

## Davis-Besse

### 2Q/2004 Plant Inspection Findings

## Initiating Events

**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\(pdf\)](#)

**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\(pdf\)](#)

**Significance:**  Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **FAILURE TO FOLLOW DB-OP-00000, "CONDUCT OF OPERATIONS," REGARDING PRESENT PLANT CONDITIONS AND UNDERSTANDING OF THE OPERATING OF THE PLANT EQUIPMENT**

A finding of very low safety significance was identified through a self-revealing event related to the operators failing to have the proper knowledge of plant equipment lineups in accordance with the Conduct of Operations procedure for the operation of plant equipment in their area. During the performance of the evolution to draw a bubble in the pressurizer, the heaters failed to energize as expected, because the operators were unaware that some of the pressurizer heaters were unavailable for operation due to interlocks not being met and power not being available. The primary cause of this finding was related to the cross-cutting area of Human Performance in that operators were unaware of the status of plant equipment. The finding was more than minor since the finding affected the initiating event cornerstone attributes of configuration control for equipment lineups. The on-shift operators were not aware of the plant's equipment lineup for operation of the pressurizer heaters. The finding was determined to be of very low safety significance since additional pressurizer heaters were available and no actual plant impact occurred. An NCV of Technical Specification 6.8.1.a for procedural non-adherence was identified.

Inspection Report# : [2003011\(pdf\)](#)

**Significance:**  Nov 15, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

## **CONTROL ROOM STAFF DID NOT ADEQUATELY MONITOR AND CONTROL REACTOR COOLANT SYSTEM PRESSURE DURING REACTOR COOLANT SYSTEM COOLDOWN WHICH RESULTED IN A REACTOR TRIP ON SHUTDOWN BYPASS HIGH PRESSURE**

A self-revealing finding of very low safety significance was identified when control room staff did not adequately monitor and control reactor coolant system pressure during reactor coolant system cooldown which resulted in a reactor trip on shutdown bypass high pressure. The inspectors determined that this finding was of more than minor safety significance because it (1) involved the human performance attribute of the Initiating Events Cornerstone; and (2) affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was of very low safety significance because at the time of the event, the reactor was subcritical with only group one safety control rods withdrawn. This was a non-cited violation of a procedure required by Technical Specification 6.8.1.a.

Inspection Report# : [2003022\(pdf\)](#)

## Mitigating Systems

**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 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\(pdf\)](#)

**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 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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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

#### **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\(pdf\)](#)

**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: 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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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\(pdf\)](#)

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**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

**Inappropriate Application of 10 CFR 50.59**

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\(pdf\)](#)**G****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\(pdf\)](#)**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

**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\(pdf\)](#)



G

**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:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**CONTROL ROOM STAFF DID NOT ADEQUATELY MONITOR AND CONTROL SYSTEM STATUS WHICH RESULTED IN AN UNANTICIPATED ENTRY INTO A TECHNICAL SPECIFICATION ACTION STATEMENT**

A finding of very low safety significance was self-revealed when, in preparation for electrical testing of the motor on valve CC 1328, Component Cooling Water (CCW) to CRD Booster Pump 1 Suction, the licensee hung a clearance that de-energized the valve and left the valve in the open position without the knowledge of the control room personnel for approximately 6 hours. This rendered the valve incapable of automatically closing in the event of an SFAS Level 4 close signal which caused the CCW Train 1 to be inoperable. Failure to maintain the proper status of Technical Specification equipment is a violation of plant procedures required by Technical Specification 6.8.1., "Procedures and Programs." The finding was more than minor because it involved the human performance attribute 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.

Inspection Report# : [2003025\(pdf\)](#)

G

**Significance:** Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO CONTROL TEST EQUIPMENT IN ACCORDANCE WITH LICENSEE PROCEDURE**

The team identified a finding of very low safety significance. Specifically, a Non-Cited Violation of Technical Specification 6.8.1.a was identified for multiple examples of personnel failing to document the usage of Measuring and Test Equipment (M&TE) from safety-related surveillance testing. The primary cause of this finding was associated with the cross-cutting area of Human Performance in that M&TE users had failed to properly account for M&TE usage. 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. If M&TE failed a post-calibration check, traceability lapses in the licensee's M&TE database would make it difficult to identify all instances where the out-of-tolerance M&TE was used since last calibrated in order to evaluate the impact of the condition on components and systems. The finding was determined to be of very low safety significance because no actual out-of-tolerance conditions occurred involving the affected M&TE.

