Davis-Besse
1Q/2011 Plant Inspection Findings

Initiating Events

Significance: G 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)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ASSESS AND MANAGE RISK DURING CONSERVATIVE GRID OPERATIONS
The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR 50.65(a)(4), for the failure to implement appropriate risk management actions when conservative grid operations were declared at the station. The licensee included this finding in their corrective action program as CR 10-79727. An immediate corrective action was taken to appropriately apply orange risk controls to activities representing risk to generation or grid reliability during the period of conservative grid operations.

The inspectors determined that the failure to implement appropriate risk management actions in accordance with procedure NOP-OP-1007, "Risk Management," was a performance deficiency. In accordance with IMC 0612, Appendix E, "Examples of Minor Issues," this issue was more than minor because it was sufficiently similar to more than minor Example 7.f in that overall plant risk would be in a higher licensee-established risk category. The inspectors determined that the finding affected the initiating events cornerstone and could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process." Because the finding was associated with maintenance risk management, characterization and initial screening was accomplished using IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process." In accordance with

flowchart 2, the inspectors determined the finding to be of very low safety significance (Green) because the incremental core damage probability (ICDP) at the plant during the period of conservative grid operations was less than 1.0E 6. This finding has a cross-cutting aspect in the decision-making component of the human performance cross-cutting area because, when faced with changing plant conditions, the licensee did not appropriately use a systematic process to make a risk-significant decision.
Inspection Report# : 2010004 *(pdf)*

Significance: G Sep 09, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Unqualified PT Procedure For CRDM Nozzle Repair Welds
The team identified a Non-Cited Violation (NCV) of 10 CFR Part 50 Appendix B, Criterion IX for the licensee's failure to use a nondestructive examination procedure qualified in accordance with applicable Codes and Standards for detection of flaws in control rod drive nozzle repairs. Specifically, the licensee failed to ensure that Procedure 54-ISI-244-10 "Liquid Penetrant Examination of Reactor Vessel Head Penetrations from the Inside Surface," contained a maximum time limit for application of water-wash. The licensee issued a procedure change to incorporate a maximum time limit of 10 minutes for the water-wash application time and demonstrated that this wash time was acceptable.

This finding was more than minor because if left uncorrected, the failure to use a qualified procedure could become a more significant safety concern. Absent NRC identification, the licensee would not have controlled the maximum times used to wash the penetrant materials off repair weld surfaces. Excessive wash time could have resulted in failure to detect fabrication flaws such as voids and cracks. Undetected cracks returned to service in the repair welds would place the RVCH at increased risk for through-wall leakage and/or nozzle failure. Therefore, this finding adversely affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. The issue was corrected promptly, no cracks were returned to service, and the team answered "no" to the Phase I screening question that asked assuming the worst case degradation would the finding result in exceeding the Technical Specification limit for any reactor coolant system leakage. Therefore, the finding screened as having very low safety significance (Green). This finding had a cross-cutting aspect in the area of Human Performance, Work Practices (IMC 0310 (Item H.4(c)) because the licensee did not provide adequate supervisory and management oversight of work activities including contractors such that nuclear safety was supported. Specifically, the licensee failed to provide an adequate oversight in the review and acceptance of the unqualified vendor Procedure 54-ISI-244-10 (Section 4OA3.5).
Inspection Report# : 2010008 *(pdf)*

Significance: G Sep 09, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Unqualified Weld Repair Applied For CRDM Nozzle No. 4
The team identified a NCV of 10 CFR Part 50 Appendix B, Criterion IX for the licensee's failure to perform repair welding on control rod drive mechanism nozzle No. 4 using a qualified weld procedure. Specifically, the licensee failed to ensure that the weld procedure supplement PS0140-002 controlled heat input to less than that demonstrated in the supporting weld procedure qualification. To restore compliance, the licensee completed a new weld coupon, tested the coupon, and documented the results in a new procedure qualification record. The procedure qualification record recorded heat inputs for the weld coupon that bound the heat input used for the weld repairs completed on CRDM nozzle No. 4 and the weld coupon test results demonstrated the weld properties were acceptable.

This finding was more than minor because if left uncorrected, the failure to use a qualified weld procedure could become a more significant safety concern. Absent NRC identification, the licensee would not have completed a Code qualified weld repair on Control Rod Drive Mechanism nozzle No. 4 prior to returning the reactor vessel closure head to service. The repair weld lacked qualification tests to demonstrate that the mechanical properties (toughness, ductility or strength) were adequate, which could have placed the RVCH at an increased risk for through-wall leakage and/or nozzle failure. Therefore, this finding adversely affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. The issue was corrected promptly, the unqualified repair weld was not placed in service, and the team answered "no" to the Phase I screening question that asked assuming the worst case degradation would the finding result in exceeding the Technical

Specification limit for any reactor coolant system leakage. Therefore, the finding screened as having very low safety significance (Green). This finding had a cross-cutting aspect in the area of Human Performance, Work Practices per IMC 0310 (Item H.4(c)) because the licensee did not provide adequate supervisory and management oversight of work activities including contractors such that nuclear safety was supported. Specifically, the licensee failed to provide an adequate oversight in the review and acceptance of the unqualified vendor weld procedure supplement (PS) 0140-002 (Section 4OA3.5).
Inspection Report# : 2010008 *(pdf)*

Significance: G Sep 09, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure For Viewing of Remote PT on Nozzle No. 61 Repair Weld.
The team identified a NCV of 10 CFR Part 50 Appendix B, Criterion V for the licensee's failure to provide documented instructions appropriate to the circumstances for the remote visual examination of the final dye penetrant examination completed on repaired nozzle No. 61. Specifically, OI 03-1240857-006 "BWOG CRDM Nozzle Top Down Inspection Tooling Operating Instructions," did not include guidance for control of spacer sizes or camera field of view necessary to ensure that the entire examination surface area was viewed. To correct this issue, the procedure was revised to include additional instructions to ensure complete examination coverage with the remote camera system. Additionally, the licensee repeated the examinations on nozzle No. 61 and nine additional nozzles with incomplete examination coverage.

