

Davis-Besse 4Q/2004 Plant Inspection Findings

Initiating Events

G**Significance:** Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

REACTOR OPERATOR ATTEMPTED TO ADD WATER TO THE MAKE UP TANK UTILIZING EQUIPMENT THAT WAS OUT OF SERVICE

A finding of very low safety significance was self-revealed when control room staff attempted to add water to the makeup tank using equipment that had been removed from service as part of the clearance which supported work on makeup system valves MU362 and MU363. The control room staff was unaware of the status of the normal makeup water sources to the reactor coolant system, even though the system's status was clearly documented in the Limiting Condition for Operation Tracking Log, a document which is required to be reviewed by the Shift Manager, the Unit Supervisor, and the Reactor Operator prior to shift turnover. The inspectors concluded that the finding was more than minor because the operator's lack of knowledge of system status challenged their ability to adjust control rod index by adding water to the reactor coolant system and to perform selected abnormal operating procedures prepared to address small reactor coolant system leaks. This finding was of very low safety significance because, during the time period the clearance impacted the operation of the makeup water sources, neither the ability to control makeup tank water level or to maintain an appropriate rod control index were challenged. This was determined to be a Non-Cited Violation of Technical Specification 6.8.1.a.

Inspection Report# : [2004014\(pdf\)](#)**G****Significance:** Mar 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL FOR FW780 STEM LOCKING DEVICE

The inspectors identified a finding of very low safety significance when they discovered that the licensee failed to provide adequate work control documents to safely perform the work activity for the removal of the actuator on motor-operated valve FW780 with the feedwater system at full operating pressure. The inspectors determined that the finding was more than minor because, if left uncorrected, it could contribute to the likelihood of those events that upset plant stability. Specifically, the failure of the stem locking device, with the actuator removed, could have resulted in the ejection of the valve stem, resulting in a feedwater system transient and personnel injury. The finding was of very low safety significance because the finding: (1) was not associated with the likelihood of primary or secondary system LOCA initiation; (2) did not contribute to the likelihood that mitigation systems would be unavailable; and (3) was not associated with fire or flood. The issue was determined to be a Non-Cited Violation of Technical Specification 6.8.1.

Inspection Report# : [2004006\(pdf\)](#)**G****Significance:** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Process Monitoring Function for Alternative Shutdown Capability

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix R, Section III.L.2.d, having very low safety significance. Specifically, the licensee failed to provide the process monitoring function, capable of providing direct readings of the process variables necessary to perform and control the alternative shutdown, for a control room or cable spreading room fire. Following discovery, the licensee entered the issue into the corrective action program and performed a modification to resolve the issue. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee had previously identified this issue as an enhancement and did not recognize that it was a violation of regulatory requirements.

This issue was more than minor because it affected the initiating events cornerstone and, by not providing the direct indications necessary for the operators to determine the status of the idle SG, the probability of experiencing unacceptable stresses on the SG tubes during the limiting Appendix R scenario was increased. The team determined this finding to be of very low significance, based upon the low probability of a serious control room fire combined with the low probability that such a fire would affect this specific instrumentation detrimentally. Additionally, even in the event that such a fire had affected this instrumentation, it was likely that the operators still would have been able to prevent these tube stresses through use of manual actions, although this was not a credited action in the Fire Protection procedures for this scenario. (Section 4OA3(5)b.1)

Inspection Report# : [2003010\(pdf\)](#)

Mitigating Systems

Significance:  Dec 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY AND EFFECTIVELY CORRECT DEGRADATION OF UNDERGROUND CABLES DUE TO WATER INTRUSION

The inspectors identified a finding of very low significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to assure that adequate and timely actions were promptly identified and implemented to address several underground wetted cable issues, a condition adverse to quality. This inspector-identified issue was greater than minor because if left uncorrected, the issue could become a more significant safety concern and could affect the mitigating systems attributes of equipment performance reliability. The inspectors evaluated the finding using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," Phase 1 screening. The inspectors determined that the finding (1) did not result in a design or qualification deficiency confirmed to result in a loss of function per NRC Generic Letter 91-18; (2) did not represent an actual loss of safety function; (3) did not result in a loss of safety function of a single train for greater than the Technical Specification allowed outage time; (4) did not represent an actual loss of safety function of one or more non-Technical Specification trains designated as risk significant per the Maintenance Rule for greater than 24 hours; and (5) did not screen as potentially risk significant due to seismic, fire, flooding, or severe weather initiating events.

Inspection Report# : [2004017\(pdf\)](#)

Significance:  Dec 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO INITIATE A CONDITION REPORT FOR CONDITIONS ADVERSE TO QUALITY IN THE AUXILIARY FEEDWATER SYSTEM

The inspectors identified a finding of very low significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings, for failure to initiate a condition report for conditions adverse to quality in the auxiliary feedwater system. The inspectors identified two conditions adverse to quality that had not been entered into the corrective action program. The inspectors determined that the failure to initiate condition reports for conditions adverse to quality in the auxiliary feedwater system was greater than minor because if left uncorrected the issue would become a more significant safety concern involving programmatic and equipment issues. The inspectors determined that the finding was not suitable for SDP evaluation because the failure to initiate the condition reports did not directly result in degraded or inoperable equipment. Therefore, this finding was reviewed by Regional Management, in accordance with IMC 0612 Section 05.04c, and determined to be of very low safety significance.

Inspection Report# : [2004017\(pdf\)](#)

Significance: SL-IV Nov 13, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM APPROPRIATE 50.59 SCREENING CONCERNING ECCS SUMP PUMP AFFECT ON ECCS COMPONENT OPERABILITY

A failure to perform an adequate safety evaluation review as required by 10 CFR 50.59 for changes made to the facility as described in the Updated Safety Analysis Report (USAR) was self-revealed. In June 2003, the licensee changed the limit and precautions sections of several procedures to specify that emergency core cooling system (ECCS) room sump pumps were not required to be in service for ECCS and containment spray equipment operability. However, the USAR credits the ECCS sump pumps and their running lights for providing indication of the need for operator action in response to a passive failure in the ECCS system. The procedure changes were inappropriately categorized as being exempt from the 50.59 process because the changes involved "Managerial or Administrative Procedures." Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated with the traditional enforcement process. The finding was determined to be of very low safety significance because, although the procedure changes could have resulted in the operation outside the requirements of technical specification action statements, no loss of function occurred. This was determined to be a Severity Level IV NCV of 10 CFR 50.59.

