condition into the corrective action program.

The inspectors concluded that the licensee had reasonable opportunity to foresee and correct the inaccurate/incomplete information prior to the information being submitted to the NRC. As a result, this issue was considered a performance deficiency. Using the information provided in IMC 0612, Appendix B, "Issue Screening," the inspectors determined that traditional enforcement was warranted, because violations of 10 CFR 50.9 are considered to potentially impede or impact the regulatory process. Specifically, in order to determine the acceptability of granting discretion, the NRC needed assurance that the replacement couplings met hardness requirements. Using the information provided in the Enforcement Policy, Section 6.9, this issue was determined to be a Severity Level (SL) IV NCV, as it did not meet the definition for a Severity Level I, II, or III Violation. Specifically the violation was not greater than SL IV, because the inspectors concluded that the lack of hardness testing did not impact the NRC's conclusion since the licensee did not enter the period of enforcement discretion. The inspectors also evaluated the underlying performance deficiency under the ROP. Since the licensee did not enter the period of enforcement discretion and all the questions for more than minor in Appendix B were answered no, the inspectors concluded that there was no ROP finding and therefore no cross-cutting aspect.

Inspection Report# : [2010005](#) (pdf)

Significance:  Oct 22, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures.

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor examiner for Non-Destructive Examination (NDE) failed to perform an ultrasonic (UT) wall thickness (one-time inspection) examination in accordance with procedures on the T-81, Primary System Makeup Storage Tank. The licensee initiated corrective action document CR-PLP-2010-04653 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation. This finding is of very low safety-significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of IMC 0609.04. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures [H.4 (b)]. (Section 40A5.1.b (1))

Inspection Report# : [2010010](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Risk Assessment for Maintenance Activities

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50.65 a(4) for failing to properly assess and manage the risk associated with the removal of the auxiliary feedwater (AFW) pump room floor plug during emergent maintenance activities. Specifically, the impact of the floor plug was not considered

in the risk assessment and licensee personnel were unaware of resources needed to restore configuration. The performance deficiency was identified after the floor plug had been reinstalled. Prior to the next maintenance activity involving floor plugs, the licensee ensured appropriate actions were taken in accordance with their procedures. The issue was entered into the licensee's CAP as CR PLP 2010 03434.

The issue was more than minor because it adversely affected the Protection from External Factors attribute of the Mitigating Systems cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events. Additionally, the inspectors compared the issue to examples in IMC 0612 Appendix E, and concluded it was similar to example 7.e. for more than minor in that the risk assessment was not adequate for a situation where licensee procedures required risk management actions to be taken to address plant configuration. Specifically, the licensee did not perform a risk assessment for removal of the AFW pump room floor plug and did not establish adequate risk management actions to reinstall it in the event of flooding. The finding screened as Green based on an evaluation performed by a Senior Risk Analyst (SRA) using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," with a bounding risk evaluation which estimated a relatively low increase in risk for the given configuration. The finding had an associated cross cutting aspect in the area of Human Performance (Resources) in that the licensee failed to provide complete, accurate, and up to date procedures that are adequate to ensure nuclear safety.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Actions Required by LCO 3.0.3 and 3.3.1

The inspectors identified a finding of very low safety significance (Green) and associated NCV of TS 3.3.1 and 3.0.3 for failure to comply with required TS actions. Specifically, on August 23, the licensee lost the automatic Loss of Load Trip but neither placed a trip unit in trip nor placed the plant in Mode 3 as required by TS 3.3.1 and TS 3.0.3 respectively. The licensee has restored the Loss of Load trip to operable status and entered the issue into the CAP as CR PLP 2010 03579.

The inspectors concluded that this issue was more than minor because it adversely affected the Mitigating System Cornerstone objective of ensuring the availability of systems that respond to initiating events. In addition, the inspectors reviewed IMC 0612 Appendix E and determined the issue was not similar to those items listed. The inspectors used IMC 0609 Attachment 4, Phase 1 screening, and discussed the issue with the regional SRA. The inspectors determined that the finding was of very low safety significance, Green, since the Reactor Protection System Safety Function was not lost. The finding had an associated cross cutting aspect in the area of Human Performance (Decision Making) in that the licensee failed to verify the validity of underlying assumptions.

This is related to traditional enforcement item 2010-004-03.

Inspection Report# : [2010004](#) (pdf)

Significance: SL-IV Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Make an 8 Hour Report Pursuant to 10 CFR 50.72

The inspectors identified an NCV for failure to make an 8 hour report as required by 10 CFR 50.72. On August 23, the licensee lost the trip function associated with the Loss of Turbine Load but did not recognize that this condition was a loss of a safety function and reportable within 8 hours as required by 10 CFR 50.72. After discussions with the residents, the licensee reported the condition pursuant to 10 CFR 50.72. The licensee entered this condition into the CAP as CR PLP 2010 3752.

The inspectors concluded that the issue was more than minor because the failure to make the required report impacted the regulatory process. The finding affected the Mitigating System Cornerstone because the intent of the reporting is to capture events where there would have been failure of a safety system to properly operate. The Finding was processed through the traditional enforcement process. The inspectors concluded that the finding was of SL IV because failure to make a required 10 CFR 50.72 report is an example of a SL IV violation in the Enforcement Policy. The underlying cause of this issue is the same as the Green NCV listed in 1R15 so no additional cross-cutting aspect

was assigned.

This is related to performance deficiency 2010-004-02.

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Ground on Preferred AC Bus Due to Improperly Installed electrical Bushing

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V for failure to accomplish activities affecting quality as prescribed by the documented instructions, procedures, or drawings. Specifically, the licensee replaced a solenoid valve on a safety related chiller in a manner that permitted a ground to develop on a preferred electrical bus after two years of operations. The licensee repaired the solenoid valve and entered the issue into the CAP as CR PLP 2010 03234.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the ground reduced the reliability of the associated safety related electrical bus. Further, correction of the ground rendered the control room Heating, Ventilation and Air Conditioning (HVAC) chiller inoperable. The finding screened as Green because there was no loss of system safety function. The licensee determined the cause to be an improperly tightened electrical bushing, and that the proper tightening of bushings was part of electrical maintenance training. Therefore, human error prevention techniques used by the craft during assembly were not sufficient to preclude the bushing from being improperly tightened.

Inspection Report# : [2010004](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Violation of Fatigue Rule Requirements

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 26.205(d) for the failure to control the work hours of covered workers. Specifically, contract workers violated the minimum days off requirements during the October 2010 refueling outage and were not being tracked and controlled in accordance with licensee procedures. The licensee entered the issue into their Corrective Action Program and reviewed the hours worked and jobs performed by the contract workers.

The issue affected the Barrier Cornerstone because the work being performed involved reactor fuel and was more than minor because if left uncorrected, it could become a more significant safety concern. The finding screened as very low safety significance (Green) based on no known effects to the plant caused by possible worker fatigue. The finding had an associated cross-cutting aspect in the human performance area. Specifically, the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, the licensee did not ensure work hours were tracked appropriately for personnel doing covered work.

Inspection Report# : [2011002](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Back-up Radiation Monitor

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.5.1 for failure to establish, implement and maintain the Offsite Dose Calculation Manual (ODCM). Specifically, the licensee failed to establish a backup radiation monitor capable of performing monitoring consistent with the primary radiation monitors and ODCM requirements. Over several months, the licensee experienced multiple failures of the steam line and stack radiation monitors. The ODCM provides direction to point a backup monitor at the effected effluent path should the primary monitor fail. The backup radiation monitor could not perform its intended function due to physical obstructions and geometry. The licensee instituted alternate means of monitoring releases when the primary monitor does not work and has entered the condition into the corrective action program.

The inspectors concluded that the failure to establish RIA 2328 to be an effective backup for the stack and steam line radiation monitors was a performance deficiency that warranted a significance determination. Since RIA-2328 potentially impacts both Public Radiation Safety and Emergency Planning Cornerstones, the inspectors reviewed the significance under both cornerstones. For radiation protection, the inspectors compared the issue to the examples in Appendix E, and concluded that example 6.b applied. Example 6.b states that a radiation monitor that cannot perform its safety function with a reasonable level of safety margin is an example of a more than minor issue. Further, the inspectors determined the finding was more than minor because it impacted the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation and is associated with the program and process attribute. This finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low-safety-significance (Green) because this was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. In addition, the radiation monitor is used in the emergency plan for determining an emergency action level. The issue screened out as minor in this cornerstone, because there are other EALs that would be available to ensure the correct classification could be met within required times. There was no cross cutting aspect in that the procedures and radiation monitor have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Include The Steam Generator Mausoleum in the Groundwater Protection Risk Ranking Program

The inspectors identified a finding of very low-safety-significance and an associated NCV of TS 5.4.1, Procedures, for the failure to implement procedures and include the steam generator mausoleum in the groundwater risk-ranking program for structures, systems, or components after a small amount of water was identified on the floor that contained Cs-137 and tritium with a credible mechanism to reach groundwater. Specifically, the licensee did not implement Station Procedure EN-CY-111, 'Radiological Groundwater Monitoring Program' to evaluate and document this structure after it was determined to contain radioactive liquids with a single barrier before reaching groundwater. Completion of the groundwater risk-ranking process may have prescribed additional measures to enhance or reinstate leak detection methods for this structure that contains licensed material and for which there is a credible mechanism for licensed material to reach groundwater. The licensee entered the condition into the corrective action program. Corrective actions included creating a recurring action item AR 00107492 to inspect the mausoleum

every 6 months and clean up any water.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect and correct leaks of radioactive material before there is an impact on public dose. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined the finding to be of very low-safety significance because there is no indication of a spill or release of radioactive material on site or to the offsite environs from this structure and therefore, this finding was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to take appropriate corrective actions to address issues. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program) (P.1(d)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Manage Changes to the Offsite Dose Calculation Manual

The inspectors identified a finding of very low-safety significance and associated NCV of TS 5.5.1.c, for a change that was made to the ODCM in 2004 to eliminate drinking water well sampling with an inaccurate evaluation for the change. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. This issue was entered into the licensee corrective action program as CR-PLP-2010-1013. The licensee revised the ODCM to add the sampling and analysis of the Palisades Park drinking water well.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined that the finding was of very low-safety significance because it involved the environmental monitoring program. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to thoroughly evaluate the problem and did not ensure that the problem was resolved. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program). (P.1(c)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedural Controls for Liquid Radioactive Waste

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 for failure to establish and implement procedures recommended by Regulatory guide 1.33. Specifically, the licensee failed to establish procedures for liquid radioactive waste and emergency procedures for abnormal releases of radioactivity related to tank T-90 and 91. The licensee has revised procedures to control concentrations of tritium in tanks T-90 and 91 and entered the condition into the Corrective Action Program (CAP).

The inspectors concluded that the failure to maintain procedures as required by TS 5.4 was a performance deficiency that warranted a significance determination. The inspectors determined the finding was more than minor because it impacted the public radiation safety cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation, in that, the licensee failed to meet the program and process attribute of procedures. Since the finding

resulted in less than .005 rem exposure to members of the public, the inspectors concluded the finding was of very low safety significance (green) in accordance with IMC 0609, Appendix D. There was no cross-cutting aspect in that the procedures and Updated Final Safety Analysis Review (UFSAR) content have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : October 14, 2011

Palisades

3Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Adequately Evaluate the Enclosure Installed Over the 1F/1G Buses.

The inspectors identified a finding of very low safety significance involving the licensee's failure to adequately evaluate the enclosure installed over the 1F/1G Buses to be in compliance with all applicable requirements. Specifically, the licensee did not ensure that the new enclosure would not affect start-up transformer 1-2 during a design basis wind event. There were no violations of NRC regulations identified. This finding was entered into the licensee's corrective action program, which resulted in replacing inadequate eye-bolts.

The performance deficiency was determined to be more than minor because it was associated with the Initiating Events Cornerstone attribute of transient initiator (loss of offsite power) and affected the cornerstone objective to limit the likelihood of those events that upset plant stability. Specifically, there was reasonable doubt as to whether the enclosure could have withstood a design wind event, which would have increased the probability that severe weather could have affected the ability of startup transformer 1 2 to provide offsite power. The finding screened as very low safety significance (Green) because the transient initiator would not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding has a cross-cutting aspect in human performance because the licensee did not ensure reviews of safety significant decisions to verify the validity of the underlying assumptions or identify possible unintended consequences. Specifically, the licensee's design reviews for the 1F/1G Bus enclosure modification did not address the potential impact on start-up transformer 1-2 if the enclosure failed during a design basis wind event. [H.1(b)]. (Section 1R21.5.b.(1)).

Inspection Report# : [2011009](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Procedures Were Not Appropriate to Address Gas Accumulation Issues.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to establish appropriate procedures for managing gas accumulation issues. Specifically, three examples were identified as follows: (1) Procedure ESSO 10 did not ensure that identified voids would be successfully removed by flushing; (2) Procedure SOP-3 did not specify a maximum flowrate which analyzed net positive suction head and potential air entrainment due to

vortexing during reduced inventory operations when in shutdown cooling; and (3) Procedure SOP 3 did not contain instructions to vent the steam that could form at the low pressure safety injection discharge piping following a shutdown loss of cooling accident prior to system initiation. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with the Initiating Events and Mitigating System Cornerstones, and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because: (1) Procedure ESSO 10 was a deficiency confirmed not to result in loss of operability in that a review of recent periodic gas monitoring results determined that the affected locations were full of water; (2) Procedure SOP 3 associated with reduced inventory operations did not meet any of the criteria that required a Phase II or III analysis in that it did not rise to the level that there was an increase in the likelihood of a loss of shutdown cooling; and (3) Procedure SOP 3 associated with the steam void formation did not require a quantitative assessment because it met each item for the core heat removal, inventory control, power availability, containment control, and reactivity guidelines. This finding had a cross-cutting

aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate relevant external operating experience. Specifically, the licensee's evaluation of gas related issues in response to Generic Letter 2008 01 was deficient in that, the licensee did not identify two potential gas sources, vortexing during reduced inventory and flashing following a shutdown loss of coolant accident, and did not address the minimum flowrate required to remove gas in piping when flushing. [P.2(a)]. (Section 4OA5.1c.(2))
Inspection Report# : [2011009](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Corrosion During Reactor Vessel Visual Examination

A finding of very low safety significance and associated NCV of 10 CFR Part 50.55a(g)(6)(ii)(D)(1), "Reactor Vessel Head Inspections," was identified by the inspectors for the licensee's failure to evaluate corrosion present on the reactor vessel head during a Code Case (CC) N-729-1 VE visual examination. The licensee entered the condition into the corrective action program. As a corrective action the licensee compared pictures taken during the 2010 head visual examination with video records from a 2003 visual head examination. Based upon this comparison, the licensee determined that no indication of significant wall loss or structural degradation had occurred. Further, the licensee determined that the surface irregularities observed were caused by a combination of scaling (e.g., rusting) due to high humidity and a rough surface condition caused by the original head forging process and were not the result of boric acid induced corrosion or wastage. Additionally, the licensee determined that the "white spots" on the head were the result of boron staining, white mastic residue used to attach insulation to the head, or chromate water deposits from a previous component cooling water leak. The licensee did not identify any evidence of leakage of boron or boric acid on the head since the 2003 visual head examination. Based upon these observations and conclusions, the licensee determined that the reactor vessel head was operable and acceptable for continued service. The licensee also assigned a corrective action to ensure that an appropriate evaluation of relevant indications was incorporated into the vessel head VE examination procedure.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the failure to evaluate head corrosion could have allowed unacceptable wastage to be returned to service. If areas of corrosion reduced vessel head strength, it could place the reactor coolant system at increased risk for through-wall leakage and/or failure. The licensee completed actions to assess the corrosion and surface irregularities observed and determined that no indication of significant wall loss or structural degradation had occurred. The inspectors answered "No" to the SDP Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any reactor coolant system leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?" Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Decision Making because the licensee staff failed to make conservative assumptions in decisions affecting the integrity of the reactor vessel head. Specifically, the decision to not evaluate areas of corrosion present on the vessel head was not based sufficient information to demonstrate that the proposed action/decision was safe (H.1(b)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Switchgear Weather Proof

A finding of very low safety significance without an associated NCV was self-revealed when a loss of the rear bus and loss of one cooling tower occurred. The licensee failed to maintain the enclosure for F and G busses weatherproof as stipulated in the design basis documents for the 4160V electrical system. In addition, the licensee cancelled a preventive maintenance task to inspect the enclosure's caulking. Due to degradation of the seals, water intruded into the F bus switchgear and caused a short and explosion resulting in loss of one qualified circuit of offsite power. This resulted in entry into an Emergency Action Level (EAL) of an Usual Event (the lowest emergency classification). As an immediate action, the licensee reduced power to about 55 percent. The licensee entered the finding into their

corrective action program (CAP).

The finding was more than minor because it impacted the initiating event cornerstone objective of limiting the likelihood of those events that upset plant stability and is associated with the attribute of equipment performance. Using IMC 0609 Appendix A the inspectors determined the finding was of very low safety significance because even though the issue impacted the transient initiating event frequency, it did not impact the mitigating system availability. The inspectors determined there was no cross-cutting aspect because the causes of the failure to maintain the switchgear enclosure are not reflective of current performance. There was no violation of NRC requirements.

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Examination of Head Penetration Nozzles Nos. 1 and 3

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the licensee's failure to follow Procedure CEP-NDE-0955, "Visual Examination of Bare-Metal Surfaces," and perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within 4 feet. Instead, the licensee performed the examination at approximately 5 feet and the illumination level at this distance had not been demonstrated as adequate to detect primary coolant system leakage. As a corrective action, the licensee's examiner repeated the bare metal visual examination of nozzles Nos. 1 and 3 and surrounding head surfaces at a distance of less than 4 feet. The violation was entered into the licensee's corrective action program as condition report (CR) PLP-2010-05188.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would have continued to perform inadequate examinations of the surfaces of the vessel head near nozzles Nos. 1 and 3, which could allow through-wall nozzle cracks to go undetected. Undetected cracks returned to service would place the vessel head at increased risk for leakage and/or nozzle failure, which affected the Initiating Events Cornerstone attribute of Equipment Performance (barrier integrity). The licensee promptly corrected this issue by repeating the examination of nozzles Nos. 1 and 3 in accordance with the procedure to confirm that no evidence of nozzle leakage existed. The inspectors answered "No" to the Significance Determination Process Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any Primary Coolant System (PCS) leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation"? Therefore, the finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, the failure to perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within four feet occurred because the licensee's management staff did not adequately stress or enforce procedure adherence for this activity. In particular, procedure CEP-NDE-0955 was issued as an "Informational Use" type procedure that was not required to be present at the worksite and thus allowed licensee staff to rely on memory to perform the procedural steps.

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Low Pressure Alarms During Reduced Inventory Operations

A finding of very low safety significance and associated NCV of 10 CFR 50.65a(4) was self-revealed for the failure to properly assess and manage risk when service water low pressure alarms were received during orange risk reduced inventory operations. The work control center authorized a non-critical service water valve to be stroked with the belief that the system was filled and vented thus precluding an impact on the service water system. However, that portion of the system had not been filled yet. As a result, opening the valve caused a pressure drop in the system. The licensee started a standby service water pump to restore pressure. The issue was also entered into the corrective action program.

The inspectors determined the finding was more than minor based in-part on example 7g of IMC 0612, Appendix E, which describes a condition where a safety function is significantly degraded without sufficient compensation. Additionally, as described in IMC 0612 Appendix B, the issue is associated with the configuration control attribute and impacted the Initiating Events Cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions in that proper configuration control was not maintained over the shutdown equipment lineup. Utilizing IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, the inspectors determined the issue was Green in Phase I screening since there was adequate mitigation capability and there was no loss of control. The finding had a cross cutting aspect in the area of Human Performance, Work Control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities to assure plant performance. Specifically, the licensee failed to determine the current status of the service water system and did not evaluate potential impacts during a period of elevated plant risk.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Daily Crane Checks

The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities. (H.3(b))The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities.

Inspection Report# : [2010005](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain SAMGs

The inspectors identified a finding of very low safety significance for the licensee's failure to review and update the Severe Accident Management Guidelines (SAMGs) as required by the site's procedure review process for SAMG's. Specifically, the SAMG writers' guide and site procedures required periodic or biennial reviews of the SAMGs; however, no reviews had been performed since 2005. In addition, the licensee procedures for design changes require that design changes identify impacts on SAMGs. Because the SAMGs are not required by regulations, the inspectors determined that the failure to update the SAMGs was a finding without an associated violation. The licensee has entered the condition into their corrective action program (CAP), and performed revisions, and established electronic accessibility to the SAMGs.

The inspectors concluded that the failure to review and update the SAMGs as required by the SAMG writers' guide and licensee procedures was a performance deficiency that warranted further evaluations through the SDP. The finding was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because, the performance deficiency is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the objective to ensure the reliability of systems to respond to initiating events. In addition, the SAMGs are procedures used to mitigate the effects of beyond design basis accidents and, if left uncorrected, would complicate the licensee's response to a severe accident and have the potential to lead to a more significant safety concern. The inspectors concluded that the finding was not more than very low safety significance because it did not degrade any of the mitigating system functions listed in the phase 1 screen. No cross cutting issue existed due to the age of the issue.

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 Design Reviews Did Not Adequately Assess the Potential to Accumulate Voids Within Piping Systems.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately review the design of emergency core cooling and containment spray systems with respect to the potential to accumulate voids. Specifically, the design reviews did not consider system interactions, evaluate the acceptability of locations believed to be inaccessible for periodic monitoring, and ensure the validity of the assumption that some high point vents were periodically used to ensure that some locations were full of water when excluding them from periodic monitoring. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with Mitigating System Cornerstone and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because the finding involved a design or qualification deficiency that did not result in a loss of operability. Specifically, based on a historical review of recent maintenance activities, current process parameters, and, in some locations, ultrasonic examinations, the licensee's operability evaluation concluded there were no adverse voids at these locations. This finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with the Generic Letter 2008 01 design reviews such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's design reviews considered plant specific information such as system interactions and at power operations. [H.4(c)]. (Section 40A5.1c.(1))

Inspection Report# : [2011009](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Void Size Acceptance Criteria is Non-Conservative.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to develop conservative void size acceptance criteria. Specifically, the void size acceptance criteria was based on an incorrect safety injection and refueling water base tank elevation and a 10 percent degradation of the design rated flowrates of the pumps. When the correct base tank elevation and lower allowable pump flowrates were considered, the void acceptance criteria were non-conservative. This finding was entered into the licensee's corrective action program.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating System Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because the finding was a design or qualification deficiency confirmed not to result in loss of operability. Specifically, a review of recent periodic gas monitoring results determined that no voids were present at the suction side of the affected pumps. This finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with actions related to Generic Letter 2008 01 such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's development of void acceptance criteria relied on limiting design values. [H.4(c)]. (Section 40A5.1c.(3))

Inspection Report# : [2011009](#) (pdf)

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Inspect ASME Class 2 Piping

A self-revealed finding of very-low safety significance with an associated NCV of TS 5.4.1, Procedures, occurred for the licensee's failure to properly implement the procedure for inspection of American Society of Mechanical Engineers (ASME) Class 2 piping associated with the Safety Injection and Refueling Water tank. Specifically, while investigating roof leakage into the control room and auxiliary building, boric acid deposits and an active flange leak discovered on piping under the tank roof indicated that this ASME Class 2 piping had not been inspected per the site procedure for approximately 20 years. Upon discovery, this leak would require ASME Code Section XI corrective actions to confirm the structural integrity of the connection. Although the licensee considered the area with the piping inaccessible, while investigating the roof leakage issue, the licensee was able to construct a scaffold and reach the area of concern. The licensee initiated condition reports, cleaned off all of the deposits and completed VT-2 inspections of piping in the area.

The issue was more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, boric acid accumulations and leakage impacting a Class 2 system requiring ASME Code Section XI corrective actions could go undetected during further code inspection intervals. Inspection Manual Chapter 0609, Appendix E, example 2c, helped inform that determination because the example states that a finding would be more than minor if degradation existed following periods of missed testing. The finding screened as very low safety significance (Green) by answering 'no' to questions in the Mitigating Systems column of IMC 0609, Attachment 4, Table 4a, since the boric acid accumulations did not result in a loss of function for the impacted components. The inspectors determined that there was no associated cross-cutting aspect due to the age of the issue.

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Account for Potential Age-Related Degradation in EDG Governors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, for the failure to recognize and account for potential age-related degradation of capacitors in the emergency diesel generator (EDG) digital reference units design controls. Specifically, the installed

capacitors were found beyond industry and vendor recommended useful life and if they were to degrade, could impact safety-related functions of the EDGs. The licensee entered the issue into their Corrective Action Program and replaced the digital reference units.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern because the capacitors would continue to degrade. The finding affected the Mitigating Systems Cornerstone and screened as very low safety significance (Green) based on the assessment that the operability of the EDG was maintained, and answering 'no' to all questions for that cornerstone in IMC 0609 Attachment 4, table 4a. The finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution. Specifically, the licensee did not use operating experience information, including vendor recommendations, to support plant safety in that relevant information was not collected, evaluated, and communicated in a timely manner. Although the part 21 was issued in 2001, the licensee had the opportunity to identify the condition in March 2011 when evaluating the acceptability for continued use of EDG governor components that were also impacted by the 2001 part 21.

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Assure Adequate Resolution for Remote Visual Examinations

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure of a licensee non-destructive examination examiner to accomplish activities affecting quality in accordance with procedures. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor, because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to perform an adequate visual testing examination on liquid Freon piping of refrigeration condensing unit VC 10 did not assure that the intended function of the unit would be maintained consistent with the current licensing basis through the period of ended operation. The finding was of very low safety significance based on a Phase I screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 4a because the licensee's re-examination confirmed operability and no loss of safety function. The finding has a cross-cutting aspect in the area of human performance, work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported.

Inspection Report# : [2011008](#) (*pdf*)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Test Results for Diesel Fuel Oil Tanks Not Evaluated

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to evaluate test results for tank wall thickness under the scope of the Diesel Fuel Quality and Storage Monitoring Program. Specifically, the licensee did not evaluate the test results associated with the ultrasonic measurement of thickness of the bottom of the 'A' emergency diesel generator day tank and both diesel fire pump day tanks. In addition, the licensee had not developed acceptance criteria for this activity. The licensee entered this issue into their corrective action program. The corrective actions that were been considered at the time of this inspection were the development of an acceptance criteria for tank wall thickness and performing an apparent cause evaluation.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the ultrasonic examination results showed that the wall thicknesses of the inspected tanks were close to the nominal thickness or greater. The finding had a cross-cutting aspect in the area of

human performance because the licensee did not have complete design documentation, procedures, and work packages for performing non-destructive examinations of the bottom walls of the tanks under the scope of the Diesel Fuel Monitoring and Storage Aging Management Program.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Tank T-10A Not Age Managed for Effect of Identified Water

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to promptly correct a condition adverse to quality associated with the emergency diesel generator fuel oil storage tank, T-10A. Specifically, the licensee did not follow Procedure No 3.26 when addressing the accumulated water in between the partial double wall and on the exterior wall of T-10A. The associated aging effects of the water were not properly managed because these conditions were not evaluated. The licensee entered this issue into the corrective action program. The corrective actions that were been considered at the time of this inspection were to perform an assessment of methods used to integrate operating experiences to their aging management programs, evaluate the cause of not evaluating the potential effects of the water on tank T-10A, and remove the accumulated water.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the accumulated water in the annulus and on the exterior wall of T-10A had not resulted in the loss of functionality of the tank because there is no indication that either water is leaking from the annulus to the tank interior or fuel oil is leaking into the annulus. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely because the associated corrective actions focused on the removal of the water and did not consider potential age management of the component.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Flow Accelerated Corrosion Program Acceptance Limits Not in Accordance with Design Standard

A finding of very low safety significance was identified by the inspectors for the failure to assure an engineering evaluation was initiated if pipe wall thickness measurements fall below 87.5 percent of nominal pipe wall thickness. Specifically, computer software utilized by the flow accelerated corrosion program was not modified to initiate an engineering evaluation if degraded pipe wall thickness measurements were less than 87.5 percent of nominal pipe wall thickness. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, the finding would become a more safety significant concern. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred because the affected piping was non-safety-related. The finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee failed to provide effective supervisory oversight of work activities such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Adequate Oil Sampling and Analysis Aging Management Program

A finding of very low safety significance was identified by the inspectors for the failure to: (1) develop and implement an oil sampling and analysis aging management program with specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation. The licensee entered these issues into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to: (1) provide specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation did not assure that plant equipment within the scope of the oil sampling and analysis aging management program would be maintained consistent with the current design basis through the extended period of operation. The inspectors screened the finding using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred. The finding has a cross-cutting aspect in the area of Human Performance for the resources component because the implementing procedures did not include guidance defining parameters of the program.

Inspection Report# : [2011008](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Pipe Welds Not Incorporated into the ISI Program

A finding of very low safety significance and associated NCV of 10 CFR 50.55a(g)4 was identified by the inspectors for the licensee's failure to establish a weld reference system for 11 welds in the cross-tie line between the chemical and volume control system and the containment spray system. Consequently, these welds had not been entered into the inservice inspection weld database used to schedule followup surface or volumetric examinations. To correct this issue, the licensee implemented changes to the applicable Inservice Inspection isometric drawings and entered these welds into the Inservice Inspection database. The violation was entered into the licensee's corrective action program as CR PLP-2010-05229.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would not have examined a sample of these welds, which could have allowed service induced cracks to go undetected. Undetected cracks would place the cross-tie pipe segment at increased risk for through-wall leakage and/or failure, which affected the Mitigating System Cornerstone attribute of Equipment Performance (reliability). The licensee promptly corrected this issue and scheduled weld examinations to ensure cracks would be detected. The inspectors answered "Yes" to the Significance Determination Process Phase I screening question; "Is the finding a design or qualification deficiency confirmed not to result in loss of operability or functionality"? Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide complete, accurate, and up-to-date procedures, or work packages for the correct labeling of components. Specifically, the licensee staff failed to establish a weld reference system because up-to-date procedures were not developed to ensure identification and labeling of new welds installed in safety-related systems.

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Required Quality Control Inspections

Inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion X, "Inspection," for the failure to ensure that

Quality Control (QC) verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee's conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of QC verification inspections. This issue was entered into the corrective action program under CRs CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems Cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether QC verification inspections were appropriate.

Inspection Report# : [2010005](#) (*pdf*)

Significance: SL-IV Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide Complete and Accurate Information

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 for the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, in a letter on dated October 5, 2009, the licensee inaccurately stated new couplings for a service water pump were independently tested prior to installation. The licensee provided this information as part of a request for a Notice of Enforcement Discretion (NOED). The licensee requested the NOED due to a failure of a service water pump coupling that had not been properly heat treated. The licensee subsequently informed the NRC that the tests had not been performed and entered the condition into the corrective action program.

The inspectors concluded that the licensee had reasonable opportunity to foresee and correct the inaccurate/incomplete information prior to the information being submitted to the NRC. As a result, this issue was considered a performance deficiency. Using the information provided in IMC 0612, Appendix B, "Issue Screening," the inspectors determined that traditional enforcement was warranted, because violations of 10 CFR 50.9 are considered to potentially impede or impact the regulatory process. Specifically, in order to determine the acceptability of granting discretion, the NRC needed assurance that the replacement couplings met hardness requirements. Using the information provided in the Enforcement Policy, Section 6.9, this issue was determined to be a Severity Level (SL) IV NCV, as it did not meet the definition for a Severity Level I, II, or III Violation. Specifically the violation was not greater than SL IV, because the inspectors concluded that the lack of hardness testing did not impact the NRC's conclusion since the licensee did not enter the period of enforcement discretion. The inspectors also evaluated the underlying performance deficiency under the ROP. Since the licensee did not enter the period of enforcement discretion and all the questions for more than minor in Appendix B were answered no, the inspectors concluded that there was no ROP finding and therefore no cross-cutting aspect.

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Oct 22, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures.

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor examiner for Non-Destructive Examination (NDE) failed to perform an ultrasonic (UT) wall thickness (one-time inspection) examination in accordance with procedures on the T-81, Primary System Makeup Storage Tank. The licensee initiated corrective action document CR-PLP-2010-04653 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation. This finding is of very low safety-significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of IMC 0609.04. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures [H.4 (b)]. (Section 4OA5.1.b (1))

Inspection Report# : [2010010](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Violation of Fatigue Rule Requirements

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 26.205(d) for the failure to control the work hours of covered workers. Specifically, contract workers violated the minimum days off requirements during the October 2010 refueling outage and were not being tracked and controlled in accordance with licensee procedures. The licensee entered the issue into their Corrective Action Program and reviewed the hours worked and jobs performed by the contract workers.

The issue affected the Barrier Cornerstone because the work being performed involved reactor fuel and was more than minor because if left uncorrected, it could become a more significant safety concern. The finding screened as very low safety significance (Green) based on no known effects to the plant caused by possible worker fatigue. The finding had an associated cross-cutting aspect in the human performance area. Specifically, the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, the licensee did not ensure work hours were tracked appropriately for personnel doing covered work.

Inspection Report# : [2011002](#) (*pdf*)

Emergency Preparedness

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement the Approved Emergency Classification Scheme

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR 50.47(b)(4) for the failure to properly implement the approved Emergency Action Level (EAL) classification scheme. Specifically, the licensee implemented the EAL classification scheme such that an Alert (one occurrence) would not be declared, as it should be, related to degraded performance of safety related equipment as a result of flooding. The licensee has entered the condition into their CAP and conducted training to implement appropriate criteria for declaration of

subject EAL.

The inspectors concluded that the failure to implement a standard emergency classification scheme emergency planning drill was a performance deficiency that warranted a significance determination using the SDP. The issue was more than minor because it is associated with the Emergency Response Organization performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective to ensure that the capability of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency is maintained by the licensee. The issue was of very low safety significance (Green) because it met the example for a Green finding using IMC 0609 Appendix B, "Emergency Preparedness SDP" under Section 4.4 and did not meet the threshold for a greater than green finding in Appendix B since there was no loss or degradation of a Risk-Significant Planning Standard. The finding had an associated cross cutting aspect under the area of human performance in the resources component. Specifically, the licensee did not provide adequate training of personnel.

Inspection Report# : [2011004](#) (pdf)

Occupational Radiation Safety

Significance:  Sep 30, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

Failure to Control Dose to Worker in Licked High Radiation Area

A finding of very low safety significance and an NCV was self revealed following the licensee's failure to control dose to workers as specified in the radiation work permit (RWP) and as required by Technical Specification (TS) 5.7.2. Specifically, inadequacies in the licensee's process for performing remote dose monitoring, resulted in workers exceeding their authorized RWP dose limits. Therefore the dose was not controlled as required by TS. The licensee has entered the condition into their corrective action program (CAP). Corrective actions included revising procedures for remote radiological job coverage for workers wearing multiple dosimeters.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve as low as is reasonably achievable (ALARA) planning or work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by vague procedural guidance. Consequently, this finding had a cross cutting aspect in the area of human performance resources. Specifically, the licensee ensures that resources are available and adequate to maintain complete, accurate, and up to date procedures.

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

Unauthorized Entry to High Radiation Area

A self revealed finding of very low safety significance and associated NCV of TS 5.7.1, occurred when an individual entered a high radiation area without proper authorization. The individual was not knowledgeable of dose rates in the area. The licensee has entered the condition into their CAP. Corrective actions included counseling of the worker and the error was discussed with all Nuclear Plant Operators at shift turnover.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated

with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve ALARA Planning or Work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by the worker that did not ask for a peer check before entering the posted high radiation area. Consequently, this finding had a cross cutting aspect in the area of human performance work practices. Specifically, human error prevention techniques, such as self and peer checking are used.

Inspection Report# : [2011004](#) (pdf)

Public Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Back-up Radiation Monitor

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.5.1 for failure to establish, implement and maintain the Offsite Dose Calculation Manual (ODCM). Specifically, the licensee failed to establish a backup radiation monitor capable of performing monitoring consistent with the primary radiation monitors and ODCM requirements. Over several months, the licensee experienced multiple failures of the steam line and stack radiation monitors. The ODCM provides direction to point a backup monitor at the effected effluent path should the primary monitor fail. The backup radiation monitor could not perform its intended function due to physical obstructions and geometry. The licensee instituted alternate means of monitoring releases when the primary monitor does not work and has entered the condition into the corrective action program.

The inspectors concluded that the failure to establish RIA 2328 to be an effective backup for the stack and steam line radiation monitors was a performance deficiency that warranted a significance determination. Since RIA-2328 potentially impacts both Public Radiation Safety and Emergency Planning Cornerstones, the inspectors reviewed the significance under both cornerstones. For radiation protection, the inspectors compared the issue to the examples in Appendix E, and concluded that example 6.b applied. Example 6.b states that a radiation monitor that cannot perform its safety function with a reasonable level of safety margin is an example of a more than minor issue. Further, the inspectors determined the finding was more than minor because it impacted the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation and is associated with the program and process attribute. This finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low-safety-significance (Green) because this was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. In addition, the radiation monitor is used in the emergency plan for determining an emergency action level. The issue screened out as minor in this cornerstone, because there are other EALs that would be available to ensure the correct classification could be met within required times. There was no cross cutting aspect in that the procedures and radiation monitor have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Include The Steam Generator Mausoleum in the Groundwater Protection Risk Ranking Program

The inspectors identified a finding of very low-safety-significance and an associated NCV of TS 5.4.1, Procedures, for the failure to implement procedures and include the steam generator mausoleum in the groundwater risk-ranking program for structures, systems, or components after a small amount of water was identified on the floor that contained Cs-137 and tritium with a credible mechanism to reach groundwater. Specifically, the licensee did not

implement Station Procedure EN-CY-111, 'Radiological Groundwater Monitoring Program' to evaluate and document this structure after it was determined to contain radioactive liquids with a single barrier before reaching groundwater. Completion of the groundwater risk-ranking process may have prescribed additional measures to enhance or reinstate leak detection methods for this structure that contains licensed material and for which there is a credible mechanism for licensed material to reach groundwater. The licensee entered the condition into the corrective action program. Corrective actions included creating a recurring action item AR 00107492 to inspect the mausoleum every 6 months and clean up any water.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect and correct leaks of radioactive material before there is an impact on public dose. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined the finding to be of very low-safety significance because there is no indication of a spill or release of radioactive material on site or to the offsite environs from this structure and therefore, this finding was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to take appropriate corrective actions to address issues. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program) (P.1(d)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Manage Changes to the Offsite Dose Calculation Manual

The inspectors identified a finding of very low-safety significance and associated NCV of TS 5.5.1.c, for a change that was made to the ODCM in 2004 to eliminate drinking water well sampling with an inaccurate evaluation for the change. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. This issue was entered into the licensee corrective action program as CR-PLP-2010-1013. The licensee revised the ODCM to add the sampling and analysis of the Palisades Park drinking water well.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined that the finding was of very low-safety significance because it involved the environmental monitoring program. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to thoroughly evaluate the problem and did not ensure that the problem was resolved. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program). (P.1(c)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedural Controls for Liquid Radioactive Waste

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 for failure to establish and implement procedures recommended by Regulatory guide 1.33. Specifically, the licensee failed to establish procedures for liquid radioactive waste and emergency procedures for abnormal releases of radioactivity related to tank T-90 and 91. The licensee has revised procedures to control concentrations of tritium in tanks T-90 and 91 and entered the condition into the Corrective Action Program (CAP).

The inspectors concluded that the failure to maintain procedures as required by TS 5.4 was a performance deficiency that warranted a significance determination. The inspectors determined the finding was more than minor because it impacted the public radiation safety cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation, in that, the licensee failed to meet the program and process attribute of procedures. Since the finding resulted in less than .005 rem exposure to members of the public, the inspectors concluded the finding was of very low safety significance (green) in accordance with IMC 0609, Appendix D. There was no cross-cutting aspect in that the procedures and Updated Final Safety Analysis Review (UFSAR) content have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011002](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : January 04, 2012

Palisades

4Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Maintenance Procedures for Safety Related Breakers in Panel D11-2

A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 was identified by the inspectors for failure to properly establish written procedures for maintenance that can affect the performance of safety related equipment as required by Regulatory Guide 1.33, Section 9. Specifically, during Refueling Outage 21 (RFO 21) maintenance personnel were conducting breaker testing and replacements on the 125 VDC Panel D11 2 with an inadequate work order package that did not include the appropriate procedure steps for replacing breakers in the panel. Instead, the work order directed maintenance workers in the field to install the breakers using a procedure that was not prescriptive in the reinstallation instructions and did not include signature steps for supervisor verification/inspection of the reinstallation activities. The licensee corrected the improperly installed breakers prior to reactor startup. The licensee also entered the issue in their Corrective Action Program (CAP) as CR-PLP-2012-00648.

The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the breaker replacement workmanship deficiencies from the maintenance performed on Panel D11 2 during RFO 21 led to intermittent operation of some loads supplied by the panel. The finding screened as “Green” in the Initiating Events Cornerstone by answering “no” to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety and specifically, the training of personnel and a sufficient number of qualified personnel are available to complete tasks commensurate with maintaining nuclear safety

Inspection Report# : [2011005](#) (*pdf*)

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Control Packing Configuration of Pressurizer Spray Control Valves

A finding of very low safety significance was self revealed on September 16, 2011, when the packing for CV 1057, one of two pressurizer spray control valves, failed resulting in unidentified Primary Coolant System (PCS) leakage in excess of TS limits. As a result, the licensee manually tripped the reactor and declared an Unusual Event was declared. The licensee failed to maintain the configuration of the plant in accordance with the design. No violation of regulatory requirements was identified, however, the licensee failed to implement an Entergy procedure, a self-imposed standard. Contrary to the licensee’s Configuration Management procedure, EN DC 105, the intended packing configuration was not installed during RFO 21. Specifically, end rings integral to the design were omitted. As immediate corrective action, the licensee repacked CV 1057 and checked the consolidation of the sister valve, CV 1059. The licensee also entered the issue in their CAP as CR-PLP-2012-04620 and performed a root cause analysis.

The inspectors determined the failure of the packing due to inadequate configuration management was a performance deficiency warranting further evaluation with the Significance Determination Process. The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Design Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the issue resulted in PCS leakage greater than TS limits, a manual

reactor trip, and declaration of an Unusual Event. The issue screened as Green, or very low safety significance, in a Phase 3 SDP evaluation performed by regional Senior Reactor Analysts. The finding had a cross cutting aspect in the area of Human Performance associated with the Resources component. Specifically, the licensee failed to ensure that complete, accurate, and up to date design documentation, procedures, and work packages were available and adequate to ensure nuclear safety for maintenance on the pressurizer spray control valves.

Inspection Report# : [2011005](#) (pdf)

Significance: **W** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Prevent Recurrence of a Significant Condition Adverse to Quality concerning Service Water Pump Couplings.

A self revealed finding with a preliminary low to moderate safety significance and two associated apparent violations of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," and Criterion III, "Design Control," was self-revealed on August 9, 2011, due to the licensee's failure to prevent recurrence of a significant condition adverse to quality. Specifically, on September 29, 2009, coupling #7 on service water pump P-7C failed due to intergranular stress corrosion cracking (IGSCC). The corrective actions taken to prevent recurrence did not consider all critical factors to prevent or minimize IGSCC from recurring. On August 9, 2011, coupling #6 on service pump P-7C failed due to IGSCC. In addition, in 2007, when the licensee implemented a design change to the coupling material, the licensee failed to reasonably address the factors to reduce susceptibility of the 416 stainless steel couplings to IGSCC. This issue was entered into the licensee's corrective action program (CAP) as CR-PLP-2011-03902. Long term corrective actions included replacing all couplings in the three service water pumps with couplings made of a material that was less susceptible to intergranular stress corrosion cracking.

This finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Design Control and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operation. Specifically, as a result of the performance deficiency, on August 9, 2011, pump P-7C failed during normal operation. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors then performed a Phase 2 evaluation using the pre solved SDP worksheets for Palisades and determined that this finding screened as Yellow. Due to inherent conservatism in the Phase 2 analysis, the RIII Senior Reactor Analysts performed a Phase 3 SDP analysis. The results of the Phase 3 SDP evaluation concluded that this finding was preliminarily determined to be White. The finding has a cross cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee failed to take into consideration significant operating experience from as early as 1993 and as late as 2010 that linked IGSCC susceptibility of 410 and 416 stainless steels to temper embrittlement (P.2 (b)).

Inspection Report# : [2011016](#) (pdf)

Inspection Report# : [2011020](#) (pdf)

Significance: **Y** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Have Adequate Work Instructions for Work Performed on Panel D11-2.

A preliminary finding of substantial safety significance (Yellow) and an associated apparent violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed on September 25, 2011. The licensee failed to ensure that the work instructions on safety related 125 Volt direct current (DC) Distribution Panel D11 2 through Work Orders (WO) 291194 01, 291210 01, and 291123 03, all activities that affected quality, were adequate for the scheduled work; and the licensee failed to ensure the work instructions were followed by your staff for the affected activity. As a result of these deficiencies, during the work in the field on the energized Panel D11 2, a positive horizontal bus bar rotated and contacted a negative horizontal bus bar. This in turn, caused an electrical fault in Panel D11 2 and a complete loss of the left train 125 Volt DC safety related system coincident with both 120 Volt preferred alternating current (AC) power sources, busses Y 10 and Y 30. These electrical losses resulted in a reactor and turbine trip at approximately 3:06 p.m. on

September 25, 2011, coincident with a Safety Injection Actuation Signal, Main Steam Isolation Signal, Containment High Radiation Signal, Containment Isolation Signal, Auxiliary Feedwater Actuation Signal, and Containment High Pressure Alarm (no actuation signal). This issue was documented in the licensee's corrective action program as CR PLP 2011 04822 and at the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions. As a remedial corrective action on September 25, 2011, the licensee repaired the damage caused to Panel D11 2 to restore it to service and addressed the operability and effect of the transient on other components.

The inspectors determined that the finding was more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Initiating Events Cornerstone, and adversely affected the cornerstone objective to limit the likelihood of those events, that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to create work orders in accordance with procedures and the failure to perform work in accordance with prescribed instructions directly resulted in the loss of the left train of 125 Volt DC coincident with two preferred AC power sources. The Phase 1 Significance Determination Process (SDP) evaluation determined that the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding required a Phase 2 evaluation using IMC 0609 Appendix A, "Determining the Significance of At Power Reactor Inspection Findings," which determined the significance was a Yellow Finding. The SRAs used the Palisades SPAR [Simplified Plant Analysis Risk] model, Revision 8.17, for the SDP Phase 3 evaluation. The result of the Phase 3 SDP is a preliminary finding of substantial safety significance (Yellow) with an estimated conditional core damage probability (CCDP) of $1.6E-5$. The inspectors also determined this finding had a cross cutting aspect in the area of human performance, work practices, because the licensee failed to communicate and ensure human error prevention techniques were used, such as holding formal pre job briefings, self and peer checking, and proper documentation of activities. The licensee also failed to ensure that these techniques were used commensurate with the risk of the assigned task, such that work activities are performed safely. Finally, during these maintenance activities, the inspectors concluded that licensee personnel proceeded in the face of uncertainty or unexpected circumstances (H.4 (a)).

Inspection Report# : [2011014](#) (pdf)

Inspection Report# : [2011019](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Emergency Operating Procedure Immediate Actions.

A finding of very low safety significance and associated non cited violation of Technical Specification 5.4.1 was identified by the inspectors for the failure to implement procedures for combating emergencies and other significant events as required by Regulatory Guide (RG) 1.33, Section 6. Specifically, during the performance of EOP 1.0, "Standard Post Trip Actions," in response to a loss of the left train 125 Volt DC bus and subsequent plant trip, the control room reactor operators failed to immediately take the contingency action in the "response not obtained" column for an immediate action step that could not be met due to the partial loss of control room indications. Procedure EOP 1.0, Step 2.b. of Section 4.0, "Immediate Actions," required the reactor operator in the control room to verify that the Main Generator was disconnected from the grid, and if that step cannot be completed, then the operator was required to connect a jumper across the corresponding relay terminals in the control room panel to open the output breakers. These actions were not immediately taken by the control room staff at the time of this event. Once the control room staff was aware of the "closed" status of the Main Generator output breakers from an update provided by an extra reactor operator who was in contact with transmission system operator, the action step was then taken by the turbine side reactor operator to jumper the relay terminals in the control room panel to open the breakers. This issue was documented in the licensee's corrective action program as CR PLP 2011 06081 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action on October 28, 2011, each operations crew received a briefing about operator expectations, the usage of human performance tools and procedures, and an overview of the recent events.

The inspectors determined that the finding was more than minor in accordance with IMC 0612 "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected, the performance deficiency could have the potential to lead to a more significant safety concern. In particular, this loss of 125 Volt DC event could have

become a more significant event with further complications and plant issues. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Initiating Events Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Work Practices, in that the licensee communicates human error prevention techniques, such as peer checking, and that these techniques are used commensurate with the risk of the assigned task, such that work activities are performed safely (H.4(a)).
Inspection Report# : [2011014](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Adequately Evaluate the Enclosure Installed Over the 1F/1G Buses.

The inspectors identified a finding of very low safety significance involving the licensee's failure to adequately evaluate the enclosure installed over the 1F/1G Buses to be in compliance with all applicable requirements. Specifically, the licensee did not ensure that the new enclosure would not affect start-up transformer 1-2 during a design basis wind event. There were no violations of NRC regulations identified. This finding was entered into the licensee's corrective action program, which resulted in replacing inadequate eye-bolts.

The performance deficiency was determined to be more than minor because it was associated with the Initiating Events Cornerstone attribute of transient initiator (loss of offsite power) and affected the cornerstone objective to limit the likelihood of those events that upset plant stability. Specifically, there was reasonable doubt as to whether the enclosure could have withstood a design wind event, which would have increased the probability that severe weather could have affected the ability of startup transformer 1 2 to provide offsite power. The finding screened as very low safety significance (Green) because the transient initiator would not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding has a cross-cutting aspect in human performance because the licensee did not ensure reviews of safety significant decisions to verify the validity of the underlying assumptions or identify possible unintended consequences. Specifically, the licensee's design reviews for the 1F/1G Bus enclosure modification did not address the potential impact on start-up transformer 1-2 if the enclosure failed during a design basis wind event. [H.1(b)]. (Section 1R21.5.b.(1)).

Inspection Report# : [2011009](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Procedures Were Not Appropriate to Address Gas Accumulation Issues.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to establish appropriate procedures for managing gas accumulation issues. Specifically, three examples were identified as follows: (1) Procedure ESSO 10 did not ensure that identified voids would be successfully removed by flushing; (2) Procedure SOP-3 did not specify a maximum flowrate which analyzed net positive suction head and potential air entrainment due to vortexing during reduced inventory operations when in shutdown cooling; and (3) Procedure SOP 3 did not contain instructions to vent the steam that could form at the low pressure safety injection discharge piping following a shutdown loss of cooling accident prior to system initiation. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with the Initiating Events and Mitigating System Cornerstones, and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because: (1) Procedure ESSO 10 was a deficiency confirmed not to result in loss of operability in that a review of recent periodic gas monitoring results determined that the affected locations were full of water; (2) Procedure SOP 3 associated with reduced inventory operations did not meet any of the criteria that required a Phase II or III analysis in that it did not rise to the level that there was an increase in the likelihood of a loss of shutdown cooling; and (3) Procedure SOP 3 associated with the

steam void formation did not require a quantitative assessment because it met each item for the core heat removal, inventory control, power availability, containment control, and reactivity guidelines. This finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate relevant external operating experience. Specifically, the licensee's evaluation of gas related issues in response to Generic Letter 2008 01 was deficient in that, the licensee did not identify two potential gas sources, vortexing during reduced inventory and flashing following a shutdown loss of coolant accident, and did not address the minimum flowrate required to remove gas in piping when flushing. [P.2(a)]. (Section 40A5.1c.(2))

Inspection Report# : [2011009](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Corrosion During Reactor Vessel Visual Examination

A finding of very low safety significance and associated NCV of 10 CFR Part 50.55a(g)(6)(ii)(D)(1), "Reactor Vessel Head Inspections," was identified by the inspectors for the licensee's failure to evaluate corrosion present on the reactor vessel head during a Code Case (CC) N-729-1 VE visual examination. The licensee entered the condition into the corrective action program. As a corrective action the licensee compared pictures taken during the 2010 head visual examination with video records from a 2003 visual head examination. Based upon this comparison, the licensee determined that no indication of significant wall loss or structural degradation had occurred. Further, the licensee determined that the surface irregularities observed were caused by a combination of scaling (e.g., rusting) due to high humidity and a rough surface condition caused by the original head forging process and were not the result of boric acid induced corrosion or wastage. Additionally, the licensee determined that the "white spots" on the head were the result of boron staining, white mastic residue used to attach insulation to the head, or chromate water deposits from a previous component cooling water leak. The licensee did not identify any evidence of leakage of boron or boric acid on the head since the 2003 visual head examination. Based upon these observations and conclusions, the licensee determined that the reactor vessel head was operable and acceptable for continued service. The licensee also assigned a corrective action to ensure that an appropriate evaluation of relevant indications was incorporated into the vessel head VE examination procedure.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the failure to evaluate head corrosion could have allowed unacceptable wastage to be returned to service. If areas of corrosion reduced vessel head strength, it could place the reactor coolant system at increased risk for through-wall leakage and/or failure. The licensee completed actions to assess the corrosion and surface irregularities observed and determined that no indication of significant wall loss or structural degradation had occurred. The inspectors answered "No" to the SDP Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any reactor coolant system leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?" Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Decision Making because the licensee staff failed to make conservative assumptions in decisions affecting the integrity of the reactor vessel head. Specifically, the decision to not evaluate areas of corrosion present on the vessel head was not based sufficient information to demonstrate that the proposed action/decision was safe (H.1(b)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Switchgear Weather Proof

A finding of very low safety significance without an associated NCV was self-revealed when a loss of the rear bus and loss of one cooling tower occurred. The licensee failed to maintain the enclosure for F and G busses weatherproof as stipulated in the design basis documents for the 4160V electrical system. In addition, the licensee cancelled a preventive maintenance task to inspect the enclosure's caulking. Due to degradation of the seals, water intruded into the F bus switchgear and caused a short and explosion resulting in loss of one qualified circuit of offsite power. This

resulted in entry into an Emergency Action Level (EAL) of an Usual Event (the lowest emergency classification). As an immediate action, the licensee reduced power to about 55 percent. The licensee entered the finding into their corrective action program (CAP).

The finding was more than minor because it impacted the initiating event cornerstone objective of limiting the likelihood of those events that upset plant stability and is associated with the attribute of equipment performance. Using IMC 0609 Appendix A the inspectors determined the finding was of very low safety significance because even though the issue impacted the transient initiating event frequency, it did not impact the mitigating system availability. The inspectors determined there was no cross-cutting aspect because the causes of the failure to maintain the switchgear enclosure are not reflective of current performance. There was no violation of NRC requirements.

Inspection Report# : [2011002](#) (pdf)

Mitigating Systems

Significance: SL-IV Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Report a 10 CFR 50.72 Notification for an 8-hour Non-Emergency Report.

A Severity Level (SL) IV non cited violation of 10 CFR 50.72(b)(3)(ii)(B) was identified by the inspectors for the failure to notify the NRC as soon as practical and in all cases within eight hours of the occurrence of any event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. Specifically, the licensee failed to report on September 26, 2011, within eight hours an Appendix R noncompliance that was identified in DC shunt trip Breakers 72 01 and 72 02 for the 125 Volt DC system following the reactor trip that occurred on September 25, 2011. The licensee's preliminary analysis demonstrated that if a shunt trip breaker automatically opened due to fire induced fault currents, then the licensee's Appendix R credited equipment may have been lost unexpectedly, an unanalyzed condition that significantly degrades plant safety. This issue was documented in the licensee's corrective action program as CR PLP 2011 05263 and at the end of the special inspection, the licensee continued to perform a causal evaluation in order to develop corrective actions. As a remedial corrective action, the licensee made the required event notification in Event Notification Number 47322 on October 5, 2011.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, Block 7, Figure 2, because reporting failure violations are considered to be violations that potentially impact the regulatory process and are dispositioned using traditional enforcement. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. In addition, NRC Enforcement Policy, dated July 12, 2011, Section 6.9.d.9, states, in part, that an example of an SL IV violation is the licensee's failure to make a report required by 10 CFR 50.72.

The associated Performance Deficiency is tracked as item 2011-014-08.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Human Performance Tools and to Perform an Infrequently Performed Test or Evolutoin Brief.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN HU 102, "Human Performance Tools," which established standards and expectations for the use of specific human performance tools with the goal to improve personnel and plant performance through human error reduction. The inspectors identified that Procedure EN HU 102 was not implemented for the work performed on September 25, 2011, to install a temporary modification and to address a non conforming condition associated with Panel D11 2. Implementation of the procedure for Panel D11 2 scheduled work required the use of Procedure EN OP 116,

“Infrequently Performed Tests or Evolutions,” and performance of an infrequently performed tests and evolution pre job brief, which the inspectors determined was not performed for the work on September 25, 2011. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 04822 and CR PLP 2011 04981. At the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Mitigating Systems Cornerstone. This adversely affected the cornerstone objective, in that, the failure to utilize human error reduction tools impacted the availability, reliability and capability of systems that responded to initiating events to prevent undesirable consequences. Specifically, the failure to utilize human performance tools directly contributed to the inadequate work planning and preparation scheduled for Panel D11 2 on September 25, 2011. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 Initial Screening and Characterization of Findings,” Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding has a cross cutting aspect in the area of human performance, work practices, because the licensee failed to ensure personnel work practices supported human performance through defining and effectively communicating expectations regarding procedural compliance coincident with plant personnel following procedures. Specifically, the licensee personnel failed to reference or implement procedures with human performance tools, which, if implemented, would have required an IPTE brief for the work performed on Panel D11 2 on September 25, 2011 (H.4(b)).

Inspection Report# : [2011014](#) (*pdf*)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Comply with Work Hour Rules for Non-Covered Workers.

A finding of very low significance was identified by the inspectors for the licensee’s failure to implement Procedure EN FAP OM 006, “Working Hour Limits for Non Covered Workers,” which established standard fleet guidance for working hour limits for Entergy non covered (not covered under 10 CFR 26) workers as defined in EN OM 123, “Working Hour Limits.” The inspectors identified that at least two non covered managers on the nightshift, involved with the work planning and oversight of troubleshooting repair efforts for Panel D11 2, had not followed the standards for work hour limits and did not initiate condition reports when the work hour limits were exceeded, as required by Procedure EN FAP OM 006. Specifically, the inspectors identified that the Duty Station Manager worked approximately 25 consecutive hours from September 23 through September 24, and greater than 72 hours in a 7 day period. The electrical superintendent exceeded the administrative limits of 16 hours in 24 hour period, 26 hours in 48 hour period, 72 hours in a 7 day period, and greater than a 10 hour break between work periods over a consecutive 19 day period of work. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 05095 and CR PLP 2011 05116. At the end of this inspection, the licensee continued to perform an apparent cause evaluation and extent of condition to determine extent of the problem and causes for the performance deficiency in order to develop corrective actions.

The issue affected the Mitigating Systems Cornerstone because the 125 Volt DC system work plan development was overseen by the non covered workers. The inspectors determined that the finding was more than minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated December 24, 2009, because it revealed weaknesses that, if left uncorrected, could lead to more significant safety concerns associated with overseeing work on safety related equipment. In addition, the inspectors concluded that the failure to implement working hour limitations for non covered workers in Procedure EN FAP OM 006 was more than an isolated instance. The inspectors and Senior Reactor Analyst concluded that the use of IMC 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria,” was the appropriate method for determining the significance. In accordance with IMC 0609, Appendix M, management review of this issue determined that this finding was of very low safety significance since the performance deficiency did not directly contribute to the event, as the non covered workers were involved with the planning and not actual implementation of the work performed on September 25, 2011, on Panel D11 2. The finding has a cross cutting aspect in the area of human performance, resources, because the licensee failed to ensure that personnel and other resources were available and adequate to assure nuclear safety;

specifically, sufficient qualified personnel were available to maintain work hours within working hour guidelines (H.2 (b)).

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Procedure for the Loss of a DC Bus and the Simultaneous Loss of Two Preferred AC Power Sources.

A finding of very low safety significance and associated NCV of TS 5.4.1 was identified by the inspectors for the failure to establish a procedure for combating emergencies and other significant events as required by RG 1.33, Section 6. Specifically, Section 6 states, in part, that the loss of electrical power (and/or degraded power sources) is a safety related activity that should be covered by written procedures, and TS 5.4.1 required, in part, that written procedures be established, implemented, and maintained to cover the activities in RG 1.33. The design and licensing basis of the plant includes the loss of a single train of DC power. Although the site has multiple procedures to address the loss of the DC system and individual preferred AC sources, the procedures did not integrate to provide a response that minimized challenges to plant safety. The site has three separate procedures that were used in this event for the loss of one DC bus and loss of one preferred AC source (two sources were lost during the event, hence two of these procedures were used); but not one inclusive procedure to cover the loss of both preferred AC sources simultaneously. The procedures that the crew worked through were inadequate to respond in a timely fashion to changing plant conditions caused by the loss of the left train of DC power. This issue was documented in the licensee's corrective action program as CR PLP 2011 06209 and, at the end of the special inspection, the licensee was still performing an evaluation to determine the causes and to develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems Cornerstone attribute of Procedure Quality, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of procedure quality, areas to measure, lists operating (post event) procedures such as abnormal operating procedures, standard operating procedures, emergency operating procedures, and can include off normal procedures, as being items that should be established and maintained to ensure the cornerstone objective is met. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding does not have an associated cross cutting aspect since the last known operating experience for a loss of the 125 Volt DC system occurred in 1981 at the Millstone Nuclear Generating Station.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Operability Evaluation.

A finding of very low safety significance and associated non cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to implement a procedure for an activity affecting quality. Procedure EN OP 104, "Operability Determination Process," required an assessment of the operability for structures, systems, and components (SSCs) when degraded or non conforming conditions were identified and establishment of compensatory measures were needed to, "ensure, maintain, and enhance future operability." Specifically, the inspectors identified that the operability evaluation for the 125 Volt DC system, completed on September 30, 2011, did not contain two compensatory measures necessary to ensure the operability of the system. It was also identified that the 50.59 pre screening (process applicability determination) for the temporary modification, which was also a compensatory measure for the operability evaluation, was not clearly written and did not adequately describe the evaluation of the modification or the bases for this decision. This issue was documented in the licensee's corrective action program as CR PLP 2011 04988 and CR PLP 2011 04965 and at the end of the special inspection the licensee was still

performing an evaluation to determine the causes and to develop corrective actions. The licensee's remedial corrective actions included revising the 50.59 pre screening to clearly address the effect of the compensatory measures on other aspects of the facility, prohibiting maintenance on the energized 125 Volt DC busses, and issuing additional site guidance for the operation of battery chargers.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of Equipment Performance, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of equipment performance impacted the availability and reliability of the 125 Volt DC system. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Decision Making, because the licensee did not adequately conduct an effectiveness review of a safety significant decision to verify the validity of the underlying assumptions and identify possible unintended consequences, as necessary (H.1(b)).

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 14, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Maintain Design and Procurement Control of the 125-Volt DC System.

A self revealed finding of very low safety significance (Green) and associated NCV of Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and Criterion IV, "Procurement Document Control," was identified for the licensee's failure to establish measures to ensure that the applicable regulatory requirements and design bases were correctly translated into specifications and instructions. In addition, the licensee failed to establish measures to assure that the applicable regulatory requirements and design bases, which were necessary to assure adequate quality, were suitably included or referenced in the documents for procurement of equipment. Specifically, 125 Volt DC Breakers 72 01 and 72 02 were purchased and installed with thermal overloads and instantaneous trips enabled. The design basis stated that the breakers were non automatic and only actuated manually. As a result, on September 25, 2011, when an electrical fault occurred on Panel D11 2, the left train 125 Volt DC bus was lost, because the instantaneous trip device on Breaker 72 01 automatically actuated, propagating the fault through the bus, which resulted in a reactor and turbine trip, and plant transient. This issue was documented in the licensee's corrective action program as CR PLP 2011 4835 and CR PLP 2011 4965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action prior to plant startup, the licensee implemented a temporary modification to increase the breaker instantaneous trips and performed an operability evaluation, with compensatory actions for the 125 Volt DC system.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, lack of coordination between Panel D11 2 protective device (FUZ/D11 2) and Breaker 72 01 resulted in the loss of the left 125 Volt DC bus and two preferred AC power sources and complicated plant shutdown during the reactor trip on September 25, 2011, when an electrical fault occurred while working on Panel D11 2. The risk assessment associated with the event on September 25, and the complication caused by the breaker opening, is evaluated and described in the preliminary Yellow AV. The inspectors determined the finding, related to the design deficiency, could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of findings," Table 4a for the Mitigating Systems cornerstone. The inspectors answered "Yes" to Question 1 in Column 2. Therefore, the inspectors determined that this finding could be screened as having very low safety significance (Green), because the finding was a design deficiency confirmed not to result in loss of operability or functionality of a system safety function. In addition, the inspectors also determined that the finding affected the fire protection safe shutdown strategies. Therefore, screening under IMC 0609, Appendix F, "Fire Protection Significance Determination Process," was

required. Based on review of IMC 0609, the inspectors concluded that the finding represented a moderate degradation within the post fire safe shutdown category and performed a Phase 2 analysis. Based on the licensee's evaluation for the loads the inspectors determined that this finding screened as having very low safety significance (Green) per Task 2.3.5, screening check for lack of fire ignition sources and fire scenarios. The inspectors did not identify a cross cutting aspect associated with this finding because Breakers 72 01 and 72 02 were procured and installed in 1981 and therefore, the finding was not reflective of licensee's current performance.

The associated Traditional Enforcement Item is tracked as Item 2011-014-01.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 05, 2011

Identified By: NRC

Item Type: VIO Violation

Improper Lubrication of Turbine Driven Auxiliary Feedwater Pump Linkages

A self-revealed finding of low to moderate safety significance and associated Apparent Violation (AV) of 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," occurred for the licensee's failure to follow procedures for lubrication of linkages on the TDAFW pump overspeed trip device. Specifically, during a maintenance window the licensee greased a knife edge on the trip mechanism. The greasing of the knife edge contributed to a trip of the pump on May 10, 2011, as well as rendering the pump inoperable for a period of time in excess of what is allowed by Technical Specifications (TSs). After identification of the grease, the licensee removed the grease, restored the pump to an operable status, and initiated condition report (CR) PLP-2011-02350.

The inspectors concluded that the finding was more than minor because it was associated with the equipment reliability and performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the TDAFW pump could not reliably perform its mitigating function. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre-solved SDP worksheets for Palisades and determined that this finding screened as Yellow. In order to realistically assess the significance, IMC 0609 required a Phase 3 SDP evaluation. Based on the Probabilistic Risk Analysis conducted by the Senior Reactor Analyst (SRA), a Significance and Enforcement Review Panel reached a preliminary determination the finding was of low to moderate (White) safety significance. The finding occurred, in part, due to a worker making a change to a work instruction without following the process for procedure revisions. Therefore, the inspectors assigned a cross cutting aspect of H.1(a), risk significant decisions using a systematic process. (Section 4OA3)

Inspection Report# : [2011013](#) (pdf)

Inspection Report# : [2011017](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain SAMGs

The inspectors identified a finding of very low safety significance for the licensee's failure to review and update the Severe Accident Management Guidelines (SAMGs) as required by the site's procedure review process for SAMG's. Specifically, the SAMG writers' guide and site procedures required periodic or biennial reviews of the SAMGs; however, no reviews had been performed since 2005. In addition, the licensee procedures for design changes require that design changes identify impacts on SAMGs. Because the SAMGs are not required by regulations, the inspectors determined that the failure to update the SAMGs was a finding without an associated violation. The licensee has entered the condition into their corrective action program (CAP), and performed revisions, and established electronic accessibility to the SAMGs.

The inspectors concluded that the failure to review and update the SAMGs as required by the SAMG writers' guide and licensee procedures was a performance deficiency that warranted further evaluations through the SDP. The finding was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because, the performance deficiency is associated with the

procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the objective to ensure the reliability of systems to respond to initiating events. In addition, the SAMGs are procedures used to mitigate the effects of beyond design basis accidents and, if left uncorrected, would complicate the licensee's response to a severe accident and have the potential to lead to a more significant safety concern. The inspectors concluded that the finding was not more than very low safety significance because it did not degrade any of the mitigating system functions listed in the phase 1 screen. No cross cutting issue existed due to the age of the issue.

Inspection Report# : [2011004](#) (pdf)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 Design Reviews Did Not Adequately Assess the Potential to Accumulate Voids Within Piping Systems.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately review the design of emergency core cooling and containment spray systems with respect to the potential to accumulate voids. Specifically, the design reviews did not consider system interactions, evaluate the acceptability of locations believed to be inaccessible for periodic monitoring, and ensure the validity of the assumption that some high point vents were periodically used to ensure that some locations were full of water when excluding them from periodic monitoring. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with Mitigating System Cornerstone and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because the finding involved a design or qualification deficiency that did not result in a loss of operability. Specifically, based on a historical review of recent maintenance activities, current process parameters, and, in some locations, ultrasonic examinations, the licensee's operability evaluation concluded there were no adverse voids at these locations. This finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with the Generic Letter 2008 01 design reviews such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's design reviews considered plant specific information such as system interactions and at power operations. [H.4(c)]. (Section 40A5.1c.(1))

Inspection Report# : [2011009](#) (pdf)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Void Size Acceptance Criteria is Non-Conservative.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to develop conservative void size acceptance criteria. Specifically, the void size acceptance criteria was based on an incorrect safety injection and refueling water base tank elevation and a 10 percent degradation of the design rated flowrates of the pumps. When the correct base tank elevation and lower allowable pump flowrates were considered, the void acceptance criteria were non-conservative. This finding was entered into the licensee's corrective action program.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating System Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because the finding was a design or qualification deficiency confirmed not to result in loss of operability. Specifically, a review of recent periodic gas monitoring results determined that no voids were present at the suction side of the affected pumps. This finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with actions related to Generic Letter 2008 01 such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's development of void acceptance criteria relied on limiting design values. [H.4(c)]. (Section 40A5.1c.(3))

Inspection Report# : [2011009](#) (pdf)

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Inspect ASME Class 2 Piping

A self-revealed finding of very-low safety significance with an associated NCV of TS 5.4.1, Procedures, occurred for the licensee's failure to properly implement the procedure for inspection of American Society of Mechanical Engineers (ASME) Class 2 piping associated with the Safety Injection and Refueling Water tank. Specifically, while investigating roof leakage into the control room and auxiliary building, boric acid deposits and an active flange leak discovered on piping under the tank roof indicated that this ASME Class 2 piping had not been inspected per the site procedure for approximately 20 years. Upon discovery, this leak would require ASME Code Section XI corrective actions to confirm the structural integrity of the connection. Although the licensee considered the area with the piping inaccessible, while investigating the roof leakage issue, the licensee was able to construct a scaffold and reach the area of concern. The licensee initiated condition reports, cleaned off all of the deposits and completed VT-2 inspections of piping in the area.

The issue was more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, boric acid accumulations and leakage impacting a Class 2 system requiring ASME Code Section XI corrective actions could go undetected during further code inspection intervals. Inspection Manual Chapter 0609, Appendix E, example 2c, helped inform that determination because the example states that a finding would be more than minor if degradation existed following periods of missed testing. The finding screened as very low safety significance (Green) by answering 'no' to questions in the Mitigating Systems column of IMC 0609, Attachment 4, Table 4a, since the boric acid accumulations did not result in a loss of function for the impacted components. The inspectors determined that there was no associated cross-cutting aspect due to the age of the issue.

