Cooper
4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: FIN Finding
Failure to Implement Fire Protection Plan Requirements Related to Hot Work Activities
The inspectors identified two examples of a finding for the failure of contract personnel to properly implement the requirements of the station procedure for control of hot work activities, where one instance resulted in a fire. Specifically, between November 9 and December 4, 2010, two examples were identified where contractor personnel failed to properly implement the requirements of station Procedure 0.39, “Hot Work,” Revision 42, Step 5.17.3 which required that all combustible material within 35 feet of the hot work area was removed, protected or additional fire watches stationed. Consequently, on December 4, 2010, during torch cutting activities on the central alarm station upgrade project, combustible material that had been introduced into the area was ignited by the hot work. These issues were entered into the corrective action program as Condition Reports CR-CNS-2010-8364, and CR-CNS-2010-9015.

The failure of contract personnel to follow the requirements of the stations control of hot work procedure was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the protection against external factors attribute and directly affected the Initiating Events 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. Additionally, if left uncorrected, the practice of conducting hot work in a manner that results in unintended combustion of uncontrolled combustible material within the procedurally specified exclusion area would have the potential to lead to a more significant safety concern, in that, it could result in a fire in or near risk important equipment. Using NRC Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” Phase 1 worksheet, the finding was determined to have very low safety significance because the condition represented a low degradation of a fire prevention and administrative control. This finding had a crosscutting aspect in the area of human performance associated with decision making, in that, the licensee failed to use conservative assumptions in their 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 when allowing combustible material to be introduced into the procedurally specified exclusion area for hot work activities.
Inspection Report# : 2010005 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assess and Manage Risk for Electrical Switchyard Impacting Maintenance
The inspectors identified a noncited violation of 10 CFR 50.65(a)(4), “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” for the failure of operations and work control personnel to adequately assess and manage risk associated with a planned maintenance activity. Specifically, on December 7, 2010, operations and work control personnel failed to adequately assess maintenance activities involving the use of a crane in the plants electrical switchyard. Following the inspectors’ identification of this issue, the licensee adequately assessed and managed the increase in risk for the maintenance activities. The issue was entered into the licensee’s corrective action program as Condition Report CR-CNS-2010-9146.

The failure to perform an adequate risk assessment for planned maintenance activities was a performance deficiency. As such, the finding was more minor because it affected the protection against external factors attribute of the Initiating Events Cornerstone. Additionally, if left uncorrected the practice of not properly evaluating crane activities in the stations switchyard would have the potential to lead to a more significant safety concern, in that, it could result in a more than minimal increase in risk associated with other risk important equipment that would not be identified

nor result in appropriate actions being taken to mitigate this increase in risk. The inspectors determined that the licensee does not maintain a probabilistic risk analysis model that incorporates the electrical switchyard, and as such, an incremental core damage probability cannot be estimated for the plant conditions that existed at the time of the performance deficiency. For this reason, the inspectors determined that Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 2, could not be used to determine the risk significance the finding. Using the qualitative review process of Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," the finding is determined to have very low safety significance because the finding did not result in any additional loss of defense in depth systems. This finding had a crosscutting aspect in the area of human performance associated with decision making, in that, the licensee failed to use conservative assumptions in their 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# : 2010005 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Assess and Manage Risk During Maintenance Activities
The inspectors documented a noncited 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 perform an adequate risk assessment for the planned maintenance activities. Specifically, on August 24, 2010, operations and work control personnel failed to adequately assess and manage the increase in risk associated with the breaker switching sequence to support maintenance on the station startup service transformer. Following identification of the issue, the licensee adequately assessed and managed the increased risk associated with the maintenance activity. The issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2010-6100.

