Davis-Besse
4Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE PROCEDURAL GUIDANCE DURING RESTORATION FROM VALVE MAINTENANCE RESULTS IN FEEDWATER HEATER SYSTEM AND PLANT POWER TRANSIENT
A self-revealed finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1(a) were identified when the licensee failed to provide proper procedural guidance for the restoration from valve maintenance on HD291G, a manual isolation valve for the level controller for HD291A, the emergency drain valve for High Pressure (HP) Feedwater Heater No. 1–4, on November 13, 2014. Specifically, the licensee's restoration instructions did not isolate HD291A prior to restoring its associated level controller. As a result, when a perturbation in the level controller during restoration caused HD291A to rapidly reposition to the fully open position, the resulting HP Feedwater Train 1 transient caused HP Feedwater Heaters 1–4, 1–5, and 1–6 to trip. The change in plant efficiency that resulted momentarily drove plant power slightly above 100 percent.
This finding was associated with the Initiating Events Cornerstone of reactor safety and was of more than minor significance because it directly impacted the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the finding using IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power.” Using Exhibit 1, the inspectors determined that the finding screened as very low safety significance because all screening questions for the Initiating Events Cornerstone of reactor safety were answered “No.” This finding also was determined to have a cross-cutting component in the area of human performance, work management aspect, because during the work planning process for this maintenance activity the licensee failed to identify the risk associated with not isolating the HP Feedwater Heater No. 1–4 Emergency Drain Valve, HD291A, prior to restoring its associated level controller to service. (H.5)

Inspection Report# : 2014005 *(pdf)*

Significance: G Sep 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROPERLY PERFORM REQUIRED FIRE WATCH
An NRC-identified finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1(d) were identified when the licensee failed to properly implement station procedures for fire protection impairments and fire watches. Specifically, a required compensatory fire watch on numerous occasions did not enter a room for which fire impairments had existed because of a door problem. Upon identification the licensee entered the issue in the corrective action program and implemented corrective actions including modification of fire protection software to track administrative impairments and placing a camera in the room until the door was repaired. This finding was determined to be of more than minor safety significance because it was associated with the Initiating Events cornerstone attribute of Protection Against External Factors (Fire) and adversely affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during plant operations. Specifically, required fire watches established as compensatory measures should have been

maintained for the duration of the impairments so that the site's ability to promptly detect and suppress a fire would be maintained. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Phase 1–Initial Screening and Characterization of Findings." Because the finding involved fire protection, the inspectors transitioned to IMC 0609, Appendix F, "Fire Protection Significant Determination Process." The finding was characterized according to IMC 0609,
SDP, Appendix F, Attachment 1, "Fire Protection SDP Phase 1 Worksheet," dated September 20, 2013. This issue screened as low safety significance per Attachment 1, Question 1.3.1.A, because it did not affect the ability of the reactor to reach and maintain safe shutdown. This finding had a cross-cutting aspect in the area of human performance associated with conservative bias such that individuals use decision making practices that emphasize prudent choices over those that are simply allowable. In particular, the shift manager made an inaccurate assessment of existing fire impairments by only checking the fire protection software and not the fire watch log, which was readily available. The shift manager also made the decision to not document
the approval for modifying how the compensatory fire watch was being performed such that on-coming personnel would be aware of the change. (H.14)

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROPERLY PERFORM REQUIRED FIRE WATCH
The Inspectors identified a finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.4.1(d) when the licensee failed to properly implement station procedures for control of ignition sources. Specifically, the inspectors identified that an assigned fire watch was not present to monitor post weld heat treatment (PWHT) activities on reactor coolant system (RCS) piping in containment.
The finding was determined to be of more than minor significance because if left uncorrected would have the potential to lead to a more significant safety concern. In particular, uncontrolled ignition sources have the potential to start a fire that could impact risk significant plant equipment. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Phase 1–Initial Screening and Characterization of Findings." Because the finding involved reactor shutdown operations and conditions, the inspectors transitioned to IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process–Phase 1 Operational Checklists for Both PWRs and BWRs." Since the finding was associated with an issue that occurred during the time the reactor was in a defueled condition, the inspectors conservatively consulted all four PWR checklists (i.e., Checklists 1–4). The inspectors determined that the finding did not adversely impact any shutdown defense-in-depth or mitigation attributes on any checklist, nor did it meet any of the checklist specific requirements for a Phase 2 or Phase 3 Significance Determination Process (SDP) analysis. Consequently, the
finding was determined to be of very low safety significance (Green). This finding had a cross-cutting aspect in the area of human performance associated with teamwork such that individuals and work groups communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety is maintained. In particular, licensee contract personnel did not adequately communicate to maintain or verify that a fire watch was stationed at an assigned position for the entire duration for which it was required. (H.4)

