Cooper
2Q/2007 Plant Inspection Findings

Initiating Events

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Entry Into the Stability Exclusion Region of the Power to Flow Map
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified involving an inadequate procedure for transitioning to single recirculation loop operation during power operations. This procedural inadequacy resulted in operators entering the stability exclusion region after securing one reactor recirculation pump for maintenance activities. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2007-03555.

The finding is more than minor because if left uncorrected the finding could become a more significant safety concern. For example, operation in the stability exclusion region could result in core thermal-hydraulic instabilities and rapid power oscillations. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have a very low safety significance because it did not contribute to the likelihood that mitigating systems would be unavailable following a reactor trip. The cause of this finding is related to the human performance cross cutting component of resources because the system operating procedures did not provide guidance for establishing adequate margin to the stability exclusion region prior to securing a reactor recirculation pump (H.2(c)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Equipment Isolation Instructions Results in Unisolable Leak and Reactor Scram
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for the inadequate isolation instructions contained in System Operating Procedure 2.2.8, "Control Rod Drive Hydraulic System." The use of these inadequate isolation instructions resulted in an unisolable leak from the control rod drive system and insertion of a manul reactor scram. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2007-03552.

This finding is more than minor because it is associated with the initiating events cornerstone attribute of procedure adequacy and affects the associated cornerstone objective to limit the likelihood of those events that upset plant stability. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have a very low safety significance because it did not contribute to the likelihood that mitigating systems would be unavailable following a reactor trip. The cause of this finding is related to the human performance cross cutting component of resources because the licensee failed to ensure that the procedure was complete and accurate to assure proper component isolation from the reactor coolant system prior to performing maintenance activities (H.2(c)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Mar 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Operating Procedures for Draining Main Steam Lines
A self revealing noncited violation of Technical Specification 5.4.1(a) was identified for licensee's failure to establish adequate operating procedures for filling, venting, draining, and startup of the main steam system. This procedural

inadequacy led to a water hammer event on November 21, 2006, resulting in damage to the main steam piping support system. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-09597.

The finding is more than minor because it is associated with the Initiating Events cornerstone attribute of equipment performance and affects the associated 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 the Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the finding is determined to have a very low safety significance because the finding did not contribute to the likelihood that mitigation equipment or functions would not be available following a reactor trip.
Inspection Report# : 2007002 *(pdf)*

Significance: G Mar 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Maintenance Results in a Loss of Shutdown Cooling
A self revealing noncited violation of Technical Specification 5.4.1(a) was identified regarding the licensee’s failure to establish an adequate maintenance procedure for Reactor Protection System Motor Generator Set B. On November 19, 2006, the voltage regulator failed due to a lack of vendor recommended maintenance on the voltage adjustment potentiometer. This failure resulted in a loss of shutdown cooling. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-09451.

The finding is more than minor because it is associated with the Initiating Events cornerstone attribute of equipment performance and affects the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown conditions. Appendix G, “ Shutdown Operations Significance Determination Process,” of Manual Chapter 0609 was used to conclude that the finding was of very low safety significance since it did not affect the licensee’s ability to monitor core conditions or recover shutdown cooling after it was lost. The cause of the finding is related to the resource component of the human performance crosscutting area in that the licensee did ensure that complete, accurate, and up-to-date procedures were available for periodic maintenance on the voltage regulator.
Inspection Report# : 2007002 *(pdf)*

Significance: G Sep 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Risk Assessment for Safety-Related Undervoltage Relay Testing
The NRC identified a noncited violation of 10 CFR 50.65(a)(4) regarding the online risk evaluation for a surveillance test on safety-related undervoltage relays. On August 21, 2006, the licensee performed routine testing of the under-voltage relays for safety-related Bus 1G. The online risk assessment for August 21 reflected this testing but did not consider an increase in the likelihood of a loss of offsite power due to a modification of transmission towers inside the owner controlled area that was occurring at the same time. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-06099.