The failure to perform an adequate risk assessment for planned maintenance activities was a performance deficiency. The performance deficiency was greater than minor because it was associated with the protection against external factors attribute and directly affected the Initiating Events 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 NRC Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1, the finding was determined to have very low safety significance because the incremental core damage probability deficit and the incremental large early release probability deficit, used to evaluate the magnitude of the error in the licensee's inadequate risk assessment, were less than 1E-6 and 1E-7, respectively. This finding had a crosscutting aspect in the area of problem identification and resolution associated with operating experience, in that, the licensee uses operating experience information, including vendor recommendations and internally generated lessons learned, to support plant safety. Specifically, the licensee implements and institutionalizes operating experience through changes to station processes and procedures.
Inspection Report# : 2010005 *(pdf)*

Significance: G Oct 08, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Monitor the Performance of the Screen Wash System
The inspectors identified that the licensee failed to correctly determine that a plant power reduction caused by a clogged screen wash system for the circulating water system was a maintenance preventable functional failure that exceeded the plant level performance criteria. As a direct consequence, the licensee failed to assess this Maintenance Rule Program function per 10 CFR 50.65(a)(1) as required by station procedures. This issue was determined to involve a noncited violation of 10 CFR 50.65(a)(2) requirements for monitoring the effectiveness of maintenance at nuclear power plants. The licensee entered this issue in their corrective action program as CR-CNS-2010-05631.

This finding is more than minor because failure to monitor the effectiveness of the screen wash system function CW-F01 affects the protection against external factors attribute of the initiating events cornerstone, since this system was intended to limit the likelihood of events that upset plant stability. The inspectors determined that this performance deficiency was an additional, but separate consequence of the obstructed screen wash system. The inspectors

determined that this finding occurred as a separate consequence of the licensee's functional failure assessment process, and that the system performance problem was not directly attributable to this finding. Therefore, this finding cannot be processed through the significance determination process, and was determined to be green using the guidance of Appendix B to Manual Chapter 0612 and Appendix D to Inspection Procedure 71111.12. The finding has a crosscutting aspect in the area of human performance associated with decision-making because the licensee did not use conservative assumptions in the functional failure evaluation of an obstructed screen wash system (Section 1R12).

Inspection Report# : 2010004 *(pdf)*

Significance: G Oct 08, 2010
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow Procedure Results in Repeat Equipment Failure
A self-revealing finding was identified for the licensee's failure to follow the guidance of Administrative Procedure 0.5.EVAL, "Preparation of Condition Reports," Revision 21. Specifically, corrective actions to fix the Reactor Recirculation Motor Generator field breaker failure from 2009 failed to meet the measurable and reasonable criteria when the actions did not prevent a repeat failure of the same breaker and resulted in a fire in the breaker. The licensee entered this issue in their corrective action program as CR-CNS-2009-04115.

The finding is more than minor because it adversely affected the protection against external factors (Fire), attribute of the initiating events cornerstone, and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet (Initial Screening and Characterization of Findings) the finding was determined to have very low safety significance since it did not contribute to the likelihood of a primary or secondary system loss-of-coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. This finding has a crosscutting aspect in the corrective action program component of the problem identification and resolution area due to licensee corrective actions that failed to implement a resolution of field breaker failures (Section 4OA3).
Inspection Report# : 2010004 *(pdf)*

Significance: G Jun 23, 2010
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Perform Required Maintenance Causes Unplanned Down Power
A self-revealing finding was identified for the licensee's failure to implement the preventive maintenance requirements of the vendor manual for the plant traveling water screens. Specifically, Vendor Manual 140, "Traveling Water Screen," Revision 35, contained daily and weekly routine maintenance requirements to open the channel-flushing valve to clear any accumulated debris from the screens. Despite the fact that the licensee incorporated this vendor manual into their preventive maintenance system, this maintenance requirement was overlooked. The failure to perform this maintenance task led to the trip of the A1 and A2 traveling water screens on May 1, 2010 and required an emergent power reduction. The licensee entered this issue in their corrective action program as Condition Report CR-CNS-2010-03195, and implemented daily checks of the traveling water screens and daily flushing of the screen debris troughs.

The finding was more than minor because it affected the equipment performance attribute of the initiating events cornerstone, and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was characterized under the significance determination process as having very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation functions would be unavailable. The inspectors determined that no crosscutting aspect was applicable to this finding because the performance deficiency was not reflective of current performance (Section 4OA5).

Inspection Report# : 2010003 *(pdf)*

Significance: G Apr 28, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Work Preparation Activities Cause Unplanned Increase in Reactor Power
A self revealing noncited violation of 10 CFR 50.54.j was identified when the licensee failed to ensure that mechanisms which may affect reactivity are manipulated only with the knowledge and consent of a licensed operator at the controls. Specifically, a work planner caused a feedwater heater trip by touching a pressure regulating valve without the knowledge of the control room. The reactivity increase due to the change in feedwater temperature caused the reactor to exceed the licensed thermal power limit of 2419 MWt until reactor operators reduced power. The licensee entered this issue in their corrective action program as CR-CNS-2010-03091.