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Account for Potential Age-Related Degradation in EDG Governors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, for the failure to recognize and account for potential age-related degradation of capacitors in the emergency diesel generator (EDG) digital reference units design controls. Specifically, the installed capacitors were found beyond industry and vendor recommended useful life and if they were to degrade, could impact safety-related functions of the EDGs. The licensee entered the issue into their Corrective Action Program and replaced the digital reference units.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern because the capacitors would continue to degrade. The finding affected the Mitigating Systems Cornerstone and screened as very low safety significance (Green) based on the assessment that the operability of the EDG was maintained, and answering 'no' to all questions for that cornerstone in IMC 0609 Attachment 4, table 4a. The finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution. Specifically, the licensee did not use operating experience information, including vendor recommendations, to support plant safety in that relevant information was not collected, evaluated, and communicated in a timely manner. Although the part 21 was issued in 2001, the licensee had the opportunity to identify the condition in March 2011 when evaluating the acceptability for continued use of EDG governor components that were also impacted by the 2001 part 21.

Inspection Report# : [2011002](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Assure Adequate Resolution for Remote Visual Examinations

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure of a licensee non-destructive examination examiner to accomplish activities affecting quality in accordance with procedures. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor, because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to perform an adequate visual testing examination on liquid Freon piping of refrigeration condensing unit VC 10 did not assure that the intended function of the unit would be maintained consistent with the current licensing basis through the period of ended operation. The finding was of very low safety significance based on a Phase I screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 4a because the licensee's re-examination confirmed operability and no loss of safety function. The finding has a cross-cutting aspect in the area of human performance, work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Test Results for Diesel Fuel Oil Tanks Not Evaluated

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to evaluate test results for tank wall thickness under the scope of the Diesel Fuel Quality and Storage Monitoring Program. Specifically, the licensee did not evaluate the test results associated with the ultrasonic measurement of thickness of the bottom of the 'A' emergency diesel generator day tank and both diesel fire pump day tanks. In addition, the licensee had not developed acceptance criteria for this activity. The licensee entered this issue into their corrective action program. The corrective actions that were been considered at the time of this inspection were the development of an acceptance criteria for tank wall thickness and performing an apparent cause evaluation.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the ultrasonic examination results showed that the wall thicknesses of the inspected tanks were close to the nominal thickness or greater. The finding had a cross-cutting aspect in the area of human performance because the licensee did not have complete design documentation, procedures, and work packages for performing non-destructive examinations of the bottom walls of the tanks under the scope of the Diesel Fuel Monitoring and Storage Aging Management Program.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Tank T-10A Not Age Managed for Effect of Identified Water

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to promptly correct a condition adverse to quality associated with the emergency diesel generator fuel oil storage tank, T-10A. Specifically, the licensee did not follow Procedure No 3.26 when addressing the accumulated water in between the partial double wall and on the exterior wall of T-10A. The associated aging effects of the water were not properly managed because these conditions were not evaluated. The licensee entered this issue into the corrective action program. The corrective actions that were been considered at the time of this inspection were to perform an assessment of methods used to

integrate operating experiences to their aging management programs, evaluate the cause of not evaluating the potential effects of the water on tank T-10A, and remove the accumulated water.

The finding was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the accumulated water in the annulus and on the exterior wall of T-10A had not resulted in the loss of functionality of the tank because there is no indication that either water is leaking from the annulus to the tank interior or fuel oil is leaking into the annulus. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely because the associated corrective actions focused on the removal of the water and did not consider potential age management of the component.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Flow Accelerated Corrosion Program Acceptance Limits Not in Accordance with Design Standard

A finding of very low safety significance was identified by the inspectors for the failure to assure an engineering evaluation was initiated if pipe wall thickness measurements fall below 87.5 percent of nominal pipe wall thickness. Specifically, computer software utilized by the flow accelerated corrosion program was not modified to initiate an engineering evaluation if degraded pipe wall thickness measurements were less than 87.5 percent of nominal pipe wall thickness. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, the finding would become a more safety significant concern. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred because the affected piping was non-safety-related. The finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee failed to provide effective supervisory oversight of work activities such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

Significance:  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Adequate Oil Sampling and Analysis Aging Management Program

A finding of very low safety significance was identified by the inspectors for the failure to: (1) develop and implement an oil sampling and analysis aging management program with specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation. The licensee entered these issues into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to: (1) provide specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation did not assure that plant equipment within the scope of the oil sampling and analysis aging management program would be maintained consistent with the current design basis through the extended period of operation. The inspectors screened the finding using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred. The finding has a cross-cutting aspect in the area of Human

Performance for the resources component because the implementing procedures did not include guidance defining parameters of the program.

Inspection Report# : [2011008](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Violation of Fatigue Rule Requirements

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 26.205(d) for the failure to control the work hours of covered workers. Specifically, contract workers violated the minimum days off requirements during the October 2010 refueling outage and were not being tracked and controlled in accordance with licensee procedures. The licensee entered the issue into their Corrective Action Program and reviewed the hours worked and jobs performed by the contract workers.

The issue affected the Barrier Cornerstone because the work being performed involved reactor fuel and was more than minor because if left uncorrected, it could become a more significant safety concern. The finding screened as very low safety significance (Green) based on no known effects to the plant caused by possible worker fatigue. The finding had an associated cross-cutting aspect in the human performance area. Specifically, the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, the licensee did not ensure work hours were tracked appropriately for personnel doing covered work.

Inspection Report# : [2011002](#) (pdf)

Emergency Preparedness

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement the Approved Emergency Classification Scheme

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR 50.47(b)(4) for the failure to properly implement the approved Emergency Action Level (EAL) classification scheme. Specifically, the licensee implemented the EAL classification scheme such that an Alert (one occurrence) would not be declared, as it should be, related to degraded performance of safety related equipment as a result of flooding. The licensee has entered the condition into their CAP and conducted training to implement appropriate criteria for declaration of subject EAL.

The inspectors concluded that the failure to implement a standard emergency classification scheme emergency planning drill was a performance deficiency that warranted a significance determination using the SDP. The issue was more than minor because it is associated with the Emergency Response Organization performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective to ensure that the capability of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency is maintained by the licensee. The issue was of very low safety significance (Green) because it met the example for a Green finding using IMC 0609 Appendix B, "Emergency Preparedness SDP" under Section 4.4 and did not meet the threshold for a greater than green finding in Appendix B since there was no loss or degradation of a Risk-Significant Planning Standard. The finding had an associated cross cutting aspect under the area of human performance in the resources component. Specifically, the licensee did not provide adequate training of personnel.

Occupational Radiation Safety

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Control Dose to Worker in Locked High Radiation Area

A finding of very low safety significance and an NCV was self revealed following the licensee's failure to control dose to workers as specified in the radiation work permit (RWP) and as required by Technical Specification (TS) 5.7.2. Specifically, inadequacies in the licensee's process for performing remote dose monitoring, resulted in workers exceeding their authorized RWP dose limits. Therefore the dose was not controlled as required by TS. The licensee has entered the condition into their corrective action program (CAP). Corrective actions included revising procedures for remote radiological job coverage for workers wearing multiple dosimeters.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve as low as is reasonably achievable (ALARA) planning or work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by vague procedural guidance. Consequently, this finding had a cross cutting aspect in the area of human performance resources. Specifically, the licensee ensures that resources are available and adequate to maintain complete, accurate, and up to date procedures.

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Unauthorized Entry to High Radiation Area

A self revealed finding of very low safety significance and associated NCV of TS 5.7.1, occurred when an individual entered a high radiation area without proper authorization. The individual was not knowledgeable of dose rates in the area. The licensee has entered the condition into their CAP. Corrective actions included counseling of the worker and the error was discussed with all Nuclear Plant Operators at shift turnover.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve ALARA Planning or Work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by the worker that did not ask for a peer check before entering the posted high radiation area. Consequently, this finding had a cross cutting aspect in the area of human performance work practices. Specifically, human error prevention techniques, such as self and peer checking are used.

Inspection Report# : [2011004](#) (pdf)

Public Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Back-up Radiation Monitor

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.5.1 for failure to establish, implement and maintain the Offsite Dose Calculation Manual (ODCM). Specifically, the licensee failed to establish a backup radiation monitor capable of performing monitoring consistent with the primary radiation monitors and ODCM requirements. Over several months, the licensee experienced multiple failures of the steam line and stack radiation monitors. The ODCM provides direction to point a backup monitor at the effected effluent path should the primary monitor fail. The backup radiation monitor could not perform its intended function due to physical obstructions and geometry. The licensee instituted alternate means of monitoring releases when the primary monitor does not work and has entered the condition into the corrective action program.

The inspectors concluded that the failure to establish RIA 2328 to be an effective backup for the stack and steam line radiation monitors was a performance deficiency that warranted a significance determination. Since RIA-2328 potentially impacts both Public Radiation Safety and Emergency Planning Cornerstones, the inspectors reviewed the significance under both cornerstones. For radiation protection, the inspectors compared the issue to the examples in Appendix E, and concluded that example 6.b applied. Example 6.b states that a radiation monitor that cannot perform its safety function with a reasonable level of safety margin is an example of a more than minor issue. Further, the inspectors determined the finding was more than minor because it impacted the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation and is associated with the program and process attribute. This finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low-safety-significance (Green) because this was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. In addition, the radiation monitor is used in the emergency plan for determining an emergency action level. The issue screened out as minor in this cornerstone, because there are other EALs that would be available to ensure the correct classification could be met within required times. There was no cross cutting aspect in that the procedures and radiation monitor have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Include The Steam Generator Mausoleum in the Groundwater Protection Risk Ranking Program

The inspectors identified a finding of very low-safety-significance and an associated NCV of TS 5.4.1, Procedures, for the failure to implement procedures and include the steam generator mausoleum in the groundwater risk-ranking program for structures, systems, or components after a small amount of water was identified on the floor that contained Cs-137 and tritium with a credible mechanism to reach groundwater. Specifically, the licensee did not implement Station Procedure EN-CY-111, 'Radiological Groundwater Monitoring Program' to evaluate and document this structure after it was determined to contain radioactive liquids with a single barrier before reaching groundwater. Completion of the groundwater risk-ranking process may have prescribed additional measures to enhance or reinstate leak detection methods for this structure that contains licensed material and for which there is a credible mechanism for licensed material to reach groundwater. The licensee entered the condition into the corrective action program. Corrective actions included creating a recurring action item AR 00107492 to inspect the mausoleum every 6 months and clean up any water.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect and correct leaks of radioactive material before there is an impact on public dose. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined the finding to be of very low-

safety significance because there is no indication of a spill or release of radioactive material on site or to the offsite environs from this structure and therefore, this finding was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to take appropriate corrective actions to address issues. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program) (P.1(d)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Manage Changes to the Offsite Dose Calculation Manual

The inspectors identified a finding of very low-safety significance and associated NCV of TS 5.5.1.c, for a change that was made to the ODCM in 2004 to eliminate drinking water well sampling with an inaccurate evaluation for the change. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. This issue was entered into the licensee corrective action program as CR-PLP-2010-1013. The licensee revised the ODCM to add the sampling and analysis of the Palisades Park drinking water well.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined that the finding was of very low-safety significance because it involved the environmental monitoring program. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to thoroughly evaluate the problem and did not ensure that the problem was resolved. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program). (P.1(c)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedural Controls for Liquid Radioactive Waste

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 for failure to establish and implement procedures recommended by Regulatory guide 1.33. Specifically, the licensee failed to establish procedures for liquid radioactive waste and emergency procedures for abnormal releases of radioactivity related to tank T-90 and 91. The licensee has revised procedures to control concentrations of tritium in tanks T-90 and 91 and entered the condition into the Corrective Action Program (CAP).

The inspectors concluded that the failure to maintain procedures as required by TS 5.4 was a performance deficiency that warranted a significance determination. The inspectors determined the finding was more than minor because it impacted the public radiation safety cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation, in that, the licensee failed to meet the program and process attribute of procedures. Since the finding resulted in less than .005 rem exposure to members of the public, the inspectors concluded the finding was of very low safety significance (green) in accordance with IMC 0609, Appendix D. There was no cross-cutting aspect in that the procedures and Updated Final Safety Analysis Review (UFSAR) content have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011002](#) (pdf)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : March 02, 2012

Palisades

1Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, “Integrity of Examination and Tests” was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered ‘no.’ The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, “Integrity of Examination and Tests” was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated

crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered 'no.' The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Intermittent Fuse Contact Causes Feedwater Transient and Plant Trip

A self revealed finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1, Procedures, was identified for the failure to adequately implement the fuse control procedure during the reinstallation of a safety related fuse after maintenance. Specifically, insufficient contact was established between a fuse holder clip and fuse ferrule for safety related fuse FUZ/Y1014 2, resulting in the opening of the 'A' Feedwater Pump Recirculation valve, CV 0711 at full power. This induced a feed transient which required operators to manually trip the reactor. The licensee took compensatory actions to ensure the valve was isolated prior to the return to full power operation. The licensee also entered the issue in their CAP as CR PLP 2012 02182 to further evaluate the conditions of the procedural guidance implementation, procedural disconnects, application of "loose fuse" operating experience, and the extent of condition for other safety related fuses.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening," because it is associated with the Initiating Events cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the cause of the feedwater transient which led to a plant trip on December 14, 2011 was intermittent electrical contact between FUZ/Y1014 2 and its holder clip. The finding screened as "Green" in the Initiating Events cornerstone by answering "no" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of problem identification and resolution related to the cross cutting component of operating experience, in that the licensee implements and institutionalizes operating experience through changes to station processes, procedures, equipment, and training program. In this finding, the issue of "loose fuses," potential causes of these loose fuses, and the potential plant effects this could cause have been identified in externally generated operated experience as well as Palisades' own operating experience from a loose fuse on a safety-related component in 2011. Therefore, the inspectors determined this issue was reflective of current performance, and the inspectors determined that lessons learned from these identified "loose fuse" issues were not extensively reviewed for applicability throughout systems in the plant and were not fully institutionalized to prevent these issues from recurring.

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Ensure Reactor Head Vents Closed During PCS Fill

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self revealed on January 7, 2012, for the failure to adequately implement a procedure when indications of Primary Coolant System (PCS) leakage exceeding 10 gallons per minute (gpm) were observed by the control room operators. The finding occurred while the plant was shut down and in a cold shutdown condition. Specifically, the licensee discovered that reactor head vent valves MV PC1060B and MV PC1060C had not been shut before filling and pressurizing the PCS, contrary to the requirements of procedure SOP 1C, Primary Coolant System Heatup. The licensee shut the valves and isolated the leak. The leakage resulted in approximately 3000 gallons of primary coolant being transferred to the reactor cavity tilt pit. This leakage was subsequently drained prior to startup. The licensee entered the issue as CR PLP 2012 00165 in their CAP.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening,"

because it is associated with the Initiating Events Cornerstone attribute of Configuration Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, uncontrolled release of coolant from the PCS could challenge plant stability. The issue screened as Green utilizing Attachment 1 of IMC 0609 Appendix G, "Shutdown Operations Significance Determination Process." Specifically, the finding and plant conditions at the time did not warrant the use of a Phase 2 or 3 analysis, because there was no impact on any safety functions. The inspectors determined the cause of the finding was associated with the cross cutting area of human performance. Specifically, by assuming the reactor head vent valves were not open, operations shift personnel did not use conservative assumptions in decision making and adopt a requirement to demonstrate that a proposed action was safe in order to proceed.

Inspection Report# : [2012002](#) (pdf)

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Maintenance Procedures for Safety Related Breakers in Panel D11-2

A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 was identified by the inspectors for failure to properly establish written procedures for maintenance that can affect the performance of safety related equipment as required by Regulatory Guide 1.33, Section 9. Specifically, during Refueling Outage 21 (RFO 21) maintenance personnel were conducting breaker testing and replacements on the 125 VDC Panel D11 2 with an inadequate work order package that did not include the appropriate procedure steps for replacing breakers in the panel. Instead, the work order directed maintenance workers in the field to install the breakers using a procedure that was not prescriptive in the reinstallation instructions and did not include signature steps for supervisor verification/inspection of the reinstallation activities. The licensee corrected the improperly installed breakers prior to reactor startup. The licensee also entered the issue in their Corrective Action Program (CAP) as CR-PLP-2012-00648.

The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the breaker replacement workmanship deficiencies from the maintenance performed on Panel D11 2 during RFO 21 led to intermittent operation of some loads supplied by the panel. The finding screened as "Green" in the Initiating Events Cornerstone by answering "no" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety and specifically, the training of personnel and a sufficient number of qualified personnel are available to complete tasks commensurate with maintaining nuclear safety

Inspection Report# : [2011005](#) (pdf)

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Control Packing Configuration of Pressurizer Spray Control Valves

A finding of very low safety significance was self revealed on September 16, 2011, when the packing for CV 1057, one of two pressurizer spray control valves, failed resulting in unidentified Primary Coolant System (PCS) leakage in excess of TS limits. As a result, the licensee manually tripped the reactor and declared an Unusual Event was declared. The licensee failed to maintain the configuration of the plant in accordance with the design. No violation of regulatory requirements was identified, however, the licensee failed to implement an Entergy procedure, a self-imposed standard. Contrary to the licensee's Configuration Management procedure, EN DC 105, the intended packing configuration was not installed during RFO 21. Specifically, end rings integral to the design were omitted. As immediate corrective action, the licensee repacked CV 1057 and checked the consolidation of the sister valve, CV 1059. The licensee also entered the issue in their CAP as CR-PLP-2012-04620 and performed a root cause analysis.

The inspectors determined the failure of the packing due to inadequate configuration management was a performance

deficiency warranting further evaluation with the Significance Determination Process. The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Design Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the issue resulted in PCS leakage greater than TS limits, a manual reactor trip, and declaration of an Unusual Event. The issue screened as Green, or very low safety significance, in a Phase 3 SDP evaluation performed by regional Senior Reactor Analysts. The finding had a cross cutting aspect in the area of Human Performance associated with the Resources component. Specifically, the licensee failed to ensure that complete, accurate, and up to date design documentation, procedures, and work packages were available and adequate to ensure nuclear safety for maintenance on the pressurizer spray control valves.

Inspection Report# : [2011005](#) (*pdf*)

Significance: **W** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Prevent Recurrence of a Significant Condition Adverse to Quality concerning Service Water Pump Couplings.

A self revealed finding with a preliminary low to moderate safety significance and two associated apparent violations of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," and Criterion III, "Design Control," was self-revealed on August 9, 2011, due to the licensee's failure to prevent recurrence of a significant condition adverse to quality. Specifically, on September 29, 2009, coupling #7 on service water pump P-7C failed due to intergranular stress corrosion cracking (IGSCC). The corrective actions taken to prevent recurrence did not consider all critical factors to prevent or minimize IGSCC from recurring. On August 9, 2011, coupling #6 on service pump P-7C failed due to IGSCC. In addition, in 2007, when the licensee implemented a design change to the coupling material, the licensee failed to reasonably address the factors to reduce susceptibility of the 416 stainless steel couplings to IGSCC. This issue was entered into the licensee's corrective action program (CAP) as CR-PLP-2011-03902. Long term corrective actions included replacing all couplings in the three service water pumps with couplings made of a material that was less susceptible to intergranular stress corrosion cracking.

This finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Design Control and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operation. Specifically, as a result of the performance deficiency, on August 9, 2011, pump P-7C failed during normal operation. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors then performed a Phase 2 evaluation using the pre solved SDP worksheets for Palisades and determined that this finding screened as Yellow. Due to inherent conservatism in the Phase 2 analysis, the RIII Senior Reactor Analysts performed a Phase 3 SDP analysis. The results of the Phase 3 SDP evaluation concluded that this finding was preliminarily determined to be White. The finding has a cross cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee failed to take into consideration significant operating experience from as early as 1993 and as late as 2010 that linked IGSCC susceptibility of 410 and 416 stainless steels to temper embrittlement (P.2 (b)).

Inspection Report# : [2011016](#) (*pdf*)

Inspection Report# : [2011020](#) (*pdf*)

Significance: **Y** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Have Adequate Work Instructions for Work Performed on Panel D11-2.

A preliminary finding of substantial safety significance (Yellow) and an associated apparent violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed on September 25, 2011. The licensee failed to ensure that the work instructions on safety related 125 Volt direct current (DC) Distribution Panel D11 2 through Work Orders (WO) 291194 01, 291210 01, and 291123 03, all activities that affected quality, were adequate for the scheduled work; and the licensee failed to ensure the work instructions were followed by your staff for the affected activity. As a result of these deficiencies,

during the work in the field on the energized Panel D11 2, a positive horizontal bus bar rotated and contacted a negative horizontal bus bar. This in turn, caused an electrical fault in Panel D11 2 and a complete loss of the left train 125 Volt DC safety related system coincident with both 120 Volt preferred alternating current (AC) power sources, busses Y 10 and Y 30. These electrical losses resulted in a reactor and turbine trip at approximately 3:06 p.m. on September 25, 2011, coincident with a Safety Injection Actuation Signal, Main Steam Isolation Signal, Containment High Radiation Signal, Containment Isolation Signal, Auxiliary Feedwater Actuation Signal, and Containment High Pressure Alarm (no actuation signal). This issue was documented in the licensee's corrective action program as CR PLP 2011 04822 and at the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions. As a remedial corrective action on September 25, 2011, the licensee repaired the damage caused to Panel D11 2 to restore it to service and addressed the operability and effect of the transient on other components.

The inspectors determined that the finding was more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Initiating Events Cornerstone, and adversely affected the cornerstone objective to limit the likelihood of those events, that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to create work orders in accordance with procedures and the failure to perform work in accordance with prescribed instructions directly resulted in the loss of the left train of 125 Volt DC coincident with two preferred AC power sources. The Phase 1 Significance Determination Process (SDP) evaluation determined that the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding required a Phase 2 evaluation using IMC 0609 Appendix A, "Determining the Significance of At Power Reactor Inspection Findings," which determined the significance was a Yellow Finding. The SRAs used the Palisades SPAR [Simplified Plant Analysis Risk] model, Revision 8.17, for the SDP Phase 3 evaluation. The result of the Phase 3 SDP is a preliminary finding of substantial safety significance (Yellow) with an estimated conditional core damage probability (CCDP) of $1.6E-5$. The inspectors also determined this finding had a cross cutting aspect in the area of human performance, work practices, because the licensee failed to communicate and ensure human error prevention techniques were used, such as holding formal pre job briefings, self and peer checking, and proper documentation of activities. The licensee also failed to ensure that these techniques were used commensurate with the risk of the assigned task, such that work activities are performed safely. Finally, during these maintenance activities, the inspectors concluded that licensee personnel proceeded in the face of uncertainty or unexpected circumstances (H.4 (a)).

Inspection Report# : [2011014](#) (pdf)

Inspection Report# : [2011019](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Emergency Operating Procedure Immediate Actions.

A finding of very low safety significance and associated non cited violation of Technical Specification 5.4.1 was identified by the inspectors for the failure to implement procedures for combating emergencies and other significant events as required by Regulatory Guide (RG) 1.33, Section 6. Specifically, during the performance of EOP 1.0, "Standard Post Trip Actions," in response to a loss of the left train 125 Volt DC bus and subsequent plant trip, the control room reactor operators failed to immediately take the contingency action in the "response not obtained" column for an immediate action step that could not be met due to the partial loss of control room indications. Procedure EOP 1.0, Step 2.b. of Section 4.0, "Immediate Actions," required the reactor operator in the control room to verify that the Main Generator was disconnected from the grid, and if that step cannot be completed, then the operator was required to connect a jumper across the corresponding relay terminals in the control room panel to open the output breakers. These actions were not immediately taken by the control room staff at the time of this event. Once the control room staff was aware of the "closed" status of the Main Generator output breakers from an update provided by an extra reactor operator who was in contact with transmission system operator, the action step was then taken by the turbine side reactor operator to jumper the relay terminals in the control room panel to open the breakers. This issue was documented in the licensee's corrective action program as CR PLP 2011 06081 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action on October 28, 2011, each operations crew received a briefing about operator expectations, the usage of human performance tools and procedures, and an overview of the recent events.

The inspectors determined that the finding was more than minor in accordance with IMC 0612 "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected, the performance deficiency could have the potential to lead to a more significant safety concern. In particular, this loss of 125 Volt DC event could have become a more significant event with further complications and plant issues. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Initiating Events Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Work Practices, in that the licensee communicates human error prevention techniques, such as peer checking, and that these techniques are used commensurate with the risk of the assigned task, such that work activities are performed safely (H.4(a)).

Inspection Report# : [2011014](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Adequately Evaluate the Enclosure Installed Over the 1F/1G Buses.

The inspectors identified a finding of very low safety significance involving the licensee's failure to adequately evaluate the enclosure installed over the 1F/1G Buses to be in compliance with all applicable requirements. Specifically, the licensee did not ensure that the new enclosure would not affect start-up transformer 1-2 during a design basis wind event. There were no violations of NRC regulations identified. This finding was entered into the licensee's corrective action program, which resulted in replacing inadequate eye-bolts.

The performance deficiency was determined to be more than minor because it was associated with the Initiating Events Cornerstone attribute of transient initiator (loss of offsite power) and affected the cornerstone objective to limit the likelihood of those events that upset plant stability. Specifically, there was reasonable doubt as to whether the enclosure could have withstood a design wind event, which would have increased the probability that severe weather could have affected the ability of startup transformer 1 2 to provide offsite power. The finding screened as very low safety significance (Green) because the transient initiator would not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding has a cross-cutting aspect in human performance because the licensee did not ensure reviews of safety significant decisions to verify the validity of the underlying assumptions or identify possible unintended consequences. Specifically, the licensee's design reviews for the 1F/1G Bus enclosure modification did not address the potential impact on start-up transformer 1-2 if the enclosure failed during a design basis wind event. [H.1(b)]. (Section 1R21.5.b.(1)).

Inspection Report# : [2011009](#) (*pdf*)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Procedures Were Not Appropriate to Address Gas Accumulation Issues.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to establish appropriate procedures for managing gas accumulation issues. Specifically, three examples were identified as follows: (1) Procedure ESSO 10 did not ensure that identified voids would be successfully removed by flushing; (2) Procedure SOP-3 did not specify a maximum flowrate which analyzed net positive suction head and potential air entrainment due to vortexing during reduced inventory operations when in shutdown cooling; and (3) Procedure SOP 3 did not contain instructions to vent the steam that could form at the low pressure safety injection discharge piping following a shutdown loss of cooling accident prior to system initiation. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with the Initiating Events and Mitigating System Cornerstones, and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because: (1) Procedure ESSO 10 was

a deficiency confirmed not to result in loss of operability in that a review of recent periodic gas monitoring results determined that the affected locations were full of water; (2) Procedure SOP 3 associated with reduced inventory operations did not meet any of the criteria that required a Phase II or III analysis in that it did not rise to the level that there was an increase in the likelihood of a loss of shutdown cooling; and (3) Procedure SOP 3 associated with the steam void formation did not require a quantitative assessment because it met each item for the core heat removal, inventory control, power availability, containment control, and reactivity guidelines. This finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate relevant external operating experience. Specifically, the licensee's evaluation of gas related issues in response to Generic Letter 2008 01 was deficient in that, the licensee did not identify two potential gas sources, vortexing during reduced inventory and flashing following a shutdown loss of coolant accident, and did not address the minimum flowrate required to remove gas in piping when flushing. [P.2(a)]. (Section 40A5.1c.(2))

Inspection Report# : [2011009](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Corrosion During Reactor Vessel Visual Examination

A finding of very low safety significance and associated NCV of 10 CFR Part 50.55a(g)(6)(ii)(D)(1), "Reactor Vessel Head Inspections," was identified by the inspectors for the licensee's failure to evaluate corrosion present on the reactor vessel head during a Code Case (CC) N-729-1 VE visual examination. The licensee entered the condition into the corrective action program. As a corrective action the licensee compared pictures taken during the 2010 head visual examination with video records from a 2003 visual head examination. Based upon this comparison, the licensee determined that no indication of significant wall loss or structural degradation had occurred. Further, the licensee determined that the surface irregularities observed were caused by a combination of scaling (e.g., rusting) due to high humidity and a rough surface condition caused by the original head forging process and were not the result of boric acid induced corrosion or wastage. Additionally, the licensee determined that the "white spots" on the head were the result of boron staining, white mastic residue used to attach insulation to the head, or chromate water deposits from a previous component cooling water leak. The licensee did not identify any evidence of leakage of boron or boric acid on the head since the 2003 visual head examination. Based upon these observations and conclusions, the licensee determined that the reactor vessel head was operable and acceptable for continued service. The licensee also assigned a corrective action to ensure that an appropriate evaluation of relevant indications was incorporated into the vessel head VE examination procedure.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the failure to evaluate head corrosion could have allowed unacceptable wastage to be returned to service. If areas of corrosion reduced vessel head strength, it could place the reactor coolant system at increased risk for through-wall leakage and/or failure. The licensee completed actions to assess the corrosion and surface irregularities observed and determined that no indication of significant wall loss or structural degradation had occurred. The inspectors answered "No" to the SDP Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any reactor coolant system leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?" Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Decision Making because the licensee staff failed to make conservative assumptions in decisions affecting the integrity of the reactor vessel head. Specifically, the decision to not evaluate areas of corrosion present on the vessel head was not based sufficient information to demonstrate that the proposed action/decision was safe (H.1(b)).

Inspection Report# : [2011003](#) (pdf)

Mitigating Systems

Significance: N/A Feb 17, 2012

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Inspection Assessment

On the basis of the sample selected for review, the team concluded that implementation of the Corrective Action Program (CAP) at Palisades was adequate, but only marginally effective. The inspectors did note an overall decline in performance since the last inspection. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria and were properly evaluated commensurate with their safety significance. In general, causes for issues were adequately determined and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, frequent NRC input or self-revealing events identified issues that the plant staff failed to adequately address. In one case, a significant condition adverse to quality was not adequately addressed and this resulted in recurrence of a failure of a safety-related service water pump. Another self-revealed finding related to the failure to run on an auxiliary feedwater pump, of low to moderate safety significance, was not adequately addressed initially. NRC comments, and later review by the licensee, led to the development of a root cause analysis which revealed other significant shortfalls in the maintenance of the turbine-driven auxiliary feedwater pump. This was a finding of low to moderate safety significance. The team noted that the licensee effectively reviewed operating experience for applicability to station activities. Audits and self assessments were determined to be effectively performed at an appropriate level to identify deficiencies. Based on the surveys conducted by the licensee, interviews conducted during the inspection, and review of the employee concerns program, employee freedom to raise nuclear safety concerns without fear of reprisal was evident.

Inspection Report# : [2012007](#) (pdf)

Significance: SL-IV Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Report a 10 CFR 50.72 Notification for an 8-hour Non-Emergency Report.

A Severity Level (SL) IV non cited violation of 10 CFR 50.72(b)(3)(ii)(B) was identified by the inspectors for the failure to notify the NRC as soon as practical and in all cases within eight hours of the occurrence of any event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. Specifically, the licensee failed to report on September 26, 2011, within eight hours an Appendix R noncompliance that was identified in DC shunt trip Breakers 72 01 and 72 02 for the 125 Volt DC system following the reactor trip that occurred on September 25, 2011. The licensee's preliminary analysis demonstrated that if a shunt trip breaker automatically opened due to fire induced fault currents, then the licensee's Appendix R credited equipment may have been lost unexpectedly, an unanalyzed condition that significantly degrades plant safety. This issue was documented in the licensee's corrective action program as CR PLP 2011 05263 and at the end of the special inspection, the licensee continued to perform a causal evaluation in order to develop corrective actions. As a remedial corrective action, the licensee made the required event notification in Event Notification Number 47322 on October 5, 2011.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, Block 7, Figure 2, because reporting failure violations are considered to be violations that potentially impact the regulatory process and are dispositioned using traditional enforcement. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. In addition, NRC Enforcement Policy, dated July 12, 2011, Section 6.9.d.9, states, in part, that an example of an SL IV violation is the licensee's failure to make a report required by 10 CFR 50.72.

The associated Performance Deficiency is tracked as item 2011-014-08.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Human Performance Tools and to Perform an Infrequently Performed Test or Evolution Brief.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN HU 102, "Human Performance Tools," which established standards and expectations for the use of specific human

performance tools with the goal to improve personnel and plant performance through human error reduction. The inspectors identified that Procedure EN HU 102 was not implemented for the work performed on September 25, 2011, to install a temporary modification and to address a non conforming condition associated with Panel D11 2. Implementation of the procedure for Panel D11 2 scheduled work required the use of Procedure EN OP 116, "Infrequently Performed Tests or Evolutions," and performance of an infrequently performed tests and evolution pre job brief, which the inspectors determined was not performed for the work on September 25, 2011. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 04822 and CR PLP 2011 04981. At the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Mitigating Systems Cornerstone. This adversely affected the cornerstone objective, in that, the failure to utilize human error reduction tools impacted the availability, reliability and capability of systems that responded to initiating events to prevent undesirable consequences. Specifically, the failure to utilize human performance tools directly contributed to the inadequate work planning and preparation scheduled for Panel D11 2 on September 25, 2011. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding has a cross cutting aspect in the area of human performance, work practices, because the licensee failed to ensure personnel work practices supported human performance through defining and effectively communicating expectations regarding procedural compliance coincident with plant personnel following procedures. Specifically, the licensee personnel failed to reference or implement procedures with human performance tools, which, if implemented, would have required an IPTE brief for the work performed on Panel D11 2 on September 25, 2011 (H.4(b)).

Inspection Report# : [2011014](#) (*pdf*)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Comply with Work Hour Rules for Non-Covered Workers.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN FAP OM 006, "Working Hour Limits for Non Covered Workers," which established standard fleet guidance for working hour limits for Entergy non covered (not covered under 10 CFR 26) workers as defined in EN OM 123, "Working Hour Limits." The inspectors identified that at least two non covered managers on the nightshift, involved with the work planning and oversight of troubleshooting repair efforts for Panel D11 2, had not followed the standards for work hour limits and did not initiate condition reports when the work hour limits were exceeded, as required by Procedure EN FAP OM 006. Specifically, the inspectors identified that the Duty Station Manager worked approximately 25 consecutive hours from September 23 through September 24, and greater than 72 hours in a 7 day period. The electrical superintendent exceeded the administrative limits of 16 hours in 24 hour period, 26 hours in 48 hour period, 72 hours in a 7 day period, and greater than a 10 hour break between work periods over a consecutive 19 day period of work. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 05095 and CR PLP 2011 05116. At the end of this inspection, the licensee continued to perform an apparent cause evaluation and extent of condition to determine extent of the problem and causes for the performance deficiency in order to develop corrective actions.

The issue affected the Mitigating Systems Cornerstone because the 125 Volt DC system work plan development was overseen by the non covered workers. The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it revealed weaknesses that, if left uncorrected, could lead to more significant safety concerns associated with overseeing work on safety related equipment. In addition, the inspectors concluded that the failure to implement working hour limitations for non covered workers in Procedure EN FAP OM 006 was more than an isolated instance. The inspectors and Senior Reactor Analyst concluded that the use of IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," was the appropriate method for determining the significance. In accordance with IMC 0609, Appendix M, management review of this issue determined that this finding was of very

low safety significance since the performance deficiency did not directly contribute to the event, as the non covered workers were involved with the planning and not actual implementation of the work performed on September 25, 2011, on Panel D11 2. The finding has a cross cutting aspect in the area of human performance, resources, because the licensee failed to ensure that personnel and other resources were available and adequate to assure nuclear safety; specifically, sufficient qualified personnel were available to maintain work hours within working hour guidelines (H.2 (b)).

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Procedure for the Loss of a DC Bus and the Simultaneous Loss of Two Preferred AC Power Sources.

A finding of very low safety significance and associated NCV of TS 5.4.1 was identified by the inspectors for the failure to establish a procedure for combating emergencies and other significant events as required by RG 1.33, Section 6. Specifically, Section 6 states, in part, that the loss of electrical power (and/or degraded power sources) is a safety related activity that should be covered by written procedures, and TS 5.4.1 required, in part, that written procedures be established, implemented, and maintained to cover the activities in RG 1.33. The design and licensing basis of the plant includes the loss of a single train of DC power. Although the site has multiple procedures to address the loss of the DC system and individual preferred AC sources, the procedures did not integrate to provide a response that minimized challenges to plant safety. The site has three separate procedures that were used in this event for the loss of one DC bus and loss of one preferred AC source (two sources were lost during the event, hence two of these procedures were used); but not one inclusive procedure to cover the loss of both preferred AC sources simultaneously. The procedures that the crew worked through were inadequate to respond in a timely fashion to changing plant conditions caused by the loss of the left train of DC power. This issue was documented in the licensee's corrective action program as CR PLP 2011 06209 and, at the end of the special inspection, the licensee was still performing an evaluation to determine the causes and to develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems Cornerstone attribute of Procedure Quality, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of procedure quality, areas to measure, lists operating (post event) procedures such as abnormal operating procedures, standard operating procedures, emergency operating procedures, and can include off normal procedures, as being items that should be established and maintained to ensure the cornerstone objective is met. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding does not have an associated cross cutting aspect since the last known operating experience for a loss of the 125 Volt DC system occurred in 1981 at the Millstone Nuclear Generating Station.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Operability Evaluation.

A finding of very low safety significance and associated non cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to implement a procedure for an activity affecting quality. Procedure EN OP 104, "Operability Determination Process," required an assessment of the operability for structures, systems, and components (SSCs) when degraded or non conforming conditions were identified and establishment of compensatory measures were needed to, "ensure, maintain, and enhance future operability." Specifically, the inspectors identified that the operability evaluation for the 125 Volt DC system, completed on September 30, 2011, did not contain two compensatory measures necessary to ensure the operability of the system. It was also identified that the 50.59 pre

screening (process applicability determination) for the temporary modification, which was also a compensatory measure for the operability evaluation, was not clearly written and did not adequately describe the evaluation of the modification or the bases for this decision. This issue was documented in the licensee's corrective action program as CR PLP 2011 04988 and CR PLP 2011 04965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. The licensee's remedial corrective actions included revising the 50.59 pre screening to clearly address the effect of the compensatory measures on other aspects of the facility, prohibiting maintenance on the energized 125 Volt DC busses, and issuing additional site guidance for the operation of battery chargers.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of Equipment Performance, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of equipment performance impacted the availability and reliability of the 125 Volt DC system. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Decision Making, because the licensee did not adequately conduct an effectiveness review of a safety significant decision to verify the validity of the underlying assumptions and identify possible unintended consequences, as necessary (H.1(b)).

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 14, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Maintain Design and Procurement Control of the 125-Volt DC System.

A self revealed finding of very low safety significance (Green) and associated NCV of Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and Criterion IV, "Procurement Document Control," was identified for the licensee's failure to establish measures to ensure that the applicable regulatory requirements and design bases were correctly translated into specifications and instructions. In addition, the licensee failed to establish measures to assure that the applicable regulatory requirements and design bases, which were necessary to assure adequate quality, were suitably included or referenced in the documents for procurement of equipment. Specifically, 125 Volt DC Breakers 72 01 and 72 02 were purchased and installed with thermal overloads and instantaneous trips enabled. The design basis stated that the breakers were non automatic and only actuated manually. As a result, on September 25, 2011, when an electrical fault occurred on Panel D11 2, the left train 125 Volt DC bus was lost, because the instantaneous trip device on Breaker 72 01 automatically actuated, propagating the fault through the bus, which resulted in a reactor and turbine trip, and plant transient. This issue was documented in the licensee's corrective action program as CR PLP 2011 4835 and CR PLP 2011 4965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action prior to plant startup, the licensee implemented a temporary modification to increase the breaker instantaneous trips and performed an operability evaluation, with compensatory actions for the 125 Volt DC system.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, lack of coordination between Panel D11 2 protective device (FUZ/D11 2) and Breaker 72 01 resulted in the loss of the left 125 Volt DC bus and two preferred AC power sources and complicated plant shutdown during the reactor trip on September 25, 2011, when an electrical fault occurred while working on Panel D11 2. The risk assessment associated with the event on September 25, and the complication caused by the breaker opening, is evaluated and described in the preliminary Yellow AV. The inspectors determined the finding, related to the design deficiency, could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of findings," Table 4a for the Mitigating Systems cornerstone. The inspectors answered "Yes" to Question 1 in Column 2. Therefore, the inspectors

determined that this finding could be screened as having very low safety significance (Green), because the finding was a design deficiency confirmed not to result in loss of operability or functionality of a system safety function. In addition, the inspectors also determined that the finding affected the fire protection safe shutdown strategies. Therefore, screening under IMC 0609, Appendix F, "Fire Protection Significance Determination Process," was required. Based on review of IMC 0609, the inspectors concluded that the finding represented a moderate degradation within the post fire safe shutdown category and performed a Phase 2 analysis. Based on the licensee's evaluation for the loads the inspectors determined that this finding screened as having very low safety significance (Green) per Task 2.3.5, screening check for lack of fire ignition sources and fire scenarios. The inspectors did not identify a cross cutting aspect associated with this finding because Breakers 72 01 and 72 02 were procured and installed in 1981 and therefore, the finding was not reflective of licensee's current performance.

The associated Traditional Enforcement Item is tracked as Item 2011-014-01.

Inspection Report# : [2011014](#) (pdf)

Significance: **W** Oct 05, 2011

Identified By: NRC

Item Type: VIO Violation

Improper Lubrication of Turbine Driven Auxiliary Feedwater Pump Linkages

A self-revealed finding of low to moderate safety significance and associated Apparent Violation (AV) of 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," occurred for the licensee's failure to follow procedures for lubrication of linkages on the TDAFW pump overspeed trip device. Specifically, during a maintenance window the licensee greased a knife edge on the trip mechanism. The greasing of the knife edge contributed to a trip of the pump on May 10, 2011, as well as rendering the pump inoperable for a period of time in excess of what is allowed by Technical Specifications (TSs). After identification of the grease, the licensee removed the grease, restored the pump to an operable status, and initiated condition report (CR) PLP-2011-02350.

The inspectors concluded that the finding was more than minor because it was associated with the equipment reliability and performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the TDAFW pump could not reliably perform its mitigating function. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre-solved SDP worksheets for Palisades and determined that this finding screened as Yellow. In order to realistically assess the significance, IMC 0609 required a Phase 3 SDP evaluation. Based on the Probabilistic Risk Analysis conducted by the Senior Reactor Analyst (SRA), a Significance and Enforcement Review Panel reached a preliminary determination the finding was of low to moderate (White) safety significance. The finding occurred, in part, due to a worker making a change to a work instruction without following the process for procedure revisions. Therefore, the inspectors assigned a cross cutting aspect of H.1(a), risk significant decisions using a systematic process. (Section 4OA3)

Inspection Report# : [2011013](#) (pdf)

Inspection Report# : [2011017](#) (pdf)

Significance: **G** Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain SAMGs

The inspectors identified a finding of very low safety significance for the licensee's failure to review and update the Severe Accident Management Guidelines (SAMGs) as required by the site's procedure review process for SAMG's. Specifically, the SAMG writers' guide and site procedures required periodic or biennial reviews of the SAMGs; however, no reviews had been performed since 2005. In addition, the licensee procedures for design changes require that design changes identify impacts on SAMGs. Because the SAMGs are not required by regulations, the inspectors determined that the failure to update the SAMGs was a finding without an associated violation. The licensee has entered the condition into their corrective action program (CAP), and performed revisions, and established electronic accessibility to the SAMGs.

The inspectors concluded that the failure to review and update the SAMGs as required by the SAMG writers' guide and licensee procedures was a performance deficiency that warranted further evaluations through the SDP. The finding was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because, the performance deficiency is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the objective to ensure the reliability of systems to respond to initiating events. In addition, the SAMGs are procedures used to mitigate the effects of beyond design basis accidents and, if left uncorrected, would complicate the licensee's response to a severe accident and have the potential to lead to a more significant safety concern. The inspectors concluded that the finding was not more than very low safety significance because it did not degrade any of the mitigating system functions listed in the phase 1 screen. No cross cutting issue existed due to the age of the issue.

Inspection Report# : [2011004](#) (pdf)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 Design Reviews Did Not Adequately Assess the Potential to Accumulate Voids Within Piping Systems.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately review the design of emergency core cooling and containment spray systems with respect to the potential to accumulate voids. Specifically, the design reviews did not consider system interactions, evaluate the acceptability of locations believed to be inaccessible for periodic monitoring, and ensure the validity of the assumption that some high point vents were periodically used to ensure that some locations were full of water when excluding them from periodic monitoring. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with Mitigating System Cornerstone and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because the finding involved a design or qualification deficiency that did not result in a loss of operability. Specifically, based on a historical review of recent maintenance activities, current process parameters, and, in some locations, ultrasonic examinations, the licensee's operability evaluation concluded there were no adverse voids at these locations. This finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with the Generic Letter 2008 01 design reviews such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's design reviews considered plant specific information such as system interactions and at power operations. [H.4(c)]. (Section 4OA5.1c.(1))

Inspection Report# : [2011009](#) (pdf)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Void Size Acceptance Criteria is Non-Conservative.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to develop conservative void size acceptance criteria. Specifically, the void size acceptance criteria was based on an incorrect safety injection and refueling water base tank elevation and a 10 percent degradation of the design rated flowrates of the pumps. When the correct base tank elevation and lower allowable pump flowrates were considered, the void acceptance criteria were non-conservative. This finding was entered into the licensee's corrective action program.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating System Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because the finding was a design or qualification deficiency confirmed not to result in loss of operability. Specifically, a review of recent periodic gas monitoring results determined that no voids were present at the suction side of the affected pumps. This finding had a

cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with actions related to Generic Letter 2008 01 such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's development of void acceptance criteria relied on limiting design values. [H.4(c)]. (Section 40A5.1c.(3))

Inspection Report# : [2011009](#) (pdf)

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Inspect ASME Class 2 Piping

A self-revealed finding of very-low safety significance with an associated NCV of TS 5.4.1, Procedures, occurred for the licensee's failure to properly implement the procedure for inspection of American Society of Mechanical Engineers (ASME) Class 2 piping associated with the Safety Injection and Refueling Water tank. Specifically, while investigating roof leakage into the control room and auxiliary building, boric acid deposits and an active flange leak discovered on piping under the tank roof indicated that this ASME Class 2 piping had not been inspected per the site procedure for approximately 20 years. Upon discovery, this leak would require ASME Code Section XI corrective actions to confirm the structural integrity of the connection. Although the licensee considered the area with the piping inaccessible, while investigating the roof leakage issue, the licensee was able to construct a scaffold and reach the area of concern. The licensee initiated condition reports, cleaned off all of the deposits and completed VT-2 inspections of piping in the area.

The issue was more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, boric acid accumulations and leakage impacting a Class 2 system requiring ASME Code Section XI corrective actions could go undetected during further code inspection intervals. Inspection Manual Chapter 0609, Appendix E, example 2c, helped inform that determination because the example states that a finding would be more than minor if degradation existed following periods of missed testing. The finding screened as very low safety significance (Green) by answering 'no' to questions in the Mitigating Systems column of IMC 0609, Attachment 4, Table 4a, since the boric acid accumulations did not result in a loss of function for the impacted components. The inspectors determined that there was no associated cross-cutting aspect due to the age of the issue.

Inspection Report# : [2011003](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement the Approved Emergency Classification Scheme

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR 50.47(b)(4) for the failure to properly implement the approved Emergency Action Level (EAL) classification scheme. Specifically, the licensee implemented the EAL classification scheme such that an Alert (one occurrence) would not be declared, as it should be, related to degraded performance of safety related equipment as a result of flooding. The licensee has entered the condition into their CAP and conducted training to implement appropriate criteria for declaration of subject EAL.

The inspectors concluded that the failure to implement a standard emergency classification scheme emergency

planning drill was a performance deficiency that warranted a significance determination using the SDP. The issue was more than minor because it is associated with the Emergency Response Organization performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective to ensure that the capability of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency is maintained by the licensee. The issue was of very low safety significance (Green) because it met the example for a Green finding using IMC 0609 Appendix B, "Emergency Preparedness SDP" under Section 4.4 and did not meet the threshold for a greater than green finding in Appendix B since there was no loss or degradation of a Risk-Significant Planning Standard. The finding had an associated cross cutting aspect under the area of human performance in the resources component. Specifically, the licensee did not provide adequate training of personnel.

Inspection Report# : [2011004](#) (pdf)

Occupational Radiation Safety

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Control Dose to Worker in Locked High Radiation Area

A finding of very low safety significance and an NCV was self revealed following the licensee's failure to control dose to workers as specified in the radiation work permit (RWP) and as required by Technical Specification (TS) 5.7.2. Specifically, inadequacies in the licensee's process for performing remote dose monitoring, resulted in workers exceeding their authorized RWP dose limits. Therefore the dose was not controlled as required by TS. The licensee has entered the condition into their corrective action program (CAP). Corrective actions included revising procedures for remote radiological job coverage for workers wearing multiple dosimeters.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve as low as is reasonably achievable (ALARA) planning or work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by vague procedural guidance. Consequently, this finding had a cross cutting aspect in the area of human performance resources. Specifically, the licensee ensures that resources are available and adequate to maintain complete, accurate, and up to date procedures.

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Unauthorized Entry to High Radiation Area

A self revealed finding of very low safety significance and associated NCV of TS 5.7.1, occurred when an individual entered a high radiation area without proper authorization. The individual was not knowledgeable of dose rates in the area. The licensee has entered the condition into their CAP. Corrective actions included counseling of the worker and the error was discussed with all Nuclear Plant Operators at shift turnover.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the

Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve ALARA Planning or Work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by the worker that did not ask for a peer check before entering the posted high radiation area. Consequently, this finding had a cross cutting aspect in the area of human performance work practices. Specifically, human error prevention techniques, such as self and peer checking are used.

Inspection Report# : [2011004](#) (pdf)

Public Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Back-up Radiation Monitor

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.5.1 for failure to establish, implement and maintain the Offsite Dose Calculation Manual (ODCM). Specifically, the licensee failed to establish a backup radiation monitor capable of performing monitoring consistent with the primary radiation monitors and ODCM requirements. Over several months, the licensee experienced multiple failures of the steam line and stack radiation monitors. The ODCM provides direction to point a backup monitor at the effected effluent path should the primary monitor fail. The backup radiation monitor could not perform its intended function due to physical obstructions and geometry. The licensee instituted alternate means of monitoring releases when the primary monitor does not work and has entered the condition into the corrective action program.

The inspectors concluded that the failure to establish RIA 2328 to be an effective backup for the stack and steam line radiation monitors was a performance deficiency that warranted a significance determination. Since RIA-2328 potentially impacts both Public Radiation Safety and Emergency Planning Cornerstones, the inspectors reviewed the significance under both cornerstones. For radiation protection, the inspectors compared the issue to the examples in Appendix E, and concluded that example 6.b applied. Example 6.b states that a radiation monitor that cannot perform its safety function with a reasonable level of safety margin is an example of a more than minor issue. Further, the inspectors determined the finding was more than minor because it impacted the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation and is associated with the program and process attribute. This finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low-safety-significance (Green) because this was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. In addition, the radiation monitor is used in the emergency plan for determining an emergency action level. The issue screened out as minor in this cornerstone, because there are other EALs that would be available to ensure the correct classification could be met within required times. There was no cross cutting aspect in that the procedures and radiation monitor have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Include The Steam Generator Mausoleum in the Groundwater Protection Risk Ranking Program

The inspectors identified a finding of very low-safety-significance and an associated NCV of TS 5.4.1, Procedures, for the failure to implement procedures and include the steam generator mausoleum in the groundwater risk-ranking program for structures, systems, or components after a small amount of water was identified on the floor that contained Cs-137 and tritium with a credible mechanism to reach groundwater. Specifically, the licensee did not implement Station Procedure EN-CY-111, 'Radiological Groundwater Monitoring Program' to evaluate and document this structure after it was determined to contain radioactive liquids with a single barrier before reaching groundwater. Completion of the groundwater risk-ranking process may have prescribed additional measures to

enhance or reinstate leak detection methods for this structure that contains licensed material and for which there is a credible mechanism for licensed material to reach groundwater. The licensee entered the condition into the corrective action program. Corrective actions included creating a recurring action item AR 00107492 to inspect the mausoleum every 6 months and clean up any water.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect and correct leaks of radioactive material before there is an impact on public dose. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined the finding to be of very low-safety significance because there is no indication of a spill or release of radioactive material on site or to the offsite environs from this structure and therefore, this finding was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to take appropriate corrective actions to address issues. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program) (P.1(d)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Manage Changes to the Offsite Dose Calculation Manual

The inspectors identified a finding of very low-safety significance and associated NCV of TS 5.5.1.c, for a change that was made to the ODCM in 2004 to eliminate drinking water well sampling with an inaccurate evaluation for the change. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. This issue was entered into the licensee corrective action program as CR-PLP-2010-1013. The licensee revised the ODCM to add the sampling and analysis of the Palisades Park drinking water well.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined that the finding was of very low-safety significance because it involved the environmental monitoring program. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to thoroughly evaluate the problem and did not ensure that the problem was resolved. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program). (P.1(c)).

Inspection Report# : [2011003](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Palisades

2Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Operation of Primary Coolant Pumps Outside Design Basis

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50 Appendix B, Criterion III, Design Control, for the failure to operate the Primary Coolant Pumps (PCPs) in accordance with their design operating criteria. In October 2011, a slight rise in vibration levels on the 'C' PCP occurred and was sustained for approximately 24 hours. This was followed by a short spike in vibrations and a return to a lower stabilized value than what had been previously observed. Investigation by the licensee revealed it was likely a piece of an impeller vane which had deformed and broken free. Based on a review of operating experience associated with impellers and further licensee investigation, the inspectors concluded that the PCPs had been operated outside of their license/design basis as stated in the Updated Final Safety Analysis Report (UFSAR) with regard to minimum net positive suction head and maximum flow. Further, based on impeller like pieces found in the reactor vessel in 2007 (which an apparent cause stated likely came from a PCP), and an operating history which indicated past occurrences of vane breakage and degradation, the inspectors concluded the licensee had the ability to foresee and correct the condition affecting the PCPs prior to the release of a piece in October 2011. The licensee entered the issue in their Corrective Action Program (CAP) as CR PLP 2011 5744 and performed additional research into the phenomena leading to the impeller degradation. The PCP operating sequence was changed, an Operational Decision Making Issue was implemented, and efforts to explore further procedural changes are on going to mitigate degradation of the impellers.

The issue was determined to be more than minor because it impacted the Design Control attribute of the Initiating Events Cornerstone, adversely affecting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the potential release of impeller pieces in the primary coolant system (PCS) challenges the cornerstone objective. The issue screened as Green, or very low safety significance, based on answering 'no' to the Loss of coolant Accident (LOCA) initiator question under the Initiating Events cornerstone in IMC 0609, Attachment 4, Table 4a. This was based on a review of the licensee's assessment by the regional inspectors, experts at the Office of Nuclear Reactor Regulation (NRR) and Office of Research in determining the deficiency would not likely be an impact to the coolant pressure boundary. The inspectors determined there was no associated cross cutting aspect because the finding was not indicative of current licensee performance.

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Work Management Process for Reactor Head Work

The inspectors identified a finding of very low safety significance with an associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to properly follow the work management process for work done to loosen stuck reactor head studs. During the April May 2012 refueling outage, difficulty was encountered in loosening some of the reactor head studs to support refueling operations. The decision was made to retension the studs that had already been detensioned (without ascending back to Mode 5 from Mode 6) and start over using a more precise electric pumping unit that had not been used to that point due to equipment issues. Contrary to EN WM 102, Work Implementation and Closeout, the licensee used the field change process, not authorized for this type of change, to "pen and ink" different tensioning values and sequence in the normal tensioning procedure (so as not to return to Mode 5). Additionally, the inspectors identified that the steps documented as having been performed as a record of the contingency actions taken

differed from what was actually performed. The licensee entered the issue into the CAP as Condition Reports CR PLP 2012 2610 and CR PLP 2012 2848, and corrected the contingency work instructions.

The issue was determined to be more than minor because if left uncorrected, it could lead to more significant safety issues. Specifically, the failure to follow appropriate processes and correctly document reactor head work is indicative of shortfalls that could occur for other safety related work. Additionally, the licensee was slow to recognize the issue. The inspectors concluded that the Initiating Events Cornerstone was impacted because of the potential for an inadvertent mode change. The finding screened as Green, or very low safety significance, using IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process," based on all of the mitigation criteria being met and no phase 2 or 3 analysis being required per Checklist 3, indicating there was no impact to shutdown safety functions. The inspectors determined that the finding had an associated cross cutting aspect in the area of human performance in that personnel work practices did not support human performance. Specifically, supervisory and management oversight failed to assure the proper processes were followed

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, "Integrity of Examination and Tests" was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered 'no.' The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, "Integrity of Examination and Tests" was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam

compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered 'no.' The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Intermittent Fuse Contact Causes Feedwater Transient and Plant Trip

A self revealed finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1, Procedures, was identified for the failure to adequately implement the fuse control procedure during the reinstallation of a safety related fuse after maintenance. Specifically, insufficient contact was established between a fuse holder clip and fuse ferrule for safety related fuse FUZ/Y1014 2, resulting in the opening of the 'A' Feedwater Pump Recirculation valve, CV 0711 at full power. This induced a feed transient which required operators to manually trip the reactor. The licensee took compensatory actions to ensure the valve was isolated prior to the return to full power operation. The licensee also entered the issue in their CAP as CR PLP 2012 02182 to further evaluate the conditions of the procedural guidance implementation, procedural disconnects, application of "loose fuse" operating experience, and the extent of condition for other safety related fuses.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening," because it is associated with the Initiating Events cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the cause of the feedwater transient which led to a plant trip on December 14, 2011 was intermittent electrical contact between FUZ/Y1014 2 and its holder clip. The finding screened as "Green" in the Initiating Events cornerstone by answering "no" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of problem identification and resolution related to the cross cutting component of operating experience, in that the licensee implements and institutionalizes operating experience through changes to station processes, procedures, equipment, and training program. In this finding, the issue of "loose fuses," potential causes of these loose fuses, and the potential plant effects this could cause have been identified in externally generated operated experience as well as Palisades' own operating experience from a loose fuse on a safety-related component in 2011. Therefore, the inspectors determined this issue was reflective of current performance, and the inspectors determined that lessons learned from these identified "loose fuse" issues were not extensively reviewed for applicability throughout systems in the plant and were not fully institutionalized to prevent these issues from recurring.

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Ensure Reactor Head Vents Closed During PCS Fill

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self revealed on January 7, 2012,

for the failure to adequately implement a procedure when indications of Primary Coolant System (PCS) leakage exceeding 10 gallons per minute (gpm) were observed by the control room operators. The finding occurred while the plant was shut down and in a cold shutdown condition. Specifically, the licensee discovered that reactor head vent valves MV PC1060B and MV PC1060C had not been shut before filling and pressurizing the PCS, contrary to the requirements of procedure SOP 1C, Primary Coolant System Heatup. The licensee shut the valves and isolated the leak. The leakage resulted in approximately 3000 gallons of primary coolant being transferred to the reactor cavity tilt pit. This leakage was subsequently drained prior to startup. The licensee entered the issue as CR PLP 2012 00165 in their CAP.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening," because it is associated with the Initiating Events Cornerstone attribute of Configuration Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, uncontrolled release of coolant from the PCS could challenge plant stability. The issue screened as Green utilizing Attachment 1 of IMC 0609 Appendix G, "Shutdown Operations Significance Determination Process." Specifically, the finding and plant conditions at the time did not warrant the use of a Phase 2 or 3 analysis, because there was no impact on any safety functions. The inspectors determined the cause of the finding was associated with the cross cutting area of human performance. Specifically, by assuming the reactor head vent valves were not open, operations shift personnel did not use conservative assumptions in decision making and adopt a requirement to demonstrate that a proposed action was safe in order to proceed.

Inspection Report# : [2012002](#) (pdf)

G

Significance: Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Maintenance Procedures for Safety Related Breakers in Panel D11-2

A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 was identified by the inspectors for failure to properly establish written procedures for maintenance that can affect the performance of safety related equipment as required by Regulatory Guide 1.33, Section 9. Specifically, during Refueling Outage 21 (RFO 21) maintenance personnel were conducting breaker testing and replacements on the 125 VDC Panel D11 2 with an inadequate work order package that did not include the appropriate procedure steps for replacing breakers in the panel. Instead, the work order directed maintenance workers in the field to install the breakers using a procedure that was not prescriptive in the reinstallation instructions and did not include signature steps for supervisor verification/inspection of the reinstallation activities. The licensee corrected the improperly installed breakers prior to reactor startup. The licensee also entered the issue in their Corrective Action Program (CAP) as CR-PLP-2012-00648.

The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the breaker replacement workmanship deficiencies from the maintenance performed on Panel D11 2 during RFO 21 led to intermittent operation of some loads supplied by the panel. The finding screened as "Green" in the Initiating Events Cornerstone by answering "no" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety and specifically, the training of personnel and a sufficient number of qualified personnel are available to complete tasks commensurate with maintaining nuclear safety

Inspection Report# : [2011005](#) (pdf)

G

Significance: Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Control Packing Configuration of Pressurizer Spray Control Valves

A finding of very low safety significance was self revealed on September 16, 2011, when the packing for CV 1057, one of two pressurizer spray control valves, failed resulting in unidentified Primary Coolant System (PCS) leakage in excess of TS limits. As a result, the licensee manually tripped the reactor and declared an Unusual Event was declared. The licensee failed to maintain the configuration of the plant in accordance with the design. No violation of regulatory requirements was identified, however, the licensee failed to implement an Entergy procedure, a self-imposed standard. Contrary to the licensee's Configuration Management procedure, EN DC 105, the intended packing configuration was not installed during RFO 21. Specifically, end rings integral to the design were omitted. As immediate corrective action, the licensee repacked CV 1057 and checked the consolidation of the sister valve, CV 1059. The licensee also entered the issue in their CAP as CR-PLP-2012-04620 and performed a root cause analysis.

The inspectors determined the failure of the packing due to inadequate configuration management was a performance deficiency warranting further evaluation with the Significance Determination Process. The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Design Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the issue resulted in PCS leakage greater than TS limits, a manual reactor trip, and declaration of an Unusual Event. The issue screened as Green, or very low safety significance, in a Phase 3 SDP evaluation performed by regional Senior Reactor Analysts. The finding had a cross cutting aspect in the area of Human Performance associated with the Resources component. Specifically, the licensee failed to ensure that complete, accurate, and up to date design documentation, procedures, and work packages were available and adequate to ensure nuclear safety for maintenance on the pressurizer spray control valves.

Inspection Report# : [2011005](#) (pdf)

Significance: **W** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Prevent Recurrence of a Significant Condition Adverse to Quality concerning Service Water Pump Couplings.

A self revealed finding with a preliminary low to moderate safety significance and two associated apparent violations of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," and Criterion III, "Design Control," was self-revealed on August 9, 2011, due to the licensee's failure to prevent recurrence of a significant condition adverse to quality. Specifically, on September 29, 2009, coupling #7 on service water pump P-7C failed due to intergranular stress corrosion cracking (IGSCC). The corrective actions taken to prevent recurrence did not consider all critical factors to prevent or minimize IGSCC from recurring. On August 9, 2011, coupling #6 on service pump P-7C failed due to IGSCC. In addition, in 2007, when the licensee implemented a design change to the coupling material, the licensee failed to reasonably address the factors to reduce susceptibility of the 416 stainless steel couplings to IGSCC. This issue was entered into the licensee's corrective action program (CAP) as CR-PLP-2011-03902. Long term corrective actions included replacing all couplings in the three service water pumps with couplings made of a material that was less susceptible to intergranular stress corrosion cracking.

This finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Design Control and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operation. Specifically, as a result of the performance deficiency, on August 9, 2011, pump P-7C failed during normal operation. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors then performed a Phase 2 evaluation using the pre solved SDP worksheets for Palisades and determined that this finding screened as Yellow. Due to inherent conservatism in the Phase 2 analysis, the RIII Senior Reactor Analysts performed a Phase 3 SDP analysis. The results of the Phase 3 SDP evaluation concluded that this finding was preliminarily determined to be White. The finding has a cross cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee failed to take into consideration significant operating experience from as early as 1993 and as late as 2010 that linked IGSCC susceptibility of 410 and 416 stainless steels to temper embrittlement (P.2 (b)).

Inspection Report# : [2011016](#) (pdf)

Inspection Report# : [2011020](#) (pdf)

Y**Significance:** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Have Adequate Work Instructions for Work Performed on Panel D11-2.

A preliminary finding of substantial safety significance (Yellow) and an associated apparent violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed on September 25, 2011. The licensee failed to ensure that the work instructions on safety related 125 Volt direct current (DC) Distribution Panel D11 2 through Work Orders (WO) 291194 01, 291210 01, and 291123 03, all activities that affected quality, were adequate for the scheduled work; and the licensee failed to ensure the work instructions were followed by your staff for the affected activity. As a result of these deficiencies, during the work in the field on the energized Panel D11 2, a positive horizontal bus bar rotated and contacted a negative horizontal bus bar. This in turn, caused an electrical fault in Panel D11 2 and a complete loss of the left train 125 Volt DC safety related system coincident with both 120 Volt preferred alternating current (AC) power sources, busses Y 10 and Y 30. These electrical losses resulted in a reactor and turbine trip at approximately 3:06 p.m. on September 25, 2011, coincident with a Safety Injection Actuation Signal, Main Steam Isolation Signal, Containment High Radiation Signal, Containment Isolation Signal, Auxiliary Feedwater Actuation Signal, and Containment High Pressure Alarm (no actuation signal). This issue was documented in the licensee's corrective action program as CR PLP 2011 04822 and at the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions. As a remedial corrective action on September 25, 2011, the licensee repaired the damage caused to Panel D11 2 to restore it to service and addressed the operability and effect of the transient on other components.

The inspectors determined that the finding was more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Initiating Events Cornerstone, and adversely affected the cornerstone objective to limit the likelihood of those events, that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to create work orders in accordance with procedures and the failure to perform work in accordance with prescribed instructions directly resulted in the loss of the left train of 125 Volt DC coincident with two preferred AC power sources. The Phase 1 Significance Determination Process (SDP) evaluation determined that the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding required a Phase 2 evaluation using IMC 0609 Appendix A, "Determining the Significance of At Power Reactor Inspection Findings," which determined the significance was a Yellow Finding. The SRAs used the Palisades SPAR [Simplified Plant Analysis Risk] model, Revision 8.17, for the SDP Phase 3 evaluation. The result of the Phase 3 SDP is a preliminary finding of substantial safety significance (Yellow) with an estimated conditional core damage probability (CCDP) of $1.6E-5$. The inspectors also determined this finding had a cross cutting aspect in the area of human performance, work practices, because the licensee failed to communicate and ensure human error prevention techniques were used, such as holding formal pre job briefings, self and peer checking, and proper documentation of activities. The licensee also failed to ensure that these techniques were used commensurate with the risk of the assigned task, such that work activities are performed safely. Finally, during these maintenance activities, the inspectors concluded that licensee personnel proceeded in the face of uncertainty or unexpected circumstances (H.4 (a)).

Inspection Report# : [2011014](#) (pdf)Inspection Report# : [2011019](#) (pdf)**G****Significance:** Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Emergency Operating Procedure Immediate Actions.

A finding of very low safety significance and associated non cited violation of Technical Specification 5.4.1 was identified by the inspectors for the failure to implement procedures for combating emergencies and other significant events as required by Regulatory Guide (RG) 1.33, Section 6. Specifically, during the performance of EOP 1.0, "Standard Post Trip Actions," in response to a loss of the left train 125 Volt DC bus and subsequent plant trip, the control room reactor operators failed to immediately take the contingency action in the "response not obtained"

column for an immediate action step that could not be met due to the partial loss of control room indications. Procedure EOP 1.0, Step 2.b. of Section 4.0, "Immediate Actions," required the reactor operator in the control room to verify that the Main Generator was disconnected from the grid, and if that step cannot be completed, then the operator was required to connect a jumper across the corresponding relay terminals in the control room panel to open the output breakers. These actions were not immediately taken by the control room staff at the time of this event. Once the control room staff was aware of the "closed" status of the Main Generator output breakers from an update provided by an extra reactor operator who was in contact with transmission system operator, the action step was then taken by the turbine side reactor operator to jumper the relay terminals in the control room panel to open the breakers. This issue was documented in the licensee's corrective action program as CR PLP 2011 06081 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action on October 28, 2011, each operations crew received a briefing about operator expectations, the usage of human performance tools and procedures, and an overview of the recent events.

The inspectors determined that the finding was more than minor in accordance with IMC 0612 "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected, the performance deficiency could have the potential to lead to a more significant safety concern. In particular, this loss of 125 Volt DC event could have become a more significant event with further complications and plant issues. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Initiating Events Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Work Practices, in that the licensee communicates human error prevention techniques, such as peer checking, and that these techniques are used commensurate with the risk of the assigned task, such that work activities are performed safely (H.4(a)).

Inspection Report# : [2011014](#) (pdf)

G

Significance: Aug 25, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Adequately Evaluate the Enclosure Installed Over the 1F/1G Buses.

The inspectors identified a finding of very low safety significance involving the licensee's failure to adequately evaluate the enclosure installed over the 1F/1G Buses to be in compliance with all applicable requirements. Specifically, the licensee did not ensure that the new enclosure would not affect start-up transformer 1-2 during a design basis wind event. There were no violations of NRC regulations identified. This finding was entered into the licensee's corrective action program, which resulted in replacing inadequate eye-bolts.

The performance deficiency was determined to be more than minor because it was associated with the Initiating Events Cornerstone attribute of transient initiator (loss of offsite power) and affected the cornerstone objective to limit the likelihood of those events that upset plant stability. Specifically, there was reasonable doubt as to whether the enclosure could have withstood a design wind event, which would have increased the probability that severe weather could have affected the ability of startup transformer 1 2 to provide offsite power. The finding screened as very low safety significance (Green) because the transient initiator would not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding has a cross-cutting aspect in human performance because the licensee did not ensure reviews of safety significant decisions to verify the validity of the underlying assumptions or identify possible unintended consequences. Specifically, the licensee's design reviews for the 1F/1G Bus enclosure modification did not address the potential impact on start-up transformer 1-2 if the enclosure failed during a design basis wind event. [H.1(b)]. (Section 1R21.5.b.(1)).

Inspection Report# : [2011009](#) (pdf)

G

Significance: Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Procedures Were Not Appropriate to Address Gas Accumulation Issues.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to establish appropriate procedures for managing gas accumulation issues. Specifically, three examples were identified as follows: (1) Procedure ESSO 10 did not ensure that identified voids would be successfully removed by flushing; (2) Procedure SOP-3 did not specify a maximum flowrate which analyzed net positive suction head and potential air entrainment due to vortexing during reduced inventory operations when in shutdown cooling; and (3) Procedure SOP 3 did not contain instructions to vent the steam that could form at the low pressure safety injection discharge piping following a shutdown loss of cooling accident prior to system initiation. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with the Initiating Events and Mitigating System Cornerstones, and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because: (1) Procedure ESSO 10 was a deficiency confirmed not to result in loss of operability in that a review of recent periodic gas monitoring results determined that the affected locations were full of water; (2) Procedure SOP 3 associated with reduced inventory operations did not meet any of the criteria that required a Phase II or III analysis in that it did not rise to the level that there was an increase in the likelihood of a loss of shutdown cooling; and (3) Procedure SOP 3 associated with the steam void formation did not require a quantitative assessment because it met each item for the core heat removal, inventory control, power availability, containment control, and reactivity guidelines. This finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate relevant external operating experience. Specifically, the licensee's evaluation of gas related issues in response to Generic Letter 2008 01 was deficient in that, the licensee did not identify two potential gas sources, vortexing during reduced inventory and flashing following a shutdown loss of coolant accident, and did not address the minimum flowrate required to remove gas in piping when flushing. [P.2(a)]. (Section 40A5.1c.(2))

Inspection Report# : [2011009](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Margins for Evaluation of Leaking SIRWT Nozzles

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to adequately evaluate leaking Safety Injection and Refueling Water Tank (SIRWT) nozzles during the application of American Society of Mechanical Engineers (ASME) Code Case N 705. During the April May 2012 refueling outage, the SIRWT was drained for inspection and repairs and a deformed nozzle was sealed off, as it was believed to be the potential source of pre outage leakage. Upon refill, leakage was observed under a different section of the roof upon which the SIRWT rests, indicating a potentially new leak. The licensee employed ASME Code Case N 705 to demonstrate tank operability given the existing leakage and set an upper limit for allowed leakage. Inspector review of the approved evaluation identified certain Code Case criteria that were not discussed, namely, the residual weld stresses and seismic sloshing stresses. After discussions with the inspectors, the licensee developed residual weld stress values for their evaluation and discussed potential effects of seismic sloshing. The result was a reduction in allowed leakage from 130 gallons per day (gpd) to 34.8 gpd. The licensee entered the issue in their CAP as CR PLP 2012 04245 and CR PLP 2012 03732.

