

Perry 1

3Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROMPTLY COMPLETE HOT WEATHER PREPARATIONS

The inspectors identified a finding of very low significance when licensee personnel failed to complete tasks designed to prepare equipment for operation during high temperature conditions by March 30, 2006. The finding also affected the cross-cutting area of Human Performance because the licensee organization failed to effectively coordinate, plan, and schedule completion of summer preparation activities prior to the onset of hot weather.

This finding was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability. The finding was of very low safety significance 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. No violation of NRC requirements occurred.

Inspection Report# : [2006003\(pdf\)](#)

Mitigating Systems

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY CORRECT A TESTING DEFICIENCY AFFECTING A REACTOR CORE ISOLATION COOLING REMOTE SHUTDOWN SYSTEM FUNCTION

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," following a review of Licensee Event Report 05000440/2006-001-00, "Incorrect Wiring in the Remote Shutdown Panel Results in a Fire Protection Program Violation," which identified that licensee personnel failed to correct a test deficiency associated with the remote shutdown circuit in a timely manner. The test deficiency was identified on September 9, 2003. The licensee corrected a wiring error and adequately tested the circuit on January 17, 2006. As part of their corrective actions, in addition to correcting the wiring error, licensee personnel performed an extent of condition review, which did not identify any additional wiring errors. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution because licensee personnel failed to appropriately evaluate the significance of the issue when the test deficiency was identified and therefore failed to appropriately prioritize and implement corrective actions in a timely manner.

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. The finding affected the reliability of the reactor core isolation cooling system during a control room fire scenario. The finding was determined through a Significance Determination Process Phase 3 analysis to be of very low safety significance due, in large part, to the low initiating event frequency of fires in the main control room as well as the availability of other mitigating systems.

Inspection Report# : [2006003\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW MAINTENACE PROCEDURES FOR ELECTRICAL EQUIPMENT VENTILATION FAN MOTOR WHEN VIBRATION LEVELS EXCEEDED ALERT CRITERIA

A finding of very low safety significance and a non-cited violation of Technical Specification 5.4, "Procedures," was self-revealed on February 11, 2006, when licensee personnel failed to adhere to predictive maintenance program procedures after "B" Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation system return fan vibration levels exceeded predictive maintenance program alert criteria on September 29, 2005. As part of their immediate corrective actions, licensee personnel completed repairs to the "B" Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation system on March 3, 2006. The finding affected the cross-cutting area of Human Performance because licensee personnel failed to adhere to predictive maintenance program procedures after a degraded condition was identified.

The finding was more than minor because the failure to adhere to procedures associated with the maintenance of safety-related equipment, if left uncorrected, could become a more significant safety concern. In this case, the failure to adhere to predictive maintenance program procedures on September 29, 2005, resulted in an unaddressed and unmonitored degraded fan motor condition, led to the fan motor failure, and resulted in a small fire and an Alert emergency declaration on February 11, 2006. Because the Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation system was a support system, the finding was not suitable for Significance Determination Process review. Following management review, the finding was determined to be of very low safety significance because only one train of the Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation system was affected and the fire did not result in any personnel injuries or damage to other equipment.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW BELT TENSIONING MAINTENANCE PROCEDURES FOR ELECTRICAL EQUIPMENT VENTILATION FAN MOTOR

The inspectors identified a finding of very low safety significance and a non-cited violation of Technical Specification 5.4, "Procedures," when licensee personnel failed to adhere to maintenance procedures during "B" Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation train maintenance and did not establish the required drive belt tension between the return fan and motor prior to returning the train to service. As part of their immediate corrective actions, the licensee counseled involved personnel regarding procedure adherence expectations. The finding affected the cross-cutting area of Human Performance because licensee personnel failed to adhere to maintenance procedures affecting safety-related equipment.

The finding was more than minor because the failure to adhere to procedures associated with the maintenance of safety-related equipment, if left uncorrected, could become a more significant safety concern. In this case, a previous failure to adhere to procedures associated with this fan motor contributed to the failure of the "B" Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation train that resulted in a fire and an Alert emergency declaration on February 11, 2006. Because the Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation system was a support system, the finding was not suitable for Significance Determination Process review. Following management review, the finding was determined to be of very low safety significance because only one train of the Motor Control Center Switchgear and Miscellaneous Electrical Equipment Ventilation system was affected.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Mar 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

ADS and MSIV Air Accumulators Stress Analysis Deficiencies

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) involving an inadequate stress analysis performed for the automatic depressurization system (ADS) air accumulators. Specifically, the licensee failed to account for all the related stresses in the ADS accumulator stress analysis calculation. Inclusion of these additional stresses resulted in a higher stress than

allowed by the American Society of Mechanical Engineers Code. Additionally, the accumulators' certification of design, as required by the Code, Section III, did not include the maximum design pressure, which resulted in the accumulators being non-conforming.

The finding was more than minor because the failure to adequately evaluate the design requirements of the accumulators could have led to structural failure of the tanks, which would have prevented the ADS valves from functioning as designed and could have affected the mitigating systems cornerstone objective of design control. The finding was of very low safety significance based on the results of the licensee's analysis and screened as Green using the SDP Phase 1 screening worksheet.