Inspection Report# : [2004015\(pdf\)](#)

Significance:  Nov 13, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO COMPLY WITH TS REQUIRED PROCEDURES FOR CONTROL OF STATUS OF CCW 1 BREAKER WHILE DANGER TAGGED

A finding of very low safety significance was self-revealed when maintenance personnel failed to adhere to the requirements of administrative work control documents and instructions during maintenance activities associated with the racking in of breaker AC113 [CCW 1 Motor Supply Breaker]. With a danger tag hanging on the breaker cubicle door, licensee personnel installed the breaker into the breaker cubicle with the intention of operating the breaker to perform maintenance checks on the CCW pump 1 motor. This was contrary to licensee's procedural requirements. The inspectors concluded that the finding was more than minor because, if left uncorrected, it could become a more significant

safety concern. Specifically, the operation or manipulation of the danger tagged AC-113 breaker could have resulted in equipment damage or serious personnel injury. This issue was determined to be of very low safety significance because there was no maintenance evolutions in progress on the CCW 1 pump motor which would have required the breaker AC-113 to be racked out at the time of the breaker was inappropriately racked into its cubicle. This was determined to be a Non-Cited Violation of Technical Specification 6.8.1.a.

Inspection Report# : [2004015\(pdf\)](#)

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Significance: Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO COMPLY WITH TS BECAUSE OF DESIGN INADEQUACY IN THE STEAM FEEDWATER RUPTURE CONTROLS SYSTEM

A finding of very low safety significance was self-revealed when the licensee discovered, during planned work activities, that the Steam Feedwater Rupture Controls System logic cards could energize in a blocked condition after being de-energized. This condition could prevent automatic isolation of a faulted number 2 steam generator concurrent with a loss of offsite power. This condition was introduced into the system logic subsequent to a design change completed on the Steam Feedwater Rupture Controls System in 1988. When recognized in 2003, the licensee corrected the design deficiency. The inspectors concluded that the finding was greater than minor because it involved the attributes of design control and equipment reliability and could have affected the mitigating systems objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because it did not result in an actual loss of safety function since the starting of the auxiliary feedwater system was not affected and a faulted number 2 steam generator could be isolated with operator action if automatic isolation did not occur. This was determined to be a Non-Cited Violation of Technical Specification 3.3.2.2.

Inspection Report# : [2004014\(pdf\)](#)

G

Significance: Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECTLY VERIFY THE ADEQUACY OF THE DESIGN OF THE CONTAINMENT EMERGENCY SUMP SCREEN, AND TO IMPLEMENT EFFECTIVE CORRECTIVE ACTIONS TO REPAIR A 3/4-INCH WIDE BY 6-INCHES LONG GAP

A finding of very low safety significance was self-revealed during the licensee's inspection activities to address emergency core cooling system deficiencies, documented in LER 50-346/2002-005, and involved the licensee's failure to effectively implement corrective actions to verify the adequacy of the design of the containment emergency sump screen, and to implement effective corrective actions to repair an existing gap. Based on the inspectors' analysis, it was unlikely that the ECCS would be impacted. The inspectors concluded that the finding was greater than minor because the gap was associated with the objective and attributes of the Mitigating Systems and the Barrier Cornerstones. Specifically, the containment emergency sump screen was sized to pass no more than 1/4-inch debris particles and debris larger than 1/4-inch could have potentially damaged emergency core cooling system (ECCS) equipment and/or clogged the containment spray system (CSS) nozzles. The finding was of very low safety significance because: 1) the gap was not a design or qualification deficiency which resulted in a loss of function per Generic Letter 91-18, Revision 1; 2) did not represent an actual loss of safety function of a mitigating system; 3) did not represent an actual loss of safety function of a single train of a mitigating system for greater than its Technical Specification allowed outage time; 4) did not represent an actual loss of safety function of one or more non-Technical Specification mitigating system trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours; and 5) did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. In addition, containment spray is not a large early release frequency contributor per IMC 0609 Appendix H. This was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Actions.

Inspection Report# : [2004014\(pdf\)](#)

Significance: SL-IV Sep 17, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Incomplete Information Provided to NRC in Licensing Submittal

The team identified that the licensee failed to provide complete information to the NRC in a licensing submittal. Specifically, the licensee did not identify that previously submitted licensing correspondence regarding the basis for not protecting ventilation system cables was no longer accurate.

Inspection Report# : [2004009\(pdf\)](#)

Significance: SL-IV Jul 02, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate 10 CFR 50.59 Evaluation Regarding Tornado Missile Protection for EDG Exhaust Stacks

The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," based on the licensee performing an inadequate evaluation of a proposed change to the plant, regarding tornado missile protection of the diesel generator exhaust stacks and plant doors. Specifically, the licensee's response to the question posed in 10 CFR 50.59(c)(2)(vi) did not demonstrate that the proposed change did not create the possibility of a malfunction of equipment important to safety with a different result than any previously evaluated in the Final Safety Analysis Report (as updated).

Because the Significance Determination Process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, this issue was dispositioned using the traditional enforcement process in accordance with Section IV of the NRC Enforcement Policy. However, the results of the violation, that is, the failure to demonstrate that the proposed change did not create the possibility of a malfunction of equipment important to safety with a different result, were assessed using the Significance Determination Process.

This finding was determined to be more than minor because the inspectors could not determine reasonably that the change would not ultimately require NRC approval. The finding was determined to be of very low safety significance based on a significance determination process analysis of a loss of offsite power concurrent with loss of one emergency diesel generator and the violation was classified as a Severity Level IV Violation. (Section 1R02)

Inspection Report# : [2004010\(pdf\)](#)

Significance: SL-IV Jul 02, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Safety Evaluation for Changes to the Plant made as Described in the USAR Concerning the low-low pressure interlock for the AFW Pumps

The inspectors identified a Severity Level IV Non-Cited Violation associated with the failure to perform an adequate safety evaluation review as required by 10 CFR 50.59 for changes made to the facility as described in the Updated Safety Analysis Report. Specifically, the licensee failed to perform a safety evaluation in accordance with 10 CFR 50.59 for changes made to Section 9.2.7.3.c of the Updated Safety Analysis Report concerning the low-low pressure interlock for the auxiliary feedwater pumps. The changes made by the licensee adversely affected an Updated Safety Analysis Report-described function in that a previously described automatic feature of the steam inlet valve to the auxiliary feedwater pump was changed to clarify that this automatic feature was not available under certain conditions.

Because the Significance Determination Process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, this issue was dispositioned using the traditional enforcement process in accordance with Section IV of the NRC Enforcement Policy. However, the results of the violation, that is, the failure to evaluate the changes made to Section 9.2.7.3.c of the USAR, were assessed using the Significance Determination Process.