The finding was determined to be more than minor because the finding, if left uncorrected, could become a more significant safety concern. The inspectors utilized examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues," to inform this determination. Omission of Code-Case-required parameters in the approved evaluation led to reasonable doubt on the operability of the system had the licensee ascended to a mode requiring SIRWT operability. Further analysis was also required by the licensee. Absent NRC identification, the failure to adequately evaluate the leaking SIRWT nozzles could have allowed unstable cracks to remain in service. Unstable nozzle cracks could propagate and allow unacceptable leakage from the SIRWT resulting in loss of inventory and increase the risk for insufficient core cooling for post LOCA conditions. This finding impacted the Mitigating Systems Cornerstone

attribute of Equipment Performance (reliability). The finding adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because the licensee promptly corrected this issue and lowered the amount of allowed leakage, the inspectors answered “No” to all of the worksheet questions identified in IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 Initial Screening and Characterization of Findings,” Table 4a for the Mitigating Systems Cornerstone. The correct leakage limit was in place prior to the required time the tank needed to be operable. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of Human Performance for the work practices component. The licensee did not provide adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported (H.4.c). Specifically, the licensee failed to ensure that the vendor evaluation to demonstrate SIRWT nozzle integrity with through wall cracks included consideration of residual weld stresses and seismic sloshing stresses. The inspectors determined the primary cause of this finding based upon discussions with the licensee’s engineering staff.

Inspection Report# : [2012003](#) (pdf)

Significance: N/A Feb 17, 2012

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Inspection Assessment

On the basis of the sample selected for review, the team concluded that implementation of the Corrective Action Program (CAP) at Palisades was adequate, but only marginally effective. The inspectors did note an overall decline in performance since the last inspection. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria and were properly evaluated commensurate with their safety significance. In general, causes for issues were adequately determined and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, frequent NRC input or self-revealing events identified issues that the plant staff failed to adequately address. In one case, a significant condition adverse to quality was not adequately addressed and this resulted in recurrence of a failure of a safety-related service water pump. Another self-revealed finding related to the failure to run on an auxiliary feedwater pump, of low to moderate safety significance, was not adequately addressed initially. NRC comments, and later review by the licensee, led to the development of a root cause analysis which revealed other significant shortfalls in the maintenance of the turbine-driven auxiliary feedwater pump. This was a finding of low to moderate safety significance. The team noted that the licensee effectively reviewed operating experience for applicability to station activities. Audits and self assessments were determined to be effectively performed at an appropriate level to identify deficiencies. Based on the surveys conducted by the licensee, interviews conducted during the inspection, and review of the employee concerns program, employee freedom to raise nuclear safety concerns without fear of reprisal was evident.

Inspection Report# : [2012007](#) (pdf)

Significance: SL-IV Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Report a 10 CFR 50.72 Notification for an 8-hour Non-Emergency Report.

A Severity Level (SL) IV non cited violation of 10 CFR 50.72(b)(3)(ii)(B) was identified by the inspectors for the failure to notify the NRC as soon as practical and in all cases within eight hours of the occurrence of any event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. Specifically, the licensee failed to report on September 26, 2011, within eight hours an Appendix R noncompliance that was identified in DC shunt trip Breakers 72 01 and 72 02 for the 125 Volt DC system following the reactor trip that occurred on September 25, 2011. The licensee’s preliminary analysis demonstrated that if a shunt trip breaker automatically opened due to fire induced fault currents, then the licensee’s Appendix R credited equipment may have been lost unexpectedly, an unanalyzed condition that significantly degrades plant safety. This issue was documented in the licensee’s corrective action program as CR PLP 2011 05263 and at the end of the special inspection, the licensee continued to perform a causal evaluation in order to develop corrective actions. As a remedial corrective action, the licensee made the required event notification in Event Notification Number 47322 on October 5, 2011.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor

Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, Block 7, Figure 2, because reporting failure violations are considered to be violations that potentially impact the regulatory process and are dispositioned using traditional enforcement. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. In addition, NRC Enforcement Policy, dated July 12, 2011, Section 6.9.d.9, states, in part, that an example of an SL IV violation is the licensee's failure to make a report required by 10 CFR 50.72.

The associated Performance Deficiency is tracked as item 2011-014-08.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Human Performance Tools and to Perform an Infrequently Performed Test or Evolution Brief.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN HU 102, "Human Performance Tools," which established standards and expectations for the use of specific human performance tools with the goal to improve personnel and plant performance through human error reduction. The inspectors identified that Procedure EN HU 102 was not implemented for the work performed on September 25, 2011, to install a temporary modification and to address a non conforming condition associated with Panel D11 2. Implementation of the procedure for Panel D11 2 scheduled work required the use of Procedure EN OP 116, "Infrequently Performed Tests or Evolutions," and performance of an infrequently performed tests and evolution pre job brief, which the inspectors determined was not performed for the work on September 25, 2011. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 04822 and CR PLP 2011 04981. At the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Mitigating Systems Cornerstone. This adversely affected the cornerstone objective, in that, the failure to utilize human error reduction tools impacted the availability, reliability and capability of systems that responded to initiating events to prevent undesirable consequences. Specifically, the failure to utilize human performance tools directly contributed to the inadequate work planning and preparation scheduled for Panel D11 2 on September 25, 2011. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding has a cross cutting aspect in the area of human performance, work practices, because the licensee failed to ensure personnel work practices supported human performance through defining and effectively communicating expectations regarding procedural compliance coincident with plant personnel following procedures. Specifically, the licensee personnel failed to reference or implement procedures with human performance tools, which, if implemented, would have required an IPTE brief for the work performed on Panel D11 2 on September 25, 2011 (H.4(b)).

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Comply with Work Hour Rules for Non-Covered Workers.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN FAP OM 006, "Working Hour Limits for Non Covered Workers," which established standard fleet guidance for working hour limits for Entergy non covered (not covered under 10 CFR 26) workers as defined in EN OM 123, "Working Hour Limits." The inspectors identified that at least two non covered managers on the nightshift, involved with the work planning and oversight of troubleshooting repair efforts for Panel D11 2, had not followed the standards

for work hour limits and did not initiate condition reports when the work hour limits were exceeded, as required by Procedure EN FAP OM 006. Specifically, the inspectors identified that the Duty Station Manager worked approximately 25 consecutive hours from September 23 through September 24, and greater than 72 hours in a 7 day period. The electrical superintendent exceeded the administrative limits of 16 hours in 24 hour period, 26 hours in 48 hour period, 72 hours in a 7 day period, and greater than a 10 hour break between work periods over a consecutive 19 day period of work. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 05095 and CR PLP 2011 05116. At the end of this inspection, the licensee continued to perform an apparent cause evaluation and extent of condition to determine extent of the problem and causes for the performance deficiency in order to develop corrective actions.

The issue affected the Mitigating Systems Cornerstone because the 125 Volt DC system work plan development was overseen by the non covered workers. The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it revealed weaknesses that, if left uncorrected, could lead to more significant safety concerns associated with overseeing work on safety related equipment. In addition, the inspectors concluded that the failure to implement working hour limitations for non covered workers in Procedure EN FAP OM 006 was more than an isolated instance. The inspectors and Senior Reactor Analyst concluded that the use of IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," was the appropriate method for determining the significance. In accordance with IMC 0609, Appendix M, management review of this issue determined that this finding was of very low safety significance since the performance deficiency did not directly contribute to the event, as the non covered workers were involved with the planning and not actual implementation of the work performed on September 25, 2011, on Panel D11 2. The finding has a cross cutting aspect in the area of human performance, resources, because the licensee failed to ensure that personnel and other resources were available and adequate to assure nuclear safety; specifically, sufficient qualified personnel were available to maintain work hours within working hour guidelines (H.2 (b)).

Inspection Report# : [2011014](#) (pdf)

G

Significance: Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Procedure for the Loss of a DC Bus and the Simultaneous Loss of Two Preferred AC Power Sources.

A finding of very low safety significance and associated NCV of TS 5.4.1 was identified by the inspectors for the failure to establish a procedure for combating emergencies and other significant events as required by RG 1.33, Section 6. Specifically, Section 6 states, in part, that the loss of electrical power (and/or degraded power sources) is a safety related activity that should be covered by written procedures, and TS 5.4.1 required, in part, that written procedures be established, implemented, and maintained to cover the activities in RG 1.33. The design and licensing basis of the plant includes the loss of a single train of DC power. Although the site has multiple procedures to address the loss of the DC system and individual preferred AC sources, the procedures did not integrate to provide a response that minimized challenges to plant safety. The site has three separate procedures that were used in this event for the loss of one DC bus and loss of one preferred AC source (two sources were lost during the event, hence two of these procedures were used); but not one inclusive procedure to cover the loss of both preferred AC sources simultaneously. The procedures that the crew worked through were inadequate to respond in a timely fashion to changing plant conditions caused by the loss of the left train of DC power. This issue was documented in the licensee's corrective action program as CR PLP 2011 06209 and, at the end of the special inspection, the licensee was still performing an evaluation to determine the causes and to develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems Cornerstone attribute of Procedure Quality, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of procedure quality, areas to measure, lists operating (post event) procedures such as abnormal operating procedures, standard operating procedures, emergency operating procedures, and can include off normal procedures, as being items that should be established and maintained to ensure the cornerstone objective is met. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC

0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding does not have an associated cross cutting aspect since the last known operating experience for a loss of the 125 Volt DC system occurred in 1981 at the Millstone Nuclear Generating Station.

Inspection Report# : [2011014](#) (pdf)

G

Significance: Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Operability Evaluation.

A finding of very low safety significance and associated non cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to implement a procedure for an activity affecting quality. Procedure EN OP 104, "Operability Determination Process," required an assessment of the operability for structures, systems, and components (SSCs) when degraded or non conforming conditions were identified and establishment of compensatory measures were needed to, "ensure, maintain, and enhance future operability." Specifically, the inspectors identified that the operability evaluation for the 125 Volt DC system, completed on September 30, 2011, did not contain two compensatory measures necessary to ensure the operability of the system. It was also identified that the 50.59 pre screening (process applicability determination) for the temporary modification, which was also a compensatory measure for the operability evaluation, was not clearly written and did not adequately describe the evaluation of the modification or the bases for this decision. This issue was documented in the licensee's corrective action program as CR PLP 2011 04988 and CR PLP 2011 04965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. The licensee's remedial corrective actions included revising the 50.59 pre screening to clearly address the effect of the compensatory measures on other aspects of the facility, prohibiting maintenance on the energized 125 Volt DC busses, and issuing additional site guidance for the operation of battery chargers.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of Equipment Performance, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of equipment performance impacted the availability and reliability of the 125 Volt DC system. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Decision Making, because the licensee did not adequately conduct an effectiveness review of a safety significant decision to verify the validity of the underlying assumptions and identify possible unintended consequences, as necessary (H.1(b)).

Inspection Report# : [2011014](#) (pdf)

G

Significance: Oct 14, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Maintain Design and Procurement Control of the 125-Volt DC System.

A self revealed finding of very low safety significance (Green) and associated NCV of Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and Criterion IV, "Procurement Document Control," was identified for the licensee's failure to establish measures to ensure that the applicable regulatory requirements and design bases were correctly translated into specifications and instructions. In addition, the licensee failed to establish measures to assure that the applicable regulatory requirements and design bases, which were necessary to assure adequate quality, were suitably included or referenced in the documents for procurement of equipment. Specifically, 125 Volt DC Breakers 72 01 and 72 02 were purchased and installed with thermal overloads and instantaneous trips enabled. The design

basis stated that the breakers were non automatic and only actuated manually. As a result, on September 25, 2011, when an electrical fault occurred on Panel D11 2, the left train 125 Volt DC bus was lost, because the instantaneous trip device on Breaker 72 01 automatically actuated, propagating the fault through the bus, which resulted in a reactor and turbine trip, and plant transient. This issue was documented in the licensee's corrective action program as CR PLP 2011 4835 and CR PLP 2011 4965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action prior to plant startup, the licensee implemented a temporary modification to increase the breaker instantaneous trips and performed an operability evaluation, with compensatory actions for the 125 Volt DC system.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, lack of coordination between Panel D11 2 protective device (FUZ/D11 2) and Breaker 72 01 resulted in the loss of the left 125 Volt DC bus and two preferred AC power sources and complicated plant shutdown during the reactor trip on September 25, 2011, when an electrical fault occurred while working on Panel D11 2. The risk assessment associated with the event on September 25, and the complication caused by the breaker opening, is evaluated and described in the preliminary Yellow AV. The inspectors determined the finding, related to the design deficiency, could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of findings," Table 4a for the Mitigating Systems cornerstone. The inspectors answered "Yes" to Question 1 in Column 2. Therefore, the inspectors determined that this finding could be screened as having very low safety significance (Green), because the finding was a design deficiency confirmed not to result in loss of operability or functionality of a system safety function. In addition, the inspectors also determined that the finding affected the fire protection safe shutdown strategies. Therefore, screening under IMC 0609, Appendix F, "Fire Protection Significance Determination Process," was required. Based on review of IMC 0609, the inspectors concluded that the finding represented a moderate degradation within the post fire safe shutdown category and performed a Phase 2 analysis. Based on the licensee's evaluation for the loads the inspectors determined that this finding screened as having very low safety significance (Green) per Task 2.3.5, screening check for lack of fire ignition sources and fire scenarios. The inspectors did not identify a cross cutting aspect associated with this finding because Breakers 72 01 and 72 02 were procured and installed in 1981 and therefore, the finding was not reflective of licensee's current performance.

The associated Traditional Enforcement Item is tracked as Item 2011-014-01.

Inspection Report# : [2011014](#) (*pdf*)

Significance: **W** Oct 05, 2011

Identified By: NRC

Item Type: VIO Violation

Improper Lubrication of Turbine Driven Auxiliary Feedwater Pump Linkages

A self-revealed finding of low to moderate safety significance and associated Apparent Violation (AV) of 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," occurred for the licensee's failure to follow procedures for lubrication of linkages on the TDAFW pump overspeed trip device. Specifically, during a maintenance window the licensee greased a knife edge on the trip mechanism. The greasing of the knife edge contributed to a trip of the pump on May 10, 2011, as well as rendering the pump inoperable for a period of time in excess of what is allowed by Technical Specifications (TSs). After identification of the grease, the licensee removed the grease, restored the pump to an operable status, and initiated condition report (CR) PLP-2011-02350.

The inspectors concluded that the finding was more than minor because it was associated with the equipment reliability and performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the TDAFW pump could not reliably perform its mitigating function. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre-solved SDP worksheets for Palisades and determined that this finding screened as Yellow. In order to realistically assess the significance, IMC

0609 required a Phase 3 SDP evaluation. Based on the Probabilistic Risk Analysis conducted by the Senior Reactor Analyst (SRA), a Significance and Enforcement Review Panel reached a preliminary determination the finding was of low to moderate (White) safety significance. The finding occurred, in part, due to a worker making a change to a work instruction without following the process for procedure revisions. Therefore, the inspectors assigned a cross cutting aspect of H.1(a), risk significant decisions using a systematic process. (Section 4OA3)

Inspection Report# : [2011013](#) (pdf)

Inspection Report# : [2011017](#) (pdf)

Inspection Report# : [2012010](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain SAMGs

The inspectors identified a finding of very low safety significance for the licensee's failure to review and update the Severe Accident Management Guidelines (SAMGs) as required by the site's procedure review process for SAMG's. Specifically, the SAMG writers' guide and site procedures required periodic or biennial reviews of the SAMGs; however, no reviews had been performed since 2005. In addition, the licensee procedures for design changes require that design changes identify impacts on SAMGs. Because the SAMGs are not required by regulations, the inspectors determined that the failure to update the SAMGs was a finding without an associated violation. The licensee has entered the condition into their corrective action program (CAP), and performed revisions, and established electronic accessibility to the SAMGs.

The inspectors concluded that the failure to review and update the SAMGs as required by the SAMG writers' guide and licensee procedures was a performance deficiency that warranted further evaluations through the SDP. The finding was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because, the performance deficiency is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the objective to ensure the reliability of systems to respond to initiating events. In addition, the SAMGs are procedures used to mitigate the effects of beyond design basis accidents and, if left uncorrected, would complicate the licensee's response to a severe accident and have the potential to lead to a more significant safety concern. The inspectors concluded that the finding was not more than very low safety significance because it did not degrade any of the mitigating system functions listed in the phase 1 screen. No cross cutting issue existed due to the age of the issue.

Inspection Report# : [2011004](#) (pdf)

Significance:  Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 Design Reviews Did Not Adequately Assess the Potential to Accumulate Voids Within Piping Systems.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately review the design of emergency core cooling and containment spray systems with respect to the potential to accumulate voids. Specifically, the design reviews did not consider system interactions, evaluate the acceptability of locations believed to be inaccessible for periodic monitoring, and ensure the validity of the assumption that some high point vents were periodically used to ensure that some locations were full of water when excluding them from periodic monitoring. This finding was entered into the licensee's corrective action program.

The performance deficiency was associated with Mitigating System Cornerstone and determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as of very low safety significance (Green) because the finding involved a design or qualification deficiency that did not result in a loss of operability. Specifically, based on a historical review of recent maintenance activities, current process parameters, and, in some locations, ultrasonic examinations, the licensee's operability evaluation concluded there were no adverse voids at these locations. This finding had a cross-cutting aspect in the area of human

performance because the licensee did not ensure supervisory oversight of work activities associated with the Generic Letter 2008 01 design reviews such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's design reviews considered plant specific information such as system interactions and at power operations. [H.4(c)]. (Section 40A5.1c.(1))
Inspection Report# : [2011009](#) (pdf)

G

Significance: Aug 25, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Void Size Acceptance Criteria is Non-Conservative.

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to develop conservative void size acceptance criteria. Specifically, the void size acceptance criteria was based on an incorrect safety injection and refueling water base tank elevation and a 10 percent degradation of the design rated flowrates of the pumps. When the correct base tank elevation and lower allowable pump flowrates were considered, the void acceptance criteria were non-conservative. This finding was entered into the licensee's corrective action program.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating System Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because the finding was a design or qualification deficiency confirmed not to result in loss of operability. Specifically, a review of recent periodic gas monitoring results determined that no voids were present at the suction side of the affected pumps. This finding had a cross-cutting aspect in the area of human performance because the licensee did not ensure supervisory oversight of work activities associated with actions related to Generic Letter 2008 01 such that nuclear safety is supported. Specifically, oversight did not ensure that the contractor's development of void acceptance criteria relied on limiting design values. [H.4(c)]. (Section 40A5.1c.(3))
Inspection Report# : [2011009](#) (pdf)

Barrier Integrity

Emergency Preparedness

G

Significance: Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement the Approved Emergency Classification Scheme

The inspectors identified a finding of very low safety significance with an associated NCV of 10 CFR 50.47(b)(4) for the failure to properly implement the approved Emergency Action Level (EAL) classification scheme. Specifically, the licensee implemented the EAL classification scheme such that an Alert (one occurrence) would not be declared, as it should be, related to degraded performance of safety related equipment as a result of flooding. The licensee has entered the condition into their CAP and conducted training to implement appropriate criteria for declaration of subject EAL.

The inspectors concluded that the failure to implement a standard emergency classification scheme emergency planning drill was a performance deficiency that warranted a significance determination using the SDP. The issue was more than minor because it is associated with the Emergency Response Organization performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective to ensure that the capability of implementing adequate measures to protect the health and safety of the public in the event of a radiological

emergency is maintained by the licensee. The issue was of very low safety significance (Green) because it met the example for a Green finding using IMC 0609 Appendix B, "Emergency Preparedness SDP" under Section 4.4 and did not meet the threshold for a greater than green finding in Appendix B since there was no loss or degradation of a Risk-Significant Planning Standard. The finding had an associated cross cutting aspect under the area of human performance in the resources component. Specifically, the licensee did not provide adequate training of personnel.

Inspection Report# : [2011004](#) (pdf)

Occupational Radiation Safety

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Control Dose to Worker in Locked High Radiation Area

A finding of very low safety significance and an NCV was self revealed following the licensee's failure to control dose to workers as specified in the radiation work permit (RWP) and as required by Technical Specification (TS) 5.7.2. Specifically, inadequacies in the licensee's process for performing remote dose monitoring, resulted in workers exceeding their authorized RWP dose limits. Therefore the dose was not controlled as required by TS. The licensee has entered the condition into their corrective action program (CAP). Corrective actions included revising procedures for remote radiological job coverage for workers wearing multiple dosimeters.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve as low as is reasonably achievable (ALARA) planning or work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by vague procedural guidance. Consequently, this finding had a cross cutting aspect in the area of human performance resources. Specifically, the licensee ensures that resources are available and adequate to maintain complete, accurate, and up to date procedures.

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Unauthorized Entry to High Radiation Area

A self revealed finding of very low safety significance and associated NCV of TS 5.7.1, occurred when an individual entered a high radiation area without proper authorization. The individual was not knowledgeable of dose rates in the area. The licensee has entered the condition into their CAP. Corrective actions included counseling of the worker and the error was discussed with all Nuclear Plant Operators at shift turnover.

The finding was more than minor because it is addressed in Example 6.h of IMC 0612 Appendix E, "Examples of Minor Issues." Additionally, the inspectors determined that the finding was more than minor because it is associated with the program and process attribute, and affected the Occupational Radiation Safety Cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operations. This finding was assessed using IMC 0609, Attachment C for the Occupational Radiation Safety SDP and determined to be of very low safety significance (Green) because this failure did not involve ALARA Planning or Work controls; did not result in an overexposure or substantial potential for overexposure and there was not a compromised ability to assess dose. The finding was caused by the worker that did

not ask for a peer check before entering the posted high radiation area. Consequently, this finding had a cross cutting aspect in the area of human performance work practices. Specifically, human error prevention techniques, such as self and peer checking are used.

Inspection Report# : [2011004](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : September 12, 2012

Palisades

3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Work Management Processes

A self-revealed finding of very low safety significance and two associated NCVs were identified for the failure to conduct maintenance activities in accordance with work management procedures. Two NCVs are being documented in accordance with NRC Enforcement Manual Section 2.13.8 because of a cause-and-effect relationship under one performance deficiency. The first NCV was of Technical Specification (TS) 5.4.1 for failure to implement work management procedures. Specifically, Fix-It-Now (FIN) maintenance personnel working on a control room light indication issue for the safety-related Component Cooling Water Surge Tank Fill Valve, CV 0918, conducted troubleshooting outside of what was originally planned and briefed. Contrary to work management procedures, the required documentation, independent and/or supervisory reviews, nor risk assessment were completed. This deviation resulted in the installation of jumpers from an 115V alternating current (AC) circuit to the safety-related 125V direct current (DC) power system, which actuated various control room alarms, including a ground alarm on the DC system. The second associated NCV, revealed as a result of the first, was for a failure to implement risk management actions as required by 10 CFR 50.65(a)(4), Maintenance Rule. Contrary to this, the licensee failed to perform a quantitative or qualitative risk assessment for work (installation of jumpers) on circuitry associated with CV 0918. Corrective actions consisted of entering the issue into the corrective action program (CAP) and reassigning the FIN team personnel back to their respective maintenance shops and a suspension of all tool pouch maintenance activities pending further investigation. The licensee also held information sharing sessions with the maintenance and operations departments about this incident, the work management process, the standards for implementing this process, and new checklists for use during work planning and authorization.

The finding was more than minor utilizing IMC 0612, Appendix B, because it could reasonably be viewed as a precursor to a significant event and it affected the Initiating Events Cornerstone attribute of Human Performance, adversely impacting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, planning and conducting work outside work management requirements resulted in a short circuit and various control room alarms. The finding screened as Green by answering “no” to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available in Exhibit 1 of IMC 0609, Appendix A. Additionally, the inspectors screened the finding as Green utilizing an Incremental Core Damage Probability Deficit (ICDPD) calculation performed by a regional Senior Risk Analyst in accordance with IMC 0609, Appendix K, due to the one NCV associated with the Maintenance Rule. The finding had a cross cutting aspect in the area of Human Performance, related to the cross cutting component of Decision Making, in that the licensee uses conservative assumptions in decision making, adopts a requirement to demonstrate that the proposed action is safe in order to proceed, and identifies possible unintended consequences of a decision. In this finding, there were personnel in various departments that could have questioned the continuation of the maintenance with respect to following the work management process (H.1(b)).

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Water Leakage into Control Room During Maintenance

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self-revealed for the failure to implement work management procedures when operators noticed water leakage into the control room from the ceiling during maintenance activities. Water dripped onto the top of a panel near the middle of the control room and inside a nearby walk-in panel. Metal trays that had been previously established to measure and route known leakage from the Safety Injection and Refueling Water Tank (SIRWT) out of the roof area ('catacombs') above the control room were moved during maintenance. The plant was shut down at the time to repair the SIRWT and the tank was drained. However, a water-cooled drilling device was being used in the roof at the time to 'core-bore' out old nozzles. Contrary to Quality Procedure EN WM 105, Planning, no controls were established to keep the trays in place or otherwise prevent water from accumulating in the catacomb area. As a result, the water from the tool seeped through the catacomb floor while it was in use and wetted equipment in the walk-in panel. Operators immediately halted the work in the roof area and shielded equipment from further wetting. The licensee inspected the affected equipment and determined there were no adverse effects as a result of the wetted equipment. The issue was also entered into the Corrective Action Program (CAP).

The failure to plan work activities in a manner to protect control room equipment from leakage was a performance deficiency warranting further evaluation in the SDP. The issue was determined to be more than minor using IMC 0612, Appendix B, because it impacted the Configuration Control attribute of the Initiating Events Cornerstone, and it adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions. Specifically, wetting of electrical components in the control room challenges the ability of those components to perform their function reliability. The inspectors utilized IMC 0609, Appendix G, "Shutdown Significance Determination Process," to assess the significance of the finding because the plant was shut down at the time. The finding screened as Green, or very-low safety significance, using Checklist 2 of Attachment 1 because with the primary coolant system closed and steam generators available for heat removal, none of the conditions listed as requiring a Phase 2 or 3 analysis applied and all shutdown safety functions were maintained. The finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Control component. The licensee did not coordinate work activities consistent with nuclear safety (H.3(a)). The core-bore work activity did not properly incorporate the job site conditions, risk insights, or the need for compensatory actions. Since there was a known deficiency in the control room boundary regarding the potential for water ingress, appropriate controls should have been outlined in work instructions or exercised over the catch devices themselves to help control the water that was being used in the tank/catacomb area.

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Operation of Primary Coolant Pumps Outside Design Basis

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50 Appendix B, Criterion III, Design Control, for the failure to operate the Primary Coolant Pumps (PCPs) in accordance with their design operating criteria. In October 2011, a slight rise in vibration levels on the 'C' PCP occurred and was sustained for approximately 24 hours. This was followed by a short spike in vibrations and a return to a lower stabilized value than what had been previously observed. Investigation by the licensee revealed it was likely a piece of an impeller vane which had deformed and broken free. Based on a review of operating experience associated with impellers and further licensee investigation, the inspectors concluded that the PCPs had been operated outside of their license/design basis as stated in the Updated Final Safety Analysis Report (UFSAR) with regard to minimum net positive suction head and maximum flow. Further, based on impeller like pieces found in the reactor vessel in 2007 (which an

apparent cause stated likely came from a PCP), and an operating history which indicated past occurrences of vane breakage and degradation, the inspectors concluded the licensee had the ability to foresee and correct the condition affecting the PCPs prior to the release of a piece in October 2011. The licensee entered the issue in their Corrective Action Program (CAP) as CR PLP 2011 5744 and performed additional research into the phenomena leading to the impeller degradation. The PCP operating sequence was changed, an Operational Decision Making Issue was implemented, and efforts to explore further procedural changes are on going to mitigate degradation of the impellers.

The issue was determined to be more than minor because it impacted the Design Control attribute of the Initiating Events Cornerstone, adversely affecting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the potential release of impeller pieces in the primary coolant system (PCS) challenges the cornerstone objective. The issue screened as Green, or very low safety significance, based on answering 'no' to the Loss of coolant Accident (LOCA) initiator question under the Initiating Events cornerstone in IMC 0609, Attachment 4, Table 4a. This was based on a review of the licensee's assessment by the regional inspectors, experts at the Office of Nuclear Reactor Regulation (NRR) and Office of Research in determining the deficiency would not likely be an impact to the coolant pressure boundary. The inspectors determined there was no associated cross cutting aspect because the finding was not indicative of current licensee performance.

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Work Management Process for Reactor Head Work

The inspectors identified a finding of very low safety significance with an associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to properly follow the work management process for work done to loosen stuck reactor head studs. During the April May 2012 refueling outage, difficulty was encountered in loosening some of the reactor head studs to support refueling operations. The decision was made to retension the studs that had already been detensioned (without ascending back to Mode 5 from Mode 6) and start over using a more precise electric pumping unit that had not been used to that point due to equipment issues. Contrary to EN WM 102, Work Implementation and Closeout, the licensee used the field change process, not authorized for this type of change, to "pen and ink" different tensioning values and sequence in the normal tensioning procedure (so as not to return to Mode 5). Additionally, the inspectors identified that the steps documented as having been performed as a record of the contingency actions taken differed from what was actually performed. The licensee entered the issue into the CAP as Condition Reports CR PLP 2012 2610 and CR PLP 2012 2848, and corrected the contingency work instructions.

The issue was determined to be more than minor because if left uncorrected, it could lead to more significant safety issues. Specifically, the failure to follow appropriate processes and correctly document reactor head work is indicative of shortfalls that could occur for other safety related work. Additionally, the licensee was slow to recognize the issue. The inspectors concluded that the Initiating Events Cornerstone was impacted because of the potential for an inadvertent mode change. The finding screened as Green, or very low safety significance, using IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process," based on all of the mitigation criteria being met and no phase 2 or 3 analysis being required per Checklist 3, indicating there was no impact to shutdown safety functions. The inspectors determined that the finding had an associated cross cutting aspect in the area of human performance in that personnel work practices did not support human performance. Specifically, supervisory and management oversight failed to assure the proper processes were followed

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, “Integrity of Examination and Tests” was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered ‘no.’ The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, “Integrity of Examination and Tests” was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions

for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered 'no.' The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Intermittent Fuse Contact Causes Feedwater Transient and Plant Trip

A self revealed finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1, Procedures, was identified for the failure to adequately implement the fuse control procedure during the reinstallation of a safety related fuse after maintenance. Specifically, insufficient contact was established between a fuse holder clip and fuse ferrule for safety related fuse FUZ/Y1014 2, resulting in the opening of the 'A' Feedwater Pump Recirculation valve, CV 0711 at full power. This induced a feed transient which required operators to manually trip the reactor. The licensee took compensatory actions to ensure the valve was isolated prior to the return to full power operation. The licensee also entered the issue in their CAP as CR PLP 2012 02182 to further evaluate the conditions of the procedural guidance implementation, procedural disconnects, application of "loose fuse" operating experience, and the extent of condition for other safety related fuses.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening," because it is associated with the Initiating Events cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the cause of the feedwater transient which led to a plant trip on December 14, 2011 was intermittent electrical contact between FUZ/Y1014 2 and its holder clip. The finding screened as "Green" in the Initiating Events cornerstone by answering "no" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of problem identification and resolution related to the cross cutting component of operating experience, in that the licensee implements and institutionalizes operating experience through changes to station processes, procedures, equipment, and training program. In this finding, the issue of "loose fuses," potential causes of these loose fuses, and the potential plant effects this could cause have been identified in externally generated operated experience as well as Palisades' own operating experience from a loose fuse on a safety-related component in 2011. Therefore, the inspectors determined this issue was reflective of current performance, and the inspectors determined that lessons learned from these identified "loose fuse" issues were not extensively reviewed for applicability throughout systems in the plant and were not fully institutionalized to prevent these issues from recurring.

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Ensure Reactor Head Vents Closed During PCS Fill

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self revealed on January 7, 2012, for the failure to adequately implement a procedure when indications of Primary Coolant System (PCS) leakage exceeding 10 gallons per minute (gpm) were observed by the control room operators. The finding occurred while the plant was shut down and in a cold shutdown condition. Specifically, the licensee discovered that reactor head vent valves MV PC1060B and MV PC1060C had not been shut before filling and pressurizing the PCS, contrary to the requirements of procedure SOP 1C, Primary Coolant System Heatup. The licensee shut the valves and isolated the leak. The leakage resulted in approximately 3000 gallons of primary coolant being transferred to the reactor cavity tilt

pit. This leakage was subsequently drained prior to startup. The licensee entered the issue as CR PLP 2012 00165 in their CAP.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, “Issue Screening,” because it is associated with the Initiating Events Cornerstone attribute of Configuration Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, uncontrolled release of coolant from the PCS could challenge plant stability. The issue screened as Green utilizing Attachment 1 of IMC 0609 Appendix G, “Shutdown Operations Significance Determination Process.” Specifically, the finding and plant conditions at the time did not warrant the use of a Phase 2 or 3 analysis, because there was no impact on any safety functions. The inspectors determined the cause of the finding was associated with the cross cutting area of human performance. Specifically, by assuming the reactor head vent valves were not open, operations shift personnel did not use conservative assumptions in decision making and adopt a requirement to demonstrate that a proposed action was safe in order to proceed.

Inspection Report# : [2012002](#) (pdf)

Significance:  Dec 31, 2011
 Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Maintenance Procedures for Safety Related Breakers in Panel D11-2

A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 was identified by the inspectors for failure to properly establish written procedures for maintenance that can affect the performance of safety related equipment as required by Regulatory Guide 1.33, Section 9. Specifically, during Refueling Outage 21 (RFO 21) maintenance personnel were conducting breaker testing and replacements on the 125 VDC Panel D11 2 with an inadequate work order package that did not include the appropriate procedure steps for replacing breakers in the panel. Instead, the work order directed maintenance workers in the field to install the breakers using a procedure that was not prescriptive in the reinstallation instructions and did not include signature steps for supervisor verification/inspection of the reinstallation activities. The licensee corrected the improperly installed breakers prior to reactor startup. The licensee also entered the issue in their Corrective Action Program (CAP) as CR-PLP-2012-00648.

The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the breaker replacement workmanship deficiencies from the maintenance performed on Panel D11 2 during RFO 21 led to intermittent operation of some loads supplied by the panel. The finding screened as “Green” in the Initiating Events Cornerstone by answering “no” to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety and specifically, the training of personnel and a sufficient number of qualified personnel are available to complete tasks commensurate with maintaining nuclear safety

Inspection Report# : [2011005](#) (pdf)

Significance:  Dec 31, 2011
 Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Control Packing Configuration of Pressurizer Spray Control Valves

A finding of very low safety significance was self revealed on September 16, 2011, when the packing for CV 1057,

one of two pressurizer spray control valves, failed resulting in unidentified Primary Coolant System (PCS) leakage in excess of TS limits. As a result, the licensee manually tripped the reactor and declared an Unusual Event was declared. The licensee failed to maintain the configuration of the plant in accordance with the design. No violation of regulatory requirements was identified, however, the licensee failed to implement an Entergy procedure, a self-imposed standard. Contrary to the licensee's Configuration Management procedure, EN DC 105, the intended packing configuration was not installed during RFO 21. Specifically, end rings integral to the design were omitted. As immediate corrective action, the licensee repacked CV 1057 and checked the consolidation of the sister valve, CV 1059. The licensee also entered the issue in their CAP as CR-PLP-2012-04620 and performed a root cause analysis.

The inspectors determined the failure of the packing due to inadequate configuration management was a performance deficiency warranting further evaluation with the Significance Determination Process. The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Design Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the issue resulted in PCS leakage greater than TS limits, a manual reactor trip, and declaration of an Unusual Event. The issue screened as Green, or very low safety significance, in a Phase 3 SDP evaluation performed by regional Senior Reactor Analysts. The finding had a cross cutting aspect in the area of Human Performance associated with the Resources component. Specifically, the licensee failed to ensure that complete, accurate, and up to date design documentation, procedures, and work packages were available and adequate to ensure nuclear safety for maintenance on the pressurizer spray control valves.

Inspection Report# : [2011005](#) (*pdf*)

Significance: **W** Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Prevent Recurrence of a Significant Condition Adverse to Quality concerning Service Water Pump Couplings.

A self revealed finding with a preliminary low to moderate safety significance and two associated apparent violations of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," and Criterion III, "Design Control," was self-revealed on August 9, 2011, due to the licensee's failure to prevent recurrence of a significant condition adverse to quality. Specifically, on September 29, 2009, coupling #7 on service water pump P-7C failed due to intergranular stress corrosion cracking (IGSCC). The corrective actions taken to prevent recurrence did not consider all critical factors to prevent or minimize IGSCC from recurring. On August 9, 2011, coupling #6 on service pump P-7C failed due to IGSCC. In addition, in 2007, when the licensee implemented a design change to the coupling material, the licensee failed to reasonably address the factors to reduce susceptibility of the 416 stainless steel couplings to IGSCC. This issue was entered into the licensee's corrective action program (CAP) as CR-PLP-2011-03902. Long term corrective actions included replacing all couplings in the three service water pumps with couplings made of a material that was less susceptible to intergranular stress corrosion cracking.

This finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Design Control and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operation. Specifically, as a result of the performance deficiency, on August 9, 2011, pump P-7C failed during normal operation. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors then performed a Phase 2 evaluation using the pre solved SDP worksheets for Palisades and determined that this finding screened as Yellow. Due to inherent conservatism in the Phase 2 analysis, the RIII Senior Reactor Analysts performed a Phase 3 SDP analysis. The results of the Phase 3 SDP evaluation concluded that this finding was preliminarily determined to be White. The finding has a cross cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee failed to take into consideration significant

operating experience from as early as 1993 and as late as 2010 that linked IGSCC susceptibility of 410 and 416 stainless steels to temper embrittlement (P.2 (b)).

Inspection Report# : [2012011](#) (pdf)

Inspection Report# : [2011020](#) (pdf)

Inspection Report# : [2011016](#) (pdf)

Significance: Y Oct 28, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Have Adequate Work Instructions for Work Performed on Panel D11-2.

A preliminary finding of substantial safety significance (Yellow) and an associated apparent violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed on September 25, 2011. The licensee failed to ensure that the work instructions on safety related 125 Volt direct current (DC) Distribution Panel D11 2 through Work Orders (WO) 291194 01, 291210 01, and 291123 03, all activities that affected quality, were adequate for the scheduled work; and the licensee failed to ensure the work instructions were followed by your staff for the affected activity. As a result of these deficiencies, during the work in the field on the energized Panel D11 2, a positive horizontal bus bar rotated and contacted a negative horizontal bus bar. This in turn, caused an electrical fault in Panel D11 2 and a complete loss of the left train 125 Volt DC safety related system coincident with both 120 Volt preferred alternating current (AC) power sources, busses Y 10 and Y 30. These electrical losses resulted in a reactor and turbine trip at approximately 3:06 p.m. on September 25, 2011, coincident with a Safety Injection Actuation Signal, Main Steam Isolation Signal, Containment High Radiation Signal, Containment Isolation Signal, Auxiliary Feedwater Actuation Signal, and Containment High Pressure Alarm (no actuation signal). This issue was documented in the licensee's corrective action program as CR PLP 2011 04822 and at the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions. As a remedial corrective action on September 25, 2011, the licensee repaired the damage caused to Panel D11 2 to restore it to service and addressed the operability and effect of the transient on other components.

The inspectors determined that the finding was more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Initiating Events Cornerstone, and adversely affected the cornerstone objective to limit the likelihood of those events, that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to create work orders in accordance with procedures and the failure to perform work in accordance with prescribed instructions directly resulted in the loss of the left train of 125 Volt DC coincident with two preferred AC power sources. The Phase 1 Significance Determination Process (SDP) evaluation determined that the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding required a Phase 2 evaluation using IMC 0609 Appendix A, "Determining the Significance of At Power Reactor Inspection Findings," which determined the significance was a Yellow Finding. The SRAs used the Palisades SPAR [Simplified Plant Analysis Risk] model, Revision 8.17, for the SDP Phase 3 evaluation. The result of the Phase 3 SDP is a preliminary finding of substantial safety significance (Yellow) with an estimated conditional core damage probability (CCDP) of $1.6E-5$. The inspectors also determined this finding had a cross cutting aspect in the area of human performance, work practices, because the licensee failed to communicate and ensure human error prevention techniques were used, such as holding formal pre job briefings, self and peer checking, and proper documentation of activities. The licensee also failed to ensure that these techniques were used commensurate with the risk of the assigned task, such that work activities are performed safely. Finally, during these maintenance activities, the inspectors concluded that licensee personnel proceeded in the face of uncertainty or unexpected circumstances (H.4 (a)).

Inspection Report# : [2011019](#) (pdf)

Inspection Report# : [2012011](#) (pdf)

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Emergency Operating Procedure Immediate Actions.

A finding of very low safety significance and associated non cited violation of Technical Specification 5.4.1 was identified by the inspectors for the failure to implement procedures for combating emergencies and other significant events as required by Regulatory Guide (RG) 1.33, Section 6. Specifically, during the performance of EOP 1.0, "Standard Post Trip Actions," in response to a loss of the left train 125 Volt DC bus and subsequent plant trip, the control room reactor operators failed to immediately take the contingency action in the "response not obtained" column for an immediate action step that could not be met due to the partial loss of control room indications. Procedure EOP 1.0, Step 2.b. of Section 4.0, "Immediate Actions," required the reactor operator in the control room to verify that the Main Generator was disconnected from the grid, and if that step cannot be completed, then the operator was required to connect a jumper across the corresponding relay terminals in the control room panel to open the output breakers. These actions were not immediately taken by the control room staff at the time of this event. Once the control room staff was aware of the "closed" status of the Main Generator output breakers from an update provided by an extra reactor operator who was in contact with transmission system operator, the action step was then taken by the turbine side reactor operator to jumper the relay terminals in the control room panel to open the breakers. This issue was documented in the licensee's corrective action program as CR PLP 2011 06081 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action on October 28, 2011, each operations crew received a briefing about operator expectations, the usage of human performance tools and procedures, and an overview of the recent events.

The inspectors determined that the finding was more than minor in accordance with IMC 0612 "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected, the performance deficiency could have the potential to lead to a more significant safety concern. In particular, this loss of 125 Volt DC event could have become a more significant event with further complications and plant issues. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Initiating Events Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Work Practices, in that the licensee communicates human error prevention techniques, such as peer checking, and that these techniques are used commensurate with the risk of the assigned task, such that work activities are performed safely (H.4(a)).

Inspection Report# : [2011014](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Foreign Material in Safety Injection and Refueling Water Tank (SIRWT)

A finding of very-low safety significance with an associated NCV of TS 5.4.1 was self revealed for failure to implement a maintenance procedure when it was discovered that foreign material had entered the SIRWT during a

forced outage to repair the tank. A few days after the tank was refilled, a non-safety-related recirculation pump for the tank failed. The licensee discovered a plastic bag in the pump suction. The licensee entered the issue in their CAP and performed a root cause evaluation. The licensee concluded that inadequate implementation of Quality Procedure EN MA 118, Foreign Material Exclusion, allowed the bag to enter the SIRWT during the refilling of the tank from the upper manway access. Since all Emergency Core Cooling system (ECCS) pumps have their suctions aligned to the SIRWT, the operability of those pumps came into question upon discovery of the bag in the recirculation pump. As a result, the licensee tested all of the pumps to ensure they were operable. There were no abnormalities noted during the test-runs.

The failure to adequately implement EN MA 118, Foreign Material Exclusion, was a performance deficiency warranting further assessment in the SDP. Specifically, a buffer zone was not established around the upper opening to the SIRWT and consideration was not given to the effects of ventilation in the area. Both contributed to the introduction of foreign material into the tank. Utilizing IMC 0612, Appendix B, the inspectors determined the issue was more than minor because it adversely impacted the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, introduction of foreign material challenged the reliability of all ECCS pumps and necessitated emergent testing to ensure they remained operable. The finding screened as Green, or very low safety significance, utilizing IMC 0609, Appendix A, based on answering 'no' to all questions in Section A of Exhibit 2. The inspectors also determined that the finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Practices component. Based on other examples of poor implementation of the Foreign Material Exclusion (FME) program identified by both the inspectors and licensee; combined with the failure to correct those issues, the inspectors determined that the licensee did not ensure there was adequate supervisory and management oversight of work activities such that nuclear safety was supported.

Inspection Report# : [2012004](#) (pdf)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Margins for Evaluation of Leaking SIRWT Nozzles

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to adequately evaluate leaking Safety Injection and Refueling Water Tank (SIRWT) nozzles during the application of American Society of Mechanical Engineers (ASME) Code Case N 705. During the April May 2012 refueling outage, the SIRWT was drained for inspection and repairs and a deformed nozzle was sealed off, as it was believed to be the potential source of pre outage leakage. Upon refill, leakage was observed under a different section of the roof upon which the SIRWT rests, indicating a potentially new leak. The licensee employed ASME Code Case N 705 to demonstrate tank operability given the existing leakage and set an upper limit for allowed leakage. Inspector review of the approved evaluation identified certain Code Case criteria that were not discussed, namely, the residual weld stresses and seismic sloshing stresses. After discussions with the inspectors, the licensee developed residual weld stress values for their evaluation and discussed potential effects of seismic sloshing. The result was a reduction in allowed leakage from 130 gallons per day (gpd) to 34.8 gpd. The licensee entered the issue in their CAP as CR PLP 2012 04245 and CR PLP 2012 03732.

The finding was determined to be more than minor because the finding, if left uncorrected, could become a more significant safety concern. The inspectors utilized examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues," to inform this determination. Omission of Code-Case-required parameters in the approved evaluation led to reasonable doubt on the operability of the system had the licensee ascended to a mode requiring SIRWT operability. Further analysis was also required by the licensee. Absent NRC identification, the failure to adequately evaluate the leaking SIRWT nozzles could have allowed unstable cracks to remain in service. Unstable nozzle cracks could propagate and allow unacceptable leakage from the SIRWT resulting in loss of inventory and increase the risk for insufficient core cooling for post LOCA conditions. This finding impacted the Mitigating Systems Cornerstone

attribute of Equipment Performance (reliability). The finding adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because the licensee promptly corrected this issue and lowered the amount of allowed leakage, the inspectors answered “No” to all of the worksheet questions identified in IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 Initial Screening and Characterization of Findings,” Table 4a for the Mitigating Systems Cornerstone. The correct leakage limit was in place prior to the required time the tank needed to be operable. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of Human Performance for the work practices component. The licensee did not provide adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported (H.4.c). Specifically, the licensee failed to ensure that the vendor evaluation to demonstrate SIRWT nozzle integrity with through wall cracks included consideration of residual weld stresses and seismic sloshing stresses. The inspectors determined the primary cause of this finding based upon discussions with the licensee’s engineering staff.

Inspection Report# : [2012003](#) (*pdf*)

Significance: N/A Feb 17, 2012

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Inspection Assessment

On the basis of the sample selected for review, the team concluded that implementation of the Corrective Action Program (CAP) at Palisades was adequate, but only marginally effective. The inspectors did note an overall decline in performance since the last inspection. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria and were properly evaluated commensurate with their safety significance. In general, causes for issues were adequately determined and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, frequent NRC input or self-revealing events identified issues that the plant staff failed to adequately address. In one case, a significant condition adverse to quality was not adequately addressed and this resulted in recurrence of a failure of a safety-related service water pump. Another self-revealed finding related to the failure to run on an auxiliary feedwater pump, of low to moderate safety significance, was not adequately addressed initially. NRC comments, and later review by the licensee, led to the development of a root cause analysis which revealed other significant shortfalls in the maintenance of the turbine-driven auxiliary feedwater pump. This was a finding of low to moderate safety significance. The team noted that the licensee effectively reviewed operating experience for applicability to station activities. Audits and self assessments were determined to be effectively performed at an appropriate level to identify deficiencies. Based on the surveys conducted by the licensee, interviews conducted during the inspection, and review of the employee concerns program, employee freedom to raise nuclear safety concerns without fear of reprisal was evident.

Inspection Report# : [2012007](#) (*pdf*)

Significance: SL-IV Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Report a 10 CFR 50.72 Notification for an 8-hour Non-Emergency Report.

A Severity Level (SL) IV non cited violation of 10 CFR 50.72(b)(3)(ii)(B) was identified by the inspectors for the failure to notify the NRC as soon as practical and in all cases within eight hours of the occurrence of any event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. Specifically, the licensee failed to report on September 26, 2011, within eight hours an Appendix R noncompliance that was identified in DC shunt trip Breakers 72 01 and 72 02 for the 125 Volt DC system following the reactor trip that occurred on September 25, 2011. The licensee’s preliminary analysis demonstrated that if a shunt trip breaker automatically opened due to fire induced fault currents, then the licensee’s Appendix R credited equipment may have been lost unexpectedly, an unanalyzed condition that significantly degrades plant safety. This issue was documented in the licensee’s corrective action program as CR PLP 2011 05263 and at the end of the special

inspection, the licensee continued to perform a causal evaluation in order to develop corrective actions. As a remedial corrective action, the licensee made the required event notification in Event Notification Number 47322 on October 5, 2011.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, Block 7, Figure 2, because reporting failure violations are considered to be violations that potentially impact the regulatory process and are dispositioned using traditional enforcement. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. In addition, NRC Enforcement Policy, dated July 12, 2011, Section 6.9.d.9, states, in part, that an example of an SL IV violation is the licensee's failure to make a report required by 10 CFR 50.72.

The associated Performance Deficiency is tracked as item 2011-014-08.

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Implement Human Performance Tools and to Perform an Infrequently Performed Test or Evolution Brief.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN HU 102, "Human Performance Tools," which established standards and expectations for the use of specific human performance tools with the goal to improve personnel and plant performance through human error reduction. The inspectors identified that Procedure EN HU 102 was not implemented for the work performed on September 25, 2011, to install a temporary modification and to address a non conforming condition associated with Panel D11 2. Implementation of the procedure for Panel D11 2 scheduled work required the use of Procedure EN OP 116, "Infrequently Performed Tests or Evolutions," and performance of an infrequently performed tests and evolution pre job brief, which the inspectors determined was not performed for the work on September 25, 2011. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 04822 and CR PLP 2011 04981. At the end of this inspection, the licensee continued to perform a root cause evaluation to determine the causes of the event and develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Procedure Quality and Human Performance attributes of the Mitigating Systems Cornerstone. This adversely affected the cornerstone objective, in that, the failure to utilize human error reduction tools impacted the availability, reliability and capability of systems that responded to initiating events to prevent undesirable consequences. Specifically, the failure to utilize human performance tools directly contributed to the inadequate work planning and preparation scheduled for Panel D11 2 on September 25, 2011. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding has a cross cutting aspect in the area of human performance, work practices, because the licensee failed to ensure personnel work practices supported human performance through defining and effectively communicating expectations regarding procedural compliance coincident with plant personnel following procedures. Specifically, the licensee personnel failed to reference or implement procedures with human performance tools, which, if implemented, would have required an IPTE brief for the work performed on Panel D11 2 on September 25, 2011 (H.4(b)).

Inspection Report# : [2011014](#) (pdf)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Comply with Work Hour Rules for Non-Covered Workers.

A finding of very low significance was identified by the inspectors for the licensee's failure to implement Procedure EN FAP OM 006, "Working Hour Limits for Non Covered Workers," which established standard fleet guidance for working hour limits for Entergy non covered (not covered under 10 CFR 26) workers as defined in EN OM 123, "Working Hour Limits." The inspectors identified that at least two non covered managers on the nightshift, involved with the work planning and oversight of troubleshooting repair efforts for Panel D11 2, had not followed the standards for work hour limits and did not initiate condition reports when the work hour limits were exceeded, as required by Procedure EN FAP OM 006. Specifically, the inspectors identified that the Duty Station Manager worked approximately 25 consecutive hours from September 23 through September 24, and greater than 72 hours in a 7 day period. The electrical superintendent exceeded the administrative limits of 16 hours in 24 hour period, 26 hours in 48 hour period, 72 hours in a 7 day period, and greater than a 10 hour break between work periods over a consecutive 19 day period of work. No violation of NRC requirements occurred. The licensee documented this condition in its corrective action program as CR PLP 2011 05095 and CR PLP 2011 05116. At the end of this inspection, the licensee continued to perform an apparent cause evaluation and extent of condition to determine extent of the problem and causes for the performance deficiency in order to develop corrective actions.

The issue affected the Mitigating Systems Cornerstone because the 125 Volt DC system work plan development was overseen by the non covered workers. The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it revealed weaknesses that, if left uncorrected, could lead to more significant safety concerns associated with overseeing work on safety related equipment. In addition, the inspectors concluded that the failure to implement working hour limitations for non covered workers in Procedure EN FAP OM 006 was more than an isolated instance. The inspectors and Senior Reactor Analyst concluded that the use of IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," was the appropriate method for determining the significance. In accordance with IMC 0609, Appendix M, management review of this issue determined that this finding was of very low safety significance since the performance deficiency did not directly contribute to the event, as the non covered workers were involved with the planning and not actual implementation of the work performed on September 25, 2011, on Panel D11 2. The finding has a cross cutting aspect in the area of human performance, resources, because the licensee failed to ensure that personnel and other resources were available and adequate to assure nuclear safety; specifically, sufficient qualified personnel were available to maintain work hours within working hour guidelines (H.2 (b)).

Inspection Report# : [2011014](#) (*pdf*)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish a Procedure for the Loss of a DC Bus and the Simultaneous Loss of Two Preferred AC Power Sources.

A finding of very low safety significance and associated NCV of TS 5.4.1 was identified by the inspectors for the failure to establish a procedure for combating emergencies and other significant events as required by RG 1.33, Section 6. Specifically, Section 6 states, in part, that the loss of electrical power (and/or degraded power sources) is a safety related activity that should be covered by written procedures, and TS 5.4.1 required, in part, that written procedures be established, implemented, and maintained to cover the activities in RG 1.33. The design and licensing basis of the plant includes the loss of a single train of DC power. Although the site has multiple procedures to address the loss of the DC system and individual preferred AC sources, the procedures did not integrate to provide a response that minimized challenges to plant safety. The site has three separate procedures that were used in this event for the

loss of one DC bus and loss of one preferred AC source (two sources were lost during the event, hence two of these procedures were used); but not one inclusive procedure to cover the loss of both preferred AC sources simultaneously. The procedures that the crew worked through were inadequate to respond in a timely fashion to changing plant conditions caused by the loss of the left train of DC power. This issue was documented in the licensee's corrective action program as CR PLP 2011 06209 and, at the end of the special inspection, the licensee was still performing an evaluation to determine the causes and to develop corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems Cornerstone attribute of Procedure Quality, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of procedure quality, areas to measure, lists operating (post event) procedures such as abnormal operating procedures, standard operating procedures, emergency operating procedures, and can include off normal procedures, as being items that should be established and maintained to ensure the cornerstone objective is met. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding does not have an associated cross cutting aspect since the last known operating experience for a loss of the 125 Volt DC system occurred in 1981 at the Millstone Nuclear Generating Station.

Inspection Report# : [2011014](#) (*pdf*)

Significance:  Oct 28, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Operability Evaluation.

A finding of very low safety significance and associated non cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to implement a procedure for an activity affecting quality. Procedure EN OP 104, "Operability Determination Process," required an assessment of the operability for structures, systems, and components (SSCs) when degraded or non conforming conditions were identified and establishment of compensatory measures were needed to, "ensure, maintain, and enhance future operability." Specifically, the inspectors identified that the operability evaluation for the 125 Volt DC system, completed on September 30, 2011, did not contain two compensatory measures necessary to ensure the operability of the system. It was also identified that the 50.59 pre screening (process applicability determination) for the temporary modification, which was also a compensatory measure for the operability evaluation, was not clearly written and did not adequately describe the evaluation of the modification or the bases for this decision. This issue was documented in the licensee's corrective action program as CR PLP 2011 04988 and CR PLP 2011 04965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. The licensee's remedial corrective actions included revising the 50.59 pre screening to clearly address the effect of the compensatory measures on other aspects of the facility, prohibiting maintenance on the energized 125 Volt DC busses, and issuing additional site guidance for the operation of battery chargers.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Mitigating Systems cornerstone attribute of Equipment Performance, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of equipment performance impacted the availability and reliability of the 125 Volt DC system. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of

Findings,” Table 4a, for the Mitigating Systems Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Mitigating Systems questions and screened the finding as having very low safety significance (Green). The finding had a cross cutting aspect in the area of human performance related to the cross cutting component of Decision Making, because the licensee did not adequately conduct an effectiveness review of a safety significant decision to verify the validity of the underlying assumptions and identify possible unintended consequences, as necessary (H.1(b)).

Inspection Report# : [2011014](#) (*pdf*)

Significance:  Oct 14, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Maintain Design and Procurement Control of the 125-Volt DC System.

A self revealed finding of very low safety significance (Green) and associated NCV of Title 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” and Criterion IV, “Procurement Document Control,” was identified for the licensee’s failure to establish measures to ensure that the applicable regulatory requirements and design bases were correctly translated into specifications and instructions. In addition, the licensee failed to establish measures to assure that the applicable regulatory requirements and design bases, which were necessary to assure adequate quality, were suitably included or referenced in the documents for procurement of equipment. Specifically, 125 Volt DC Breakers 72 01 and 72 02 were purchased and installed with thermal overloads and instantaneous trips enabled. The design basis stated that the breakers were non automatic and only actuated manually. As a result, on September 25, 2011, when an electrical fault occurred on Panel D11 2, the left train 125 Volt DC bus was lost, because the instantaneous trip device on Breaker 72 01 automatically actuated, propagating the fault through the bus, which resulted in a reactor and turbine trip, and plant transient. This issue was documented in the licensee’s corrective action program as CR PLP 2011 4835 and CR PLP 2011 4965 and at the end of the special inspection the licensee was still performing an evaluation to determine the causes and to develop corrective actions. As a remedial corrective action prior to plant startup, the licensee implemented a temporary modification to increase the breaker instantaneous trips and performed an operability evaluation, with compensatory actions for the 125 Volt DC system.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated December 24, 2009, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, lack of coordination between Panel D11 2 protective device (FUZ/D11 2) and Breaker 72 01 resulted in the loss of the left 125 Volt DC bus and two preferred AC power sources and complicated plant shutdown during the reactor trip on September 25, 2011, when an electrical fault occurred while working on Panel D11 2. The risk assessment associated with the event on September 25, and the complication caused by the breaker opening, is evaluated and described in the preliminary Yellow AV. The inspectors determined the finding, related to the design deficiency, could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 Initial Screening and Characterization of findings,” Table 4a for the Mitigating Systems cornerstone. The inspectors answered “Yes” to Question 1 in Column 2. Therefore, the inspectors determined that this finding could be screened as having very low safety significance (Green), because the finding was a design deficiency confirmed not to result in loss of operability or functionality of a system safety function. In addition, the inspectors also determined that the finding affected the fire protection safe shutdown strategies. Therefore, screening under IMC 0609, Appendix F, “Fire Protection Significance Determination Process,” was required. Based on review of IMC 0609, the inspectors concluded that the finding represented a moderate degradation within the post fire safe shutdown category and performed a Phase 2 analysis. Based on the licensee’s evaluation for the loads the inspectors determined that this finding screened as having very low safety significance (Green) per Task 2.3.5, screening check for lack of fire ignition sources and fire scenarios. The inspectors did not identify a cross cutting aspect associated with this finding because Breakers 72 01 and 72 02 were procured and installed in 1981 and therefore, the finding was not reflective of licensee’s current performance.

The associated Traditional Enforcement Item is tracked as Item 2011-014-01.
Inspection Report# : [2011014](#) (*pdf*)

Significance: **W** Oct 05, 2011

Identified By: NRC

Item Type: VIO Violation

Improper Lubrication of Turbine Driven Auxiliary Feedwater Pump Linkages

A self-revealed finding of low to moderate safety significance and associated Apparent Violation (AV) of 10 CFR Part 50 Appendix B, Criterion V, “Instructions, Procedures and Drawings,” occurred for the licensee’s failure to follow procedures for lubrication of linkages on the TDAFW pump overspeed trip device. Specifically, during a maintenance window the licensee greased a knife edge on the trip mechanism. The greasing of the knife edge contributed to a trip of the pump on May 10, 2011, as well as rendering the pump inoperable for a period of time in excess of what is allowed by Technical Specifications (TSs). After identification of the grease, the licensee removed the grease, restored the pump to an operable status, and initiated condition report (CR) PLP-2011-02350.

The inspectors concluded that the finding was more than minor because it was associated with the equipment reliability and performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the TDAFW pump could not reliably perform its mitigating function. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre-solved SDP worksheets for Palisades and determined that this finding screened as Yellow. In order to realistically assess the significance, IMC 0609 required a Phase 3 SDP evaluation. Based on the Probabilistic Risk Analysis conducted by the Senior Reactor Analyst (SRA), a Significance and Enforcement Review Panel reached a preliminary determination the finding was of low to moderate (White) safety significance. The finding occurred, in part, due to a worker making a change to a work instruction without following the process for procedure revisions. Therefore, the inspectors assigned a cross cutting aspect of H.1(a), risk significant decisions using a systematic process. (Section 4OA3)

Inspection Report# : [2011013](#) (*pdf*)

Inspection Report# : [2011017](#) (*pdf*)

Inspection Report# : [2012010](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : December 07, 2012

Palisades

4Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Immediate Operability Determination

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V, for the failure to perform an immediate operability determination in accordance with EN OP 104, Operability Determination Process. After discovering a non isolable steam leak on a main steam header drain valve (an American Society of Mechanical Engineers (ASME) Class 2 system) at approximately 2:30 a.m., the licensee failed to perform the steps specified in EN-OP-104 to expeditiously evaluate and to document a basis for operability. In addition, EN-OP-104 required input from engineering to be obtained for an ASME Class 2 thru wall leak. However, the night-shift operators did not obtain input from engineering and did not document the basis for operability. After day shift took over in the morning around 6:30 am, engineering and management were contacted and more rigorous efforts to assess operability commenced. The licensee subsequently declared the associated primary coolant system (PCS) loop, which requires an operable steam generator, to be inoperable at 11:15 am (approximately 9 hours after the condition was initially documented) and shut down the plant to repair the leak. The inspectors determined that not completing an immediate determination in accordance with EN OP 104 caused an unnecessary delay in commencing a plant shutdown to repair the non-isolable leak. The licensee entered this issue into their corrective action program as CR PLP 2013 00158.

The issue was determined to be greater than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, it could lead to a more significant safety concern. Specifically, the failure to perform an immediate operability determination when assessing safety related components, including a delay in requesting assistance, could lead to more significant issues. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The issue was determined to be of very low safety significance (Green) because it did not cause a reactor trip AND a loss of accident mitigation equipment. The finding had an associated cross cutting aspect in the decision making component of the human performance area because the night-shift operators did not obtain interdisciplinary input and reviews on the safety-significant operability decision (H.1.a).

Inspection Report# : [2012005](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Appropriately Implement Procedure, "Working Hour Limits for Non-Covered Workers."

A finding of very low safety significance was identified by the inspectors for the programmatic failure to appropriately implement procedure, EN FAP OM 006, "Working Hour Limits for Non Covered Workers." Two non covered supervisors and six individual contributors, performing work or overseeing work on a safety related component, did not follow the procedural requirements of obtaining supervisor approval prior to exceeding working hour limits, document excess work hours in the payroll system, or initiate a condition report in a timely manner. An extent of condition review identified two additional instances of individuals, one contractor and one plant employee, not obtaining prior approval to exceed work hour limits nor completing the appropriate documentation. No violation of regulatory requirements occurred since the performance deficiency involved workers not covered by 10 CFR 26.205 through 26.209, which defines the work hour limitations and exceptions for covered workers. The licensee documented the programmatic weaknesses associated with the use of EN FAP OM 006 in their corrective action

program. The “Working Hour Limits for Non Covered Workers” procedure was revised to clarify when and by whom condition reports should be written when working hour limits are to be exceeded, as well as, who should write the report.

The finding was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, the programmatic failure to appropriately implement work hour limitations for non covered workers could lead to more significant safety concerns associated with fatigue potentially impacting the conduct and oversight of work on safety significant components. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the individuals who exceeded the working hour limits for non covered workers were involved in a forced outage for repair and inspection of a control rod drive mechanism housing (part of the primary coolant system pressure boundary) that had a thru wall leak which caused an emergent plant shutdown. Management review of this issue per IMC 0609 Appendix M, “Significance Determination Process Using Qualitative Criteria,” effective April 12, 2012, determined that this finding was of very low safety significance, or Green, since the performance deficiency did not directly contribute to the event. The finding had a cross cutting aspect in the area of Problem Identification and Resolution, related to the cross cutting component of Corrective Action Program, in that the licensee thoroughly evaluates problems such that the resolutions address causes and extent of conditions and also includes, for significant problems, conducting effectiveness reviews of corrective actions to ensure that the problems are resolved. In this finding, similar instances of non covered workers not adhering to the standards for work hour limits and not initiating condition reports as required by EN FAP OM 006 were identified in 2011, and the corrective actions for those issues were not sufficient to prevent them from occurring again [P.1(c)].

Inspection Report# : [2012005](#) (*pdf*)

Significance:

G

Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Work Management Processes

A self-revealed finding of very low safety significance and two associated NCVs were identified for the failure to conduct maintenance activities in accordance with work management procedures. Two NCVs are being documented in accordance with NRC Enforcement Manual Section 2.13.8 because of a cause-and-effect relationship under one performance deficiency. The first NCV was of Technical Specification (TS) 5.4.1 for failure to implement work management procedures. Specifically, Fix-It-Now (FIN) maintenance personnel working on a control room light indication issue for the safety-related Component Cooling Water Surge Tank Fill Valve, CV 0918, conducted troubleshooting outside of what was originally planned and briefed. Contrary to work management procedures, the required documentation, independent and/or supervisory reviews, nor risk assessment were completed. This deviation resulted in the installation of jumpers from an 115V alternating current (AC) circuit to the safety-related 125V direct current (DC) power system, which actuated various control room alarms, including a ground alarm on the DC system. The second associated NCV, revealed as a result of the first, was for a failure to implement risk management actions as required by 10 CFR 50.65(a)(4), Maintenance Rule. Contrary to this, the licensee failed to perform a quantitative or qualitative risk assessment for work (installation of jumpers) on circuitry associated with CV 0918. Corrective actions consisted of entering the issue into the corrective action program (CAP) and reassigning the FIN team personnel back to their respective maintenance shops and a suspension of all tool pouch maintenance activities pending further investigation. The licensee also held information sharing sessions with the maintenance and operations departments about this incident, the work management process, the standards for implementing this process, and new checklists for use during work planning and authorization.

The finding was more than minor utilizing IMC 0612, Appendix B, because it could reasonably be viewed as a precursor to a significant event and it affected the Initiating Events Cornerstone attribute of Human Performance, adversely impacting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, planning and conducting work outside work management requirements resulted in a short circuit and various control room alarms. The finding screened as Green by answering “no” to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available in Exhibit 1 of IMC 0609, Appendix A.

Additionally, the inspectors screened the finding as Green utilizing an Incremental Core Damage Probability Deficit (ICDPD) calculation performed by a regional Senior Risk Analyst in accordance with IMC 0609, Appendix K, due to the one NCV associated with the Maintenance Rule. The finding had a cross cutting aspect in the area of Human Performance, related to the cross cutting component of Decision Making, in that the licensee uses conservative assumptions in decision making, adopts a requirement to demonstrate that the proposed action is safe in order to proceed, and identifies possible unintended consequences of a decision. In this finding, there were personnel in various departments that could have questioned the continuation of the maintenance with respect to following the work management process (H.1(b)).

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Water Leakage into Control Room During Maintenance

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self-revealed for the failure to implement work management procedures when operators noticed water leakage into the control room from the ceiling during maintenance activities. Water dripped onto the top of a panel near the middle of the control room and inside a nearby walk-in panel. Metal trays that had been previously established to measure and route known leakage from the Safety Injection and Refueling Water Tank (SIRWT) out of the roof area ('catacombs') above the control room were moved during maintenance. The plant was shut down at the time to repair the SIRWT and the tank was drained. However, a water-cooled drilling device was being used in the roof at the time to 'core-bore' out old nozzles. Contrary to Quality Procedure EN WM 105, Planning, no controls were established to keep the trays in place or otherwise prevent water from accumulating in the catacomb area. As a result, the water from the tool seeped through the catacomb floor while it was in use and wetted equipment in the walk-in panel. Operators immediately halted the work in the roof area and shielded equipment from further wetting. The licensee inspected the affected equipment and determined there were no adverse effects as a result of the wetted equipment. The issue was also entered into the Corrective Action Program (CAP).

The failure to plan work activities in a manner to protect control room equipment from leakage was a performance deficiency warranting further evaluation in the SDP. The issue was determined to be more than minor using IMC 0612, Appendix B, because it impacted the Configuration Control attribute of the Initiating Events Cornerstone, and it adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions. Specifically, wetting of electrical components in the control room challenges the ability of those components to perform their function reliability. The inspectors utilized IMC 0609, Appendix G, "Shutdown Significance Determination Process," to assess the significance of the finding because the plant was shut down at the time. The finding screened as Green, or very-low safety significance, using Checklist 2 of Attachment 1 because with the primary coolant system closed and steam generators available for heat removal, none of the conditions listed as requiring a Phase 2 or 3 analysis applied and all shutdown safety functions were maintained. The finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Control component. The licensee did not coordinate work activities consistent with nuclear safety (H.3(a)). The core-bore work activity did not properly incorporate the job site conditions, risk insights, or the need for compensatory actions. Since there was a known deficiency in the control room boundary regarding the potential for water ingress, appropriate controls should have been outlined in work instructions or exercised over the catch devices themselves to help control the water that was being used in the tank/catacomb area.

Inspection Report# : [2012004](#) (pdf)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Operation of Primary Coolant Pumps Outside Design Basis

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50 Appendix B, Criterion III, Design Control, for the failure to operate the Primary Coolant Pumps (PCPs) in accordance with their design operating criteria. In October 2011, a slight rise in vibration levels on the 'C' PCP occurred and was sustained for approximately 24 hours. This was followed by a short spike in vibrations and a return to a lower stabilized value

than what had been previously observed. Investigation by the licensee revealed it was likely a piece of an impeller vane which had deformed and broken free. Based on a review of operating experience associated with impellers and further licensee investigation, the inspectors concluded that the PCPs had been operated outside of their license/design basis as stated in the Updated Final Safety Analysis Report (UFSAR) with regard to minimum net positive suction head and maximum flow. Further, based on impeller like pieces found in the reactor vessel in 2007 (which an apparent cause stated likely came from a PCP), and an operating history which indicated past occurrences of vane breakage and degradation, the inspectors concluded the licensee had the ability to foresee and correct the condition affecting the PCPs prior to the release of a piece in October 2011. The licensee entered the issue in their Corrective Action Program (CAP) as CR PLP 2011 5744 and performed additional research into the phenomena leading to the impeller degradation. The PCP operating sequence was changed, an Operational Decision Making Issue was implemented, and efforts to explore further procedural changes are on going to mitigate degradation of the impellers.

The issue was determined to be more than minor because it impacted the Design Control attribute of the Initiating Events Cornerstone, adversely affecting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the potential release of impeller pieces in the primary coolant system (PCS) challenges the cornerstone objective. The issue screened as Green, or very low safety significance, based on answering 'no' to the Loss of coolant Accident (LOCA) initiator question under the Initiating Events cornerstone in IMC 0609, Attachment 4, Table 4a. This was based on a review of the licensee's assessment by the regional inspectors, experts at the Office of Nuclear Reactor Regulation (NRR) and Office of Research in determining the deficiency would not likely be an impact to the coolant pressure boundary. The inspectors determined there was no associated cross cutting aspect because the finding was not indicative of current licensee performance.