Inspection Report# : [2006009\(pdf\)](#)

Significance:  Mar 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Non-conservative Safety-Related Air Storage Tank Sizing Calculation

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) involving the sizing of the main steam isolation valve and automatic depressurization system (ADS) air storage tank. The inspectors identified that the licensee failed to correctly specify in a design calculation the required minimum differential air pressure required to actuate the ADS valves when manually operated. This resulted in a safety-related air system calculation that was non-conservative when determining the long-term air volume requirements in the air storage tank. The licensee's corrective actions included verifying that adequate design margin existed for the air tank capacity and entered this performance deficiency into their corrective action program for resolution.

The finding was more than minor because the failure to adequately evaluate air storage tank sizing could result in over-predicting the tank's capacity as verified by the surveillance test's acceptance criteria (i.e., creating design margin capability that would not exist) and could have affected the mitigating systems cornerstone objective of design control. The finding was of very low safety significance based on the results of the licensee's analysis and screened as Green using the SDP Phase 1 screening worksheet.

Inspection Report# : [2006009\(pdf\)](#)

Significance:  Mar 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedures for Controlling Flow into Reactor Vessel

The inspectors identified a Non-Cited Violation of Technical Specification Requirement 5.4.1, which requires, in part, that written procedures/instructions be established, implemented, and maintained covering the emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1. The anticipated transient without scram (ATWS) special plant instructions issued to provide for injection outside the shroud were inadequate because the procedures inappropriately limited the ability to control reactor water level (or reactor pressure if reactor water level is unknown). The licensee entered this performance deficiency into their corrective action program for resolution.

This finding was more than minor because the procedure deficiency affected the ability of the licensee to use the low pressure coolant injection sub-systems to prevent undesirable consequences of large power excursions associated with an ATWS, and was associated with the mitigating systems procedure quality attribute of the mitigating systems cornerstone objective. The finding was of very low safety significance because no actual initiating event or transient occurred and screened as Green using the SDP Phase 1 screening worksheet.

Inspection Report# : [2006009\(pdf\)](#)

Significance:  Mar 17, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM REQUIRED STEPS PRESCRIBED BY PROCEDURE GEI-0009

A finding of very low safety significance and an associated non-cited violation of Technical Specification

5.4, "Procedures," was identified on January 19, 2006, when the inspectors identified during a safety-related breaker maintenance activity, that licensee personnel failed to perform required steps in procedure GEI-0009, "ABB Low Voltage Power Circuit Breaker Types K-600 & K-600S Through K-3000 & K-3000S Maintenance." Specifically, licensee personnel failed to perform required minimum operating voltage testing on the safety-related EF1A05 breaker that provided power to Division 1 Motor Control Center (MCC), Switchgear (SWGR), and Battery Room Supply Fan A. The primary cause of this finding was related to the cross-cutting area of Human Performance because licensee personnel failed to adhere to a step-by-step procedure associated with safety-related equipment. As part of the licensee's corrective actions, an extent of condition review was conducted, which determined that no additional safety-related breakers were affected.

The inspectors concluded that the finding was more than minor in accordance with example 4.1 in IMC 0612, Appendix E, "Examples of Minor Issues," since the subject breaker was subsequently determined to be out of specification. This issue was also associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2006007\(pdf\)](#)

Significance:  Mar 17, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM REQUIRED STEPS PRESCRIBED BY PROCEDURE ICI-B12-0001

A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.4, "Procedures," was identified on January 10, 2006, when the inspectors observed during a calibration check of a Division III Emergency Diesel Generator (EDG) Exhaust Air Damper, that licensee personnel failed to perform required steps prescribed by procedure ICI-B12-0001, "ITT NH90 Series Milliampere Proportional/On-Off Hydramotor Actuator Calibration." The primary cause of this finding was related to the cross-cutting area of Human Performance because licensee personnel failed to adhere to a step-by-step procedure associated with safety-related equipment. As part of their corrective actions, licensee personnel revised ICI-B12-0001 to clarify the requirements of the procedure.

This finding was more than minor because it was associated with the Mitigating System cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2006007\(pdf\)](#)

Significance:  Dec 30, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE FUEL OIL PUMP PROCEDURES RESULTED IN DIVISION 2 EDG UNABAILABILITY

A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.4, "Procedures," was self-revealed during Division 2 Emergency Diesel Generator (EDG) post-maintenance testing on September 15, 2005, when the engine-driven fuel oil pump was discovered air bound after licensee personnel failed to implement appropriate procedures for the fill and vent of the pump suction and discharge lines following pump maintenance activities. As a result of operating the pump for about 40 minutes without proper fuel oil flow, the engine-driven fuel oil pump required replacement, which extended the Division 2 EDG maintenance outage by about 24 hours and incurred about 15 hours of unnecessary unavailability. As part of their corrective actions, the licensee removed the EDG from service, replaced the engine-driven fuel oil pump, and successfully re-tested the EDG on September 16, 2005. The

primary cause of this finding was related to the cross-cutting area of Human Performance since licensee personnel failed to develop an appropriate fill and vent procedure for the engine-driven fuel oil pump.

This finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2005010\(pdf\)](#)

Significance:  Dec 30, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE OIL RESERVOIR MAINTENANCE PROCEDURE IMPLEMENTATION FOR ECC 'B' PUMP RESULTED IN OIL LEAK

A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.4, "Procedures," was self-revealed on October 30, 2005, when licensee personnel failed to develop an appropriate procedure for the replacement of the 'B' Emergency Closed Cooling (ECC) pump oil bearing reservoir, which resulted in an oil leak and unnecessary pump unavailability. As part of their corrective actions, licensee personnel completed repairs to the pump on November 1, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results. The primary cause of this finding was related to the cross-cutting area of Human Performance because licensee personnel failed to develop appropriate oil reservoir maintenance procedures.

This finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2005010\(pdf\)](#)

Significance:  Dec 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECT AN OIL RESERVOIR MAINTENANCE PROCEDURE ISSUE RESULTED IN ECC 'A' OIL LEAK

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was self-revealed on November 19, 2005, when licensee personnel failed to promptly correct a condition adverse to quality associated with the development of appropriate procedures for oil reservoir replacement, which resulted in an oil leak on the 'A' ECC pump, incurring unnecessary pump unavailability. As part of their corrective actions, licensee personnel completed repairs to the pump on November 29, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution because licensee personnel failed to correct an inadequate oil reservoir maintenance procedure in a timely manner.

This finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety

significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2005010\(pdf\)](#)

Significance: **G** Oct 28, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY CORRECT ONLINE WORK MANAGEMENT PRACTICES THAT RESULTED IN UNNECESSARILY HIGH SAFETY SYSTEM UNAVAILABILITY

The inspector identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," when licensee personnel failed to correct a condition adverse to quality. Specifically, the licensee failed to correct a condition of inadequate online maintenance management that adversely affected safety system availability. In the second quarter of 2000, the heat removal system unavailability performance indicator crossed the Green-to-White threshold due to inadequate online work management, which led to high safety system unavailability. Between the years 2000 and 2004, the licensee identified on several occasions that safety system unavailability was higher than the industry average and that the station lacked an adequate process to balance online maintenance with safety system unavailability. Additionally, poor work management processes were noted to unnecessarily extend maintenance activities and adversely affect safety system availability. In the second quarter of 2004, the residual heat removal safety system unavailability performance indicator crossed the Green-to-White threshold. The licensee again identified that inadequate online maintenance management and generally higher than industry average safety system unavailability were primary contributing causes. Licensee corrective actions included management of safety system unavailability to 50 percent of the NRC Green-to-White threshold and work management improvements. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution, subcategory corrective action, since a condition adverse to quality was not corrected in a timely manner.

The finding was more than minor because it was associated with the equipment performance attribute of the reactor safety 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. Specifically, from 2000 to 2004, the failure to promptly correct the condition of inadequate management of online work adversely affected safety system availability. The inspector determined that the finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2005012\(pdf\)](#)

Significance: **W** Dec 31, 2003

Identified By: NRC

Item Type: VIO Violation

INADEQUATE LPCS/RHR 'A' FILL AND VENT PROCEDURES RESULTS IN SYSTEM INOPERABILITY AFTER LOSS OF OFFSITE POWER

An apparent self-revealed violation of Technical Specification 5.4 occurred when the waterleg pump for low pressure core spray (LPCS) and residual heat removal (RHR) 'A' became air bound following a loss of offsite power. Subsequent investigation revealed that the procedures for venting these systems did not include the high point vent valve on the discharge of the pump, thus allowing gas to accumulate in a vertical section of system piping. When the waterleg pump lost power on August 14, 2003, the accumulated gas expanded and caused voiding of the pump. As a result, both LPCS and RHR 'A' were rendered inoperable.

The NRC assessed this finding through Phase 3 of the Significance Determination Process and made a preliminary determination that it is an issue with low to moderate safety significance.

After considering the information developed during the inspection, the NRC has concluded that the inspection finding is appropriately characterized as White (i.e., an issue with low to moderate increased importance to safety) and a final Significance Determination Process letter was issued on March 12, 2004, and will be inspected within the scope of a supplemental 95002 inspection in May 2004.

Inspection Report# : [2004006\(pdf\)](#)

Inspection Report# : [2005003\(pdf\)](#)

Significance: **W** Sep 30, 2003

Identified By: NRC

Item Type: VIO Violation

IMPROPER MAINTENANCE CAUSES EMERGENCY SERVICE WATER PUMP FAILURE

A self-revealed apparent violation of Technical Specification (TS) 5.4 occurred when the Division 1 emergency service water (ESW) pump failed during routine pump operation. The licensee rebuilt the pump in 1997 and during this reassembly, failed to properly reassemble the pump shaft connections. The improper reassembly led to pump failure on September 1, 2003.

The NRC assessed this finding through Phase 3 of the Significance Determination Process and made a preliminary determination that it is an issue with low to moderate safety significance. On January 28, 2004, a final significance determination letter was issued which characterized this issue as white.

Inspection Report# : [2004005\(pdf\)](#)

Inspection Report# : [2005003\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