The finding affected the Initiating Events Cornerstone and is more than minor because the licensee’s risk assessment failed to consider unusual external conditions that were present during the surveillance test. The finding is not suitable for significance determination process evaluation; however, it has been reviewed by NRC management and was determined to be a finding of very low safety significance. This determination took into consideration the short duration of the work activity and the fact that the relay testing and the transmission modifications were both completed without any adverse consequences. The cause of the finding is related to the crosscutting element of human performance in that the licensee’s work control process did not appropriately incorporate risk insights regarding the transmission system work while planning Bus 1G undervoltage testing.
Inspection Report# : 2006004 *(pdf)*

Mitigating Systems

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Operator Error Leads to Draining RHR Loop
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified involving the failure to follow the procedural requirements of System Operating Procedure 2.2.69.3, “RHR Suppression Pool Cooling and Containment Spray.” This procedural violation resulted in the inadvertent draining and unavailability of one train of the low pressure coolant injection (LPCI) system. This issue was entered into the licensee’s corrective action program as Condition Report CR-CNS-2007-03380.

This finding is more than minor because it is associated with the mitigating systems cornerstone attribute of human performance and affects the associated 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, “Significance Determination Process,” Phase 1 Worksheet, the finding is determined to have a very low safety significance because it did not result in the actual loss of safety function for the LPCI train for greater than its technical specifications allowed outage time. The cause of this finding is related to the human performance cross cutting component of work practices because neither self or peer checking actions prevented the reactor operator from violating the system operating procedure (H.4(a)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Apr 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedures for Conducting Maintenance on Emergency Diesel Generator 2
The team identified three examples of a noncited violation of Technical Specification 5.4.1.a involving the licensee’s failure to establish adequate maintenance procedures for maintenance activities on Emergency Diesel Generator 2. Specifically, these procedures were incomplete in that they failed to provide adequate guidance to allow maintenance personnel to identify a degraded condition affecting the voltage regulator off-manual-auto switch and to properly conduct voltage regulator tuning activities.

The finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of procedure quality and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Specifically, the performance deficiency resulted in (1) the failure to discover a degraded condition in the Emergency Diesel Generator 2 voltage regulator and, (2) an over-voltage trip during the tuning of Emergency Diesel Generator 2 on November 13, 2006. Using the Manual Chapter 0609 Appendix G, "Shutdown Operations Significance Determination Process," Phase 1 Checklist, the finding is determined to have very low safety significance because one operable diesel generator was still capable of supplying power to the class 1E electrical power distribution subsystems. This finding has a cross-cutting aspect in the area of human performance in that the licensee’s procedures were not complete and provided inadequate instructions for persons conducting maintenance on safety related equipment.
Inspection Report# : 2007007 *(pdf)*

Significance: W Apr 24, 2007
Identified By: NRC
Item Type: VIO Violation
Failure to Promptly Identify and Correct Defective Diesel Generator Voltage Regulator Components
The team identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct a significant condition adverse to quality, and failed to assure that the cause of a significant condition adverse to quality was determined and that corrective aciton was taken to preclude repetition. Specifically, the licensee's inadequate procedural guidance for evaluating the suitability of parts used in safety related applications presented an opportunity in which the licensee failed to promptly identify a defective voltage regulator circuit board used in Emergency Diesel Generator 2 prior to its installation on November 8, 2006. Following

installation of the defective voltage regulator circuit board, the licensee failed to determine the cause of two high voltage condtions which occurred on November 13, 2006, and failed to take corrective action to preclude repetition. As a result, an additional high voltage condition occurred resulting in a failure of Emergency Diesel Generator 2 on January 18, 2007.