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Work Management Process for Reactor Head Work

The inspectors identified a finding of very low safety significance with an associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to properly follow the work management process for work done to loosen stuck reactor head studs. During the April May 2012 refueling outage, difficulty was encountered in loosening some of the reactor head studs to support refueling operations. The decision was made to retension the studs that had already been detensioned (without ascending back to Mode 5 from Mode 6) and start over using a more precise electric pumping unit that had not been used to that point due to equipment issues. Contrary to EN WM 102, Work Implementation and Closeout, the licensee used the field change process, not authorized for this type of change, to "pen and ink" different tensioning values and sequence in the normal tensioning procedure (so as not to return to Mode 5). Additionally, the inspectors identified that the steps documented as having been performed as a record of the contingency actions taken differed from what was actually performed. The licensee entered the issue into the CAP as Condition Reports CR PLP 2012 2610 and CR PLP 2012 2848, and corrected the contingency work instructions.

The issue was determined to be more than minor because if left uncorrected, it could lead to more significant safety issues. Specifically, the failure to follow appropriate processes and correctly document reactor head work is indicative of shortfalls that could occur for other safety related work. Additionally, the licensee was slow to recognize the issue. The inspectors concluded that the Initiating Events Cornerstone was impacted because of the potential for an inadvertent mode change. The finding screened as Green, or very low safety significance, using IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process," based on all of the mitigation criteria being met and no phase 2 or 3 analysis being required per Checklist 3, indicating there was no impact to shutdown safety functions. The inspectors determined that the finding had an associated cross cutting aspect in the area of human performance in that personnel work practices did not support human performance. Specifically, supervisory and management oversight failed to assure the proper processes were followed

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, "Integrity of Examination and Tests" was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered 'no.' The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Exam Compromise During Requalification Exams

A finding of very low safety significance and associated NCV of 10 CFR 55.49, "Integrity of Examination and Tests" was identified by the inspectors for failure to ensure there were no activities which compromised exam integrity. Specifically, the licensee failed to properly review Simulator Exam Scenario (SES) 130 and the associated Reactivity Management Briefing Sheet. Had the briefing sheet been provided to the crew being evaluated, without inspector intervention, it would have resulted in an exam compromise. The inspectors identified that a critical task was on the crew briefing sheet prior to its administration, and told the licensee of the condition. The licensee subsequently added a page break to push the critical task from the briefing sheet to the following page. There was no actual exam compromise. The licensee also entered the issue in their Corrective Action Program (CAP) as CR PLP 2012 1001.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process, because the issue dealt with licensed operator qualification. The violation is consistent with a Severity Level IV violation using the enforcement policy. The inspectors determined that the underlying technical issue could be evaluated using the SDP. This issue is associated with the Initiating Events cornerstone. The underlying risk significance was determined to be more than minor because if left uncorrected, this event could have the potential to put unqualified operators in the control room. Specifically, the Reactivity Management Briefing Sheet in SES 130 inadvertently contained Critical Task No. 1 of the scenario. Had the briefing sheet been provided to the evaluated crew with the critical task provided at the bottom of the sheet, the crew would have known one of the performance elements of the scenario for which the crew was being evaluated. The finding screened as Green because all questions for the Initiating Events Cornerstone in Table 4a of IMC 0609 Attachment 4 could be answered 'no.' The inspectors did not identify any applicable cross cutting aspects associated with this finding in reviewing IMC 0310.

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Intermittent Fuse Contact Causes Feedwater Transient and Plant Trip

A self revealed finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1, Procedures, was identified for the failure to adequately implement the fuse control procedure during the reinstallation of a safety related fuse after maintenance. Specifically, insufficient contact was established between a fuse holder clip and fuse ferrule for safety related fuse FUZ/Y1014 2, resulting in the opening of the 'A' Feedwater Pump Recirculation valve, CV 0711 at full power. This induced a feed transient which required operators to manually trip the reactor. The licensee took compensatory actions to ensure the valve was isolated prior to the return to full power operation. The licensee also entered the issue in their CAP as CR PLP 2012 02182 to further evaluate the conditions of the procedural guidance implementation, procedural disconnects, application of "loose fuse" operating experience, and the extent of condition for other safety related fuses.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening," because it is associated with the Initiating Events cornerstone attribute of Equipment Performance and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the cause of the feedwater transient which led to a plant trip on December 14, 2011 was intermittent electrical contact between FUZ/Y1014 2 and its holder clip. The finding screened as "Green" in the Initiating Events cornerstone by answering "no" to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available. The finding had a cross cutting aspect in the area of problem identification and resolution related to the cross cutting component of operating experience, in that the licensee implements and institutionalizes operating experience through changes to station processes, procedures, equipment, and training program. In this finding, the issue of "loose fuses," potential causes of these loose fuses, and the potential plant effects this could cause have been identified in externally generated operated experience as well as Palisades' own operating experience from a loose fuse on a safety-related component in 2011. Therefore, the inspectors determined this issue was reflective of current performance, and the inspectors determined that lessons learned from these identified "loose fuse" issues were not extensively reviewed for applicability throughout systems in the plant and were not fully institutionalized to prevent these issues from recurring.

Inspection Report# : [2012002](#) (pdf)**Significance:**  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Ensure Reactor Head Vents Closed During PCS Fill

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self revealed on January 7, 2012, for the failure to adequately implement a procedure when indications of Primary Coolant System (PCS) leakage exceeding 10 gallons per minute (gpm) were observed by the control room operators. The finding occurred while the plant was shut down and in a cold shutdown condition. Specifically, the licensee discovered that reactor head vent valves MV PC1060B and MV PC1060C had not been shut before filling and pressurizing the PCS, contrary to the requirements of procedure SOP 1C, Primary Coolant System Heatup. The licensee shut the valves and isolated the leak. The leakage resulted in approximately 3000 gallons of primary coolant being transferred to the reactor cavity tilt pit. This leakage was subsequently drained prior to startup. The licensee entered the issue as CR PLP 2012 00165 in their CAP.

The finding was determined to be greater than minor in accordance with IMC 0612 Appendix B, "Issue Screening," because it is associated with the Initiating Events Cornerstone attribute of Configuration Control and adversely impacted the objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, uncontrolled release of coolant from the PCS could challenge plant stability. The issue screened as Green utilizing Attachment 1 of IMC 0609 Appendix G, "Shutdown Operations Significance Determination Process." Specifically, the finding and plant conditions at the time did not warrant the use of a Phase 2 or 3 analysis, because there was no impact on any safety functions. The inspectors determined the cause

of the finding was associated with the cross cutting area of human performance. Specifically, by assuming the reactor head vent valves were not open, operations shift personnel did not use conservative assumptions in decision making and adopt a requirement to demonstrate that a proposed action was safe in order to proceed.

Inspection Report# : [2012002](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Foreign Material in Safety Injection and Refueling Water Tank (SIRWT)

A finding of very-low safety significance with an associated NCV of TS 5.4.1 was self revealed for failure to implement a maintenance procedure when it was discovered that foreign material had entered the SIRWT during a forced outage to repair the tank. A few days after the tank was refilled, a non-safety-related recirculation pump for the tank failed. The licensee discovered a plastic bag in the pump suction. The licensee entered the issue in their CAP and performed a root cause evaluation. The licensee concluded that inadequate implementation of Quality Procedure EN MA 118, Foreign Material Exclusion, allowed the bag to enter the SIRWT during the refilling of the tank from the upper manway access. Since all Emergency Core Cooling system (ECCS) pumps have their suctions aligned to the SIRWT, the operability of those pumps came into question upon discovery of the bag in the recirculation pump. As a result, the licensee tested all of the pumps to ensure they were operable. There were no abnormalities noted during the test-runs.

The failure to adequately implement EN MA 118, Foreign Material Exclusion, was a performance deficiency warranting further assessment in the SDP. Specifically, a buffer zone was not established around the upper opening to the SIRWT and consideration was not given to the effects of ventilation in the area. Both contributed to the introduction of foreign material into the tank. Utilizing IMC 0612, Appendix B, the inspectors determined the issue was more than minor because it adversely impacted the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, introduction of foreign material challenged the reliability of all ECCS pumps and necessitated emergent testing to ensure they remained operable. The finding screened as Green, or very low safety significance, utilizing IMC 0609, Appendix A, based on answering 'no' to all questions in Section A of Exhibit 2. The inspectors also determined that the finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Practices component. Based on other examples of poor implementation of the Foreign Material Exclusion (FME) program identified by both the inspectors and licensee; combined with the failure to correct those issues, the inspectors determined that the licensee did not ensure there was adequate supervisory and management oversight of work activities such that nuclear safety was supported.

Inspection Report# : [2012004](#) (pdf)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Margins for Evaluation of Leaking SIRWT Nozzles

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to adequately evaluate leaking Safety Injection and Refueling Water Tank (SIRWT) nozzles during the application of American Society of Mechanical Engineers (ASME) Code Case N 705. During the April May 2012 refueling outage, the SIRWT was drained for inspection and repairs and a deformed nozzle was sealed off, as it was believed to be the potential source of pre outage leakage. Upon refill, leakage was observed under a different section of the roof upon which the SIRWT rests, indicating a potentially new leak. The licensee employed ASME Code Case N 705 to demonstrate tank operability given the existing leakage and set an upper limit for allowed leakage. Inspector review of the approved evaluation identified certain Code Case criteria that were not discussed, namely, the residual weld stresses and seismic sloshing stresses. After discussions

with the inspectors, the licensee developed residual weld stress values for their evaluation and discussed potential effects of seismic sloshing. The result was a reduction in allowed leakage from 130 gallons per day (gpd) to 34.8 gpd. The licensee entered the issue in their CAP as CR PLP 2012 04245 and CR PLP 2012 03732.

The finding was determined to be more than minor because the finding, if left uncorrected, could become a more significant safety concern. The inspectors utilized examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues," to inform this determination. Omission of Code-Case-required parameters in the approved evaluation led to reasonable doubt on the operability of the system had the licensee ascended to a mode requiring SIRWT operability. Further analysis was also required by the licensee. Absent NRC identification, the failure to adequately evaluate the leaking SIRWT nozzles could have allowed unstable cracks to remain in service. Unstable nozzle cracks could propagate and allow unacceptable leakage from the SIRWT resulting in loss of inventory and increase the risk for insufficient core cooling for post LOCA conditions. This finding impacted the Mitigating Systems Cornerstone attribute of Equipment Performance (reliability). The finding adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because the licensee promptly corrected this issue and lowered the amount of allowed leakage, the inspectors answered "No" to all of the worksheet questions identified in IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The correct leakage limit was in place prior to the required time the tank needed to be operable. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of Human Performance for the work practices component. The licensee did not provide adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported (H.4.c). Specifically, the licensee failed to ensure that the vendor evaluation to demonstrate SIRWT nozzle integrity with through wall cracks included consideration of residual weld stresses and seismic sloshing stresses. The inspectors determined the primary cause of this finding based upon discussions with the licensee's engineering staff.

Inspection Report# : [2012003](#) (*pdf*)

Significance: N/A Feb 17, 2012

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Inspection Assessment

On the basis of the sample selected for review, the team concluded that implementation of the Corrective Action Program (CAP) at Palisades was adequate, but only marginally effective. The inspectors did note an overall decline in performance since the last inspection. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria and were properly evaluated commensurate with their safety significance. In general, causes for issues were adequately determined and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, frequent NRC input or self-revealing events identified issues that the plant staff failed to adequately address. In one case, a significant condition adverse to quality was not adequately addressed and this resulted in recurrence of a failure of a safety-related service water pump. Another self-revealed finding related to the failure to run on an auxiliary feedwater pump, of low to moderate safety significance, was not adequately addressed initially. NRC comments, and later review by the licensee, led to the development of a root cause analysis which revealed other significant shortfalls in the maintenance of the turbine-driven auxiliary feedwater pump. This was a finding of low to moderate safety significance. The team noted that the licensee effectively reviewed operating experience for applicability to station activities. Audits and self assessments were determined to be effectively performed at an appropriate level to identify deficiencies. Based on the surveys conducted by the licensee, interviews conducted during the inspection, and review of the employee concerns program, employee freedom to raise nuclear safety concerns without fear of reprisal was evident.

Inspection Report# : [2012007](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : February 28, 2013

Palisades

1Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Take Corrective Action to Prevent Recurrence of Control Rod Drive Mechanism Pressure Boundary Leakage

A self-revealing finding of very low safety significance (Green) with associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, and Technical Specification (TS) 3.4.13, Primary Coolant System (PCS) Operational Leakage, was identified for failure to take corrective actions to prevent recurrence of Control Rod Drive Mechanism (CRDM) cracking and leakage, a significant condition adverse to quality (SCAQ). Specifically, for Criterion XVI the licensee failed to include the internal CRDM housing weld build-up area within the scope of corrective actions taken for a 2001 CRDM through wall leak on CRDM-21, caused by transgranular stress corrosion cracking (TGSCC). Subsequently, a through wall leak recurred in the weld build-up area on CRDM-24 in 2012 due to TGSCC. As a result, the licensee operated with PCS pressure boundary leakage, which is not allowed by TS 3.4.13. Further, because the licensee was not aware that the leakage was PCS pressure boundary leakage, the licensee did not implement the associated TS action statement. The licensee replaced CRDM-24 upper housing and entered the issue into their corrective action program as CR PLP 2013-01134. Additional corrective actions are described in NRC Inspection Report 05000255/2012012.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Initiating Events Cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability. Specifically, the licensee did not take adequate corrective actions to prevent recurrence of leakage in CRDM housings, which represents pressure boundary leakage. The inspectors determined this finding was of very low safety significance (Green) because the leak would not have exceeded the reactor coolant system leak rate for a small LOCA and could not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The cause of this finding, non-conservative decision making, occurred over 10 years ago and is well outside of the nominal 3 year period in IMC 0612 for cross-cutting aspects. Therefore, this is not indicative of current performance, because no other opportunities to identify the issue occurred during the previous 3-year period. However more recently, the licensee exhibited non-conservative decision making with respect to addressing the potential for CRDM housing cracking and leakage during the recent root cause (Section 4OA2.4 (b.2) of this report), resulting in another finding. This cross-cutting aspect will be captured through the other finding.

Inspection Report# : [2013002](#) (*pdf*)

Significance: G Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Address the Generic Implications of the Cracking Identified in Control Rod Drive

Mechanism- 24

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to accomplish quality activities in accordance with the prescribed procedures. Specifically, the licensee failed to adequately evaluate and document the generic implications of the cause of the 2012 cracking identified in Control Rod Drive Mechanism (CRDM)-24 in accordance with a quality procedure, Procedure, EN-LI-118, "Root Cause Evaluation." This issue was entered into the licensee's Corrective Action Program (CAP) under CR-PLP-2013-01500. Subsequently, the licensee decided to revise the inspection plan to add additional corrective actions to inspect a sample of welds No. 3 and No. 4 for transgranular stress corrosion cracking (TGSCC) during the upcoming refueling outage.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, absent NRC identification, the licensee would not have completed further evaluations or inspections of CRDM housing welds, which could have resulted in additional CRDM housing failure and leakage by TGSCC. In accordance with Table 2, "Cornerstones Affected by Degraded Condition or Programmatic Weakness," of IMC 609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding was associated with the Initiating Events Cornerstone because the failure of a CRDM housing is a Primary System Loss of Cooling Accident (LOCA) initiator contributor. Using Exhibit 1, "Initiating Events Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined this finding was of very low safety significance because the leak would not exceed the reactor coolant system leak rate for a small LOCA and would not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The inspectors determined that the primary cause of the failure to adequately consider welds No. 3 and No. 4 in the generic implications section of the root cause report (RCR) related to the decision making cross-cutting component in the human performance area because licensee staff did not use conservative assumptions in decision making. Specifically, the licensee did not use conservative assumptions when excluding welds No. 3 and No. 4 as being susceptible to TGSCC when there was not enough information to exclude them from consideration.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Immediate Operability Determination

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V, for the failure to perform an immediate operability determination in accordance with EN OP 104, Operability Determination Process. After discovering a non isolable steam leak on a main steam header drain valve (an American Society of Mechanical Engineers (ASME) Class 2 system) at approximately 2:30 a.m., the licensee failed to perform the steps specified in EN-OP-104 to expeditiously evaluate and to document a basis for operability. In addition, EN-OP-104 required input from engineering to be obtained for an ASME Class 2 thru wall leak. However, the night-shift operators did not obtain input from engineering and did not document the basis for operability. After day shift took over in the morning around 6:30 am, engineering and management were contacted and more rigorous efforts to assess operability commenced. The licensee subsequently declared the associated primary coolant system (PCS) loop, which requires an operable steam generator, to be inoperable at 11:15 am (approximately 9 hours after the condition was initially documented) and shut down the plant to repair the leak. The inspectors determined that not completing an immediate determination in accordance with EN OP 104 caused an unnecessary delay in commencing a plant shutdown to repair the non-isolable leak. The licensee entered this issue into their corrective action program as CR PLP 2013 00158.

The issue was determined to be greater than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, it could lead to a more significant safety concern. Specifically, the failure to perform an immediate operability determination when assessing safety related components, including a delay in requesting assistance, could lead to more significant issues. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The issue was determined to be of very low safety significance (Green) because it did not cause a reactor trip AND a loss of accident mitigation equipment. The finding had an associated cross cutting aspect in the decision making component of the human performance area because the night-shift operators did not obtain interdisciplinary input and reviews on the safety-significant operability decision (H.1.a).

Inspection Report# : [2012005](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Appropriately Implement Procedure, "Working Hour Limits for Non-Covered Workers."

A finding of very low safety significance was identified by the inspectors for the programmatic failure to appropriately implement procedure, EN FAP OM 006, "Working Hour Limits for Non Covered Workers." Two non covered supervisors and six individual contributors, performing work or overseeing work on a safety related component, did not follow the procedural requirements of obtaining supervisor approval prior to exceeding working hour limits, document excess work hours in the payroll system, or initiate a condition report in a timely manner. An extent of condition review identified two additional instances of individuals, one contractor and one plant employee, not obtaining prior approval to exceed work hour limits nor completing the appropriate documentation. No violation of regulatory requirements occurred since the performance deficiency involved workers not covered by 10 CFR 26.205 through 26.209, which defines the work hour limitations and exceptions for covered workers. The licensee documented the programmatic weaknesses associated with the use of EN FAP OM 006 in their corrective action program. The "Working Hour Limits for Non Covered Workers" procedure was revised to clarify when and by whom condition reports should be written when working hour limits are to be exceeded, as well as, who should write the report.

The finding was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, the programmatic failure to appropriately implement work hour limitations for non covered workers could lead to more significant safety concerns associated with fatigue potentially impacting the conduct and oversight of work on safety significant components. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the individuals who exceeded the working hour limits for non covered workers were involved in a forced outage for repair and inspection of a control rod drive mechanism housing (part of the primary coolant system pressure boundary) that had a thru wall leak which caused an emergent plant shutdown. Management review of this issue per IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," effective April 12, 2012, determined that this finding was of very low safety significance, or Green, since the performance deficiency did not directly contribute to the event. The finding had a cross cutting aspect in the area of Problem Identification and Resolution, related to the cross cutting component of Corrective Action Program, in that the licensee thoroughly evaluates problems such that the resolutions address causes and extent of conditions and also includes, for significant problems, conducting effectiveness reviews of corrective actions to ensure that the problems are resolved. In this finding, similar instances of non covered workers not adhering to the standards for work hour limits and not initiating condition reports as required by EN FAP OM 006 were identified in 2011, and the corrective actions for those issues were not sufficient to prevent them from occurring again [P.1(c)].

Inspection Report# : [2012005](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Work Management Processes

A self-revealed finding of very low safety significance and two associated NCVs were identified for the failure to conduct maintenance activities in accordance with work management procedures. Two NCVs are being documented in accordance with NRC Enforcement Manual Section 2.13.8 because of a cause-and-effect relationship under one performance deficiency. The first NCV was of Technical Specification (TS) 5.4.1 for failure to implement work management procedures. Specifically, Fix-It-Now (FIN) maintenance personnel working on a control room light indication issue for the safety-related Component Cooling Water Surge Tank Fill Valve, CV 0918, conducted troubleshooting outside of what was originally planned and briefed. Contrary to work management procedures, the required documentation, independent and/or supervisory reviews, nor risk assessment were completed. This deviation resulted in the installation of jumpers from an 115V alternating current (AC) circuit to the safety-related 125V direct current (DC) power system, which actuated various control room alarms, including a ground alarm on the DC system. The second associated NCV, revealed as a result of the first, was for a failure to implement risk management actions as required by 10 CFR 50.65(a)(4), Maintenance Rule. Contrary to this, the licensee failed to perform a quantitative or qualitative risk assessment for work (installation of jumpers) on circuitry associated with CV 0918. Corrective actions consisted of entering the issue into the corrective action program (CAP) and reassigning the FIN team personnel back to their respective maintenance shops and a suspension of all tool pouch maintenance activities pending further investigation. The licensee also held information sharing sessions with the maintenance and operations departments about this incident, the work management process, the standards for implementing this process, and new checklists for use during work planning and authorization.

The finding was more than minor utilizing IMC 0612, Appendix B, because it could reasonably be viewed as a precursor to a significant event and it affected the Initiating Events Cornerstone attribute of Human Performance, adversely impacting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, planning and conducting work outside work management requirements resulted in a short circuit and various control room alarms. The finding screened as Green by answering “no” to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available in Exhibit 1 of IMC 0609, Appendix A. Additionally, the inspectors screened the finding as Green utilizing an Incremental Core Damage Probability Deficit (ICDPD) calculation performed by a regional Senior Risk Analyst in accordance with IMC 0609, Appendix K, due to the one NCV associated with the Maintenance Rule. The finding had a cross cutting aspect in the area of Human Performance, related to the cross cutting component of Decision Making, in that the licensee uses conservative assumptions in decision making, adopts a requirement to demonstrate that the proposed action is safe in order to proceed, and identifies possible unintended consequences of a decision. In this finding, there were personnel in various departments that could have questioned the continuation of the maintenance with respect to following the work management process (H.1(b)).

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Water Leakage into Control Room During Maintenance

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self-revealed for the failure to implement work management procedures when operators noticed water leakage into the control room from the ceiling during maintenance activities. Water dripped onto the top of a panel near the middle of the control room and inside a

nearby walk-in panel. Metal trays that had been previously established to measure and route known leakage from the Safety Injection and Refueling Water Tank (SIRWT) out of the roof area ('catacombs') above the control room were moved during maintenance. The plant was shut down at the time to repair the SIRWT and the tank was drained. However, a water-cooled drilling device was being used in the roof at the time to 'core-bore' out old nozzles. Contrary to Quality Procedure EN WM 105, Planning, no controls were established to keep the trays in place or otherwise prevent water from accumulating in the catacomb area. As a result, the water from the tool seeped through the catacomb floor while it was in use and wetted equipment in the walk-in panel. Operators immediately halted the work in the roof area and shielded equipment from further wetting. The licensee inspected the affected equipment and determined there were no adverse effects as a result of the wetted equipment. The issue was also entered into the Corrective Action Program (CAP).

The failure to plan work activities in a manner to protect control room equipment from leakage was a performance deficiency warranting further evaluation in the SDP. The issue was determined to be more than minor using IMC 0612, Appendix B, because it impacted the Configuration Control attribute of the Initiating Events Cornerstone, and it adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions. Specifically, wetting of electrical components in the control room challenges the ability of those components to perform their function reliability. The inspectors utilized IMC 0609, Appendix G, "Shutdown Significance Determination Process," to assess the significance of the finding because the plant was shut down at the time. The finding screened as Green, or very-low safety significance, using Checklist 2 of Attachment 1 because with the primary coolant system closed and steam generators available for heat removal, none of the conditions listed as requiring a Phase 2 or 3 analysis applied and all shutdown safety functions were maintained. The finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Control component. The licensee did not coordinate work activities consistent with nuclear safety (H.3(a)). The core-bore work activity did not properly incorporate the job site conditions, risk insights, or the need for compensatory actions. Since there was a known deficiency in the control room boundary regarding the potential for water ingress, appropriate controls should have been outlined in work instructions or exercised over the catch devices themselves to help control the water that was being used in the tank/catacomb area.

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Operation of Primary Coolant Pumps Outside Design Basis

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50 Appendix B, Criterion III, Design Control, for the failure to operate the Primary Coolant Pumps (PCPs) in accordance with their design operating criteria. In October 2011, a slight rise in vibration levels on the 'C' PCP occurred and was sustained for approximately 24 hours. This was followed by a short spike in vibrations and a return to a lower stabilized value than what had been previously observed. Investigation by the licensee revealed it was likely a piece of an impeller vane which had deformed and broken free. Based on a review of operating experience associated with impellers and further licensee investigation, the inspectors concluded that the PCPs had been operated outside of their license/design basis as stated in the Updated Final Safety Analysis Report (UFSAR) with regard to minimum net positive suction head and maximum flow. Further, based on impeller like pieces found in the reactor vessel in 2007 (which an apparent cause stated likely came from a PCP), and an operating history which indicated past occurrences of vane breakage and degradation, the inspectors concluded the licensee had the ability to foresee and correct the condition affecting the PCPs prior to the release of a piece in October 2011. The licensee entered the issue in their Corrective Action Program (CAP) as CR PLP 2011 5744 and performed additional research into the phenomena leading to the impeller degradation. The PCP operating sequence was changed, an Operational Decision Making Issue was implemented, and efforts to explore further procedural changes are on going to mitigate degradation of the impellers.

The issue was determined to be more than minor because it impacted the Design Control attribute of the Initiating

Events Cornerstone, adversely affecting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the potential release of impeller pieces in the primary coolant system (PCS) challenges the cornerstone objective. The issue screened as Green, or very low safety significance, based on answering ‘no’ to the Loss of coolant Accident (LOCA) initiator question under the Initiating Events cornerstone in IMC 0609, Attachment 4, Table 4a. This was based on a review of the licensee’s assessment by the regional inspectors, experts at the Office of Nuclear Reactor Regulation (NRR) and Office of Research in determining the deficiency would not likely be an impact to the coolant pressure boundary. The inspectors determined there was no associated cross cutting aspect because the finding was not indicative of current licensee performance.

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Work Management Process for Reactor Head Work

The inspectors identified a finding of very low safety significance with an associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to properly follow the work management process for work done to loosen stuck reactor head studs. During the April May 2012 refueling outage, difficulty was encountered in loosening some of the reactor head studs to support refueling operations. The decision was made to retension the studs that had already been detensioned (without ascending back to Mode 5 from Mode 6) and start over using a more precise electric pumping unit that had not been used to that point due to equipment issues. Contrary to EN WM 102, Work Implementation and Closeout, the licensee used the field change process, not authorized for this type of change, to “pen and ink” different tensioning values and sequence in the normal tensioning procedure (so as not to return to Mode 5). Additionally, the inspectors identified that the steps documented as having been performed as a record of the contingency actions taken differed from what was actually performed. The licensee entered the issue into the CAP as Condition Reports CR PLP 2012 2610 and CR PLP 2012 2848, and corrected the contingency work instructions.

The issue was determined to be more than minor because if left uncorrected, it could lead to more significant safety issues. Specifically, the failure to follow appropriate processes and correctly document reactor head work is indicative of shortfalls that could occur for other safety related work. Additionally, the licensee was slow to recognize the issue. The inspectors concluded that the Initiating Events Cornerstone was impacted because of the potential for an inadvertent mode change. The finding screened as Green, or very low safety significance, using IMC 0609, Appendix G, Attachment 1, “Shutdown Operations Significance Determination Process,” based on all of the mitigation criteria being met and no phase 2 or 3 analysis being required per Checklist 3, indicating there was no impact to shutdown safety functions. The inspectors determined that the finding had an associated cross cutting aspect in the area of human performance in that personnel work practices did not support human performance. Specifically, supervisory and management oversight failed to assure the proper processes were followed

Inspection Report# : [2012003](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish an Acceptable Component Cooling Water Heat Exchanger Final Test Frequency

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control", for failure to establish testing to demonstrate the safety-related Component Cooling Water (CCW) heat exchangers would perform satisfactorily in service. Specifically, the licensee failed to demonstrate the heat exchanger's fouling factors would remain acceptable to ensure adequate heat transfer capability prior to changing the inspection, cleaning, eddy current testing, and thermal performance testing frequency to 12 years. The licensee entered this issue into their Corrective Action Program as CR-PLP-2012-05132 and CR-PLP-2013-00544 and implemented actions to revise the inspection, cleaning, testing, and maintenance frequencies to less than 5 years.

The issue was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability reliability and capability of systems needed to respond to initiating events to prevent undesired consequences. Specifically, the inappropriate test frequency affected the licensees' ability to ensure the CCW heat exchangers were available and capable to reliably perform as expected. The finding screened as of very low safety significance (Green) because the inadequate test program was not a design deficiency and did not result in a loss of system or component function. This finding has a cross-cutting aspect in the area of human performance, decision making because the licensee did not use conservative decision making and did not conduct effectiveness reviews of safety significant decisions to verify the validity of underlying assumptions, identify possible unintended consequences, or determine how to improve future decisions. Specifically, the licensee failed to use conservative decision-making or verify the validity of underlying assumptions when evaluating the effect that reducing the frequency of testing, inspection, cleaning, and maintenance would have on the CCW heat exchangers.

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Work Instructions for Component Cooling Water Heat Exchanger

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to properly plan and document work on the safety-related 'A' Component Cooling Water (CCW) heat exchanger during a forced outage to repair leaks in the heat exchanger. Contrary to Criterion V and site implementing procedures EN-DC-115, Engineering Change Process, and EN-WM-105, Planning, the licensee did not ensure that appropriate quantitative or qualitative acceptance criteria for determining that important activities affecting quality were included in the work done to re-plug a population of leaking tubes in the heat exchanger. The licensee changed the work instructions to include the acceptance criteria after questioning by the inspectors. The licensee also interviewed workers to ensure the criteria had been utilized during earlier plug installation. The licensee entered the issue into their Corrective Action Program as CR-PLP-2013-00773 and CR-PLP-2013-00969.

The issue was determined to be greater-than-minor per IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, it could lead to a more significant safety concern. The inspectors' decision was informed by examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues." The examples refer to an issue not being minor if significant programmatic deficiencies were identified with the issue that could lead to worse errors if left uncorrected. When the issue was first raised by the inspectors, only one of the two critical parameters was initially added to the revised work instructions. Further, two examples of inadequate documentation were identified. A basis for removing steps to check for leaks was not properly documented; and it was not clear from the completed work packages that the engineering acceptance criteria were met. Given these issues, the inspectors determined the threshold for a finding was met. The inspectors concluded the finding adversely impacted the Mitigating Systems Cornerstone objective and was of very low safety significance (Green) utilizing IMC 0609, "Significance Determination Process." Specifically,

utilizing Exhibit 2 of Appendix A, all questions in Section A were answered ‘no’. The finding had an associated cross-cutting aspect in the work control component of the human performance area. Specifically, the licensee did not coordinate work activities by incorporating actions to ensure interdepartmental alignments were made while planning and executing the work to assure plant and human performance

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Damage to ‘A’ Auxiliary Feedwater (AFW) Pump Packing During Surveillance Run

A self-revealed finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion V was identified for the failure to conduct the ‘A’ Auxiliary Feedwater (AFW) pump technical specification surveillance test in accordance with the prescribed in-service test procedure. Specifically, plant personnel conducting the surveillance test on the ‘A’ AFW Pump adjusted packing when it was not required per the guidance in the procedure, which caused the pump packing to overheat and start smoking, resulting in unplanned inoperability of the pump. The licensee documented the issue in their corrective action program as CR-PLP-2013-01128 and completed an apparent cause evaluation. Planned corrective actions included revising the in-service test procedure.

The finding was more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it was associated with the Mitigating Systems Cornerstone attribute of human performance and adversely impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a packing adjustment was made without being required by the procedure, causing the pump to overheat, which resulted in unplanned inoperability of the safety-related and risk significant ‘A’ AFW pump. The finding had an associated cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures plant personnel have complete, accurate, and up-to-date design documentation, procedures, and work packages. In this finding, the fact that the ‘A’ AFW pump has a unique packing design was not evident in the procedure being used and was not discussed during the pre-job briefs.

Inspection Report# : [2013002](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Foreign Material in Safety Injection and Refueling Water Tank (SIRWT)

A finding of very-low safety significance with an associated NCV of TS 5.4.1 was self revealed for failure to implement a maintenance procedure when it was discovered that foreign material had entered the SIRWT during a forced outage to repair the tank. A few days after the tank was refilled, a non-safety-related recirculation pump for the tank failed. The licensee discovered a plastic bag in the pump suction. The licensee entered the issue in their CAP and performed a root cause evaluation. The licensee concluded that inadequate implementation of Quality Procedure EN MA 118, Foreign Material Exclusion, allowed the bag to enter the SIRWT during the refilling of the tank from the upper manway access. Since all Emergency Core Cooling system (ECCS) pumps have their suctions aligned to the SIRWT, the operability of those pumps came into question upon discovery of the bag in the recirculation pump. As a result, the licensee tested all of the pumps to ensure they were operable. There were no abnormalities noted during the test-runs.

The failure to adequately implement EN MA 118, Foreign Material Exclusion, was a performance deficiency warranting further assessment in the SDP. Specifically, a buffer zone was not established around the upper opening to the SIRWT and consideration was not given to the effects of ventilation in the area. Both contributed to the

introduction of foreign material into the tank. Utilizing IMC 0612, Appendix B, the inspectors determined the issue was more than minor because it adversely impacted the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, introduction of foreign material challenged the reliability of all ECCS pumps and necessitated emergent testing to ensure they remained operable. The finding screened as Green, or very low safety significance, utilizing IMC 0609, Appendix A, based on answering 'no' to all questions in Section A of Exhibit 2. The inspectors also determined that the finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Practices component. Based on other examples of poor implementation of the Foreign Material Exclusion (FME) program identified by both the inspectors and licensee; combined with the failure to correct those issues, the inspectors determined that the licensee did not ensure there was adequate supervisory and management oversight of work activities such that nuclear safety was supported.

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Margins for Evaluation of Leaking SIRWT Nozzles

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to adequately evaluate leaking Safety Injection and Refueling Water Tank (SIRWT) nozzles during the application of American Society of Mechanical Engineers (ASME) Code Case N 705. During the April May 2012 refueling outage, the SIRWT was drained for inspection and repairs and a deformed nozzle was sealed off, as it was believed to be the potential source of pre outage leakage. Upon refill, leakage was observed under a different section of the roof upon which the SIRWT rests, indicating a potentially new leak. The licensee employed ASME Code Case N 705 to demonstrate tank operability given the existing leakage and set an upper limit for allowed leakage. Inspector review of the approved evaluation identified certain Code Case criteria that were not discussed, namely, the residual weld stresses and seismic sloshing stresses. After discussions with the inspectors, the licensee developed residual weld stress values for their evaluation and discussed potential effects of seismic sloshing. The result was a reduction in allowed leakage from 130 gallons per day (gpd) to 34.8 gpd. The licensee entered the issue in their CAP as CR PLP 2012 04245 and CR PLP 2012 03732.

The finding was determined to be more than minor because the finding, if left uncorrected, could become a more significant safety concern. The inspectors utilized examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues," to inform this determination. Omission of Code-Case-required parameters in the approved evaluation led to reasonable doubt on the operability of the system had the licensee ascended to a mode requiring SIRWT operability. Further analysis was also required by the licensee. Absent NRC identification, the failure to adequately evaluate the leaking SIRWT nozzles could have allowed unstable cracks to remain in service. Unstable nozzle cracks could propagate and allow unacceptable leakage from the SIRWT resulting in loss of inventory and increase the risk for insufficient core cooling for post LOCA conditions. This finding impacted the Mitigating Systems Cornerstone attribute of Equipment Performance (reliability). The finding adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because the licensee promptly corrected this issue and lowered the amount of allowed leakage, the inspectors answered "No" to all of the worksheet questions identified in IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The correct leakage limit was in place prior to the required time the tank needed to be operable. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of Human Performance for the work practices component. The licensee did not provide adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported (H.4.c). Specifically, the licensee failed to ensure that the vendor evaluation to demonstrate SIRWT nozzle integrity with through wall cracks included consideration of residual weld stresses and seismic sloshing stresses. The inspectors determined the primary cause of this finding based upon discussions with the licensee's engineering staff.

Inspection Report# : [2012003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Derived Air Concentration (DAC)-Hour Tracking

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4.1. Specifically, the licensee failed to perform Derived Air Concentration (DAC)-Hour tracking for airborne transuranic radioactivity as required by a quality plant procedure, EN-RP-131, "Air Sampling," resulting in untimely internal dose assessments for selected plant workers. The issue was entered in the licensee's corrective action program as CR-PLP-2012-02683. The licensee's immediate corrective actions included re-evaluating the use of site-specific work instructions. Long-term corrective actions included procedure changes and completing the required personnel dose assessments utilizing upper bounding radiological conditions.

The finding is more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not performing DAC-Hour tracking for airborne transuranic radioactivity affected the licensee's ability to assess workers internal exposures in a timely manner and adversely impacted the licensee's ability to monitor, control and limit workers' radiation exposures (committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding: (1) did not involve as-low-as-is-reasonably-achievable (ALARA) planning and controls; (2) did not involve a radiological overexposure; (3) there was not a substantial potential for an overexposure; and (4) there was no compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to a cross-cutting aspect in the area of human performance, resources component, such that the licensee maintains complete, accurate and up-to-date procedures and work packages.

Inspection Report# : [2013002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : June 04, 2013

Palisades

2Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Take Corrective Action to Prevent Recurrence of Control Rod Drive Mechanism Pressure Boundary Leakage

A self-revealing finding of very low safety significance (Green) with associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, and Technical Specification (TS) 3.4.13, Primary Coolant System (PCS) Operational Leakage, was identified for failure to take corrective actions to prevent recurrence of Control Rod Drive Mechanism (CRDM) cracking and leakage, a significant condition adverse to quality (SCAQ). Specifically, for Criterion XVI the licensee failed to include the internal CRDM housing weld build-up area within the scope of corrective actions taken for a 2001 CRDM through wall leak on CRDM-21, caused by transgranular stress corrosion cracking (TGSCC). Subsequently, a through wall leak recurred in the weld build-up area on CRDM-24 in 2012 due to TGSCC. As a result, the licensee operated with PCS pressure boundary leakage, which is not allowed by TS 3.4.13. Further, because the licensee was not aware that the leakage was PCS pressure boundary leakage, the licensee did not implement the associated TS action statement. The licensee replaced CRDM-24 upper housing and entered the issue into their corrective action program as CR PLP 2013-01134. Additional corrective actions are described in NRC Inspection Report 05000255/2012012.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Initiating Events Cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability. Specifically, the licensee did not take adequate corrective actions to prevent recurrence of leakage in CRDM housings, which represents pressure boundary leakage. The inspectors determined this finding was of very low safety significance (Green) because the leak would not have exceeded the reactor coolant system leak rate for a small LOCA and could not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The cause of this finding, non-conservative decision making, occurred over 10 years ago and is well outside of the nominal 3 year period in IMC 0612 for cross-cutting aspects. Therefore, this is not indicative of current performance, because no other opportunities to identify the issue occurred during the previous 3-year period. However more recently, the licensee exhibited non-conservative decision making with respect to addressing the potential for CRDM housing cracking and leakage during the recent root cause (Section 4OA2.4 (b.2) of this report), resulting in another finding. This cross-cutting aspect will be captured through the other finding.

Inspection Report# : [2013002](#) (*pdf*)

Significance: G Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Address the Generic Implications of the Cracking Identified in Control Rod Drive

Mechanism- 24

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to accomplish quality activities in accordance with the prescribed procedures. Specifically, the licensee failed to adequately evaluate and document the generic implications of the cause of the 2012 cracking identified in Control Rod Drive Mechanism (CRDM)-24 in accordance with a quality procedure, Procedure, EN-LI-118, "Root Cause Evaluation." This issue was entered into the licensee's Corrective Action Program (CAP) under CR-PLP-2013-01500. Subsequently, the licensee decided to revise the inspection plan to add additional corrective actions to inspect a sample of welds No. 3 and No. 4 for transgranular stress corrosion cracking (TGSCC) during the upcoming refueling outage.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, absent NRC identification, the licensee would not have completed further evaluations or inspections of CRDM housing welds, which could have resulted in additional CRDM housing failure and leakage by TGSCC. In accordance with Table 2, "Cornerstones Affected by Degraded Condition or Programmatic Weakness," of IMC 609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding was associated with the Initiating Events Cornerstone because the failure of a CRDM housing is a Primary System Loss of Cooling Accident (LOCA) initiator contributor. Using Exhibit 1, "Initiating Events Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined this finding was of very low safety significance because the leak would not exceed the reactor coolant system leak rate for a small LOCA and would not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The inspectors determined that the primary cause of the failure to adequately consider welds No. 3 and No. 4 in the generic implications section of the root cause report (RCR) related to the decision making cross-cutting component in the human performance area because licensee staff did not use conservative assumptions in decision making. Specifically, the licensee did not use conservative assumptions when excluding welds No. 3 and No. 4 as being susceptible to TGSCC when there was not enough information to exclude them from consideration.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Immediate Operability Determination

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V, for the failure to perform an immediate operability determination in accordance with EN OP 104, Operability Determination Process. After discovering a non isolable steam leak on a main steam header drain valve (an American Society of Mechanical Engineers (ASME) Class 2 system) at approximately 2:30 a.m., the licensee failed to perform the steps specified in EN-OP-104 to expeditiously evaluate and to document a basis for operability. In addition, EN-OP-104 required input from engineering to be obtained for an ASME Class 2 thru wall leak. However, the night-shift operators did not obtain input from engineering and did not document the basis for operability. After day shift took over in the morning around 6:30 am, engineering and management were contacted and more rigorous efforts to assess operability commenced. The licensee subsequently declared the associated primary coolant system (PCS) loop, which requires an operable steam generator, to be inoperable at 11:15 am (approximately 9 hours after the condition was initially documented) and shut down the plant to repair the leak. The inspectors determined that not completing an immediate determination in accordance with EN OP 104 caused an unnecessary delay in commencing a plant shutdown to repair the non-isolable leak. The licensee entered this issue into their corrective action program as CR PLP 2013 00158.

The issue was determined to be greater than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, it could lead to a more significant safety concern. Specifically, the failure to perform an immediate operability determination when assessing safety related components, including a delay in requesting assistance, could lead to more significant issues. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The issue was determined to be of very low safety significance (Green) because it did not cause a reactor trip AND a loss of accident mitigation equipment. The finding had an associated cross cutting aspect in the decision making component of the human performance area because the night-shift operators did not obtain interdisciplinary input and reviews on the safety-significant operability decision (H.1.a).

Inspection Report# : [2012005](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Appropriately Implement Procedure, "Working Hour Limits for Non-Covered Workers."

A finding of very low safety significance was identified by the inspectors for the programmatic failure to appropriately implement procedure, EN FAP OM 006, "Working Hour Limits for Non Covered Workers." Two non covered supervisors and six individual contributors, performing work or overseeing work on a safety related component, did not follow the procedural requirements of obtaining supervisor approval prior to exceeding working hour limits, document excess work hours in the payroll system, or initiate a condition report in a timely manner. An extent of condition review identified two additional instances of individuals, one contractor and one plant employee, not obtaining prior approval to exceed work hour limits nor completing the appropriate documentation. No violation of regulatory requirements occurred since the performance deficiency involved workers not covered by 10 CFR 26.205 through 26.209, which defines the work hour limitations and exceptions for covered workers. The licensee documented the programmatic weaknesses associated with the use of EN FAP OM 006 in their corrective action program. The "Working Hour Limits for Non Covered Workers" procedure was revised to clarify when and by whom condition reports should be written when working hour limits are to be exceeded, as well as, who should write the report.

The finding was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, the programmatic failure to appropriately implement work hour limitations for non covered workers could lead to more significant safety concerns associated with fatigue potentially impacting the conduct and oversight of work on safety significant components. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the individuals who exceeded the working hour limits for non covered workers were involved in a forced outage for repair and inspection of a control rod drive mechanism housing (part of the primary coolant system pressure boundary) that had a thru wall leak which caused an emergent plant shutdown. Management review of this issue per IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," effective April 12, 2012, determined that this finding was of very low safety significance, or Green, since the performance deficiency did not directly contribute to the event. The finding had a cross cutting aspect in the area of Problem Identification and Resolution, related to the cross cutting component of Corrective Action Program, in that the licensee thoroughly evaluates problems such that the resolutions address causes and extent of conditions and also includes, for significant problems, conducting effectiveness reviews of corrective actions to ensure that the problems are resolved. In this finding, similar instances of non covered workers not adhering to the standards for work hour limits and not initiating condition reports as required by EN FAP OM 006 were identified in 2011, and the corrective actions for those issues were not sufficient to prevent them from occurring again [P.1(c)].

Inspection Report# : [2012005](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Work Management Processes

A self-revealed finding of very low safety significance and two associated NCVs were identified for the failure to conduct maintenance activities in accordance with work management procedures. Two NCVs are being documented in accordance with NRC Enforcement Manual Section 2.13.8 because of a cause-and-effect relationship under one performance deficiency. The first NCV was of Technical Specification (TS) 5.4.1 for failure to implement work management procedures. Specifically, Fix-It-Now (FIN) maintenance personnel working on a control room light indication issue for the safety-related Component Cooling Water Surge Tank Fill Valve, CV 0918, conducted troubleshooting outside of what was originally planned and briefed. Contrary to work management procedures, the required documentation, independent and/or supervisory reviews, nor risk assessment were completed. This deviation resulted in the installation of jumpers from an 115V alternating current (AC) circuit to the safety-related 125V direct current (DC) power system, which actuated various control room alarms, including a ground alarm on the DC system. The second associated NCV, revealed as a result of the first, was for a failure to implement risk management actions as required by 10 CFR 50.65(a)(4), Maintenance Rule. Contrary to this, the licensee failed to perform a quantitative or qualitative risk assessment for work (installation of jumpers) on circuitry associated with CV 0918. Corrective actions consisted of entering the issue into the corrective action program (CAP) and reassigning the FIN team personnel back to their respective maintenance shops and a suspension of all tool pouch maintenance activities pending further investigation. The licensee also held information sharing sessions with the maintenance and operations departments about this incident, the work management process, the standards for implementing this process, and new checklists for use during work planning and authorization.

The finding was more than minor utilizing IMC 0612, Appendix B, because it could reasonably be viewed as a precursor to a significant event and it affected the Initiating Events Cornerstone attribute of Human Performance, adversely impacting the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, planning and conducting work outside work management requirements resulted in a short circuit and various control room alarms. The finding screened as Green by answering “no” to the Transient Initiator question of contributing to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available in Exhibit 1 of IMC 0609, Appendix A. Additionally, the inspectors screened the finding as Green utilizing an Incremental Core Damage Probability Deficit (ICDPD) calculation performed by a regional Senior Risk Analyst in accordance with IMC 0609, Appendix K, due to the one NCV associated with the Maintenance Rule. The finding had a cross cutting aspect in the area of Human Performance, related to the cross cutting component of Decision Making, in that the licensee uses conservative assumptions in decision making, adopts a requirement to demonstrate that the proposed action is safe in order to proceed, and identifies possible unintended consequences of a decision. In this finding, there were personnel in various departments that could have questioned the continuation of the maintenance with respect to following the work management process (H.1(b)).

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Water Leakage into Control Room During Maintenance

A finding of very low safety significance with an associated NCV of TS 5.4.1 was self-revealed for the failure to implement work management procedures when operators noticed water leakage into the control room from the ceiling during maintenance activities. Water dripped onto the top of a panel near the middle of the control room and inside a

nearby walk-in panel. Metal trays that had been previously established to measure and route known leakage from the Safety Injection and Refueling Water Tank (SIRWT) out of the roof area ('catacombs') above the control room were moved during maintenance. The plant was shut down at the time to repair the SIRWT and the tank was drained. However, a water-cooled drilling device was being used in the roof at the time to 'core-bore' out old nozzles. Contrary to Quality Procedure EN WM 105, Planning, no controls were established to keep the trays in place or otherwise prevent water from accumulating in the catacomb area. As a result, the water from the tool seeped through the catacomb floor while it was in use and wetted equipment in the walk-in panel. Operators immediately halted the work in the roof area and shielded equipment from further wetting. The licensee inspected the affected equipment and determined there were no adverse effects as a result of the wetted equipment. The issue was also entered into the Corrective Action Program (CAP).

The failure to plan work activities in a manner to protect control room equipment from leakage was a performance deficiency warranting further evaluation in the SDP. The issue was determined to be more than minor using IMC 0612, Appendix B, because it impacted the Configuration Control attribute of the Initiating Events Cornerstone, and it adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions. Specifically, wetting of electrical components in the control room challenges the ability of those components to perform their function reliability. The inspectors utilized IMC 0609, Appendix G, "Shutdown Significance Determination Process," to assess the significance of the finding because the plant was shut down at the time. The finding screened as Green, or very-low safety significance, using Checklist 2 of Attachment 1 because with the primary coolant system closed and steam generators available for heat removal, none of the conditions listed as requiring a Phase 2 or 3 analysis applied and all shutdown safety functions were maintained. The finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Control component. The licensee did not coordinate work activities consistent with nuclear safety (H.3(a)). The core-bore work activity did not properly incorporate the job site conditions, risk insights, or the need for compensatory actions. Since there was a known deficiency in the control room boundary regarding the potential for water ingress, appropriate controls should have been outlined in work instructions or exercised over the catch devices themselves to help control the water that was being used in the tank/catacomb area.

Inspection Report# : [2012004](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Welding at the F East Nozzle Reinforcement Plate

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to perform adequate pre weld cleaning and control the welding process in a manner that ensured proper weld fusion of the F East nozzle reinforcement plate weld joint within the safety injection refueling water storage tank (SIRWT). Consequently, this weld failed in service causing leakage from the SIRWT. The licensee subsequently replaced the floor of the SIRWT and included instructions in the floor replacement work order that required pre weld cleaning with acetone or other approved solvents. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 03185.

The finding was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the inspectors answered "yes" to the More than Minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern"? Absent NRC identification, the failure to adequately clean aluminum prior to welding and adequately control the repair welding techniques may

have been repeated during future repairs to the SIRWT and resulted in lack of fusion type weld defects/cracks returned to service. Unstable cracks could propagate and create failure of the SIRWT pressure boundary resulting in loss of inventory and increase the risk for insufficient core cooling for post Loss-of-Coolant Accident (LOCA) conditions. Therefore, this finding adversely affected the mitigating systems cornerstone attribute of equipment performance (reliability). The inspectors determined this finding was of very low safety significance (Green) based on answering “no” to the questions in Part A of Exhibit 2, “Mitigating Systems Screening Questions,” in IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At Power.” Specifically, the small amount of leakage from the SIRWT weld leak did not result in loss of a mitigating system function. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of human performance for the resources component because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety was supported.

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Jun 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Corrective Action Process for Service Water Leaks

A finding of very low safety significance with an associated non-cited violation of 10 CFR 50 Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self revealed for the failure to adhere to the requirements of the site’s corrective action process. Specifically, the station failed to complete corrective actions to address cavitation induced erosion of service water system components, which resulted in additional through wall leaks and other adverse conditions in that safety related system. Since 1993, this phenomenon caused several through wall leaks and the failure of a valve, which isolated normal service water flow to a component cooling water heat exchanger. Corrective actions to replace valves susceptible to this type of erosion were not implemented, and actions to utilize more effective non destructive examination (NDE) techniques to assess piping or development of pre-emptive repair/replacement strategies were not performed, resulting in further leaks from the service water system. The current corrective action process procedure, EN LI 102, states that corrective actions are determined, implemented, and adequate to resolve conditions. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 05813.

The issue was determined to be greater than minor in accordance with IMC 0609 Appendix B, “Issue Screening,” issue date September 7, 2012, because it adversely affected the equipment performance attribute of the mitigating systems cornerstone whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a through wall leak can challenge the integrity of the piping and system function. The inspectors concluded the finding was of very low safety significance (Green) utilizing IMC 0609, “Significance Determination Process,” issue date June 2, 2011. Specifically, in Attachment 4, issue date June 19, 2012, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered ‘no’ since the leaks did not result in a loss of safety function. The finding had an associated cross cutting aspect in the area of problem identification and resolution for the operating experience component. Specifically, the licensee did not implement and institutionalize operating experience through changes to station processes and procedures.

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish an Acceptable Component Cooling Water Heat Exchanger Final Test Frequency

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control”, for failure to establish testing to demonstrate the safety-

related Component Cooling Water (CCW) heat exchangers would perform satisfactorily in service. Specifically, the licensee failed to demonstrate the heat exchanger's fouling factors would remain acceptable to ensure adequate heat transfer capability prior to changing the inspection, cleaning, eddy current testing, and thermal performance testing frequency to 12 years. The licensee entered this issue into their Corrective Action Program as CR-PLP-2012-05132 and CR-PLP-2013-00544 and implemented actions to revise the inspection, cleaning, testing, and maintenance frequencies to less than 5 years.

The issue was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability reliability and capability of systems needed to respond to initiating events to prevent undesired consequences. Specifically, the inappropriate test frequency affected the licensees' ability to ensure the CCW heat exchangers were available and capable to reliably perform as expected. The finding screened as of very low safety significance (Green) because the inadequate test program was not a design deficiency and did not result in a loss of system or component function. This finding has a cross-cutting aspect in the area of human performance, decision making because the licensee did not use conservative decision making and did not conduct effectiveness reviews of safety significant decisions to verify the validity of underlying assumptions, identify possible unintended consequences, or determine how to improve future decisions. Specifically, the licensee failed to use conservative decision-making or verify the validity of underlying assumptions when evaluating the effect that reducing the frequency of testing, inspection, cleaning, and maintenance would have on the CCW heat exchangers.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Work Instructions for Component Cooling Water Heat Exchanger

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to properly plan and document work on the safety-related 'A' Component Cooling Water (CCW) heat exchanger during a forced outage to repair leaks in the heat exchanger. Contrary to Criterion V and site implementing procedures EN-DC-115, Engineering Change Process, and EN-WM-105, Planning, the licensee did not ensure that appropriate quantitative or qualitative acceptance criteria for determining that important activities affecting quality were included in the work done to re-plug a population of leaking tubes in the heat exchanger. The licensee changed the work instructions to include the acceptance criteria after questioning by the inspectors. The licensee also interviewed workers to ensure the criteria had been utilized during earlier plug installation. The licensee entered the issue into their Corrective Action Program as CR-PLP-2013-00773 and CR-PLP-2013-00969.

The issue was determined to be greater-than-minor per IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, it could lead to a more significant safety concern. The inspectors' decision was informed by examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues." The examples refer to an issue not being minor if significant programmatic deficiencies were identified with the issue that could lead to worse errors if left uncorrected. When the issue was first raised by the inspectors, only one of the two critical parameters was initially added to the revised work instructions. Further, two examples of inadequate documentation were identified. A basis for removing steps to check for leaks was not properly documented; and it was not clear from the completed work packages that the engineering acceptance criteria were met. Given these issues, the inspectors determined the threshold for a finding was met. The inspectors concluded the finding adversely impacted the Mitigating Systems Cornerstone objective and was of very low safety significance (Green) utilizing IMC 0609, "Significance Determination Process." Specifically, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered 'no'. The finding had an associated cross-cutting aspect in the work control component of the human performance area. Specifically, the licensee did not coordinate work activities by incorporating actions to ensure interdepartmental alignments were made while planning

and executing the work to assure plant and human performance

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Damage to 'A' Auxiliary Feedwater (AFW) Pump Packing During Surveillance Run

A self-revealed finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion V was identified for the failure to conduct the 'A' Auxiliary Feedwater (AFW) pump technical specification surveillance test in accordance with the prescribed in-service test procedure. Specifically, plant personnel conducting the surveillance test on the 'A' AFW Pump adjusted packing when it was not required per the guidance in the procedure, which caused the pump packing to overheat and start smoking, resulting in unplanned inoperability of the pump. The licensee documented the issue in their corrective action program as CR-PLP-2013-01128 and completed an apparent cause evaluation. Planned corrective actions included revising the in-service test procedure.

The finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Mitigating Systems Cornerstone attribute of human performance and adversely impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a packing adjustment was made without being required by the procedure, causing the pump to overheat, which resulted in unplanned inoperability of the safety-related and risk significant 'A' AFW pump. The finding had an associated cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures plant personnel have complete, accurate, and up-to-date design documentation, procedures, and work packages. In this finding, the fact that the 'A' AFW pump has a unique packing design was not evident in the procedure being used and was not discussed during the pre-job briefs.

Inspection Report# : [2013002](#) (pdf)

Significance:  Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Foreign Material in Safety Injection and Refueling Water Tank (SIRWT)

A finding of very-low safety significance with an associated NCV of TS 5.4.1 was self revealed for failure to implement a maintenance procedure when it was discovered that foreign material had entered the SIRWT during a forced outage to repair the tank. A few days after the tank was refilled, a non-safety-related recirculation pump for the tank failed. The licensee discovered a plastic bag in the pump suction. The licensee entered the issue in their CAP and performed a root cause evaluation. The licensee concluded that inadequate implementation of Quality Procedure EN MA 118, Foreign Material Exclusion, allowed the bag to enter the SIRWT during the refilling of the tank from the upper manway access. Since all Emergency Core Cooling system (ECCS) pumps have their suctions aligned to the SIRWT, the operability of those pumps came into question upon discovery of the bag in the recirculation pump. As a result, the licensee tested all of the pumps to ensure they were operable. There were no abnormalities noted during the test-runs.

The failure to adequately implement EN MA 118, Foreign Material Exclusion, was a performance deficiency warranting further assessment in the SDP. Specifically, a buffer zone was not established around the upper opening to the SIRWT and consideration was not given to the effects of ventilation in the area. Both contributed to the introduction of foreign material into the tank. Utilizing IMC 0612, Appendix B, the inspectors determined the issue was more than minor because it adversely impacted the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to

initiating events to prevent undesirable consequences. Specifically, introduction of foreign material challenged the reliability of all ECCS pumps and necessitated emergent testing to ensure they remained operable. The finding screened as Green, or very low safety significance, utilizing IMC 0609, Appendix A, based on answering 'no' to all questions in Section A of Exhibit 2. The inspectors also determined that the finding had an associated cross cutting aspect in the Human Performance area, specifically in the Work Practices component. Based on other examples of poor implementation of the Foreign Material Exclusion (FME) program identified by both the inspectors and licensee; combined with the failure to correct those issues, the inspectors determined that the licensee did not ensure there was adequate supervisory and management oversight of work activities such that nuclear safety was supported. Inspection Report# : [2012004](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Derived Air Concentration (DAC)-Hour Tracking

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4.1. Specifically, the licensee failed to perform Derived Air Concentration (DAC)-Hour tracking for airborne transuranic radioactivity as required by a quality plant procedure, EN-RP-131, "Air Sampling," resulting in untimely internal dose assessments for selected plant workers. The issue was entered in the licensee's corrective action program as CR-PLP-2012-02683. The licensee's immediate corrective actions included re-evaluating the use of site-specific work instructions. Long-term corrective actions included procedure changes and completing the required personnel dose assessments utilizing upper bounding radiological conditions.

The finding is more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not performing DAC-Hour tracking for airborne transuranic radioactivity affected the licensee's ability to assess workers internal exposures in a timely manner and adversely impacted the licensee's ability to monitor, control and limit workers' radiation exposures (committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding: (1) did not involve as-low-as-is-reasonably-achievable (ALARA) planning and controls; (2) did not involve a radiological overexposure; (3) there was not a substantial potential for an overexposure; and (4) there was no compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to a cross-cutting aspect in the area of human performance, resources component, such that the licensee maintains complete, accurate and up-to-date procedures and work packages.

Inspection Report# : [2013002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : September 03, 2013

Palisades

3Q/2013 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Take Corrective Action to Prevent Recurrence of Control Rod Drive Mechanism Pressure Boundary Leakage

A self-revealing finding of very low safety significance (Green) with associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, and Technical Specification (TS) 3.4.13, Primary Coolant System (PCS) Operational Leakage, was identified for failure to take corrective actions to prevent recurrence of Control Rod Drive Mechanism (CRDM) cracking and leakage, a significant condition adverse to quality (SCAQ). Specifically, for Criterion XVI the licensee failed to include the internal CRDM housing weld build-up area within the scope of corrective actions taken for a 2001 CRDM through wall leak on CRDM-21, caused by transgranular stress corrosion cracking (TGSCC). Subsequently, a through wall leak recurred in the weld build-up area on CRDM-24 in 2012 due to TGSCC. As a result, the licensee operated with PCS pressure boundary leakage, which is not allowed by TS 3.4.13. Further, because the licensee was not aware that the leakage was PCS pressure boundary leakage, the licensee did not implement the associated TS action statement. The licensee replaced CRDM-24 upper housing and entered the issue into their corrective action program as CR PLP 2013-01134. Additional corrective actions are described in NRC Inspection Report 05000255/2012012.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Initiating Events Cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability. Specifically, the licensee did not take adequate corrective actions to prevent recurrence of leakage in CRDM housings, which represents pressure boundary leakage. The inspectors determined this finding was of very low safety significance (Green) because the leak would not have exceeded the reactor coolant system leak rate for a small LOCA and could not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The cause of this finding, non-conservative decision making, occurred over 10 years ago and is well outside of the nominal 3 year period in IMC 0612 for cross-cutting aspects. Therefore, this is not indicative of current performance, because no other opportunities to identify the issue occurred during the previous 3-year period. However more recently, the licensee exhibited non-conservative decision making with respect to addressing the potential for CRDM housing cracking and leakage during the recent root cause (Section 4OA2.4 (b.2) of this report), resulting in another finding. This cross-cutting aspect will be captured through the other finding.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Address the Generic Implications of the Cracking Identified in Control Rod Drive

Mechanism- 24

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to accomplish quality activities in accordance with the prescribed procedures. Specifically, the licensee failed to adequately evaluate and document the generic implications of the cause of the 2012 cracking identified in Control Rod Drive Mechanism (CRDM)-24 in accordance with a quality procedure, Procedure, EN-LI-118, "Root Cause Evaluation." This issue was entered into the licensee's Corrective Action Program (CAP) under CR-PLP-2013-01500. Subsequently, the licensee decided to revise the inspection plan to add additional corrective actions to inspect a sample of welds No. 3 and No. 4 for transgranular stress corrosion cracking (TGSCC) during the upcoming refueling outage.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, absent NRC identification, the licensee would not have completed further evaluations or inspections of CRDM housing welds, which could have resulted in additional CRDM housing failure and leakage by TGSCC. In accordance with Table 2, "Cornerstones Affected by Degraded Condition or Programmatic Weakness," of IMC 609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding was associated with the Initiating Events Cornerstone because the failure of a CRDM housing is a Primary System Loss of Cooling Accident (LOCA) initiator contributor. Using Exhibit 1, "Initiating Events Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined this finding was of very low safety significance because the leak would not exceed the reactor coolant system leak rate for a small LOCA and would not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The inspectors determined that the primary cause of the failure to adequately consider welds No. 3 and No. 4 in the generic implications section of the root cause report (RCR) related to the decision making cross-cutting component in the human performance area because licensee staff did not use conservative assumptions in decision making. Specifically, the licensee did not use conservative assumptions when excluding welds No. 3 and No. 4 as being susceptible to TGSCC when there was not enough information to exclude them from consideration.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Immediate Operability Determination

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V, for the failure to perform an immediate operability determination in accordance with EN OP 104, Operability Determination Process. After discovering a non isolable steam leak on a main steam header drain valve (an American Society of Mechanical Engineers (ASME) Class 2 system) at approximately 2:30 a.m., the licensee failed to perform the steps specified in EN-OP-104 to expeditiously evaluate and to document a basis for operability. In addition, EN-OP-104 required input from engineering to be obtained for an ASME Class 2 thru wall leak. However, the night-shift operators did not obtain input from engineering and did not document the basis for operability. After day shift took over in the morning around 6:30 am, engineering and management were contacted and more rigorous efforts to assess operability commenced. The licensee subsequently declared the associated primary coolant system (PCS) loop, which requires an operable steam generator, to be inoperable at 11:15 am (approximately 9 hours after the condition was initially documented) and shut down the plant to repair the leak. The inspectors determined that not completing an immediate determination in accordance with EN OP 104 caused an unnecessary delay in commencing a plant shutdown to repair the non-isolable leak. The licensee entered this issue into their corrective action program as CR PLP 2013 00158.

The issue was determined to be greater than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, it could lead to a more significant safety concern. Specifically, the failure to perform an immediate operability determination when assessing safety related components, including a delay in requesting assistance, could lead to more significant issues. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The issue was determined to be of very low safety significance (Green) because it did not cause a reactor trip AND a loss of accident mitigation equipment. The finding had an associated cross cutting aspect in the decision making component of the human performance area because the night-shift operators did not obtain interdisciplinary input and reviews on the safety-significant operability decision (H.1.a).

Inspection Report# : [2012005](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Appropriately Implement Procedure, "Working Hour Limits for Non-Covered Workers."

A finding of very low safety significance was identified by the inspectors for the programmatic failure to appropriately implement procedure, EN FAP OM 006, "Working Hour Limits for Non Covered Workers." Two non covered supervisors and six individual contributors, performing work or overseeing work on a safety related component, did not follow the procedural requirements of obtaining supervisor approval prior to exceeding working hour limits, document excess work hours in the payroll system, or initiate a condition report in a timely manner. An extent of condition review identified two additional instances of individuals, one contractor and one plant employee, not obtaining prior approval to exceed work hour limits nor completing the appropriate documentation. No violation of regulatory requirements occurred since the performance deficiency involved workers not covered by 10 CFR 26.205 through 26.209, which defines the work hour limitations and exceptions for covered workers. The licensee documented the programmatic weaknesses associated with the use of EN FAP OM 006 in their corrective action program. The "Working Hour Limits for Non Covered Workers" procedure was revised to clarify when and by whom condition reports should be written when working hour limits are to be exceeded, as well as, who should write the report.

The finding was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected, the programmatic failure to appropriately implement work hour limitations for non covered workers could lead to more significant safety concerns associated with fatigue potentially impacting the conduct and oversight of work on safety significant components. The performance deficiency also affected the Initiating Events cornerstone attribute of Equipment Performance, adversely impacting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the individuals who exceeded the working hour limits for non covered workers were involved in a forced outage for repair and inspection of a control rod drive mechanism housing (part of the primary coolant system pressure boundary) that had a thru wall leak which caused an emergent plant shutdown. Management review of this issue per IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," effective April 12, 2012, determined that this finding was of very low safety significance, or Green, since the performance deficiency did not directly contribute to the event. The finding had a cross cutting aspect in the area of Problem Identification and Resolution, related to the cross cutting component of Corrective Action Program, in that the licensee thoroughly evaluates problems such that the resolutions address causes and extent of conditions and also includes, for significant problems, conducting effectiveness reviews of corrective actions to ensure that the problems are resolved. In this finding, similar instances of non covered workers not adhering to the standards for work hour limits and not initiating condition reports as required by EN FAP OM 006 were identified in 2011, and the corrective actions for those issues were not sufficient to prevent them from occurring again [P.1(c)].

Inspection Report# : [2012005](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Welding at the F East Nozzle Reinforcement Plate

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to perform adequate pre weld cleaning and control the welding process in a manner that ensured proper weld fusion of the F East nozzle reinforcement plate weld joint within the safety injection refueling water storage tank (SIRWT). Consequently, this weld failed in service causing leakage from the SIRWT. The licensee subsequently replaced the floor of the SIRWT and included instructions in the floor replacement work order that required pre weld cleaning with acetone or other approved solvents. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 03185.

The finding was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the inspectors answered "yes" to the More than Minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern"? Absent NRC identification, the failure to adequately clean aluminum prior to welding and adequately control the repair welding techniques may have been repeated during future repairs to the SIRWT and resulted in lack of fusion type weld defects/cracks returned to service. Unstable cracks could propagate and create failure of the SIRWT pressure boundary resulting in loss of inventory and increase the risk for insufficient core cooling for post Loss-of-Coolant Accident (LOCA) conditions. Therefore, this finding adversely affected the mitigating systems cornerstone attribute of equipment performance (reliability). The inspectors determined this finding was of very low safety significance (Green) based on answering "no" to the questions in Part A of Exhibit 2, "Mitigating Systems Screening Questions," in IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At Power." Specifically, the small amount of leakage from the SIRWT weld leak did not result in loss of a mitigating system function. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of human performance for the resources component because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety was supported.

Inspection Report# : [2013003](#) (pdf)**Significance:**  Jun 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Corrective Action Process for Service Water Leaks

A finding of very low safety significance with an associated non-cited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed for the failure to adhere to the requirements of the site's corrective action process. Specifically, the station failed to complete corrective actions to address cavitation induced erosion of service water system components, which resulted in additional through wall leaks and other adverse conditions in that safety related system. Since 1993, this phenomenon caused several through wall leaks and the failure of a valve, which isolated normal service water flow to a component cooling water heat exchanger. Corrective actions to replace valves susceptible to this type of erosion were not implemented, and actions to utilize more effective non destructive examination (NDE) techniques to assess piping or development of pre-emptive repair/replacement strategies were not performed, resulting in further leaks from the service water system. The current

corrective action process procedure, EN LI 102, states that corrective actions are determined, implemented, and adequate to resolve conditions. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 05813.

The issue was determined to be greater than minor in accordance with IMC 0609 Appendix B, "Issue Screening," issue date September 7, 2012, because it adversely affected the equipment performance attribute of the mitigating systems cornerstone whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a through wall leak can challenge the integrity of the piping and system function. The inspectors concluded the finding was of very low safety significance (Green) utilizing IMC 0609, "Significance Determination Process," issue date June 2, 2011. Specifically, in Attachment 4, issue date June 19, 2012, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered 'no' since the leaks did not result in a loss of safety function. The finding had an associated cross cutting aspect in the area of problem identification and resolution for the operating experience component. Specifically, the licensee did not implement and institutionalize operating experience through changes to station processes and procedures.

Inspection Report# : [2013003](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish an Acceptable Component Cooling Water Heat Exchanger Final Test Frequency

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control", for failure to establish testing to demonstrate the safety-related Component Cooling Water (CCW) heat exchangers would perform satisfactorily in service. Specifically, the licensee failed to demonstrate the heat exchanger's fouling factors would remain acceptable to ensure adequate heat transfer capability prior to changing the inspection, cleaning, eddy current testing, and thermal performance testing frequency to 12 years. The licensee entered this issue into their Corrective Action Program as CR-PLP-2012-05132 and CR-PLP-2013-00544 and implemented actions to revise the inspection, cleaning, testing, and maintenance frequencies to less than 5 years.

The issue was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability reliability and capability of systems needed to respond to initiating events to prevent undesired consequences. Specifically, the inappropriate test frequency affected the licensees' ability to ensure the CCW heat exchangers were available and capable to reliably perform as expected. The finding screened as of very low safety significance (Green) because the inadequate test program was not a design deficiency and did not result in a loss of system or component function. This finding has a cross-cutting aspect in the area of human performance, decision making because the licensee did not use conservative decision making and did not conduct effectiveness reviews of safety significant decisions to verify the validity of underlying assumptions, identify possible unintended consequences, or determine how to improve future decisions. Specifically, the licensee failed to use conservative decision-making or verify the validity of underlying assumptions when evaluating the effect that reducing the frequency of testing, inspection, cleaning, and maintenance would have on the CCW heat exchangers.

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Work Instructions for Component Cooling Water Heat Exchanger

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to properly plan and document work on the safety-related 'A' Component Cooling Water (CCW) heat exchanger during a forced outage to repair leaks in the heat exchanger. Contrary to Criterion V and site implementing procedures EN-DC-115, Engineering Change Process, and EN-WM-105, Planning, the licensee did not ensure that appropriate quantitative or qualitative acceptance criteria for determining that important activities affecting quality were included in the work done to re-plug a population of leaking tubes in the heat exchanger. The licensee changed the work instructions to include the acceptance criteria after questioning by the inspectors. The licensee also interviewed workers to ensure the criteria had been utilized during earlier plug installation. The licensee entered the issue into their Corrective Action Program as CR-PLP-2013-00773 and CR-PLP-2013-00969.

