

## Davis-Besse 4Q/2003 Plant Inspection Findings

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### Initiating Events

**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\(pdf\)](#)

**Significance:**  Jun 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **FAILURE TO PROPERLY IMPLEMENT SYSTEM PROCEDURES DURING THE FILLING OF THE CIRCULATING WATER SYSTEM**

A self-revealing Non-Cited Violation of Technical Specification 6.8.1.a was identified for failing to properly implement system procedures during the filling of the circulating water system. Since three drain valves were improperly left open during the fill, approximately three inches of water flooded the 565' elevation of the turbine building. The finding is greater than minor because it: (1) involves the configuration control attribute of the Initiating Event Cornerstone; and (2) affects the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding is of very low safety significance because the event was terminated prior to actual loss of a equipment important to plant safety.

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

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**Significance:** Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **FAILURE TO IMPLEMENT PROCEDURES WHICH CONTROLLED THE FABRICATION AND INSTALLATION OF TEMPORARY MODIFICATIONS IN SAFETY RELATED SYSTEMS**

The inspectors identified a non-cited violation of Technical Specification 6.8.1.a, which resulted in the failure of the CAC 2 service water PVC jumper. This failure was a direct result of the licensee not properly controlling the installation of the Poly-vinyl Chloride (PVC) jumper in accordance with the requirements of their "Control of Temporary Modifications" procedure. The inspectors determined that the finding is more than minor because it: (1) involves the configuration control attribute of the Initiating Events cornerstone; and (2) affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Since the performance issue did not directly affect Core Heat Removal, Inventory Control, Power Availability, Containment Control, or Reactivity Control, the issue was considered to be of very low safety significance.

Inspection Report# : [2003004\(pdf\)](#)

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## **Mitigating Systems**

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**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\(pdf\)](#)



**Significance:** G 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:** G 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

**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\(pdf\)](#)

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

**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\(pdf\)](#)

**Significance:**  Jun 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **FAILURE TO PROVIDE ADEQUATE PROCEDURAL GUIDANCE FOR TIGHTENING FASTENERS INTERNAL TO THE HIGH PRESSURE INJECTION PUMP**

A self-revealing Non-Cited Violation of Technical Specification 6.8.1.a was identified for failing to provide adequate procedural guidance for tightening fasteners internal to the high pressure injection pump. As a direct result, five socket head cap screws, located near the discharge of the pump, failed during pump testing. The finding is greater than minor because it: (1) involves the procedure quality attribute of the Mitigating System cornerstone; and (2) affects the cornerstone objective of ensuring the availability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because no actual loss of a safety function occurred due to the failure of the cap screws.

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

**Significance:**  May 17, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**INADVERTENT OPERATION OF DH7A AND DH7B CAUSED BY INADEQUATE SFAS COMPONENT TESTING PROCEDURE**

A Green self-revealing non-cited violation of Technical Specification 6.8.1.a was identified for inadequate component restoration instructions contained in DB-SC-03122, "SFAS Component Testing Procedure," Revision 01. This resulted in the inadvertent operation, on separate occasions, of Borated Water Storage Tank Outlet Valves DH7A and DH7B during Safety Feature Actuation System (SFAS) individual component testing restoration activities for Core Flooding Tank to Sampling System Valve CF1545 and Nitrogen System to Containment Isolation Valve NN236. The finding is more than minor because it could be viewed as a precursor to a more significant event. In other circumstances, the inadvertent opening of the valve could result in a condition adverse to safety, including flooding of the ECCS rooms. In this case, due to the plant configuration, there was no adverse impact on the plant. The finding is of very low safety significance because no actual loss of a safety function occurred.

Inspection Report# : [2003013\(pdf\)](#)

**Significance:**  May 17, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROPERLY IMPLEMENT WORK INSTRUCTIONS DURING THE REINSTALLATION OF ELECTRICAL CONDUIT AND THE ELECTRICAL TERMINATION OF OPERATING POWER AND INDICATION POWER TO RC4608A AND RC4608B (LOOP 1)**

A self-revealing non-cited violation of Technical Specification 6.8.1.a was identified for the failure to properly implement work instructions during the reinstallation of electrical conduit and the electrical termination of operating power and indication power to Loop 1 Reactor Coolant System High Point Vent Valves RC4608A and RC4608B. This resulted in the electrical power for each valve being swapped. The finding is more than minor because it: (1) involved the configuration control attribute of the Mitigating System cornerstone; and (2) affected the cornerstone objective of ensuring the availability, and capability of systems that respond to initiating events to prevent undesirable consequences.

