Cooper
3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Appropriately Manage Risk for Maintenance in the Station's Switchyard
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(4), “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” associated with the licensee’s failure to manage risk associated with switchyard maintenance. Specifically, as a result of a risk assessment performed for planned work in the station’s switchyard the licensee had identified required risk management actions for these activities to offset the increase in on-line risk. However, workers failed to implement these risk management actions during the performance of the work. This issue was entered into the licensee’s corrective action program as Condition Report CR-CNS-2011-12267.

The licensee’s failure to implement required risk management actions to manage the increase in on-line risk during switchyard work was a performance deficiency. The performance deficiency was more than minor because it affected the protection against external factors attribute of the Initiating Events Cornerstone, and directly 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, and is therefore a finding. Using Manual Chapter 0609, Appendix K, “Maintenance Risk Assessment and Risk Management Significance Determination Process,” flowchart 2, “Assessment of RMAs,” the inspectors determined the need to calculate the risk deficit to determine the significance of this issue. The inspectors contacted the regional senior reactor analyst who estimated the increase in risk caused by the unmonitored switchyard activity. For the five minute period of exposure, the frequency of the switchyard-centered loss of offsite power was increased by one order of magnitude. The result was an ICCDP of 1.0E-11. As such, this finding was determined to have very low safety significance. This finding had a cross-cutting aspect in the area of human performance associated with the work practices component, because the licensee failed to assure that human error prevention techniques, such as self and peer checking were used to assure that work activities were performed safely. Specifically, individuals working in the switchyard failed to self and peer check prior to moving aerial equipment in the switchyard without spotters.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow Station Procedure Results in Inadequate Work Instructions
The inspectors documented a self-revealing finding associated with the licensee’s failure to ensure the requirements of Station Procedure 0-CNS-52, “Control of Switchyard and Transformer Yard Activities at CNS,” Revision 22, were implemented. Specifically, on February 2, 2012, the work order issued for use by transmission and distribution personnel for modification work in the stations 161 kV switchyard failed to thoroughly evaluate the work scope and provide sufficient detail for the workers to prevent affecting operating equipment. This inadequate work order resulted in tripping the startup station service transformer which resulted in an unplanned down power. This issue was entered into the licensee’s corrective action program as Condition Report CR-CNS-2012-00777.

The failure to follow the requirements of Station Procedure 0-CNS-52 and generate a work order with sufficient level of detail above skill of the craft which referred to appropriate references to provide necessary guidance for the work task was a performance deficiency. The performance deficiency was determined to be more than minor because it affected the procedure quality attribute of the Initiating Events Cornerstone, and it directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability during power operations, and is therefore a finding. Using Manual Chapter 0609, Attachment 4, “Phase 1 Initial Screening and Characterization of Findings,” the finding was determined to have very low safety significance (Green) because 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. This finding had a cross-cutting aspect in the area of human performance associated with the work practices component, because the licensee failed to ensure that supervisory and management oversight of contractor work in the station 161 kV transformer yard was sufficient to ensure that nuclear safety was supported.
Inspection Report# : 2012002 *(pdf)*

Mitigating Systems

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Adequate Postmaintenance Testing
The inspectors documented a self revealing, non cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” associated with the licensee’s failure to develop and specify adequate postmaintenance testing requirements in work instructions used to perform maintenance on emergency diesel generator 1. Specifically, in October 2011, Work Order 4766672 did not specify adequate postmaintenance testing instructions to verify that the left bank air distributor was properly re-installed following a change in work scope. This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-02532 and CR-CNS-2012-02566.

The licensee’s failure to establish adequate work instructions, to include post maintenance testing requirements to verify equipment operability following maintenance, was a performance deficiency. The performance deficiency was more than minor because it affected the procedure quality attribute of the Mitigating Systems Cornerstone, and directly affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding screened as potentially risk significant since the finding represented an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. When evaluated per Inspection Manual Chapter 0609, Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations,” and the Cooper Phase 2 pre-solved table item, “EDG1,” the inspectors determined this finding to be of very low safety significance (Green). This finding had a cross cutting aspect in the area of human performance associated with the resources component, because the licensee failed to provide complete, accurate and up to date work packages that specified the appropriate post maintenance testing requirements following work scope change.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Ensure Compliance with the Requirements of Station Troubleshooting Procedure
The inspectors documented a self-revealing, non cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated with the failure of the licensee to ensure compliance with the requirements of the station's trouble shooting plan generated in accordance with Procedure 7.0.1.7, Revision 15, "Troubleshooting Plant Equipment." Specifically, licensee personnel failed to ensure that ground isolated test equipment was used during troubleshooting activities that affected the 250 Vdc bus. The licensee entered this deficiency into their corrective action program for resolution as Condition Report CR-CNS-2012-02717.