Inspection Report# : [2003011\(pdf\)](#)

G

**Significance:** Nov 15, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**EDG RELAYS IN THE START AND RUN CIRCUITS WERE NOT RATED FOR THE CURRENT APPLICATION**

A finding of very low safety significance was identified when the inspectors identified that relays in the EDG "start and run" circuits were not rated for the application that they were being used. The inspectors determined that this finding was of more than minor safety significance because it affected the mitigating systems cornerstone objective. The finding was of very low safety significance since the issue was a design deficiency that was confirmed not to result in the loss of function in accordance with GL 91-18 (Revision 1). This was a non-cited violation of 10 CFR 50, Appendix B, Criterion III.

Inspection Report# : [2003022\(pdf\)](#)**Significance:** SL-IV Nov 12, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**INACCURATE OR INCOMPLETE INFORMATION IN RESPONSE TO G/L 88-14(INSTRUMENT AIR SUPPLY SYSTEM PROBLEMS AFFECTING SAFETY-RELATED EQUIPMENT**

The inspectors identified a Non-Cited Violation of 10 CFR 50.9(a) regarding the licensee's February 22, 1989, reply to NRC Generic Letter 88-14, "Instrument Air Supply System Problems Affecting Safety-related Equipment." Specifically, the licensee's response stated that the dewpoint of Davis-

Besse's Instrument Air System is checked three times weekly. However, the inspectors determined at the time the licensee's response to this Generic Letter was being prepared and issued, the dewpoint was checked significantly less than three times weekly. This was identified in the licensee's corrective action program as CR 03-08959. This finding is of very low safety significance because of the age of the issue and because substantial upgrades have been performed on the Instrument Air System. This finding potentially impacted the NRC's ability to perform its regulatory function. This type of finding cannot be processed through the Significance Determination Process. Consequently, the violation was processed using the traditional enforcement process.

Inspection Report# : [2003019\(pdf\)](#)

**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\(pdf\)](#)

**G**  
**Significance:** Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**IMPROPER IMPLEMENTATION OF THE IMMEDIATE ACTION MAINTENANCE PROCESS**

An NRC identified finding of very low safety significance was identified when the inspectors discovered that Operations management inappropriately authorized the performance of the IAM process to perform adjustments on 1 turbine driven auxiliary feedwater pump governor. The inspectors determined that this finding was of more than minor safety significance because if left uncorrected the finding would become a more significant safety concern. As stated in a number of the licensee's procedures, the IAM process should only be implemented to affect maintenance required to mitigate failures that potentially threaten public or personnel health or reactor safety. The expedited nature of the IAM process was derived from the performance of the normal work reviews and documentation after the maintenance was performed. As a result, the potential for errors, associated with the work performed under the IAM process and the adequacy of the retest to validate the effectiveness of the maintenance, was increased. This finding was of very low safety significance because the actual impact of the inappropriate implementation of the IAM did not adversely impact the adjustment of the 1 turbine driven feedwater pump governor and an adequate retest was performed to evaluate the adequacy of the maintenance. This was a Non-Cited Violation of Technical Specification 6.8.1.a.

Inspection Report# : [2003018\(pdf\)](#)

**G**  
**Significance:** Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**TECHNICAL SPECIFICATION 3.5.2 - INADEQUATE FINAL CONTAINMENT INSPECTION**

An NRC identified finding of very low safety significance was identified when the inspectors discovered a significant amount of loose material in the containment building, subsequent to a final closeout inspection performed by senior licensee management. The inspectors determined that this finding was of more than minor safety significance because if left uncorrected, it would have become a more significant safety concern. The finding was of very low safety significance because the licensee corrected the identified deficiencies prior to transitioning to an operational mode that required the containment emergency sumps to be operable. This issue was a Non-Cited Violation of Technical Specification 3.5.2, which required the removal of loose materials that could challenge the containment emergency sump prior to establishing containment integrity.