The issue was determined to be greater-than-minor per IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, it could lead to a more significant safety concern. The inspectors' decision was informed by examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues." The examples refer to an issue not being minor if significant programmatic deficiencies were identified with the issue that could lead to worse errors if left uncorrected. When the issue was first raised by the inspectors, only one of the two critical parameters was initially added to the revised work instructions. Further, two examples of inadequate documentation were identified. A basis for removing steps to check for leaks was not properly documented; and it was not clear from the completed work packages that the engineering acceptance criteria were met. Given these issues, the inspectors determined the threshold for a finding was met. The inspectors concluded the finding adversely impacted the Mitigating Systems Cornerstone objective and was of very low safety significance (Green) utilizing IMC 0609, "Significance Determination Process." Specifically, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered 'no'. The finding had an associated cross-cutting aspect in the work control component of the human performance area. Specifically, the licensee did not coordinate work activities by incorporating actions to ensure interdepartmental alignments were made while planning and executing the work to assure plant and human performance

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Damage to 'A' Auxiliary Feedwater (AFW) Pump Packing During Surveillance Run

A self-revealed finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion V was identified for the failure to conduct the 'A' Auxiliary Feedwater (AFW) pump technical specification surveillance test in accordance with the prescribed in-service test procedure. Specifically, plant personnel conducting the surveillance test on the 'A' AFW Pump adjusted packing when it was not required per the guidance in the procedure, which caused the pump packing to overheat and start smoking, resulting in unplanned inoperability of the pump. The licensee documented the issue in their corrective action program as CR-PLP-2013-01128 and completed an apparent cause evaluation. Planned corrective actions included revising the in-service test procedure.

The finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Mitigating Systems Cornerstone attribute of human performance and adversely impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a packing adjustment was made without being required by the procedure, causing the pump to overheat, which resulted in unplanned inoperability of the safety-related and risk significant 'A' AFW pump. The finding had an associated cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures plant personnel have complete, accurate, and up-to-date design documentation, procedures, and work packages. In this finding, the fact that the 'A' AFW pump has a unique packing design was not evident in the procedure being used and was not discussed during the pre-job briefs.

Inspection Report# : [2013002](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor in Alpha 3 Area

The inspectors identified a finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1. Specifically, the licensee failed to perform air sampling as required by station procedure EN RP-122 “Alpha Monitoring.” The issue was entered in the licensee’s Corrective Action Program (CAP) as CR PLP 2013 02054. The licensee’s immediate corrective actions included performance management of the radiation protection technician and direct radiation protection supervisor oversight of the work activity.

The finding is more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not monitoring the worker intake in an Alpha Level 3 area affected the licensee’s ability to assess workers internal exposures in a timely manner, and adversely impacted the licensee’s ability to monitor, control, and limit radiation exposures (i.e., committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, “Occupational Radiation Safety Significance Determination Process,” the inspectors determined that the finding had very low safety significance (Green) because the finding did not involve: (1) as low as reasonably achievable (ALARA) planning and controls; (2) a radiological overexposure; (3) a substantial potential for an overexposure; and (4) a compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to the cross cutting aspect of problem identification and resolution in the component of corrective actions, specifically the licensee did not take appropriate corrective actions to address safety issues and adverse trends in Alpha monitoring in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2013004](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Derived Air Concentration (DAC)-Hour Tracking

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4.1. Specifically, the licensee failed to perform Derived Air Concentration (DAC)-Hour tracking for airborne transuranic radioactivity as required by a quality plant procedure, EN-RP-131, “Air Sampling,” resulting in untimely internal dose assessments for selected plant workers. The issue was entered in the licensee’s corrective

action program as CR-PLP-2012-02683. The licensee's immediate corrective actions included re-evaluating the use of site-specific work instructions. Long-term corrective actions included procedure changes and completing the required personnel dose assessments utilizing upper bounding radiological conditions.

The finding is more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not performing DAC-Hour tracking for airborne transuranic radioactivity affected the licensee's ability to assess workers internal exposures in a timely manner and adversely impacted the licensee's ability to monitor, control and limit workers' radiation exposures (committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding: (1) did not involve as-low-as-is-reasonably-achievable (ALARA) planning and controls; (2) did not involve a radiological overexposure; (3) there was not a substantial potential for an overexposure; and (4) there was no compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to a cross-cutting aspect in the area of human performance, resources component, such that the licensee maintains complete, accurate and up-to-date procedures and work packages.

Inspection Report# : [2013002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : December 03, 2013

Palisades

4Q/2013 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Take Corrective Action to Prevent Recurrence of Control Rod Drive Mechanism Pressure Boundary Leakage

A self-revealing finding of very low safety significance (Green) with associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, and Technical Specification (TS) 3.4.13, Primary Coolant System (PCS) Operational Leakage, was identified for failure to take corrective actions to prevent recurrence of Control Rod Drive Mechanism (CRDM) cracking and leakage, a significant condition adverse to quality (SCAQ). Specifically, for Criterion XVI the licensee failed to include the internal CRDM housing weld build-up area within the scope of corrective actions taken for a 2001 CRDM through wall leak on CRDM-21, caused by transgranular stress corrosion cracking (TGSCC). Subsequently, a through wall leak recurred in the weld build-up area on CRDM-24 in 2012 due to TGSCC. As a result, the licensee operated with PCS pressure boundary leakage, which is not allowed by TS 3.4.13. Further, because the licensee was not aware that the leakage was PCS pressure boundary leakage, the licensee did not implement the associated TS action statement. The licensee replaced CRDM-24 upper housing and entered the issue into their corrective action program as CR PLP 2013-01134. Additional corrective actions are described in NRC Inspection Report 05000255/2012012.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Initiating Events Cornerstone attribute of equipment performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability. Specifically, the licensee did not take adequate corrective actions to prevent recurrence of leakage in CRDM housings, which represents pressure boundary leakage. The inspectors determined this finding was of very low safety significance (Green) because the leak would not have exceeded the reactor coolant system leak rate for a small LOCA and could not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The cause of this finding, non-conservative decision making, occurred over 10 years ago and is well outside of the nominal 3 year period in IMC 0612 for cross-cutting aspects. Therefore, this is not indicative of current performance, because no other opportunities to identify the issue occurred during the previous 3-year period. However more recently, the licensee exhibited non-conservative decision making with respect to addressing the potential for CRDM housing cracking and leakage during the recent root cause (Section 4OA2.4 (b.2) of this report), resulting in another finding. This cross-cutting aspect will be captured through the other finding.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Address the Generic Implications of the Cracking Identified in Control Rod Drive

Mechanism- 24

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to accomplish quality activities in accordance with the prescribed procedures. Specifically, the licensee failed to adequately evaluate and document the generic implications of the cause of the 2012 cracking identified in Control Rod Drive Mechanism (CRDM)-24 in accordance with a quality procedure, Procedure, EN-LI-118, "Root Cause Evaluation." This issue was entered into the licensee's Corrective Action Program (CAP) under CR-PLP-2013-01500. Subsequently, the licensee decided to revise the inspection plan to add additional corrective actions to inspect a sample of welds No. 3 and No. 4 for transgranular stress corrosion cracking (TGSCC) during the upcoming refueling outage.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, absent NRC identification, the licensee would not have completed further evaluations or inspections of CRDM housing welds, which could have resulted in additional CRDM housing failure and leakage by TGSCC. In accordance with Table 2, "Cornerstones Affected by Degraded Condition or Programmatic Weakness," of IMC 609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding was associated with the Initiating Events Cornerstone because the failure of a CRDM housing is a Primary System Loss of Cooling Accident (LOCA) initiator contributor. Using Exhibit 1, "Initiating Events Screening Questions," in IMC 0609, Attachment A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined this finding was of very low safety significance because the leak would not exceed the reactor coolant system leak rate for a small LOCA and would not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for leakage for TGSCC in type 316 stainless steel will experience leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to shut down the plant prior to experiencing a component rupture. The inspectors determined that the primary cause of the failure to adequately consider welds No. 3 and No. 4 in the generic implications section of the root cause report (RCR) related to the decision making cross-cutting component in the human performance area because licensee staff did not use conservative assumptions in decision making. Specifically, the licensee did not use conservative assumptions when excluding welds No. 3 and No. 4 as being susceptible to TGSCC when there was not enough information to exclude them from consideration.

Inspection Report# : [2013002](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete a Transient Combustible Evaluation

An NRC identified finding of very low safety significance and an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to complete a transient combustible evaluation as required by procedure EN DC 161, "Control of Combustibles." Specifically, transient combustible materials in use for work activities associated with the Spent Fuel Pool Cooling Heat Exchangers were being stored in the Auxiliary Building 590' corridor, a Level 1 Combustible Control Zone, without having a required transient combustible evaluation completed prior to (or during) the work. The licensee entered this issue into their Corrective Action Program (CAP) as Condition Report (CR) PLP-2013-04905, performed a Level 1 Human Performance Evaluation, and removed the materials after the work was completed.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Additionally, it was similar to the “not minor if” statement of Example 4.k in IMC 0612, Appendix E. This example stated that an issue was not minor if a credible fire scenario involving the identified transient combustibles could affect equipment important to safety. For this issue, transient combustible materials in use for work in progress were being stored in a Level 1 area where a fire could affect equipment important to safety, and a transient combustible evaluation had not been completed as required by licensee procedures. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because workers failed to validate the combustible control zone classification of the work area during the planning and preparation phase of the project, resulting in the group not obtaining a transient combustible evaluation for the work area prior to commencing work. Contributing to this was ineffective change management communication for the newest revision to EN-DC-161, which re classified many areas of the plant into different combustible control zones.

Inspection Report# : [2013005](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

The Aging Effects of the Biological Shield Wall Wetted Environment Were Not Being Managed

The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” when licensee personnel failed to evaluate the aging effects of the biological shield wall wetted environment. Specifically, the licensee identified seeping water from the biological shield wall on several occasions, but did not evaluate the potential aging effects on the structure concrete and rebar. This finding was entered into the licensee’s CAP as CR-PLP-2013-4041 to evaluate the potential aging effects.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as having very low safety significance (Green) because it did not result in a loss of operability or functionality. Specifically, the biological shield wall wetted environment had not resulted in the loss of functionality of the structure because recent wall visual inspection had not identified indications of immediate structural flaws, such as significant cracks or spalling. The inspectors determined that this finding had a cross-cutting aspect in the CAP component of the Problem Identification and Resolution cross-cutting area because the licensee failed to consider the potential aging effects following the discovery of water seeping from the biological shield wall.

Inspection Report# : [2013005](#) (pdf)

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Welding at the F East Nozzle Reinforcement Plate

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion IX, “Control of Special Processes,” for the licensee’s failure to perform adequate pre weld cleaning and control the welding process in a manner that ensured proper weld fusion of the F East nozzle reinforcement plate weld joint within the safety injection refueling water storage tank (SIRWT). Consequently, this weld failed in service causing leakage from the SIRWT. The licensee subsequently replaced the floor of the SIRWT and included instructions in the floor replacement work order that required pre weld cleaning with acetone or other approved solvents. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 03185.

The finding was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the inspectors answered "yes" to the More than Minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern"? Absent NRC identification, the failure to adequately clean aluminum prior to welding and adequately control the repair welding techniques may have been repeated during future repairs to the SIRWT and resulted in lack of fusion type weld defects/cracks returned to service. Unstable cracks could propagate and create failure of the SIRWT pressure boundary resulting in loss of inventory and increase the risk for insufficient core cooling for post Loss-of-Coolant Accident (LOCA) conditions. Therefore, this finding adversely affected the mitigating systems cornerstone attribute of equipment performance (reliability). The inspectors determined this finding was of very low safety significance (Green) based on answering "no" to the questions in Part A of Exhibit 2, "Mitigating Systems Screening Questions," in IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At Power." Specifically, the small amount of leakage from the SIRWT weld leak did not result in loss of a mitigating system function. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of human performance for the resources component because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety was supported.

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Jun 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Corrective Action Process for Service Water Leaks

A finding of very low safety significance with an associated non-cited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed for the failure to adhere to the requirements of the site's corrective action process. Specifically, the station failed to complete corrective actions to address cavitation induced erosion of service water system components, which resulted in additional through wall leaks and other adverse conditions in that safety related system. Since 1993, this phenomenon caused several through wall leaks and the failure of a valve, which isolated normal service water flow to a component cooling water heat exchanger. Corrective actions to replace valves susceptible to this type of erosion were not implemented, and actions to utilize more effective non destructive examination (NDE) techniques to assess piping or development of pre-emptive repair/replacement strategies were not performed, resulting in further leaks from the service water system. The current corrective action process procedure, EN LI 102, states that corrective actions are determined, implemented, and adequate to resolve conditions. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 05813.

The issue was determined to be greater than minor in accordance with IMC 0609 Appendix B, "Issue Screening," issue date September 7, 2012, because it adversely affected the equipment performance attribute of the mitigating systems cornerstone whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a through wall leak can challenge the integrity of the piping and system function. The inspectors concluded the finding was of very low safety significance (Green) utilizing IMC 0609, "Significance Determination Process," issue date June 2, 2011. Specifically, in Attachment 4, issue date June 19, 2012, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered 'no' since the leaks did not result in a loss of safety function. The finding had an associated cross cutting aspect in the area of problem identification and resolution for the operating experience component. Specifically, the licensee did not implement and institutionalize operating experience through changes to station processes and procedures.

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish an Acceptable Component Cooling Water Heat Exchanger Final Test Frequency

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control", for failure to establish testing to demonstrate the safety-related Component Cooling Water (CCW) heat exchangers would perform satisfactorily in service. Specifically, the licensee failed to demonstrate the heat exchanger's fouling factors would remain acceptable to ensure adequate heat transfer capability prior to changing the inspection, cleaning, eddy current testing, and thermal performance testing frequency to 12 years. The licensee entered this issue into their Corrective Action Program as CR-PLP-2012-05132 and CR-PLP-2013-00544 and implemented actions to revise the inspection, cleaning, testing, and maintenance frequencies to less than 5 years.

The issue was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability reliability and capability of systems needed to respond to initiating events to prevent undesired consequences. Specifically, the inappropriate test frequency affected the licensees' ability to ensure the CCW heat exchangers were available and capable to reliably perform as expected. The finding screened as of very low safety significance (Green) because the inadequate test program was not a design deficiency and did not result in a loss of system or component function. This finding has a cross-cutting aspect in the area of human performance, decision making because the licensee did not use conservative decision making and did not conduct effectiveness reviews of safety significant decisions to verify the validity of underlying assumptions, identify possible unintended consequences, or determine how to improve future decisions. Specifically, the licensee failed to use conservative decision-making or verify the validity of underlying assumptions when evaluating the effect that reducing the frequency of testing, inspection, cleaning, and maintenance would have on the CCW heat exchangers.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Work Instructions for Component Cooling Water Heat Exchanger

The inspectors identified a finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to properly plan and document work on the safety-related 'A' Component Cooling Water (CCW) heat exchanger during a forced outage to repair leaks in the heat exchanger. Contrary to Criterion V and site implementing procedures EN-DC-115, Engineering Change Process, and EN-WM-105, Planning, the licensee did not ensure that appropriate quantitative or qualitative acceptance criteria for determining that important activities affecting quality were included in the work done to re-plug a population of leaking tubes in the heat exchanger. The licensee changed the work instructions to include the acceptance criteria after questioning by the inspectors. The licensee also interviewed workers to ensure the criteria had been utilized during earlier plug installation. The licensee entered the issue into their Corrective Action Program as CR-PLP-2013-00773 and CR-PLP-2013-00969.

The issue was determined to be greater-than-minor per IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, it could lead to a more significant safety concern. The inspectors' decision was informed by examples 3j and 3k in IMC 0612, Appendix E, "Examples of Minor Issues." The examples refer to an issue not being minor if significant programmatic deficiencies were identified with the issue that could lead to worse errors if left uncorrected. When the issue was first raised by the inspectors, only one of the two critical parameters was initially added to the revised work instructions. Further, two examples of inadequate documentation were identified. A basis for removing steps to check for leaks was not properly documented; and it was not clear from the completed work packages that the engineering acceptance criteria were met. Given these issues, the inspectors determined the threshold for a finding

was met. The inspectors concluded the finding adversely impacted the Mitigating Systems Cornerstone objective and was of very low safety significance (Green) utilizing IMC 0609, “Significance Determination Process.” Specifically, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered ‘no’. The finding had an associated cross-cutting aspect in the work control component of the human performance area. Specifically, the licensee did not coordinate work activities by incorporating actions to ensure interdepartmental alignments were made while planning and executing the work to assure plant and human performance

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Damage to 'A' Auxiliary Feedwater (AFW) Pump Packing During Surveillance Run

A self-revealed finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion V was identified for the failure to conduct the ‘A’ Auxiliary Feedwater (AFW) pump technical specification surveillance test in accordance with the prescribed in-service test procedure. Specifically, plant personnel conducting the surveillance test on the ‘A’ AFW Pump adjusted packing when it was not required per the guidance in the procedure, which caused the pump packing to overheat and start smoking, resulting in unplanned inoperability of the pump. The licensee documented the issue in their corrective action program as CR-PLP-2013-01128 and completed an apparent cause evaluation. Planned corrective actions included revising the in-service test procedure.

The finding was more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it was associated with the Mitigating Systems Cornerstone attribute of human performance and adversely impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a packing adjustment was made without being required by the procedure, causing the pump to overheat, which resulted in unplanned inoperability of the safety-related and risk significant ‘A’ AFW pump. The finding had an associated cross cutting aspect in the area of human performance related to the cross cutting component of resources, in that the licensee ensures plant personnel have complete, accurate, and up-to-date design documentation, procedures, and work packages. In this finding, the fact that the ‘A’ AFW pump has a unique packing design was not evident in the procedure being used and was not discussed during the pre-job briefs.

Inspection Report# : [2013002](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

. The inspectors identified a finding of very low safety significance and two associated NCVs of TS 5.7.1 and one associated NCV of TS 5.7.2 when on three separate occasions, three separate workers unknowingly entered areas with greater than expected dose rates. Specifically, on April 10, 2012, the radiation protection (RP) staff inappropriately authorized plant personnel to enter a locked high radiation area in the Auxiliary Building Pipechase (ABP) 602' elevation that had not been appropriately radiologically characterized prior to the entry; and on April 25, 2012, and again on April 27, 2012, workers inside the containment 607' elevation staging equipment at the 'B' steam generator (S/G) manway inappropriately traversed high radiation areas with elevated dose rates near the 'A' S/G cubicle. On both occasions, workers deviated slightly from the briefed travel paths. The licensee entered this issue into their CAP as CR-PLP-2012-03229 and CR-PLP-2012-03313, and as part of their corrective actions, shared lessons learned from this issue with the RP staff to address survey adequacy and for enhanced communications with workers during pre job briefings.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. Additionally, it was similar to the "not minor if" statement of Example 6.h in IMC 0612, Appendix E. The finding was determined to be of very low safety significance because the problem was not an as low as reasonably achievable (ALARA) planning issue, there was no overexposure nor substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because the licensee failed to define and clearly communicate expectations regarding procedural compliance and ensure that personnel followed procedures.

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor in Alpha 3 Area

The inspectors identified a finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1. Specifically, the licensee failed to perform air sampling as required by station procedure EN RP-122 "Alpha Monitoring." The issue was entered in the licensee's Corrective Action Program (CAP) as CR PLP 2013 02054. The licensee's immediate corrective actions included performance management of the radiation protection technician and direct radiation protection supervisor oversight of the work activity.

The finding is more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not monitoring the worker intake in an Alpha Level 3 area affected the licensee's ability to assess workers internal exposures in a timely manner, and adversely impacted the licensee's ability to monitor, control, and limit radiation exposures (i.e., committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding did not involve: (1) as low as reasonably achievable (ALARA) planning and controls; (2) a radiological overexposure; (3) a substantial potential for an overexposure; and (4) a compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to the cross cutting aspect of problem identification and resolution in the component of corrective actions, specifically the licensee did not take appropriate corrective actions to address safety issues and adverse trends in Alpha monitoring in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2013004](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Derived Air Concentration (DAC)-Hour Tracking

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.4.1. Specifically, the licensee failed to perform Derived Air Concentration (DAC)-Hour tracking for airborne transuranic radioactivity as required by a quality plant procedure, EN-RP-131, "Air Sampling," resulting in untimely internal dose assessments for selected plant workers. The issue was entered in the licensee's corrective action program as CR-PLP-2012-02683. The licensee's immediate corrective actions included re-evaluating the use of site-specific work instructions. Long-term corrective actions included procedure changes and completing the required personnel dose assessments utilizing upper bounding radiological conditions.

The finding is more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not performing DAC-Hour tracking for airborne transuranic radioactivity affected the licensee's ability to assess workers internal exposures in a timely manner and adversely impacted the licensee's ability to monitor, control and limit workers' radiation exposures (committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding: (1) did not involve as-low-as-is-reasonably-achievable (ALARA) planning and controls; (2) did not involve a radiological overexposure; (3) there was not a substantial potential for an overexposure; and (4) there was no compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to a cross-cutting aspect in the area of human performance, resources component, such that the licensee maintains complete, accurate and up-to-date procedures and work packages.

Inspection Report# : [2013002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : February 24, 2014

Palisades 1Q/2014 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Insatallation of Steam Generator Nozzle Dams

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to have an adequate procedure and work order (WO) to install steam generator nozzle dams. The licensee entered this issue in their Corrective Action Program (CAP) as Condition Report (CR) PLP-2014-00770, Improper Routing of Nozzle Dam Air Supply. As part of their corrective actions, the licensee planned to revise the nozzle dam installation procedure and the WO.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Procedure Quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and was similar to the more than minor criteria in Example 5.a of IMC 0612, Appendix E, "Examples of Minor Issues." As it related to this finding, the intended design of the nozzle dam air supply system was not correctly translated into the installation procedure or the work instructions. Further, the nozzle dam air system was not properly tested prior to being placed into service. Since the plant was shutdown in Mode 6, the inspectors assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." A Phase 2 risk evaluation was required that determined the total event risk was 3.6E-8 and was therefore of very low safety significance (Green). This finding had an associated cross-cutting aspect in the Change Management (H.3) component of the Human Performance cross-cutting area. In particular, issues during the previous refueling outage led the steam generator project management team to review the configuration of the nozzle dam air system. Through this review, the licensee identified that changes to the alignment of air to the nozzle dams was required. However, due to turnover within the project management group and inadequate communications and documentation, the licensee failed to appropriately evaluate and implement those changes.

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Complete Volumetric Examinations for DM Butt Welds in Branch Connections

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.55a(g)(6)(ii)(F)(3) when licensee personnel failed to complete required baseline volumetric examinations for nine dissimilar metal (DM) butt welds in the Primary Coolant System (PCS) that were fabricated from Inconel Alloy 82/182 weld metal and were susceptible to primary water stress corrosion cracking (PWSCC). The licensee entered this issue into their CAP as CR PLP 2014 01742, NRC Question on Whether Hot and Cold Leg Branch Connection Welds are In Scope of ASME [American Society of Mechanical Engineers] Code Case (CC) N-770-1. As part of their

corrective actions, the licensee submitted a request for relief to the NRC to allow substitution of a visual and dye penetrant surface examination of these welds as an alternative to volumetric examinations. The NRC granted verbal relief on March 13, 2014, which stated the licensee could implement the proposed alternative to 10 CFR 50.55a(g)(6)(ii)(F), which included a commitment to perform enhanced leakage monitoring during the current operating cycle and perform the required volumetric examinations during the next refueling outage.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Equipment Performance (Reliability) attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors also determined that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the failure to complete volumetric examinations on the nine DM butt welded PCS branch connections fabricated with Alloy 82/182 weld metal could have allowed PWSCC susceptible material to remain in service, which could propagate and result in a Loss-of-Coolant-Accident (LOCA). The inspectors performed a Phase I Significance Determination Process screening using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 1, "Initiating Events Screening Questions." The inspectors answered the Phase I SDP "LOCA Initiators" Questions A1 and A2 'No' because undetected cracks, if present, were not yet through-wall and did not challenge the structural integrity of the welds. Therefore, this finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Evaluation (P.2) component of the Problem Identification and Resolution cross-cutting area because the licensee did not ensure that the resolution of the issue appropriately addressed causes and the extent of condition. Specifically, when determining the applicability of CC N 770 1, the licensee failed to thoroughly evaluate the scope of welds susceptible to PWSCC that required volumetric examination commensurate with the safety significance of this issue.

Inspection Report# : [2014002](#) (pdf)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Introduction of Foreign Material Into the SW System

A finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to follow procedure EN MA 118, "Foreign Material Exclusion (FME)," during work on the safety-related critical service water (SW) system during refueling outage (RFO) 1R23. Specifically, Sections 5.2[1] and 5.2[6] of EN-MA-118 stated that planners and procedure writers should evaluate FME considerations for work activities and include job specific FME controls in work instructions and procedures. Additionally, EN-MA-188 stated that during the planning stage, the planner should designate the FME Zone type, risk level, pathways to FME sensitive equipment, and work practice restrictions, as applicable, in all work packages. However, adequate controls were not established and documented when the decision was made to use an inflatable bladder inside the SW system when work was being performed on the system. As a result, on two separate occasions during RFO 1R23, bladders were inadvertently entrained into the return header of the SW system by the relative vacuum created by system flow. The licensee entered this issue into their CAP as CR PLP 2014 00715, Vacuum was So Great that Bladder was Ripped Off Lanyard and Lost in Piping, and CR PLP 2014 01176, FME Bladder Lost During Work Near CV-0823. As part of their corrective actions, the licensee successfully completed a comprehensive SW system test, which validated acceptable system parameters.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. In accordance with Checklist 3, "PWR [Pressurized Water Reactor] Cold Shutdown and Refueling Operation RCS [Reactor Coolant System] Open and Refueling Cavity Level <

23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours,” following the loss of the first bladder, and Checklist 4, “PWR Refueling Operation: RCS Level > 23' Or PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer,” following the loss of the second bladder of Attachment 1, “Phase 1 Operational Checklists for both PWRs and BWRs [Boiling Water Reactors],” of IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process,” the inspectors determined that mitigation capabilities were not adversely impacted. Additionally, utilizing Table 1, “Losses of Control,” of IMC 0609, Appendix G, the inspectors determined there was no loss of control. As a result, the finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of the Human Performance cross-cutting area because the licensee did not implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority. In particular, the work process did not include the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities.

Inspection Report# : [2014002](#) (pdf)

Mitigating Systems

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete a Transient Combustible Evaluation

An NRC identified finding of very low safety significance and an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1, “Procedures,” was identified by the inspectors when licensee personnel failed to complete a transient combustible evaluation as required by procedure EN DC 161, “Control of Combustibles.” Specifically, transient combustible materials in use for work activities associated with the Spent Fuel Pool Cooling Heat Exchangers were being stored in the Auxiliary Building 590’ corridor, a Level 1 Combustible Control Zone, without having a required transient combustible evaluation completed prior to (or during) the work. The licensee entered this issue into their Corrective Action Program (CAP) as Condition Report (CR) PLP-2013-04905, performed a Level 1 Human Performance Evaluation, and removed the materials after the work was completed.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Additionally, it was similar to the “not minor if” statement of Example 4.k in IMC 0612, Appendix E. This example stated that an issue was not minor if a credible fire scenario involving the identified transient combustibles could affect equipment important to safety. For this issue, transient combustible materials in use for work in progress were being stored in a Level 1 area where a fire could affect equipment important to safety, and a transient combustible evaluation had not been completed as required by licensee procedures. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because workers failed to validate the combustible control zone classification of the work area during the planning and preparation phase of the project, resulting in the group not obtaining a transient combustible evaluation for the work area prior to commencing work. Contributing to this was ineffective change management communication for the newest revision to EN-DC-161, which re classified many areas of the plant into different combustible control zones.

Inspection Report# : [2013005](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

The Aging Effects of the Biological Shield Wall Wetted Environment Were Not Being Managed

The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to evaluate the aging effects of the biological shield wall wetted environment. Specifically, the licensee identified seeping water from the biological shield wall on several occasions, but did not evaluate the potential aging effects on the structure concrete and rebar. This finding was entered into the licensee's CAP as CR-PLP-2013-4041 to evaluate the potential aging effects.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as having very low safety significance (Green) because it did not result in a loss of operability or functionality. Specifically, the biological shield wall wetted environment had not resulted in the loss of functionality of the structure because recent wall visual inspection had not identified indications of immediate structural flaws, such as significant cracks or spalling. The inspectors determined that this finding had a cross-cutting aspect in the CAP component of the Problem Identification and Resolution cross-cutting area because the licensee failed to consider the potential aging effects following the discovery of water seeping from the biological shield wall.

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Welding at the F East Nozzle Reinforcement Plate

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to perform adequate pre weld cleaning and control the welding process in a manner that ensured proper weld fusion of the F East nozzle reinforcement plate weld joint within the safety injection refueling water storage tank (SIRWT). Consequently, this weld failed in service causing leakage from the SIRWT. The licensee subsequently replaced the floor of the SIRWT and included instructions in the floor replacement work order that required pre weld cleaning with acetone or other approved solvents. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 03185.

The finding was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the inspectors answered "yes" to the More than Minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern"? Absent NRC identification, the failure to adequately clean aluminum prior to welding and adequately control the repair welding techniques may have been repeated during future repairs to the SIRWT and resulted in lack of fusion type weld defects/cracks returned to service. Unstable cracks could propagate and create failure of the SIRWT pressure boundary resulting in loss of inventory and increase the risk for insufficient core cooling for post Loss-of-Coolant Accident (LOCA) conditions. Therefore, this finding adversely affected the mitigating systems cornerstone attribute of equipment performance (reliability). The inspectors determined this finding was of very low safety significance (Green) based on answering "no" to the questions in Part A of Exhibit 2, "Mitigating Systems Screening Questions," in IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At Power." Specifically, the small amount of leakage from the SIRWT weld leak did not result in loss of a mitigating system function. Therefore, this finding screened as having very low safety significance (Green). This finding has a cross cutting aspect in the area of human performance for the resources component because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety was supported.

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Jun 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Corrective Action Process for Service Water Leaks

A finding of very low safety significance with an associated non-cited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed for the failure to adhere to the requirements of the site's corrective action process. Specifically, the station failed to complete corrective actions to address cavitation induced erosion of service water system components, which resulted in additional through wall leaks and other adverse conditions in that safety related system. Since 1993, this phenomenon caused several through wall leaks and the failure of a valve, which isolated normal service water flow to a component cooling water heat exchanger. Corrective actions to replace valves susceptible to this type of erosion were not implemented, and actions to utilize more effective non destructive examination (NDE) techniques to assess piping or development of pre emptive repair/replacement strategies were not performed, resulting in further leaks from the service water system. The current corrective action process procedure, EN LI 102, states that corrective actions are determined, implemented, and adequate to resolve conditions. The licensee entered the issue in their corrective action program (CAP) as CR PLP 2013 05813.

The issue was determined to be greater than minor in accordance with IMC 0609 Appendix B, "Issue Screening," issue date September 7, 2012, because it adversely affected the equipment performance attribute of the mitigating systems cornerstone whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, a through wall leak can challenge the integrity of the piping and system function. The inspectors concluded the finding was of very low safety significance (Green) utilizing IMC 0609, "Significance Determination Process," issue date June 2, 2011. Specifically, in Attachment 4, issue date June 19, 2012, utilizing Exhibit 2 of Appendix A, all questions in Section A were answered 'no' since the leaks did not result in a loss of safety function. The finding had an associated cross cutting aspect in the area of problem identification and resolution for the operating experience component. Specifically, the licensee did not implement and institutionalize operating experience through changes to station processes and procedures.

Inspection Report# : [2013003](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedures During Reactor Vessel Head Lift

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to follow maintenance procedure RFL R 16, "Reactor Vessel Closure Head Installation." Specifically, during the reactor vessel head lift on March 5, 2014, to support reinstallation onto the vessel flange, workers failed to identify an interference with the reactor head lift structure, causing the head to impact a jack screw on the structure and increasing the total load weight to approximately 283,000 pounds, which was greater than the procedural maximum polar crane load rating of 270,000 pounds. The licensee entered this issue into their CAP as CR-PLP-2014-01903, Reactor Head Flange Contacted Jacking Screw While Raising it Off the Head Stand. As part of their corrective actions, the licensee conducted a Level 1 Human Performance Evaluation, generated a site wide Human Performance error communication, and performed work crew stand downs to discuss crane and rigging expectations.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Human Performance attribute of the Barrier Integrity cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Additionally, the inspectors determined that the performance deficiency could reasonably be viewed as a precursor to a significant event and that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the operability of the containment polar crane was required to be evaluated and the reactor vessel head was required to be inspected after the event occurred to verify no significant damage was caused and the maximum design limit of the crane could have been exceeded if the evolution was not stopped when it was, which increased the risk of dropping the head during the lift. The finding was screened in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, "Phase 1 Operational Checklists for both PWRs and BWRs." The finding was determined to be of very low safety significance (Green) based on not requiring a quantitative assessment after reviewing the five shutdown safety functional areas in Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours." This finding had an associated cross cutting aspect in the Challenge the Unknown (H.11) component of the Human Performance cross-cutting area. Specifically, human performance investigations identified that workers exhibited a lack of rigor when performing interference verifications prior to and during the reactor head lift, and an inadequate "stop when unsure" mentality when assessing the situation before continuing with the head lift. In addition, the workers and supervisors for this task did not understand that the load cell increase exceeded the procedural maximum value and did not inform decision makers outside of the immediate work area to validate it was safe to proceed with the evolution.

Inspection Report# : [2014002](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Radiation Exposure ALARA on CRDM 24 Repairs

A finding of very low safety significance was self revealed when workers received unplanned and unintended occupational radiation dose during a maintenance outage conducted in August 2012 due to deficiencies in the licensee's Radiological Work Planning and Work Execution Program. Specifically, the licensee failed to properly incorporate As-Low-As-Reasonably-Achievable (ALARA) strategies and insights while planning and executing Control Rod Drive Mechanism (CRDM) 24 housing work. The licensee entered this issue into their CAP as CR-PLP-2014 05812, UT [Ultrasonic Testing] Exams of the Additional CRDM Stalk Housings Has Exceeded the Dose Estimate for the RWP [Radiation Work Permit]. Corrective actions were implemented to address the outage planning and work execution issues.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Program and Process attribute of the Occupational Radiation

Safety cornerstone and adversely impacted the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Additionally, the finding was similar to the more than minor criteria in Example 6.i of IMC 0612, Appendix E, “Examples of Minor Issues.” The inspectors screened this finding in accordance with IMC 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process.” The inspectors determined that the finding did not involve: (1) a radiological overexposure; (2) a substantial potential for an overexposure; or (3) a compromised ability to assess dose. The inspectors also determined that the finding involved ALARA planning and work controls and that the licensee’s 3 year rolling collective dose average was above 135 person Rem at the time the performance deficiency occurred. However, because the work activity was a single occurrence that involved an actual dose outcome that was within the licensee’s control of less than 25 person Rem, this finding was determined to be of very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of Human Performance cross-cutting area because the licensee did not plan work activities that appropriately incorporated radiological safety.

Inspection Report# : [2014002](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

. The inspectors identified a finding of very low safety significance and two associated NCVs of TS 5.7.1 and one associated NCV of TS 5.7.2 when on three separate occasions, three separate workers unknowingly entered areas with greater than expected dose rates. Specifically, on April 10, 2012, the radiation protection (RP) staff inappropriately authorized plant personnel to enter a locked high radiation area in the Auxiliary Building Pipechase (ABP) 602' elevation that had not been appropriately radiologically characterized prior to the entry; and on April 25, 2012, and again on April 27, 2012, workers inside the containment 607' elevation staging equipment at the ‘B’ steam generator (S/G) manway inappropriately traversed high radiation areas with elevated dose rates near the ‘A’ S/G cubicle. On both occasions, workers deviated slightly from the briefed travel paths. The licensee entered this issue into their CAP as CR-PLP-2012-03229 and CR-PLP-2012-03313, and as part of their corrective actions, shared lessons learned from this issue with the RP staff to address survey adequacy and for enhanced communications with workers during pre job briefings.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. Additionally, it was similar to the “not minor if” statement of Example 6.h in IMC 0612, Appendix E. The finding was determined to be of very low safety significance because the problem was not an as low as reasonably achievable (ALARA) planning issue, there was no overexposure nor substantial potential for an overexposure, and the licensee’s ability to assess dose was not compromised. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because the licensee failed to define and clearly communicate expectations regarding procedural compliance and ensure that personnel followed procedures.

Inspection Report# : [2013005](#) (pdf)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor in Alpha 3 Area

The inspectors identified a finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1. Specifically, the licensee failed to perform air sampling as required by station procedure EN RP-122 “Alpha Monitoring.” The issue was entered in the licensee’s Corrective Action Program (CAP) as CR PLP 2013 02054. The licensee’s immediate corrective actions included performance management of the radiation protection technician and direct radiation protection supervisor oversight of the work activity.

The finding is more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not monitoring the worker intake in an Alpha Level 3 area affected the licensee’s ability to assess workers internal exposures in a timely manner, and adversely impacted the licensee’s ability to monitor, control, and limit radiation exposures (i.e., committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, “Occupational Radiation Safety Significance Determination Process,” the inspectors determined that the finding had very low safety significance (Green) because the finding did not involve: (1) as low as reasonably achievable (ALARA) planning and controls; (2) a radiological overexposure; (3) a substantial potential for an overexposure; and (4) a compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to the cross cutting aspect of problem identification and resolution in the component of corrective actions, specifically the licensee did not take appropriate corrective actions to address safety issues and adverse trends in Alpha monitoring in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2013004](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : May 30, 2014

Palisades 2Q/2014 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Insatallation of Steam Generator Nozzle Dams

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to have an adequate procedure and work order (WO) to install steam generator nozzle dams. The licensee entered this issue in their Corrective Action Program (CAP) as Condition Report (CR) PLP-2014-00770, Improper Routing of Nozzle Dam Air Supply. As part of their corrective actions, the licensee planned to revise the nozzle dam installation procedure and the WO.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Procedure Quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and was similar to the more than minor criteria in Example 5.a of IMC 0612, Appendix E, "Examples of Minor Issues." As it related to this finding, the intended design of the nozzle dam air supply system was not correctly translated into the installation procedure or the work instructions. Further, the nozzle dam air system was not properly tested prior to being placed into service. Since the plant was shutdown in Mode 6, the inspectors assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." A Phase 2 risk evaluation was required that determined the total event risk was 3.6E-8 and was therefore of very low safety significance (Green). This finding had an associated cross-cutting aspect in the Change Management (H.3) component of the Human Performance cross-cutting area. In particular, issues during the previous refueling outage led the steam generator project management team to review the configuration of the nozzle dam air system. Through this review, the licensee identified that changes to the alignment of air to the nozzle dams was required. However, due to turnover within the project management group and inadequate communications and documentation, the licensee failed to appropriately evaluate and implement those changes.

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Complete Volumetric Examinations for DM Butt Welds in Branch Connections

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.55a(g)(6)(ii)(F)(3) when licensee personnel failed to complete required baseline volumetric examinations for nine dissimilar metal (DM) butt welds in the Primary Coolant System (PCS) that were fabricated from Inconel Alloy 82/182 weld metal and were susceptible to primary water stress corrosion cracking (PWSCC). The licensee entered this issue into their CAP as CR PLP 2014 01742, NRC Question on Whether Hot and Cold Leg Branch Connection Welds are In Scope of ASME [American Society of Mechanical Engineers] Code Case (CC) N-770-1. As part of their

corrective actions, the licensee submitted a request for relief to the NRC to allow substitution of a visual and dye penetrant surface examination of these welds as an alternative to volumetric examinations. The NRC granted verbal relief on March 13, 2014, which stated the licensee could implement the proposed alternative to 10 CFR 50.55a(g)(6)(ii)(F), which included a commitment to perform enhanced leakage monitoring during the current operating cycle and perform the required volumetric examinations during the next refueling outage.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Equipment Performance (Reliability) attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors also determined that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the failure to complete volumetric examinations on the nine DM butt welded PCS branch connections fabricated with Alloy 82/182 weld metal could have allowed PWSCC susceptible material to remain in service, which could propagate and result in a Loss-of-Coolant-Accident (LOCA). The inspectors performed a Phase I Significance Determination Process screening using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 1, "Initiating Events Screening Questions." The inspectors answered the Phase I SDP "LOCA Initiators" Questions A1 and A2 'No' because undetected cracks, if present, were not yet through-wall and did not challenge the structural integrity of the welds. Therefore, this finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Evaluation (P.2) component of the Problem Identification and Resolution cross-cutting area because the licensee did not ensure that the resolution of the issue appropriately addressed causes and the extent of condition. Specifically, when determining the applicability of CC N 770 1, the licensee failed to thoroughly evaluate the scope of welds susceptible to PWSCC that required volumetric examination commensurate with the safety significance of this issue.

Inspection Report# : [2014002](#) (pdf)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Introduction of Foreign Material Into the SW System

A finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to follow procedure EN MA 118, "Foreign Material Exclusion (FME)," during work on the safety-related critical service water (SW) system during refueling outage (RFO) 1R23. Specifically, Sections 5.2[1] and 5.2[6] of EN-MA-118 stated that planners and procedure writers should evaluate FME considerations for work activities and include job specific FME controls in work instructions and procedures. Additionally, EN-MA-188 stated that during the planning stage, the planner should designate the FME Zone type, risk level, pathways to FME sensitive equipment, and work practice restrictions, as applicable, in all work packages. However, adequate controls were not established and documented when the decision was made to use an inflatable bladder inside the SW system when work was being performed on the system. As a result, on two separate occasions during RFO 1R23, bladders were inadvertently entrained into the return header of the SW system by the relative vacuum created by system flow. The licensee entered this issue into their CAP as CR PLP 2014 00715, Vacuum was So Great that Bladder was Ripped Off Lanyard and Lost in Piping, and CR PLP 2014 01176, FME Bladder Lost During Work Near CV-0823. As part of their corrective actions, the licensee successfully completed a comprehensive SW system test, which validated acceptable system parameters.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. In accordance with Checklist 3, "PWR [Pressurized Water Reactor] Cold Shutdown and Refueling Operation RCS [Reactor Coolant System] Open and Refueling Cavity Level <

23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours,” following the loss of the first bladder, and Checklist 4, “PWR Refueling Operation: RCS Level > 23' Or PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer,” following the loss of the second bladder of Attachment 1, “Phase 1 Operational Checklists for both PWRs and BWRs [Boiling Water Reactors],” of IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process,” the inspectors determined that mitigation capabilities were not adversely impacted. Additionally, utilizing Table 1, “Losses of Control,” of IMC 0609, Appendix G, the inspectors determined there was no loss of control. As a result, the finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of the Human Performance cross-cutting area because the licensee did not implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority. In particular, the work process did not include the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities.

Inspection Report# : [2014002](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: FIN Finding

Written NRC Biennial Written Examinations Did Not meet Qualitative Standards

The inspectors identified a finding of very low safety significance associated with 10 CFR 55.59, "Requalification," based on a determination that greater than 20 percent of the biennial requalification written exam questions administered to licensed operators during weeks three and five of the 2012 examination cycle were flawed. The licensee entered this issue into their Corrective Action Program (CAP) as CR PNP 2014 02521, Written Exam Quality, dated April 10, 2014.

The inspectors determined that the finding was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the finding adversely affected the quality and level of difficulty of biennial written exams, which potentially impacted Palisades' ability to appropriately evaluate licensed operators. The risk importance of this issue was evaluated using

IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)." The inspectors considered the number of written exam questions that did not meet the qualitative standard for written exam questions. The qualitative standards used by the inspectors are defined in NUREG 1021, Revision 9, ES 602, Attachment 1, "Guidelines for Developing Open Reference Examinations," and Appendix B, "Written Examination Guidelines." Because more than 30 percent of the questions reviewed did not satisfy the guidance, Block 4 of Appendix I applied. Based on the screening criteria, the finding was characterized by the SDP as having very low safety significance (Green) because greater than 20 percent, but less than 40 percent, of the reviewed written exam questions were flawed. A review of the cross cutting aspects was performed and no associated cross cutting aspect was identified.

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Long-Term Scaffolds in Accordance with Procedures

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to adequately implement procedure EN MA 133, "Control of Scaffolding." Specifically, multiple examples were identified of scaffolds installed in the plant for greater than 90 days that had not undergone process applicability determinations, were not appropriately documented in the scaffold control log, and/or did not contain proper tags. The licensee documented the issue in their CAP as CR PLP 2014 2646, Two Scaffolds Near Safety Related Equipment Not Being Controlled as Long-Term, dated April 17, 2014; conducted an extent of condition review of the entire scaffold log and identified additional discrepancies; completed the required process applicability determinations; and re inspected scaffolds that had been categorized as long term.

The inspectors determined that the performance deficiency was more than minor because it was similar to Example 4.a) of IMC 0612, Appendix E, "Examples of Minor Issues." This example described an engineering evaluation that was not performed for scaffolding erected near safety related equipment and stated that it would be a more than minor issue if the licensee routinely failed to perform the engineering evaluations. For this specific finding, there were multiple examples of process applicability determinations not being performed within the procedurally required timeframe. The finding was determined to be of very low safety significance (Green) because it did not affect the operability/functionality of structures, systems and components (SSCs) and all required safety functions were maintained. This finding was associated with the cross cutting aspect of Teamwork in the Human Performance area. Specifically, licensee and supplemental individuals and work groups did not sufficiently communicate and coordinate work activities associated with maintaining the scaffold control log or documentation related to scaffolding installed in the plant. The workers also did not understand how to account for time during refueling and forced outages when determining the long term status of scaffolds, which could have been resolved with input from other work groups

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete a Transient Combustible Evaluation

An NRC identified finding of very low safety significance and an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to complete a transient combustible evaluation as required by procedure EN DC 161, "Control of Combustibles." Specifically, transient combustible materials in use for work activities associated with the Spent Fuel Pool Cooling Heat Exchangers were being stored in the Auxiliary Building 590' corridor, a Level 1 Combustible Control Zone, without having a required transient combustible evaluation completed prior to (or during) the work. The licensee entered this issue into their Corrective Action Program (CAP) as Condition Report (CR) PLP-2013-04905, performed a Level 1 Human Performance Evaluation, and removed the materials after the work was completed.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Additionally, it was similar to the "not minor if" statement of Example 4.k in IMC 0612, Appendix E. This example stated that an issue was not minor if a credible fire scenario involving the identified transient combustibles could affect equipment important to safety. For this issue, transient combustible materials in use for work in progress were being stored in a Level 1 area where a fire could affect equipment important to safety, and a transient combustible evaluation had

not been completed as required by licensee procedures. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because workers failed to validate the combustible control zone classification of the work area during the planning and preparation phase of the project, resulting in the group not obtaining a transient combustible evaluation for the work area prior to commencing work. Contributing to this was ineffective change management communication for the newest revision to EN-DC-161, which re classified many areas of the plant into different combustible control zones.

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

The Aging Effects of the Biological Shield Wall Wetted Environment Were Not Being Managed

The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” when licensee personnel failed to evaluate the aging effects of the biological shield wall wetted environment. Specifically, the licensee identified seeping water from the biological shield wall on several occasions, but did not evaluate the potential aging effects on the structure concrete and rebar. This finding was entered into the licensee’s CAP as CR-PLP-2013-4041 to evaluate the potential aging effects.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as having very low safety significance (Green) because it did not result in a loss of operability or functionality. Specifically, the biological shield wall wetted environment had not resulted in the loss of functionality of the structure because recent wall visual inspection had not identified indications of immediate structural flaws, such as significant cracks or spalling. The inspectors determined that this finding had a cross-cutting aspect in the CAP component of the Problem Identification and Resolution cross-cutting area because the licensee failed to consider the potential aging effects following the discovery of water seeping from the biological shield wall.

Inspection Report# : [2013005](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedures During Reactor Vessel Head Lift

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self-revealed when licensee personnel failed to follow maintenance procedure RFL R 16, “Reactor Vessel Closure Head Installation.” Specifically, during the reactor vessel head lift on March 5, 2014, to support reinstallation onto the vessel flange, workers failed to identify an interference with the reactor head lift structure, causing the head to impact a jack screw on the structure and increasing the total load weight to approximately 283,000 pounds, which was greater than the procedural maximum polar crane load rating of 270,000 pounds. The licensee entered this issue into their CAP as CR-PLP-2014-01903, Reactor Head Flange Contacted Jacking Screw While Raising it Off the Head Stand. As part of their corrective actions, the licensee conducted a Level 1 Human Performance Evaluation, generated a site wide Human Performance error communication, and performed work crew stand downs to discuss crane and rigging expectations.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Human Performance attribute of the Barrier Integrity cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Additionally, the inspectors determined that the performance deficiency could reasonably be viewed as a precursor to a significant event and that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the operability of the containment polar crane was required to be evaluated and the reactor vessel head was required to be inspected after the event occurred to verify no significant damage was caused and the maximum design limit of the crane could have been exceeded if the evolution was not stopped when it was, which increased the risk of dropping the head during the lift. The finding was screened in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, "Phase 1 Operational Checklists for both PWRs and BWRs." The finding was determined to be of very low safety significance (Green) based on not requiring a quantitative assessment after reviewing the five shutdown safety functional areas in Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling <2 hours." This finding had an associated cross cutting aspect in the Challenge the Unknown (H.11) component of the Human Performance cross-cutting area. Specifically, human performance investigations identified that workers exhibited a lack of rigor when performing interference verifications prior to and during the reactor head lift, and an inadequate "stop when unsure" mentality when assessing the situation before continuing with the head lift. In addition, the workers and supervisors for this task did not understand that the load cell increase exceeded the procedural maximum value and did not inform decision makers outside of the immediate work area to validate it was safe to proceed with the evolution.

Inspection Report# : [2014002](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 for the failure to maintain a sealed source inventory and perform leak tests required by station procedures. The inspectors identified multiple discrepancies with the records that were required to be maintained to demonstrate that sealed sources stored onsite were known by the radiation protection organization, the storage locations of the sealed sources were identified, and that select sources were leak tested to prevent the spread of radioactive contamination. This issue was entered into the licensee's CAP as CR PLP 2014 02715, Issue with Control of Sources, dated April 22, 2014.

The inspectors determined that the failure to maintain an inventory of sources onsite and leak test sources was a finding of more than minor significance because, if left uncorrected, the performance deficiency had the potential to

lead to a more significant safety concern. Specifically, the failure to ensure that the sources were free of external contamination could spread radioactive contamination, including alpha contamination, that was not readily detectable by personnel monitoring equipment, and could result in increased exposure to radiation. The finding was assessed using the Occupational Radiation Safety SDP and was determined to be of very low safety significance (Green) because the problem was not as low as reasonably achievable (ALARA) planning issue; there was no overexposure, nor a substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Self Assessment in the Problem Identification and Resolution area. Specifically, the licensee did not conduct a self critical and objective assessment of the program and practice

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for unauthorized entries into high radiation areas (HRAs). Specifically, on January 30, 2014, a worker replacing lights in lower containment received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On February 14, 2014, a worker entered the West Engineered Safeguards Room and received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On both occasions, workers changed the work plans after discussing the work plans with radiation protection staff.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Conservative Bias in the Human Performance area. Specifically, both workers decided to change the work plans after discussing the work plans with radiation protection staff and did not stop to consider whether the new work activity or location was safe

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entries into High Radiation Areas without Required Dosimetry

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for entry into HRAs without a required monitoring device. On two separate occasions, two separate workers entered HRAs without the required dosimetry. Specifically, on February 11, 2014, a worker entered the 607' elevation of containment and entered areas with dose rates of 320 millirem (mR)/hour. The licensee's investigation determined that the worker left the required electronic alarming dosimeter (EAD) in the dress out area. Another worker found the EAD in the dress out area and notified radiation protection staff, who located and escorted the individual from containment. On February 22, 2014, a worker entered the West Engineered Safeguards Room with dose rates of 150 mR/hour. The licensee's investigation determined that the worker left the required EAD in the dress

out area. The individual identified the missing EAD when undressing to leave the room.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into HRAs without alarming direct reading dosimetry placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Avoid Complacency in the Human Performance area. Specifically, the workers did not recognize and plan for possible mistakes and did not implement appropriate error reduction tools, such as self check, to ensure they were prepared to enter the HRA
Inspection Report# : [2014003](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Radiation Exposure ALARA on CRDM 24 Repairs

A finding of very low safety significance was self revealed when workers received unplanned and unintended occupational radiation dose during a maintenance outage conducted in August 2012 due to deficiencies in the licensee's Radiological Work Planning and Work Execution Program. Specifically, the licensee failed to properly incorporate As-Low-As-Reasonably-Achievable (ALARA) strategies and insights while planning and executing Control Rod Drive Mechanism (CRDM) 24 housing work. The licensee entered this issue into their CAP as CR-PLP-2014 05812, UT [Ultrasonic Testing] Exams of the Additional CRDM Stalk Housings Has Exceeded the Dose Estimate for the RWP [Radiation Work Permit]. Corrective actions were implemented to address the outage planning and work execution issues.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely impacted the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Additionally, the finding was similar to the more than minor criteria in Example 6.i of IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors screened this finding in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process." The inspectors determined that the finding did not involve: (1) a radiological overexposure; (2) a substantial potential for an overexposure; or (3) a compromised ability to assess dose. The inspectors also determined that the finding involved ALARA planning and work controls and that the licensee's 3 year rolling collective dose average was above 135 person Rem at the time the performance deficiency occurred. However, because the work activity was a single occurrence that involved an actual dose outcome that was within the licensee's control of less than 25 person Rem, this finding was determined to be of very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of Human Performance cross-cutting area because the licensee did not plan work activities that appropriately incorporated radiological safety.

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

. The inspectors identified a finding of very low safety significance and two associated NCVs of TS 5.7.1 and one

associated NCV of TS 5.7.2 when on three separate occasions, three separate workers unknowingly entered areas with greater than expected dose rates. Specifically, on April 10, 2012, the radiation protection (RP) staff inappropriately authorized plant personnel to enter a locked high radiation area in the Auxiliary Building Pipechase (ABP) 602' elevation that had not been appropriately radiologically characterized prior to the entry; and on April 25, 2012, and again on April 27, 2012, workers inside the containment 607' elevation staging equipment at the 'B' steam generator (S/G) manway inappropriately traversed high radiation areas with elevated dose rates near the 'A' S/G cubicle. On both occasions, workers deviated slightly from the briefed travel paths. The licensee entered this issue into their CAP as CR-PLP-2012-03229 and CR-PLP-2012-03313, and as part of their corrective actions, shared lessons learned from this issue with the RP staff to address survey adequacy and for enhanced communications with workers during pre job briefings.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. Additionally, it was similar to the "not minor if" statement of Example 6.h in IMC 0612, Appendix E. The finding was determined to be of very low safety significance because the problem was not an as low as reasonably achievable (ALARA) planning issue, there was no overexposure nor substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because the licensee failed to define and clearly communicate expectations regarding procedural compliance and ensure that personnel followed procedures.

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Monitor in Alpha 3 Area

The inspectors identified a finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1. Specifically, the licensee failed to perform air sampling as required by station procedure EN RP-122 "Alpha Monitoring." The issue was entered in the licensee's Corrective Action Program (CAP) as CR PLP 2013 02054. The licensee's immediate corrective actions included performance management of the radiation protection technician and direct radiation protection supervisor oversight of the work activity.

The finding is more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, not monitoring the worker intake in an Alpha Level 3 area affected the licensee's ability to assess workers internal exposures in a timely manner, and adversely impacted the licensee's ability to monitor, control, and limit radiation exposures (i.e., committed effective dose equivalent or internal dose). In accordance with IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding did not involve: (1) as low as reasonably achievable (ALARA) planning and controls; (2) a radiological overexposure; (3) a substantial potential for an overexposure; and (4) a compromised ability to assess dose. The inspectors determined that the primary cause of this finding was related to the cross cutting aspect of problem identification and resolution in the component of corrective actions, specifically the licensee did not take appropriate corrective actions to address safety issues and adverse trends in Alpha monitoring in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2013004](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Exam Security Issues

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 55.49, "Integrity of Examinations and Tests," which stated, "Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part." Specifically, Palisades placed personnel in the simulator operating booth that were not identified in the security agreement, placed the scenario turnover sheet for a second scenario in the simulator during the first scenario, and left a job performance measure turnover sheet in the simulator after the applicant left the simulator and brought the next applicant into the simulator. This issue was entered into the licensee's CAP as CR PLP 2014 02533, Issues Were Identified During the Annual Exam Administered on April 10, 2014, dated April 10, 2014.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to become a more significant safety concern. Specifically, the failure to properly control operational examination material in a manner in which applicants were not prematurely exposed to the material provided opportunities to compromise the examination. The finding was screened as one of very low safety significance (Green) in accordance with IMC 0609, Appendix I, "Licensed Operator Requalification SDP." This finding was associated with the cross cutting aspect of Procedure Adherence in the Human Performance area (H.8).

Inspection Report# : [2014003](#) (*pdf*)

Significance: N/A Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Notify the NRC Within 30 Days of Discovering Changes in Medical Conditions

A Severity Level IV non-cited violation of 10 CFR 50.74, "Notification of Change in Operator or Senior Operator Status," was identified by the inspectors during a review of licensed operator medical records. Specifically, Palisades did not notify the NRC within 30 days of discovering a change in medical condition for a licensed operator.

Subsequently, the licensee submitted the required notification for the operator on

April 11, 2014, and entered the issue into their CAP as CR PLP 2014 02518, NRC Informed the Palisades Training

Department that an NRC Form 396 was Not Submitted, dated April 10, 2014.

The inspectors determined that Traditional Enforcement applied because a failure to make a required report impacted the regulatory process. Specifically, the licensee had not notified the NRC within 30 days of learning of a change in medical condition for a licensed operator for which a license condition was required. Based on Example 6.9.d.1 of the NRC's Enforcement Policy, the inspectors determined that the issue represented a Severity Level IV violation. No associated Reactor Oversight Process finding was identified, thus there was no associated cross-cutting aspect.

Inspection Report# : [2014003](#) (*pdf*)

Last modified : August 29, 2014

Palisades

3Q/2014 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Protection against High Winds

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 when licensee personnel failed to maintain and implement an adequate procedure covering Acts of Nature. Specifically, the licensee's interpretation of Abnormal Operating Procedure (AOP)–38 entry conditions resulted in a decision not to enter the procedure despite available information indicating the presence of high wind conditions in the vicinity of the plant. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2014 04155, NRC Questioned Entry into AOP 38, dated August 20, 2014. Planned corrective actions include a procedure revision to clarify the procedure entry conditions.

The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the preparatory actions prescribed by AOP 38 were directly related to the Initiating Events Cornerstone objective and inconsistent application of those actions in advance of high wind conditions increased the likelihood of debris induced initiating events. In accordance with IMC 0609, Appendix A, Exhibit 1, "Initiating Events Screening Questions," Section B, "Transient Initiators," because the finding did not result in a reactor trip or the loss of mitigating equipment, it was determined to be of very low safety significance. This finding was associated with a cross cutting aspect of Training in the Human Performance cross cutting area. Specifically, the licensee's interpretation of procedure AOP 38 entry conditions was a result of the training provided to operators.

Inspection Report# : [2014004](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Insatallation of Steam Generator Nozzle Dams

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to have an adequate procedure and work order (WO) to install steam generator nozzle dams. The licensee entered this issue in their Corrective Action Program (CAP) as Condition Report (CR) PLP-2014-00770, Improper Routing of Nozzle Dam Air Supply. As part of their corrective actions, the licensee planned to revise the nozzle dam installation procedure and the WO.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Procedure Quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and was

similar to the more than minor criteria in Example 5.a of IMC 0612, Appendix E, “Examples of Minor Issues.” As it related to this finding, the intended design of the nozzle dam air supply system was not correctly translated into the installation procedure or the work instructions. Further, the nozzle dam air system was not properly tested prior to being placed into service. Since the plant was shutdown in Mode 6, the inspectors assessed the risk significance of the event in accordance with IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process.” A Phase 2 risk evaluation was required that determined the total event risk was $3.6E-8$ and was therefore of very low safety significance (Green). This finding had an associated cross-cutting aspect in the Change Management (H.3) component of the Human Performance cross-cutting area. In particular, issues during the previous refueling outage led the steam generator project management team to review the configuration of the nozzle dam air system. Through this review, the licensee identified that changes to the alignment of air to the nozzle dams was required. However, due to turnover within the project management group and inadequate communications and documentation, the licensee failed to appropriately evaluate and implement those changes.

Inspection Report# : [2014002](#) (pdf)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Complete Volumetric Examinations for DM Butt Welds in Branch Connections

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.55a(g)(6)(ii)(F)(3) when licensee personnel failed to complete required baseline volumetric examinations for nine dissimilar metal (DM) butt welds in the Primary Coolant System (PCS) that were fabricated from Inconel Alloy 82/182 weld metal and were susceptible to primary water stress corrosion cracking (PWSCC). The licensee entered this issue into their CAP as CR PLP 2014 01742, NRC Question on Whether Hot and Cold Leg Branch Connection Welds are In Scope of ASME [American Society of Mechanical Engineers] Code Case (CC) N-770-1. As part of their corrective actions, the licensee submitted a request for relief to the NRC to allow substitution of a visual and dye penetrant surface examination of these welds as an alternative to volumetric examinations. The NRC granted verbal relief on March 13, 2014, which stated the licensee could implement the proposed alternative to 10 CFR 50.55a(g)(6)(ii)(F), which included a commitment to perform enhanced leakage monitoring during the current operating cycle and perform the required volumetric examinations during the next refueling outage.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because the finding was associated with the Equipment Performance (Reliability) attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors also determined that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the failure to complete volumetric examinations on the nine DM butt welded PCS branch connections fabricated with Alloy 82/182 weld metal could have allowed PWSCC susceptible material to remain in service, which could propagate and result in a Loss-of-Coolant-Accident (LOCA). The inspectors performed a Phase I Significance Determination Process screening using IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 1, “Initiating Events Screening Questions.” The inspectors answered the Phase I SDP “LOCA Initiators” Questions A1 and A2 ‘No’ because undetected cracks, if present, were not yet through-wall and did not challenge the structural integrity of the welds. Therefore, this finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Evaluation (P.2) component of the Problem Identification and Resolution cross-cutting area because the licensee did not ensure that the resolution of the issue appropriately addressed causes and the extent of condition. Specifically, when determining the applicability of CC N 770 1, the licensee failed to thoroughly evaluate the scope of welds susceptible to PWSCC that required volumetric examination commensurate with the safety significance of this issue.

Inspection Report# : [2014002](#) (pdf)**Significance:**  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Introduction of Foreign Material Into the SW System

A finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to follow procedure EN MA 118, "Foreign Material Exclusion (FME)," during work on the safety-related critical service water (SW) system during refueling outage (RFO) 1R23. Specifically, Sections 5.2[1] and 5.2[6] of EN-MA-118 stated that planners and procedure writers should evaluate FME considerations for work activities and include job specific FME controls in work instructions and procedures. Additionally, EN-MA-188 stated that during the planning stage, the planner should designate the FME Zone type, risk level, pathways to FME sensitive equipment, and work practice restrictions, as applicable, in all work packages. However, adequate controls were not established and documented when the decision was made to use an inflatable bladder inside the SW system when work was being performed on the system. As a result, on two separate occasions during RFO 1R23, bladders were inadvertently entrained into the return header of the SW system by the relative vacuum created by system flow. The licensee entered this issue into their CAP as CR PLP 2014 00715, Vacuum was So Great that Bladder was Ripped Off Lanyard and Lost in Piping, and CR PLP 2014 01176, FME Bladder Lost During Work Near CV-0823. As part of their corrective actions, the licensee successfully completed a comprehensive SW system test, which validated acceptable system parameters.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. In accordance with Checklist 3, "PWR [Pressurized Water Reactor] Cold Shutdown and Refueling Operation RCS [Reactor Coolant System] Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours," following the loss of the first bladder, and Checklist 4, "PWR Refueling Operation: RCS Level > 23' Or PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer," following the loss of the second bladder of Attachment 1, "Phase 1 Operational Checklists for both PWRs and BWRs [Boiling Water Reactors]," of IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," the inspectors determined that mitigation capabilities were not adversely impacted. Additionally, utilizing Table 1, "Losses of Control," of IMC 0609, Appendix G, the inspectors determined there was no loss of control. As a result, the finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of the Human Performance cross-cutting area because the licensee did not implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority. In particular, the work process did not include the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities.

Inspection Report# : [2014002](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: FIN Finding

Written NRC Biennial Written Examinations Did Not meet Qualitative Standards

The inspectors identified a finding of very low safety significance associated with 10 CFR 55.59, "Requalification," based on a determination that greater than 20 percent of the biennial requalification written exam questions administered to licensed operators during weeks three and five of the 2012 examination cycle were flawed. The licensee entered this issue into their Corrective Action Program (CAP) as CR PNP 2014 02521, Written Exam Quality, dated April 10, 2014.

The inspectors determined that the finding was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the finding adversely affected the quality and level of difficulty of biennial written exams, which potentially impacted Palisades' ability to appropriately evaluate licensed operators. The risk importance of this issue was evaluated using IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)." The inspectors considered the number of written exam questions that did not meet the qualitative standard for written exam questions. The qualitative standards used by the inspectors are defined in NUREG 1021, Revision 9, ES 602, Attachment 1, "Guidelines for Developing Open Reference Examinations," and Appendix B, "Written Examination Guidelines." Because more than 30 percent of the questions reviewed did not satisfy the guidance, Block 4 of Appendix I applied. Based on the screening criteria, the finding was characterized by the SDP as having very low safety significance (Green) because greater than 20 percent, but less than 40 percent, of the reviewed written exam questions were flawed. A review of the cross cutting aspects was performed and no associated cross cutting aspect was identified.

Inspection Report# : [2014003](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Long-Term Scaffolds in Accordance with Procedures

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to adequately implement procedure EN MA 133, "Control of Scaffolding." Specifically, multiple examples were identified of scaffolds installed in the plant for greater than 90 days that had not undergone process applicability determinations, were not appropriately documented in the scaffold control log, and/or did not contain proper tags. The licensee documented the issue in their CAP as CR PLP 2014 2646, Two Scaffolds Near Safety Related Equipment Not Being Controlled as Long-Term, dated April 17, 2014; conducted an extent of condition review of the entire scaffold log and identified additional discrepancies; completed the required process applicability determinations; and re inspected scaffolds that had been categorized as long term.

The inspectors determined that the performance deficiency was more than minor because it was similar to Example 4.a) of IMC 0612, Appendix E, "Examples of Minor Issues." This example described an engineering evaluation that was not performed for scaffolding erected near safety related equipment and stated that it would be a more than minor issue if the licensee routinely failed to perform the engineering evaluations. For this specific finding, there were multiple examples of process applicability determinations not being performed within the procedurally required timeframe. The finding was determined to be of very low safety significance (Green) because it did not affect the operability/functionality of structures, systems and components (SSCs) and all required safety functions were maintained. This finding was associated with the cross cutting aspect of Teamwork in the Human Performance area. Specifically, licensee and supplemental individuals and work groups did not sufficiently communicate and coordinate work activities associated with maintaining the scaffold control log or documentation related to scaffolding installed in the plant. The workers also did not understand how to account for time during refueling and forced outages when determining the long term status of scaffolds, which could have been resolved with input from other work groups

Inspection Report# : [2014003](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete a Transient Combustible Evaluation

An NRC identified finding of very low safety significance and an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to complete a transient combustible evaluation as required by procedure EN DC 161, "Control of Combustibles." Specifically, transient combustible materials in use for work activities associated with the Spent Fuel Pool Cooling Heat Exchangers were being stored in the Auxiliary Building 590' corridor, a Level 1 Combustible Control Zone, without having a required transient combustible evaluation completed prior to (or during) the work. The licensee entered this issue into their Corrective Action Program (CAP) as Condition Report (CR) PLP-2013-04905, performed a Level 1 Human Performance Evaluation, and removed the materials after the work was completed.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Additionally, it was similar to the "not minor if" statement of Example 4.k in IMC 0612, Appendix E. This example stated that an issue was not minor if a credible fire scenario involving the identified transient combustibles could affect equipment important to safety. For this issue, transient combustible materials in use for work in progress were being stored in a Level 1 area where a fire could affect equipment important to safety, and a transient combustible evaluation had not been completed as required by licensee procedures. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because workers failed to validate the combustible control zone classification of the work area during the planning and preparation phase of the project, resulting in the group not obtaining a transient combustible evaluation for the work area prior to commencing work. Contributing to this was ineffective change management communication for the newest revision to EN-DC-161, which re classified many areas of the plant into different combustible control zones.

Inspection Report# : [2013005](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

The Aging Effects of the Biological Shield Wall Wetted Environment Were Not Being Managed

The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to evaluate the aging effects of the biological shield wall wetted environment. Specifically, the licensee identified seeping water from the biological shield wall on several occasions, but did not evaluate the potential aging effects on the structure concrete and rebar. This finding was entered into the licensee's CAP as CR-PLP-2013-4041 to evaluate the potential aging effects.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding screened as having very low safety significance (Green) because it did not result in a loss of operability or functionality. Specifically, the biological shield wall wetted environment had not resulted in the loss of functionality of the structure because recent wall visual inspection had not

identified indications of immediate structural flaws, such as significant cracks or spalling. The inspectors determined that this finding had a cross-cutting aspect in the CAP component of the Problem Identification and Resolution cross-cutting area because the licensee failed to consider the potential aging effects following the discovery of water seeping from the biological shield wall.

Inspection Report# : [2013005](#) (*pdf*)

Barrier Integrity

Significance:  Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Spent Fuel Pool Region II Criticality Analysis

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to follow procedure EN OP 104, "Operability Determination Process." Specifically, Operability Evaluation CR PLP 2013 04775 failed to include adequate technical information to support the basis for the reasonable expectation of operability, as required by Step 5.5.c of EN OP 104. On March 25, 2014, the licensee entered the NRC questions into the CAP as Assignments 6 and 7 of CR PLP 2013 04775, Issues Identified with Region II of SFP Criticality Analysis, with an initial due date of

April 8, 2014. Both Assignments 6 and 7 were ultimately closed in late April to a new Assignment 9, which was created to complete a revised Operability Evaluation. The licensee determined that contracted technical support was necessary to adequately evaluate the NRC concerns. At the end of the inspection period, the contracted evaluation effort was ongoing. Planned corrective actions included documenting the conclusions of the ongoing evaluation in a revised Operability Evaluation for CR PLP 2013 04775.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Configuration Control attribute of the Barrier Integrity Cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the Spent Fuel Pool (SFP) criticality analysis relied on certain physical conditions to maintain the effective neutron multiplication factor below 1.0, but actual physical conditions were not completely bounded by the existing criticality analysis. Because the inspectors answered 'No' to all of the SFP questions in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance. This finding was associated with a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area. Specifically, the licensee failed to collect and implement relevant external operating experience.

Inspection Report# : [2014004](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedures During Reactor Vessel Head Lift

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to follow maintenance procedure RFL R 16, "Reactor Vessel Closure Head Installation." Specifically, during the reactor vessel head lift on March 5, 2014, to support reinstallation onto the vessel flange, workers failed to identify an interference with the reactor head lift structure, causing the head to impact a jack screw on the structure and increasing the total load weight

to approximately 283,000 pounds, which was greater than the procedural maximum polar crane load rating of 270,000 pounds. The licensee entered this issue into their CAP as CR-PLP-2014-01903, Reactor Head Flange Contacted Jacking Screw While Raising it Off the Head Stand. As part of their corrective actions, the licensee conducted a Level 1 Human Performance Evaluation, generated a site wide Human Performance error communication, and performed work crew stand downs to discuss crane and rigging expectations.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Human Performance attribute of the Barrier Integrity cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Additionally, the inspectors determined that the performance deficiency could reasonably be viewed as a precursor to a significant event and that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the operability of the containment polar crane was required to be evaluated and the reactor vessel head was required to be inspected after the event occurred to verify no significant damage was caused and the maximum design limit of the crane could have been exceeded if the evolution was not stopped when it was, which increased the risk of dropping the head during the lift. The finding was screened in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, "Phase 1 Operational Checklists for both PWRs and BWRs." The finding was determined to be of very low safety significance (Green) based on not requiring a quantitative assessment after reviewing the five shutdown safety functional areas in Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling <2 hours." This finding had an associated cross cutting aspect in the Challenge the Unknown (H.11) component of the Human Performance cross-cutting area. Specifically, human performance investigations identified that workers exhibited a lack of rigor when performing interference verifications prior to and during the reactor head lift, and an inadequate "stop when unsure" mentality when assessing the situation before continuing with the head lift. In addition, the workers and supervisors for this task did not understand that the load cell increase exceeded the procedural maximum value and did not inform decision makers outside of the immediate work area to validate it was safe to proceed with the evolution.