The failure to follow the troubleshooting plan was a performance deficiency. 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 affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore, a finding. Specifically, the licensee failed to ensure that ground isolated test equipment was used as specified in the troubleshooting plan contained in Work Order 4863518, "Troubleshooting SS IVTR UPS2 and Transfer Switch," causing a ground and 0.8 volt drop on the 250 Vdc Bus 1A. The inspectors evaluated the finding using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of human performance, associated with the decision making, because the licensee failed to use conservative assumptions and conduct effectiveness reviews to validate the underlying assumptions that ground isolated test equipment was used as specified in the troubleshooting plan.

Inspection Report# : 2012003 *(pdf)*

Significance:  Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Recognize the Need for An Evaluation and to Properly Document the Bases for Operability
The inspectors identified two examples of a non cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated with the failure of the licensee to recognize the need for an evaluation and to properly document the bases for operability when a degrading nonconforming condition was identified. Specifically, the licensee did not consider all relevant information when assessing: (1) the diesel generator 1's jacket water heater seismic operability with only two bolts fully engaged and; (2) the impact of a free floating absorbent bag discovered in the diesel generator 2's room sump for internal flooding analysis for a medium energy line break. The licensee entered these issues into their corrective action program for resolution as Condition Reports CR-CNS-2012-03137 and CR-CNS-2012-02767.

The licensee's failure to recognize the need for an evaluation and to properly document the bases for operability when a degraded nonconforming condition was identified was a performance deficiency. 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 affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. The inspectors evaluated the finding using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss

of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of human performance, associated with decision making, because the licensee failed to use conservative assumptions and conduct effectiveness reviews to validate the underlying assumptions when determining diesel generator 1's jacket water heater seismic operability with only two bolts fully engaged and impact of a free floating absorbent bag in diesel generator 2's room sump for internal flooding analysis for a medium energy line break.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Design Control of the Standby Liquid Control System and Sumps Credited in the Internal Flooding Analysis
The inspectors identified two examples of a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to: (1) assure that the applicable seismic design basis requirements associated with the standby liquid control system storage tank was correctly translated into the plant design to ensure that the standby liquid control system would remain operable following a seismic event and; (2) maintain design control of sumps credited in the station's internal flooding analysis. These issues were entered into the licensee's corrective action program as Condition Reports CR CNS 2012 01918 for the standby liquid storage tank and CR-CNS-2012-02414, CR-CNS-2012-02426, CR-CNS-2012-02509, CR-CNS-2012-02510, CR-CNS-2012-02752, and CR-CNS-2012-02767 for the oil absorbent bags.

The licensee's failure to maintain design control of the standby liquid control system and sumps credited for the station's internal flooding analysis was a performance deficiency. 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 affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. The inspectors evaluated the finding using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of problem identification and resolution, associated with the corrective action component: (1) the licensee failed to thoroughly evaluate concerns with seismic analysis of the standby liquid control system such that the resolution addresses causes an extent of conditions, as necessary, during the development of NEDC 12-015; (2) the licensee had the opportunity in 2010 and early 2012 during reviews of the internal flooding analysis to identify that oil absorbent bags contained in the sumps credited in the internal flooding analysis did not contain an analysis and where an unapproved modification.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Furnish Evidence of an Activity Affecting Quality
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," associated with the licensee's failure to furnish evidence of an activity affecting quality associated with the emergency diesel generator jacket water cooling pumps. Specifically, the licensee failed to maintain design documents

that detailed the amount of net positive suction head required for the diesel generator jacket water pumps to ensure that at the current low level alarm set point the pumps would not cavitate and potentially be damaged. The licensee generated a bounding operability evaluation to address this issue. This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-03262, and CR-CNS-2012-03305.

The licensee's failure to furnish evidence that showed the required net positive suction head for the jacket water pump was maintained at the current low level alarm set point was a performance deficiency. The performance deficiency was determined to be more than minor because it affected the design control attribute of the Mitigating Systems Cornerstone, and it directly affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Using Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because it was not a design or qualification issue confirmed not to result in a loss of operability or functionality; did not represent an actual loss of safety function of system or train; did not result in the loss of one or more trains of nontechnical specification equipment; and did not screen as potentially risk-significant due to seismic, flooding, or a severe weather initiating event. This finding did not have a cross cutting aspect because the most significant contributor of this finding did not reflect current licensee performance.

Inspection Report# : 2012003 *(pdf)*

Significance:  Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Design Changes Not Appropriately Approved by the Licensee
The inspectors identified a non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to ensure that design changes were subject to design control measures commensurate with those applied to the original design and were approved by the designated responsible organization. Specifically, the licensee received a design level calculation from a vendor in support of service water pump C change out but failed to appropriately review, accept and enter this calculation into their design basis. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2012-03634.

The licensee's failure to ensure that changes to the facility were subject to design control measures commensurate with those applied to the original design, and were approved by the designated responsible organization was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the design control attribute of Mitigating Systems Cornerstone, and affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Using Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. This finding had a cross cutting aspect in the area of human performance associated with the work practices component, because the licensee failed to adequately define and effectively communicates expectations regarding procedural compliance and personnel failed to follow procedures. Specifically, engineering department personnel failed to follow station procedures when receiving a new design basis calculation from a vendor.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Evaluate Changes for Adverse Impacts
The inspectors identified four examples of a non cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated with the licensee's failure to follow the requirements of station procedure 0.8, "10CFR50.59 and 10CFR72 .48 Reviews," and evaluate changes made to safety related components for adverse impacts. Specifically, the inspectors identified four instances where the licensee personnel in multiple work groups failed to follow the requirements of station procedure 0.8 and evaluate changes being made to safety related components for potentially adverse impacts prior to implementing these changes. This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-02750, CR-CNS-2012-03366, CR-CNS-2012-03806, CR-CNS-2012-04033, and CR-CNS-2012-04456.