The finding was more than minor because the performance deficiency could be reasonably viewed as a precursor to a significant event in that a reactor power transient was initiated without the knowledge of the control room. This finding was characterized under the significance determination process as having very low safety significance because while the finding degraded the transient initiator contributor function of the initiating events cornerstone, it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. The inspectors determined that this finding has a crosscutting aspect in the area of human performance associated with the work practices component because the work planner proceeded in the face of unexpected circumstances by exceeding the scope of the job when he found the leak was greater than expected (Section 4OA3).

Inspection Report# : 2010003 *(pdf)*

Mitigating Systems

Significance: G Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Translate Design and Operating Requirements into Procedures
The team identified four examples of a Green noncited violation of Technical Specification 5.4.1.a, which states in part that, “Written procedures shall be established, implemented, and maintained, covering the procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A.9.b,” for the failure to establish adequate procedures. Specifically, as of August 12, 2010, the licensee failed to establish adequate procedures involving 4160 V breaker maintenance, safety related check valve maintenance, and the operation of residual heat removal pumps. This finding was entered into the licensee’s corrective action program as Condition Reports CNS- 2010-05611, CNS-2010-05635, CNS-2010-05556, CNS-2010-05586, CNS-2010-05590, and CNS-2010-05342.

The failure to establish adequate procedures for 4160 V breaker maintenance, safety related check valve maintenance, and the operation of residual heat removal pumps 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 the 4160 Vac systems, core spray system and the residual heat removal system to respond to events and prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. The licensee placed the 4160 V breaker procedures on administrative hold, performed an evaluation of the affected check valves which determined that they would be able to perform their required functions, and revised the procedures related to residual heat removal pump operations. This finding had a crosscutting aspect in the area of human performance resources because the licensee did not provide complete, accurate, and up-to-date design documentation to plant personnel [H.2 (c)].
Inspection Report# : 2010007 *(pdf)*

Significance: G Oct 20, 2010
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to promptly Correct Conditions Adverse to Quality
The team identified three examples of a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to ensure conditions adverse to quality were promptly corrected. Specifically, as of August 12, 2010, the licensee failed to promptly correct conditions adverse to quality involving the installation and testing of safety related station batteries and the design control process. This finding was entered into the licensee's corrective action program as Condition Reports CNS-2010-05674, CNS-2010-05647, and CNS-2010-5950

The failure to promptly correct conditions adverse to quality was a performance deficiency. This finding was more than minor because it was associated with the corrective actions attribute of the mitigating systems cornerstone and if left uncorrected would have the potential to lead to more significant safety concerns. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. This finding had a crosscutting aspect in the human performance decision-making because the licensee failed to use conservative assumptions in decision-making to correct the underlying cause of the many conditions adverse to quality [H.1(b)].
Inspection Report# : 2010007 *(pdf)*

Significance: G Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Test Control
The team identified three examples of a Green noncited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for failure to ensure that design information was correctly translated into station test procedures. Specifically, as of August 12, 2010, the licensee failed to ensure that design information was correctly translated into station procedures involving capacity testing, service testing, and maintenance of safety related station batteries. This finding was entered into the licensee's corrective action program as Condition Reports CNS-2010-5445, CNS-2010-5564, CNS-2010-5674, and CNS-2010-5759.

The failure to correctly translate design requirements into station procedures involving capacity testing, service testing, and maintenance of safety related station batteries 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 impacted the cornerstone objective to ensure the availability, reliability, and capability of the affected system to respond to initiating events and prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. The licensee performed an evaluation and determined that the station batteries were capable of performing their safety functions. This finding had a crosscutting aspect in the area of human performance resources because the licensee did not provide complete, accurate and up-to-date design documentation to plant personnel [H.2(c)].
Inspection Report# : 2010007 *(pdf)*

Significance: G Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control
The team identified seven examples of a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to establish measures to ensure that applicable regulatory requirements and the design bases were correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to ensure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled." Specifically, as of August 12, 2010, the licensee failed to correctly translate regulatory requirements and design bases information into specifications, drawings, procedures, and instructions involving emergency diesel generator frequency, service water pump, electrical cables for the residual heat removal pumps, seismic supports, the emergency diesel generator air start system testing, tornado and high wind impact on the emergency diesel generator fuel oil storage facilities and safety related Agast relay service life evaluations. This finding was entered into the licensee's corrective action program as Condition Reports CNS-2010-

05301, CNS-2010-5763, CNS-2010-05222, CNS-2010-05281, CNS-2010-5294, CNS-2010-5350, and CNS-2010-5438.

