

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 Offsite 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 accordance 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 inspectors 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:  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:  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 $1 \times 10E-6$ (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