The failure of station personnel to follow the requirements of station procedure 0.8, "10CFR50.59 and 10CFR72 .48 Reviews," for modifications to safety related equipment was a performance deficiency. The performance deficiency was determined to be more than minor because if left uncorrected the continued practice of modifying the facility without evaluating for adverse impacts has the potential to lead to a more significant safety concern. Specifically, unevaluated modifications to the facility could introduce adverse changes that result in systems not able to perform their intended safety function which would not be recognized. This finding affects the Mitigating Systems Cornerstone. Using Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of human performance, associated with the decision making component in that the licensee failed to use conservative assumptions in decision making and adopt a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate it is unsafe in order to disapprove the action.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Non-conservative Service Water Booster Pump A and D Differential Pressure Operability Limits During In-Service Surveillance Testing
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Controls," for the licensee's non-conservative service water booster pump A and D differential pressure operability limits. The licensee entered this deficiency into their corrective action program for resolution as Condition Report CR-CNS-2012-02497 and CR-CNS-2012-02500.

The licensee's nonconservative service water booster pump A and D differential pressure operability limits was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the procedural quality attribute of the Mitigating Systems Cornerstone, and affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Specifically, the pump differential pressure operability limit for service water booster pump A and D was not correctly stated in the In-service Testing program so that the pumps would meet their 30 day mission time for a design basis accident with a degrading pump differential pressure. The inspectors evaluated the finding using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and

Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of problem identification and resolution, associated with the corrective action component, in that, the licensee failed to thoroughly evaluate concerns with operability limit for service water booster pump A and D such that the resolution address causes an extent of conditions, as necessary. Specifically, operability lower limit was identified during the initiation of Condition Report CR-CNS-2011-07980, but the licensee failed to update the operability limits during the review of the condition report.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Design Control of the Essential Ventilation System
The inspectors identified a non-cited violation of 10 CFR 50 Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to ensure that the control buildings essential ventilation system would maintain battery room temperatures such that the batteries would remain operable under all design conditions. Specifically, the essential ventilation system does not provide a heat source for the battery rooms and during cold weather conditions cannot maintain room temperatures above the minimum required for operability without the use of portable heaters. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2012-00724.

The licensee's failure to ensure that the essential ventilation system would support battery operability under all design conditions was a performance deficiency. 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 affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Using Manual Chapter 0609, Attachment 4, "Phase 1 Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or server weather initiating event. This finding had a cross-cutting aspect in the area of human performance, associated with the decision-making component in that the licensee failed to conduct adequate effectiveness reviews of safety-significant decisions to verify the validity of the underlying assumptions, and identify possible unintended consequences. Specifically, the licensee failed to recognize the use of portable heaters as a manual action which indicated an inadequate ventilation design.
Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Fail to Correct a Condition Adverse to Quality for Determining the Number of Multiple Starts for a Single Diesel Generator Starting Air Accumulator
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the licensee's failure to prepare an adequate design calculation demonstrating that a single diesel generator starting air accumulator was capable of performing multiple starts of an emergency diesel generator. The licensee entered this deficiency into their corrective action program for resolution as Condition Report CR-CNS-2012-03039.

The licensee's failure to prepare an adequate design calculation demonstrating that a single diesel generator starting air accumulator was capable of performing multiple starts of an emergency diesel generator was a performance deficiency. 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 affected the associated objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. The inspectors evaluated the finding using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of human performance, associated with the decision making, because the licensee failed to use conservative assumptions and conduct effectiveness reviews to validate the underlying assumptions when determining the number of multiple starts on one diesel generator starting air accumulator.

Inspection Report# : 2012003 *(pdf)*

Significance:  Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Use Design-Basis Parameter Values in Design-Related Calculations
The inspectors identified a non cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to ensure that design bases parameters documented in the Updated Safety Analysis Report were used for station activities. Specifically, the licensee based an operability evaluation and a door breach sensitivity study on a parameter value determined in a calculation instead of the value documented in the Updated Safety Analysis Report because they failed to recognize information in Final Safety Analysis Report Amendment 25 that described the turbine building sidings response to a high energy line break as design bases information. This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2011-10391 and CR-CNS-2011-11861.