This finding was determined to be more than minor because the inspectors could not determine reasonably that the change would not ultimately require NRC approval. The inspectors determined that this issue was of very low safety significance, because the design basis safety-related function of the auxiliary feedwater system, to remove reactor decay heat following a loss of normal feedwater, was not adversely affected, and because the team determined from the mitigating systems evaluation in the Phase 1 Screening Worksheet that all the questions were answered "No." Therefore, the results of the violation were determined to be of very low safety significance and the violation was classified as a Severity Level IV Violation. (Section 1R02)

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY IMPLEMENT A PROCEDURE REQUIRED BY TS 6.8.1 THAT REQUIRED VERIFICATION THAT CORRECT VALVE DATA WAS BEING USED TO TEST AND ADJUST MAIN STEAM SAFETY VALVES

A Non-Cited Violation of Technical Specification 6.8.1 was self-revealed when the licensee discovered that data, inputted to equipment being used to test and set the relief pressures of main steam safety valves, was incorrect. It was discovered that the incorrect valve parameters were being used for safety valves with setpoints of 1050 psig. The licensee failed to implement the procedurally specified data verification. The inspectors determined that the finding was more than minor because the licensee, by not effectively implementing an approved procedure for use of the test equipment, set a main steam safety valve outside of the acceptable range and declared the valve operable. The finding was of low safety significance because main steam relief capability remained sufficient and all activities causing entries into technical specification action statements were completed within technical specification allowable time limits.

Inspection Report# : [2004008\(pdf\)](#)

Significance:  Feb 27, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY ASSESS OVERALL PLANT RISK DURING AUXILIARY FEEDWATER SURVEILLANCE TESTING

The team identified a finding of very low safety significance associated with an NCV of 10 CFR 50.65(a)(4) for the failure to properly assess and manage the increase in risk during AFW Train 1 surveillance testing as a result of incorrectly considering the AFW Train 1 available when it was actually unavailable while an AFW turbine steam supply drain valve was open. The primary cause of this finding was associated with the cross-cutting area of Human Performance, in that, personnel failed to properly recognize that testing rendered the pump unavailable when the steam supply drain valve was opened. The finding was more than minor because it involved the equipment performance attribute of the Mitigating System cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that

respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the Technical Specification allowed outage time, and no risk due to external events. This issue was an NCV of 10 CFR 50.65(a)(4) for the failure to properly assess and manage the increase in risk during AFW Train 1 surveillance testing.

Inspection Report# : [2004004\(pdf\)](#)

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Significance: Feb 27, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO COMPLETE ADEQUATE POST-MAINTENANCE TESTING ON AUXILIARY FEEDWATER TRAIN 1 AND TRAIN 2 PRIOR TO MODE 3 ENTRY

The team identified a finding of very low safety significance associated with an NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for the failure to implement adequate post-maintenance testing prior to entering Mode 3 (Hot Standby) to demonstrate operability of auxiliary feedwater (AFW) Train 1 and Train 2 following turbine casing leak repairs. The primary cause of this finding was related to the cross-cutting area of Human Performance, in that, operations personnel decided to defer post-maintenance testing prescribed in maintenance work order instructions until after Mode 3 entry based on incorrectly assuming that the surveillance requirement provisions of Technical Specification 4.0.4 applied to post-maintenance testing. The finding was more than minor because it involved the equipment performance and configuration control attribute of the Mitigating System cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the Technical Specification allowed outage time, and no risk due to external events. This issue was an NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control."

Inspection Report# : [2004004\(pdf\)](#)

G

Significance: Feb 14, 2004

Identified By: NRC

Item Type: FIN Finding

LICENSEE NOT ADEQUATELY PREPARED FOR THE ONSET OF FRAZIL ICE CONDITIONS

A finding of very low safety significance was identified by the inspectors for inadequate preparations for the onset of frazil ice conditions prior to January 6, 2004. Lack of coordination between licensee departments resulted in incomplete preparations prior to the onset of frazil ice conditions. The inspectors determined that the finding was more than minor because, if left uncorrected, it could contribute to the likelihood of those events that upset plant stability. Specifically, the failure to adequately prepare for frazil ice conditions could result in a plant shutdown. The finding was of very low safety significance because the finding: (1) was not associated with the likelihood of primary or secondary system LOCA initiation; (2) did not contribute to the likelihood that mitigation systems would be unavailable; and (3) was not associated with fire or flood. No violation of NRC requirements occurred.

Inspection Report# : [2004002\(pdf\)](#)

G

Significance: Feb 14, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Determine the Cause and Implement Actions to Prevent Recurrence for the Inadequate Design Changes Made to the Service Water System Valves

The inspectors identified a finding of very low safety significance and associated NCV for the licensee's failure to determine the cause and implement actions to prevent recurrence for the inadequate design changes (removed air accumulators) made to the air operated service water system valves at the outlet of the component cooling water heat exchangers. Although the licensee had implemented corrective measures for the service water valve design deficiencies, the licensee failed to recognize the need for a root cause investigation and to take actions to prevent recurrence for the inadequate modification process until questioned by the NRC inspectors. This finding was greater than minor because this example was associated with the Mitigating Systems Cornerstone and if left uncorrected, could potentially result in other inoperable safety related equipment or systems. The finding was determined to be of very low safety significance by management review, because the licensee had taken actions to restore the air operated service water valves to an operable configuration and, after identification by the inspectors, the licensee entered the failure to identify the cause(s) and implement action(s) to prevent recurrence for the inadequate modification into the corrective action program. This issue was a NCV of 10 CFR 50 Appendix B Criteria XVI, "Corrective Action".

Inspection Report# : [2004002\(pdf\)](#)

G

Significance: Feb 14, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

CONTROL ROOM STAFF DID NOT ADEQUATELY MONITOR AND CONTROL SYSTEM STATUS WHICH RESULTED IN A NONCOMPLIANCE WITH A TS ACTION STATEMENT

A finding of very low safety significance was self-revealed when, during performance of a functional test for the Steam Feedwater Rupture

Control System (SFRCS) steam generator 2 differential pressure switch, the licensee did not perform the 1 hour action statement of Technical Specification 3.3.2.2. The pressure switch was isolated for a period of approximately 2 hours and 24 minutes without control room knowledge. This rendered the pressure switch incapable of sensing differential pressure and providing a signal, if needed, to the SFRCS actuation channel 2. Plant procedures require maintaining knowledge of the proper and actual status of Technical Specification listed equipment. The finding was more than minor because it involved the configuration control and human performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The issue was a Non-Cited Violation of Technical Specification 6.8.1 which required the implementation of written procedures governing plant operations.

Inspection Report# : [2004002\(pdf\)](#)



Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Auxiliary Feedwater System Calculation Issues With Main Steam Safety Valves

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to ensure that design analyses showed that the auxiliary feedwater (AFW) system could perform its safety function under design basis conditions. Following discovery, the licensee entered the issue into the corrective action program. The primary cause of this violation was related to the cross-cutting area of human performance, as the licensee used the results of a vendor calculation without verifying that it was adequate.

This issue was more than minor because the calculations were non-conservative and the calculation of record did not demonstrate that the AFW system could perform its safety function under design basis conditions. Based on further analysis, the licensee concluded the AFW system was operable. Therefore, the issue screened out of Phase 1 of the significance determination process and was of very low safety significance.