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN AN APPROVED HOT WORK PERMIT FOR CONTAINMENT
The Inspectors identified a finding of very low safety significance and an associated non-cited violation of TS 5.4.1(d)

when the licensee failed to properly implement station procedures for control of ignition sources. Specifically, an invalid hot work permit was being used to control steam generator (SG) replacement hot work activities in containment from April 6, 2014, to April 14, 2014. The finding was determined to be of more than minor significance because if left uncorrected would have the potential to lead to a more significant safety concern. In particular, uncontrolled ignition sources have the potential to start a fire that could spread and impact risk significant plant equipment. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Phase 1–Initial Screening and Characterization of Findings." Because the finding involved reactor shutdown operations and conditions, the inspectors transitioned to IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process - Phase 1 Operational Checklists for Both PWRs and BWRs." Since the finding was associated with an issue that occurred during the time the reactor was in a defueled condition, the inspectors conservatively consulted all four PWR checklists (i.e., Checklists 1–4). The inspectors determined that the finding did not adversely impact any shutdown defense-in-depth or mitigation attributes on any checklist, nor did it meet any of the checklist specific requirements for a Phase 2 or Phase 3 SDP analysis. Consequently, the finding was determined to be of very low safety significance (Green). This finding had a cross-cutting aspect in the area of human performance associated with licensee personnel avoiding complacency. Specifically, the inspectors noted that aspect whereby individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risks even while expecting successful outcomes. (H.12)

Inspection Report# : 2014003 *(pdf)*

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IMPLEMENT FIRE PROTECTION PLAN REQUIREMENTS RELATED TO CONTROL OF IGNITION SOURCES
The Inspectors identified a finding of very low safety significance and associated non-cited violations of Technical Specification (TS) 5.4.1(d) when the licensee failed to properly implement station procedures for control of ignition sources. Specifically, the inspectors identified two examples where the licensee did not adequately protect work areas containing combustible material from welding and grinding sparks generated in containment. The finding was determined to be of more than minor significance because if left uncorrected would have the potential to lead to a more significant safety concern. In particular, uncontrolled ignition sources have the potential to start a fire that could impact risk significant plant equipment. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings." Because the finding involved reactor shutdown operations and conditions, the inspectors transitioned to IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process - Phase 1 Operational Checklists for Both Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs)." Since the finding was associated with an issue that occurred during the time the reactor was in a defueled condition, the inspectors conservatively consulted all four pressurized water reactor PWR checklists (i.e., Checklists 1 – 4). The inspectors determined that the finding did not adversely impact any shutdown defense-in-depth or mitigation attributes on any checklist, nor did it meet any of the checklist specific requirements for a Phase 2 or Phase 3 Significance Determination Process (SDP) analysis. Consequently, the finding was determined to be of very low safety significance. This finding had a
cross-cutting aspect in the area of human performance associated with teamwork such that individuals and work groups communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety is maintained. In particular, the licensee's standards and expectations for control of ignition sources were not adequately communicated to ensure adequate protection of combustible material. In the first example, the fire watch was unaware of the condition of the area below the welding activity. In the second example, the fire watch was generally unfamiliar with control of ignition source procedural requirements. In both cases, personnel passing by the work area observed hot sparks coming in contact with combustible material but did not communicate the condition to either the worker generating the sparks or the assigned fire watch to have the condition corrected. (H.4)

Inspection Report# : 2014002 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAKE A TIMELY 8-HOUR EVENT REPORT PER 10 CFR 50.72(b)(3)(xiii)
An NRC-identified finding of very low safety significance and an associated Severity Level IV NCV of the reporting requirements of 10 CFR 50.72(b)(3)(xiii) were identified following the inspectors' review of licensee corrective actions for a previous occurrence of a reportable condition that took place on May 26, 2014. That event was reported to the NRC as required (Event Notification 49546), and the licensee developed applicable corrective actions within their Corrective Action Program (CAP). While reviewing the circumstances surrounding that issue, the inspectors identified that on May 21, 2014, the licensee's control room overhead annunciator system had suffered a similar malfunction. The licensee's initial reviews of the May 21, 2014, issue, however, determined that the matter was not reportable, and no report to the NRC Operations Center was made at that time. The event was eventually reported to the NRC (Event Notification 50252) on July 3, 2014, following discussions with the inspectors. The finding was determined to be of more than minor significance because it was associated with the Mitigating Systems cornerstone and directly impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the inspectors had previously determined that the underlying technical issue surrounding this event involved a finding of very low safety significance, and documented that finding in NRC IR 05000346/2014003 (FIN 05000346/2014003–05; ADAMS Accession No. ML14212A468). That issue, involving the licensee's failure to assign appropriate work priority to corrective actions associated with their annunciator system, resulted in additional malfunctions of the control room overhead annunciator system, one of which was the event that occurred on May 21, 2014. The inspectors evaluated the finding using IMC 0609, Appendix A, “The Significance Determination Process for Findings-At-Power.” Using Exhibit 2, which contains the screening questions for the Mitigating Systems cornerstone of reactor safety, the inspectors determined that the finding screened as very low safety significance because all screening questions were, answered ‘No.’ This finding was determined to have a cross-cutting aspect in the area of human performance, documentation, because the licensee's reference material related to NRC event reporting that was available to the on-shift operations crew on May 21, 2014, did not contain comprehensive guidance relative to the event that occurred. (H.7)