The licensee's failure to maintain design control when performing an operability evaluation and sensitivity study, with respect to the turbine building high energy line break analysis, is a performance deficiency. This performance deficiency was determined to be more than minor because if left uncorrected, the licensee's practice of basing design-related analyses on parameter values that don't represent the design bases has the potential to lead to a more significant safety concern. Specifically, if the licensee bases analyses on a particular parameter value that doesn't represent the design bases and if that parameter value differs from the corresponding design-basis value in a nonconservative manner, then the licensee could reasonably complete an operability assessment based on the nonconservative parameter value and determine that a safety-related system is operable, when an operability assessment based on the design-basis parameter value would have determined that the system is inoperable. As a result, a safety-related system could remain in an undetected inoperable state for an indefinite period of time, and is therefore a finding. Using Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors determined this finding has very low safety significance (Green) because it: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk-significant due to seismic, flooding, or a severe weather initiating event. The finding was determined to have a cross cutting aspect in the area of human performance, associated with the decision-making component in that the licensee failed to use conservative assumptions in decision making when they failed to recognize and control design bases information.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Analyze Seismic Requirements for Service Water Instrument Rack
The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” which states, in part, “measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions.” Specifically, prior to March 8, 2012, the licensee failed to incorporate the seismic/barge impact loadings using a +Y (vertical up) component in combination with the lateral loads, which would result in the highest concrete anchor bolt interaction, into Calculation NEDC 12-20 for the service water instrument rack. Also, the calculation incorrectly utilized a factor of safety of four for the anchor bolts, where as the Updated Safety Analysis Report, Appendix C 2, Section 2.10, specified a factor of safety of five. This finding was entered into the licensee’s corrective action program as Condition Report CR-CNS-2012-01665.

The team determined that the failure to incorporate the seismic/barge impact loadings using a +Y (vertical up) component in combination with the lateral loads into calculation NEDC 12-20, and using an incorrect safety factor for the instrument rack anchor bolts was a performance deficiency. This finding was 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. In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the issue was determined to have very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee revised the associated calculations to include the correct required standards, and the calculation was acceptable. This finding was determined to have a crosscutting aspect in the area of human performance, associated with the work practices component because the licensee did not ensure that supervisory or management oversight of the work activities, including contractors, were such that nuclear safety was supported.
Inspection Report# : 2012007 *(pdf)*

Significance: G Jun 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Resistance Values for the Preventative Maintenance of the Non-Segregated Phase Bus Duct
The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” which states, in part, “A program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate acceptance limits contained in applicable documents.” Specifically, prior to April 4, 2012, for the Startup Station Service Transformer (SSST), the licensee did not use the actual measured bus bar resistance values which exceeded the calculated values. This resulted in non-conservative values used in Calculation NEDC 00-003, which did not bound actual plant parameters. Also, for the Emergency Station Service Transformer (ESST), the current procedure has a resistance acceptance tolerance specified as 1 Ohm, and in Condition Report CR-CNS-2011-11750, the licensee found the actual measured value was in the milliohms, which should have been used as the acceptance criteria in the procedure. This finding was entered into the licensee’s corrective action program as Condition Reports CR-CNS-2012-02358 and CR-CNS-2012-02359.

The team determined that the failure to provide adequate acceptance criteria for the bus duct resistance for the Emergency Station Service Transformer and the Startup Station Service Transformer was a performance deficiency.

This finding was more than minor because it was associated with the test 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. In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the issue was determined to have very low safety significance (Green) because it was a test deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee performed an engineering justification for the bus resistance acceptance criteria based on the difference between the as measured resistance values and those values used in the voltage regulation study, and found the values acceptable. This finding was determined to have a cross-cutting aspect in the area of human performance associated with the decision making component because the licensee did not use conservative assumptions in decision making and adopt a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action.

Inspection Report# : 2012007 *(pdf)*

Significance:  Jun 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Address the Design Bases of the Battery Chargers Following Identification of an Undersized Fused Disconnect Switch Connecting the Swing Battery Chargers to the Direct Current (DC) Buses
The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," which states, in part, "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition." Specifically, in 2005, the licensee performed a review of the "C" swing battery charger disconnect switch fuses and their ratings, documented in Condition Report CR-CNS-2005-09378. However, the actions associated with this Condition Report did not evaluate the Updated Safety Analysis Report emergency event function which states that each battery charger shall have adequate capacity to restore its battery to full charge from a totally discharged condition while carrying the normal station steady state direct current load. This finding was entered into the licensee's corrective action program as Condition Report CR-CNS-2012-01611.

The team determined that the failure to adequately assess all design requirements during the review of Condition Report CR-CNS-2005-09378 was a performance deficiency. This finding was 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. In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the team determined that the finding represented a loss of system safety function requiring a Phase 2 evaluation. The Region IV Senior Reactor Analyst concluded that a Phase 3 evaluation was needed to address the issue because it departed from the guidance provided for Phase 1 or Phase 2. Using NRC Inspection Manual Chapter 0609, and Standardized Plant Analysis Risk (SPAR) model, the Senior Reactor Analyst identified that the frequency of events where the defective swing charger would affect core damage sequences were very low, that a station blackout restored by offsite power within one hour would not be expected to result in a failure of the swing charger, and it would be likely that the other battery charger would successfully charge the associated direct current bus and battery and result in a successful recovery. Therefore, the issue was determined to have very low significance (Green). This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2012007 *(pdf)*

Significance: G Jun 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish a Preventative Maintenance Program for Molded Case Curcuit Breakers
The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to April 4, 2012, the licensee failed to perform an adequate review of the design basis requirements to establish a preventive maintenance program for molded case circuit breakers located in the safety-related station battery chargers and important to safety battery inverters. This finding was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-1647 and CR-CNS-2012-1664.