The finding is greater than minor because it is associated with the equipment performance cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The NRC assessed this finding through Phase 3 of NRC Inspection Manual Chapter 0609, "Significance Determination Process," and made a preliminary determination that the finding was of low to moderate safety significance. Based upon this analysis, discussions during a regulatory conference, and review of additional information, the staff determined that the final significance was of low to moderate safety significance (white). The final significance determination was communicated to the licensee on August 17, 2007. The cause of this finding is related to the problem identification and resolution cross cutting components of the corrective action program and operating experience because the licensee failed to thoroughly evaluate the high voltage condition such that resolutions address the causes and the licensee failed to effectively use operating experience, including vendor recommendations, resulting in changes to plant equipment (P.1(c) and P.2(b)).
Inspection Report# : 2007007 *(pdf)*
Inspection Report# : 2007008 *(pdf)*

Significance:  Mar 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct Condition Adverse to Quality on Safety-Related 4160 V Switchgear
An NRC identified noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI was identified regarding the licensee's failure to correct a degraded condition on the safety-related switchgear. Misalignment between the breakers and the switchgear cubicles was documented in multiple condition reports dating back to 2002 but the license failed to correct the condition. As a result of this misalignment, a start-permissive interlock switch in the Service Water Pump D breaker cubicle failed, potentially rendering all four service water booster pumps unavailable during an accident. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-09166.

The finding is more than minor because it is associated with the Mitigating Systems Cornerstone attribute of equipment performance and affects the associated cornerstone objective to ensure the availability and reliability of systems that respond to initiating events. The Phase 1 Worksheets in Manual Chapter 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because the finding represents an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. Based on the results of the Phase 2 analysis, the finding is determined to have very low safety significance. The cause of the finding is related to the corrective action component of the crosscutting area of problem identification and resolution in that the licensee failed to correct this degraded condition.
Inspection Report# : 2007002 *(pdf)*

Significance:  Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants
The inspector identified a non-cited violation of 10 CFR 55.21, "Medical Examination," and 10 CFR 55.23, "Certification." The inspector identified that the licensee failed to conduct all the medical testing required by American Nuclear Standards Institute/American Nuclear Society 3.4 -1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," as committed to by the facility licensee. Specifically, the facility licensee was not testing its operators for nose sensitivity (i.e., ability to detect odor of products of combustion and of tracer or market gases) Section 5.4.2, "Nose." Once identified, the licensee implemented immediate corrective actions to medically test all operators prior to returning to on-shift duties.

This finding was more than minor because the inadequate medical examinations could result in potential consequences due to licensed operators who may not be medically qualified to perform licensed duties and could, therefore, potentially affect the health and safety of the public. The finding was also of very low safety significance because no actual consequences were noted due to adverse medical conditions. In addition, no adverse operational

events were observed to have occurred due to inadequate medical conditions or missed medical tests. This finding has a cross-cutting aspect in the area of human performance associated with work practices because the licensee did not effectively supervise the work performed by the doctor, a contract worker, to ensure the requirements in the applicable procedures, American National Standards Institute 3.4-1983, were met.
Inspection Report# : 2006005 *(pdf)*

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Work Instructions
A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified regarding the licensee's failure to follow procedures for maintenance affecting the performance of safety-related equipment. Work Order 4514076 provided instructions to instrumentation and control technicians to connect a digital recorder to the Emergency Diesel Generator 2 voltage regulator. Contrary to the instructions in the Work Order, the technicians connected additional test equipment resulting in damage to Emergency Diesel Generator 2. The licensee entered this into their corrective action program as Condition Report CR-CNS-2006-08999.

The finding is more than minor because it is associated with the human performance attribute of the Mitigating Systems cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the NRC Manual Chapter 0609 Appendix G, "Shutdown Operations Significance Determination Process," Phase 1 Checklist, the finding is determined to have very low safety significance because one operable diesel generator was still capable of supplying power to the Class 1E electrical power distribution subsystems. This finding has a crosscutting aspect in the area of human performance given that the licensee’s work practices did not ensure that personnel do not proceed in the face of uncertainty or unexpected circumstances.
Inspection Report# : 2006005 *(pdf)*

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Identify and Correct Nonconforming Conditions in Safety-Related Motor-Operated Valves
A self-revelaing,noncited violation of 10 CFR, Part 50, Appendix B, Criterion XVI, was identified regarding the licensee's failure to correct a nonconforming condition in safety-related, motor-operated valves. In 1994, Limitorque and the NRC notified the industry that the torque switch roll pin in certain Limitorque valve actuators was susceptible to failure. The licensee took no corrective actions based on this notification. On November 8, 2006, the acceptable torque range was exceeded during stroking of the high pressure coolant injection inboard steam isolation valve due to the failure of the torque switch roll pin. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-08821.

