Davis-Besse
3Q/2010 Plant Inspection Findings

Initiating Events

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: 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:  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)*

Significance: G Mar 31, 2010
Identified By: NRC
Item Type: FIN Finding
FAILURE TO MAINTAIN STATION BLACKOUT DIESEL GENERATOR OUTPUT CABLES IN AN ENVIRONMENT CONSISTENT WITH DESIGN
The inspectors identified a finding of very low safety significance for the licensee's failure to maintain normally energized medium voltage cables BPGD302C, C1, D, and D1 in an environment consistent with the cable design. The cables, which are output cables for the station blackout diesel generator and were not designed for long-term water submergence, were in a manhole that was shown to be flooded regularly. Water submergence of energized medium voltage cables, not designed for water submergence, can accelerate deterioration of such cables and potentially affect the ability of the cables to withstand electrical transients. The licensee's procedures and program for medium voltage cables did recognize the issue but did not identify the submergence issue with these cables. In response to the finding the licensee increased the frequency of monitoring for water in the manhole. No violation of NRC requirements was identified. The finding was determined to be more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the station blackout diesel generator was to provide electrical power to emergency core cooling systems (ECCSs) in the event of a loss of all alternating current power. The inspectors determined that the finding was of very low safety significance because it did not result in any inoperability of required equipment and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a cross-cutting aspect in the area of human performance, work control component, because the licensee failed to appropriately plan work activities incorporating risk insights and job site conditions, including environmental conditions, which may impact plant system and components. Specifically, although the intent was to address water submergence of energized medium voltage risk-significant cables to reduce the risk of early cable failure, the licensee failed to identify and address site and component conditions that regularly submerged the energized 4160 volt cable associated with the electrical output of the station blackout diesel generator.
Inspection Report# : 2010002 *(pdf)*

Significance: G Mar 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE POST-MAINTENANCE TESTING OF ECCS ROOM COOLER
A self-revealed finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified for the failure to adequately implement post-maintenance testing (PMT) when restoring emergency core cooling system (ECCS) room cooler 4, in ECCS train 1 pump room, to service after performing preventive maintenance. The licensee did not discover the failure of the room cooler's service water inlet valve during PMT and inappropriately declared the room cooler operable after completion of testing. This condition existed until the following day, when sufficient flow was not obtained during performance testing of the cooler. As an immediate corrective action, an engineering technical evaluation determined that under current conditions, room cooler 5, the other cooler in the room, would provide sufficient heat transfer to maintain the room temperature within the bounds of design basis, thus assuring operability of ECCS train 1 equipment. Also, the work orders for the ECCS room coolers have been revised to have Operations document that the system is at normal operating pressure before

performing a PMT leak check.The finding is more than minor because it is associated with the equipment reliability attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the inadequate PMT did not ensure operability of ECCS room cooler 4, which also affected the operability of ECCS train 1 equipment. The inspectors determined that the finding was of very low safety significance because the inspectors answered “no” to all five screening questions under the mitigating systems cornerstone column. This finding has a cross-cutting aspect in the area of human performance, work practices component, because the licensee did not use appropriate human error prevention techniques. Specifically, the licensee did not properly document that the system reached normal operating pressure or temperature when performing the PMT.

Inspection Report# : 2010002 *(pdf)*

Significance: G Jan 14, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Non-Conservative Calculation of Induction Motor Load on AC Power System
A finding of very low safety-significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the failure to evaluate worst case motor loads for emergency diesel generator and alternating current power system loading under postulated accident conditions. Specifically, the licensee did not use vendor guaranteed motor efficiency data in Calculation C-EE-015.03-008. As a result, motor efficiencies under postulated accident conditions were non-conservatively determined by the licensee for the high pressure injection, decay heat, and containment spray motors. This violation was entered into the licensee’s corrective action program. To demonstrate operability, the licensee performed additional analysis.

The finding was determined to be more than minor because if left uncorrected, the failure to accurately determine loading upon the emergency diesel generators could result in overloading an emergency diesel generator due to the addition of loads. The inspectors determined that the finding was of very low safety-significance because the finding was a design or qualification deficiency confirmed to not result in a loss of operability or functionality. This finding has a cross-cutting aspect in the Resources component of Human Performance because the licensee did not ensure personnel and other resources were adequate to assure nuclear safety. [H.2(b)]
Inspection Report# : 2009007 *(pdf)*

Significance: G Jan 14, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Interim Corrective Actions to Address Structures, Systems, and Components Unprotected from Tornados
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 failure to take interim corrective actions to address potential tornado missile damage to unprotected structures, systems, and components (SSCs) such as the emergency diesel generator (EDG) exhaust vent stacks. The licensee initiated a procedure change to procedure KA-EP-02810 to provide guidance for plant assessment following a tornado, and prepared an operations order to address the diesel storage tank vent lines. This violation was entered into the licensee’s corrective action program.

