Palisades
3Q/2009 Plant Inspection Findings

Initiating Events

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: G 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: G 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: G 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: G 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: G 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: G 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: G 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: G 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: G 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: G Sep 30, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

Entering a High Radiation Area without an adequate awareneses 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: G 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: G 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