The failure to correctly translate regulatory requirements and design bases information into specifications, drawings, procedures, and instructions for the emergency diesel generator frequency, service water pump, electrical cables for the residual heat removal pumps, emergency diesel generator room ventilation seismic supports, emergency diesel generator air start system testing, tornado and high wind impact on the emergency diesel generator fuel oil storage facilities and safety related Agast relay service life evaluations 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 impacted the cornerstone objective to ensure the availability, reliability, and capability of the affected system to respond to events and prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. The licensee performed evaluations which determined that the affected components and systems were capable of meeting their design functions. The finding had a crosscutting aspect in the area of problem identification and resolution, associated with operating experience because the licensee failed to properly evaluate and apply various industry events associated with the above systems and incorporate the information into plant procedures and training [P.2(b)].
Inspection Report# : 2010007 *(pdf)*

Significance: G Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Ice Deflector Pontoon Barge Storage in Service Water Discharge Canal
The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to verify the adequacy of design for the service water system. Specifically, prior to August 10, 2010, the licensee did not have a calculation to support storage of an ice deflector pontoon barge in the service water discharge canal during design tornado or high wind conditions. This finding was entered into the licensee's corrective action program under Condition Report CNS-2010-5763.

The failure to establish appropriate design controls by having a calculation for storage of a pontoon barge in the safety-related service water discharge canal is a performance deficiency. The finding is more than minor because it is associated with the design control attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the service water system to respond to events to prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. The licensee performed a calculation (NEDC 10-057) which demonstrated the current storage of the pontoon barge in the service water discharge was sufficient, such that it will not to adversely affect the service water system. The finding had a crosscutting aspect in the area of human performance decision making because 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 that it is unsafe in order to disapprove the action because the licensee failed conduct an effective review of safety-significant decisions associated with the ice deflector barge storage to verify the validity of the underlying assumptions, identify possible unintended consequences, and determine how to improve future decisions [H.1(b)].

Inspection Report# : 2010007 *(pdf)*

Significance: SL-IV Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Faulty General Electric Switches
The team identified a severity level IV noncited violation of 10 CFR Part 21, "Notification of Failure to Comply or Existence of a Defect and its Evaluation," for the failure of the licensee to evaluate the deviations in 13 of 23 safety-related switches within 60 days. Specifically, prior to August 10, 2010, the licensee failed to submit a report as required by paragraph 21.21 (a)(1) of 10 CFR Part 21 when 13 of 23 General Electric control switches purchased to support a station modification to the safety related 4160 kV switchgear were discovered to have a defect that was later

determined to create a substantial safety hazard. The defective switches were discovered and documented on Condition Report CNS-2009-09985 dated November 25, 2009 and the evaluation was not completed until August 10, 2010. After the evaluation determined the defect did create a substantial safety hazard, the NRC was notified via an event notification on August 10, 2010. Using the Traditional Enforcement Policy and Manual, this was determined to be a Severity Level IV noncited violation. This finding was entered into the licensee's corrective action program as Condition Report CNS-2010-5629. The finding had a crosscutting aspect of problem identification and resolution, alternative process, because the licensee failed to ensure appropriate and timely resolution of identified problems [P.1 (e)].
Inspection Report# : 2010007 *(pdf)*

Significance: G Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
URI 05000298/2007011-07, Fuel Oil Storage Tank Required Submergence To Prevent Vortexing And Available Volume Are Marginal Without Accounting For Instrument Uncertainties
The team identified a Green noncited violation of CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure of the licensee to verify the adequacy of design for the diesel fuel oil transfer system. Specifically, the licensee failed to demonstrate an adequate supply of fuel oil was available in the tanks to support the safety function of the emergency diesel generators because the licensee failed to consider the potential for vortex formation in the two diesel fuel oil storage tanks and the two day tanks and net positive suction head of the associated pumps. This finding was entered into the licensee's corrective action program under Condition Report CNS-2010-5763.