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ENSURE AUXILIARY FEEDWATER DESIGN BASES WERE CORRECTLY TRANSLATED INTO DESIGN DOCUMENTS AND PROCEDURES
The inspectors identified two examples representing one finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to ensure the auxiliary feedwater system (AFW) design bases were correctly translated into specifications, drawings, and procedures. Specifically, the licensee failed to ensure the loss of normal feedwater analysis, and AFW cooler assumptions would not be violated during limiting temperature and flow conditions. As part of their corrective actions, the licensee instituted a standing order to ensure the reactor operators had guidance to ensure transferring

water from the hotwell to the condensate storage tank (CST) did not exceed the loss of normal feedwater analysis CST limit of 120 degrees Fahrenheit (ºF). The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control. Specifically, the inspectors were concerned the AFW system could potentially be operated in a manner which had not been previously evaluated. The finding screened as having very low safety significance because the finding was a deficiency affecting the design or qualification of a mitigating system, structure, or component (SSC) but the SSC maintained its operability. Specifically, the licensee reviewed the operating history of the CSTs and found no indication the CST water had been above 120 ºF in Modes 1 through 3. Also, the licensee reviewed the operating history of the AFW coolers and found no indication the AFW coolers had been inoperable due to excessive cooling water temperature or inadequate flow. The inspectors determined this finding had an associated cross-cutting aspect, avoid complacency, in the human performance cross cutting area. (H.12)

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
ACCEPTANCE CRITERIA FOR EMERGENCY CORE COOLING SYSTEM ROOM COOLER INSPECTION WAS NOT SPECIFIED IN INSPECTION PROCEDURE
The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to follow the Generic Letter (GL) 89–13 program implementing procedure (NOP–ER–2006) to develop the emergency core cooling system (ECCS) room cooler inspection procedure. Specifically, the inspection procedure for inspecting the ECCS room cooler lacked quantifiable acceptance criteria. This finding was entered into the licensee’s corrective action program (CAP). The immediate actions taken included a discussion of the finding with engineering staff and GL 89–13 program owner and a review of other GL 89–13 heat exchanger inspection procedures. The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Procedure Quality and it adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of the system to respond to initiating events to prevent undesirable consequences. Specifically, the ECCS room cooler inspection procedure failed to ensure the reliability of the heat exchanger because it did not have quantifiable acceptance criteria, as required by the NOP–ER–2006 procedure. Since the finding did not represent a loss of safety function, the inspectors screened the finding as having very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because it did not reflect current performance due to the age of the performance deficiency.

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: FIN Finding
REPAIR WORK PRIORITY DID NOT SUPPORT TIMELY CORRECTIVE ACTION
The Inspectors identified a finding of very low safety significance following review of licensee corrective actions for a previous occurrence of a reportable condition that took place on May 26, 2014. Specifically, on November 17, 2013, the licensee's control room overhead annunciator system suffered a malfunction similar to the May condition. That event was reported to the NRC as required (Event Notification 49546), and the licensee developed applicable corrective actions within their CAP. Several of corrective actions, however, were assigned the lowest possible priority within the licensee's work prioritization system, contrary to the licensee's established procedure guidance. No violation of NRC requirements was identified. This finding was of more than minor significance because it directly impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to

initiating events to prevent undesirable consequences. Specifically, as a result of the low priority assigned to a licensee work order, the work wasn't performed and additional significant malfunctions of the control room overhead annunciator system were incurred. The inspectors evaluated the finding using IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." Using Exhibit 2, which contains the screening questions for the Mitigating Systems Cornerstone of Reactor Safety, the inspectors determined that the finding screened as very low safety significance (Green) because all questions were answered as "No." This finding has a cross-cutting aspect in the area of problem identification and resolution, resolution aspect, because the licensee failed to take effective corrective actions to address issues in a timely manner commensurate with their safety significance. (P.3)

