

Davis-Besse

3Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE WELD RECORDS FOR CRDM HOUSINGS

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," were identified by the inspectors for the licensee's failure to establish adequate measures (e.g., perform a review of radiographic (RT) film weld records) to ensure material procured from a contractor (replacement control rod drive mechanism (CRDM) housings) met the American Society of Mechanical Engineers (ASME) Code. Consequently, two replacement CRDM housings were procured with RT film weld records that did not conform to the ASME Code-required film density ranges. As a corrective action, the licensee returned the affected CRDM housings to a vendor facility for completion of new RT film records prior to installation on the replacement vessel head. The violation was entered into the licensee's corrective action program (CAP) as condition report (CR) 2011-00750.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the failure to complete an adequate RT examination of welds on two CRDM housings could have allowed unacceptable weld flaws to be placed in service. Specifically, weld flaws such as cracks, can reduce the CRDM housing integrity, and place the reactor coolant system (RCS) at an increased risk for through-wall leakage and/or failure. Because this finding was identified prior to placing the CRDM housings into service, the inspectors answered "No" to the Significance Determination Process Phase 1 screening question: "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any RCS leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?" Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee staff failed to ensure adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Absent NRC intervention, the failure to establish adequate measures to ensure material procured from a contractor (replacement CRDM housings) met the ASME Code would have allowed welds on two housings with non-conforming RT records to be placed into service. (H.4(c)) (Section 40A5.1).

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY CONTROL CONSTRUCTION MATERIAL ADJACENT TO THE SWITCHYARD

A self-revealed Green finding and associated NCV of Technical Specification (TS) 5.4.1 were identified for the licensee's failure to establish and implement procedures recommended by Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Specifically, the licensee failed to appropriately establish and implement a procedure addressing an act of nature (high wind conditions) when material adjacent to the Davis-Besse switchyard was displaced by high winds and blown into switchyard equipment causing the loss of one required offsite power circuit. The licensee included this finding in their corrective action program (CAP) as condition report (CR) 11-89062. An immediate corrective action was taken to clear the debris from the switchyard and restore the affected offsite power circuit. A corrective action was initiated to develop procedural guidance for high wind conditions, including guidance for securing material in the switchyard.

The inspectors determined that the licensee's failure to control material near risk significant equipment, or to

appropriately apply the standards in the Material Readiness and Housekeeping Inspection Procedure (IP), was a performance deficiency. The inspectors determined that the finding was more than minor because it is associated with the Initiating Events cornerstone attribute of Protection Against External Factors, and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding using IMC 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Using the Phase 1 SDP worksheet for the Initiating Event Cornerstone, transient initiator contributor, the inspectors determined that the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Therefore, the finding was determined to be of very low safety significance. This finding has a cross-cutting aspect in the area of human performance, resources component, because the licensee did not ensure that an adequate procedure was available to assure nuclear safety by addressing high wind conditions and properly securing loose material near the switchyard.

Inspection Report# : [2011002](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ECCS ROOM COOLER VALVE POSITION

A finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the licensee's failure to control the configuration of the emergency core cooling system (ECCS) room cooler service water (SW) outlet valves in accordance with procedures. Specifically, the licensee failed to update procedures used to set the appropriate throttle position for the valves, and by using information tags to control valve position, failed to follow plant status control procedures.

The inspectors determined that the finding was more than minor because it was associated with the Mitigating Systems Cornerstone attributes of Design Control and Configuration Control and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, an incorrect throttle position of the ECCS room cooler outlet valves could have an effect on the reliability or availability of ECCS train 2 equipment. A past operability review determined that the as-found flowrate to ECCS room coolers 1 and 2 was reduced with outlet valves SW87 and SW103 mispositioned, however, the flow was sufficient to not affect the operability of ECCS room coolers 1 and 2. Using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone, the finding screened as very low safety significance (Green) because the inspectors answered "No" to the screening questions in Table 4a. Specifically, the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Human Performance, Resources component, because the licensee did not ensure that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety. Specifically, the licensee did not process a document change request to update procedures used to verify SW valve alignments. (H.2(c)) (Section 1R15)

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TAKE TIMELY CORECTIVE ACTIONS

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Procedures, Instructions, and Drawings," were identified by the inspectors for the licensee's failure to correct deficiencies, deviations, and/or nonconformances associated with safety related systems, structures, and components (SSCs) in a timely manner, as required by the licensee's Quality Assurance Program Manual (QAPM) and CAP implementing procedure. Specifically, the inspectors identified a trend on the part of the licensee to leave certain low significance/low priority corrective actions for various safety related SSCs completely unscheduled and unaddressed,

in some cases for extensive periods of time that ranged up to 8 years. The licensee initiated their own review to determine the full extent of condition of this issue, and entered the issue into their CAP as CR 2011 00385.

The finding, which was associated with the Mitigating Systems Cornerstone, was determined to be of more than minor significance because the issue represented a programmatic deficiency associated with the licensee's CAP that if left uncorrected would have the potential to lead to a more significant safety concern. Using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone, the inspectors determined that the finding was of very low safety significance because each of the SSC deficiencies, deviations, and/or nonconformances identified by the inspectors represented an issue that did not result in the loss of operability or functionality. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, for certain deficiencies, deviations, and/or nonconformances associated with safety related SSCs the licensee took no corrective actions whatsoever, instead allowing the corrective actions associated with those issues to be placed in the plant's backlog of unscheduled work. (P.1(d)) (Section 40A2.3).