The finding affected the Mitigating Systems cornerstone and is more than minor because, if left uncorrected, it would become a more safety significant concern. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there was no loss of safety function for the high pressure coolant injection system.
Inspection Report# : 2006005 *(pdf)*

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Identify and Correct Degraded Condition on Service Water Strainer
A self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion XVI was identified regarding the licensee’s failure to identify and correct age-related degradation in the motor coupling for Service Water Discharge Strainer A. Corrective maintenance designed to identify and replace degraded components was performed in February, 2006; however, the licensee failed to identify and replace a degraded rubber sleeve in the coupling which subsequently failed on October 29, 2006. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-08226.

The finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of equipment performance and affects the associated cornerstone objective to ensure the availability and reliability of systems that respond to initiating events. The Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because the finding also increased the likelihood of a loss of service water initiating event. Based on the results of a Phase 3 analysis, the finding is determined to have very low safety significance. The cause of the finding is related to the corrective action component of the crosscutting area of problem identification and resolution in that the licensee failed to identify this issue in a timely manner.
Inspection Report# : 2006005 *(pdf)*

Significance:  Dec 31, 2006
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Implement Vendor Recommendations Results in a Fire
A self-revealing finding was identified regarding the failure to install heat trace on the standby liquid control system in accordance with the vendor manual. The heat trace was installed in 1994 without the required ground-fault circuit protection. This resulted in a small fire in the heat trace on November 11, 2006. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-09006.

The finding is more than minor because it is associated with the Mitigating Systems Cornerstone attribute of design control and affects the associated cornerstone objective to ensure the availability, reliability, and capability of the standby liquid control system that is required to respond to initiating events, such as anticipated transients without scrams. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there it did not result in a loss of safety function.
Inspection Report# : 2006005 *(pdf)*

Significance:  Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Maintenance Procedure Results in Safety-Related Valve Failure
A self-revealing non-cited violation of Technical Specification 5.4.1a was identified for licensee’s failure to establish adequate maintenance procedures for safety-related, motor-operated valves. Between 1993 and 2006, maintenance procedures for Limitorque motor actuators did not contain sufficient detail to ensure that actuator motor pinion gears were installed correctly. This deficiency resulted in the failure of a low pressure safety injection valve on October 17, 2006 due to its pinion gear migrating off the motor shaft. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-07490.

The finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of equipment performance and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. The Phase 1 worksheets in NRC Manual Chapter 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because it resulted in the loss of a train of low pressure coolant injection for greater than the Technical Specification allowed outage time. The inspectors performed a Phase 2 analysis using Appendix A, "Technical Basis For At Power Significance Determination Process," of Manual Chapter 0609, "Significance Determination Process," and the Phase 2 worksheet for Cooper Nuclear Station. Based on the results of the Phase 2 analysis, the finding is determined to have very low safety significance.
Inspection Report# : 2006005 *(pdf)*

Significance:  Sep 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Requirements for Scaffolding Construction
The NRC identified a noncited violation of Technical Specification 5.4.1.a regarding the licensee's failure to follow procedures for maintenance affecting the performance of safety-related equipment. Specifically, the inspectors

discovered three examples of scaffolding constructed within the minimum separation distance to operable safety-related equipment as defined in Maintenance Procedure 7.0.7, "Scaffolding Construction and Control." The licensee documented the procedural violations in CR-CNS-2006-06763.

