

# Davis-Besse

## 4Q/2008 Plant Inspection Findings

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### Initiating Events

**Significance:**  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **FAILURE TO FOLLOW WELDING PROCEDURES**

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of two contractor welders to adhere to welding procedures for the weld overlay (WOL) repairs on two pressurizer safety relief valve (SRV) nozzles. Specifically, both welders failed to use calculated relative travel speed settings as required by procedure in order to ensure that correct heat input values (an essential variable) were maintained. The licensee entered the issue into their corrective action program and suspended welding activities on the two SRVs until it was determined that the travel speeds used resulted in a heat input that was bounded by the procedure as qualified. This finding is greater than minor because if left uncorrected it would have become a more significant safety concern in that the failure to control heat input could have reduced the impact toughness of the WOL such that it would be susceptible to brittle fracture. The finding is of very low safety significance because calculations determined that the resulting heat inputs were bound by the welding procedure specifications' (WPS) parameters. As a result, assuming worst case degradation, it is unlikely that there would be reactor coolant system leakage or the loss of safety function of any mitigating system. The cause of the finding is related to the cross-cutting aspect of Human Performance, Work Practices, (Item H.4.(c)) because licensee personnel failed to ensure supervisory and management oversight activities of their contractors such that nuclear safety was ensured.

Inspection Report# : [2008002](#) (*pdf*)

**Significance:**  Mar 31, 2008

Identified By: NRC

Item Type: FIN Finding

#### **UNEXPECTED REACTIVITY EXCURSION DUE TO UNIDENTIFIED VALVE POSITION DURING POST REPAIR AIR PRESSURE TESTING**

A self-revealing finding was identified for the failure of operators to maintain configuration control of valves during an air pressure test of a repair of a feedwater heater. Specifically, the operators left valve RD198 open during a pressure test of the extraction steam, or shell side, of feedwater heater 1-5 of the Main Feedwater System. This loss of configuration control gave testing air a path to the main condensers and led to degradation of the condenser vacuum, which then caused the Integrated Control System to raise reactor power unexpectedly. No violation occurred. Once the issue was identified, the licensee stopped the air pressure test and entered the finding into their corrective action program. The finding is greater than minor since it was associated with the configuration control-operating equipment lineup attribute of the Initiating Events Cornerstone and because it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. The finding is of very low safety significance since it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The finding was associated with the cross-cutting area of human performance in that work control and specifically the coordination of work activities did not properly record or assess the status of a valve in the test boundary and created a condition that had an operational impact (H.3(b)).

Inspection Report# : [2008002](#) (*pdf*)

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# Mitigating Systems

**Significance:**  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

## **FAILURE TO SCHEDULE AND PERFORM PROCEDURALLY REQUIRED POST-MAINTENANCE TEST**

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for work planning and reviewing licensee personnel's failure to identify applicable post-maintenance testing requirements listed in the Post-Maintenance Testing Manual (PMTM) following replacement of the lube oil cooler for the Motor Driven Feed Pump (MDFP). Use of the PMTM and other sources for identifying testing was specified as a requirement in Section 4.2 of procedure NOP-WM-1005, "Work Management Order Testing Process." The finding was determined to be more than minor because the finding was associated with the Mitigating System Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. The inspectors determined that the finding was of very low safety significance (Green) because it did not result in a loss of function per Generic Letter 91 18, did not represent an actual loss of safety function, and was not potentially risk significant due to external events. Although not confirmed by planned testing, the replacement of the lube oil cooler did not significantly change the bearing cooling capability of the MDFP. This finding has a cross-cutting aspect in the area of human performance with the component of work practices because the licensee did not ensure proper supervisory and management oversight of the work planning activities (H.4(c)).

Inspection Report# : [2008004](#) (*pdf*)

**Significance:** SL-IV Jul 11, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

## **Failure to Perform a 10 CFR 50.59 Evaluation for Service Water System Modification**

The inspectors identified a Severity Level IV NCV, having very low safety significance, of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to provide a documented basis for determining that changes to the service water system did not require prior NRC approval. Specifically, the licensee removed flow restricting piping orifices which created an adverse change to the service water system, because the service water pumps could have insufficient net positive suction head during accident conditions. The licensee revised the service water system operating procedure to ensure that this change did not result in operation of the service water pumps with inadequate net positive suction head and entered this issue into the corrective action program.