Inspection Report# : [2003013\(pdf\)](#)

**Significance:**  May 17, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATELY IMPLEMENTATION PROCEDURE NS-MD-01023 (MATERIAL ENGINEERING EVALUATION) DURING THE PROCUREMENT EFFORTS FOR REPLACEMENT SFAS RELAYS**

An NRC identified non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified for the failure to properly implement procedures required for performing equivalency evaluations for components being replaced in safety related equipment. This resulted in the installation of relays into the Safety Features Actuation System (SFAS) cabinets that were not electrically rated for their specific application. The inspectors concluded that the finding is more than minor because, if left uncorrected the finding would become a more significant safety concern. By procuring and installing relays into the SFAS cabinets that were not electrically rated for that particular application, if left uncorrected, there was no reasonable assurance that the SFAS would have actuated required safety-related components when called upon. This finding is of very low safety significance because no actual loss of a safety function occurred. Even though SFAS was placed in service (shutdown bypass switches taken out of bypass), the impact to plant risk was negligible due to the fact that, at no time when the incorrect relays were installed, was the SFAS required to be operable to support the operating Mode of the plant.

Inspection Report# : [2003013\(pdf\)](#)

**Significance:**  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **FAILURE TO ADEQUATELY VERIFY THE ACCURACY OF ECCS DESIGN CALCULATIONS**

The inspector identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately verify or check the accuracy of certain design calculations. Specifically, one calculation used an incorrect water volume for the core flood tank when determining minimum containment water level and another calculation failed to incorporate head loss terms for several components when determining the available net positive suction head for the low pressure injection and containment spray pumps. The inspector concluded that, if left uncorrected, this finding could have become a more significant safety concern. Specifically, lack of effective measures for verifying and checking the accuracy of design for safety-related structures, systems, or components (SSCs) could result in the failure to identify conditions that could render SSCs incapable of performing their safety function. However, the inspector concluded that this issue did not: (1) result in an increase in reactor coolant system (RCS) temperature or a loss of reactor coolant system inventory; (2) increase the likelihood of a loss of RCS inventory; (3) degrade the ability to terminate a leak path or add RCS inventory when needed; or (4) degrade the licensee's ability to recover decay heat removal once it was lost. Based on the screening criteria of IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," the inspector determined that this issue did not require a quantitative shutdown risk assessment. Therefore this issue was determined to be of very low risk significance .

Inspection Report# : [2003006\(pdf\)](#)

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## **Barrier Integrity**

**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\(pdf\)](#)

**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:** G Jun 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PERFORM WORK IN ACCORDANCE WITH APPROVED MAINTENANCE PROCEDURES DURING THE INSTALLATION OF REACTOR COOLANT PUMP MECHANICAL SEAL RTDs**

A self-revealing Non-Cited Violation of Technical Specification 6.8.1.a was identified for failing to perform work in accordance with approved maintenance procedures during the installation of reactor coolant pump mechanical seal RTDs. As a direct result, the RTD tubing nuts were not installed to a sufficient tightness to provide a leak tight joint at normal operating pressure. The finding is greater than minor because if left uncorrected, it would become a more significant safety concern. Investigation by the licensee revealed that the RTD tubing nuts were not installed to a sufficient tightness to provide a leak tight joint at normal operating pressure. The finding is of very low safety significance because the current operational Mode does not challenge the integrity of the RTD mechanical joints.

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

**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

**SERVICE STRUCTURE MODIFICATION DELAY**

The inspectors identified an apparent violation involving the failure to follow the corrective action procedure and take timely corrective action for a condition adverse to quality, in that the licensee failed to implement a modification to permit complete inspection and cleaning of the reactor vessel head and CRDM nozzles. 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 50-346/2002-08-05 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# : [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:**  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

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

**Significance: TBD** Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

#### **FAILURE TO FOLLOW CORRECTIVE ACTION PROGRAM PROCEDURE**

The inspectors identified an apparent violation involving two examples of failure to follow the station's corrective action program 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 50-346/2002-08-09 dated October 2, 2002.

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

**Significance: TBD** Aug 09, 2002

Identified By: NRC

Item Type: AV Apparent Violation

### **REACTOR COOLANT SYSTEM UNIDENTIFIED LEAKAGE TREND**

The inspectors identified a finding involving failure to complete an identified corrective action for an adverse trend in RCS unidentified leakage. 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 50-346/2002-08-06 dated October 2, 2002.

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

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## Occupational Radiation Safety

**Significance:**  Apr 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Locked High Radiation Area access controls.**

Failure to properly control access (use flashing lights as a warning device) to certain locked high radiation areas (LHRAs) that are created adjacent to the fuel transfer chute during movement of irradiated fuel, as required by Technical Specifications.

Inspection Report# : [2003008\(pdf\)](#)

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## Public Radiation Safety

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## Physical Protection

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## Miscellaneous

**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:**  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:** 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 : March 02, 2004