The failure to establish appropriate design controls for the safety-related diesel fuel oil transfer pump net positive suction head calculation was a performance deficiency. The 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 to ensure the availability, reliability, and capability of the diesel fuel oil transfer system to respond to events and prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. The licensee performed an evaluation which determined that the system was capable of meeting its design function. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2010007 *(pdf)*

Significance: G Oct 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
URI 05000298/2007011-08, High Pressure Coolant Pump Swap-Over from Emergency Condensate Storage Tank to Torus Vortex Calculation
The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure of the licensee to verify the adequacy of design for the high pressure coolant injection system. Specifically, prior to December 2007, the licensee did not have vortex calculations for the high pressure coolant injection system during swap-over from the emergency condensate storage tank to the torus. The calculation was required to establish that the high pressure coolant injection pumps have adequate net positive suction head to operate in accordance with design. This finding was entered into the licensee's corrective action program under Condition Report CNS-2010-5763.

The failure to establish appropriate design controls for the safety-related high pressure coolant injection pump net positive suction head calculation was a performance deficiency. The 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 to ensure the availability, reliability, and capability of the high pressure coolant injection system to respond to events and prevent undesirable consequences. Using the Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the issue screened as having very low safety significance (Green) because it was not a design or qualification deficiency and did not represent a loss of safety function. The licensee performed an evaluation which determined that the system was capable of meeting its design function. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee

performance.

Inspection Report# : 2010007 *(pdf)*

Significance: G Jun 23, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Document Design of Service Water Discharge Piping in Plant Drawings
The inspectors identified a noncited violation of 10 CFR 50 App B Criterion III, “Design Control,” in which the licensee failed to maintain accurate design drawings of the service water system discharge piping. Specifically, Drawing BR 2120, “Yard Circ. & Service Water Piping Plan & Sections,” Revision 14 incorrectly identified the as-left configuration of the service water system discharge piping, and was used as a design input to numerous essential calculations. The licensee entered this issue in their corrective action program as Condition Report CR-CNS-2010-03689.

The finding was more than minor because it affected the design control 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 (i.e., core damage). This finding was characterized under the significance determination process as having very low safety significance because all of the screening questions in the Manual Chapter 0609, Attachment 4, “Initial Screening and Characterization of Findings” Phase 1 screening table were answered in the negative. The inspectors determined that no crosscutting aspect was applicable to this finding due to the age of the performance deficiency and the lack of recent identification opportunities (Section 1R04).

Inspection Report# : 2010003 *(pdf)*

Significance: G Jun 23, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Place the Essential 4160 Volt Alternating Current System Agastat Relays in (a)(1).
The inspectors identified a noncited violation of 10 CFR 50.65(a)(2), requirements for monitoring the effectiveness of maintenance at nuclear power plants, for failure to demonstrate that the performance of the essential 4160 volt alternating current power system was effectively controlled through appropriate preventive maintenance. As a result, the licensee did not establish goals or monitor the performance of the essential power system Agastat relays per 10 CFR 50.65 (a)(1) to ensure appropriate corrective actions were initiated when a revised evaluation of a Agastat time delay relay failure incorrectly changed the initial functional failure determination. Incorrectly changing this maintenance preventable functional failure resulted in the affected function, EE-PF03A, not reaching the licensee’s maintenance rule (a)(1) threshold. The licensee entered this issue in their corrective action program as Condition Report CR-CNS-2008-07910.

This finding is more than minor because it affected the reliability objective of the Equipment Performance attribute under the Mitigating Systems Cornerstone. The inspectors determined that this performance deficiency was an additional, but separate consequence of the degraded performance of the essential 4160 volt alternating current system Agastat relays. Following the guidance of Appendix B to MC0612 and Appendix D to IP 71111.12, the inspectors determined that this finding occurred as a consequence of actual problems with the Agastat relays, and that those actual problems were not attributable to this finding. This finding therefore cannot be processed through the significance determination process, and is considered to be green by definition. The finding has a crosscutting aspect in the area of human performance associated with decision making because the licensee did not use conservative assumptions in the functional failure evaluation of a Agastat relay failure (Section 1R12).