Inspection Report# : [2014002](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 for the failure to maintain a sealed source inventory and perform leak tests required by station procedures. The inspectors identified multiple discrepancies with the records that were required to be maintained to demonstrate that sealed sources stored onsite were known by the radiation protection organization, the storage locations of the sealed sources were identified, and that select sources were leak tested to prevent the spread of

radioactive contamination. This issue was entered into the licensee's CAP as CR PLP 2014 02715, Issue with Control of Sources, dated April 22, 2014.

The inspectors determined that the failure to maintain an inventory of sources onsite and leak test sources was a finding of more than minor significance because, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the failure to ensure that the sources were free of external contamination could spread radioactive contamination, including alpha contamination, that was not readily detectable by personnel monitoring equipment, and could result in increased exposure to radiation. The finding was assessed using the Occupational Radiation Safety SDP and was determined to be of very low safety significance (Green) because the problem was not as low as reasonably achievable (ALARA) planning issue; there was no overexposure, nor a substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Self Assessment in the Problem Identification and Resolution area. Specifically, the licensee did not conduct a self critical and objective assessment of the program and practice

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for unauthorized entries into high radiation areas (HRAs). Specifically, on January 30, 2014, a worker replacing lights in lower containment received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On February 14, 2014, a worker entered the West Engineered Safeguards Room and received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On both occasions, workers changed the work plans after discussing the work plans with radiation protection staff.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Conservative Bias in the Human Performance area. Specifically, both workers decided to change the work plans after discussing the work plans with radiation protection staff and did not stop to consider whether the new work activity or location was safe

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entries into High Radiation Areas without Required Dosimetry

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for entry into HRAs without a required monitoring device. On two separate occasions, two separate workers entered HRAs without the required dosimetry. Specifically, on February 11, 2014, a worker entered the 607'

elevation of containment and entered areas with dose rates of 320 millirem (mR)/hour. The licensee's investigation determined that the worker left the required electronic alarming dosimeter (EAD) in the dress out area. Another worker found the EAD in the dress out area and notified radiation protection staff, who located and escorted the individual from containment. On February 22, 2014, a worker entered the West Engineered Safeguards Room with dose rates of 150 mR/hour. The licensee's investigation determined that the worker left the required EAD in the dress out area. The individual identified the missing EAD when undressing to leave the room.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into HRAs without alarming direct reading dosimetry placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Avoid Complacency in the Human Performance area. Specifically, the workers did not recognize and plan for possible mistakes and did not implement appropriate error reduction tools, such as self check, to ensure they were prepared to enter the HRA
Inspection Report# : [2014003](#) (pdf)

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Radiation Exposure ALARA on CRDM 24 Repairs

A finding of very low safety significance was self revealed when workers received unplanned and unintended occupational radiation dose during a maintenance outage conducted in August 2012 due to deficiencies in the licensee's Radiological Work Planning and Work Execution Program. Specifically, the licensee failed to properly incorporate As-Low-As-Reasonably-Achievable (ALARA) strategies and insights while planning and executing Control Rod Drive Mechanism (CRDM) 24 housing work. The licensee entered this issue into their CAP as CR-PLP-2014 05812, UT [Ultrasonic Testing] Exams of the Additional CRDM Stalk Housings Has Exceeded the Dose Estimate for the RWP [Radiation Work Permit]. Corrective actions were implemented to address the outage planning and work execution issues.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely impacted the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Additionally, the finding was similar to the more than minor criteria in Example 6.i of IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors screened this finding in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process." The inspectors determined that the finding did not involve: (1) a radiological overexposure; (2) a substantial potential for an overexposure; or (3) a compromised ability to assess dose. The inspectors also determined that the finding involved ALARA planning and work controls and that the licensee's 3 year rolling collective dose average was above 135 person Rem at the time the performance deficiency occurred. However, because the work activity was a single occurrence that involved an actual dose outcome that was within the licensee's control of less than 25 person Rem, this finding was determined to be of very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of Human Performance cross-cutting area because the licensee did not plan work activities that appropriately incorporated radiological safety.

Inspection Report# : [2014002](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

. The inspectors identified a finding of very low safety significance and two associated NCVs of TS 5.7.1 and one associated NCV of TS 5.7.2 when on three separate occasions, three separate workers unknowingly entered areas with greater than expected dose rates. Specifically, on April 10, 2012, the radiation protection (RP) staff inappropriately authorized plant personnel to enter a locked high radiation area in the Auxiliary Building Pipechase (ABP) 602' elevation that had not been appropriately radiologically characterized prior to the entry; and on April 25, 2012, and again on April 27, 2012, workers inside the containment 607' elevation staging equipment at the 'B' steam generator (S/G) manway inappropriately traversed high radiation areas with elevated dose rates near the 'A' S/G cubicle. On both occasions, workers deviated slightly from the briefed travel paths. The licensee entered this issue into their CAP as CR-PLP-2012-03229 and CR-PLP-2012-03313, and as part of their corrective actions, shared lessons learned from this issue with the RP staff to address survey adequacy and for enhanced communications with workers during pre job briefings.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. Additionally, it was similar to the "not minor if" statement of Example 6.h in IMC 0612, Appendix E. The finding was determined to be of very low safety significance because the problem was not as low as reasonably achievable (ALARA) planning issue, there was no overexposure nor substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because the licensee failed to define and clearly communicate expectations regarding procedural compliance and ensure that personnel followed procedures.

Inspection Report# : [2013005](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Exam Security Issues

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 55.49, "Integrity of Examinations and Tests," which stated, "Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part." Specifically, Palisades placed personnel in the simulator operating booth that were not identified in the security agreement, placed the scenario turnover sheet for a second scenario in the simulator during the first scenario, and left a job performance measure turnover sheet in the simulator after the applicant left the simulator and brought the next applicant into the simulator. This issue was entered into the licensee's CAP as CR PLP 2014 02533, Issues Were Identified During the Annual Exam Administered on April 10, 2014, dated April 10, 2014.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to become a more significant safety concern. Specifically, the failure to properly control operational examination material in a manner in which applicants were not prematurely exposed to the material provided opportunities to compromise the examination. The finding was screened as one of very low safety significance (Green) in accordance with IMC 0609, Appendix I, "Licensed Operator Requalification SDP." This finding was associated with the cross cutting aspect of Procedure Adherence in the Human Performance area (H.8).

Inspection Report# : [2014003](#) (*pdf*)

Significance: N/A Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Notify the NRC Within 30 Days of Discovering Changes in Medical Conditions

A Severity Level IV non-cited violation of 10 CFR 50.74, "Notification of Change in Operator or Senior Operator Status," was identified by the inspectors during a review of licensed operator medical records. Specifically, Palisades did not notify the NRC within 30 days of discovering a change in medical condition for a licensed operator.

Subsequently, the licensee submitted the required notification for the operator on

April 11, 2014, and entered the issue into their CAP as CR PLP 2014 02518, NRC Informed the Palisades Training Department that an NRC Form 396 was Not Submitted, dated April 10, 2014.

The inspectors determined that Traditional Enforcement applied because a failure to make a required report impacted the regulatory process. Specifically, the licensee had not notified the NRC within 30 days of learning of a change in medical condition for a licensed operator for which a license condition was required. Based on Example 6.9.d.1 of the NRC's Enforcement Policy, the inspectors determined that the issue represented a Severity Level IV violation. No associated Reactor Oversight Process finding was identified, thus there was no associated cross-cutting aspect.

Inspection Report# : [2014003](#) (*pdf*)

Last modified : November 26, 2014

Palisades 4Q/2014 Plant Inspection Findings

Initiating Events

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Include the Degraded Voltage Channel Time Delay in TS Surveillance Requirement 3.3.5.2a

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR Part 50.36(c)(3), "Surveillance Requirements," for the failure to ensure the channel time delay for the degraded-voltage monitor was included in Technical Specification (TS) Surveillance Requirement (SR) 3.3.5.2.a. Specifically, the licensee failed to include in the TS SR the required time delay after the voltage relay trips before the preferred source of power is isolated and 1E electrical loads transferred to the stand-by Emergency Diesel Generators (EDGs). This finding was entered into the licensee's Corrective Action Program and the licensee's preliminary verification determined the degraded voltage monitors were still operable but degraded or non-conforming.

The performance deficiency was determined to be more than minor because if left uncorrected, it would have the potential to lead to more significant safety concern. Specifically, by not incorporating the total time delay requirements into the Technical Specifications, (TS) the time could be changed without going through the TS change process, possibly leading to spurious trips of offsite power sources or possibly exceeding the accident analysis time is the FSAR. The inspectors determined the finding was of very low safety significance (Green) because it did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Protection against High Winds

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 when licensee personnel failed to maintain and implement an adequate procedure covering Acts of Nature. Specifically, the licensee's interpretation of Abnormal Operating Procedure (AOP)–38 entry conditions resulted in a decision not to enter the procedure despite available information indicating the presence of high wind conditions in the vicinity of the plant. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2014 04155, NRC Questioned Entry into AOP 38, dated August 20, 2014. Planned corrective actions include a procedure revision to clarify the procedure entry conditions.

The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the preparatory actions prescribed by AOP 38 were directly related to the Initiating Events Cornerstone objective and inconsistent application of those actions in

advance of high wind conditions increased the likelihood of debris induced initiating events. In accordance with IMC 0609, Appendix A, Exhibit 1, "Initiating Events Screening Questions," Section B, "Transient Initiators," because the finding did not result in a reactor trip or the loss of mitigating equipment, it was determined to be of very low safety significance. This finding was associated with a cross cutting aspect of Training in the Human Performance cross cutting area. Specifically, the licensee's interpretation of procedure AOP 38 entry conditions was a result of the training provided to operators.

Inspection Report# : [2014004](#) (pdf)

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Insatallation of Steam Generator Nozzle Dams

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to have an adequate procedure and work order (WO) to install steam generator nozzle dams. The licensee entered this issue in their Corrective Action Program (CAP) as Condition Report (CR) PLP-2014-00770, Improper Routing of Nozzle Dam Air Supply. As part of their corrective actions, the licensee planned to revise the nozzle dam installation procedure and the WO.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Procedure Quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and was similar to the more than minor criteria in Example 5.a of IMC 0612, Appendix E, "Examples of Minor Issues." As it related to this finding, the intended design of the nozzle dam air supply system was not correctly translated into the installation procedure or the work instructions. Further, the nozzle dam air system was not properly tested prior to being placed into service. Since the plant was shutdown in Mode 6, the inspectors assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." A Phase 2 risk evaluation was required that determined the total event risk was 3.6E-8 and was therefore of very low safety significance (Green). This finding had an associated cross-cutting aspect in the Change Management (H.3) component of the Human Performance cross-cutting area. In particular, issues during the previous refueling outage led the steam generator project management team to review the configuration of the nozzle dam air system. Through this review, the licensee identified that changes to the alignment of air to the nozzle dams was required. However, due to turnover within the project management group and inadequate communications and documentation, the licensee failed to appropriately evaluate and implement those changes.

Inspection Report# : [2014002](#) (pdf)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Complete Volumetric Examinations for DM Butt Welds in Branch Connections

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.55a(g)(6)(ii)(F)(3) when licensee personnel failed to complete required baseline volumetric examinations for nine dissimilar metal (DM) butt welds in the Primary Coolant System (PCS) that were fabricated from Inconel Alloy 82/182 weld metal and were susceptible to primary water stress corrosion cracking (PWSCC). The licensee entered this issue into their CAP as CR PLP 2014 01742, NRC Question on Whether Hot and Cold Leg Branch Connection Welds are In Scope of ASME [American Society of Mechanical Engineers] Code Case (CC) N-770-1. As part of their corrective actions, the licensee submitted a request for relief to the NRC to allow substitution of a visual and dye

penetrant surface examination of these welds as an alternative to volumetric examinations. The NRC granted verbal relief on March 13, 2014, which stated the licensee could implement the proposed alternative to 10 CFR 50.55a(g)(6)(ii)(F), which included a commitment to perform enhanced leakage monitoring during the current operating cycle and perform the required volumetric examinations during the next refueling outage.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Equipment Performance (Reliability) attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors also determined that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the failure to complete volumetric examinations on the nine DM butt welded PCS branch connections fabricated with Alloy 82/182 weld metal could have allowed PWSCC susceptible material to remain in service, which could propagate and result in a Loss-of-Coolant-Accident (LOCA). The inspectors performed a Phase I Significance Determination Process screening using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 1, "Initiating Events Screening Questions." The inspectors answered the Phase I SDP "LOCA Initiators" Questions A1 and A2 'No' because undetected cracks, if present, were not yet through-wall and did not challenge the structural integrity of the welds. Therefore, this finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Evaluation (P.2) component of the Problem Identification and Resolution cross-cutting area because the licensee did not ensure that the resolution of the issue appropriately addressed causes and the extent of condition. Specifically, when determining the applicability of CC N 770 1, the licensee failed to thoroughly evaluate the scope of welds susceptible to PWSCC that required volumetric examination commensurate with the safety significance of this issue.

Inspection Report# : [2014002](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Introduction of Foreign Material Into the SW System

A finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," was identified by the inspectors when licensee personnel failed to follow procedure EN MA 118, "Foreign Material Exclusion (FME)," during work on the safety-related critical service water (SW) system during refueling outage (RFO) 1R23. Specifically, Sections 5.2[1] and 5.2[6] of EN-MA-118 stated that planners and procedure writers should evaluate FME considerations for work activities and include job specific FME controls in work instructions and procedures. Additionally, EN-MA-188 stated that during the planning stage, the planner should designate the FME Zone type, risk level, pathways to FME sensitive equipment, and work practice restrictions, as applicable, in all work packages. However, adequate controls were not established and documented when the decision was made to use an inflatable bladder inside the SW system when work was being performed on the system. As a result, on two separate occasions during RFO 1R23, bladders were inadvertently entrained into the return header of the SW system by the relative vacuum created by system flow. The licensee entered this issue into their CAP as CR PLP 2014 00715, Vacuum was So Great that Bladder was Ripped Off Lanyard and Lost in Piping, and CR PLP 2014 01176, FME Bladder Lost During Work Near CV-0823. As part of their corrective actions, the licensee successfully completed a comprehensive SW system test, which validated acceptable system parameters.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. In accordance with Checklist 3, "PWR [Pressurized Water Reactor] Cold Shutdown and Refueling Operation RCS [Reactor Coolant System] Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours," following the loss of the first bladder,

and Checklist 4, “PWR Refueling Operation: RCS Level > 23' Or PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer,” following the loss of the second bladder of Attachment 1, “Phase 1 Operational Checklists for both PWRs and BWRs [Boiling Water Reactors],” of IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process,” the inspectors determined that mitigation capabilities were not adversely impacted. Additionally, utilizing Table 1, “Losses of Control,” of IMC 0609, Appendix G, the inspectors determined there was no loss of control. As a result, the finding screened as having very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of the Human Performance cross-cutting area because the licensee did not implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority. In particular, the work process did not include the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities.

Inspection Report# : [2014002](#) (pdf)

Mitigating Systems

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure for Storage of Equipment in the Vicinity of Safety-Related Equipment

The inspectors identified a finding of very low safety significance (Green) with an associated non-cited violation of Technical Specification (TS) 5.4.1, Procedures and Programs, for the failure to follow site procedures covering the storage of material in the vicinity of safety-related equipment. Specifically, on three occasions the inspectors identified ladders at ladder station 42 in the 590' elevation of the component cooling water room that were either in contact with safety-related equipment or were capable of toppling into safety-related equipment. For immediate corrective actions, licensee personnel properly stored the ladder after each issue was identified by the inspectors. This issue is documented in the licensee's corrective action program (CAP) as Condition Report CR-PLP-2015-00126.

The performance deficiency was determined to be more than minor based on Inspection Manual Chapter (IMC) 0612, Appendix E, Example 4.a, which determined that low-level procedural errors without a safety consequence are more than minor when they become a repetitive/routine occurrence. Specifically, unrestrained ladders could impact safety-related equipment during a design basis seismic event. The inspectors evaluated the significance of the finding in accordance with IMC 0609, Attachment 4, “Initial Characterization of Findings.” In accordance with Table 2, the finding was determined

to affect the Mitigating Systems Cornerstone. The inspectors answered ‘No’ to the questions in Table 3 and continued the significance evaluation in accordance with IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power.” The inspectors answered ‘No’ to the Mitigating Systems Screening Questions contained in Exhibit 2 and determined the finding was of very low safety significance (Green). This finding was associated with a cross-cutting aspect of Identification in the Problem Identification and Resolution cross-cutting area (P1).

Inspection Report# : [2014005](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Engineered Safeguards Systems Aren't Adversely Affected By Air Entrainment

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the failure to ensure the safety-related Engineered Safeguard Systems trains would not be adversely affected by air entrainment when aligned to the Safety Injection and Refueling Water (SIRW) Tank. Specifically, calculation EA-C-PAL-0877D, assumed incorrectly only one train of the Engineered Safeguards System (ESS) was in operation when evaluating if the SIRW Tank reaches the limit for critical submergence during a tank drawdown. As part of their corrective actions, the licensee re-evaluated the scenarios of concern, performed an operability evaluation, and implemented compensatory actions.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, air entrainment into the ESS systems could potentially impact the operability of the system by air binding the pumps, reduce discharge flow, discharge pressure and/or delay injection. The inspectors determined the finding was of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Undersized Supply Cables from Startup Transformer to 2400V Buses

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure the incoming feeder cables from startup transformer 1-2 to 2400 V safety related Buses 1C and 1D were sized in accordance with their design basis, as described in Palisades FSAR Section 8.5.2. Specifically, the licensee failed to ensure the ampacity of the cables was at least as high as their maximum steady-state current. The licensee entered this finding into their Correction Action Program and verified the operability of the cables.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, cables were undersized with respect to the loading that would automatically occur as the result of a design basis accident. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee did not ensure that equipment is operated and maintained within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Undersized Motors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure electric motors are sized in accordance with the design basis, as discussed in Palisades FSAR Section 6.2.3.1. Specifically, the horsepower ratings of certain motors are less than power demands of their driven equipment, and they were not analyzed to ensure overheating would not

occur. The licensee entered this finding into their Correction Action Program with a recommended action to analyze the effect of the condition, and has verified the operability of the motors.

This performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, motors serving loads with power demands in excess of the motor horsepower ratings were not analyzed to ensure that motor damage would not occur. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee failed to ensure that equipment is operated within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.
Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure that 480V System Voltages do not Exceed Equipment Ratings

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure that voltages on the 480V system do not exceed equipment ratings. Specifically, the licensee increased the output voltage of the supply transformers to the 480V safety-related buses by 2.5 percent, but failed to ensure the resulting voltages would not exceed equipment ratings when the system is powered from the station power transformer or emergency diesel generator. The licensee entered this finding into their Correction Action Program and verified the operability of the affected equipment.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to verify or check the voltage increase on the 480V system to ensure the maximum allowable voltage would not exceed equipment ratings. The inspectors determined the finding was of very low safety significance (Green) because the affected SSCs maintained their operability and functionality. The inspectors did not identify a cross-cutting aspect associated with this finding, because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Comprehensive Pump Testing of Containment Spray Pump P-54A in Accordance with the Inservice Testing Program

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of Technical Specifications 5.5.7, "Inservice Testing Program," for the failure to perform comprehensive pump testing of Containment Spray Pump P-54A in accordance with the code of record. Specifically, the licensee did not rerun a comprehensive pump test, as required by the code's ISTB-6300 "Systematic Error" section. As part of their corrective actions, the licensee entered the issue into the Corrective Action Program, and determined the component remained operable.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance

attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failing to perform testing as required could result in the degradation of the equipment being undetected. The finding screened as having very low safety significance because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The findings had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the licensee failed to thoroughly evaluate the issue to ensure that resolutions address causes and extents of conditions commensurate with their safety significance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Surveillance for Emergency Diesel Generator Largest Load Reject Test

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to have adequate acceptance criteria in the emergency diesel generator surveillance procedures. Specifically, the licensee failed to ensure the surveillance test procedures for the emergency diesel generator largest load rejection test bounded the power demand of the largest load, as required by Technical Specification SR 3.8.1.5. The licensee entered this finding into their Correction Action Program and verified the operability of the emergency diesel generators.

The performance deficiency was determined to be more than minor, because it impacted the Procedure Quality attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the surveillance procedure error could result in acceptance of test results that did not satisfy Technical Specification SR 3.8.1.5 for rejection of a load greater than or equal to the emergency diesel generator's single largest predicted post-accident load. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a cross-cutting aspect in the area of Human Performance, associated with the Resources component, because the licensee failed to ensure that personnel, equipment, procedures, and other resources are adequate to assure nuclear safety by maintaining long term plant safety.

Inspection Report# : [2014008](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: FIN Finding

Written NRC Biennial Written Examinations Did Not meet Qualitative Standards

The inspectors identified a finding of very low safety significance associated with 10 CFR 55.59, "Requalification," based on a determination that greater than 20 percent of the biennial requalification written exam questions administered to licensed operators during weeks three and five of the 2012 examination cycle were flawed. The licensee entered this issue into their Corrective Action Program (CAP) as CR PNP 2014 02521, Written Exam Quality, dated April 10, 2014.

The inspectors determined that the finding was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the finding adversely affected the quality and level of difficulty of biennial written exams, which potentially impacted Palisades' ability to appropriately evaluate licensed operators. The

risk importance of this issue was evaluated using

IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)." The inspectors considered the number of written exam questions that did not meet the qualitative standard for written exam questions. The qualitative standards used by the inspectors are defined in NUREG 1021, Revision 9, ES 602, Attachment 1, "Guidelines for Developing Open Reference Examinations," and Appendix B, "Written Examination Guidelines." Because more than 30 percent of the questions reviewed did not satisfy the guidance, Block 4 of Appendix I applied. Based on the screening criteria, the finding was characterized by the SDP as having very low safety significance (Green) because greater than 20 percent, but less than 40 percent, of the reviewed written exam questions were flawed. A review of the cross cutting aspects was performed and no associated cross cutting aspect was identified.

Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Long-Term Scaffolds in Accordance with Procedures

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to adequately implement procedure EN MA 133, "Control of Scaffolding." Specifically, multiple examples were identified of scaffolds installed in the plant for greater than 90 days that had not undergone process applicability determinations, were not appropriately documented in the scaffold control log, and/or did not contain proper tags. The licensee documented the issue in their CAP as CR PLP 2014 2646, Two Scaffolds Near Safety Related Equipment Not Being Controlled as Long-Term, dated April 17, 2014; conducted an extent of condition review of the entire scaffold log and identified additional discrepancies; completed the required process applicability determinations; and re inspected scaffolds that had been categorized as long term.

The inspectors determined that the performance deficiency was more than minor because it was similar to Example 4.a) of IMC 0612, Appendix E, "Examples of Minor Issues." This example described an engineering evaluation that was not performed for scaffolding erected near safety related equipment and stated that it would be a more than minor issue if the licensee routinely failed to perform the engineering evaluations. For this specific finding, there were multiple examples of process applicability determinations not being performed within the procedurally required timeframe. The finding was determined to be of very low safety significance (Green) because it did not affect the operability/functionality of structures, systems and components (SSCs) and all required safety functions were maintained. This finding was associated with the cross cutting aspect of Teamwork in the Human Performance area. Specifically, licensee and supplemental individuals and work groups did not sufficiently communicate and coordinate work activities associated with maintaining the scaffold control log or documentation related to scaffolding installed in the plant. The workers also did not understand how to account for time during refueling and forced outages when determining the long term status of scaffolds, which could have been resolved with input from other work groups

Inspection Report# : [2014003](#) (*pdf*)

Barrier Integrity

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correctly Translate Valve Leakage Limits into Test Procedure

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate design valve leakage limits into the applicable test procedure. Specifically, the acceptance criterion for emergency core cooling system (ECCS)/containment spray (CS) recirculation isolation valves CV-3027 and CV-3056 had not been correctly adjusted to account for the higher differential pressure associated with ECCS operation under post-accident conditions. The licensee entered this finding into their Corrective Action Program to correct the valve leakage limit.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, leakage approaching the procedural values would exceed analyzed dose calculations. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of present performance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify Non-Safety-Related Sub-Components Improperly Supplied with Safety-Related Valves

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," for the licensee's failure to identify non-safety-related

sub-components improperly supplied with safety-related valves. Specifically, ECCS/CS recirculation isolation valves CV-3027 and CV-3056, which were installed in 2007, were supplied with non-safety-related sub-components. These components were identified as non-safety-related on the vendor drawings. In addition, the licensee later installed a section of non-safety-related tubing on valve CV-3027 based on the incorrect vendor drawing. The licensee entered this finding into their Corrective Action Program to correct the valve drawings and replace the non-safety-related parts.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to identify non-safety-related sub-components improperly supplied with safety-related valves which would form part of the containment barrier under post-accident conditions. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish an Adequate Test Program for the Shutdown Cooling Heat Exchangers

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to establish an adequate test program for the Shutdown Cooling (SDC) Heat Exchangers (HXs) to demonstrate they can perform as designed. Specifically, the licensee failed to take actions to ensure the SDC HXs' heat transfer capability met its design bases, as assumed in design bases calculations.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to verify the SDC HXs heat transfer capability met their design bases, as assumed in design bases calculations, to limit containment temperatures and pressures during an event. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding had an associated cross-cutting aspect, Conservative Bias, in the Human Performance cross-cutting area. Specifically, on several occasions when the licensee identified the need to perform testing and/or inspection of the SDC HXs, the licensee did not take actions because they did not believe any regulatory requirements or technical issues existed that required the testing and/or inspections.

Inspection Report# : [2014008](#) (*pdf*)

G

Significance: Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Spent Fuel Pool Region II Criticality Analysis

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to follow procedure EN OP 104, "Operability Determination Process." Specifically, Operability Evaluation CR PLP 2013 04775 failed to include adequate technical information to support the basis for the reasonable expectation of operability, as required by Step 5.5.c of EN OP 104. On March 25, 2014, the licensee entered the NRC questions into the CAP as Assignments 6 and 7 of CR PLP 2013 04775, Issues Identified with Region II of SFP Criticality Analysis, with an initial due date of

April 8, 2014. Both Assignments 6 and 7 were ultimately closed in late April to a new Assignment 9, which was created to complete a revised Operability Evaluation. The licensee determined that contracted technical support was necessary to adequately evaluate the NRC concerns. At the end of the inspection period, the contracted evaluation effort was ongoing. Planned corrective actions included documenting the conclusions of the ongoing evaluation in a revised Operability Evaluation for CR PLP 2013 04775.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Configuration Control attribute of the Barrier Integrity Cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the Spent Fuel Pool (SFP) criticality analysis relied on certain physical conditions to maintain the effective neutron multiplication factor below 1.0, but actual physical conditions were not completely bounded by the existing criticality analysis. Because the inspectors answered 'No' to all of the SFP questions in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance. This finding was associated with a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area. Specifically, the licensee failed to collect and implement relevant external operating experience.

Inspection Report# : [2014004](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedures During Reactor Vessel Head Lift

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when licensee personnel failed to follow maintenance procedure RFL R 16, "Reactor Vessel Closure Head Installation." Specifically, during the reactor vessel head lift on March 5, 2014, to support reinstallation onto the vessel flange, workers failed to identify an interference with the reactor head lift structure, causing the head to impact a jack screw on the structure and increasing the total load weight to approximately 283,000 pounds, which was greater than the procedural maximum polar crane load rating of 270,000 pounds. The licensee entered this issue into their CAP as CR-PLP-2014-01903, Reactor Head Flange Contacted Jacking Screw While Raising it Off the Head Stand. As part of their corrective actions, the licensee conducted a Level 1 Human Performance Evaluation, generated a site wide Human Performance error communication, and performed work crew stand downs to discuss crane and rigging expectations.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Human Performance attribute of the Barrier Integrity cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Additionally, the inspectors determined that the performance deficiency could reasonably be viewed as a precursor to a significant event and that if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, the operability of the containment polar crane was required to be evaluated and the reactor vessel head was required to be inspected after the event occurred to verify no significant damage was caused and the maximum design limit of the crane could have been exceeded if the evolution was not stopped when it was, which increased the risk of dropping the head during the lift. The finding was screened in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, "Phase 1 Operational Checklists for both PWRs and BWRs." The finding was determined to be of very low safety significance (Green) based on not requiring a quantitative assessment after reviewing the five shutdown safety functional areas in Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours." This finding had an associated cross cutting aspect in the Challenge the Unknown (H.11) component of the Human Performance cross-cutting area. Specifically, human performance investigations identified that workers exhibited a lack of rigor when performing interference verifications prior to and during the reactor head lift, and an inadequate "stop when unsure" mentality when assessing the situation before continuing with the head lift. In addition, the workers and supervisors for this task did not understand that the load cell increase exceeded the procedural maximum value and did not inform decision makers outside of the immediate work area to validate it was safe to proceed with the evolution.

Inspection Report# : [2014002](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance: TBD Oct 30, 2014

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Monitor the Highest Exposed Part of the Compartment When Using EDEX

The NRC identified a finding and two apparent violations of NRC requirements associated with the replacement of Control Rod Drive (CRD) housings between February 6 and March 8, 2014. Specifically, the inspectors identified an apparent violation of Title 10 of the Code of Federal Regulations (CFR) Part 20.1201, "Occupational Dose Limits for Adults," because the licensee failed to ensure that radiation worker dosimeters calibrated to the Deep Dose Equivalent (DDE) were located at the highest exposed portion of the respective compartment, a condition of the NRC-approved method for determining effective dose equivalent external (EDEX). The inspectors also identified an example of an apparent violation of Technical Specification 5.4 "Procedures," associated with this finding. Upon identification of this issue, the licensee suspended the use of EDEX and tungsten shield vests. The licensee re-calculated the dose received for the workers involved and updated the nuclear power industry's dose tracking system with the revised dose results. Additionally, a root cause evaluation was initiated under Condition Report CR-PLP-2014-04683.

The inspectors reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and did not find any similar examples. The performance deficiency was determined to be of more than minor safety significance in accordance with IMC 0612 Appendix B, "Issue Screening," because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that inaccurate radiation monitoring affects the licensee's ability to control and limit radiation exposures. Therefore, the performance deficiency was a finding. The finding did not involve as-low-as-reasonably-achievable (ALARA) planning or work controls and there was no overexposure or substantial potential for an overexposure. However, the NRC determined that the licensee's ability to assess dose was compromised. Consequently, the NRC concluded that the finding was preliminarily determined to be of White safety significance. The finding had a cross-cutting characteristic in the area of human performance related to the cross-cutting aspect of change management, in that, the licensee's procedures did not include all of the requirements for implementing EDEX when the methods were approved by the NRC and did not provide adequate guidance for the new tungsten shield vests.

Inspection Report# : [2014010](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 for the failure to maintain a sealed source inventory and perform leak tests required by station procedures. The inspectors identified multiple discrepancies with the records that were required to be maintained to demonstrate that sealed sources stored onsite were known by the radiation protection organization, the storage locations of the sealed sources were identified, and that select sources were leak tested to prevent the spread of radioactive contamination. This issue was entered into the licensee's CAP as CR PLP 2014 02715, Issue with Control of Sources, dated April 22, 2014.

The inspectors determined that the failure to maintain an inventory of sources onsite and leak test sources was a finding of more than minor significance because, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the failure to ensure that the sources were free of external contamination could spread radioactive contamination, including alpha contamination, that was not readily detectable by personnel monitoring equipment, and could result in increased exposure to radiation. The finding was assessed using the Occupational Radiation Safety SDP and was determined to be of very low safety significance (Green) because the problem was not an as low as reasonably achievable (ALARA) planning issue; there was no overexposure, nor a substantial potential for an overexposure; and the licensee's ability to assess dose was not

compromised. This finding was associated with the cross cutting aspect of Self Assessment in the Problem Identification and Resolution area. Specifically, the licensee did not conduct a self critical and objective assessment of the program and practice

Inspection Report# : [2014003](#) (pdf)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Control of Entry into High Radiation Areas

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for unauthorized entries into high radiation areas (HRAs). Specifically, on January 30, 2014, a worker replacing lights in lower containment received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On February 14, 2014, a worker entered the West Engineered Safeguards Room and received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On both occasions, workers changed the work plans after discussing the work plans with radiation protection staff.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Conservative Bias in the Human Performance area. Specifically, both workers decided to change the work plans after discussing the work plans with radiation protection staff and did not stop to consider whether the new work activity or location was safe

Inspection Report# : [2014003](#) (pdf)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Entries into High Radiation Areas without Required Dosimetry

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for entry into HRAs without a required monitoring device. On two separate occasions, two separate workers entered HRAs without the required dosimetry. Specifically, on February 11, 2014, a worker entered the 607' elevation of containment and entered areas with dose rates of 320 millirem (mR)/hour. The licensee's investigation determined that the worker left the required electronic alarming dosimeter (EAD) in the dress out area. Another worker found the EAD in the dress out area and notified radiation protection staff, who located and escorted the individual from containment. On February 22, 2014, a worker entered the West Engineered Safeguards Room with dose rates of 150 mR/hour. The licensee's investigation determined that the worker left the required EAD in the dress out area. The individual identified the missing EAD when undressing to leave the room.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into HRAs without alarming direct reading dosimetry placed them at increased risk for unnecessary radiation exposure. The

finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Avoid Complacency in the Human Performance area. Specifically, the workers did not recognize and plan for possible mistakes and did not implement appropriate error reduction tools, such as self check, to ensure they were prepared to enter the HRA Inspection Report# : [2014003](#) (*pdf*)

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Maintain Radiation Exposure ALARA on CRDM 24 Repairs

A finding of very low safety significance was self revealed when workers received unplanned and unintended occupational radiation dose during a maintenance outage conducted in August 2012 due to deficiencies in the licensee's Radiological Work Planning and Work Execution Program. Specifically, the licensee failed to properly incorporate As-Low-As-Reasonably-Achievable (ALARA) strategies and insights while planning and executing Control Rod Drive Mechanism (CRDM) 24 housing work. The licensee entered this issue into their CAP as CR-PLP-2014 05812, UT [Ultrasonic Testing] Exams of the Additional CRDM Stalk Housings Has Exceeded the Dose Estimate for the RWP [Radiation Work Permit]. Corrective actions were implemented to address the outage planning and work execution issues.

The inspectors determined that this finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the finding was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely impacted the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Additionally, the finding was similar to the more than minor criteria in Example 6.i of IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors screened this finding in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process." The inspectors determined that the finding did not involve: (1) a radiological overexposure; (2) a substantial potential for an overexposure; or (3) a compromised ability to assess dose. The inspectors also determined that the finding involved ALARA planning and work controls and that the licensee's 3 year rolling collective dose average was above 135 person Rem at the time the performance deficiency occurred. However, because the work activity was a single occurrence that involved an actual dose outcome that was within the licensee's control of less than 25 person Rem, this finding was determined to be of very low safety significance (Green). This finding had an associated cross cutting aspect in the Work Management (H.5) component of Human Performance cross-cutting area because the licensee did not plan work activities that appropriately incorporated radiological safety.

Inspection Report# : [2014002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary.

Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Exam Security Issues

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 55.49, "Integrity of Examinations and Tests," which stated, "Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part." Specifically, Palisades placed personnel in the simulator operating booth that were not identified in the security agreement, placed the scenario turnover sheet for a second scenario in the simulator during the first scenario, and left a job performance measure turnover sheet in the simulator after the applicant left the simulator and brought the next applicant into the simulator. This issue was entered into the licensee's CAP as CR PLP 2014 02533, Issues Were Identified During the Annual Exam Administered on April 10, 2014, dated April 10, 2014.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to become a more significant safety concern. Specifically, the failure to properly control operational examination material in a manner in which applicants were not prematurely exposed to the material provided opportunities to compromise the examination. The finding was screened as one of very low safety significance (Green) in accordance with IMC 0609, Appendix I, "Licensed Operator Requalification SDP." This finding was associated with the cross cutting aspect of Procedure Adherence in the Human Performance area (H.8).

Inspection Report# : [2014003](#) (*pdf*)

Significance: N/A Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Notify the NRC Within 30 Days of Discovering Changes in Medical Conditions

A Severity Level IV non-cited violation of 10 CFR 50.74, "Notification of Change in Operator or Senior Operator Status," was identified by the inspectors during a review of licensed operator medical records. Specifically, Palisades did not notify the NRC within 30 days of discovering a change in medical condition for a licensed operator.

Subsequently, the licensee submitted the required notification for the operator on

April 11, 2014, and entered the issue into their CAP as CR PLP 2014 02518, NRC Informed the Palisades Training Department that an NRC Form 396 was Not Submitted, dated April 10, 2014.

The inspectors determined that Traditional Enforcement applied because a failure to make a required report impacted the regulatory process. Specifically, the licensee had not notified the NRC within 30 days of learning of a change in medical condition for a licensed operator for which a license condition was required. Based on Example 6.9.d.1 of the NRC's Enforcement Policy, the inspectors determined that the issue represented a Severity Level IV violation. No associated Reactor Oversight Process finding was identified, thus there was no associated cross-cutting aspect.

Inspection Report# : [2014003](#) (*pdf*)

Last modified : February 26, 2015

Palisades

1Q/2015 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Leads to primary Coolant Pump Seal Degradation

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1(a) was self-revealed when the 'C' primary coolant pump (PCP) seal degraded as a result of an inadequate maintenance procedure. Specifically, maintenance procedure PCS-M-54, "N-9000 Primary Coolant Pump Shaft Seal Assembly," did not identify critical steps in the assembly of the PCP seal and, as a result, the work activity was not adequately controlled. This issue was entered into the licensee's Corrective Action Program (CAP) as CR-PLP-2014-03495, Planned Outage Required Due to Two Stages of the Primary Coolant Pump P 50C Seal Not Performing as Expected, dated June 21, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the 'C' PCP seal was not correctly assembled or installed during refueling outage (RFO) 1R23, which resulted in premature seal degradation. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst (SRA) using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Palisades Standardized Plant Analysis Risk (SPAR) model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Work Management component of the Human Performance cross-cutting area. Specifically, the licensee did not effectively screen the PCP seal assembly through the work management process to identify that it should have been classified as a critical maintenance activity. In addition, insufficient emphasis was placed on in-field vendor oversight during work execution.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Determine the Cause of Head Penetration Nozzle J-Groove Weld Cracking (Section 40A2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of Title 10, Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to establish measures to assure that the cause of the ultrasonic examination leakage path indications and crack indications identified in the J-groove welds of the reactor pressure vessel head penetration nozzles 29 and 30 (a significant condition adverse to quality) was determined. Specifically, the licensee did not complete adequate causal investigations to assure the cause of this significant condition adverse to quality was determined. The licensee entered this issue into the Corrective Action Program (CAP), and initiated an action to conduct a root cause investigation for this issue.

The issue was more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. The inspector also answered “Yes” to the more than minor screening question, “If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern?” Specifically, the inspector determined that this issue was more than minor because, if left uncorrected, the licensee would have reduced the frequency of reactor vessel head nozzle penetration examinations which could result in the failure to detect primary water stress corrosion cracking (PWSCC). Undetected PWSCC could increase the risk for through-wall leakage and design basis events such as a loss-of-coolant accident (LOCA). The inspector determined that the finding was of very-low safety significance based on answering “No” to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. Although this performance deficiency occurred more than 10 years ago, it was representative of current licensee performance because in the November 19, 2014, Licensee Event Report Cancellation Letter, the licensee again failed to assure that the cause of the reactor pressure vessel nozzle crack indications in the J-groove welds was determined. Therefore, the finding had a cross-cutting aspect in the area of Problem Identification and Resolution because the licensee failed to assure the cause was determined for the reactor pressure vessel nozzle crack indications in the J-groove welds, and this decision was not consistent with an organization that thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance (IMC 310-Item P.2). (Section 40A2.1.b(1))

Inspection Report# : [2015009](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Unqualified Non-Destructive Examinations of J-Groove Welds 29 and 30 (Section 40A2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion IX “Control of Special Processes,” for the licensee’s failure to use qualified personnel and procedures for the dye penetrant (PT) examinations of the J-groove welds at nozzles 29 and 30 used to characterize crack indications. Consequently, no quality records existed to validate or confirm the size or extent of the cracking identified in these welds. The licensee documented the use of the unqualified PT examination for characterizing the reactor pressure vessel nozzle J-groove weld cracks in the CAP, and was developing corrective actions at the conclusion of the inspection.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. Further, if left uncorrected, it would become a more significant issue. Specifically, the licensee had based the risk evaluation of the nozzle cracking on the results of the unqualified PT examination, and if this result was not correct, the risk significance of past plant operation with these cracks may have been greater than assumed. Additionally, the licensee had considered the results from this PT examination, as part of the evaluations identified in their November 19, 2014, letter that concluded the flaws identified were caused by embedded weld defects, and not PWSCC. Based upon this revised cause

determination, the licensee had elected to reduce the scheduled vessel head examinations, and this reduced inspection schedule may not be adequate to identify PWSCC prior to experiencing a through-wall leak. The inspectors determined that the finding was of very low safety significance based on answering “No” to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. The finding did not have a cross-cutting aspect because it was not indicative of current licensee performance due to the age of the performance deficiency.

(Section 40A2.1.b(2)).

Inspection Report# : [2015009](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Include the Degraded Voltage Channel Time Delay in TS Surveillance Requirement 3.3.5.2a

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR Part 50.36(c)(3), “Surveillance Requirements,” for the failure to ensure the channel time delay for the degraded-voltage monitor was included in Technical Specification (TS) Surveillance Requirement (SR) 3.3.5.2.a. Specifically, the licensee failed to include in the TS SR the required time delay after the voltage relay trips before the preferred source of power is isolated and 1E electrical loads transferred to the stand-by Emergency Diesel Generators (EDGs). This finding was entered into the licensee’s Corrective Action Program and the licensee’s preliminary verification determined the degraded voltage monitors were still operable but degraded or non-conforming.

The performance deficiency was determined to be more than minor because if left uncorrected, it would have the potential to lead to more significant safety concern. Specifically, by not incorporating the total time delay requirements into the Technical Specifications, (TS) the time could be changed without going through the TS change process, possibly leading to spurious trips of offsite power sources or possibly exceeding the accident analysis time in the FSAR. The inspectors determined the finding was of very low safety significance (Green) because it did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee’s present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Sep 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Procedure for Protection against High Winds

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 when licensee personnel failed to maintain and implement an adequate procedure covering Acts of Nature. Specifically, the licensee’s interpretation of Abnormal Operating Procedure (AOP)–38 entry conditions resulted in a decision not to enter the procedure despite available information indicating the presence of high wind conditions in the vicinity of the plant. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2014 04155, NRC Questioned Entry into AOP 38, dated August 20, 2014. Planned corrective actions include a procedure revision to clarify the procedure entry conditions.

The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the preparatory actions prescribed by AOP 38

were directly related to the Initiating Events Cornerstone objective and inconsistent application of those actions in advance of high wind conditions increased the likelihood of debris induced initiating events. In accordance with IMC 0609, Appendix A, Exhibit 1, "Initiating Events Screening Questions," Section B, "Transient Initiators," because the finding did not result in a reactor trip or the loss of mitigating equipment, it was determined to be of very low safety significance. This finding was associated with a cross cutting aspect of Training in the Human Performance cross cutting area. Specifically, the licensee's interpretation of procedure AOP 38 entry conditions was a result of the training provided to operators.

Inspection Report# : [2014004](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Results in Failure of Component Cooling Water Pump

A finding of very low safety significance and an associated NCV of TS 5.4.1(a) was self-revealed on January 6, 2015, after the licensee identified smoke coming from the 'C' component cooling water (CCW) pump (P-52C) as a result of incorrect assembly of the inboard pump bearing in December 2014, due to an inadequate maintenance procedure. This issue was entered into the licensee's CAP as CR-PLP-2015-00063, Workers Reported Smoke Coming from Shaft of P-52C, dated January 6, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Standiardized Plant Analysis Risk model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, plant staff accepted the practice of bending the 'C' CCW pump oiler nipple to achieve proper level when the oiler could not be properly aligned which compensated for, rather than corrected, an underlying issue of improper alignment when tightening the alignment pin.

Inspection Report# : [2015001](#) (pdf)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inoperability of Safety Injection Tank Due to Long-Term Leakage

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors when licensee personnel failed to assure that leakage out of the 'B' safety injection tank (SIT), a condition adverse to quality, was corrected in a timely manner. Specifically, although minor water leakage out of the 'B' SIT had been occurring since at least 2010, the licensee had not corrected the leakage despite several plant outages that provided an opportunity to address the issue. This issue was entered into the licensee's CAP as CR-PLP-2014-04861, B SIT Declared Inoperable Due to Reaching Technical Specification Low Level Setpoint, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment

Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the leakage out of the 'B' SIT resulted in unexpected inoperability of the tank on October 7, 2014. The finding was determined to be of very low safety significance based on answering "No" to the screening questions in Exhibit 2.A, Mitigating Systems Screening Questions. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, over time the licensee became confident that the long-term leakage out of the 'B' SIT was minor and could be managed without an impact to equipment operability, which proved to be incorrect when the minor leakage resulted in 'B' SIT inoperability on October 7, 2014.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Verify the Adequacy of Credited High Energy Line Break Barriers

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors when the licensee credited fire doors for High Energy Line Break (HELB) protection without a supporting test or evaluation. Specifically, Procedure 4.02 credited fire doors with protection of safety-related equipment against a HELB when the primary HELB barrier was disabled without a test or evaluation to demonstrate the doors could withstand the HELB environment. This issue was entered into the licensee's Corrective Action Program as CR-PLP-2015-00371, NRC Concerns with Calculation EA-PSA-CCW-HELB-02-17, dated January 22, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not have an evaluation to demonstrate that barriers relied upon to protect mitigating systems from a HELB initiating event could perform the credited protection function. The inspectors answered "No" to the questions in Exhibit 2.A, Mitigating Systems Screening Questions, and as a result determined the issue was of very low safety significance. This finding was not associated with a cross-cutting aspect since the calculation in question was created in 2003 and therefore did not represent current performance.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, "2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments," Revision 34. This issue was entered into the licensee's CAP as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the change that was implemented adversely affected the seismic qualification of the electrical circuit that was relied upon to ensure safety bus 1C would be loaded by the 1–1 DG upon a loss of offsite power. The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance. This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee did not use all available information and relevant guidance, such as Nuclear Energy Institute 96–07, to demonstrate that the proposed activity was safe and did not require a license amendment prior to implementation.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: FIN Finding

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS–E–1, “2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments,” Revision 34. This issue was entered into the licensee’s Corrective Action Program as CR–PLP–2014–04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the change that was implemented adversely affected the seismic qualification of the electrical circuit that was relied upon to ensure safety bus 1C would be loaded by the 1–1 DG upon a loss of offsite power. The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance. This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee did not use all available information and relevant guidance, such as Nuclear Energy Institute 96–07, to demonstrate that the proposed activity was safe and did not require a license amendment prior to implementation.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Follow Procedure for Storage of Equipment in the Vicinity of Safety-Related Equipment

The inspectors identified a finding of very low safety significance (Green) with an associated non-cited violation of

Technical Specification (TS) 5.4.1, Procedures and Programs, for the failure to follow site procedures covering the storage of material in the vicinity of safety-related equipment. Specifically, on three occasions the inspectors identified ladders at ladder station 42 in the 590' elevation of the component cooling water room that were either in contact with safety-related equipment or were capable of toppling into safety-related equipment. For immediate corrective actions, licensee personnel properly stored the ladder after each issue was identified by the inspectors. This issue is documented in the licensee's corrective action program (CAP) as Condition Report CR-PLP-2015-00126.

The performance deficiency was determined to be more than minor based on Inspection Manual Chapter (IMC) 0612, Appendix E, Example 4.a, which determined that low-level procedural errors without a safety consequence are more than minor when they become a repetitive/routine occurrence. Specifically, unrestrained ladders could impact safety-related equipment during a design basis seismic event. The inspectors evaluated the significance of the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings." In accordance with Table 2, the finding was determined to affect the Mitigating Systems Cornerstone. The inspectors answered 'No' to the questions in Table 3 and continued the significance evaluation in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The inspectors answered 'No' to the Mitigating Systems Screening Questions contained in Exhibit 2 and determined the finding was of very low safety significance (Green). This finding was associated with a cross-cutting aspect of Identification in the Problem Identification and Resolution cross-cutting area (P1).

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure Engineered Safeguards Systems Aren't Adversely Affected By Air Entrainment

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the failure to ensure the safety-related Engineered Safeguard Systems trains would not be adversely affected by air entrainment when aligned to the Safety Injection and Refueling Water (SIRW) Tank. Specifically, calculation EA-C-PAL-0877D, assumed incorrectly only one train of the Engineered Safeguards System (ESS) was in operation when evaluating if the SIRW Tank reaches the limit for critical submergence during a tank drawdown. As part of their corrective actions, the licensee re-evaluated the scenarios of concern, performed an operability evaluation, and implemented compensatory actions.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, air entrainment into the ESS systems could potentially impact the operability of the system by air binding the pumps, reduce discharge flow, discharge pressure and/or delay injection. The inspectors determined the finding was of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Undersized Supply Cables from Startup Transformer to 2400V Buses

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix

B, Criterion III, “Design Control,” for the licensee’s failure to ensure the incoming feeder cables from startup transformer 1-2 to 2400 V safety related Buses 1C and 1D were sized in accordance with their design basis, as described in Palisades FSAR Section 8.5.2. Specifically, the licensee failed to ensure the ampacity of the cables was at least as high as their maximum steady-state current. The licensee entered this finding into their Correction Action Program and verified the operability of the cables.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, cables were undersized with respect to the loading that would automatically occur as the result of a design basis accident. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee did not ensure that equipment is operated and maintained within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Undersized Motors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to ensure electric motors are sized in accordance with the design basis, as discussed in Palisades FSAR Section 6.2.3.1. Specifically, the horsepower ratings of certain motors are less than power demands of their driven equipment, and they were not analyzed to ensure overheating would not occur. The licensee entered this finding into their Correction Action Program with a recommended action to analyze the effect of the condition, and has verified the operability of the motors.

This performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, motors serving loads with power demands in excess of the motor horsepower ratings were not analyzed to ensure that motor damage would not occur. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee failed to ensure that equipment is operated within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure that 480V System Voltages do not Exceed Equipment Ratings

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to ensure that voltages on the 480V system do not exceed equipment ratings. Specifically, the licensee increased the output voltage of the supply transformers to the 480V safety-related buses by 2.5 percent, but failed to ensure the resulting voltages would not exceed equipment ratings when the system is powered from the station power transformer or emergency diesel generator. The licensee entered this finding into their Correction Action Program and verified the operability of the affected equipment.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to verify or check the voltage increase on the 480V system to ensure the maximum allowable voltage would not exceed equipment ratings. The inspectors determined the finding was of very low safety significance (Green) because the affected SSCs maintained their operability and functionality. The inspectors did not identify a cross-cutting aspect associated with this finding, because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Comprehensive Pump Testing of Containment Spray Pump P-54A in Accordance with the Inservice Testing Program

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of Technical Specifications 5.5.7, "Inservice Testing Program," for the failure to perform comprehensive pump testing of Containment Spray Pump P-54A in accordance with the code of record. Specifically, the licensee did not rerun a comprehensive pump test, as required by the code's ISTB-6300 "Systematic Error" section. As part of their corrective actions, the licensee entered the issue into the Corrective Action Program, and determined the component remained operable.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failing to perform testing as required could result in the degradation of the equipment being undetected. The finding screened as having very low safety significance because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The findings had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the licensee failed to thoroughly evaluate the issue to ensure that resolutions address causes and extents of conditions commensurate with their safety significance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Non-Conservative Surveillance for Emergency Diesel Generator Largest Load Reject Test

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to have adequate acceptance criteria in the emergency diesel generator surveillance procedures. Specifically, the licensee failed to ensure the surveillance test procedures for the emergency diesel generator largest load rejection test bounded the power demand of the largest load, as required by Technical Specification SR 3.8.1.5. The licensee entered this finding into their Correction Action Program and verified the operability of the emergency diesel generators.

The performance deficiency was determined to be more than minor, because it impacted the Procedure Quality attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective of

ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the surveillance procedure error could result in acceptance of test results that did not satisfy Technical Specification SR 3.8.1.5 for rejection of a load greater than or equal to the emergency diesel generator's single largest predicted post-accident load. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a cross-cutting aspect in the area of Human Performance, associated with the Resources component, because the licensee failed to ensure that personnel, equipment, procedures, and other resources are adequate to assure nuclear safety by maintaining long term plant safety.

Inspection Report# : [2014008](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: FIN Finding

Written NRC Biennial Written Examinations Did Not meet Qualitative Standards

The inspectors identified a finding of very low safety significance associated with 10 CFR 55.59, "Requalification," based on a determination that greater than 20 percent of the biennial requalification written exam questions administered to licensed operators during weeks three and five of the 2012 examination cycle were flawed. The licensee entered this issue into their Corrective Action Program (CAP) as CR PNP 2014 02521, Written Exam Quality, dated April 10, 2014.

The inspectors determined that the finding was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the finding adversely affected the quality and level of difficulty of biennial written exams, which potentially impacted Palisades' ability to appropriately evaluate licensed operators. The risk importance of this issue was evaluated using

IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)." The inspectors considered the number of written exam questions that did not meet the qualitative standard for written exam questions. The qualitative standards used by the inspectors are defined in NUREG 1021, Revision 9, ES 602, Attachment 1, "Guidelines for Developing Open Reference Examinations," and Appendix B, "Written Examination Guidelines." Because more than 30 percent of the questions reviewed did not satisfy the guidance, Block 4 of Appendix I applied. Based on the screening criteria, the finding was characterized by the SDP as having very low safety significance (Green) because greater than 20 percent, but less than 40 percent, of the reviewed written exam questions were flawed. A review of the cross cutting aspects was performed and no associated cross cutting aspect was identified.

Inspection Report# : [2014003](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Evaluate Long-Term Scaffolds in Accordance with Procedures

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to adequately implement procedure EN MA 133, "Control of Scaffolding." Specifically, multiple examples were identified of scaffolds installed in the plant for greater than 90 days that had not undergone process applicability determinations, were not appropriately documented in the scaffold control log, and/or did not contain proper tags. The licensee documented the issue in their CAP as CR PLP 2014 2646, Two Scaffolds Near Safety Related Equipment Not Being Controlled as Long-Term, dated April 17, 2014; conducted an extent of condition review of the entire scaffold log and

identified additional discrepancies; completed the required process applicability determinations; and re inspected scaffolds that had been categorized as long term.

The inspectors determined that the performance deficiency was more than minor because it was similar to Example 4.a) of IMC 0612, Appendix E, “Examples of Minor Issues.” This example described an engineering evaluation that was not performed for scaffolding erected near safety related equipment and stated that it would be a more than minor issue if the licensee routinely failed to perform the engineering evaluations. For this specific finding, there were multiple examples of process applicability determinations not being performed within the procedurally required timeframe. The finding was determined to be of very low safety significance (Green) because it did not affect the operability/functionality of structures, systems and components (SSCs) and all required safety functions were maintained. This finding was associated with the cross cutting aspect of Teamwork in the Human Performance area. Specifically, licensee and supplemental individuals and work groups did not sufficiently communicate and coordinate work activities associated with maintaining the scaffold control log or documentation related to scaffolding installed in the plant. The workers also did not understand how to account for time during refueling and forced outages when determining the long term status of scaffolds, which could have been resolved with input from other work groups

Inspection Report# : [2014003](#) (*pdf*)

Barrier Integrity

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Translate Valve Leakage Limits into Test Procedure

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to correctly translate design valve leakage limits into the applicable test procedure. Specifically, the acceptance criterion for emergency core cooling system (ECCS)/containment spray (CS) recirculation isolation valves CV-3027 and CV-3056 had not been correctly adjusted to account for the higher differential pressure associated with ECCS operation under post-accident conditions. The licensee entered this finding into their Corrective Action Program to correct the valve leakage limit.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, leakage approaching the procedural values would exceed analyzed dose calculations. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Non-Safety-Related Sub-Components Improperly Supplied with Safety-Related Valves

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion VII, “Control of Purchased Material, Equipment, and Services,” for the licensee’s failure to identify non-safety-related sub-components improperly supplied with safety-related valves. Specifically, ECCS/CS recirculation isolation valves CV-3027 and CV-3056, which were installed in 2007, were supplied with non-safety-related sub-components. These components were identified as non-safety-related on the vendor drawings. In addition, the licensee later installed a section of non-safety-related tubing on valve CV-3027 based on the incorrect vendor drawing. The licensee entered this finding into their Corrective Action Program to correct the valve drawings and replace the non-safety-related parts.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to identify non-safety-related sub-components improperly supplied with safety-related valves which would form part of the containment barrier under post-accident conditions. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of the licensee’s present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish an Adequate Test Program for the Shutdown Cooling Heat Exchangers

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” for the licensee’s failure to establish an adequate test program for the Shutdown Cooling (SDC) Heat Exchangers (HXs) to demonstrate they can perform as designed. Specifically, the licensee failed to take actions to ensure the SDC HXs’ heat transfer capability met its design bases, as assumed in design bases calculations.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to verify the SDC HXs heat transfer capability met their design bases, as assumed in design bases calculations, to limit containment temperatures and pressures during an event. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding had an associated cross-cutting aspect, Conservative Bias, in the Human Performance cross-cutting area. Specifically, on several occasions when the licensee identified the need to perform testing and/or inspection of the SDC HXs, the licensee did not take actions because they did not believe any regulatory requirements or technical issues existed that required the testing and/or inspections.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Sep 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Spent Fuel Pool Region II Criticality Analysis

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to follow procedure EN OP 104, "Operability Determination Process." Specifically, Operability Evaluation CR PLP 2013 04775 failed to include adequate technical information to support the basis for the reasonable expectation of operability, as required by Step 5.5.c of EN OP 104. On March 25, 2014, the licensee entered the NRC questions into the CAP as Assignments 6 and 7 of CR PLP 2013 04775, Issues Identified with Region II of SFP Criticality Analysis, with an initial due date of

April 8, 2014. Both Assignments 6 and 7 were ultimately closed in late April to a new Assignment 9, which was created to complete a revised Operability Evaluation. The licensee determined that contracted technical support was necessary to adequately evaluate the NRC concerns. At the end of the inspection period, the contracted evaluation effort was ongoing. Planned corrective actions included documenting the conclusions of the ongoing evaluation in a revised Operability Evaluation for CR PLP 2013 04775.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Configuration Control attribute of the Barrier Integrity Cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the Spent Fuel Pool (SFP) criticality analysis relied on certain physical conditions to maintain the effective neutron multiplication factor below 1.0, but actual physical conditions were not completely bounded by the existing criticality analysis. Because the inspectors answered 'No' to all of the SFP questions in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance. This finding was associated with a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area. Specifically, the licensee failed to collect and implement relevant external operating experience.

Inspection Report# : [2014004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance: **W** Oct 30, 2014

Identified By: NRC

Item Type: VIO Violation

Failure to Monitor the Highest Exposed Part of the Compartment When Using EDEX

The NRC identified one finding and two violations of NRC requirements associated with the replacement of Control Rod Drive (CRD) housings between February 6 and March 8, 2014. Specifically, the inspectors identified a violation of Title 10 of the Code of Federal Regulations (CFR) Part 20.1201, "Occupational Dose Limits for Adults," because the licensee failed to ensure that radiation worker dosimeters calibrated to the Deep Dose Equivalent (DDE) were located at the highest exposed portion of the respective compartment, a condition of the NRC-approved method for determining effective dose equivalent external (EDEX). The inspectors also identified a violation of Technical Specification 5.4 "Procedures," associated with this finding. Upon identification of this issue, the licensee suspended the use of EDEX and tungsten shield vests. The licensee re-calculated the dose received for the workers involved and updated the nuclear power industry's dose tracking system with the revised dose results. Additionally, a root cause evaluation was initiated under Condition Report CR-PLP-2014-04683.

The inspectors reviewed the guidance in IMC 0612, Appendix E, “Examples of Minor Issues,” and did not find any similar examples. The performance deficiency was determined to be of more than minor safety significance in accordance with IMC 0612 Appendix B, “Issue Screening,” because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that inaccurate radiation monitoring affects the licensee’s ability to control and limit radiation exposures. Therefore, the performance deficiency was a finding. The finding did not involve as-low-as-reasonably-achievable (ALARA) planning or work controls and there was no overexposure or substantial potential for an overexposure. However, the NRC determined that the licensee’s ability to assess dose was compromised. Consequently, the NRC concluded that the finding was of White safety significance. The finding had a cross-cutting characteristic in the area of human performance related to the cross-cutting aspect of change management, in that, the licensee’s procedures did not include all of the requirements for implementing EDEX when the methods were approved by the NRC and did not provide adequate guidance for the new tungsten shield vests.

Inspection Report# : [2014010](#) (pdf)

Inspection Report# : [2015007](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Follow Procedure Associated with Sealed Source Inventory and Leak Testing

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1 for the failure to maintain a sealed source inventory and perform leak tests required by station procedures. The inspectors identified multiple discrepancies with the records that were required to be maintained to demonstrate that sealed sources stored onsite were known by the radiation protection organization, the storage locations of the sealed sources were identified, and that select sources were leak tested to prevent the spread of radioactive contamination. This issue was entered into the licensee’s CAP as CR PLP 2014 02715, Issue with Control of Sources, dated April 22, 2014.

The inspectors determined that the failure to maintain an inventory of sources onsite and leak test sources was a finding of more than minor significance because, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the failure to ensure that the sources were free of external contamination could spread radioactive contamination, including alpha contamination, that was not readily detectable by personnel monitoring equipment, and could result in increased exposure to radiation. The finding was assessed using the Occupational Radiation Safety SDP and was determined to be of very low safety significance (Green) because the problem was not an as low as reasonably achievable (ALARA) planning issue; there was no overexposure, nor a substantial potential for an overexposure; and the licensee’s ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Self Assessment in the Problem Identification and Resolution area. Specifically, the licensee did not conduct a self critical and objective assessment of the program and practice

Inspection Report# : [2014003](#) (pdf)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Control of Entry into High Radiation Areas

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for unauthorized entries into high radiation areas (HRAs). Specifically, on January 30, 2014, a worker

replacing lights in lower containment received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On February 14, 2014, a worker entered the West Engineered Safeguards Room and received an electronic dosimeter dose rate alarm. The licensee's investigation concluded that the worker was in an area that was not discussed or authorized by radiation protection staff. On both occasions, workers changed the work plans after discussing the work plans with radiation protection staff.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into areas without knowledge of their radiological conditions placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Conservative Bias in the Human Performance area. Specifically, both workers decided to change the work plans after discussing the work plans with radiation protection staff and did not stop to consider whether the new work activity or location was safe
Inspection Report# : [2014003](#) (*pdf*)

Significance:  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Entries into High Radiation Areas without Required Dosimetry

The inspectors reviewed a self revealed finding of very low safety significance and an associated non-cited violation of TS 5.7.1 for entry into HRAs without a required monitoring device. On two separate occasions, two separate workers entered HRAs without the required dosimetry. Specifically, on February 11, 2014, a worker entered the 607' elevation of containment and entered areas with dose rates of 320 millirem (mR)/hour. The licensee's investigation determined that the worker left the required electronic alarming dosimeter (EAD) in the dress out area. Another worker found the EAD in the dress out area and notified radiation protection staff, who located and escorted the individual from containment. On February 22, 2014, a worker entered the West Engineered Safeguards Room with dose rates of 150 mR/hour. The licensee's investigation determined that the worker left the required EAD in the dress out area. The individual identified the missing EAD when undressing to leave the room.

The inspectors determined that the performance deficiency was more than minor because it impacted the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, worker entry into HRAs without alarming direct reading dosimetry placed them at increased risk for unnecessary radiation exposure. The finding was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. This finding was associated with the cross cutting aspect of Avoid Complacency in the Human Performance area. Specifically, the workers did not recognize and plan for possible mistakes and did not implement appropriate error reduction tools, such as self check, to ensure they were prepared to enter the HRA
Inspection Report# : [2014003](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Exam Security Issues

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 55.49, "Integrity of Examinations and Tests," which stated, "Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part." Specifically, Palisades placed personnel in the simulator operating booth that were not identified in the security agreement, placed the scenario turnover sheet for a second scenario in the simulator during the first scenario, and left a job performance measure turnover sheet in the simulator after the applicant left the simulator and brought the next applicant into the simulator. This issue was entered into the licensee's CAP as CR PLP 2014 02533, Issues Were Identified During the Annual Exam Administered on April 10, 2014, dated April 10, 2014.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to become a more significant safety concern. Specifically, the failure to properly control operational examination material in a manner in which applicants were not prematurely exposed to the material provided opportunities to compromise the examination. The finding was screened as one of very low safety significance (Green) in accordance with IMC 0609, Appendix I, "Licensed Operator Requalification SDP." This finding was associated with the cross cutting aspect of Procedure Adherence in the Human Performance area (H.8).

Inspection Report# : [2014003](#) (*pdf*)

Significance: N/A Jun 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Notify the NRC Within 30 Days of Discovering Changes in Medical Conditions

A Severity Level IV non-cited violation of 10 CFR 50.74, "Notification of Change in Operator or Senior Operator Status," was identified by the inspectors during a review of licensed operator medical records. Specifically, Palisades did not notify the NRC within 30 days of discovering a change in medical condition for a licensed operator. Subsequently, the licensee submitted the required notification for the operator on April 11, 2014, and entered the issue into their CAP as CR PLP 2014 02518, NRC Informed the Palisades Training Department that an NRC Form 396 was Not Submitted, dated April 10, 2014.

The inspectors determined that Traditional Enforcement applied because a failure to make a required report impacted the regulatory process. Specifically, the licensee had not notified the NRC within 30 days of learning of a change in

medical condition for a licensed operator for which a license condition was required. Based on Example 6.9.d.1 of the NRC's Enforcement Policy, the inspectors determined that the issue represented a Severity Level IV violation. No associated Reactor Oversight Process finding was identified, thus there was no associated cross-cutting aspect.

Inspection Report# : [2014003](#) (*pdf*)

Last modified : June 16, 2015

Palisades

3Q/2015 Plant Inspection Findings

Initiating Events

Significance:  Aug 19, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Operability Evaluation Not Performed in Accordance with Station Procedure (Section 1R15)

Green. An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified for the licensee’s failure to adhere to the site procedure for performing operability determinations during the evaluation of a nonconforming condition associated with nine primary coolant system (PCS) welds susceptible to primary water stress corrosion cracking (PWSCC). The licensee’s corrective actions for this finding included completion of an operability determination in accordance with the site operability procedure to include a new analysis which demonstrated the AMSE Code acceptance criteria would continue to be met for the affected welds during the remainder of the operating cycle. The licensee entered the failure to comply with the operability procedure into the CAP (CR PLP-2015-03434).

This finding was determined to be more than minor because it was similar to the “not minor if” aspect of Example 3j in IMC 0612, Appendix E, “Example of Minor Issues,” because the errors in operability evaluation CA-1 of CR-PLP-2015-01239 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the “minor because” aspect of this example since the impact of the errors on the operability evaluation was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Table 3, for the Initiating Events Cornerstone and IMC 0609, Appendix A, “The SDP for Findings At-Power.” Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered “No” to questions A.1 and A.2, of Exhibit 1, “Initiating Events Screening Questions,” identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in Evaluation for the Problem Identification and Resolution cross-cutting area since the licensee failed to thoroughly evaluate the impact on operability of a nonconforming condition associated with nine PCS welds susceptible to PWSCC [IMC 310, Item P.2]. (Section 1R15)

Inspection Report# : [2015012](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Leads to primary Coolant Pump Seal Degradation

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1(a) was self-revealed when the ‘C’ primary coolant pump (PCP) seal degraded as a result of an inadequate maintenance procedure. Specifically, maintenance procedure PCS-M-54, “N-9000 Primary Coolant Pump Shaft Seal Assembly,” did not identify critical steps in the assembly of the PCP seal and, as a result, the work activity was not adequately controlled.

This issue was entered into the licensee's Corrective Action Program (CAP) as CR-PLP-2014-03495, Planned Outage Required Due to Two Stages of the Primary Coolant Pump P 50C Seal Not Performing as Expected, dated June 21, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the 'C' PCP seal was not correctly assembled or installed during refueling outage (RFO) 1R23, which resulted in premature seal degradation. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst (SRA) using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Palisades Standardized Plant Analysis Risk (SPAR) model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Work Management component of the Human Performance cross-cutting area. Specifically, the licensee did not effectively screen the PCP seal assembly through the work management process to identify that it should have been classified as a critical maintenance activity. In addition, insufficient emphasis was placed on in-field vendor oversight during work execution.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Determine the Cause of Head Penetration Nozzle J-Groove Weld Cracking (Section 40A2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of Title 10, Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to establish measures to assure that the cause of the ultrasonic examination leakage path indications and crack indications identified in the J-groove welds of the reactor pressure vessel head penetration nozzles 29 and 30 (a significant condition adverse to quality) was determined. Specifically, the licensee did not complete adequate causal investigations to assure the cause of this significant condition adverse to quality was determined. The licensee entered this issue into the Corrective Action Program (CAP), and initiated an action to conduct a root cause investigation for this issue.

The issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. The inspector also answered "Yes" to the more than minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern?" Specifically, the inspector determined that this issue was more than minor because, if left uncorrected, the licensee would have reduced the frequency of reactor vessel head nozzle penetration examinations which could result in the failure to detect primary water stress corrosion cracking (PWSCC). Undetected PWSCC could increase the risk for through-wall leakage and design basis events such as a loss-of-coolant accident (LOCA). The inspector determined that the finding was of very-low safety significance based on answering "No" to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. Although this performance deficiency occurred more than 10 years ago, it was representative of current licensee performance because in the November 19, 2014, Licensee Event Report Cancellation Letter, the licensee again failed to assure that the cause of the reactor pressure vessel nozzle crack indications in the J-groove welds was determined. Therefore, the finding had a

cross-cutting aspect in the area of Problem Identification and Resolution because the licensee failed to assure the cause was determined for the reactor pressure vessel nozzle crack indications in the J-groove welds, and this decision was not consistent with an organization that thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance (IMC 310-Item P.2). (Section 4OA2.1.b(1))

Inspection Report# : [2015009](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Unqualified Non-Destructive Examinations of J-Groove Welds 29 and 30 (Section 4OA2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion IX “Control of Special Processes,” for the licensee’s failure to use qualified personnel and procedures for the dye penetrant (PT) examinations of the J-groove welds at nozzles 29 and 30 used to characterize crack indications. Consequently, no quality records existed to validate or confirm the size or extent of the cracking identified in these welds. The licensee documented the use of the unqualified PT examination for characterizing the reactor pressure vessel nozzle J-groove weld cracks in the CAP, and was developing corrective actions at the conclusion of the inspection.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. Further, if left uncorrected, it would become a more significant issue. Specifically, the licensee had based the risk evaluation of the nozzle cracking on the results of the unqualified PT examination, and if this result was not correct, the risk significance of past plant operation with these cracks may have been greater than assumed. Additionally, the licensee had considered the results from this PT examination, as part of the evaluations identified in their November 19, 2014, letter that concluded the flaws identified were caused by embedded weld defects, and not PWSCC. Based upon this revised cause determination, the licensee had elected to reduce the scheduled vessel head examinations, and this reduced inspection schedule may not be adequate to identify PWSCC prior to experiencing a through-wall leak. The inspectors determined that the finding was of very low safety significance based on answering “No” to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. The finding did not have a cross-cutting aspect because it was not indicative of current licensee performance due to the age of the performance deficiency. (Section 4OA2.1.b(2)).