(Section 40A3(3)b.14)

Inspection Report# : [2003010\(pdf\)](#)



Significance: Jan 07, 2004

Identified By: NRC

Item Type: VIO Violation

Failure to Take Corrective Actions for a Previous NCV Concerning SW Pump Discharge Check Valve Acceptance Criteria

The team identified a Cited Violation of Technical Specifications Section 4.05a and 10 CFR 50.55a. Specifically, the licensee failed to ensure that the service water discharge check valve was tested in accordance with the American Society of Mechanical Engineers Code. The primary cause of this violation was related to the cross-cutting areas of problem identification and resolution and human performance, because the licensee did not recognize that the corrective actions taken needed to ensure compliance with NRC requirements.

The issue was determined to be more than minor because the inadequate test acceptance criteria allowed the licensee to accept a check valve as performing its intended function at less than full system flow. The issue was of very low safety significance using the Phase 1 of the significance determination process based on the licensee's determination that the system was operable but degraded. (Section 40A3(3)b.12)

Inspection Report# : [2003010\(pdf\)](#)



Significance: Jan 07, 2004

Identified By: NRC

Item Type: VIO Violation

Failure to Take Corrective Actions for a Previous NCV Concerning SW Discharge Path Swapover Setpoints

The team identified a Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to provide a basis for the setpoint to swap the service water system discharge path. This issue was previously identified as a Non-Cited Violation in Inspection Report 05000346/2002014 and the corrective actions taken by the licensee failed to correct the originally identified condition. The primary cause of this violation was related to the cross-cutting areas of problem identification and resolution and human performance, because the licensee did not recognize that the corrective actions taken needed to restore compliance with the identified violation of NRC requirements.

The issue was determined to be more than minor because the licensee had not corrected a previous violation and was relying on non-safety-related equipment to perform a safety function under design bases conditions. Because the issue was previously determined to be of very low safety significance, NRC management concluded that the violation could be categorized as having very low safety significance. (Section 40A3(3)b.11)

Inspection Report# : [2003010\(pdf\)](#)



Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Verify Adequacy of Short Circuit Protection for Direct Current Circuits

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," having very low safety significance. Specifically, the licensee failed to identify and correct inadequate short circuit protection for direct current (DC) circuits. Following discovery, the licensee issued a condition report to document the deficient circuit protection for valves with extremely long circuit lengths. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee had missed several opportunities to identify it as part of corrective actions for previously identified DC circuit deficiencies.

This issue was more than minor because the licensee had to perform calculations to show that the fuses would adequately protect the equipment and because modifications to those fuses were required. The issue was of very low safety significance using Phase 1 of the significance determination process because the licensee concluded the equipment was operable.

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Undervoltage Time Delay Relay Setting Did Not Account For Instrument Uncertainties

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to translate instrument uncertainties into the undervoltage time delay setting specification for the 4160 Vac buses C1 and D1. Following discovery, the licensee confirmed the settings were acceptable and re-evaluated the potential temperature effects to the time delay relays.

This issue was more than minor because the licensee had to perform calculations to show that the relays were within their allowable values, and because the licensee determined that the increased temperature could cause the time delay to operate outside of Technical Specifications limits. The issue was of very low safety significance using the Phase 1 of the significance determination process since the licensee considered the instruments to be operable. (Section 40A3(2)b.1)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of 480 Vac Class 1E Motor Thermal Overload Protection

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to provide motor thermal overload protection for the Class 1E 480 alternating current voltage (Vac) distribution system. Following discovery, the licensee physically modified approximately 53 thermal overload circuits to resolve the discrepancy. The primary cause of this violation was related to the cross-cutting area of human performance because the licensee did not realize the lack of thermal overload protection was an unanalyzed condition and that the station was not in compliance with the updated safety analysis report until identified by the team.

This issue was more than minor because the licensee failed to ensure that bypassing the thermal overload protection would result in completion of safety functions and subsequently had to install thermal overload protection in order to meet the design requirement. The issue was determined to be of very low safety significance using Phase 1 of the significance determination process because there was reasonable assurance that the condition did not result in a loss of system function. (Section 40A3(2)b.2)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Adequate Direct Current Contactor Testing to Ensure Minimum Voltage at Motor Operated Valves

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," having very low safety significance. Specifically, the licensee failed to adequately test direct current contactors related to two safety related motor operated steam valves associated with the auxiliary feedwater system. Following discovery, the licensee entered the issue into the corrective action program and was re-evaluating the basis for acceptability of these valves. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because, although the issue was identified in 2002, the licensee did not see the need to take corrective action until prompted by the team in 2003.

This issue was more than minor because the licensee had relied upon an inadequate test to show that the contactors were qualified to perform under required conditions and because the contactors were installed in the plant during previous operating cycles. The issue was of very low safety significance using the Phase 1 of the significance determination process because the licensee determined that the valves were operable. (Section 40A3(2)b.3)

Inspection Report# : [2003010\(pdf\)](#)

G**Significance:** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Calculations to Ensure Minimum Voltage Availability at Device Terminals

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to confirm operability of direct current (DC) contactors by ensuring that minimum voltage was available at the safety related device terminals. The licensee missed several opportunities to correct this design deficiency. Following discovery, the licensee issued a condition report to evaluate the adequacy of available voltage. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because, although the issue was identified in 2002, the licensee did not see the need to take corrective action until prompted by the team in 2003.

This issue was more than minor because the licensee had to perform calculations to determine if the devices had sufficient voltage to perform their safety function. The issue was of very low safety significance using Phase 1 of the significance determination process because the licensee determined that all components were operable. (Section 40A3(2)b.5)

Inspection Report# : [2003010\(pdf\)](#)**G****Significance:** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Service Water System Flow Balance Testing Procedure

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," having very low safety significance. Specifically, the licensee failed to account for a number of conditions in the service water system flow balance testing procedures. Following discovery, the licensee placed the issue in the corrective action program, evaluated the issue and established procedures to address the issue.

This issue was more than minor because procedural changes were necessary in order to ensure that the safety-related service water (SW) system branch flow rates were adequate for the system to perform its safety functions. The issue was of very low safety significance because the licensee concluded that the system was previously capable of meeting its design requirements. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.10)

Inspection Report# : [2003010\(pdf\)](#)**G****Significance:** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Non-conservative Calculation Used in Design Analysis to Determine Required Service Water Makeup Flow to Component Cooling Water

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to consider worst case minimum pressure differential between service water and component cooling water systems when determining required service water makeup flow to the component cooling water system heat exchangers. Following discovery, the licensee entered the issue into the corrective action program and performed the necessary calculations. The primary cause of this violation was related to the cross-cutting area of human performance because the licensee used test data collected during normal operation rather than taking the worst case design conditions and because there was a lack of rigor in the calculation review process.