The team determined that the failure to adequately review the design basis requirements, and not establishing a preventive maintenance program for molded case circuit breakers located in the safety-related station battery chargers and important to safety battery inverters, was a performance deficiency. This finding was 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. In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the issue was determined to have very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability or functionality. Specifically, there have not been any failures of these molded case circuit breakers attributed to lack of preventative maintenance. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2012007 *(pdf)*

Significance: G Jun 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have an Adequate Procedure for Erecting Flood Barriers
The team identified a Green noncited violation of Technical Specification 5.4.1.a, which states, in part, "Written procedures shall be established, implemented, and maintained, covering the procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A.6.w, Acts of Nature (e.g., tornado, flood, dam failure, earthquakes)." Specifically, prior to April 4, 2012, the licensee failed to maintain Procedure 7.0.11, Flood Control Barriers, Revision 24, to ensure the materials required to construct flood protection barriers were correctly listed and inventoried, to effectively protect personnel and equipment doors around the perimeter of the facility. This finding was entered into the licensee's corrective action program as Condition Report CR CNS 2012-01920.

The team determined that the failure to maintain Cooper Nuclear Station Operations Procedure 7.0.11, "Flood Control Barriers," Revision 24, with an adequate inventory of required materials listed in the procedure, was a performance deficiency. This finding was more than minor because it was associated with the procedure quality 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. In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the team determined that the finding was potentially risk significant due to a seismic, flooding, or severe weather initiating event and a Phase 3 analysis was required. A Region IV Senior Reactor Analyst performed a Phase 3 significance determination using NRC Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." In accordance with Appendix M, the Senior Reactor Analyst determined that

although it is not certain that the licensee could erect all of the flood barriers within 72 hours, it is likely that they could finish barriers to the emergency diesel generators and emergency core cooling systems in time to provide vital power and injection capabilities within the time required. Also, it is likely that extraordinary efforts could be taken to complete the barriers if the licensee was falling behind their time line, with knowledge of the timing of the arrival of flood waters. The failure of the Missouri River dams would most likely begin with incipient failure symptoms, providing extra time for the licensee to stage and prepare for the erection of barriers. Therefore, the issue was determined to have very low safety significance (Green). This finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : 2012007 *(pdf)*

Significance: G Jun 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate all Design and Technical Data Available into the Operability Determinations for the Standby Liquid Control Tank and Test Tank
The team identified a Green noncited violation, with two examples, of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," which states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished." Specifically, prior to April 4, 2012, the licensee did not follow the requirements of Cooper Nuclear Station Operations Manual Administrative Procedure 0.5.OPS, "Operations Review of Condition Reports/Operability Determination," Section 6 "Prompt Determination," Step 6.1.1.6. This step requires the use of Attachment 3, Item 3, which addresses design basis assumptions, descriptions, calculations, or values used in the Cooper Nuclear Station Updated Safety Analysis Report shall be used to ensure all aspects of the condition are addressed. For two, separate, Prompt Operability Determinations, one for the standby liquid control test tank, and the second one for the standby liquid control tank, the licensee had not considered the effect of vertical seismic loading in their calculation as identified in the Updated Safety Analysis Report (Table -3-7 page C-3-73). These findings were entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-001214, CR-CNS-2012-001232, CR-CNS-2012-001651, CR-CNS-2012-001918 and CR-CNS-2012-01962.

The team determined that the failure to follow the requirements of Cooper Nuclear station Operations Manual Administrative Procedure 0.5.OPS, "Operations Review of Condition Reports/Operability Determination," Step 6.1.1.6, was a performance deficiency. This finding 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 that respond to initiating events to prevent undesirable consequences. In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the issue was determined to have very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee revised the associated calculations to include the correct required standards, with acceptable results. This finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to properly classify, prioritize, and evaluate for operability and reportability, conditions adverse to quality.
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Inspection Report# : 2012007 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Design Control for Internal Flooding
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to assure that the applicable design basis requirements associated with the station's internal flooding analysis in response to a feed water line break was correctly translated into the plant design. Specifically, the licensee used incorrect assumptions when modeling critical channel widths for water flow on the 903 feet elevation of the reactor building which resulted in an inadequate calculation for
ensuring that required safety related equipment would remain operable following a feed water line break event. This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-00451 and CR-CNS-2012-01218.