This finding was more than minor because if left uncorrected, the failure to use an adequate procedure for detecting flaws could become a more significant safety concern. Absent NRC identification, the licensee would not have examined the entire surface of the repaired nozzle No. 61 and nine other nozzles, which could have allowed cracks to go undetected. Undetected cracks returned to service in the repair welds would place the RVCH at increased risk for through-wall leakage and/or nozzle failure. Therefore, this finding adversely affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. The issue was corrected promptly, weld cracks were not returned to service, and the team answered "no" to the Phase I screening question that asked assuming the worst case degradation would the finding result in exceeding the Technical Specification limit for any reactor coolant system leakage. Therefore, the finding screened as having very low safety significance (Green). This finding had a cross-cutting aspect in the area of Human Performance, Work Practices per IMC 0310 (Item H.4(c)) because the licensee did not provide adequate supervisory and management oversight of work activities including contractors such that nuclear safety was supported. Specifically, the licensee failed to provide an adequate oversight in that no licensee review was completed for the inadequate vendor Procedure OI 03-1240857-006(4OA3.5).
Inspection Report# : 2010008 *(pdf)*

Mitigating Systems

Significance: G 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)*

Significance: SL-IV Jun 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAKE A REQUIRED 8-HOUR EVENT REPORT PER 10 CFR 50.72(b)(3)(ii)(B)
The inspectors identified a Severity Level IV, non-cited violation (NCV) of 10 CFR 50.72(b)(3)(ii)(B) for the licensee's failure to recognize that, when in a shutdown condition, an 8-hour event notification to the NRC was required for the power plant being in an unanalyzed condition that significantly degrades plant safety. Specifically, during testing the Steam and Feedwater Rupture Control System (SFRCS) unexpectedly re-energized in a low steam line pressure blocked condition. This condition could cause an inappropriate SFRCS actuation and potentially result in auxiliary feedwater being supplied to a ruptured steam generator. The inspectors determined that, per IMC 0612, Appendix B, "Issue Screening," the failure to report the plant being in an unanalyzed condition that significantly degrades plant safety in accordance with 10 CFR 50.72(b)(3)(ii)(B) was a performance deficiency. Because the performance deficiency involved a violation that could have impacted the regulatory process, it is dispositioned using traditional enforcement. In accordance with Supplement I of the NRC Enforcement Policy, a failure to make a required report to the NRC is a Severity Level IV violation. The inspectors determined the performance deficiency was more than minor because the underlying technical issue affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the primary cause of the performance deficiency affected the cross-cutting component of thorough evaluation of problems in the cross-cutting area of Problem Identification and Resolution. Specifically, the licensee did not properly evaluate a condition adverse to quality for reportability. (P.1(c))

The Performance Deficiency portion of this issue is item 05000346/2010-003-02.
Inspection Report# : 2010003 *(pdf)*

Significance: G Jun 30, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to analyze SFRCS unexpectedly re energizing. This condition could cause an inappropriate SFRCS actuation.
The inspectors identified a Severity Level IV, non cited violation (NCV) of 10 CFR 50.72(b)(3)(ii)(B), and an associated Green finding, for the licensee's failure to recognize that, when in a shutdown condition, an 8 hour event notification to the NRC was required for the power plant being in an unanalyzed condition that significantly degrades plant safety. Specifically, during testing the Steam and Feedwater Rupture Control System (SFRCS) unexpectedly re energized in a low steam line pressure blocked condition. This condition could cause an inappropriate SFRCS actuation and potentially result in auxiliary feedwater being supplied to a ruptured steam generator. Corrective actions included a change to the SFRCS logic to ensure that a power on reset occurs anytime 28 voltage direct current (VDC) power is lost.
The inspectors determined that, per IMC 0612, Appendix B, "Issue Screening," the failure to report the plant being in an unanalyzed condition that significantly degrades plant safety in accordance with 10 CFR 50.72(b)(3)(ii)(B) was a performance deficiency. Because the performance deficiency involved a violation that could have impacted the regulatory process, it is dispositioned using traditional enforcement. In accordance with Supplement I of the NRC Enforcement Policy, a failure to make a required report to the NRC is a Severity Level IV violation. The inspectors determined the performance deficiency was more than minor because the underlying technical issue affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond

to initiating events to prevent undesirable consequences. This condition did not screen out in Phase 1 of the SDP because there was a potential loss of a safety function for greater than the technical specification allowed outage time. The significance of this condition was evaluated by the Region III Senior Reactor Analyst (SRA) and was determined to be of very low safety significance (Green). The inspectors determined that the primary cause of the performance deficiency affected the cross cutting component of thorough evaluation of problems in the cross cutting area of Problem Identification and Resolution. Specifically, the licensee did not properly evaluate a condition adverse to quality for reportability. (P.1(c)) (Section 1R15)

The Traditional Enforcement portion of this item is 05000346/2010-003-01.
Inspection Report# : 2010003 *(pdf)*

Barrier Integrity

Significance: G 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 : June 07, 2011