This issue was more than minor because the licensee needed to perform a new calculation to demonstrate that the service water flow to the component cooling water system was adequate to perform its design function under accident conditions. The issue was of very low safety significance because the licensee determined the system was operable. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.6)

Inspection Report# : [2003010\(pdf\)](#)**G****Significance:** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Calculation Concerns for Service Water Pump Room Ventilation System

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to verify the adequacy of the design of the service water (SW) pump room ventilation system. Following discovery that the design basis calculations were non-conservative, the licensee entered the issue into the corrective action program, re-performed the calculations, and made appropriate modifications to correct the issues. The primary cause of this violation was related to the cross-cutting area of corrective action because the licensee failed to correct all of the originally identified issues until identified by team.

This issue was more than minor because inadequacies in the calculations resulted in a modification which was required to ensure winter operation was within the allowable temperature range, and because the revised calculation did not include all the summer heat loads which could potentially impair the SW pump room ventilation system to perform its safety function. The issue was of very low safety significance

because the licensee determined that past non-procedurally-required compensatory actions had prevented the equipment from actually being inoperable. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.7)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Flooding Protection for the Service Water System

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to have provisions in place to protect the service water pump room from flooding. Following discovery, the licensee placed the issue in the corrective action program, evaluated the issue and established procedures to address the issue.

This issue was more than minor because the licensee had to make procedural changes in order to ensure that safety-related equipment was capable of performing its safety functions. The issue was of very low safety significance because the deficiency only dealt with a lack of procedural guidance. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.9)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Service Water System Flow Analysis

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to ensure that the service water system could perform its design function under all required conditions. Following discovery, the licensee documented the issue in the corrective action program and performed the necessary calculations.

This issue was more than minor because the licensee did not initially have a calculation which showed that the service water (SW) system could fulfill its design function under design basis conditions and because, when the calculation was prepared, it identified circumstances where the system would not be able to perform its safety function and those circumstances were not evaluated to ensure that the safety function could be met. The issue was of very low safety significance because the licensee concluded that the SW system had never been unable to perform its safety function. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.8)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Diesel Generator Floor Drains Design Deficiency

The team identified a Non-Cited Violation of 10 CFR Part 50.48(a)(1), having very low safety significance. Specifically, the licensee failed to evaluate the adequacy of emergency diesel generator common floor drains following sprinkler system actuation in the fire affected emergency diesel generator room. Following discovery, the licensee entered the issue into the corrective action program and revised the fire response procedures to address the issue.

This issue was more than minor because it affected the mitigating systems cornerstone and the potential existed that a fire in one emergency diesel generator room would potentially impact the redundant emergency diesel generator following sprinkler actuation in the fire affected emergency diesel generator room. The finding was of very low safety significance since this issue was a design deficiency that was confirmed not to result in the loss of function per Generic Letter 91-18, Revision 1. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(5)b.3)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Preconditioning of Auxiliary Feedwater System During Testing

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," having very low safety significance. Specifically, the licensee failed to recognize that flushing the system and blowing down the strainers upstream of the turbine driven pump bearing cooling water strainers prior to routine surveillances constituted preconditioning of the auxiliary feedwater system. Following discovery, the licensee entered the issue into the corrective action program. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee had failed to recognize the consequences of the preconditioning when evaluating an earlier issue.

This issue was more than minor because there was not sufficient information to show that test requirements would have been met had the strainers not been blown down. The issue was of very low safety significance because the licensee considered the system operable. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.15)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inappropriate Application of 10 CFR 50.59

Severity Level IV. The team identified a Non-Cited Violation of 10 CFR 50.59, "Changes, Tests and Experiments." Specifically, the licensee failed to perform an adequate evaluation of a defacto modification to the plant where the underlying change may have required NRC approval prior to implementation. The design change involved degraded or missing physical barriers that could result in one or more of the diesel generators failing to fulfill their design function during a tornado. Following discovery, the licensee entered the issue into the corrective action program and re-performed the analysis. The licensee also repaired those barriers which were physically degraded. The primary cause of this violation was related to the cross-cutting area of human performance as the licensee appeared to selectively choose information from the guidance document in order to achieve the desired outcome.

Because this issue affected the NRC's ability to perform its regulatory function, this finding was evaluated with the traditional enforcement process. The finding was determined to be of very low safety significance based on a significance determination process analysis of a loss of offsite power concurrent with loss of one emergency diesel generator. (Section 40A3(3)b.23)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Comprehensive Moderate Energy Line Break Analysis

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to include environmental effects of a decay heat removal pump seal failure in the moderate energy line break analysis. Following discovery, the licensee entered the issue into the corrective action program and re-performed the analysis.

This issue was more than minor because the licensee had to perform calculations to show that the environmental effects were acceptable. The issue was of very low safety significance because, upon completing the analysis, the licensee determined that the moderate energy line break heat loads were acceptable and that the system could perform its design function. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.24)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Verify Adequacy of HPI Minimum Recirculation Line Design

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to verify that the high pressure injection pumps could operate under design basis minimum flow requirements since initial plant startup. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee missed several opportunities to identify and correct the deficiency.

This issue was more than minor because the licensee had to perform a test to demonstrate that design basis requirements could be met and because the test results determined that the design basis requirements needed to be changed to ensure that the HPI pumps could perform their accident required function. The issue was of very low safety significance because surveillance test results indicated the lowest flow rate for either pump was slightly outside the licensee's new operability band, and therefore, it was deemed likely that the pumps would have performed had they been called upon. The issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.1)

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Supporting Functions for Alternative Shutdown Capability

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix R, Section III.L.2.e, having very low safety significance. Specifically,

the licensee failed to provide the process cooling and lubrication necessary to permit the operation of the equipment used for safe shutdown functions. Following discovery, the licensee entered the issue into the corrective action program and performed a modification to resolve the issue. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee had previously identified this issue as an enhancement and did not recognize that it was a violation of regulatory requirements.

This issue was more than minor because, if left uncorrected, the finding would become a more significant safety concern. By not providing containment air cooling as per the governing alternative shutdown procedure, the probability of the failure of equipment relied upon for safe shutdown was increased. This issue was screened to be of very low safety significance because there was not a total loss of safety function for an assumed control room fire with evacuation. (Section 40A3(5)b.2)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

ECCS Motors Not Qualified for Service Time

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," having very low safety significance. Specifically, the licensee failed to ensure that emergency core cooling system pump motors were environmentally qualified for the stated mission time, as stated in a license amendment request submitted to the NRC. Following discovery, the licensee entered the issue into the corrective action program. The primary cause of this violation was related to the cross-cutting area of human performance as the licensee did not ensure that personnel developing license documents had the necessary information.

This issue was more than minor because, if left uncorrected, this weakness could result in a repeat failure of the corrective action program to adequately identify, evaluate and correct problems. The issue was of very low safety significance because the licensee considered that the motors could be environmentally qualified. Therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.21)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Design Basis Calculations to Support Service Water Valve Single Failure Assumptions

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to provide an analysis which addressed the service water valve single failure assumptions described in the updated safety analysis report. Following discovery, the licensee entered the issue in the corrective action program. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee had not recognized the impact of the issue on the design basis and had not corrected it after it was identified in 2002.