The licensee's failure to maintain design control with respect to the internal flooding analysis was a performance deficiency. 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 affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. The inspectors evaluated the finding using IMC 0609.04 "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action component, because the licensee failed to thoroughly evaluate problems such that the resolutions addressed causes. By failing in 2010,to identify and model critical channel widths for water flow into their flood analysis, the licensee did not have assurance that safety related equipment would remain operable following a feed water line break event.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Scope Required Components in the Station's Maintenance Rule Monitoring Program
The inspectors identified two examples of a non-cited violation of 10 CFR 50.65(b)(2)(i) associated with the licensee's failure to monitor nonsafety-related structures, systems or components that are relied upon to mitigate accidents or transients. Specifically, the licensee did not include either the emergency diesel generator rooms sump high level alarm switches, or the reactor building quad sump pumps, which were relied upon in the station design calculations for mitigating the effects of a moderate energy line break, in the scope of the maintenance rule monitoring program specified in 10 CFR 65(a)(1). This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-00288, CR-CNS-2012-01585 and CR-CNS-2012-02144.

The licensee's failure to effectively monitor the performance of both the diesel generator rooms sump high level switches and the reactor building quads sump pumps in accordance with 10 CFR 50.65(a)(1) was a performance deficiency. The performance deficiency was determined to be more than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone, and directly affected the cornerstone objective of ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Using Manual Chapter 0609, Attachment 4, "Phase 1 Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because the maintenance rule aspect of the finding is not a design or qualification deficiency, did not represent a loss of system

safety function, did not represent an actual loss of a single train system for greater than the technical specification allowed outage time, and was not made risk-significant because of external events. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action component, because the licensee failed to thoroughly evaluate problems such that the resolutions addressed causes. Specifically, the licensee had an opportunity to identify these maintenance rule scoping issues in 2011, but failed to do so.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Design Control of Standby Liquid Control System
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to assure that the applicable design basis requirements associated with the standby liquid control system test tank were correctly translated into the plant design to ensure that the standby liquid control system would remain operable following a seismic event. The licensee entered this deficiency into their corrective action program for resolution as CR-CNS-2012-01214, CR-CNS-2012-01224, CR-CNS-2012-01232, and CR-CNS-2012-01651. The licensee subsequently performed station calculation NEDC 12-015 "Standby Liquid Control Test Tank Seismic Evaluation" that determined that the standby liquid control system would be operable following a seismic event with the standby liquid control system test tank full.

The licensee's failure to maintain design control of standby liquid control system was a performance deficiency. 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 affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences because there were questions as to whether or not the standby liquid control system would remain functional during a seismic event. The inspectors evaluated the finding using IMC 0609.04 "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; (4) did not screen as potentially risk significant due to seismic, flooding, or server weather initiating event. This finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Unevaluated Pre-conditioning for Core Spray Motor-operated Valves prior to Conducting As Found In-service Surveillance Testing
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Controls," for the licensee's unevaluated preconditioning of core spray motor operated valves prior to performing as-found inservice stroke time testing. The licensee entered this deficiency into their corrective action program for resolution as CR-CNS-2012-01070.

The licensee's unevaluated preconditioning of core spray motor operated valves prior to performing as-found inservice stroke time testing was a performance deficiency. 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 affected the associated cornerstone objective to ensure the availability, reliability, and capability of

systems that respond to initiating events to prevent undesirable consequences. Specifically, unevaluated preconditioning of valves could mask their actual as-found conditions and result in an inability to verify their operability, as well as, make it difficult to determine whether the valves would perform their intended safety function during an event. The inspectors evaluated the finding using Manual Chapter 0609.04 "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because the finding was confirmed not to result in a loss of operability or functionality of the core spray system. The finding has a cross-cutting aspect in the area of human performance associated with resources component because the licensee did not provide complete, accurate, and up-to-date procedures and work packages to prevent precondition of valves prior to testing.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Furnish Evidence of an Activity Affecting Quality
The inspectors identified a non-cited violation of 10 CFR 50 Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," associated with the licensee's failure to furnish evidence of an activity affecting quality associated with the station's analysis of a high-energy line break in the turbine building. To correct this condition, the licensee initiated actions to reconstitute the design calculation. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2012-01905.

The licensee's failure to furnish evidence of completing the calculation of the pressure at which turbine building siding would blow out was a performance deficiency. The performance deficiency was determined to be more than minor and is therefore a finding because it was associated with the design control attribute of the Mitigating Systems Cornerstone, and affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, in that the lack of evidence of completing the calculation of the pressure at which turbine building siding would blow out calls into question the results of that calculation, which was part of the analysis completed to substantiate that the design of CNS is adequate. Using Manual Chapter 0609, Attachment 4, "Phase 1 Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because it was not a design or qualification issue confirmed not to result in a loss of operability or functionality; did not represent an actual loss of safety function of system or train; did not result in the loss of one or more trains of nontechnical specification equipment; and did not screen as potentially risk-significant due to seismic, flooding, or a severe-weather initiating event. This finding did not have a cross-cutting aspect because the most significant contributor of this finding (which could not be determined) must have occurred during the early 1970s and therefore does not reflect current licensee performance.
Inspection Report# : 2012002 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Translate Design Requirements into Installed Plant Configuration
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to assure that the design basis requirements associated with a turbine building high energy line break were correctly translated into the plant design to ensure the 4160 volt switchgear and emergency diesel generators would remain functional following a line break. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2011-10618.