Because the issue affected the NRC's ability to perform its regulatory function, this issue was evaluated using the traditional enforcement process. The finding was determined to be more than minor because the inspectors could not reasonably determine that the change would not have ultimately required NRC prior approval. The finding was determined to be of very low safety significance because the licensee had not aligned the service water system in a configuration that could have damaged the pumps (Section 1R17.1.b.1)

Inspection Report# : [2008008](#) (*pdf*)

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

## **INADEQUATE MANAGEMENT OVERSIGHT DURING ORANGE RISK ACTIVITY**

The inspectors identified a non-cited violation of 10 CFR 50.65(a)(4) for failure to implement a procedurally-required risk management activity for an orange risk activity. The licensee failed to provide required management oversight of a critical step in a surveillance test of the Auxiliary Feedwater System Train 1. The surveillance test rendered the train inoperable and unavailable. The licensee entered the issue into their corrective action program. The finding is greater than minor using the guidance of IMC 0612, Appendix B, Section 3 ("Minor Questions"), question (5)(i) and question (2). The licensee failed to implement prescribed significant compensatory measures for an elevated risk activity; and

if the practice were left uncorrected, the issue would become a more significant safety concern involving programmatic issues. The finding was of very low safety significance, using IMC 0612, Appendix K, flowchart 2, because the incremental core damage frequency associated with the surveillance was less than  $1 \times 10^{-6}$ . A contributing cause of the finding is related to the cross-cutting element of human performance (H4.(b)) in that there were varying expectations on the extent of procedure compliance, and some personnel were not complying with all elements of applicable procedures.

Inspection Report# : [2008003](#) (*pdf*)

**Significance:**  Jun 06, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

**This is a security Related Finding - see inspection report for details.**

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - documentation, procedures, and component labeling. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

**Significance:**  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

**AIR VOID IN DECAY HEAT/LOW PRESSURE INJECTION SYSTEM DUE TO INADEQUATE VENTING AFTER MAINTENANCE**

A self-revealing NCV of TS 4.5.2b was identified for failure to properly fill and vent a portion of decay heat/low pressure injection train 1 after maintenance which resulted in an approximate 15 cubic foot air void in the discharge piping of the train 1 decay heat/low pressure injection system for approximately 59 days of plant operation. Work packages and procedures used in restoration and refilling of the system did not adequately identify and provide for filling of drained high points in the piping. Upon identification with a 6 inch step decrease in pressurizer level while aligning the decay heat system for refueling operations, the licensee filled and then vented the system from high point vents located in system's discharge piping in the plant's containment. The licensee entered the failure to properly fill and vent the system after maintenance in their corrective action program. The finding is greater than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective in that permitting an air void in the train's discharge piping affected the reliability and capability of the system. The finding is of very low safety significance because it did not result in a loss of function per Part 9900, "Technical Guidance – Operability Determinations and Functionality Assessments," did not represent an actual loss of safety function, and is not potentially risk significant due to external events. The finding is associated with the cross-cutting area of human performance in that the resources and specifically work packages and procedures were not adequate to ensure that the train 1 decay heat/low pressure injection system was restored to a filled and vented system condition (H.2(c)) after completion of maintenance activities.

Inspection Report# : [2008002](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

**CREVS TRAIN 2 INOPERABLE DUE TO LOSS OF REFRIGERANT CHARGE**

The inspectors identified a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," when the licensee did not correct a condition adverse to quality, associated with a refrigerant leak on the

regulating valve for Control Room Emergency Ventilation System (CREVS) Train 2, that eventually rendered CREVS Train 2 inoperable based on a loss of refrigerant charge. This finding is greater than minor because it is associated with the System, Structures, and Components (SSC) and Barrier Performance attribute of the Barrier Integrity cornerstone and negatively affected the cornerstone objective to ensure the availability, reliability, and capability of systems used to maintain the radiological barrier functionality of the control room, particularly for CREVS to maintain a suitable environment for safety-related equipment and operators. The licensee entered the equipment issue into their corrective action program. The finding is of very low safety significance because the finding only represents a degradation of the radiological barrier function provided for the control room. The cause of the finding is related to the cross-cutting aspect of problem identification and resolution (P1.(d)) in that the licensee did not take actions to correct the refrigerant leak in a timely manner, commensurate with the issue's safety significance.

Inspection Report# : [2008003](#) (*pdf*)

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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## **Physical Protection**

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

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## **Miscellaneous**

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