The finding was determined to be more than minor because tornado missile damage to certain SSCs, such as the EDG exhaust vent stacks, could adversely affect availability, reliability, and capability of systems necessary for safe shutdown, such as the EDGs. Based on a Phase 3 analysis, the inspectors determined that the finding was of very low safety-significance because of low initiating event frequency and conservative assumptions with regards to mitigating capability. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action, in that, the licensee failed to thoroughly evaluate problems, such that the resolutions address causes and extent of conditions, as necessary. [P.1(c)]
Inspection Report# : 2009007 *(pdf)*

Significance: G Dec 31, 2009

Identified By: NRC
Item Type: NCV NonCited Violation
AFW PUMP 1 OPERABILITY WITH REMOVED INSULATION
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 the removal of insulation from auxiliary feedwater pump 1 turbine inlet piping which was left uninstalled for approximately 2 weeks without engineering review required by procedure. Corrective action was to replace the insulation. The finding is more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of the auxiliary feedwater system train 1 which is designed to respond to initiating events to prevent undesirable consequences. Specifically, the removal of insulation from the auxiliary feedwater system would cause additional heat to escape from the turbine during operation and could cause reduction in assumed life of environmentally qualified (EQ) equipment within the room associated with the auxiliary feedwater system. The inspectors determined that the finding was of very low safety significance because it did not result in any inoperability of required equipment 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, work control component, because the licensee did not appropriately coordinate auxiliary feedwater leak inspection activities and incorporate actions to address the operational impact of work activities. Specifically, the licensee did not consider, in the removal of insulation on auxiliary feedwater train 1, procedure requirements provided to ensure that insulation removal activities did not have unnecessary detrimental effects on EQ equipment (H.3(b)).

Inspection Report# : 2009005 *(pdf)*

Significance: G Dec 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INCORRECT WIRING OF SERVICE WATER STRAINER STARTER 2 CONTACTOR CAUSING INOPERABILITY
A self-revealed finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified for the failure to correctly install auxiliary contacts for service water strainer 2 in accordance with the appropriate instructions, procedures, and drawings. The incorrect configuration of the auxiliary contacts resulted in the strainer being unable to perform its design function. Corrective actions included replacement of the starter contactor with the auxiliary contacts in the correct configuration. The finding is more than minor because it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the incorrect wiring of the strainer starter contactor resulted in thermal overload trips of the strainer which caused it to be inoperable. The inspectors determined that the finding was of very low safety significance because service water train 2 remained operable and there was no loss of safety function of the service water system. The inspectors did not assign a cross-cutting aspect associated with this finding because the concern was not indicative of current plant performance. The performance deficiency occurred during a work activity performed in 2004.

Inspection Report# : 2009005 *(pdf)*

Significance: G Dec 31, 2009
Identified By: NRC
Item Type: FIN Finding
FAILURE TO IMPLEMENT SPECIFIED AS-FOUND DIAGNOSTIC TESTING OF MOTOR-OPERATED VALVES
The inspectors identified a finding of very low safety significance for the licensee’s failure to implement motor operated valve (MOV) as-found testing which the licensee specified as a to-be-implemented program improvement. No violation of NRC requirements was identified. Corrective action included changing MOV preventive maintenance tasks to include as-found testing. The finding was determined to be more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent

undesirable consequences. Specifically, the licensee's periodic testing of the capability of MOVs was required to be reviewed and adjusted to appropriately account for actuator degradation to assure MOVs operability between tests. The licensee intended to use as-found testing to verify its actuator degradation assumptions and testing intervals but failed to ensure that as found testing was being accomplished. The inspectors determined that the finding was of very low safety significance because it did not result in any inoperability of required equipment 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, resource component, because the licensee failed to ensure that complete and accurate work packages were available to personnel. Specifically, although the licensee intended to perform as-found diagnostic testing of MOVs, as was advised in governing procedures, work order packages for preventive maintenance activities for MOVs were not modified during the pre-job review process to specify as found testing (H.2.(c)).