The inspectors determined that the licensee's failure to ensure that design requirements were correctly translated into installed plant equipment was a performance deficiency. 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 affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Using Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding was determined to have a cross-cutting aspect in the area of problem identification and resolution, associated with the corrective action component, in that, the licensee failed to thoroughly evaluate concerns with high energy line break doors and this resulted in the resolutions taken not addressing the causes.
Inspection Report# : 2011005 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Deficient Performance During a Single-Facility Drill
The inspector identified a non-cited violation of 10 CFR 50.47(b)(14) for failure to correct a deficiency in drill or exercise performance. Specifically, the licensee failed to identify an inaccurate protective action recommendation during the critique of a Control Room Simulator drill conducted May 18, 2011.

The failure to identify an inaccurate protective action recommendation is a performance deficiency. This finding is more than minor because it impacted the drills and emergency response organization performance attributes of the Emergency Preparedness Cornerstone. The finding had a credible impact on the cornerstone objective because inaccurate protective action recommendations affect the licensee's ability to implement adequate measures to protect the health and safety of the public. This finding was evaluated using the Emergency Preparedness Significance Determination Process and was determined to be of very low safety significance because it was associated with the emergency preparedness planning standards and was not a functional failure or degraded performance. The finding was entered into the corrective action program as
Condition Report CR-CNS-2011-10277. The finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the program did not have a low enough threshold to completely and thoroughly identify incorrect performance.
Inspection Report# : 2011005 *(pdf)*

Occupational Radiation Safety

Significance: G Jun 26, 2012

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Radiation Work Permit Requirements
The inspectors identified a non cited violation of Technical Specification 5.4.1, associated with station personnel's failure to follow radiation work permit requirements. Specifically, inspectors observed workers breaching a contaminated system during planned maintenance activities without radiation protection personnel present as specified by the radiation work permit requirements. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2012-02716.

The inspectors determined that the failure of craft personnel to follow radiation work permit requirements when breaching contaminated systems was a performance deficiency. The performance deficiency was determined to be more than minor because if left uncorrected, the continued failure of craft personnel to follow radiation work permit requirements when breaching contaminated systems could become more significant, in that, it could lead to personnel contamination events and unplanned/unexpected dose, and is therefore a finding. The finding was associated with the Occupational Radiation Safety Cornerstone. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspector determined the finding to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) 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 was determined to have a cross cutting aspect in the area of human performance, associated with the decision-making component in that workers failed to use conservative assumptions in decision making when breaching a contaminated system for maintenance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform a Radiation and Contamination Survey
The inspectors reviewed a self revealing, non cited violation of 10 CFR 20.1501(a) for the failure to perform adequate radiation and contamination surveys. Specifically, a survey was not performed prior to power washing the reactor vessel studs during reactor cavity decontamination work as part of Refueling Outage 26. The absence of a survey resulted in an unanticipated airborne radioactivity area and unintended, unplanned dose to five workers. The issue was documented in Condition Report CR CNS 2011 04891.

The failure to perform a survey to evaluate the radiological conditions is a performance deficiency. The finding is more than minor because it negatively impacted the Occupational Radiation Safety Cornerstone attribute of program and process, in that, the lack of a survey did not ensure exposure control for workers. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with ALARA 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. This finding has a human performance cross cutting aspect associated with the component of decision making because the radiation protection manager and cavity decontamination supervisor did not fully use radiological job plans and controls. Specifically, the radiation protection manager and cavity decontamination supervisor made the decision to power wash the vessel studs without using a written work plan.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC

Item Type: FIN Finding
ALARA Program Failed to Prevent Unintended Doses for Refueling Floor Activities
Inspectors identified a finding of very low safety significance for the failure to follow ALARA planning and control procedures to maintain doses ALARA for refueling floor activities covered under Radiological Work Package 2011 05. Specifically, the licensee failed to follow an ALARA planning and work control procedure by not planning, evaluating, and implementing strategies to minimize dose increases to justify increases in the estimated collective dose. Consequently, there was an overage of 20 person rem of unintended dose, which exceeded the dose estimate by 80 percent. The original dose estimate was 25 person rem and actual dose was 45 person rem. The finding and procedure concerns were documented in the licensee's corrective action program as Condition Reports CR-CNS-2012-02551 and CR-CNS-2012-02652.

The failure to follow the ALARA planning and controls procedure to prevent unplanned and unintended collective doses was a performance deficiency. This finding is greater than minor because it affected the Occupational Radiation Safety Cornerstone attribute of program and process, in that, failure to implement ALARA procedures adequately caused increased collective radiation dose for the job activity to exceed 5 person rem and exceeded the planned dose by more than 50 percent. In addition, this type of issue is addressed in Example 6.j of Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues." Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that this finding was of very low safety significance because it involved ALARA planning and controls and the licensee's latest rolling three year average does not exceed 240 person rem. This finding has a human performance cross cutting aspect associated with the work control component, because the licensee failed to evaluate the impact of work scope changes on human performance and interdepartmental communication and coordination prior to commencing work activities. Specifically, work groups, Health Physics, and the ALARA Planners did not effectively communicate how work scope changes of the radiation work permits would affect the dose estimate of the radiological work package.