Inspection Report# : 2014003 *(pdf)*

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
CONTAINMENT ECCS RECIRCULATION SUMP RELIABILITY DEGRADED DUE TO UNFASTENED DEBRIS GATE
The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to maintain a containment "trash" gate closed and pinned while the area was unattended and the unit was in Mode 3. Specifically, the inspectors identified Trash Gate 3, as referenced by plant procedure DB OP 03013, "Containment Daily Inspection and Containment Closeout Inspection," as being unpinned and open on February 1, 2014, when it should have been closed and pinned. The finding was determined to be of more than minor significance because it was associated with the Mitigating Systems Cornerstone and directly impacted the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to have the trash gate closed and pinned could allow debris generated during certain design basis accidents to degrade the capability of the Emergency Core Cooling System (ECCS) recirculation sump. The inspectors used Exhibit 2 – "Mitigating Systems Screening Questions" for mitigating systems, structures, components and functionality. The finding screened out to be of very low safety significance because it was associated with a deficiency affecting the design or qualification of a mitigating system, structure, or component that did not result in a loss of operability or functionality. Specifically, the licensee had performed an analysis that concluded that the ECCS 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 Problem Identification and Resolution (PI&R) because the licensee's corrective actions for a previous issue were less than fully effective; the inspectors identified exactly the same issue under very similar circumstances in 2011 (see NCV 05000346/2011002-02 for additional details). (P.3)

Inspection Report# : 2014002 *(pdf)*

Barrier Integrity

Significance: G Jul 02, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Completely Repair Shield Building Concrete Voiding
A finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors for the licensee's failure in 2011 to properly

repair concrete voiding in the shield building that had been identified during that construction opening restoration. The inspectors determined the performance deficiency of failure to completely repair the void during the 2011 shield building restoration was more than minor and; therefore, a finding because the performance deficiency was associated with the Barrier Integrity cornerstone attribute of Design Control and adversely impacted the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's failure to completely repair the concrete voiding in 2011 resulted in the operation of the plant with the shield building in a condition non-conforming to its design basis. The inspectors reviewed the finding using Attachment 0609.04, "Initial Characterization of Findings," Table 3 – SDP Appendix Router. The inspectors answered 'No' to all the questions in Section A of Table 3 and; therefore, the finding was evaluated using the SDP in accordance with IMC 0609, "The Significance Determination Process (SDP) for At-Power Operations," Appendix A, Exhibit 3, "Barrier Integrity Screening Questions." The inspectors answered all the questions in Exhibit 3 and determined that this finding did not represent an actual open pathway in the physical integrity of reactor containment. Therefore, the finding was determined to have very low safety significance (Green). The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, Conservative Bias, for the licensee's failure to use decision making practices that emphasize prudent choices over those that are simply allowable. Specifically, the licensee failed to implement a conservative decision to inspect the shield building inside surface void area after repairs had been made during the opening restoration in 2011. Therefore, the licensee missed the opportunity to identify that they had not adequately repaired the void. [H.14]
Inspection Report# : 2013010 *(pdf)*

Significance: G Jul 01, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Use of Unqualified Procedure for Ultrasonic Examination of Shield Building Rebar
The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion IX, "Control of Special Processes," when the licensee failed to use a qualified procedure for ultrasonic (UT) examination of the Shield Building reinforcing bars (rebar). Specifically, the licensee used a site approved UT examination procedure that had not been qualified to examine the total length of approximately twenty four inches of rebar as specified in the procedure due to near field scanning limitation. The inspectors determined that the performance deficiency of using an unqualified procedure was more than minor and; therefore, a finding because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, absent NRC identification, the licensee would have continued use of the unqualified UT examination procedure to examine potential degradation in potentially damaged rebar in the safety-related shield building. Therefore, the licensee could potentially have returned the shield building back to service with unacceptable flaws existing in the rebar. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings." The inspectors answered 'Yes' to the questions in Section A of Table 3; and; therefore, the finding was evaluated using the SDP in accordance with IMC 0609, "The Significance Determination Process for Shutdown Operations," Appendix G, Attachment 1, Exhibit 4, "Barrier Integrity Screening Questions." The inspectors answered all the questions in Exhibit 4 and determined that this finding did not result in degraded physical integrity of the containment during shutdown operations nor did it affect any shutdown safety functions. Therefore, the finding was determined to have very low safety significance (Green). The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, and Evaluation for the licensee's failure to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, the licensee failed to initially consider the entire length of rebar for potential evaluation and hence, did not consider the appropriate extent of condition. [P.2]
Inspection Report# : 2013010 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

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