This issue was more than minor because the current calculations were non-conservative and the licensee was not able to show that the service water system could perform its safety function under design basis conditions. The issue was of very low safety significance because the team determined that it was unlikely that the service water system would not function during a design basis accident, as there would need to be a maximum service water temperature or minimum ultimate heat sink level and a specific valve single failure. This issue was a design deficiency that would not likely result in the loss of function; therefore, the issue screened out of Phase 1 of the significance determination process. (Section 40A3(3)b.13)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide HPI Recirculation Line

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to provide for the original plant design to incorporate a safety-related recirculation path for the high pressure injection (HPI) pumps in the high pressure recirculation (HPR) mode of operation. Following discovery, the licensee installed an additional minimum flow recirculation line for each HPI pump.

This issue was more than minor because the original plant design did not incorporate a safety-related recirculation path for the HPI pumps in the HPR mode of operation and this finding affected the mitigating systems cornerstone. The issue was of very low safety significance because the HPR safety-function would not actually have been lost because of existing procedure actions for feed and bleed operations in situations where the steam generators could not be used to remove decay heat. Therefore, the finding screened out as having very low safety significance. Section (40A3(6)b.3)

Inspection Report# : [2003010\(pdf\)](#)

Significance: TBD Nov 12, 2003

Identified By: NRC

Item Type: AV Apparent Violation

INACCURATE/ INCOMPLETE INFO IN RESPONSE TO G/L 98-04(POTENTIAL FOR DEGRADATION OF ECCS&CONTAINMENT SPRAY SYS AFTER LOCA BECAUSE OF CONSTRUCTION&PROTECTIVE COATING DEFICIENCIES&FOREIGN MATL IN CNTMNT

The inspectors identified an apparent violation of 10 CFR 50.9(a) regarding the licensee's failure to provide the NRC complete and accurate information in the licensee's response to NRC Generic Letter 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After a Loss-of-Coolant-Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment." The response, dated November 11, 1998, failed to provide complete and accurate information concerning protective coating deficiencies and foreign material in containment. This finding potentially impacted the NRC's ability to perform its regulatory function. Since this finding cannot be processed through the Significance Determination Process, the apparent violation will be processed using the traditional enforcement process.

Inspection Report# : [2003019\(pdf\)](#)**W****Significance:** Oct 08, 2003

Identified By: NRC

Item Type: VIO Violation

POTENTIAL INABILITY FOR HPI PUMPS TO PERFORM SAFETY RELATED FUNCTION

The failure of the licensee to correctly design the HPI pumps for accident mitigation during the recirculation mode of emergency core cooling.

Inspection Report# : [2004005\(pdf\)](#)**Y****Significance:** Jun 30, 2003

Identified By: NRC

Item Type: VIO Violation

FAILURE TO EFFECTIVELY IMPLEMENT CORRECTIVE ACTIONS FOR DESIGN CONTROL ISSUES RELATED TO DEFICIENT CONTAINMENT COATINGS, UNCONTROLLED FIBROUS MATERIAL AND OTHER DEBRIS

An Apparent Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to promptly identify and correct significant conditions adverse to quality regarding the implementation of corrective actions for design control issues related to deficient containment coatings, uncontrolled fibrous material and other debris. This impacted the ability of the emergency core cooling system sump to perform its function under certain accident scenarios due to clogging of the sump screen by unqualified coatings, fibrous materials, and various other debris. The issue is more than minor because the failure to implement appropriate corrective actions resulted in an actual loss of safety function of the ECCS system. The significance determination evaluation for this finding is documented in this report.

Inspection Report# : [2003015\(pdf\)](#)Inspection Report# : [2004014\(pdf\)](#)

Barrier Integrity

G**Significance:** Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY PERFORM PLANNED MAINTENANCE ACTIVITIES DEVELOPED TO ENSURE THAT PROTECTED BUILDING ROOF DRAINS AND OVERFLOW PIPES IN ROOF PARAPETS WERE NOT DAMAGED OR BLOCKED

A finding of very low safety significance was identified by the inspectors when they identified that the licensee failed to adequately perform planned maintenance activities developed to ensure that protected auxiliary building roof drains and overflow pipes in roof parapets were not damaged or blocked. The auxiliary building is a safety related structure. The inspectors determined that the finding was more than minor because, if left uncorrected, physical design barriers that protect the public from radionuclide releases caused by accidents or events could be challenged during a probable maximum precipitation event. The finding has very low safety significance since, in accordance with the Phase 1 Screening Worksheet of Inspection Manual Chapter 0609, "Significance Determination Process," the finding only represented a potential degradation of the radiological barrier function provided for the spent fuel pool. This issue was not an immediate safety concern, because, once identified by the inspector, the licensee took prompt action to clear the affected parapet drain screens. This issue was determined to be a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V.

Inspection Report# : [2004008\(pdf\)](#)**G****Significance:** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Containment Air Cooler Air Flow Calculation Concerns

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to correctly identify and translate the design basis requirements into the containment air coolers airflow analyses and motor horsepower sizing calculations. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution as the licensee had previously identified issues with the motors, but had not reviewed the design calculation of record. Following discovery, the licensee entered the issue into the corrective action program and performed a new analysis for the motor.

This issue was more than minor because the licensee had to revise the associated calculation to evaluate the existing motor to ensure the containment air coolers (CAC) would be able to perform their design function. The issue was evaluated in a Phase 1 analysis in the significance determination process. Because the issue involved both the mitigating system and barrier integrity cornerstones, a Phase 2 analysis was also performed. A final evaluation was obtained that the issue was of very low safety significance. (Section 40A3(3)b.3)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Repetitive Spacer Grid Strap Damage

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," having very low safety significance. Specifically, the licensee failed to take adequate corrective actions to previous events to prevent damage to a new fuel assembly spacer grid strap during the final reload of the core in February 2003. Following discovery, the licensee entered the issue into the corrective action program. The primary cause of this violation was related to the cross-cutting areas of corrective action and human performance, because, despite earlier events, the licensee failed to adequately address the human performance issues that contributed to this and other fuel spacer grid events.

This issue was more than minor because the licensee failed to prevent recurrence of a significant condition adverse to quality resulting in damage occurring to previously undamaged fuel assembly grid straps. The issue only involved the fuel barrier and it screened out of the Phase 1 significance determination process as having very low safety significance. (Section 40A3(4)b)

Inspection Report# : [2003010\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Evaluation of Reactor Coolant Pump Casing-to-cover Stud Overstressing

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to evaluate a potential overstressing condition on the reactor coolant pump casing-to-cover studs. Following discovery, the licensee entered the issue into the corrective action program. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution as the licensee closed a condition report without recognizing that the apparent condition adverse to quality had not been addressed.