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Radiation Work Permit Requirements
The inspectors identified two examples of a non-cited violation of Technical Specification 5.4.1, associated with station personnel's failure to follow radiation work permit requirements. Specifically, on two separate occasions inspectors observed different workers breaching contaminated systems during planned maintenance activities without radiation protection personnel present as specified by the radiation work permit requirements. This issue was entered into the licensee's corrective action program as Condition Reports CR-CNS-2012-00461, and CR-CNS-2012-00763.

The inspectors determined that the failure of craft personnel to follow radiation work permit requirements when breaching contaminated systems was a performance deficiency. The performance deficiency was determined to be more than minor because if left uncorrected, the continued failure of craft personnel to follow radiation work permit requirements when breaching contaminated systems could become more significant, in that, it could lead to personnel contamination events and unplanned/unexpected dose, and is therefore a finding. The finding was associated with the Occupational Radiation Safety Cornerstone. Using Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspector determined the finding to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) 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. This finding had a cross-cutting aspect in the area of human performance associated with the work practices component, because the licensee failed to use conservative assumptions in decision making and adopt requirements to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action when performing work activities that breached

contaminated systems.
Inspection Report# : 2012002 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conspicuously Post a High Radiation Area
The inspector identified a non-cited violation of Technical Specification 5.7.1, resulting from the licensee's failure to conspicuously post a high radiation area during Refueling Outage 26. As corrective action, the licensee immediately stopped work and posted the area as required. The licensee documented the issues in apparent cause evaluation performed for Condition Report CR-CNS-2011-04891.

The failure to conspicuously post a high radiation area is a performance deficiency. The finding was more than minor because it was associated with the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective, in that, the failure to conspicuously post a high radiation area had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspector determined the finding to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) 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 has a human performance cross-cutting aspect associated with work practices component because the licensee did not ensure appropriate supervisory oversight of work activities to support nuclear safety.
Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Control and Continuous Coverage of a Locked High Radiation Area
The inspector identified a non-cited violation of Technical Specification 5.7.2, resulting from the licensee's failure to maintain controls by not providing continuous coverage in a posted locked high radiation area with dose rates greater than 1000 mrem per hour at 30 cm during Refueling Outage 26. As corrective action, the licensee performed an apparent cause evaluation and documented the issues identified in Condition Report CR-CNS-2011-09785.

The failure to maintain controls in a posted locked high radiation area is a performance deficiency. The finding was more than minor because it was associated with the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective, in that, the failure to maintain controls and not provide continuous radiation protection coverage in a posted locked high radiation area with dose rates greater than 1000 mrem per hour at 30 cm had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspector determined the finding to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) 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 has a human performance cross-cutting aspect associated with work practices component because the licensee did not ensure appropriate supervisory oversight of work activities to support nuclear safety.
Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: Self-Revealing

Item Type: NCV NonCited Violation
Failure to Follow Procedures for Dose Rate Alarms Received by Two Individuals
The inspector reviewed a self revealing, non-cited violation of Technical Specification 5.4.1, resulting from workers who failed to follow procedures to exit the area when two dose rate alarms were received while performing decontamination work in the reactor cavity during Refueling Outage 26. As corrective action, the licensee performed an apparent cause evaluation and documented the issues identified in Condition Report CR-CNS-2011-04891.

The failure to follow procedures is a performance deficiency. The finding was more than minor because it was associated with the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective, in that, the failure to follow radiation procedures and not leave the work area after receipt of a dose rate alarm had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process,” the inspector determined the finding to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) 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 has a human performance cross-cutting aspect associated with work practices component because the individuals failed to use self- and peer-checking human error prevention techniques.
Inspection Report# : 2011005 *(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: SL-IV Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Complete and Accurate Solid Radwaste Shipment Information in Annual Reports
Inspectors identified a non-cited violation of 10 CFR 50.9, "Completeness and Accuracy of Information," because the Annual Radiological Effluent Release Reports for 2008, 2009, and 2010 were not complete and accurate in all material respects with regard to solid radwaste shipped offsite from Cooper Nuclear Station. Specifically, the numbers of solid radwaste shipments, locations, burial volumes, and total activity amounts were not correct. This issue was entered in the licensee’s corrective action program as Condition Reports CR-CNS-2011-06921 and CR-CNS-2011-11740.

This issue was dispositioned using traditional enforcement because the failure to provide complete and accurate information in Annual Radiological Effluent Release Reports has the potential to impact the NRC's ability to perform its regulatory function. This violation is characterized as a Severity Level IV violation consistent with Sections 2.2.1 and 6.9 of the NRC Enforcement Policy. This finding was determined to be of very low safety significance. No cross-cutting aspect was identified because this performance deficiency was dispositioned using traditional enforcement.
Inspection Report# : 2011005 *(pdf)*

Significance: N/A Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Required 10 CFR 50.59 Evaluations for Changes
June 11, 2012: This violation was originally documented in ML120410071 and was withdrawn as described in ML12160A511.
Inspection Report# : 2011005 *(pdf)*

Last modified : November 30, 2012