Inspection Report# : [2003018\(pdf\)](#)

**G**  
**Significance:** Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**PROCEDURE FOR TESTING THE RESPONSE TIME OF THE AUXILIARY FEEDWATER PUMP 1 TURBINE DID NOT ADEQUATELY DESCRIBE THE ACCEPTANCE CRITERIA FOR SUCCESSFUL COMPLETION OF THE TEST**

A self-revealing finding of very low safety significance was identified when it was determined that the procedure for testing the response time of the

auxiliary feedwater pump 1 turbine did not adequately describe the acceptance criteria for successful completion of the test. The inspectors determined that this finding was of more than minor safety significance because if it was left uncorrected, it would become a more significant safety concern. The finding was of very low safety significance because, even though the procedure inadequacy led the operators to incorrectly classify the auxiliary feedwater pump 1 as inoperable, the licensee promptly implemented the appropriate acceptance criteria and properly reclassified the pump's operability status. This was a Non-Cited Violation of a procedure required by Technical Specification 6.8.1.a.

Inspection Report# : [2003018\(pdf\)](#)

**Significance:**  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**CONTROL ROOM STAFF DID NOT ADEQUATELY MONITOR AND CONTROL REACTOR COOLANT SYSTEM PRESSURE WHICH RESULTED IN CF1B OPENING UNEXPECTEDLY**

A self-revealing finding of very low safety significance was identified when control room staff did not adequately monitor and control reactor coolant system pressure during reactor coolant system heatup which resulted in valve CF1B from the core flood tank emergency system opening unexpectedly. The inspectors determined that this finding was of more than minor safety significance because it: (1) involved the configuration control attribute of the Mitigating Systems Cornerstone; and (2) affected the cornerstone objective to ensure the availability, reliability, and capability of the systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance because the operators terminated the event in a timely manner and the resulting pressure transient did not significantly challenge plant equipment. This was a Non-Cited Violation of a procedure required by Technical Specification 6.8.1.a.

Inspection Report# : [2003018\(pdf\)](#)

**Significance:**  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO ADDRESS ALL SIGNIFICANT CASUAL FACTORS RELATED TO THE CONFIGURATION CONTROL ASPECTS ASSOCIATED WITH THE INSTALLATION OF UNQUALIFIED RELAYS SFAS**

An NRC identified finding of very low safety significance was identified for the failure of the licensee to address all significant causal factors related to the configuration control aspects associated with the installation of unqualified relays in the SFAS system. The inspectors determined that this finding was of more than minor safety significance because it: (1) involved the configuration control attribute of the Mitigating Systems Cornerstone; and (2) affected the cornerstone objective to ensure the availability, reliability, and capability of the systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance because none of the five relays were installed in redundant channels; therefore, the redundant SFAS actuated component remained capable of performing its designated safety function. This was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI.

Inspection Report# : [2003018\(pdf\)](#)

**Significance:**  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**NO PROCEDURAL GUIDANCE FOR PERFORMING IMMEDIATE ACTION MAINTENANCE**

An NRC identified finding of very low safety significance was identified when the inspectors discovered that procedural guidance which governed the performance of the Immediate Action Maintenance (IAM) process did not exist. The inspectors determined that this finding was of more than minor safety significance because if left uncorrected the finding would become a more significant safety concern. This finding was of very low safety significance because, even in the absence of procedural guidance on how to implement the IAM process, the correct technical procedures were utilized to adjust the 1 turbine driven feedwater pump governor and the appropriate retests were performed to evaluate the adequacy of the maintenance. This was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V.

Inspection Report# : [2003018\(pdf\)](#)

**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\(pdf\)](#)

## Barrier Integrity

**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\(pdf\)](#)

**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\(pdf\)](#)

**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:**  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:** Dec 15, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO IDENTIFY ACTIVE RCS STEAM LEAK**

The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B. During leak testing of the reactor coolant system, licensee staff failed to identify an active steam leak through a seal weld on a pressurizer level transmitter source valve. This finding was considered more than minor because steam leaking from the seal weld, past the valve body to bonnet threads, could degrade the Code pressure boundary (i.e., the threaded connection) during plant operation. Had the inspectors not identified this issue, it could have resulted in RCS pressure boundary degradation. The inspectors concluded that this finding did not result in an actual degradation of the reactor coolant system barrier as the steam leak lasted only a few days during the leak test. Therefore, the inspectors determined that this issue was a finding of very low safety significance.