Inspection Report# : 2010003 *(pdf)*

Significance: G Mar 24, 2010
Identified By: NRC

Item Type: NCV NonCited Violation
Repeat Failure to Follow Procedure for Initiating Condition Reports
The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion V, “Instructions, Procedures and Drawings,” regarding the licensee’s failure to follow the requirements of Administrative Procedure 0.5, “Conduct of the Condition Reporting Process.” Specifically, plant engineers performing an extent of condition review for errors in the internal flooding analysis failed to initiate condition reports for additional degraded or nonconforming conditions as they were identified. The licensee entered this issue in their corrective action program as CR-CNS-2010-01596.

The inspectors determined that Manual Chapter 0612, Appendix E, “Examples of Minor Issues” provided no sufficiently similar examples, and that the finding is more than minor because it is associated with the design control 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. Using the Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” the inspectors determined that the finding has very low safety significance because all of the items in the Table 4a mitigating systems cornerstone checklist were answered in the negative. The finding has a crosscutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective actions to address previously identified examples of employees not initiating condition reports during extent of condition reviews [P.1(d)].
Inspection Report# : 2010002 *(pdf)*

Significance: G Mar 24, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Service Water Pump Room Loss of Heat Calculation
The inspectors identified a noncited violation of 10 CFR, Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s use of an incorrect post-accident service water flow rate in the design basis calculation of record. Calculation NEDC 91-232 determined the minimum service water pump room temperature following a loss of offsite power. The minimum service water flow during accident conditions is used to derive the heat input into the room by the service water pump motors. The calculation incorrectly assumed a value for the post-accident service water flow rate that was less conservative than the value defined in the updated final safety analysis report. In response to the inspectors’ concerns, the licensee initiated Condition Report CR-CNS-2009-10389 and revised the affected calculation.

The inspectors determined that this performance deficiency was sufficiently similar to the not-minor-if description of Example 3.a, 3.l, 3.j and 3.k of Manual Chapter 0612, Appendix E, “Examples of Minor Issues” due to the fact the effected calculation had to be re-performed to demonstrate the operability of the service water system. As such, the inspectors determined that the 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 to ensure the availability, reliability and capability of systems that respond to mitigating events to prevent undesirable consequences. The inspectors determined that this performance deficiency was dissimilar from any other examples in Manual Chapter 0612, Appendix E. Using the Manual Chapter 0609 Exhibit 1, "Initial Screening and Characterization of Findings," the issue screened as having very low safety significance because it was a design deficiency confirmed not to result in loss of operability in accordance with NRC Manual Chapter Part 9900, Technical Guidance, “Operability Determination Process for Operability and Functional Assessment.” The inspectors determined that no cross cutting aspect was applicable to this performance deficiency because the calculation error is not reflective of current performance.
Inspection Report# : 2010002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: VIO Violation
Failure to Have Guidelines for the Choice of Protective Actions During an Emergency Consistent with Federal Guidance
A cited violation of 10 CFR 50.47(b)(10) was identified for failure to develop and have in place guidelines for the choice of protective actions during an emergency that were consistent with federal guidance. Federal guidance for the choice of protective actions during an emergency is described in EPA-400-R-92-001 and states, in part, that evacuation is seldom justified when doses are less than protective action guides. The licensee's automatic process that extended existing protective action recommendations with changes in wind direction without considering radiation dose was identified as a performance deficiency.

This finding is more than minor because it affects the Emergency Preparedness Cornerstone objective of implementing adequate measures to protect the health and safety of the public during a radiological emergency, and is associated with the cornerstone attributes of emergency response organization performance and procedure quality. This finding was determined to be of very low safety significance because it was a failure to comply with NRC requirements, was associated with risk significant planning standard 10 CFR 50.47(b)(10), and was not a risk significant planning standard functional failure or a planning standard degraded function. This finding is a cited violation of 10 CFR 50.47(b)(10) because the licensee failed to restore compliance with NRC requirements in a timely manner. The finding is related to the corrective action element of the problem identification and resolution crosscutting aspect because the licensee failed to take corrective actions to address the safety issue in a timely manner.
Inspection Report# : 2010005 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : March 03, 2011