Inspection Report# : [2015009](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Include the Degraded Voltage Channel Time Delay in TS Surveillance Requirement 3.3.5.2a

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR Part 50.36(c)(3), “Surveillance Requirements,” for the failure to ensure the channel time delay for the degraded-voltage monitor was included in Technical Specification (TS) Surveillance Requirement (SR) 3.3.5.2.a.

Specifically, the licensee failed to include in the TS SR the required time delay after the voltage relay trips before the preferred source of power is isolated and 1E electrical loads transferred to the stand-by Emergency Diesel Generators (EDGs). This finding was entered into the licensee's Corrective Action Program and the licensee's preliminary verification determined the degraded voltage monitors were still operable but degraded or non-conforming.

The performance deficiency was determined to be more than minor because if left uncorrected, it would have the potential to lead to more significant safety concern. Specifically, by not incorporating the total time delay requirements into the Technical Specifications, (TS) the time could be changed without going through the TS change process, possibly leading to spurious trips of offsite power sources or possibly exceeding the accident analysis time is the FSAR. The inspectors determined the finding was of very low safety significance (Green) because it did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Take Appropriate Corrective Action for the Charging System While in Maintenance Rule (a)(1) Status

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR) 50.65(a)(1) was identified for the failure to take appropriate corrective actions for the charging system, while in Maintenance Rule (a)(1) status, when performance or condition goals were not met. Specifically, on April 2, 2015, the front cap of the 'B' charging pump cracked, causing volume control tank (VCT) level and pressure to lower, most likely due to excessive local cavity pressures in the pump caused by the suction accumulator pressure being out of specification. Accumulator pressures being out of specification, which causes pressure oscillations and vibrations in the charging pumps and their associated suction and discharge piping, was a similar cause to previous maintenance rule system functional failures that occurred in 2013 and 2014, which transitioned the system to (a)(1) status in July 2014. The licensee documented the issue in their corrective action program (CAP), conducted an equipment apparent cause evaluation (EACE) for the most recent failure, and revised the Maintenance Rule (a)(1) Action Plan to address the on going issues with the suction and discharge accumulators.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The charging system provides the critical safety functions of pressure and inventory control in the emergency operating procedures. The finding screened as having very low safety significance (i.e., Green) based on answering "No" to all the screening questions under the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of the significance determination process (SDP). The finding had a cross-cutting aspect of Evaluation in the Problem Identification and Resolution area. Specifically, the organization did not thoroughly evaluate previous data on the suction and discharge accumulators pressures being out of specification and what affect that may have on the system. Also, when the accumulator pressures were found out of specification, sometimes that information was not documented in condition reports (CRs), nor were the preventive maintenance (PM) frequencies re evaluated in a technical and rigorous manner to ensure the

correct PM activities were being conducted on these components in a timely manner to assure system reliability

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Apr 17, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Assess the Suppression System in the Cable Spreading Room in the Probabilistic Risk Assessment for NFPA 805 (Section 1R05.3b)

Green. The inspectors identified a finding of very-low safety significance, and an associated NCV of Title 10, Code of Federal Regulations (CFR) 50.48(c), and National Fire Protection Association Standard 805, Section 2.4.3.3 for the licensee's failure to correctly model the as-built plant in the Fire Probabilistic Risk Assessment (PRA). Specifically, the licensee credited the suppression system located in the cable spreading room in the PRA to suppress type 2 fire scenarios, whereas the actual room contained numerous obstructions due to the stacked cable trays located near the ceiling that interfered with the water spray pattern discharged from the sprinklers. These obstructions could have prevented the suppression system from providing an adequate water density pattern to suppress a fire below the cable trays in areas which contained electrical panels.

The inspectors determined that the performance deficiency was more than minor because the finding, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, the licensee's failure to correctly model/analyze the as-built condition of the suppression system located in the cable spreading room in the PRA could potentially affect the risk associated with a fire in the room, and could result in inappropriately screening out the effects of other changes associated with the fire area. Appendix M was used because the existing SDP Appendices do not adequately address the risk of performance deficiencies associated with licensees' PRAs. The Senior Reactor Analyst concluded that the finding was of very-low safety significance (Green) because while there may be a change to the plant's baseline risk as a result of this issue, there is no delta plant risk due to a deficiency in the licensee's PRA model/analysis. This finding has a cross-cutting aspect in the area of Human Performance associated with Team Work because the licensee did not communicate and coordinate activities between the PRA and the fire protection groups. [H.4]

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Results in Failure of Component Cooling Water Pump

A finding of very low safety significance and an associated NCV of TS 5.4.1(a) was self-revealed on January 6, 2015, after the licensee identified smoke coming from the 'C' component cooling water (CCW) pump (P-52C) as a result of incorrect assembly of the inboard pump bearing in December 2014, due to an inadequate maintenance procedure. This issue was entered into the licensee's CAP as CR-PLP-2015-00063, Workers Reported Smoke Coming from Shaft of P-52C, dated January 6, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Standiardized Plant Analysis Risk model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, plant

staff accepted the practice of bending the 'C' CCW pump oiler nipple to achieve proper level when the oiler could not be properly aligned which compensated for, rather than corrected, an underlying issue of improper alignment when tightening the alignment pin.

Inspection Report# : [2015001](#) (pdf)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inoperability of Safety Injection Tank Due to Long-Term Leakage

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors when licensee personnel failed to assure that leakage out of the 'B' safety injection tank (SIT), a condition adverse to quality, was corrected in a timely manner. Specifically, although minor water leakage out of the 'B' SIT had been occurring since at least 2010, the licensee had not corrected the leakage despite several plant outages that provided an opportunity to address the issue. This issue was entered into the licensee's CAP as CR-PLP-2014-04861, B SIT Declared Inoperable Due to Reaching Technical Specification Low Level Setpoint, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the leakage out of the 'B' SIT resulted in unexpected inoperability of the tank on October 7, 2014. The finding was determined to be of very low safety significance based on answering "No" to the screening questions in Exhibit 2.A, Mitigating Systems Screening Questions. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, over time the licensee became confident that the long-term leakage out of the 'B' SIT was minor and could be managed without an impact to equipment operability, which proved to be incorrect when the minor leakage resulted in 'B' SIT inoperability on October 7, 2014.

Inspection Report# : [2015001](#) (pdf)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Verify the Adequacy of Credited High Energy Line Break Barriers

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors when the licensee credited fire doors for High Energy Line Break (HELB) protection without a supporting test or evaluation. Specifically, Procedure 4.02 credited fire doors with protection of safety-related equipment against a HELB when the primary HELB barrier was disabled without a test or evaluation to demonstrate the doors could withstand the HELB environment. This issue was entered into the licensee's Corrective Action Program as CR-PLP-2015-00371, NRC Concerns with Calculation EA-PSA-CCW-HELB-02-17, dated January 22, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not have an evaluation to demonstrate that barriers relied upon to protect mitigating systems from a HELB initiating event could perform the credited protection function. The inspectors answered "No" to the questions in Exhibit 2.A, Mitigating Systems Screening Questions, and as a result determined the issue was of very low safety significance. This finding was not associated with a cross-cutting aspect since the

calculation in question was created in 2003 and therefore did not represent current performance.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, “2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments,” Revision 34. This issue was entered into the licensee’s CAP as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: FIN Finding

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, “2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments,” Revision 34. This issue was entered into the licensee’s Corrective Action Program as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the change that was implemented adversely affected the seismic qualification of the electrical circuit that was relied upon to ensure safety bus 1C would be loaded by the 1-1 DG upon a loss of offsite power. The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance. This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee did not use all

available information and relevant guidance, such as Nuclear Energy Institute 96–07, to demonstrate that the proposed activity was safe and did not require a license amendment prior to implementation.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Follow Procedure for Storage of Equipment in the Vicinity of Safety-Related Equipment

The inspectors identified a finding of very low safety significance (Green) with an associated non-cited violation of Technical Specification (TS) 5.4.1, Procedures and Programs, for the failure to follow site procedures covering the storage of material in the vicinity of safety-related equipment. Specifically, on three occasions the inspectors identified ladders at ladder station 42 in the 590' elevation of the component cooling water room that were either in contact with safety-related equipment or were capable of toppling into safety-related equipment. For immediate corrective actions, licensee personnel properly stored the ladder after each issue was identified by the inspectors. This issue is documented in the licensee's corrective action program (CAP) as Condition Report CR-PLP-2015-00126.

The performance deficiency was determined to be more than minor based on Inspection Manual Chapter (IMC) 0612, Appendix E, Example 4.a, which determined that low-level procedural errors without a safety consequence are more than minor when they become a repetitive/routine occurrence. Specifically, unrestrained ladders could impact safety-related equipment during a design basis seismic event. The inspectors evaluated the significance of the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings." In accordance with Table 2, the finding was determined

to affect the Mitigating Systems Cornerstone. The inspectors answered 'No' to the questions in Table 3 and continued the significance evaluation in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The inspectors answered 'No' to the Mitigating Systems Screening Questions contained in Exhibit 2 and determined the finding was of very low safety significance (Green). This finding was associated with a cross-cutting aspect of Identification in the Problem Identification and Resolution cross-cutting area (P1).

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure Engineered Safeguards Systems Aren't Adversely Affected By Air Entrainment

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the failure to ensure the safety-related Engineered Safeguard Systems trains would not be adversely affected by air entrainment when aligned to the Safety Injection and Refueling Water (SIRW) Tank. Specifically, calculation EA-C-PAL-0877D, assumed incorrectly only one train of the Engineered Safeguards System (ESS) was in operation when evaluating if the SIRW Tank reaches the limit for critical submergence during a tank drawdown. As part of their corrective actions, the licensee re-evaluated the scenarios of concern, performed an operability evaluation, and implemented compensatory actions.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, air entrainment into the ESS systems could potentially impact the operability of the system by air binding the pumps, reduce discharge flow, discharge pressure and/or delay injection. The inspectors determined the finding was of very low safety significance (Green) because the finding was a deficiency affecting the

design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Undersized Supply Cables from Startup Transformer to 2400V Buses

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure the incoming feeder cables from startup transformer 1-2 to 2400 V safety related Buses 1C and 1D were sized in accordance with their design basis, as described in Palisades FSAR Section 8.5.2. Specifically, the licensee failed to ensure the ampacity of the cables was at least as high as their maximum steady-state current. The licensee entered this finding into their Correction Action Program and verified the operability of the cables.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, cables were undersized with respect to the loading that would automatically occur as the result of a design basis accident. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee did not ensure that equipment is operated and maintained within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Undersized Motors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure electric motors are sized in accordance with the design basis, as discussed in Palisades FSAR Section 6.2.3.1. Specifically, the horsepower ratings of certain motors are less than power demands of their driven equipment, and they were not analyzed to ensure overheating would not occur. The licensee entered this finding into their Correction Action Program with a recommended action to analyze the effect of the condition, and has verified the operability of the motors.

This performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, motors serving loads with power demands in excess of the motor horsepower ratings were not analyzed to ensure that motor damage would not occur. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee failed to ensure that equipment is operated within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure that 480V System Voltages do not Exceed Equipment Ratings

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure that voltages on the 480V system do not exceed equipment ratings. Specifically, the licensee increased the output voltage of the supply transformers to the 480V safety-related buses by 2.5 percent, but failed to ensure the resulting voltages would not exceed equipment ratings when the system is powered from the station power transformer or emergency diesel generator. The licensee entered this finding into their Correction Action Program and verified the operability of the affected equipment.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to verify or check the voltage increase on the 480V system to ensure the maximum allowable voltage would not exceed equipment ratings. The inspectors determined the finding was of very low safety significance (Green) because the affected SSCs maintained their operability and functionality. The inspectors did not identify a cross-cutting aspect associated with this finding, because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Comprehensive Pump Testing of Containment Spray Pump P-54A in Accordance with the Inservice Testing Program

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of Technical Specifications 5.5.7, "Inservice Testing Program," for the failure to perform comprehensive pump testing of Containment Spray Pump P-54A in accordance with the code of record. Specifically, the licensee did not rerun a comprehensive pump test, as required by the code's ISTB-6300 "Systematic Error" section. As part of their corrective actions, the licensee entered the issue into the Corrective Action Program, and determined the component remained operable.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failing to perform testing as required could result in the degradation of the equipment being undetected. The finding screened as having very low safety significance because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The findings had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the licensee failed to thoroughly evaluate the issue to ensure that resolutions address causes and extents of conditions commensurate with their safety significance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Non-Conservative Surveillance for Emergency Diesel Generator Largest Load Reject Test

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to have adequate acceptance criteria in the emergency diesel generator surveillance procedures. Specifically, the licensee failed to ensure the surveillance test procedures for the emergency diesel generator largest load rejection test bounded the power demand of the largest load, as required by Technical Specification SR 3.8.1.5. The licensee entered this finding into their Correction Action Program and verified the operability of the emergency diesel generators.

The performance deficiency was determined to be more than minor, because it impacted the Procedure Quality attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the surveillance procedure error could result in acceptance of test results that did not satisfy Technical Specification SR 3.8.1.5 for rejection of a load greater than or equal to the emergency diesel generator's single largest predicted post-accident load. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a cross-cutting aspect in the area of Human Performance, associated with the Resources component, because the licensee failed to ensure that personnel, equipment, procedures, and other resources are adequate to assure nuclear safety by maintaining long term plant safety.

Inspection Report# : [2014008](#) (*pdf*)

Barrier Integrity

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Translate Valve Leakage Limits into Test Procedure

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate design valve leakage limits into the applicable test procedure. Specifically, the acceptance criterion for emergency core cooling system (ECCS)/containment spray (CS) recirculation isolation valves CV-3027 and CV-3056 had not been correctly adjusted to account for the higher differential pressure associated with ECCS operation under post-accident conditions. The licensee entered this finding into their Corrective Action Program to correct the valve leakage limit.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, leakage approaching the procedural values would exceed analyzed dose calculations. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Non-Safety-Related Sub-Components Improperly Supplied with Safety-Related Valves

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," for the licensee's failure to identify non-safety-related

sub-components improperly supplied with safety-related valves. Specifically, ECCS/CS recirculation isolation valves CV-3027 and CV-3056, which were installed in 2007, were supplied with non-safety-related sub-components. These components were identified as non-safety-related on the vendor drawings. In addition, the licensee later installed a section of non-safety-related tubing on valve CV-3027 based on the incorrect vendor drawing. The licensee entered this finding into their Corrective Action Program to correct the valve drawings and replace the non-safety-related parts.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to identify non-safety-related sub-components improperly supplied with safety-related valves which would form part of the containment barrier under post-accident conditions. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish an Adequate Test Program for the Shutdown Cooling Heat Exchangers

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to establish an adequate test program for the Shutdown Cooling (SDC) Heat Exchangers (HXs) to demonstrate they can perform as designed. Specifically, the licensee failed to take actions to ensure the SDC HXs' heat transfer capability met its design bases, as assumed in design bases calculations.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to verify the SDC HXs heat transfer capability met their design bases, as assumed in design bases calculations, to limit containment temperatures and pressures during an event. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding had an associated cross-cutting aspect, Conservative Bias, in the Human Performance cross-cutting area. Specifically, on several occasions when the licensee identified the need to perform testing and/or inspection of the SDC HXs, the licensee did not take actions because they did not believe any regulatory requirements or technical issues existed that required the testing and/or inspections.

Inspection Report# : [2014008](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Wear Prescribed Respiratory Protection

A self revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified for insulation work activities during the refueling outage associated with pressurizer spray valve CV-1057. Specifically, prior to the work beginning, the licensee determined that the use of powered air purifying respirators would be required to minimize worker dose and maintain exposures as low as reasonably achievable (ALARA), but the work was performed using only face shields, and as a result a worker was contaminated externally and internally. Corrective actions included creation of an administrative requirement to revise any radiation work permit (RWP) task that required respiratory protection to more clearly state the requirements.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Program and Process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the failure to wear required respiratory protection during the reinsulating of CV-1057 resulted in personal contamination and the intake of radioactive material. The inspectors concluded that the radiological hazards had the potential to result in higher exposures to the individuals had the circumstances been slightly altered. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," because it was not an ALARA planning issue, there was neither an overexposure nor a substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The inspectors concluded that the cause of the issue involved a cross cutting aspect in the area of Human Performance, Basis for Decisions. Specifically, the bases for operational decisions were communicated in a timely manner.

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Oct 30, 2014

Identified By: NRC

Item Type: VIO Violation

Failure to Monitor the Highest Exposed Part of the Compartment When Using EDEX

The NRC identified one finding and two violations of NRC requirements associated with the replacement of Control Rod Drive (CRD) housings between February 6 and March 8, 2014. Specifically, the inspectors identified a violation of Title 10 of the Code of Federal Regulations (CFR) Part 20.1201, "Occupational Dose Limits for Adults," because the licensee failed to ensure that radiation worker dosimeters calibrated to the Deep Dose Equivalent (DDE) were located at the highest exposed portion of the respective compartment, a condition of the NRC-approved method for determining effective dose equivalent external (EDEX). The inspectors also identified a violation of Technical Specification 5.4 "Procedures," associated with this finding. Upon identification of this issue, the licensee suspended the use of EDEX and tungsten shield vests. The licensee re-calculated the dose received for the workers involved and updated the nuclear power industry's dose tracking system with the revised dose results. Additionally, a root cause

evaluation was initiated under Condition Report CR-PLP-2014-04683.

The inspectors reviewed the guidance in IMC 0612, Appendix E, “Examples of Minor Issues,” and did not find any similar examples. The performance deficiency was determined to be of more than minor safety significance in accordance with IMC 0612 Appendix B, “Issue Screening,” because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that inaccurate radiation monitoring affects the licensee’s ability to control and limit radiation exposures. Therefore, the performance deficiency was a finding. The finding did not involve as-low-as-reasonably-achievable (ALARA) planning or work controls and there was no overexposure or substantial potential for an overexposure. However, the NRC determined that the licensee’s ability to assess dose was compromised. Consequently, the NRC concluded that the finding was of White safety significance. The finding had a cross-cutting characteristic in the area of human performance related to the cross-cutting aspect of change management, in that, the licensee's procedures did not include all of the requirements for implementing EDEX when the methods were approved by the NRC and did not provide adequate guidance for the new tungsten shield vests.

Inspection Report# : [2014010](#) (*pdf*)

Inspection Report# : [2015007](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : October 19, 2015

Palisades

3Q/2015 Plant Inspection Findings

Initiating Events

Significance:  Aug 19, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Operability Evaluation Not Performed in Accordance with Station Procedure (Section 1R15)

Green. An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified for the licensee’s failure to adhere to the site procedure for performing operability determinations during the evaluation of a nonconforming condition associated with nine primary coolant system (PCS) welds susceptible to primary water stress corrosion cracking (PWSCC). The licensee’s corrective actions for this finding included completion of an operability determination in accordance with the site operability procedure to include a new analysis which demonstrated the AMSE Code acceptance criteria would continue to be met for the affected welds during the remainder of the operating cycle. The licensee entered the failure to comply with the operability procedure into the CAP (CR PLP-2015-03434).

This finding was determined to be more than minor because it was similar to the “not minor if” aspect of Example 3j in IMC 0612, Appendix E, “Example of Minor Issues,” because the errors in operability evaluation CA-1 of CR-PLP-2015-01239 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the “minor because” aspect of this example since the impact of the errors on the operability evaluation was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Table 3, for the Initiating Events Cornerstone and IMC 0609, Appendix A, “The SDP for Findings At-Power.” Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered “No” to questions A.1 and A.2, of Exhibit 1, “Initiating Events Screening Questions,” identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in Evaluation for the Problem Identification and Resolution cross-cutting area since the licensee failed to thoroughly evaluate the impact on operability of a nonconforming condition associated with nine PCS welds susceptible to PWSCC [IMC 310, Item P.2]. (Section 1R15)

Inspection Report# : [2015012](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Leads to primary Coolant Pump Seal Degradation

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1(a) was self-revealed when the ‘C’ primary coolant pump (PCP) seal degraded as a result of an inadequate maintenance procedure. Specifically, maintenance procedure PCS-M-54, “N-9000 Primary Coolant Pump Shaft Seal Assembly,” did not identify critical steps in the assembly of the PCP seal and, as a result, the work activity was not adequately controlled.

This issue was entered into the licensee's Corrective Action Program (CAP) as CR-PLP-2014-03495, Planned Outage Required Due to Two Stages of the Primary Coolant Pump P 50C Seal Not Performing as Expected, dated June 21, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the 'C' PCP seal was not correctly assembled or installed during refueling outage (RFO) 1R23, which resulted in premature seal degradation. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst (SRA) using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Palisades Standardized Plant Analysis Risk (SPAR) model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Work Management component of the Human Performance cross-cutting area. Specifically, the licensee did not effectively screen the PCP seal assembly through the work management process to identify that it should have been classified as a critical maintenance activity. In addition, insufficient emphasis was placed on in-field vendor oversight during work execution.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Determine the Cause of Head Penetration Nozzle J-Groove Weld Cracking (Section 40A2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of Title 10, Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to establish measures to assure that the cause of the ultrasonic examination leakage path indications and crack indications identified in the J-groove welds of the reactor pressure vessel head penetration nozzles 29 and 30 (a significant condition adverse to quality) was determined. Specifically, the licensee did not complete adequate causal investigations to assure the cause of this significant condition adverse to quality was determined. The licensee entered this issue into the Corrective Action Program (CAP), and initiated an action to conduct a root cause investigation for this issue.

The issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. The inspector also answered "Yes" to the more than minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern?" Specifically, the inspector determined that this issue was more than minor because, if left uncorrected, the licensee would have reduced the frequency of reactor vessel head nozzle penetration examinations which could result in the failure to detect primary water stress corrosion cracking (PWSCC). Undetected PWSCC could increase the risk for through-wall leakage and design basis events such as a loss-of-coolant accident (LOCA). The inspector determined that the finding was of very-low safety significance based on answering "No" to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. Although this performance deficiency occurred more than 10 years ago, it was representative of current licensee performance because in the November 19, 2014, Licensee Event Report Cancellation Letter, the licensee again failed to assure that the cause of the reactor pressure vessel nozzle crack indications in the J-groove welds was determined. Therefore, the finding had a

cross-cutting aspect in the area of Problem Identification and Resolution because the licensee failed to assure the cause was determined for the reactor pressure vessel nozzle crack indications in the J-groove welds, and this decision was not consistent with an organization that thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance

(IMC 310-Item P.2). (Section 4OA2.1.b(1))

Inspection Report# : [2015009](#) (pdf)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Unqualified Non-Destructive Examinations of J-Groove Welds 29 and 30 (Section 4OA2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion IX “Control of Special Processes,” for the licensee’s failure to use qualified personnel and procedures for the dye penetrant (PT) examinations of the J-groove welds at nozzles 29 and 30 used to characterize crack indications. Consequently, no quality records existed to validate or confirm the size or extent of the cracking identified in these welds. The licensee documented the use of the unqualified PT examination for characterizing the reactor pressure vessel nozzle J-groove weld cracks in the CAP, and was developing corrective actions at the conclusion of the inspection.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. Further, if left uncorrected, it would become a more significant issue. Specifically, the licensee had based the risk evaluation of the nozzle cracking on the results of the unqualified PT examination, and if this result was not correct, the risk significance of past plant operation with these cracks may have been greater than assumed. Additionally, the licensee had considered the results from this PT examination, as part of the evaluations identified in their November 19, 2014, letter that concluded the flaws identified were caused by embedded weld defects, and not PWSCC. Based upon this revised cause determination, the licensee had elected to reduce the scheduled vessel head examinations, and this reduced inspection schedule may not be adequate to identify PWSCC prior to experiencing a through-wall leak. The inspectors determined that the finding was of very low safety significance based on answering “No” to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. The finding did not have a cross-cutting aspect because it was not indicative of current licensee performance due to the age of the performance deficiency.

(Section 4OA2.1.b(2)).

Inspection Report# : [2015009](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Include the Degraded Voltage Channel Time Delay in TS Surveillance Requirement 3.3.5.2a

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR Part 50.36(c)(3), “Surveillance Requirements,” for the failure to ensure the channel time delay for the degraded-voltage monitor was included in Technical Specification (TS) Surveillance Requirement (SR) 3.3.5.2.a.

Specifically, the licensee failed to include in the TS SR the required time delay after the voltage relay trips before the preferred source of power is isolated and 1E electrical loads transferred to the stand-by Emergency Diesel Generators (EDGs). This finding was entered into the licensee's Corrective Action Program and the licensee's preliminary verification determined the degraded voltage monitors were still operable but degraded or non-conforming.

The performance deficiency was determined to be more than minor because if left uncorrected, it would have the potential to lead to more significant safety concern. Specifically, by not incorporating the total time delay requirements into the Technical Specifications, (TS) the time could be changed without going through the TS change process, possibly leading to spurious trips of offsite power sources or possibly exceeding the accident analysis time is the FSAR. The inspectors determined the finding was of very low safety significance (Green) because it did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Justify Continued Service of Safety-Related Electrolytic Capacitors Installed Beyond Their Service Life

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to justify continued service of safety related electrolytic capacitors that were installed beyond their recommended service life associated with the safety related containment floor level indicating transmitters (LITs). Specifically, on June 21, 2015, containment floor LIT LIT-0446B and LIT-0446A did not satisfy the acceptance criteria of the technical specification surveillance monthly channel checks and LIT-0446B was declared inoperable. Further troubleshooting identified a failure of the electrolytic capacitor within the transmitter's converter module and that this failure was most likely due to age since the transmitter had been in service for greater than its recommended service life. In addition to entering this issue into their Corrective Action Program (CAP) as CR-PLP-2015-04972, the licensee replaced the failed components and planned to develop a replacement schedule for non critical, safety related electrolytic capacitors.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on answering "No" to all of the screening questions in the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of IMC 0609, Appendix A, "The Significance Determination Process for Findings At Power," Exhibit 1, "Mitigating Systems Screening Questions." The finding had a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area because the licensee did not effectively and thoroughly evaluate and implement relevant industry operating experience and guidance for age related electrolytic capacitor degradation

Inspection Report# : [2015003](#) (*pdf*)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Take Appropriate Corrective Action for the Charging System While in Maintenance Rule (a)(1) Status

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR) 50.65(a)(1) was identified for the failure to take appropriate corrective actions for the charging system, while in Maintenance Rule (a)(1) status, when performance or condition goals were not met. Specifically, on April 2, 2015, the front cap of the 'B' charging pump cracked, causing volume control tank (VCT) level and pressure to lower, most likely due to excessive local cavity pressures in the pump caused by the suction accumulator pressure being out of specification. Accumulator pressures being out of specification, which causes pressure oscillations and vibrations in the charging pumps and their associated suction and discharge piping, was a similar cause to previous maintenance rule system functional failures that occurred in 2013 and 2014, which transitioned the system to (a)(1) status in July 2014. The licensee documented the issue in their corrective action program (CAP), conducted an equipment apparent cause evaluation (EACE) for the most recent failure, and revised the Maintenance Rule (a)(1) Action Plan to address the on going issues with the suction and discharge accumulators.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The charging system provides the critical safety functions of pressure and inventory control in the emergency operating procedures. The finding screened as having very low safety significance (i.e., Green) based on answering "No" to all the screening questions under the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of the significance determination process (SDP). The finding had a cross-cutting aspect of Evaluation in the Problem Identification and Resolution area. Specifically, the organization did not thoroughly evaluate previous data on the suction and discharge accumulators pressures being out of specification and what affect that may have on the system. Also, when the accumulator pressures were found out of specification, sometimes that information was not documented in condition reports (CRs), nor were the preventive maintenance (PM) frequencies re evaluated in a technical and rigorous manner to ensure the correct PM activities were being conducted on these components in a timely manner to assure system reliability

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Apr 17, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Assess the Suppression System in the Cable Spreading Room in the Probabilistic Risk Assessment for NFPA 805 (Section 1R05.3b)

Green. The inspectors identified a finding of very-low safety significance, and an associated NCV of Title 10, Code of Federal Regulations (CFR) 50.48(c), and National Fire Protection Association Standard 805, Section 2.4.3.3 for the licensee's failure to correctly model the as-built plant in the Fire Probabilistic Risk Assessment (PRA). Specifically, the licensee credited the suppression system located in the cable spreading room in the PRA to suppress type 2 fire scenarios, whereas the actual room contained numerous obstructions due to the stacked cable trays located near the ceiling that interfered with the water spray pattern discharged from the sprinklers. These obstructions could have prevented the suppression system from providing an adequate water density pattern to suppress a fire below the cable trays in areas which contained electrical panels.

The inspectors determined that the performance deficiency was more than minor because the finding, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, the licensee's failure

to correctly model/analyze the as-built condition of the suppression system located in the cable spreading room in the PRA could potentially affect the risk associated with a fire in the room, and could result in inappropriately screening out the effects of other changes associated with the fire area. Appendix M was used because the existing SDP Appendices do not adequately address the risk of performance deficiencies associated with licensees' PRAs. The Senior Reactor Analyst concluded that the finding was of very-low safety significance (Green) because while there may be a change to the plant's baseline risk as a result of this issue, there is no delta plant risk due to a deficiency in the licensee's PRA model/analysis. This finding has a cross-cutting aspect in the area of Human Performance associated with Team Work because the licensee did not communicate and coordinate activities between the PRA and the fire protection groups. [H.4]

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Results in Failure of Component Cooling Water Pump

A finding of very low safety significance and an associated NCV of TS 5.4.1(a) was self-revealed on January 6, 2015, after the licensee identified smoke coming from the 'C' component cooling water (CCW) pump (P-52C) as a result of incorrect assembly of the inboard pump bearing in December 2014, due to an inadequate maintenance procedure. This issue was entered into the licensee's CAP as CR-PLP-2015-00063, Workers Reported Smoke Coming from Shaft of P-52C, dated January 6, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Standardized Plant Analysis Risk model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, plant staff accepted the practice of bending the 'C' CCW pump oiler nipple to achieve proper level when the oiler could not be properly aligned which compensated for, rather than corrected, an underlying issue of improper alignment when tightening the alignment pin.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inoperability of Safety Injection Tank Due to Long-Term Leakage

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors when licensee personnel failed to assure that leakage out of the 'B' safety injection tank (SIT), a condition adverse to quality, was corrected in a timely manner. Specifically, although minor water leakage out of the 'B' SIT had been occurring since at least 2010, the licensee had not corrected the leakage despite several plant outages that provided an opportunity to address the issue. This issue was entered into the licensee's CAP as CR-PLP-2014-04861, B SIT Declared Inoperable Due to Reaching Technical Specification Low Level Setpoint, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable

consequences. Specifically, the leakage out of the 'B' SIT resulted in unexpected inoperability of the tank on October 7, 2014. The finding was determined to be of very low safety significance based on answering "No" to the screening questions in Exhibit 2.A, Mitigating Systems Screening Questions. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, over time the licensee became confident that the long-term leakage out of the 'B' SIT was minor and could be managed without an impact to equipment operability, which proved to be incorrect when the minor leakage resulted in 'B' SIT inoperability on October 7, 2014.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Verify the Adequacy of Credited High Energy Line Break Barriers

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors when the licensee credited fire doors for High Energy Line Break (HELB) protection without a supporting test or evaluation. Specifically, Procedure 4.02 credited fire doors with protection of safety-related equipment against a HELB when the primary HELB barrier was disabled without a test or evaluation to demonstrate the doors could withstand the HELB environment. This issue was entered into the licensee's Corrective Action Program as CR-PLP-2015-00371, NRC Concerns with Calculation EA-PSA-CCW-HELB-02-17, dated January 22, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not have an evaluation to demonstrate that barriers relied upon to protect mitigating systems from a HELB initiating event could perform the credited protection function. The inspectors answered "No" to the questions in Exhibit 2.A, Mitigating Systems Screening Questions, and as a result determined the issue was of very low safety significance. This finding was not associated with a cross-cutting aspect since the calculation in question was created in 2003 and therefore did not represent current performance.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, "2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments," Revision 34. This issue was entered into the licensee's CAP as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as

Severity Level IV because the finding associated with this violation was determined to be of very low safety significance.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: FIN Finding

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, “2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments,” Revision 34. This issue was entered into the licensee’s Corrective Action Program as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the change that was implemented adversely affected the seismic qualification of the electrical circuit that was relied upon to ensure safety bus 1C would be loaded by the 1-1 DG upon a loss of offsite power. The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance. This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee did not use all available information and relevant guidance, such as Nuclear Energy Institute 96-07, to demonstrate that the proposed activity was safe and did not require a license amendment prior to implementation.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Follow Procedure for Storage of Equipment in the Vicinity of Safety-Related Equipment

The inspectors identified a finding of very low safety significance (Green) with an associated non-cited violation of Technical Specification (TS) 5.4.1, Procedures and Programs, for the failure to follow site procedures covering the storage of material in the vicinity of safety-related equipment. Specifically, on three occasions the inspectors identified ladders at ladder station 42 in the 590’ elevation of the component cooling water room that were either in contact with safety-related equipment or were capable of toppling into safety-related equipment. For immediate corrective actions, licensee personnel properly stored the ladder after each issue was identified by the inspectors. This issue is documented in the licensee’s corrective action program (CAP) as Condition Report CR-PLP-2015-00126.

The performance deficiency was determined to be more than minor based on Inspection Manual Chapter (IMC) 0612, Appendix E, Example 4.a, which determined that low-level procedural errors without a safety consequence are more than minor when they become a repetitive/routine occurrence. Specifically, unrestrained ladders could impact safety-

related equipment during a design basis seismic event. The inspectors evaluated the significance of the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings." In accordance with Table 2, the finding was determined

to affect the Mitigating Systems Cornerstone. The inspectors answered 'No' to the questions in Table 3 and continued the significance evaluation in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The inspectors answered 'No' to the Mitigating Systems Screening Questions contained in Exhibit 2 and determined the finding was of very low safety significance (Green). This finding was associated with a cross-cutting aspect of Identification in the Problem Identification and Resolution cross-cutting area (P1).

Inspection Report# : [2014005](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure Engineered Safeguards Systems Aren't Adversely Affected By Air Entrainment

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the failure to ensure the safety-related Engineered Safeguard Systems trains would not be adversely affected by air entrainment when aligned to the Safety Injection and Refueling Water (SIRW) Tank. Specifically, calculation EA-C-PAL-0877D, assumed incorrectly only one train of the Engineered Safeguards System (ESS) was in operation when evaluating if the SIRW Tank reaches the limit for critical submergence during a tank drawdown. As part of their corrective actions, the licensee re-evaluated the scenarios of concern, performed an operability evaluation, and implemented compensatory actions.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, air entrainment into the ESS systems could potentially impact the operability of the system by air binding the pumps, reduce discharge flow, discharge pressure and/or delay injection. The inspectors determined the finding was of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Undersized Supply Cables from Startup Transformer to 2400V Buses

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure the incoming feeder cables from startup transformer 1-2 to 2400 V safety related Buses 1C and 1D were sized in accordance with their design basis, as described in Palisades FSAR Section 8.5.2. Specifically, the licensee failed to ensure the ampacity of the cables was at least as high as their maximum steady-state current. The licensee entered this finding into their Correction Action Program and verified the operability of the cables.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, cables were undersized with respect to the loading that would automatically occur as the

result of a design basis accident. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee did not ensure that equipment is operated and maintained within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Undersized Motors

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure electric motors are sized in accordance with the design basis, as discussed in Palisades FSAR Section 6.2.3.1. Specifically, the horsepower ratings of certain motors are less than power demands of their driven equipment, and they were not analyzed to ensure overheating would not occur. The licensee entered this finding into their Correction Action Program with a recommended action to analyze the effect of the condition, and has verified the operability of the motors.

This performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, motors serving loads with power demands in excess of the motor horsepower ratings were not analyzed to ensure that motor damage would not occur. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a crosscutting aspect in the area of Human Performance, associated with the Design Margin component, because the licensee failed to ensure that equipment is operated within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure that 480V System Voltages do not Exceed Equipment Ratings

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to ensure that voltages on the 480V system do not exceed equipment ratings. Specifically, the licensee increased the output voltage of the supply transformers to the 480V safety-related buses by 2.5 percent, but failed to ensure the resulting voltages would not exceed equipment ratings when the system is powered from the station power transformer or emergency diesel generator. The licensee entered this finding into their Correction Action Program and verified the operability of the affected equipment.

The performance deficiency was determined to be more than minor, because it impacted the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to verify or check the voltage increase on the 480V system to ensure the maximum allowable voltage would not exceed equipment ratings. The inspectors determined the finding was of very low safety significance (Green) because the affected SSCs maintained their operability and functionality. The inspectors did not identify a cross-cutting aspect associated with this finding, because the finding was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Comprehensive Pump Testing of Containment Spray Pump P-54A in Accordance with the Inservice Testing Program

The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of Technical Specifications 5.5.7, "Inservice Testing Program," for the failure to perform comprehensive pump testing of Containment Spray Pump P-54A in accordance with the code of record. Specifically, the licensee did not rerun a comprehensive pump test, as required by the code's ISTB-6300 "Systematic Error" section. As part of their corrective actions, the licensee entered the issue into the Corrective Action Program, and determined the component remained operable.

The performance deficiency was determined to be more than minor because it impacted the Equipment Performance attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failing to perform testing as required could result in the degradation of the equipment being undetected. The finding screened as having very low safety significance because the finding was a deficiency affecting the design or qualification of a mitigating structure system or component (SSC) but the SSC maintained its operability. The findings had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because the licensee failed to thoroughly evaluate the issue to ensure that resolutions address causes and extents of conditions commensurate with their safety significance.

Inspection Report# : [2014008](#) (pdf)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Non-Conservative Surveillance for Emergency Diesel Generator Largest Load Reject Test

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to have adequate acceptance criteria in the emergency diesel generator surveillance procedures. Specifically, the licensee failed to ensure the surveillance test procedures for the emergency diesel generator largest load rejection test bounded the power demand of the largest load, as required by Technical Specification SR 3.8.1.5. The licensee entered this finding into their Correction Action Program and verified the operability of the emergency diesel generators.

The performance deficiency was determined to be more than minor, because it impacted the Procedure Quality attribute of the Reactor Safety, Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the surveillance procedure error could result in acceptance of test results that did not satisfy Technical Specification SR 3.8.1.5 for rejection of a load greater than or equal to the emergency diesel generator's single largest predicted post-accident load. The inspectors determined the finding was of very low safety significance (Green) because the SSC maintained its operability and functionality. This finding had a cross-cutting aspect in the area of Human Performance, associated with the Resources component, because the licensee failed to ensure that personnel, equipment, procedures, and other resources are adequate to assure nuclear safety by maintaining long term plant safety.

Inspection Report# : [2014008](#) (pdf)

Barrier Integrity

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Translate Valve Leakage Limits into Test Procedure

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate design valve leakage limits into the applicable test procedure. Specifically, the acceptance criterion for emergency core cooling system (ECCS)/containment spray (CS) recirculation isolation valves CV-3027 and CV-3056 had not been correctly adjusted to account for the higher differential pressure associated with ECCS operation under post-accident conditions. The licensee entered this finding into their Corrective Action Program to correct the valve leakage limit.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, leakage approaching the procedural values would exceed analyzed dose calculations. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Non-Safety-Related Sub-Components Improperly Supplied with Safety-Related Valves

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," for the licensee's failure to identify non-safety-related

sub-components improperly supplied with safety-related valves. Specifically, ECCS/CS recirculation isolation valves CV-3027 and CV-3056, which were installed in 2007, were supplied with non-safety-related sub-components. These components were identified as non-safety-related on the vendor drawings. In addition, the licensee later installed a section of non-safety-related tubing on valve CV-3027 based on the incorrect vendor drawing. The licensee entered this finding into their Corrective Action Program to correct the valve drawings and replace the non-safety-related parts.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to identify non-safety-related sub-components improperly supplied with safety-related valves which would form part of the containment barrier under post-accident conditions. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding did not have an associated cross-cutting aspect because it was not representative of the licensee's present performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Nov 04, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish an Adequate Test Program for the Shutdown Cooling Heat Exchangers

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” for the licensee’s failure to establish an adequate test program for the Shutdown Cooling (SDC) Heat Exchangers (HXs) to demonstrate they can perform as designed. Specifically, the licensee failed to take actions to ensure the SDC HXs’ heat transfer capability met its design bases, as assumed in design bases calculations.

The performance deficiency was determined to be more than minor because it impacted the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the associated cornerstone objective to provide reasonable assurance that containment could protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to verify the SDC HXs heat transfer capability met their design bases, as assumed in design bases calculations, to limit containment temperatures and pressures during an event. The finding screened as of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding had an associated cross-cutting aspect, Conservative Bias, in the Human Performance cross-cutting area. Specifically, on several occasions when the licensee identified the need to perform testing and/or inspection of the SDC HXs, the licensee did not take actions because they did not believe any regulatory requirements or technical issues existed that required the testing and/or inspections.

Inspection Report# : [2014008](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure To Establish, Implement, and Maintain the Offsite Dose Calculation Manual

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.5.1, “Offsite Dose Calculation Manual,” was identified for the failure to establish, implement, and maintain the Offsite Dose Calculation Manual (ODCM) relative to dose calculation parameters. Specifically, the licensee failed to modify the parameters used in public radiation calculations when changes in the use of unrestricted areas were identified. As a result, the quarterly and annual doses that were calculated every 31 days, as required by the ODCM, were incorrect and non conservative. In addition to entering this issue into their Corrective Action program (CAP) as CR–PLP–2015–2972, the licensee recalculated the dose using the correct calculation parameters.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," because the issue did not represent a significant deficiency in evaluating a planned or unplanned effluent release since the resulting dose was not grossly underestimated. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area because the licensee did not ensure adequate knowledge transfer to maintain a knowledgeable, technically competent workforce.

Inspection Report# : [2015003](#) (pdf)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Wear Prescribed Respiratory Protection

A self revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified for insulation work activities during the refueling outage associated with pressurizer spray valve CV-1057. Specifically, prior to the work beginning, the licensee determined that the use of powered air purifying respirators would be required to minimize worker dose and maintain exposures as low as reasonably achievable (ALARA), but the work was performed using only face shields, and as a result a worker was contaminated externally and internally. Corrective actions included creation of an administrative requirement to revise any radiation work permit (RWP) task that required respiratory protection to more clearly state the requirements.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Program and Process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the failure to wear required respiratory protection during the reinsulating of CV-1057 resulted in personal contamination and the intake of radioactive material. The inspectors concluded that the radiological hazards had the potential to result in higher exposures to the individuals had the circumstances been slightly altered. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," because it was not an ALARA planning issue, there was neither an overexposure nor a substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The inspectors concluded that the cause of the issue involved a cross cutting aspect in the area of Human Performance, Basis for Decisions. Specifically, the bases for operational decisions were communicated in a timely manner.

Inspection Report# : [2015002](#) (pdf)

Significance:  Oct 30, 2014

Identified By: NRC

Item Type: VIO Violation

Failure to Monitor the Highest Exposed Part of the Compartment When Using EDEX

The NRC identified one finding and two violations of NRC requirements associated with the replacement of Control Rod Drive (CRD) housings between February 6 and March 8, 2014. Specifically, the inspectors identified a violation of Title 10 of the Code of Federal Regulations (CFR) Part 20.1201, "Occupational Dose Limits for Adults," because the licensee failed to ensure that radiation worker dosimeters calibrated to the Deep Dose Equivalent (DDE) were located at the highest exposed portion of the respective compartment, a condition of the NRC-approved method for determining effective dose equivalent external (EDEX). The inspectors also identified a violation of Technical Specification 5.4 "Procedures," associated with this finding. Upon identification of this issue, the licensee suspended

the use of EDEX and tungsten shield vests. The licensee re-calculated the dose received for the workers involved and updated the nuclear power industry's dose tracking system with the revised dose results. Additionally, a root cause evaluation was initiated under Condition Report CR-PLP-2014-04683.

The inspectors reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and did not find any similar examples. The performance deficiency was determined to be of more than minor safety significance in accordance with IMC 0612 Appendix B, "Issue Screening," because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that inaccurate radiation monitoring affects the licensee's ability to control and limit radiation exposures. Therefore, the performance deficiency was a finding. The finding did not involve as-low-as-reasonably-achievable (ALARA) planning or work controls and there was no overexposure or substantial potential for an overexposure. However, the NRC determined that the licensee's ability to assess dose was compromised. Consequently, the NRC concluded that the finding was of White safety significance. The finding had a cross-cutting characteristic in the area of human performance related to the cross-cutting aspect of change management, in that, the licensee's procedures did not include all of the requirements for implementing EDEX when the methods were approved by the NRC and did not provide adequate guidance for the new tungsten shield vests.

Inspection Report# : [2014010](#) (*pdf*)

Inspection Report# : [2015007](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 19, 2015

Identified By: NRC

Item Type: VIO Violation

Innaccurate/Incomplete Information Submitted for Relief Request 4-18 (Section 1R15)

- TBD. An apparent violation (AV) of Title 10 of the Code of Federal Regulations (CFR) 50.9 was identified by the licensee, related to a failure to provide information that was complete and accurate in all material respects to the NRC in letter PNP 2014-015, "Relief Request (RR) Number 4-18 - Proposed Alternative Use of Alternate ASME [American Society of Mechanical Engineers] Code Case N-770-1 Baseline Examination." Specifically, in this document the licensee stated, "In the unlikely case that crack initiation were to occur, crack growth calculations considering primary water stress corrosion cracking (PWSCC) as the failure mechanism demonstrate that the hot leg drain nozzle weldment satisfies ASME Code acceptance criteria for 60 effective full power years [EFPY] for a

circumferential flaw, and more than 34 years for an axial flaw.” However, this statement was not correct or accurate in that, the ASME Code acceptance criteria were not satisfied for 60 EFPY for a circumferential flaw and 34 years for an axial flaw, where correct information was 20 EFPY for a circumferential flaw, and 11.3 years for an axial flaw. This AV was not an immediate safety concern because the licensee demonstrated an adequate basis for continued operability of the nine affected primary coolant system (PCS) welds. The licensee corrective actions for this AV included completion of an operability evaluation, submittal of a corrected analysis to the NRC, and entering this issue into the Corrective Action Program (CAP) (CR-PLP-2015-03441).

If the NRC was provided with the correct information in letter PNP 2014-015, where the affected welds satisfied ASME Code acceptance criteria (i.e., 75 percent through-wall) for only 20 effective full power years for a circumferential flaw, and 11.3 years for an axial flaw, the NRC would not likely have approved RR 4-18 and, as a minimum, would have requested additional supporting analysis (e.g., required substantial further inquiry). Further, the need for substantial further inquiry was illustrated by the licensee’s subsequent decision in RR 4 21 to abandon the prior analytical approach used in RR 4 18. The inspectors evaluated the underlying technical issue in accordance with the SDP to determine the risk significance of this AV. The issue of concern was of more than minor significance because it was similar to the “not minor if” aspect of Example 3j in IMC 0612, Appendix E, “Example of Minor Issues.” Specifically, the erroneous information provided in letter PNP 2014-015 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the “minor because” aspect of this example since the impact of the error for the operability of nine PCS welds was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Table 3, for the Initiating Events Cornerstone, and IMC 0609, Appendix A, “The SDP for Findings At-Power.” Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered “No” to questions A.1 and A.2, of Exhibit 1, “Initiating Events Screening Questions,” identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). No cross-cutting aspect was assigned because this Green finding was identified by the licensee. (Section 1R15)

- A final significance determination letter, SL III, Notice of Violation for EA-15-171 was issued on November 24, 2015. ADAMS Accession Number ML15328A534.

The failure to provide complete and accurate information is of significant safety concern to the NRC because the inaccurate information impacted the NRC’s ability to perform its regulatory function. The NRC relied on the inaccurate information to make a licensing decision approving Relief Request 4-18. If the information had been correct the NRC would have undertaken substantial further inquiry and reconsidered its regulatory position. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III. Inspection Report# : [2015012](#) (*pdf*)

Last modified : December 15, 2015

Palisades

4Q/2015 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate PT Examination of Pipe Lug Welds

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion IX, “Control of Special Processes,” for the licensee’s failure to perform a dye penetrant (PT) examination of the Safety Injection System (SIS) pipe lug welds in accordance with the American Society of Mechanical Engineers (ASME) Code Section XI requirements. The licensee entered this issue into the Corrective Action Program (CAP) as CR-PLP-2015-04191, repeated the PT examination of the affected SIS lug welds to meet the full extent of coverage required by the ASME Code, repeated examinations of other welds conducted by the PT examiner during the outage, and removed the PT examiner from further weld examination activities.

This performance deficiency was determined to be more than minor because, if left uncorrected, the failure to perform a PT examination in accordance with the ASME Code requirements could result in acceptance and return to service of a component with an undetected crack that would increase the possibility of pipe leakage or failure. In addition, the failure to perform a PT examination in accordance with the ASME Code adversely affected the Mitigating System Cornerstone attribute of Equipment Performance, because it could result in failure to detect cracks in pipe welds, which would reduce the availability and reliability of the SIS mitigating system. The inspectors evaluated the finding in accordance with IMC 0609, Appendix A, “The SDP for Findings At-Power,” Exhibit 2, “Mitigating Systems Screening Questions,” and answered “yes” to screening question number 1. Although this finding adversely affected the design or qualification of the SIS pipe lugs, the finding screened as very-low safety significance (Green), because it did not result in the loss of operability or functionality of the affected SIS pipe segment. This finding had a cross-cutting aspect in the Field Presence component of the Human Performance cross-cutting area. Specifically, licensee leaders were not observed in the work areas of the plant to coach and reinforce standards or expectations for the licensee’s vendor staff to ensure deviation from standards and expectations were promptly corrected.

Inspection Report# : [2015004](#) (*pdf*)

Significance:  Aug 19, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Operability Evaluation Not Performed in Accordance with Station Procedure (Section 1R15)

Green. An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified for the licensee’s failure to adhere to the site procedure for performing operability determinations during the evaluation of a nonconforming condition associated with nine primary coolant system (PCS) welds susceptible to primary water stress corrosion cracking (PWSCC). The licensee’s corrective actions for this finding included completion of an operability determination in accordance with the site operability procedure to include a new analysis which demonstrated the AMSE Code acceptance criteria would continue to be met for the affected welds during the

remainder of the operating cycle. The licensee entered the failure to comply with the operability procedure into the CAP (CR PLP-2015-03434).

This finding was determined to be more than minor because it was similar to the “not minor if” aspect of Example 3j in IMC 0612, Appendix E, “Example of Minor Issues,” because the errors in operability evaluation CA-1 of CR-PLP-2015-01239 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the “minor because” aspect of this example since the impact of the errors on the operability evaluation was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Table 3, for the Initiating Events Cornerstone and IMC 0609, Appendix A, “The SDP for Findings At-Power.” Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered “No” to questions A.1 and A.2, of Exhibit 1, “Initiating Events Screening Questions,” identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in Evaluation for the Problem Identification and Resolution cross-cutting area since the licensee failed to thoroughly evaluate the impact on operability of a nonconforming condition associated with nine PCS welds susceptible to PWSCC [IMC 310, Item P.2]. (Section 1R15)

Inspection Report# : [2015012](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Leads to primary Coolant Pump Seal Degradation

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1(a) was self-revealed when the ‘C’ primary coolant pump (PCP) seal degraded as a result of an inadequate maintenance procedure. Specifically, maintenance procedure PCS-M-54, “N-9000 Primary Coolant Pump Shaft Seal Assembly,” did not identify critical steps in the assembly of the PCP seal and, as a result, the work activity was not adequately controlled. This issue was entered into the licensee’s Corrective Action Program (CAP) as CR-PLP-2014-03495, Planned Outage Required Due to Two Stages of the Primary Coolant Pump P 50C Seal Not Performing as Expected, dated June 21, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the ‘C’ PCP seal was not correctly assembled or installed during refueling outage (RFO) 1R23, which resulted in premature seal degradation. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst (SRA) using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Palisades Standardized Plant Analysis Risk (SPAR) model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Work Management component of the Human Performance cross-cutting area. Specifically, the licensee did not effectively screen the PCP seal assembly through the work management process to identify that it should have been classified as a critical maintenance activity. In addition, insufficient emphasis was placed on in-field vendor oversight during work execution.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Determine the Cause of Head Penetration Nozzle J-Groove Weld Cracking (Section 40A2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of Title 10, Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to establish measures to assure that the cause of the ultrasonic examination leakage path indications and crack indications identified in the J-groove welds of the reactor pressure vessel head penetration nozzles 29 and 30 (a significant condition adverse to quality) was determined. Specifically, the licensee did not complete adequate causal investigations to assure the cause of this significant condition adverse to quality was determined. The licensee entered this issue into the Corrective Action Program (CAP), and initiated an action to conduct a root cause investigation for this issue.

The issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. The inspector also answered "Yes" to the more than minor screening question, "If left uncorrected, would the performance deficiency have the potential to lead to a more significant safety concern?" Specifically, the inspector determined that this issue was more than minor because, if left uncorrected, the licensee would have reduced the frequency of reactor vessel head nozzle penetration examinations which could result in the failure to detect primary water stress corrosion cracking (PWSCC). Undetected PWSCC could increase the risk for through-wall leakage and design basis events such as a loss-of-coolant accident (LOCA). The inspector determined that the finding was of very-low safety significance based on answering "No" to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. Although this performance deficiency occurred more than 10 years ago, it was representative of current licensee performance because in the November 19, 2014, Licensee Event Report Cancellation Letter, the licensee again failed to assure that the cause of the reactor pressure vessel nozzle crack indications in the J-groove welds was determined. Therefore, the finding had a cross-cutting aspect in the area of Problem Identification and Resolution because the licensee failed to assure the cause was determined for the reactor pressure vessel nozzle crack indications in the J-groove welds, and this decision was not consistent with an organization that thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance (IMC 310-Item P.2). (Section 40A2.1.b(1))

Inspection Report# : [2015009](#) (*pdf*)

Significance:  Feb 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Unqualified Non-Destructive Examinations of J-Groove Welds 29 and 30 (Section 40A2.1)

Green: The inspector identified a finding of very-low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion IX "Control of Special Processes," for the licensee's failure to use qualified personnel and procedures for the dye penetrant (PT) examinations of the J-groove welds at nozzles 29 and 30 used to characterize crack indications. Consequently, no quality records existed to validate or confirm the size or extent of the cracking identified in these welds. The licensee documented the use of the unqualified PT examination for characterizing the reactor pressure vessel nozzle J-groove weld cracks in the CAP, and was developing corrective

actions at the conclusion of the inspection.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” because it adversely affected the Initiating Events cornerstone attribute of equipment performance and procedure quality. Further, if left uncorrected, it would become a more significant issue. Specifically, the licensee had based the risk evaluation of the nozzle cracking on the results of the unqualified PT examination, and if this result was not correct, the risk significance of past plant operation with these cracks may have been greater than assumed. Additionally, the licensee had considered the results from this PT examination, as part of the evaluations identified in their November 19, 2014, letter that concluded the flaws identified were caused by embedded weld defects, and not PWSCC. Based upon this revised cause determination, the licensee had elected to reduce the scheduled vessel head examinations, and this reduced inspection schedule may not be adequate to identify PWSCC prior to experiencing a through-wall leak. The inspectors determined that the finding was of very low safety significance based on answering “No” to the IMC 0609, Appendix A, Exhibit 1-Initiating Events Screening Questions for LOCA Initiators. The finding did not have a cross-cutting aspect because it was not indicative of current licensee performance due to the age of the performance deficiency.

(Section 40A2.1.b(2)).

Inspection Report# : [2015009](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Components Required to be Covered by the Quality Assurance Program

The inspectors identified a Severity Level (SL) IV, NCV of 10 CFR, Part 50, Section 59, “Changes, Tests, and Experiments,” for the licensee’s failure to maintain records of written safety evaluations, which provide the bases for concluding the nonsafety-related portions of the CCW system inside containment could be credited to perform their function during and following a DBE, and that the change would not result in an unreviewed safety question. The licensee entered this issue into their CAP and, after performing operability determinations, concluded the system would still be capable of performing its function.

The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the resulting changes were evaluated by the SDP as having very-low safety significance (i.e., green finding). The resulting changes, the violation’s underlying technical concerns, impacted the Mitigating Systems cornerstone, and were evaluated separately as the Green finding with the associated 10 CFR, Part 50, Appendix B, Criterion II, NCV discussed above. The inspectors did not identify a cross-cutting aspect because cross-cutting aspects are not assigned to traditional enforcement violations.

Inspection Report# : [2015004](#) (*pdf*)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform a Required 50.59 Evaluation for Declassification of the CVCS

The inspectors identified a SL IV, NCV of 10 CFR, Part 50.59, “Changes, Tests, and Experiments,” and an associated finding of very-low safety significance (Green) for the licensee’s failure to maintain a record of the declassification of the Chemical Volume and Control System (CVCS) from safety-related to nonsafety-related, which includes a written evaluation that provides the bases for the determination that the change did not require a license amendment. The licensee entered this issue into their CAP, and after a review of the system, determined there was reasonable assurance that it could perform its function.

The inspectors determined the underlying technical concern was a performance deficiency associated with the Mitigating Systems cornerstone that was more than minor because, if left uncorrected, would become a more significant safety concern. The underlying technical concern screened as a finding with very-low safety significance (Green) because, although it affected the design or qualification of the CVCS, it did not result in the loss of functionality of the CVCS. The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the changes were evaluated by the SDP, described above, as having very-low safety significance (i.e., Green finding). The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance.

Inspection Report# : [2015004](#) (pdf)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Justify Continued Service of Safety-Related Electrolytic Capacitors Installed Beyond Their Service Life

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, “Design Control,” was identified for the failure to justify continued service of safety related electrolytic capacitors that were installed beyond their recommended service life associated with the safety related containment floor level indicating transmitters (LITs). Specifically, on June 21, 2015, containment floor LIT LIT-0446B and LIT-0446A did not satisfy the acceptance criteria of the technical specification surveillance monthly channel checks and LIT-0446B was declared inoperable. Further troubleshooting identified a failure of the electrolytic capacitor within the transmitter’s converter module and that this failure was most likely due to age since the transmitter had been in service for greater than its recommended service life. In addition to entering this issue into their Corrective Action Program (CAP) as CR-PLP-2015-04972, the licensee replaced the failed components and planned to develop a replacement schedule for non critical, safety related electrolytic capacitors.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on answering “No” to all of the screening questions in the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of IMC 0609, Appendix A, “The Significance Determination Process for Findings At Power,” Exhibit 1, “Mitigating Systems Screening Questions.” The finding had a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area because the licensee did not effectively and thoroughly evaluate and implement relevant industry operating experience and guidance for age related electrolytic capacitor degradation

Inspection Report# : [2015003](#) (pdf)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Take Appropriate Corrective Action for the Charging System While in Maintenance Rule (a)(1) Status

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR) 50.65(a)(1) was identified for the failure to take appropriate corrective actions for the charging system, while in Maintenance Rule (a)(1) status, when performance or condition goals were not met. Specifically, on April 2, 2015, the front cap of the 'B' charging pump cracked, causing volume control tank (VCT) level and pressure to lower, most likely due to excessive local cavity pressures in the pump caused by the suction accumulator pressure being out of specification. Accumulator pressures being out of specification, which causes pressure oscillations and vibrations in the charging pumps and their associated suction and discharge piping, was a similar cause to previous maintenance rule system functional failures that occurred in 2013 and 2014, which transitioned the system to (a)(1) status in July 2014. The licensee documented the issue in their corrective action program (CAP), conducted an equipment apparent cause evaluation (EACE) for the most recent failure, and revised the Maintenance Rule (a)(1) Action Plan to address the on going issues with the suction and discharge accumulators.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The charging system provides the critical safety functions of pressure and inventory control in the emergency operating procedures. The finding screened as having very low safety significance (i.e., Green) based on answering "No" to all the screening questions under the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of the significance determination process (SDP). The finding had a cross-cutting aspect of Evaluation in the Problem Identification and Resolution area. Specifically, the organization did not thoroughly evaluate previous data on the suction and discharge accumulators pressures being out of specification and what affect that may have on the system. Also, when the accumulator pressures were found out of specification, sometimes that information was not documented in condition reports (CRs), nor were the preventive maintenance (PM) frequencies re evaluated in a technical and rigorous manner to ensure the correct PM activities were being conducted on these components in a timely manner to assure system reliability

Inspection Report# : [2015002](#) (pdf)

Significance:  Apr 17, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Assess the Suppression System in the Cable Spreading Room in the Probabilistic Risk Assessment for NFPA 805 (Section 1R05.3b)

Green. The inspectors identified a finding of very-low safety significance, and an associated NCV of Title 10, Code of Federal Regulations (CFR) 50.48(c), and National Fire Protection Association Standard 805, Section 2.4.3.3 for the licensee's failure to correctly model the as-built plant in the Fire Probabilistic Risk Assessment (PRA). Specifically, the licensee credited the suppression system located in the cable spreading room in the PRA to suppress type 2 fire scenarios, whereas the actual room contained numerous obstructions due to the stacked cable trays located near the ceiling that interfered with the water spray pattern discharged from the sprinklers. These obstructions could have prevented the suppression system from providing an adequate water density pattern to suppress a fire below the cable trays in areas which contained electrical panels.

The inspectors determined that the performance deficiency was more than minor because the finding, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, the licensee's failure to correctly model/analyze the as-built condition of the suppression system located in the cable spreading room in the PRA could potentially affect the risk associated with a fire in the room, and could result in inappropriately screening out the effects of other changes associated with the fire area. Appendix M was used because the existing SDP Appendices do not adequately address the risk of performance deficiencies associated with licensees' PRAs. The Senior Reactor Analyst concluded that the finding was of very-low safety significance (Green) because while there may be a change to the plant's baseline risk as a result of this issue, there is no delta plant risk due to a deficiency in the licensee's PRA model/analysis. This finding has a cross-cutting aspect in the area of Human Performance associated with Team Work because the licensee did not communicate and coordinate activities between the PRA and the fire protection groups. [H.4]

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure Results in Failure of Component Cooling Water Pump

A finding of very low safety significance and an associated NCV of TS 5.4.1(a) was self-revealed on January 6, 2015, after the licensee identified smoke coming from the 'C' component cooling water (CCW) pump (P-52C) as a result of incorrect assembly of the inboard pump bearing in December 2014, due to an inadequate maintenance procedure. This issue was entered into the licensee's CAP as CR-PLP-2015-00063, Workers Reported Smoke Coming from Shaft of P-52C, dated January 6, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Based on a detailed risk evaluation performed by a Region III Senior Reactor Analyst using SAPHIRE Version 8.20 and the Events and Conditions Assessment Feature of the Standardized Plant Analysis Risk model (Version 8.1.2), the inspectors determined the finding was of very low safety significance. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, plant staff accepted the practice of bending the 'C' CCW pump oiler nipple to achieve proper level when the oiler could not be properly aligned which compensated for, rather than corrected, an underlying issue of improper alignment when tightening the alignment pin.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inoperability of Safety Injection Tank Due to Long-Term Leakage

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors when licensee personnel failed to assure that leakage out of the 'B' safety injection tank (SIT), a condition adverse to quality, was corrected in a timely manner. Specifically, although minor water leakage out of the 'B' SIT had been occurring since at least 2010, the licensee had not corrected the leakage despite several plant outages that provided an opportunity to address the issue. This issue was entered into the licensee's CAP as CR-PLP-2014-04861, B SIT Declared Inoperable Due to Reaching Technical Specification Low Level Setpoint, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Equipment

Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the leakage out of the 'B' SIT resulted in unexpected inoperability of the tank on October 7, 2014. The finding was determined to be of very low safety significance based on answering "No" to the screening questions in Exhibit 2.A, Mitigating Systems Screening Questions. This finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area. Specifically, over time the licensee became confident that the long-term leakage out of the 'B' SIT was minor and could be managed without an impact to equipment operability, which proved to be incorrect when the minor leakage resulted in 'B' SIT inoperability on October 7, 2014.

Inspection Report# : [2015001](#) (pdf)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Verify the Adequacy of Credited High Energy Line Break Barriers

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors when the licensee credited fire doors for High Energy Line Break (HELB) protection without a supporting test or evaluation. Specifically, Procedure 4.02 credited fire doors with protection of safety-related equipment against a HELB when the primary HELB barrier was disabled without a test or evaluation to demonstrate the doors could withstand the HELB environment. This issue was entered into the licensee's Corrective Action Program as CR-PLP-2015-00371, NRC Concerns with Calculation EA-PSA-CCW-HELB-02-17, dated January 22, 2015.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not have an evaluation to demonstrate that barriers relied upon to protect mitigating systems from a HELB initiating event could perform the credited protection function. The inspectors answered "No" to the questions in Exhibit 2.A, Mitigating Systems Screening Questions, and as a result determined the issue was of very low safety significance. This finding was not associated with a cross-cutting aspect since the calculation in question was created in 2003 and therefore did not represent current performance.

Inspection Report# : [2015001](#) (pdf)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, "2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments," Revision 34. This issue was entered into the licensee's CAP as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance.

Inspection Report# : [2015001](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: FIN Finding

Failure to Evaluate the Adverse Effects of the Use of Non-Seismic Temporary Jumpers

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” and an associated finding of very low safety significance was identified by the inspectors when licensee personnel failed to maintain a written safety evaluation that provided a basis that the use of temporary alligator clip jumpers to maintain emergency diesel generator (EDG) operability during certain maintenance activities did not require a license amendment. Specifically, the licensee did not address the adverse effects of the use of alligator jumpers on the design and qualification of the diesel generator (DG) circuit breaker used per Engineering Change 50310 and changes to procedure SPS-E-1, “2400 Volt and 4160 Volt Allis Chalmers and Siemens Vacuum Circuit Breaker Auxiliary Switch Adjustments,” Revision 34. This issue was entered into the licensee’s Corrective Action Program as CR-PLP-2014-04859, NRC Identified 50.59 Issue, dated October 7, 2014.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the change that was implemented adversely affected the seismic qualification of the electrical circuit that was relied upon to ensure safety bus 1C would be loaded by the 1-1 DG upon a loss of offsite power. The inspectors evaluated the underlying technical issue and determined the finding was of very low safety significance. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the finding associated with this violation was determined to be of very low safety significance. This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee did not use all available information and relevant guidance, such as Nuclear Energy Institute 96-07, to demonstrate that the proposed activity was safe and did not require a license amendment prior to implementation.

Inspection Report# : [2015001](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure To Establish, Implement, and Maintain the Offsite Dose Calculation Manual

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.5.1, “Offsite Dose Calculation Manual,” was identified for the failure to establish, implement, and maintain the Offsite Dose Calculation Manual (ODCM) relative to dose calculation parameters. Specifically, the licensee failed to modify the parameters used in public radiation calculations when changes in the use of unrestricted areas were identified. As a result, the quarterly and annual doses that were calculated every 31 days, as required by the ODCM, were incorrect and non conservative. In addition to entering this issue into their Corrective Action program (CAP) as CR-PLP-2015-2972, the licensee recalculated the dose using the correct calculation parameters.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix D, “Public Radiation Safety Significance Determination Process,” because the issue did not represent a significant deficiency in evaluating a planned or unplanned effluent release since the resulting dose was not grossly underestimated. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area because the licensee did not ensure adequate knowledge transfer to maintain a knowledgeable, technically competent workforce.

Inspection Report# : [2015003](#) (*pdf*)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Wear Prescribed Respiratory Protection

A self revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified for insulation work activities during the refueling outage associated with pressurizer spray valve CV-1057. Specifically, prior to the work beginning, the licensee determined that the use of powered air purifying respirators would be required to minimize worker dose and maintain exposures as low as reasonably achievable (ALARA), but the work was performed using only face shields, and as a result a worker was contaminated externally and internally. Corrective actions included creation of an administrative requirement to revise any radiation work permit (RWP) task that required respiratory protection to more clearly state the requirements.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Program and Process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the failure to wear required respiratory protection during the reinsulating of CV-1057 resulted in personal contamination and the intake of radioactive material. The inspectors concluded that the radiological hazards had the potential to result in higher exposures to the individuals had the circumstances been slightly altered. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process,” because it was not an ALARA planning issue, there was neither an overexposure nor a substantial potential for an overexposure, and the licensee’s ability to assess dose was not compromised. The inspectors concluded that the cause of the issue involved a cross cutting aspect in the area of Human Performance, Basis for Decisions. Specifically, the bases for operational decisions were communicated in a timely manner.

Inspection Report# : [2015002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 19, 2015

Identified By: NRC

Item Type: VIO Violation

Innaccurate/Incomplete Information Submitted for Relief Request 4-18 (Section 1R15)

• TBD. An apparent violation (AV) of Title 10 of the Code of Federal Regulations (CFR) 50.9 was identified by the licensee, related to a failure to provide information that was complete and accurate in all material respects to the NRC in letter PNP 2014-015, "Relief Request (RR) Number 4-18 - Proposed Alternative Use of Alternate ASME [American Society of Mechanical Engineers] Code Case N-770-1 Baseline Examination." Specifically, in this document the licensee stated, "In the unlikely case that crack initiation were to occur, crack growth calculations considering primary water stress corrosion cracking (PWSCC) as the failure mechanism demonstrate that the hot leg drain nozzle weldment satisfies ASME Code acceptance criteria for 60 effective full power years [EFPY] for a circumferential flaw, and more than 34 years for an axial flaw." However, this statement was not correct or accurate in that, the ASME Code acceptance criteria were not satisfied for 60 EFPY for a circumferential flaw and 34 years for an axial flaw, where correct information was 20 EFPY for a circumferential flaw, and 11.3 years for an axial flaw. This AV was not an immediate safety concern because the licensee demonstrated an adequate basis for continued operability of the nine affected primary coolant system (PCS) welds. The licensee corrective actions for this AV included completion of an operability evaluation, submittal of a corrected analysis to the NRC, and entering this issue into the Corrective Action Program (CAP) (CR-PLP-2015-03441).

If the NRC was provided with the correct information in letter PNP 2014-015, where the affected welds satisfied ASME Code acceptance criteria (i.e., 75 percent through-wall) for only 20 effective full power years for a circumferential flaw, and 11.3 years for an axial flaw, the NRC would not likely have approved RR 4-18 and, as a minimum, would have requested additional supporting analysis (e.g., required substantial further inquiry). Further, the need for substantial further inquiry was illustrated by the licensee's subsequent decision in RR 4 21 to abandon the prior analytical approach used in RR 4 18. The inspectors evaluated the underlying technical issue in accordance with the SDP to determine the risk significance of this AV. The issue of concern was of more than minor significance because it was similar to the "not minor if" aspect of Example 3j in IMC 0612, Appendix E, "Example of Minor Issues." Specifically, the erroneous information provided in letter PNP 2014-015 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the "minor because" aspect of this example since the impact of the error for the operability of nine PCS welds was not minimal. In addition, the performance deficiency was determined to be more than minor because it

was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 3, for the Initiating Events Cornerstone, and IMC 0609, Appendix A, "The SDP for Findings At-Power." Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered "No" to questions A.1 and A.2, of Exhibit 1, "Initiating Events Screening Questions," identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). No cross-cutting aspect was assigned because this Green finding was identified by the licensee. (Section 1R15)

- A final significance determination letter, SL III, Notice of Violation for EA-15-171 was issued on November 24, 2015. ADAMS Accession Number ML15328A534.

The failure to provide complete and accurate information is of significant safety concern to the NRC because the inaccurate information impacted the NRC's ability to perform its regulatory function. The NRC relied on the inaccurate information to make a licensing decision approving Relief Request 4-18. If the information had been correct the NRC would have undertaken substantial further inquiry and reconsidered its regulatory position. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III. Inspection Report# : [2015012](#) (*pdf*)

Last modified : March 01, 2016

Palisades

1Q/2016 Plant Inspection Findings

Initiating Events

Significance:  Aug 19, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Operability Evaluation Not Performed in Accordance with Station Procedure (Section 1R15)

Green. An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified for the licensee's failure to adhere to the site procedure for performing operability determinations during the evaluation of a nonconforming condition associated with nine primary coolant system (PCS) welds susceptible to primary water stress corrosion cracking (PWSCC). The licensee's corrective actions for this finding included completion of an operability determination in accordance with the site operability procedure to include a new analysis which demonstrated the AMSE Code acceptance criteria would continue to be met for the affected welds during the remainder of the operating cycle. The licensee entered the failure to comply with the operability procedure into the CAP (CR PLP-2015-03434).