Inspection Report# : [2003023\(pdf\)](#)

**G**

**Significance:** Aug 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**TS 3.6.4.1, Containment Hydrogen Analyzers**

A self-revealing violation of Technical Specification 3.6.4.1, "Hydrogen Analyzers," was identified when it was discovered that the plant had operated in Mode 1 and Mode 2 in excess of the allowed outage time, with two hydrogen analyzers inoperable. This impacted the operator's capability to monitor containment hydrogen concentration, post accident. The finding is greater than minor because it: (1) involved the configuration control attribute of the Barrier Integrity Cornerstone; and (2) affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. This finding is unrelated to structures, systems and components (SSCs) that are needed to prevent accidents from leading to core damage. The inspectors used Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Appendix H, Containment SDP. Based on this evaluation, the finding has very low safety significance.

Inspection Report# : [2003017\(pdf\)](#)

**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\(pdf\)](#)

**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\(pdf\)](#)

**R**

**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<sup>-4</sup> 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<sup>-5</sup> to low 10<sup>-4</sup> 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

#### **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\(pdf\)](#)

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

#### **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# : [2003010\(pdf\)](#)

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\(pdf\)](#)

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\(pdf\)](#)

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

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## **Emergency Preparedness**

**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\(pdf\)](#)

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## **Occupational Radiation Safety**

## Public Radiation Safety

### Physical Protection

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

### Miscellaneous

**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

#### 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

#### 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\(pdf\)](#)

**Significance:**  Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO TAKE EFFECTIVE CORRECTIVE ACTIONS TO PRECLUDE RECURRENCE OF OPERATOR PERFORMANCE DESCRIBED IN COLLECTIVE SIGNIFICANCE REVIEW FOR OPERATING EVENTS**

The team identified a finding of very low safety significance associated with an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to effectively implement corrective actions following the several operational events from the September 2003 Mode 3 normal operating pressure and temperature test. These events and the corrective actions were described in the Collective Significance Review for Operating Events and Errors Identified in Condition Report 03-08418, in conjunction with the Operations Improvement Implementation Action Plan. The corrective actions were ineffective as evidenced by continued operational performance issues in the areas of pre-job briefs and failure to implement standard and expectations. Specific examples include inadequate AFW full test brief and the lack of operators' awareness demonstrated during the evolution to draw a pressurizer bubble. This finding was related to the cross-cutting area of Problem Identification and Resolution. The finding was more than minor because the recurring operational performance issues, if left uncorrected, would become a more significant safety concern. This finding was determined to be of very low safety significance by management review because no safety systems were degraded nor was any safety equipment rendered inoperable. This issue was an NCV of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action."

Inspection Report# : [2003011\(pdf\)](#)

**Significance:**  Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROMPTLY IDENTIFY AND CORRECT ISSUES IDENTIFIED IN DAVIS-BESSE'S OPERATIONAL READINESS ASSESSMENT REPORT NO. 2003-0021**

The team identified a finding of very low safety significance associated with an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to assure that actions were promptly taken to correct deficiencies for conditions adverse to quality identified in Davis-Besse Operational Readiness Assessment Report No. 2003-0021. The report contained 20 recommended actions; several of which were not adequately captured in the corrective action program. This finding was related to the cross-cutting area of Problem Identification and Resolution. The finding was more than minor because the licensee's failure to enter these issues into their corrective action program if left uncorrected, would become a more significant safety concern. This finding was determined to be of very low safety significance by management review because no safety systems were degraded nor was any safety equipment rendered inoperable. This issue was an NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action."

Inspection Report# : [2003011\(pdf\)](#)

**Significance:** SL-IV Dec 31, 2001

Identified By: NRC

Item Type: VIO Violation

**SL IV VIOLATION OF 10 CFR 50.7**

The NRC concluded that a security officer was discriminated against for engaging in protected activities within the scope of 10 CFR 50.7, "Employee Protection." A security supervisor subjected the officer to a fact-finding meeting on January 12, 2001, and placed a copy of the documentation from the meeting in the security officer's personnel file. The NRC determined that these actions were taken, at least in part, as a result of the security officer engaging in protected activity when he identified and documented in the condition report the potential security department training deficiency. The NRC issued a Notice of Violation by letter dated December 20, 2001, requiring a response by the licensee (VIO 50-346/01-15-01).

Inspection Report# : [2001015\(pdf\)](#)

Last modified : September 08, 2004