The finding affected the Mitigating Systems Cornerstone and is more than minor because, if left uncorrected, the failure to maintain the standards of Procedure 7.0.7 could become a more significant safety concern. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because it did not represent the loss of a safety function of a single train for greater than its Technical Specification allowed outage time. This finding has a crosscutting aspect in the area of human performance in that the licensee did not effectively communicate expectations regarding work practices to workers constructing scaffolding or to supervisors who routinely monitor these activities.
Inspection Report# : 2006004 *(pdf)*

Significance: G Sep 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Tracking Failed Control Room Annunciators
The NRC identified a noncited violation of Technical Specification 5.4.1.a regarding the licensee's inadequate procedure for tracking abnormal, off-normal or alarm conditions. On August 11, 2006, during a review of operator work arounds, the inspectors identified that a failed control room annunciator was not being controlled as required by Alarm Procedure 2.3.1, "General Alarm Procedure," Revision 51. The annunciator had been marked with a green flag since June 11, 2006, to indicate that it had failed even though it was still performing its function. The licensee documented the procedural violation in Condition Report CR-CNS-2006-05852 on August 14, 2006.

The finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of equipment performance and affects the associated cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because it did not represent the loss of a safety function of a single train for greater than its Technical Specification allowed outage time. This finding has a crosscutting aspect in the area of human performance in that the licensee did not provide personnel with adequate resources for tracking abnormal, off-normal or alarm conditions. Specifically, Procedure 2.3.1 required daily checks of failed or continuously alarming annunciators but did not specify a method to perform these checks.
Inspection Report# : 2006004 *(pdf)*

Barrier Integrity

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Control Rod Mispositioned During Reactor Startup
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for the inadequate isolation instructions contained in System Operating Procedure 2.2.8, "Control Rod Drive Hydraulic System." The use of these inadequate isolation instructions resulted in an unisolable leak from the control rod drive system and insertion of a manul reactor scram. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2007-03552.

This finding is more than minor because it is associated with the initiating events cornerstone attribute of procedure adequacy and affects the associated cornerstone objective to limit the likelihood of those events that upset plant stability. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have a very low safety significance because it did not contribute to the likelihood that mitigating systems would be unavailable following a reactor trip. The cause of this finding is related to the human performance cross cutting component of work practices because neither self or peer checking actions prevented the reactor operator

from violating the prescribed rod withdrawal sequence (H.4(a)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Identify and Correct an Unanalyzed Condition in the Torus
The NRC identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, involving the licensee's failure to promptly identify and correct a condition adverse to quality regarding an unanalyzed condition in the torus. Specifically, the inspectors identified a trolley/hoist and chain the torus that had been in the torus for the past five operating cycles without being evaluated for its potential impact on safety-related equipment. The licensee documented the condition in Condition report CR-CNS-2006-09338.

The finding is more than minor because it is associated with the Barrier Integrity cornerstone attribute of design control and it affects the associated cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using the NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the finding is determined to have very low safety significance because it did not reprsent an actual breach of containment. This finding has a crosscutting aspect in the area of problem identification and resolution in that the licensee did not implement a corrective action program with a low threshold for identifying issues. Specifically, the unanalyzed condition existed in a location frequently accessed during refueling outages but never questioned by the licensee.
Inspection Report# : 2006005 *(pdf)*

Significance: G Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Operation of Reactor Above Total Core Flow Limit
The NRC identified a non-cited violation of Technical Specification 5.4.1.a regarding the licensee's failure to follow procedures for power operation and process monitoring. Specifically, the licensee operated the reactor above the total core flow limit, contrary to requirements of General Operating Procedure 2.1.10, “Station Power Changes.” The licensee documented this violation in Condition Report CR-CNS-2006-07255.

The finding is more than minor because it is associated with the Barrier Integrity cornerstone attribute of human performance (procedural adherence) and it affects the associated cornerstone objective to provide reasonable assurance that physical design barriers, such as fuel cladding, protect the public from radionuclide releases caused by accidents or events. Using the NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because it only had the potential to affect the fuel cladding barrier. This finding has a crosscutting aspect in the area of human performance in that the licensee did not effectively communicate expectations regarding work practices to operators for the control of key parameters such as total core flow.
Inspection Report# : 2006005 *(pdf)*

Significance: G Sep 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Identify Reactor Operation in Excess of Licensed Thermal Power Limits
The NRC identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, regarding the failure to promptly identify a significant condition adverse to quality regarding operation of the reactor above the licensed thermal power limits for 3 days. On June 20, 2006, licensee personnel inadvertently introduced a nonconservative error into the core thermal power calculation which was not discovered until June 23. As a result, the reactor was operated above the licensed thermal power limit of 2381 MW for 3 days. Reactor power remained below 102 percent during the entire period; therefore, the reactor was not operated outside its design limits. This issue was entered into the licensee's corrective action program as Condition Report CR-CNS-2006-04573.