This finding was determined to be more than minor because it was similar to the "not minor if" aspect of Example 3j in IMC 0612, Appendix E, "Example of Minor Issues," because the errors in operability evaluation CA-1 of CR-PLP-2015-01239 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the "minor because" aspect of this example since the impact of the errors on the operability evaluation was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 3, for the Initiating Events Cornerstone and IMC 0609, Appendix A, "The SDP for Findings At-Power." Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered "No" to questions A.1 and A.2, of Exhibit 1, "Initiating Events Screening Questions," identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in Evaluation for the Problem Identification and Resolution cross-cutting area since the licensee failed to thoroughly evaluate the impact on operability of a nonconforming condition associated with nine PCS welds susceptible to PWSCC [IMC 310, Item P.2]. (Section 1R15)

Inspection Report# : [2015012](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet the Minimum Staffing Requirements of the Fire Brigade

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 48(c) and the National Fire Protection Association (NFPA) Standard 805 Section 3.4.1 was identified for the failure to meet the minimum staffing requirements for the Fire Brigade on January 4 and 5, 2016. Specifically, two nuclear plant operators (NPOs) who had their Fire Brigade qualifications suspended, stood watch as Fire Brigade members during day shift on January 4, 2016 and approximately one half of day shift on January 5, 2016. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2016 00198, performed an apparent cause evaluation, successfully performed a fire drill to requalify the Fire Brigade members with suspended qualifications on January 6, 2016, and planned to update the tracking method used to validate drill completion for Fire Brigade qualifications.

The performance deficiency was determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on using qualitative criteria located in IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The finding had a cross cutting aspect of Documentation in the Human Performance cross cutting area because the licensee informally tracked drill completion and this information was not accessible to each individual Fire Brigade member to validate their qualifications

Inspection Report# : [2016001](#) (*pdf*)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate PT Examination of Pipe Lug Welds

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to perform a dye penetrant (PT) examination of the Safety Injection System (SIS) pipe lug welds in accordance with the American Society of Mechanical Engineers (ASME) Code Section XI requirements. The licensee entered this issue into the Corrective Action Program (CAP) as CR-PLP-2015-04191, repeated the PT examination of the affected SIS lug welds to meet the full extent of coverage required by the ASME Code, repeated examinations of other welds conducted by the PT examiner during the outage, and removed the PT examiner from further weld examination activities.

This performance deficiency was determined to be more than minor because, if left uncorrected, the failure to perform a PT examination in accordance with the ASME Code requirements could result in acceptance and return to service of a component with an undetected crack that would increase the possibility of pipe leakage or failure. In addition, the failure to perform a PT examination in accordance with the ASME Code adversely affected the Mitigating System Cornerstone attribute of Equipment Performance, because it could result in failure to detect cracks in pipe welds, which would reduce the availability and reliability of the SIS mitigating system. The inspectors evaluated the finding in accordance with IMC 0609, Appendix A, "The SDP for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," and answered "yes" to screening question number 1. Although this finding adversely affected the design or qualification of the SIS pipe lugs, the finding screened as very-low safety significance (Green), because it did not result in the loss of operability or functionality of the affected SIS pipe segment. This finding had a cross-cutting aspect in the Field Presence component of the Human Performance cross-cutting area. Specifically, licensee leaders were not observed in the work areas of the plant to coach and reinforce standards or expectations for the licensee's vendor staff to ensure deviation from standards and expectations were promptly corrected.

Inspection Report# : [2015004](#) (*pdf*)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Components Required to be Covered by the Quality Assurance Program

The inspectors identified a Severity Level (SL) IV, NCV of 10 CFR, Part 50, Section 59, "Changes, Tests, and Experiments," for the licensee's failure to maintain records of written safety evaluations, which provide the bases for concluding the nonsafety-related portions of the CCW system inside containment could be credited to perform their function during and following a DBE, and that the change would not result in an unreviewed safety question. The licensee entered this issue into their CAP and, after performing operability determinations, concluded the system would still be capable of performing its function.

The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the resulting changes were evaluated by the SDP as having very-low safety significance (i.e., green finding). The resulting changes, the violation's underlying technical concerns, impacted the Mitigating Systems cornerstone, and were evaluated separately as the Green finding with the associated 10 CFR, Part 50, Appendix B, Criterion II, NCV discussed above. The inspectors did not identify a cross-cutting aspect because cross-cutting aspects are not assigned to traditional enforcement violations.

Inspection Report# : [2015004](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform a Required 50.59 Evaluation for Declassification of the CVCS

The inspectors identified a SL IV, NCV of 10 CFR, Part 50.59, "Changes, Tests, and Experiments," and an associated finding of very-low safety significance (Green) for the licensee's failure to maintain a record of the declassification of the Chemical Volume and Control System (CVCS) from safety-related to nonsafety-related, which includes a written evaluation that provides the bases for the determination that the change did not require a license amendment. The licensee entered this issue into their CAP, and after a review of the system, determined there was reasonable assurance that it could perform its function.

The inspectors determined the underlying technical concern was a performance deficiency associated with the Mitigating Systems cornerstone that was more than minor because, if left uncorrected, would become a more significant safety concern. The underlying technical concern screened as a finding with very-low safety significance (Green) because, although it affected the design or qualification of the CVCS, it did not result in the loss of functionality of the CVCS. The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the changes were evaluated by the SDP, described above, as having very-low safety significance (i.e., Green finding). The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance.

Inspection Report# : [2015004](#) (pdf)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Justify Continued Service of Safety-Related Electrolytic Capacitors Installed Beyond Their Service Life

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to justify continued service of safety related electrolytic capacitors that were installed beyond their recommended service life associated with the safety related containment floor level indicating transmitters (LITs). Specifically, on June 21, 2015, containment floor LIT LIT-0446B and LIT-0446A did not satisfy the acceptance criteria of the technical specification surveillance monthly channel checks and LIT-0446B was declared inoperable. Further troubleshooting identified a failure of the electrolytic capacitor within the transmitter's converter module and that this failure was most likely due to age since the transmitter had been in service for greater than its recommended service life. In addition to entering this issue into their Corrective Action Program (CAP) as CR-PLP-2015-04972, the licensee replaced the failed components and planned to develop a replacement schedule for non critical, safety related electrolytic capacitors.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on answering "No" to all of the screening questions in the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of IMC 0609, Appendix A, "The Significance Determination Process for Findings At Power," Exhibit 1, "Mitigating Systems Screening Questions." The finding had a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area because the licensee did not effectively and thoroughly evaluate and implement relevant industry operating experience and guidance for age related electrolytic capacitor degradation

Inspection Report# : [2015003](#) (*pdf*)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Take Appropriate Corrective Action for the Charging System While in Maintenance Rule (a)(1) Status

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR) 50.65(a)(1) was identified for the failure to take appropriate corrective actions for the charging system, while in Maintenance Rule (a)(1) status, when performance or condition goals were not met. Specifically, on April 2, 2015, the front cap of the 'B' charging pump cracked, causing volume control tank (VCT) level and pressure to lower, most likely due to excessive local cavity pressures in the pump caused by the suction accumulator pressure being out of specification. Accumulator pressures being out of specification, which causes pressure oscillations and vibrations in the charging pumps and their associated suction and discharge piping, was a similar cause to previous maintenance rule system functional failures that occurred in 2013 and 2014, which transitioned the system to (a)(1) status in July 2014. The licensee documented the issue in their corrective action program (CAP), conducted an equipment apparent cause evaluation (EACE) for the most recent failure, and revised the Maintenance Rule (a)(1) Action Plan to address the on going issues with the suction and discharge accumulators.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The charging system provides the critical safety functions of pressure and inventory control in the emergency operating procedures. The finding screened as having very low safety significance (i.e., Green) based on answering "No" to all the screening questions under the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of the significance determination process

(SDP). The finding had a cross-cutting aspect of Evaluation in the Problem Identification and Resolution area. Specifically, the organization did not thoroughly evaluate previous data on the suction and discharge accumulators pressures being out of specification and what affect that may have on the system. Also, when the accumulator pressures were found out of specification, sometimes that information was not documented in condition reports (CRs), nor were the preventive maintenance (PM) frequencies re evaluated in a technical and rigorous manner to ensure the correct PM activities were being conducted on these components in a timely manner to assure system reliability

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Apr 17, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correctly Assess the Suppression System in the Cable Spreading Room in the Probabilistic Risk Assessment for NFPA 805 (Section 1R05.3b)

Green. The inspectors identified a finding of very-low safety significance, and an associated NCV of Title 10, Code of Federal Regulations (CFR) 50.48(c), and National Fire Protection Association Standard 805, Section 2.4.3.3 for the licensee's failure to correctly model the as-built plant in the Fire Probabilistic Risk Assessment (PRA). Specifically, the licensee credited the suppression system located in the cable spreading room in the PRA to suppress type 2 fire scenarios, whereas the actual room contained numerous obstructions due to the stacked cable trays located near the ceiling that interfered with the water spray pattern discharged from the sprinklers. These obstructions could have prevented the suppression system from providing an adequate water density pattern to suppress a fire below the cable trays in areas which contained electrical panels.

The inspectors determined that the performance deficiency was more than minor because the finding, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, the licensee's failure to correctly model/analyze the as-built condition of the suppression system located in the cable spreading room in the PRA could potentially affect the risk associated with a fire in the room, and could result in inappropriately screening out the effects of other changes associated with the fire area. Appendix M was used because the existing SDP Appendices do not adequately address the risk of performance deficiencies associated with licensees' PRAs. The Senior Reactor Analyst concluded that the finding was of very-low safety significance (Green) because while there may be a change to the plant's baseline risk as a result of this issue, there is no delta plant risk due to a deficiency in the licensee's PRA model/analysis. This finding has a cross-cutting aspect in the area of Human Performance associated with Team Work because the licensee did not communicate and coordinate activities between the PRA and the fire protection groups. [H.4]

Inspection Report# : [2015008](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Movement of Radioactive Material Results in an Unposted and Un-Barricaded High-Radiation Area

A self revealed finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.7.1 was identified when movement of a bag of radioactive material caused an area to become a high radiation area without the proper posting and barricades. The licensee immediately moved this bag of radioactive material to a posted locked high radiation area and entered this issue into their Corrective Action Program as CR–PLP–2015–05019.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the movement of the bag from an area that was a high radiation area to an area that was not posted and barricaded as a high radiation area removed a barrier that was intended to prevent workers from receiving unexpected dose. The finding was determined to be of very low safety significance in accordance with Inspection Manual Chapter 0609 Appendix C, “Occupational Radiation Safety Significance Determination Process,” dated August 19, 2008. The violation was of very low safety significance because: (1) it did not involve as low as reasonably achievable planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding had a cross cutting aspect of Teamwork in the Human Performance cross cutting area because the individuals and work groups involved did not communicate or coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained

Inspection Report# : [2016001](#) (*pdf*)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure To Establish, Implement, and Maintain the Offsite Dose Calculation Manual

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.5.1, “Offsite Dose Calculation Manual,” was identified for the failure to establish, implement, and maintain the Offsite Dose Calculation Manual (ODCM) relative to dose calculation parameters. Specifically, the licensee failed to modify the parameters used in public radiation calculations when changes in the use of unrestricted areas were identified. As a result, the quarterly and annual doses that were calculated every 31 days, as required by the ODCM, were incorrect and non conservative. In addition to entering this issue into their Corrective Action program (CAP) as CR–PLP–2015–2972, the licensee recalculated the dose using the correct calculation parameters.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix D, “Public Radiation Safety Significance Determination Process,” because the issue did not represent a significant deficiency in evaluating a planned or unplanned effluent release since the resulting dose was not grossly underestimated. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area because the licensee did not ensure adequate knowledge transfer to maintain a knowledgeable, technically competent workforce.

Inspection Report# : [2015003](#) (*pdf*)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Wear Prescribed Respiratory Protection

A self revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified for insulation work activities during the refueling outage associated with pressurizer spray valve CV-1057. Specifically, prior to the work beginning, the licensee determined that the use of powered air purifying respirators would be required to minimize worker dose and maintain exposures as low as reasonably achievable (ALARA), but the work was performed using only face shields, and as a result a worker was contaminated externally and internally. Corrective actions included creation of an administrative requirement to revise any radiation work permit (RWP) task that required respiratory protection to more clearly state the requirements.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the Program and Process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the failure to wear required respiratory protection during the reinsulating of CV-1057 resulted in personal contamination and the intake of radioactive material. The inspectors concluded that the radiological hazards had the potential to result in higher exposures to the individuals had the circumstances been slightly altered. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," because it was not an ALARA planning issue, there was neither an overexposure nor a substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The inspectors concluded that the cause of the issue involved a cross cutting aspect in the area of Human Performance, Basis for Decisions. Specifically, the bases for operational decisions were communicated in a timely manner.

Inspection Report# : [2015002](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 19, 2015

Identified By: NRC

Item Type: VIO Violation

Innaccurate/Incomplete Information Submitted for Relief Request 4-18 (Section 1R15)

• TBD. An apparent violation (AV) of Title 10 of the Code of Federal Regulations (CFR) 50.9 was identified by the licensee, related to a failure to provide information that was complete and accurate in all material respects to the NRC in letter PNP 2014-015, "Relief Request (RR) Number 4-18 - Proposed Alternative Use of Alternate ASME [American Society of Mechanical Engineers] Code Case N-770-1 Baseline Examination." Specifically, in this document the licensee stated, "In the unlikely case that crack initiation were to occur, crack growth calculations considering primary water stress corrosion cracking (PWSCC) as the failure mechanism demonstrate that the hot leg drain nozzle weldment satisfies ASME Code acceptance criteria for 60 effective full power years [EFPY] for a circumferential flaw, and more than 34 years for an axial flaw." However, this statement was not correct or accurate in that, the ASME Code acceptance criteria were not satisfied for 60 EFPY for a circumferential flaw and 34 years for an axial flaw, where correct information was 20 EFPY for a circumferential flaw, and 11.3 years for an axial flaw. This AV was not an immediate safety concern because the licensee demonstrated an adequate basis for continued operability of the nine affected primary coolant system (PCS) welds. The licensee corrective actions for this AV included completion of an operability evaluation, submittal of a corrected analysis to the NRC, and entering this issue into the Corrective Action Program (CAP) (CR-PLP-2015-03441).

If the NRC was provided with the correct information in letter PNP 2014-015, where the affected welds satisfied ASME Code acceptance criteria (i.e., 75 percent through-wall) for only 20 effective full power years for a circumferential flaw, and 11.3 years for an axial flaw, the NRC would not likely have approved RR 4-18 and, as a minimum, would have requested additional supporting analysis (e.g., required substantial further inquiry). Further, the need for substantial further inquiry was illustrated by the licensee's subsequent decision in RR 4 21 to abandon the prior analytical approach used in RR 4 18. The inspectors evaluated the underlying technical issue in accordance with the SDP to determine the risk significance of this AV. The issue of concern was of more than minor significance because it was similar to the "not minor if" aspect of Example 3j in IMC 0612, Appendix E, "Example of Minor Issues." Specifically, the erroneous information provided in letter PNP 2014-015 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the "minor because" aspect of this example since the impact of the error for the operability of nine PCS welds was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 3, for the Initiating Events Cornerstone, and IMC 0609, Appendix A, "The SDP for Findings At-Power." Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered "No" to questions A.1 and A.2, of Exhibit 1, "Initiating Events Screening Questions," identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). No cross-cutting aspect was assigned because this Green finding was identified by the licensee. (Section 1R15)

- A final significance determination letter, SL III, Notice of Violation for EA-15-171 was issued on November 24, 2015. ADAMS Accession Number ML15328A534.

The failure to provide complete and accurate information is of significant safety concern to the NRC because the inaccurate information impacted the NRC's ability to perform its regulatory function. The NRC relied on the inaccurate information to make a licensing decision approving Relief Request 4-18. If the information had been correct the NRC would have undertaken substantial further inquiry and reconsidered its regulatory position. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III. Inspection Report# : [2015012](#) (*pdf*)

Last modified : July 11, 2016

Palisades 2Q/2016 Plant Inspection Findings

Initiating Events

Significance:  Aug 19, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Operability Evaluation Not Performed in Accordance with Station Procedure (Section 1R15)

Green. An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified for the licensee’s failure to adhere to the site procedure for performing operability determinations during the evaluation of a nonconforming condition associated with nine primary coolant system (PCS) welds susceptible to primary water stress corrosion cracking (PWSCC). The licensee’s corrective actions for this finding included completion of an operability determination in accordance with the site operability procedure to include a new analysis which demonstrated the AMSE Code acceptance criteria would continue to be met for the affected welds during the remainder of the operating cycle. The licensee entered the failure to comply with the operability procedure into the CAP (CR PLP-2015-03434).

This finding was determined to be more than minor because it was similar to the “not minor if” aspect of Example 3j in IMC 0612, Appendix E, “Example of Minor Issues,” because the errors in operability evaluation CA-1 of CR-PLP-2015-01239 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the “minor because” aspect of this example since the impact of the errors on the operability evaluation was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Table 3, for the Initiating Events Cornerstone and IMC 0609, Appendix A, “The SDP for Findings At-Power.” Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered “No” to questions A.1 and A.2, of Exhibit 1, “Initiating Events Screening Questions,” identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in Evaluation for the Problem Identification and Resolution cross-cutting area since the licensee failed to thoroughly evaluate the impact on operability of a nonconforming condition associated with nine PCS welds susceptible to PWSCC [IMC 310, Item P.2]. (Section 1R15)

Inspection Report# : [2015012](#) (*pdf*)

Mitigating Systems

Significance:  Apr 08, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correct Containment Spray Pump Non-conformance

The team identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct a non-conforming condition for containment spray pump P-54A, which was discovered in October 2014, during an NRC component design bases inspection (CDBI). The licensee entered this issue into their CAP as CR-PLP-2016-01646 with an assigned action to resolve the non-conforming condition of the containment spray pump.

The team determined that the performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Design Control and adversely affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the performance deficiency identified that the licensee failed to correct a non-conformance between their current as-built configuration, the current licensing bases (i.e., Final Safety Analysis Report (FSAR) Section 6.2.3.1), and the design basis (i.e., Design Bases Calculation EA-ELEC-LDTAB-005) which was identified by the NRC in the 2014 CDBI. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04 "Initial Characterization of Findings," issued June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," issued June 19, 2012, the team answered "No" to all of the questions. Therefore, this finding was of very low safety significance (Green). The team identified a cross-cutting aspect in the Evaluation component of the Problem Identification and Resolution cross-cutting area because the licensee failed to fully evaluate the original issue identified in the 2014 CDBI to ensure that the corrective actions performed adequately addressed the non-conformance between the licensing basis, the as-built configuration, and the design basis.

Inspection Report# : [2016007](#) (pdf)

Significance:  Mar 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet the Minimum Staffing Requirements of the Fire Brigade

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 48(c) and the National Fire Protection Association (NFPA) Standard 805 Section 3.4.1 was identified for the failure to meet the minimum staffing requirements for the Fire Brigade on January 4 and 5, 2016. Specifically, two nuclear plant operators (NPOs) who had their Fire Brigade qualifications suspended, stood watch as Fire Brigade members during day shift on January 4, 2016 and approximately one half of day shift on January 5, 2016. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2016 00198, performed an apparent cause evaluation, successfully performed a fire drill to requalify the Fire Brigade members with suspended qualifications on January 6, 2016, and planned to update the tracking method used to validate drill completion for Fire Brigade qualifications.

The performance deficiency was determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on using qualitative criteria located in IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The finding had a cross cutting aspect of Documentation in the Human Performance cross cutting area because the licensee informally tracked drill completion and this information was not accessible to each individual Fire Brigade member to validate their qualifications.

Inspection Report# : [2016001](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate PT Examination of Pipe Lug Welds

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to perform a dye penetrant (PT) examination of the Safety Injection System (SIS) pipe lug welds in accordance with the American Society of Mechanical Engineers (ASME) Code Section XI requirements. The licensee entered this issue into the Corrective Action Program (CAP) as CR-PLP-2015-04191, repeated the PT examination of the affected SIS lug welds to meet the full extent of coverage required by the ASME Code, repeated examinations of other welds conducted by the PT examiner during the outage, and removed the PT examiner from further weld examination activities.

This performance deficiency was determined to be more than minor because, if left uncorrected, the failure to perform a PT examination in accordance with the ASME Code requirements could result in acceptance and return to service of a component with an undetected crack that would increase the possibility of pipe leakage or failure. In addition, the failure to perform a PT examination in accordance with the ASME Code adversely affected the Mitigating System Cornerstone attribute of Equipment Performance, because it could result in failure to detect cracks in pipe welds, which would reduce the availability and reliability of the SIS mitigating system. The inspectors evaluated the finding in accordance with IMC 0609, Appendix A, "The SDP for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," and answered "yes" to screening question number 1. Although this finding adversely affected the design or qualification of the SIS pipe lugs, the finding screened as very-low safety significance (Green), because it did not result in the loss of operability or functionality of the affected SIS pipe segment. This finding had a cross-cutting aspect in the Field Presence component of the Human Performance cross-cutting area. Specifically, licensee leaders were not observed in the work areas of the plant to coach and reinforce standards or expectations for the licensee's vendor staff to ensure deviation from standards and expectations were promptly corrected.

Inspection Report# : [2015004](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Components Required to be Covered by the Quality Assurance Program

The inspectors identified a finding of very-low safety significance, and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion II, "Quality Assurance Program," for the licensee's failure to identify all component cooling water (CCW) structures, systems, and components (SSC), which were required to be covered by the Quality Assurance Program (i.e., be safety-related). As a result, the licensee incorrectly credited nonsafety-related CCW components to remain functional during and following a design basis event (DBE). The licensee entered this finding into their CAP and, after performing operability determinations, concluded the system would still be capable of performing its function.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as having very-low safety significance (Green) because, although it was a deficiency affecting the design or qualification of a mitigating SSC, the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was determined not to be representative of current performance.

Inspection Report# : [2015004](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform a Required 50.59 Evaluation for Declassification of the CVCS

The inspectors identified a SL IV, NCV of 10 CFR, Part 50.59, “Changes, Tests, and Experiments,” and an associated finding of very-low safety significance (Green) for the licensee’s failure to maintain a record of the declassification of the Chemical Volume and Control System (CVCS) from safety-related to nonsafety-related, which includes a written evaluation that provides the bases for the determination that the change did not require a license amendment. The licensee entered this issue into their CAP, and after a review of the system, determined there was reasonable assurance that it could perform its function.

The inspectors determined the underlying technical concern was a performance deficiency associated with the Mitigating Systems cornerstone that was more than minor because, if left uncorrected, would become a more significant safety concern. The underlying technical concern screened as a finding with very-low safety significance (Green) because, although it affected the design or qualification of the CVCS, it did not result in the loss of functionality of the CVCS. The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the changes were evaluated by the SDP, described above, as having very-low safety significance (i.e., Green finding). The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance.

Inspection Report# : [2015004](#) (pdf)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Justify Continued Service of Safety-Related Electrolytic Capacitors Installed Beyond Their Service Life

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, “Design Control,” was identified for the failure to justify continued service of safety related electrolytic capacitors that were installed beyond their recommended service life associated with the safety related containment floor level indicating transmitters (LITs). Specifically, on June 21, 2015, containment floor LIT LIT-0446B and LIT-0446A did not satisfy the acceptance criteria of the technical specification surveillance monthly channel checks and LIT-0446B was declared inoperable. Further troubleshooting identified a failure of the electrolytic capacitor within the transmitter’s converter module and that this failure was most likely due to age since the transmitter had been in service for greater than its recommended service life. In addition to entering this issue into their Corrective Action Program (CAP) as CR-PLP-2015-04972, the licensee replaced the failed components and planned to develop a replacement schedule for non critical, safety related electrolytic capacitors.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on answering “No” to all of the screening questions in the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of IMC 0609, Appendix A, “The Significance Determination Process for Findings At Power,” Exhibit 1, “Mitigating Systems Screening Questions.” The finding had a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area because the licensee did not effectively and thoroughly

evaluate and implement relevant industry operating experience and guidance for age related electrolytic capacitor degradation
Inspection Report# : [2015003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Movement of Radioactive Material Results in an Unposted and Un-Barricaded High-Radiation Area

A self revealed finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.7.1 was identified when movement of a bag of radioactive material caused an area to become a high radiation area without the proper posting and barricades. The licensee immediately moved this bag of radioactive material to a posted locked high radiation area and entered this issue into their Corrective Action Program as CR–PLP–2015–05019.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the movement of the bag from an area that was a high radiation area to an area that was not posted and barricaded as a high radiation area removed a barrier that was intended to prevent workers from receiving unexpected dose. The finding was determined to be of very low safety significance in accordance with Inspection Manual Chapter 0609 Appendix C, “Occupational Radiation Safety Significance Determination Process,” dated August 19, 2008. The violation was of very low safety significance because: (1) it did not involve as low as reasonably achievable planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding had a cross cutting aspect of Teamwork in the Human Performance cross cutting area because the individuals and work groups involved did not communicate or coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained

Inspection Report# : [2016001](#) (*pdf*)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure To Establish, Implement, and Maintain the Offsite Dose Calculation Manual

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.5.1, “Offsite Dose Calculation Manual,” was identified for the failure to establish, implement, and maintain the Offsite Dose Calculation Manual (ODCM) relative to dose calculation parameters. Specifically, the licensee failed to modify the parameters

used in public radiation calculations when changes in the use of unrestricted areas were identified. As a result, the quarterly and annual doses that were calculated every 31 days, as required by the ODCM, were incorrect and non conservative. In addition to entering this issue into their Corrective Action program (CAP) as CR-PLP-2015-2972, the licensee recalculated the dose using the correct calculation parameters.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," because the issue did not represent a significant deficiency in evaluating a planned or unplanned effluent release since the resulting dose was not grossly underestimated. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area because the licensee did not ensure adequate knowledge transfer to maintain a knowledgeable, technically competent workforce.

Inspection Report# : [2015003](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 19, 2015

Identified By: NRC

Item Type: VIO Violation

Innaccurate/Incomplete Information Submitted for Relief Request 4-18 (Section 1R15)

- TBD. An apparent violation (AV) of Title 10 of the Code of Federal Regulations (CFR) 50.9 was identified by the licensee, related to a failure to provide information that was complete and accurate in all material respects to the NRC in letter PNP 2014-015, "Relief Request (RR) Number 4-18 - Proposed Alternative Use of Alternate ASME [American Society of Mechanical Engineers] Code Case N-770-1 Baseline Examination." Specifically, in this document the licensee stated, "In the unlikely case that crack initiation were to occur, crack growth calculations considering primary water stress corrosion cracking (PWSCC) as the failure mechanism demonstrate that the hot leg drain nozzle weldment satisfies ASME Code acceptance criteria for 60 effective full power years [EFPY] for a circumferential flaw, and more than 34 years for an axial flaw." However, this statement was not correct or accurate in that, the ASME Code acceptance criteria were not satisfied for 60 EFPY for a circumferential flaw and 34 years for an axial flaw, where correct information was 20 EFPY for a circumferential flaw, and 11.3 years for an axial flaw. This

AV was not an immediate safety concern because the licensee demonstrated an adequate basis for continued operability of the nine affected primary coolant system (PCS) welds. The licensee corrective actions for this AV included completion of an operability evaluation, submittal of a corrected analysis to the NRC, and entering this issue into the Corrective Action Program (CAP) (CR-PLP-2015-03441).

If the NRC was provided with the correct information in letter PNP 2014-015, where the affected welds satisfied ASME Code acceptance criteria (i.e., 75 percent through-wall) for only 20 effective full power years for a circumferential flaw, and 11.3 years for an axial flaw, the NRC would not likely have approved RR 4-18 and, as a minimum, would have requested additional supporting analysis (e.g., required substantial further inquiry). Further, the need for substantial further inquiry was illustrated by the licensee's subsequent decision in RR 4 21 to abandon the prior analytical approach used in RR 4 18. The inspectors evaluated the underlying technical issue in accordance with the SDP to determine the risk significance of this AV. The issue of concern was of more than minor significance because it was similar to the "not minor if" aspect of Example 3j in IMC 0612, Appendix E, "Example of Minor Issues." Specifically, the erroneous information provided in letter PNP 2014-015 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the "minor because" aspect of this example since the impact of the error for the operability of nine PCS welds was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 3, for the Initiating Events Cornerstone, and IMC 0609, Appendix A, "The SDP for Findings At-Power." Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered "No" to questions A.1 and A.2, of Exhibit 1, "Initiating Events Screening Questions," identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). No cross-cutting aspect was assigned because this Green finding was identified by the licensee. (Section 1R15)

- A final significance determination letter, SL III, Notice of Violation for EA-15-171 was issued on November 24, 2015. ADAMS Accession Number ML15328A534.

The failure to provide complete and accurate information is of significant safety concern to the NRC because the inaccurate information impacted the NRC's ability to perform its regulatory function. The NRC relied on the inaccurate information to make a licensing decision approving Relief Request 4-18. If the information had been correct the NRC would have undertaken substantial further inquiry and reconsidered its regulatory position. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

Inspection Report# : [2015012](#) (*pdf*)

Inspection Report# : [2016002](#) (*pdf*)

Last modified : August 29, 2016

Palisades

3Q/2016 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Sep 30, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Appropriately Select and Review for Suitability of Application the Control Switch and Circuit Design of the Engineered Safeguards Room Cooler Fans

A self revealed finding of very low safety significance and an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to appropriately select and review for suitability of application the control switch and circuit design of the engineered safeguards room cooler fans. Specifically, on July 27, 2016, when the licensee was conducting troubleshooting activities for the tripping of engineered safeguards room cooler fan V-27B, it was revealed that the control switch design was "break before make" and as the hand switch was transitioned from one position to the next, the supply voltage and the motor became "out of phase" and caused an overcurrent trip of the breaker. This resulted in an unplanned entry into a 72 hour limiting condition for operation (LCO) for the right train of the emergency core cooling system (ECCS). In the apparent cause evaluation (ACE) for this issue, the licensee determined that the contributing cause had not previously addressed this particular failure mode (i.e. the control switch and circuit design) when similar overcurrent events occurred in the past. Prior corrective actions included adding guidance to system operating procedures to pause between hand switch movements and replacing other components within those systems. These actions were not successful in eliminating this failure mode. The licensee documented the issue in their CAP, planned to revise the control circuit and switch design, and added specific procedural steps on how to operate these fans until the design change was implemented.

The finding was more than minor in accordance with IMC 0612, Appendix B, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Reliability and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, as a result of the overcurrent trip of its breaker, V-27B was declared non functional and unavailable and the equipment in the room it cooled was declared inoperable, which included the 'A' high pressure safety injection (HPSI) pump and the 'A' containment spray (CS) pump. This led to an unplanned entry into a 72 hour LCO for the right train of ECCS. The finding had a cross cutting aspect in the area of Problem Identification and Resolution and was related to the cross cutting component of Evaluation, which required that the licensee thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. As discussed above, in the ACE for this issue the licensee determined that the corrective actions associated with the identified contributing cause following similar overcurrent events that occurred in the past had not addressed or been successful in eliminating this failure mode

Inspection Report# : [2016003](#) (pdf)

Significance:  Apr 08, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correct Containment Spray Pump Non-conformance

The team identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct a non-conforming condition for containment spray pump P-54A, which was discovered in October 2014, during an NRC component design bases inspection (CDBI). The licensee entered this issue into their CAP as CR-PLP-2016-01646 with an assigned action to resolve the non-conforming condition of the containment spray pump.

The team determined that the performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Design Control and adversely affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the performance deficiency identified that the licensee failed to correct a non-conformance between their current as-built configuration, the current licensing basis (i.e., Final Safety Analysis Report (FSAR) Section 6.2.3.1), and the design basis (i.e., Design Bases Calculation EA-ELEC-LDTAB-005) which was identified by the NRC in the 2014 CDBI. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04 "Initial Characterization of Findings," issued June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," issued June 19, 2012, the team answered "No" to all of the questions. Therefore, this finding was of very low safety significance (Green). The team identified a cross-cutting aspect in the Evaluation component of the Problem Identification and Resolution cross-cutting area because the licensee failed to fully evaluate the original issue identified in the 2014 CDBI to ensure that the corrective actions performed adequately addressed the non-conformance between the licensing basis, the as-built configuration, and the design basis.

Inspection Report# : [2016007](#) (*pdf*)

Significance:  Mar 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet the Minimum Staffing Requirements of the Fire Brigade

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 48(c) and the National Fire Protection Association (NFPA) Standard 805 Section 3.4.1 was identified for the failure to meet the minimum staffing requirements for the Fire Brigade on January 4 and 5, 2016. Specifically, two nuclear plant operators (NPOs) who had their Fire Brigade qualifications suspended, stood watch as Fire Brigade members during day shift on January 4, 2016 and approximately one half of day shift on January 5, 2016. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2016 00198, performed an apparent cause evaluation, successfully performed a fire drill to requalify the Fire Brigade members with suspended qualifications on January 6, 2016, and planned to update the tracking method used to validate drill completion for Fire Brigade qualifications.

The performance deficiency was determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on using qualitative criteria located in IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The finding had a cross cutting aspect of Documentation in the Human Performance cross cutting area because the licensee informally tracked drill completion and this information was not accessible to each individual Fire Brigade member to validate their qualifications.

Inspection Report# : [2016001](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate PT Examination of Pipe Lug Welds

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion IX, “Control of Special Processes,” for the licensee’s failure to perform a dye penetrant (PT) examination of the Safety Injection System (SIS) pipe lug welds in accordance with the American Society of Mechanical Engineers (ASME) Code Section XI requirements. The licensee entered this issue into the Corrective Action Program (CAP) as CR-PLP-2015-04191, repeated the PT examination of the affected SIS lug welds to meet the full extent of coverage required by the ASME Code, repeated examinations of other welds conducted by the PT examiner during the outage, and removed the PT examiner from further weld examination activities.

This performance deficiency was determined to be more than minor because, if left uncorrected, the failure to perform a PT examination in accordance with the ASME Code requirements could result in acceptance and return to service of a component with an undetected crack that would increase the possibility of pipe leakage or failure. In addition, the failure to perform a PT examination in accordance with the ASME Code adversely affected the Mitigating System Cornerstone attribute of Equipment Performance, because it could result in failure to detect cracks in pipe welds, which would reduce the availability and reliability of the SIS mitigating system. The inspectors evaluated the finding in accordance with IMC 0609, Appendix A, “The SDP for Findings At-Power,” Exhibit 2, “Mitigating Systems Screening Questions,” and answered “yes” to screening question number 1. Although this finding adversely affected the design or qualification of the SIS pipe lugs, the finding screened as very-low safety significance (Green), because it did not result in the loss of operability or functionality of the affected SIS pipe segment. This finding had a cross-cutting aspect in the Field Presence component of the Human Performance cross-cutting area. Specifically, licensee leaders were not observed in the work areas of the plant to coach and reinforce standards or expectations for the licensee’s vendor staff to ensure deviation from standards and expectations were promptly corrected.

Inspection Report# : [2015004](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify Components Required to be Covered by the Quality Assurance Program

The inspectors identified a finding of very-low safety significance, and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion II, “Quality Assurance Program,” for the licensee’s failure to identify all component cooling water (CCW) structures, systems, and components (SSC), which were required to be covered by the Quality Assurance Program (i.e., be safety-related). As a result, the licensee incorrectly credited nonsafety-related CCW components to remain functional during and following a design basis event (DBE). The licensee entered this finding into their CAP and, after performing operability determinations, concluded the system would still be capable of performing its function.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as having very-low safety significance (Green) because, although it was a deficiency affecting the design or qualification of a mitigating SSC, the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was determined not to be representative

of current performance.

Inspection Report# : [2015004](#) (*pdf*)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform a Required 50.59 Evaluation for Declassification of the CVCS

The inspectors identified a SL IV, NCV of 10 CFR, Part 50.59, “Changes, Tests, and Experiments,” and an associated finding of very-low safety significance (Green) for the licensee’s failure to maintain a record of the declassification of the Chemical Volume and Control System (CVCS) from safety-related to nonsafety-related, which includes a written evaluation that provides the bases for the determination that the change did not require a license amendment. The licensee entered this issue into their CAP, and after a review of the system, determined there was reasonable assurance that it could perform its function.

The inspectors determined the underlying technical concern was a performance deficiency associated with the Mitigating Systems cornerstone that was more than minor because, if left uncorrected, would become a more significant safety concern. The underlying technical concern screened as a finding with very-low safety significance (Green) because, although it affected the design or qualification of the CVCS, it did not result in the loss of functionality of the CVCS. The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the changes were evaluated by the SDP, described above, as having very-low safety significance (i.e., Green finding). The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance.

Inspection Report# : [2015004](#) (*pdf*)

Barrier Integrity

Significance:  Jul 15, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Document 50.59 Evaluation for Removal of Eight Hour Operator Rounds from the FSAR (Section 1R17.1.b)

The inspectors identified a Severity Level IV, Non-Cited Violation of Title 10 of the Code of Federal Regulations (CFR), Part 50.59, “Changes, Tests, and Experiments,” and an associated finding of very low safety significance (Green) for the licensee’s failure to maintain records of a change in the facility which included a written evaluation that provided the bases for the determination that the change did not require a license amendment. Specifically, the licensee failed to have a written evaluation that provided the bases for why removal of the 8-hour operator rounds credited to detect a Spent Fuel Pool (SFP) dilution event from the Final Safety Analysis Report did not require a license amendment. The licensee entered this issue into their Corrective Action Program (CAP) as CR-PLP-2016-03055 and issued a standing order to log SFP level every eight hours as an immediate corrective action. The licensee’s planned corrective actions include preparation of a 10 CFR 50.59 evaluation for the change.

The inspectors determined that the failure to perform a 10 CFR 50.59 evaluation for the change to the Final Safety Analysis Report which removed the eight hour operator rounds credited to detect a SFP dilution event was contrary to

10 CFR 50.59(d)(1), and was a performance deficiency. The inspectors determined the performance deficiency was more than minor, and a finding, because it was associated with the barrier integrity cornerstone attribute of Configuration Control and adversely affected the associated Cornerstone Objective of ensuring that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the removal of the 8 hour operator rounds is associated with the boron concentration reactivity control in the SFP and could adversely affect the fuel cladding's function to protect the public from radionuclide releases. In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The inspectors evaluated the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings at Power," dated June 19, 2012, Exhibit 3, for the Barrier Integrity cornerstone and were directed to further evaluate the significance of the finding using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," dated April 12, 2012. The inspectors performed the qualitative evaluation described in IMC 0609, Appendix M, and determined the significance of the finding to be of very low safety significance (Green) by considering the availability of other measures the licensee had in place to detect a SFP dilution event. In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., Green finding). The inspectors determined the associated finding had a cross-cutting aspect in the area of Human Performance because the licensee did not ensure their staff were adequately trained in the implementation of the 10 CFR 50.59 rule. Specifically, the licensee staff did not realize that a change which fundamentally alters the existing means of performing or controlling design functions (removal of the 8-hour operator rounds for detecting a SFP dilution event in lieu of an automatic alarm) is adverse and requires an evaluation. (Section 1R17.1.b) [H.9]

Inspection Report# : [2016009](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Movement of Radioactive Material Results in an Unposted and Un-Barricaded High-Radiation Area

A self revealed finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.7.1 was identified when movement of a bag of radioactive material caused an area to become a high radiation area without the proper posting and barricades. The licensee immediately moved this bag of radioactive material to a posted locked high radiation area and entered this issue into their Corrective Action Program as CR–PLP–2015–05019.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the movement of the bag from an area that was a high radiation area to an area that was not posted and barricaded as a high radiation area removed a barrier that was intended to prevent workers from receiving unexpected dose. The finding was determined to be of very low safety significance in accordance with Inspection Manual Chapter 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008. The violation was of

very low safety significance because: (1) it did not involve as low as reasonably achievable planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding had a cross cutting aspect of Teamwork in the Human Performance cross cutting area because the individuals and work groups involved did not communicate or coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained

Inspection Report# : [2016001](#) (*pdf*)

Public Radiation Safety

Security

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Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Provide Bases to Determine Changes Did Not Involve Unreviewed Safety Questions

The inspectors identified a Severity Level (SL) IV, NCV of 10 CFR Part 50, Section 59, “Changes, Tests, and Experiments,” for the licensee’s failure to maintain records of written safety evaluations, which provide the bases for concluding the nonsafety-related portions of the Component Cooling Water (CCW) system inside containment could be credited to perform their function during and following a Design Basis Event (DBE), and that the change would not result in an unreviewed safety question. The licensee entered this issue into their Corrective Action program (CAP) and, after performing operability determinations, concluded the system would still be capable of performing its function.

The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the resulting changes were evaluated by the significance determination process (SDP) as having very low safety significance (i.e., green finding). The resulting changes, the violation's underlying technical concerns, impacted the Mitigating Systems cornerstone and were evaluated separately as the green finding with the associated 10 CFR Part 50, Appendix B, Criterion II, NCV discussed above. The inspectors did not identify a cross-cutting aspect because cross cutting aspects are not assigned to traditional enforcement violations.

Inspection Report# : [2015004](#) (*pdf*)

Last modified : December 08, 2016

Palisades

4Q/2016 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Sep 30, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Appropriately Select and Review for Suitability of Application the Control Switch and Circuit Design of the Engineered Safeguards Room Cooler Fans

A self revealed finding of very low safety significance and an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to appropriately select and review for suitability of application the control switch and circuit design of the engineered safeguards room cooler fans. Specifically, on July 27, 2016, when the licensee was conducting troubleshooting activities for the tripping of engineered safeguards room cooler fan V-27B, it was revealed that the control switch design was "break before make" and as the hand switch was transitioned from one position to the next, the supply voltage and the motor became "out of phase" and caused an overcurrent trip of the breaker. This resulted in an unplanned entry into a 72 hour limiting condition for operation (LCO) for the right train of the emergency core cooling system (ECCS). In the apparent cause evaluation (ACE) for this issue, the licensee determined that the contributing cause had not previously addressed this particular failure mode (i.e. the control switch and circuit design) when similar overcurrent events occurred in the past. Prior corrective actions included adding guidance to system operating procedures to pause between hand switch movements and replacing other components within those systems. These actions were not successful in eliminating this failure mode. The licensee documented the issue in their CAP, planned to revise the control circuit and switch design, and added specific procedural steps on how to operate these fans until the design change was implemented.

The finding was more than minor in accordance with IMC 0612, Appendix B, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Reliability and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, as a result of the overcurrent trip of its breaker, V-27B was declared non functional and unavailable and the equipment in the room it cooled was declared inoperable, which included the 'A' high pressure safety injection (HPSI) pump and the 'A' containment spray (CS) pump. This led to an unplanned entry into a 72 hour LCO for the right train of ECCS. The finding had a cross cutting aspect in the area of Problem Identification and Resolution and was related to the cross cutting component of Evaluation, which required that the licensee thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. As discussed above, in the ACE for this issue the licensee determined that the corrective actions associated with the identified contributing cause following similar overcurrent events that occurred in the past had not addressed or been successful in eliminating this failure mode

Inspection Report# : [2016003](#) (pdf)

Significance:  Apr 08, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correct Containment Spray Pump Non-conformance

The team identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct a non-conforming condition for containment spray pump P-54A, which was discovered in October 2014, during an NRC component design bases inspection (CDBI). The licensee entered this issue into their CAP as CR-PLP-2016-01646 with an assigned action to resolve the non-conforming condition of the containment spray pump.

The team determined that the performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Design Control and adversely affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the performance deficiency identified that the licensee failed to correct a non-conformance between their current as-built configuration, the current licensing basis (i.e., Final Safety Analysis Report (FSAR) Section 6.2.3.1), and the design basis (i.e., Design Bases Calculation EA-ELEC-LDTAB-005) which was identified by the NRC in the 2014 CDBI. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04 "Initial Characterization of Findings," issued June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," issued June 19, 2012, the team answered "No" to all of the questions. Therefore, this finding was of very low safety significance (Green). The team identified a cross-cutting aspect in the Evaluation component of the Problem Identification and Resolution cross-cutting area because the licensee failed to fully evaluate the original issue identified in the 2014 CDBI to ensure that the corrective actions performed adequately addressed the non-conformance between the licensing basis, the as-built configuration, and the design basis.

Inspection Report# : [2016007](#) (*pdf*)

Significance:  Mar 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet the Minimum Staffing Requirements of the Fire Brigade

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 48(c) and the National Fire Protection Association (NFPA) Standard 805 Section 3.4.1 was identified for the failure to meet the minimum staffing requirements for the Fire Brigade on January 4 and 5, 2016. Specifically, two nuclear plant operators (NPOs) who had their Fire Brigade qualifications suspended, stood watch as Fire Brigade members during day shift on January 4, 2016 and approximately one half of day shift on January 5, 2016. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2016 00198, performed an apparent cause evaluation, successfully performed a fire drill to requalify the Fire Brigade members with suspended qualifications on January 6, 2016, and planned to update the tracking method used to validate drill completion for Fire Brigade qualifications.

The performance deficiency was determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on using qualitative criteria located in IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The finding had a cross cutting aspect of Documentation in the Human Performance cross cutting area because the licensee informally tracked drill completion and this information was not accessible to each individual Fire Brigade member to validate their qualifications.

Inspection Report# : [2016001](#) (*pdf*)

Barrier Integrity

Significance:  Jul 15, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Document 50.59 Evaluation for Removal of Eight Hour Operator Rounds from the FSAR (Section 1R17.1.b)

The inspectors identified a Severity Level IV, Non-Cited Violation of Title 10 of the Code of Federal Regulations (CFR), Part 50.59, “Changes, Tests, and Experiments,” and an associated finding of very low safety significance (Green) for the licensee’s failure to maintain records of a change in the facility which included a written evaluation that provided the bases for the determination that the change did not require a license amendment. Specifically, the licensee failed to have a written evaluation that provided the bases for why removal of the 8-hour operator rounds credited to detect a Spent Fuel Pool (SFP) dilution event from the Final Safety Analysis Report did not require a license amendment. The licensee entered this issue into their Corrective Action Program (CAP) as CR-PLP-2016-03055 and issued a standing order to log SFP level every eight hours as an immediate corrective action. The licensee’s planned corrective actions include preparation of a 10 CFR 50.59 evaluation for the change.

The inspectors determined that the failure to perform a 10 CFR 50.59 evaluation for the change to the Final Safety Analysis Report which removed the eight hour operator rounds credited to detect a SFP dilution event was contrary to 10 CFR 50.59(d)(1), and was a performance deficiency. The inspectors determined the performance deficiency was more than minor, and a finding, because it was associated with the barrier integrity cornerstone attribute of Configuration Control and adversely affected the associated Cornerstone Objective of ensuring that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the removal of the 8 hour operator rounds is associated with the boron concentration reactivity control in the SFP and could adversely affect the fuel cladding’s function to protect the public from radionuclide releases. In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The inspectors evaluated the finding using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” dated June 19, 2012, Exhibit 3, for the Barrier Integrity cornerstone and were directed to further evaluate the significance of the finding using IMC 0609 Appendix M, “Significance Determination Process Using Qualitative Criteria,” dated April 12, 2012. The inspectors performed the qualitative evaluation described in IMC 0609, Appendix M, and determined the significance of the finding to be of very low safety significance (Green) by considering the availability of other measures the licensee had in place to detect a SFP dilution event. In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., Green finding). The inspectors determined the associated finding had a cross-cutting aspect in the area of Human Performance because the licensee did not ensure their staff were adequately trained in the implementation of the 10 CFR 50.59 rule. Specifically, the licensee staff did not realize that a change which fundamentally alters the existing means of performing or controlling design functions (removal of the 8-hour operator rounds for detecting a SFP dilution event in lieu of an automatic alarm) is adverse and requires an evaluation. (Section 1R17.1.b) [H.9]

Inspection Report# : [2016009](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Movement of Radioactive Material Results in an Unposted and Un-Barricaded High-Radiation Area

A self revealed finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.7.1 was identified when movement of a bag of radioactive material caused an area to become a high radiation area without the proper posting and barricades. The licensee immediately moved this bag of radioactive material to a posted locked high radiation area and entered this issue into their Corrective Action Program as CR–PLP–2015–05019.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the movement of the bag from an area that was a high radiation area to an area that was not posted and barricaded as a high radiation area removed a barrier that was intended to prevent workers from receiving unexpected dose. The finding was determined to be of very low safety significance in accordance with Inspection Manual Chapter 0609 Appendix C, “Occupational Radiation Safety Significance Determination Process,” dated August 19, 2008. The violation was of very low safety significance because: (1) it did not involve as low as reasonably achievable planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding had a cross cutting aspect of Teamwork in the Human Performance cross cutting area because the individuals and work groups involved did not communicate or coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained

Inspection Report# : [2016001](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Security

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Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : February 01, 2017



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Palisades – Quarterly Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Have Appropriate Controls in Place for Combustible Materials

A finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Section 48(c) was identified by the inspectors for the licensee's failure to appropriately implement the requirements of procedure EN-DC-161, "Control of Combustibles." Specifically, between January 1, 2016 and October 22, 2016, the inspectors identified several examples of the licensee's failure to have appropriate controls in place for the storage of combustible materials in excess of the limits required for those respective areas without a completed transient combustible evaluation (TCE). Also, on several occasions from October 19, 2016 to October 22, 2016, the required compensatory actions for a TCE related to the dry fuel storage cask transporter vehicle were not appropriately implemented as required by procedure EN-DC-161. The licensee entered these issues in their corrective action program (CAP) as condition reports (CRs) CR-PLP-2016-03633, CR-PLP-2016-05148, and CR-PLP-2016-0564. Corrective actions for these issues included completing the required TCEs, ensuring the combustible materials in the areas were addressed by the combustible loading calculations, and ensuring appropriate compensatory measures were implemented.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Protection Against External Factors attribute, in the area of Fire, of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, transient combustible materials without required TCEs were stored in the charging pump cubicles and in the refueling and spent fuel pool areas. The finding screened as having very low safety significance (Green) in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," since none of the

stored materials were self igniting, low flashpoint liquids, or heat sources and was therefore assigned a "Low" degradation rating. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area due to the common element of a lack of knowledge of the individuals with the control of combustibles process and understanding their roles in that process

Inspection Report# : 2016004 (*pdf*)

Significance:  Dec 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Correct an Adverse Condition Associated with Diesel Generator Load Sequencer Module

A finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion XVI, "Corrective Action," was self revealed for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct an adverse condition associated with the emergency diesel generator (DG) load sequencer and power supply module as revealed when the electrolytic capacitor failed two days after installation. The 1-2 DG was declared inoperable, the licensee replaced the failed module, and an equipment apparent cause evaluation was completed for the equipment failure. An internal operating experience review revealed that a similar issue occurred in 2005 and corrective actions to address that failure, which included establishing shelf life and age requirements for electrolytic capacitors that were part of power supply modules, were not applied to this module. The licensee entered this issue into their Corrective Action ProgramCAP as CR-PLP-2016-03260.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, because the performance deficiency was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to correct a condition adverse to quality, which rendered the 1-2 DG inoperable. This condition would have prevented the DG from automatically starting and loading on the prescribed signal. The finding was screened in accordance with IMC 0609, Appendix A, and was determined to have very low safety significance (Green) based on answering "No" to all the screening questions under the Mitigating Structure, System and Components, and Functionality section. The inspectors concluded that the corrective actions for the adverse condition of the aging electrolytic capacitors should have been implemented greater than three years ago, so the finding was not reflective of current licensee performance. Therefore, no cross cutting aspect was identified.

Inspection Report# : 2016004 (*pdf*)

Significance:  Sep 30, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Appropriately Select and Review for Suitability of Application the Control Switch and Circuit Design of the Engineered Safeguards Room Cooler Fans

A self revealed finding of very low safety significance and an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to appropriately select and review for suitability of application the control switch and circuit design of the engineered safeguards room cooler fans. Specifically, on July 27, 2016, when the licensee was conducting troubleshooting activities for the tripping of engineered safeguards room cooler fan V-27B, it was revealed that the control switch design was "break before make" and as the hand switch was transitioned from one position to the next, the supply voltage and the motor became "out of phase" and caused an overcurrent trip of the breaker. This resulted in an unplanned entry into a 72 hour limiting condition for operation (LCO) for the right train of the emergency core cooling

system (ECCS). In the apparent cause evaluation (ACE) for this issue, the licensee determined that the contributing cause had not previously addressed this particular failure mode (i.e. the control switch and circuit design) when similar overcurrent events occurred in the past. Prior corrective actions included adding guidance to system operating procedures to pause between hand switch movements and replacing other components within those systems. These actions were not successful in eliminating this failure mode. The licensee documented the issue in their CAP, planned to revise the control circuit and switch design, and added specific procedural steps on how to operate these fans until the design change was implemented.

The finding was more than minor in accordance with IMC 0612, Appendix B, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Reliability and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, as a result of the overcurrent trip of its breaker, V-27B was declared non functional and unavailable and the equipment in the room it cooled was declared inoperable, which included the 'A' high pressure safety injection (HPSI) pump and the 'A' containment spray (CS) pump. This led to an unplanned entry into a 72 hour LCO for the right train of ECCS. The finding had a cross cutting aspect in the area of Problem Identification and Resolution and was related to the cross cutting component of Evaluation, which required that the licensee thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. As discussed above, in the ACE for this issue the licensee determined that the corrective actions associated with the identified contributing cause following similar overcurrent events that occurred in the past had not addressed or been successful in eliminating this failure mode

Inspection Report# : 2016003 (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Translate Design Analysis Stack-up Configuration into Specifications, Drawings, Procedures, and Instructions

A finding of very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to establish measures to assure that the applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to provide instructions in procedures to construct the spent fuel dry cask loading stack up, in the safety-related auxiliary building, in the configuration that had been analyzed for in the stack up seismic design basis calculation. In addition, the licensee failed to provide instructions in revised procedures to construct the stack up without certain gaps as specified in the stack up seismic design basis document. The licensee documented these issues in their Corrective Action Program (CAP) as Condition Report (CR)-PLP-2016-00646, CR-PLP-2016-01308, CR-PLP-2016-01558, CR-PLP-2016-04497, and CR-PLP-2016-04826; revised the stack up seismic analysis to address the identified issues; and translated the analyzed stack up design configuration into stack up installation procedures prior to performing stack up operations with spent nuclear fuel in the multi purpose canister.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," because it was associated with the Design Control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the performance deficiency resulted in a stack up configuration that did not ensure stack up dynamic stability or Auxiliary Building structural integrity to maintain radiological barrier functionality during a design basis seismic event. The finding

screened as having very low safety significance (Green) because it did not result in the loss of operability or functionality of the Auxiliary Building. The finding had a cross cutting aspect of Field Presence in the Human Performance cross cutting area, because licensee senior managers failed to ensure effective supervisory and management oversight of contractor activities related to the seismic analysis and installation of the stack up configuration

Inspection Report# : 2016004 (*pdf*)

Significance:  Jul 15, 2016
Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Document 50.59 Evaluation for Removal of Eight Hour Operator Rounds from the FSAR (Section 1R17.1.b)

The inspectors identified a Severity Level IV, Non-Cited Violation of Title 10 of the Code of Federal Regulations (CFR), Part 50.59, "Changes, Tests, and Experiments," and an associated finding of very low safety significance (Green) for the licensee's failure to maintain records of a change in the facility which included a written evaluation that provided the bases for the determination that the change did not require a license amendment. Specifically, the licensee failed to have a written evaluation that provided the bases for why removal of the 8-hour operator rounds credited to detect a Spent Fuel Pool (SFP) dilution event from the Final Safety Analysis Report did not require a license amendment. The licensee entered this issue into their Corrective Action Program (CAP) as CR-PLP-2016-03055 and issued a standing order to log SFP level every eight hours as an immediate corrective action. The licensee's planned corrective actions include preparation of a 10 CFR 50.59 evaluation for the change.

The inspectors determined that the failure to perform a 10 CFR 50.59 evaluation for the change to the Final Safety Analysis Report which removed the eight hour operator rounds credited to detect a SFP dilution event was contrary to 10 CFR 50.59(d)(1), and was a performance deficiency. The inspectors determined the performance deficiency was more than minor, and a finding, because it was associated with the barrier integrity cornerstone attribute of Configuration Control and adversely affected the associated Cornerstone Objective of ensuring that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the removal of the 8 hour operator rounds is associated with the boron concentration reactivity control in the SFP and could adversely affect the fuel cladding's function to protect the public from radionuclide releases. In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The inspectors evaluated the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings at Power," dated June 19, 2012, Exhibit 3, for the Barrier Integrity cornerstone and were directed to further evaluate the significance of the finding using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," dated April 12, 2012. The inspectors performed the qualitative evaluation described in IMC 0609, Appendix M, and determined the significance of the finding to be of very low safety significance (Green) by considering the availability of other measures the licensee had in place to detect a SFP dilution event. In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., Green finding). The inspectors determined the associated finding had a cross-cutting aspect in the area of Human Performance because the licensee did not ensure their staff were adequately trained in the implementation of the 10 CFR 50.59 rule. Specifically, the licensee staff did not realize that a change which fundamentally alters the existing means of performing or controlling design functions (removal of the 8-hour operator rounds for detecting a SFP dilution event in lieu of an automatic alarm) is adverse and requires an evaluation. (Section 1R17.1.b) [H.9]

Inspection Report# : 2016009 (*pdf*)

**Emergency Preparedness
Occupational Radiation Safety**

Public Radiation Safety Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : August 03, 2017

Page Last Reviewed/Updated Wednesday, August 10, 2016



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Palisades – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Have Appropriate Controls in Place for Combustible Materials

A finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Section 48(c) was identified by the inspectors for the licensee's failure to appropriately implement the requirements of procedure EN-DC-161, "Control of Combustibles." Specifically, between January 1, 2016 and October 22, 2016, the inspectors identified several examples of the licensee's failure to have appropriate controls in place for the storage of combustible materials in excess of the limits required for those respective areas without a completed transient combustible evaluation (TCE). Also, on several occasions from October 19, 2016 to October 22, 2016, the required compensatory actions for a TCE related to the dry fuel storage cask transporter vehicle were not appropriately implemented as required by procedure EN-DC-161. The licensee entered these issues in their corrective action program (CAP) as condition reports (CRs) CR-PLP-2016-03633, CR-PLP-2016-05148, and CR-PLP-2016-0564. Corrective actions for these issues included completing the required TCEs, ensuring the combustible materials in the areas were addressed by the combustible loading calculations, and ensuring appropriate compensatory measures were implemented.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Protection Against External Factors attribute, in the area of Fire, of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, transient combustible materials without required TCEs were stored in the charging pump cubicles and in the refueling and spent fuel pool areas. The finding screened as having very low safety significance (Green) in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," since none of the

stored materials were self igniting, low flashpoint liquids, or heat sources and was therefore assigned a "Low" degradation rating. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area due to the common element of a lack of knowledge of the individuals with the control of combustibles process and understanding their roles in that process

Inspection Report# : 2016004 (*pdf*)

Significance:  Dec 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Correct an Adverse Condition Associated with Diesel Generator Load Sequencer Module

A finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion XVI, "Corrective Action," was self revealed for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct an adverse condition associated with the emergency diesel generator (DG) load sequencer and power supply module as revealed when the electrolytic capacitor failed two days after installation. The 1-2 DG was declared inoperable, the licensee replaced the failed module, and an equipment apparent cause evaluation was completed for the equipment failure. An internal operating experience review revealed that a similar issue occurred in 2005 and corrective actions to address that failure, which included establishing shelf life and age requirements for electrolytic capacitors that were part of power supply modules, were not applied to this module. The licensee entered this issue into their Corrective Action ProgramCAP as CR-PLP-2016-03260.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, because the performance deficiency was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to correct a condition adverse to quality, which rendered the 1-2 DG inoperable. This condition would have prevented the DG from automatically starting and loading on the prescribed signal. The finding was screened in accordance with IMC 0609, Appendix A, and was determined to have very low safety significance (Green) based on answering "No" to all the screening questions under the Mitigating Structure, System and Components, and Functionality section. The inspectors concluded that the corrective actions for the adverse condition of the aging electrolytic capacitors should have been implemented greater than three years ago, so the finding was not reflective of current licensee performance. Therefore, no cross cutting aspect was identified.

Inspection Report# : 2016004 (*pdf*)

Significance:  Sep 30, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Appropriately Select and Review for Suitability of Application the Control Switch and Circuit Design of the Engineered Safeguards Room Cooler Fans

A self revealed finding of very low safety significance and an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to appropriately select and review for suitability of application the control switch and circuit design of the engineered safeguards room cooler fans. Specifically, on July 27, 2016, when the licensee was conducting troubleshooting activities for the tripping of engineered safeguards room cooler fan V-27B, it was revealed that the control switch design was "break before make" and as the hand switch was transitioned from one position to the next, the supply voltage and the motor became "out of phase" and caused an overcurrent trip of the breaker. This resulted in an unplanned entry into a 72 hour limiting condition for operation (LCO) for the right train of the emergency core cooling

system (ECCS). In the apparent cause evaluation (ACE) for this issue, the licensee determined that the contributing cause had not previously addressed this particular failure mode (i.e. the control switch and circuit design) when similar overcurrent events occurred in the past. Prior corrective actions included adding guidance to system operating procedures to pause between hand switch movements and replacing other components within those systems. These actions were not successful in eliminating this failure mode. The licensee documented the issue in their CAP, planned to revise the control circuit and switch design, and added specific procedural steps on how to operate these fans until the design change was implemented.

The finding was more than minor in accordance with IMC 0612, Appendix B, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Reliability and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, as a result of the overcurrent trip of its breaker, V-27B was declared non functional and unavailable and the equipment in the room it cooled was declared inoperable, which included the 'A' high pressure safety injection (HPSI) pump and the 'A' containment spray (CS) pump. This led to an unplanned entry into a 72 hour LCO for the right train of ECCS. The finding had a cross cutting aspect in the area of Problem Identification and Resolution and was related to the cross cutting component of Evaluation, which required that the licensee thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. As discussed above, in the ACE for this issue the licensee determined that the corrective actions associated with the identified contributing cause following similar overcurrent events that occurred in the past had not addressed or been successful in eliminating this failure mode

Inspection Report# : 2016003 (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Translate Design Analysis Stack-up Configuration into Specifications, Drawings, Procedures, and Instructions

A finding of very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to establish measures to assure that the applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to provide instructions in procedures to construct the spent fuel dry cask loading stack up, in the safety-related auxiliary building, in the configuration that had been analyzed for in the stack up seismic design basis calculation. In addition, the licensee failed to provide instructions in revised procedures to construct the stack up without certain gaps as specified in the stack up seismic design basis document. The licensee documented these issues in their Corrective Action Program (CAP) as Condition Report (CR) -PLP-2016-00646, CR-PLP-2016-01308, CR-PLP-2016-01558, CR-PLP-2016-04497, and CR-PLP-2016-04826; revised the stack up seismic analysis to address the identified issues; and translated the analyzed stack up design configuration into stack up installation procedures prior to performing stack up operations with spent nuclear fuel in the multi purpose canister.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," because it was associated with the Design Control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the performance deficiency resulted in a stack up configuration that did not ensure stack up dynamic stability or Auxiliary Building structural integrity to maintain radiological barrier functionality during a design basis seismic event. The finding

screened as having very low safety significance (Green) because it did not result in the loss of operability or functionality of the Auxiliary Building. The finding had a cross cutting aspect of Field Presence in the Human Performance cross cutting area, because licensee senior managers failed to ensure effective supervisory and management oversight of contractor activities related to the seismic analysis and installation of the stack up configuration

Inspection Report# : 2016004 (*pdf*)

Significance:  Jul 15, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Document 50.59 Evaluation for Removal of Eight Hour Operator Rounds from the FSAR (Section 1R17.1.b)

The inspectors identified a Severity Level IV, Non-Cited Violation of Title 10 of the Code of Federal Regulations (CFR), Part 50.59, "Changes, Tests, and Experiments," and an associated finding of very low safety significance (Green) for the licensee's failure to maintain records of a change in the facility which included a written evaluation that provided the bases for the determination that the change did not require a license amendment. Specifically, the licensee failed to have a written evaluation that provided the bases for why removal of the 8-hour operator rounds credited to detect a Spent Fuel Pool (SFP) dilution event from the Final Safety Analysis Report did not require a license amendment. The licensee entered this issue into their Corrective Action Program (CAP) as CR-PLP-2016-03055 and issued a standing order to log SFP level every eight hours as an immediate corrective action. The licensee's planned corrective actions include preparation of a 10 CFR 50.59 evaluation for the change.

The inspectors determined that the failure to perform a 10 CFR 50.59 evaluation for the change to the Final Safety Analysis Report which removed the eight hour operator rounds credited to detect a SFP dilution event was contrary to 10 CFR 50.59(d)(1), and was a performance deficiency. The inspectors determined the performance deficiency was more than minor, and a finding, because it was associated with the barrier integrity cornerstone attribute of Configuration Control and adversely affected the associated Cornerstone Objective of ensuring that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the removal of the 8 hour operator rounds is associated with the boron concentration reactivity control in the SFP and could adversely affect the fuel cladding's function to protect the public from radionuclide releases. In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The inspectors evaluated the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings at Power," dated June 19, 2012, Exhibit 3, for the Barrier Integrity cornerstone and were directed to further evaluate the significance of the finding using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," dated April 12, 2012. The inspectors performed the qualitative evaluation described in IMC 0609, Appendix M, and determined the significance of the finding to be of very low safety significance (Green) by considering the availability of other measures the licensee had in place to detect a SFP dilution event. In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., Green finding). The inspectors determined the associated finding had a cross-cutting aspect in the area of Human Performance because the licensee did not ensure their staff were adequately trained in the implementation of the 10 CFR 50.59 rule. Specifically, the licensee staff did not realize that a change which fundamentally alters the existing means of performing or controlling design functions (removal of the 8-hour operator rounds for detecting a SFP dilution event in lieu of an automatic alarm) is adverse and requires an evaluation. (Section 1R17.1.b) [H.9]

Inspection Report# : 2016009 (*pdf*)

**Emergency Preparedness
Occupational Radiation Safety**

Public Radiation Safety Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : September 05, 2017

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Palisades – Quarterly Plant Inspection Findings

3Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Have Appropriate Controls in Place for Combustible Materials

A finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Section 48(c) was identified by the inspectors for the licensee's failure to appropriately implement the requirements of procedure EN-DC-161, "Control of Combustibles." Specifically, between January 1, 2016 and October 22, 2016, the inspectors identified several examples of the licensee's failure to have appropriate controls in place for the storage of combustible materials in excess of the limits required for those respective areas without a completed transient combustible evaluation (TCE). Also, on several occasions from October 19, 2016 to October 22, 2016, the required compensatory actions for a TCE related to the dry fuel storage cask transporter vehicle were not appropriately implemented as required by procedure EN-DC-161. The licensee entered these issues in their corrective action program (CAP) as condition reports (CRs) CR-PLP-2016-03633, CR-PLP-2016-05148, and CR-PLP-2016-0564. Corrective actions for these issues included completing the required TCEs, ensuring the combustible materials in the areas were addressed by the combustible loading calculations, and ensuring appropriate compensatory measures were implemented.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Protection Against External Factors attribute, in the area of Fire, of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, transient combustible materials without required TCEs were stored in the charging pump cubicles and in the refueling and spent fuel pool areas. The finding screened as having very low safety significance (Green) in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," since none of the

stored materials were self igniting, low flashpoint liquids, or heat sources and was therefore assigned a "Low" degradation rating. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area due to the common element of a lack of knowledge of the individuals with the control of combustibles process and understanding their roles in that process

Inspection Report# : 2016004 (*pdf*)

Significance:  Dec 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Correct an Adverse Condition Associated with Diesel Generator Load Sequencer Module

A finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion XVI, "Corrective Action," was self revealed for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct an adverse condition associated with the emergency diesel generator (DG) load sequencer and power supply module as revealed when the electrolytic capacitor failed two days after installation. The 1-2 DG was declared inoperable, the licensee replaced the failed module, and an equipment apparent cause evaluation was completed for the equipment failure. An internal operating experience review revealed that a similar issue occurred in 2005 and corrective actions to address that failure, which included establishing shelf life and age requirements for electrolytic capacitors that were part of power supply modules, were not applied to this module. The licensee entered this issue into their Corrective Action ProgramCAP as CR-PLP-2016-03260.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, because the performance deficiency was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to correct a condition adverse to quality, which rendered the 1-2 DG inoperable. This condition would have prevented the DG from automatically starting and loading on the prescribed signal. The finding was screened in accordance with IMC 0609, Appendix A, and was determined to have very low safety significance (Green) based on answering "No" to all the screening questions under the Mitigating Structure, System and Components, and Functionality section. The inspectors concluded that the corrective actions for the adverse condition of the aging electrolytic capacitors should have been implemented greater than three years ago, so the finding was not reflective of current licensee performance. Therefore, no cross cutting aspect was identified.

Inspection Report# : 2016004 (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Translate Design Analysis Stack-up Configuration into Specifications, Drawings, Procedures, and Instructions

A finding of very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to establish measures to assure that the applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to provide instructions in procedures to construct the spent fuel dry cask loading stack up, in the safety-related auxiliary building, in the configuration that had been analyzed for in the stack up seismic design basis calculation. In addition, the licensee failed to provide instructions

in revised procedures to construct the stack up without certain gaps as specified in the stack up seismic design basis document. The licensee documented these issues in their Corrective Action Program (CAP) as Condition Report (CR) -PLP-2016-00646, CR-PLP-2016-01308, CR-PLP-2016-01558, CR-PLP-2016-04497, and CR-PLP-2016-04826; revised the stack up seismic analysis to address the identified issues; and translated the analyzed stack up design configuration into stack up installation procedures prior to performing stack up operations with spent nuclear fuel in the multi purpose canister.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," because it was associated with the Design Control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the performance deficiency resulted in a stack up configuration that did not ensure stack up dynamic stability or Auxiliary Building structural integrity to maintain radiological barrier functionality during a design basis seismic event. The finding screened as having very low safety significance (Green) because it did not result in the loss of operability or functionality of the Auxiliary Building. The finding had a cross cutting aspect of Field Presence in the Human Performance cross cutting area, because licensee senior managers failed to ensure effective supervisory and management oversight of contractor activities related to the seismic analysis and installation of the stack up configuration

Inspection Report# : 2016004 (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : November 29, 2017

Page Last Reviewed/Updated Monday, November 06, 2017



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Palisades – Quarterly Plant Inspection Findings

4Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Oct 25, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

1-2 Diesel Generator Trip During Maintenance Resulting in Additional Unavailability of the 1-2 Diesel Generator

A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1, "Procedures", was self-revealed on March 31, 2017, when the 1-2 Diesel Generator (DG) tripped during performance of the monthly TS surveillance procedure MO-7A-2, "Emergency Diesel Generator 1-2." Specifically, during conduct of the monthly surveillance procedure, restoration activities associated with maintenance of breaker 152-213, 1-2 DG to Bus 1D, were being performed. When maintenance personnel closed the trip cutouts for the Z-phase of the 1-2 DG differential overcurrent relay, an unbalanced current flow into the differential relay resulted in relay actuation. This actuation resulted in a trip of the output breaker and subsequently the 1-2 DG. The trip caused a delay in the TS surveillance activities, and resulted in extended unavailability and inoperability of the 1-2 DG. The licensee entered this issue into their corrective action program (CAP) as condition report (CR) CR-PLP-2017-01291. Corrective actions included retesting the 1-2 DG and updating the work instructions associated with the differential overcurrent relays to include caution statements that opening or closing trip cutouts for the relays while the output breakers from the DGs to the associated buses were closed could cause the differential relays to actuate.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Mitigating Systems Cornerstone Attribute of Procedure Quality and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to

initiating events to prevent undesirable consequences. The finding screened as having very low safety significance (Green) in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, since the inspectors answered "no" to all screening questions. The finding had a cross-cutting aspect in the area of human performance, work management, for failing to identify and manage risk commensurate to the work

Inspection Report# : 2017003 (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : February 01, 2018

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