Inspection Report# : [2011004](#) (pdf)

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE TRAINING ON PROCEDURE REQUIREMENTS RESULTS IN AUXILIARY FEEDWATER INOPERABILITY

A self-revealed Green finding and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified for the licensee's failure to ensure that activities affecting quality are properly accomplished in accordance with instructions, procedures, and drawings. Specifically, the licensee failed to follow radio usage guidelines when performing fire detection surveillance testing in the auxiliary shutdown panel. The procedure did not contain a specific requirement to exclude radio usage in the vicinity of the auxiliary shutdown panel. The inappropriate use of radio communication caused interference in the auxiliary shutdown panel, resulting in a momentary loss of emergency feedwater controls. The licensee included this issue in their corrective action program as CR 11 90403. An immediate corrective action was taken to post signs restricting radio usage within the auxiliary shutdown panel room. The procedures that govern in-plant radio communications and security communications were revised to prohibit the use of portable radios in the auxiliary shutdown panel room. Additionally, a corrective action was initiated to provide training to the appropriate personnel to ensure awareness and adherence to radio communication use in the vicinity of plant equipment.

The inspectors determined that the licensee's failure to follow radio usage guidelines when working inside the auxiliary shutdown panel cabinet was a performance deficiency. The inspectors determined that the finding was more than minor because it is associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The inspectors evaluated the finding using IMC 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone, the inspectors answered no to all five screening questions. Because of the short duration of the reduction in control signals (approximately 27 seconds), it was determined that sufficient design margin was available to accommodate the worst case scenario of an auxiliary feedwater flowrate increase to both steam generators during any transient described in the Updated Safety Analysis Report. An SDP Phase 2 analysis was not required because the emergency feedwater system remained available throughout this event. Therefore, the finding was determined to be of very low safety significance (Green). This finding is associated with a cross-cutting aspect in the resources component of the human performance cross-cutting area, because the licensee did not ensure that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety. Specifically, personnel were not adequately trained on procedure DB OP-05441, Radio Communication System. [H.2(b)] (Section 40A3)

Inspection Report# : [2011003](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CONTAINMENT ECCS RECIRCULATION SUMP RELIABILITY DEGRADED DUE TO UNFASTENED DEBRIS GATE

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the failure by the licensee to maintain containment trash gate 3 closed and pinned while the area was unattended and the unit was in a mode of operation in which the gate was required to be pinned and closed. Specifically, in modes 1 through 3, when the emergency core cooling recirculation sump is required to be operable, the trash gates are designed to help minimize post-accident debris loading on the recirculation sump inlet screens. The licensee entered the issue into the CAP as CR 11-88002, and immediately restored the trash gate to its proper configuration upon notification by the inspectors. The inspectors determined that failure of licensee personnel to close and pin trash gate 3 was contrary to licensee procedures and constituted a performance deficiency. The finding was determined to be of more than minor significance because it affected the Mitigating Systems Cornerstone objective of ensuring the capability of systems that respond to initiating events. Specifically, failure to have the trash gate closed could allow debris generated during certain loss of coolant accidents to degrade the capability of the containment emergency core cooling system (ECCS) recirculation sump. Upon conducting a Phase 1 SDP evaluation, the inspectors determined that the finding was of very low safety significance because the recirculation sump remained operable even with assuming additional debris reaching the upper sump screening in a post accident environment. This finding has a cross-cutting aspect in the area of human performance, work practices, because licensee personnel did not appropriately use human error prevention techniques to verify that the gate was closed and pinned after vacating the area.

Inspection Report# : [2011002](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADVERTENT REMOVAL OF CONTROL POWER TO CONTAINMENT AIR COOLER ISOLATION VALVE

A self-revealed Green finding and associated NCV of TS 3.6.3 were identified for an inadequate clearance that inadvertently removed control power to a containment isolation valve (CIV), SW1358, Containment Air Cooler (CAC) 3 Outlet Temperature Control Valve. Without power to control SW1358, the valve was unable to be closed for longer than allowed by TSs. The licensee included this finding in their CAP as CR 11-88594. An immediate corrective action was taken to restore control power to SW1358. The inspectors determined that a performance deficiency occurred when the licensee inadvertently placed a clearance that removed control power to CIV SW1358, rendering the valve inoperable and unable to be closed for longer than allowed by TSs. The inspectors determined that the finding was more than minor because it is associated with the Barrier Integrity Cornerstone attribute of Systems, Structures, and Components (SSC) and Barrier Performance, and affected the cornerstone objective of providing reasonable assurance that the physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Using the Phase 1 SDP worksheet for the barrier integrity cornerstone, the inspectors answered "no" to all four screening questions under the containment barrier column. Specifically, the affected penetration was associated with a closed piping system within containment such that a significant breach in the piping would need to occur to provide a viable release pathway. In addition, CAC 1 and 2 remained operable during the period of time that the CAC 3 outlet temperature control valve was inoperable. Therefore, the finding was determined to be of very low safety significance. This finding has a cross-cutting aspect in the area of human performance, resources component, because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety.

Inspection Report# : [2011002](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : January 04, 2012