The finding is more than minor because it is associated with the Barrier Integrity cornerstone attribute of human

performance (procedure adherence) and affects the associated cornerstone objective to provide a reasonable assurance that physical design barriers, such as fuel cladding, protect the public from radionuclide releases caused by accidents or events. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because it only involved the potential to affect the fuel barrier. The cause of the finding is related to the corrective action component of the crosscutting area of problem identification and resolution in that the licensee failed to identify this issue in a timely manner.
Inspection Report# : 2006004 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: FIN Finding
ALARA Finding with three examples
The inspector reviewed a self-revealing ALARA finding with three examples. The collective dose of three work activities exceeded five person-rem and the planned doses by more than 50 percent. Valve work accrued 34.829 person-rem and exceeded the dose estimate by approximately 86 percent. Refueling floor work accrued 22.271 person-rem and exceeded the dose estimate by approximately 56 percent. Drywell support work accrued 31.638 person-rem and exceeded the dose estimate by 55 percent. The primary reasons were the use of an inexperienced contract work force which used poor ALARA practices and extensive rework caused by human performance errors. The licensee was in the process of developing screening and supplemental training programs for selected contract maintenance workers.

This finding is greater than minor because it is associated with the occupational radiation safety program attribute of exposure control and affected the cornerstone objective, in that it caused increased collective radiation dose. Using the Occupational Radiation Safety significance determination process, the inspector determined this finding had very low safety significance. Although the finding involved ALARA planning and work controls, the licensee's latest, official three-year rolling average collective dose was less than 240 person-rem. Additionally, this finding had a crossing-cutting aspect in the human performance area associated with resources, in that procedures and other resources were not available and adequate to train personnel before allowing them in radiological working conditions (H.2(c)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Technical Specification 5.4.1.a Violation for Inadequate Procedure For Reactor Pressure Vessel Refueling Preparation
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a involving the licensee's procedure for reactor pressure vessel refueling preparation was not adequate. The licensee's refueling procedure allowed the control room supervisor or shift manager to alter the sequence to suit existing plant conditions and time requirements. However, the procedure did not contain any precautions or limitations to consider the impact that altering the sequence would have on ancillary systems such as the high efficiency particulate air filter hose connection to the reactor pressure vessel vent. In addition, the change in sequence was not communicated or coordinated with radiation protection to evaluate potential radiological impacts. Consequently, when the licensee raised the reactor pressure vessel water level at an earlier stage in the reactor head disassembly process, the increased temperature and pressure applied to the high efficiency particulate air hose caused it to disconnect from the reactor pressure vessel vent. The loss of this connection released activation products onto the refuel floor and created an airborne radioactivity area, which alarmed the continuous air monitor and contaminated five workers. The licensee's immediate corrective actions were to evacuate personnel from the Refuel floor and begin decontamination of the

workers and the areas involved.

The finding was greater than minor because it was associated with the occupational Radiation Safety Cornerstone attribute of Program and Process, and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation from radioactive materials because it resulted in unintended internal doses. The finding was processed through the Occupational Radiation Safety Significance Determination Process and determined to be of very low safety significance (Green) because it was not an as low as is reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess the dose was not compromised. Additionally, this finding had a cross-cutting aspect in the area of human performance associated with the component of work control because the licensee failed to coordinate work activities by incorporating actions to address the impact of the work on different job activities and communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance.
Inspection Report# : 2006005 *(pdf)*

Public Radiation Safety

Physical Protection

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

Miscellaneous

Last modified : August 24, 2007