This issue was more than minor because the NRC had to perform calculations to determine if the reactor coolant pump studs were within ASME Code allowables. The issue was of very low safety significance based on the NRC determination that the studs were always functional. Therefore, the issue screened out of the Phase 1 significance determination process as having very low safety significance. (Section 40A3(3) b.19)

Inspection Report# : [2003010\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

REACTOR OPERATION WITH PRESSURE BOUNDARY LEAKAGE

The inspectors identified an apparent violation of Technical Specification Limiting Condition for Operation for Reactor Coolant System Operational Leakage, paragraph 3.4.6.2, for operation of the plant with pressure boundary leakage from through-wall cracks in the reactor coolant system. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-01 dated October 2, 2002.

Inspection Report# : [2003010\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

INADEQUATE BORIC ACID CORROSION CONTROL PROGRAM PROCEDURE

The inspectors identified an apparent violation involving deficiencies in the licensee's Boric Acid Corrosion Control procedure, NG-EN-00324. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-07 dated October 2, 2002.

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

REACTOR VESSEL HEAD BORIC ACID DEPOSITS

The inspectors identified an apparent violation involving failure to take adequate corrective action for a continuing buildup of boric acid deposits on the reactor head. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-02 dated October 2, 2002.

Inspection Report# : [2003010\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

REACTOR OPERATION WITH PRESSURE BOUNDARY LEAKAGE

The inspectors identified an apparent violation of Technical Specification Limiting Condition for Operation for Reactor Coolant System Operational Leakage, paragraph 3.4.6.2, for operation of the plant with pressure boundary leakage from through-wall cracks in the reactor coolant system. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-01 dated October 2, 2002.

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

RADIATION ELEMENT FILTERS

The inspectors identified an apparent violation involving failure to take adequate corrective action for repeated clogging of radiation element filters although a sample of the filter deposits revealed iron oxides, radionuclides, and primary chemistry. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-04 dated October 2, 2002.

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Aug 09, 2002

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROPERLY IMPLEMENT THE BORIC ACID CONTROL AND THE CORRECTIVE ACTION PROGRAMS (EA 03-025)

The performance deficiency was the licensee's failure to properly implement the boric acid control and the corrective action programs, which allowed reactor coolant system pressure boundary leakage to occur undetected for a prolonged period of time resulting in reactor pressure vessel head degradation and control rod drive nozzle circumferential cracking.

The performance deficiency resulted in an increase in the risk of reactor core damage through a loss of coolant accident caused by either a rupture in the exposed cladding in the reactor pressure vessel head cavity or a control rod drive mechanism nozzle ejection due to a circumferential crack. The result of NRC's significance analysis of the as-found reactor pressure vessel head cavity and potential for larger cavity growth indicate that the significance is in the Red range (change in core damage frequency > 10-4 per reactor-year). The result of NRC's

significance analysis of the as-found circumferential crack and potential for crack growth indicate that the significance is in the Yellow to Red range (change in core damage frequency in the range of low 10⁻⁵ to low 10⁻⁴ per reactor-year). Consequently, the NRC has determined that the performance deficiency resulting in the reactor pressure vessel head degradation and control rod drive mechanism nozzle cracking has high safety significance in the Red range.

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

CONTAINMENT AIR COOLER BORIC ACID DEPOSITS

The inspectors identified an apparent violation involving failure to take adequate corrective action for recurrent accumulations of boric acid on containment air cooler (CAC) fins. These accumulations resulted in reduced heat removal capability and reduced air flow through the cooler which was indicated by decreasing plenum pressure. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-03 dated October 2, 2002.

Inspection Report# : [2003016\(pdf\)](#)

Inspection Report# : [2003010\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

RADIATION ELEMENT FILTERS

The inspectors identified an apparent violation involving failure to take adequate corrective action for repeated clogging of radiation element filters although a sample of the filter deposits revealed iron oxides, radionuclides, and primary chemistry. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-04 dated October 2, 2002.

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

REACTOR VESSEL HEAD BORIC ACID DEPOSITS

The inspectors identified an apparent violation involving failure to take adequate corrective action for a continuing buildup of boric acid deposits on the reactor head. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-02 dated October 2, 2002.

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

FAILURE TO FOLLOW BORIC ACID CORROSION CONTROL PROGRAM PROCEDURE

The inspectors identified an apparent violation involving multiple examples of failure to follow the boric acid corrosion control procedure. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-08 dated October 2, 2002.

Inspection Report# : [2003010\(pdf\)](#)

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

COMPLETENESS AND ACCURACY OF INFORMATION

The inspectors identified an apparent violation of 10 CFR 50.9 involving multiple examples of information provided to the Commission or required by the Commission's regulations to be maintained by the licensee that were not complete and accurate. Completeness and accuracy in the documents associated with this issue would have provided an earlier alert to licensee staff and the USNRC about the problems with control rod drive mechanism nozzle leakage or may have caused the USNRC to establish a different regulatory position concerning the urgency of inspections for the reactor pressure vessel head. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-010 dated October 2, 2002.

Inspection Report# : [2003010\(pdf\)](#)

Inspection Report# : [2003016\(pdf\)](#)

Significance: TBD Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

INADEQUATE BORIC ACID CORROSION CONTROL PROGRAM PROCEDURE

The inspectors identified an apparent violation involving deficiencies in the licensee's Boric Acid Corrosion Control procedure, NG-EN-00324. This finding is more than minor because the corrosion of the reactor head and the resulting cavity represented a significant loss of the design basis barrier integrity. The activities that resulted in this apparent violation are related to activities that resulted in the Red finding for the performance deficiency associated with the licensee's failure to properly implement the boric acid control and the corrective action programs (Inspection Report 50-346/2003-16). The significance for this apparent violation will be based on several factors including the results of the ongoing investigation by the NRC's Office of Investigations. The number and nature of the apparent violations in Inspection Report 50-346/2003-16 could change based on further NRC review. This apparent violation was originally discussed as Unresolved Item 50-346/2002-08-07 dated October 2, 2002.

Inspection Report# : [2003010\(pdf\)](#)

Emergency Preparedness

Significance: TBD Nov 29, 2004

Identified By: NRC

Item Type: FIN Finding

Preliminary White Finding - Ottawa County Officials Lost Capability to Activate All EPZ Sirens for About 10 Days & Had Degraded Capability for About 30 Days

The Ottawa County Sheriff's Dispatch Center staff lost the capability to activate all 54 EPZ sirens from April 27 to May 7, 2004 (10 days) and their capability to activate all EPZ sirens was degraded from April 6 to May 7, 2004. These concerns were due to the combined effects of system design feature & a maintenance program flaw. The preliminary finding was associated with the "facilities & equipment" attribute of the EP Cornerstone and was considered to be a degradation of the risk-significant emergency planning standard 10 CFR 50.47(b)(5).

Inspection Report# : [2004018\(pdf\)](#)

Significance: TBD Nov 29, 2004

Identified By: NRC

Item Type: AV Apparent Violation

Submittal of Discrepant ANS PI Data for Second & Third Quarters of 2004

Inspectors identified that the ANS PI data submitted by the licensee for the second and third calendar quarters of 2004 were discrepant. The licensee incorrectly interpreted Revision 2 of the NEI 99-02 that provided criteria on what ANS tests could be counted as PI opportunities. The licensee incorrectly counted its "silent" ANS tests beginning on June 1, 2004 through September 30, 2004. As a result of counting "silent" tests, the reported ANS PI data remained in the GREEN band throughout the 12 month periods ending on June 30 and September 30, 2004. In contrast, NRC concluded that the ANS PI should have been in the WHITE band at the ends of both 12 month periods.

Inspection Report# : [2004018\(pdf\)](#)

Significance: SL-IV Feb 14, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

CHANGE TO EMERGENCY PLAN WITHOUT PRIOR NRC APPROVAL

The inspectors identified that the licensee had changed its standard emergency action level (EAL) scheme by revising one EAL's criteria for an Unusual Event declaration due to the initiation of the Steam and Feedwater Rupture Control System as a result of a rapid depressurization of the secondary side. The inspectors determined that this EAL change decreased the effectiveness of the emergency plan, and that the licensee did not obtain prior NRC approval for this change, contrary to the requirements of 10 CFR 50.54(q). Because the issue affected the NRC's ability to perform its regulatory function, it was evaluated with the traditional enforcement process as specified in Section IV.A.3 of the

Enforcement Policy. According to Supplement VIII of the Enforcement Policy, this finding was determined to be a Severity Level IV because it involved a failure to meet a requirement not directly related to assessment and notification. Further, this problem was isolated to one EAL and was not indicative of a functional problem with the EAL scheme. Additionally, because the licensee entered this issue into its corrective action program and completed adequate corrective actions, this finding is being treated as a Severity Level IV Non-Cited Violation of 10 CFR 50.54(q).

Inspection Report# : [2004002\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Significance:  Dec 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW CORRECTIVE ACTION PROCEDURE & IMPLEMENT REMEDIATION REQUIREMENTS FOLLOWING REJECTION OF TWO APPARENT CAUSE EVALUATIONS

The inspectors identified a finding of very low significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings, for failure to follow the corrective action procedure and implement remediation requirements following rejection of two apparent cause evaluations. This inspector-identified issue was greater than minor because if left uncorrected the issue would become a more significant safety concern involving the implementation of the corrective action program for significant conditions adverse to quality and conditions adverse to quality. The inspectors determined that the finding was not suitable for SDP evaluation because the failure to remediate the evaluators of the condition reports did not directly result in degraded equipment. Therefore, this finding was reviewed by Regional Management, in accordance with IMC 0612 Section 05.04c, and determined to be of very low safety significance. The finding was not greater than very low safety significance because no safety-related equipment was rendered inoperable.

Inspection Report# : [2004017\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET PROCEDURE IMPLEMENTATION REQUIREMENTS OF 10 CFR 50, APPENDIX B, CRITERION V, ASSOCIATED WITH RECURRING OPERATIONS PERFORMANCE ISSUES

The inspectors identified a finding having very low safety significance regarding the licensee's failure to identify proper corrective actions to preclude repetition of conditions adverse to quality as required by the Corrective Action Program. Specifically, corrective actions implemented to address repetitive Technical Specification violations and licensed operator performance errors, were not effective in precluding recurrence of similar events. The finding was more than minor because, if left uncorrected, the issue would become a more significant safety concern. Because this finding did not directly affect any of the cornerstone attributes, it was reviewed by Regional Management, in accordance with IMC 0612 Section 05.04c. The finding was determined to be of very low safety significance because no safety systems were degraded nor was any safety equipment rendered inoperable directly due to this issue. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" which requires that activities affecting quality shall be accomplished in accordance with prescribed instructions and procedures.

Inspection Report# : [2004014\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Increased Dose Consequences Due to Degraded Thermal Performance Operation of Degraded CAC

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to assess an increase in the offsite dose to the public following a postulated design basis accident due to increased containment pressure. Following discovery, the licensee entered the issue into the corrective action program and performed the necessary analysis. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution, because, although the issue had been previously identified, the licensee had failed to identify that a revised dose assessment was needed until prompted by the NRC.

This issue was more than minor because the licensee had to perform calculations to show that the increased time at higher containment pressures did not result in doses being above regulatory guide allowables. The mitigating system cornerstone was not affected since the finding pertained to offsite dose calculations rather than containment air coolers performance. Based on this review, the team determined that the issue was not covered by any of the revised oversight cornerstones and was, therefore, not suitable for SDP analysis. This determination was due to the issue regarded containment pressure and related to offsite dose consequences. Regional management determined that this regulatory issue was of very low safety significance because projected offsite doses remained less than Regulatory Guide 1.4 allowances. (Section 40A3(3)b.2) Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Accumulator Sizing Calculation Errors (Section

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to implement effective design control measures to check and verify the adequacy of the design basis calculation performed for sizing the new accumulators used to hold the service water containment isolation valves closed on a loss of instrument air. Following discovery, the licensee entered the issue into the corrective action program, revised calculations, and changed the accumulator medium from compressed air to nitrogen.

This issue was more than minor because the licensee had to change the modification design from having accumulators containing pressurized air to accumulators containing pressurized nitrogen. This finding was evaluated in Phase 1 of the significance determination process. The mitigating system cornerstone was not affected since the finding pertained to the sizing of accumulators associated with containment isolation valves. Therefore, the issue was not covered by any of the revised oversight cornerstones and was, therefore, not suitable for SDP analysis. This determination was based on the issue affecting containment isolation valves which provide a barrier to breach of containment and potential offsite dose consequences. Regional management determined that this regulatory issue was of very low safety significance. (Section 40A3(3)b.4) Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Borated Water Storage Tank Calculation Issues

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, the licensee failed to translate the postulated radiological consequences of leakage from engineered safety feature components outside containment into calculations of record for post-accident control room dose and offsite boundary dose. Following discovery, the licensee entered the issue into the corrective action program and provided a bounding evaluation which demonstrated that the increase in dose was within acceptable limits.

This issue was more than minor because the licensee had to perform calculations to show that the increased doses remained within the post accident dose level requirements. The issue could not be assessed through the significance determination process, because none of the cornerstone objectives addressed design issues dealing with postulated doses following a design basis accident. After determination that the increase in dose did not involve an issue requiring a license amendment, Regional Management concluded the regulatory issue was of very low safety significance. (Section 40A3(3)b.18) Inspection Report# : [2003010\(pdf\)](#)

Last modified : March 09, 2005