Inspection Report# : 2009005 *(pdf)*

Barrier Integrity

Significance: SL-III Jan 14, 2010
Identified By: NRC
Item Type: VIO Violation
Inappropriate Change of Fuel Transfer Tube Seal Configuration
A finding associated with two Apparent Violations of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and 10 CFR 50.71(e) was identified by the inspectors. Specifically, the licensee failed to implement design control measures which assured that the design basis, as specified in the license application, was correctly translated into specifications, drawings, procedures, and instructions and failed to correctly update the Updated Safety Analysis Report (USAR) to reflect the safety analyses associated with License Amendment 240. As a result of these failures, the current fuel transfer tube blind flange seal configuration was contrary to the licensing basis. The successful as-left local leak rate tests performed during the prior refueling outage (Refueling Outage 15) provided reasonable assurance for continued operation. The finding and apparent violations were entered into the licensee's corrective action program.

The inspectors assessed the preliminary significance of the finding using the traditional enforcement policy. The inspectors determined that had the information been complete and accurate at the time of amendment approval, the NRC would have reconsidered the regulatory position or initiated substantial further inquiry. This finding has a cross-cutting aspect in the area of Human Performance Resources, because the licensee did not have complete, accurate and up-to-date design documentation, procedures, and work packages. This cross-cutting aspect is considered reflective of current performance because the procedures in place at the time of this inspection, in addition to the procedures in place during the 1999-2000 timeframe, did not provide adequate guidance. [H.2(c)]

This finding comes from URI 05000346/2009004-03.

In report 2010-007, the associated NOVs were issued for the following Severity Level III Problem:

1. Title 10 of the Code of Federal Regulations (10 CFR), Section 50.71(e) requires, in part, that each licensee periodically update the Final Safety Analysis Report (FSAR) originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. The submittal shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the submittal of the last update to the FSAR under this section. The submittal shall include, in part, the effects of all safety analyses and evaluations performed by the licensee either in support of approved license amendments or in support of conclusions that changes did not require a license amendment in accordance with 10 CFR 50.59(c)(2). By letter dated July 26, 1999, the licensee submitted a safety analysis to the Commission in support of a license amendment to allow no "as-found" local containment leak rate testing of the fuel transfer tubes. The safety analysis identified that each fuel transfer tube had a double O-ring seal and that a review of surveillance test history from September 1991 through May 1998 showed no test failures. Based on this information, the Commission approved a license amendment on March 28, 2000. With this Commission approval, the double O-ring seal configuration with a history of no test failures formed

part of the design basis as specified in the license application.

Contrary to the above, as of November 20, 2009, the licensee failed to include the effects of all safety analyses and evaluations performed by the licensee in support of an approved license amendment into the Updated Final Safety Analysis Report (USAR) submitted to the Commission. Specifically, USAR change notice (UCN) 99-037, approved March 31, 2000, and incorporated into the November 15, 2000, USAR update submittal to the Commission, did not include the effects of all safety analyses and evaluations performed by the licensee in support of an approved license amendment, in that, UCN 99-037 failed to identify that a surveillance of test history from September 1991 through May 1998, using a double O-ring configuration, showed no test failures and that this information was used to support approval of the March 28, 2000, license amendment. As a result of this omission, the licensee failed to perform a 10 CFR 50.59 safety evaluation which addressed the test history of the double O-ring seal configuration for the fuel transfer tubes and associated licensing basis when the configuration was changed to a different configuration.

2. Title 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” requires, in part, measures be established to assure that applicable regulatory requirements and design basis, as defined in Section 50.2 and as specified in the license application, for those structures, systems, and components are correctly translated into specifications, drawings, procedures, and instructions. In addition, 10 CFR Part 50, Appendix B, Criterion III, requires, in part, that design control measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program.

Contrary to the above, in May 2000, the licensee failed to implement design control measures which assured that the design basis, as specified in the license application, was correctly translated into specifications, drawings, procedures, and instructions. In addition, the licensee failed to provide adequate measures for verifying and checking the adequacy of design. Specifically, Equivalent Replacement Resolution (ERR) 60-0003-070 permitted changing the fuel transfer tube blind flange seal configuration from a double O-ring configuration having a test history of no “as-found” local leak rate test failures to a flat gasket configuration without a comparable test history. ERR 60-0003-070 did not specify a suitable testing program for the flat gasket configuration. The change in configuration permitted by ERR 60-0003-070 was contrary to the licensing basis which became effective March 28, 2000, through approval of a license amendment. As a result of this failure, a fuel transfer tube blind flange seal configuration contrary to the design basis, without an established test history, and without a suitable confirmatory testing program was installed during the refueling outage completed on May 18, 2000.

This is a Severity Level III problem (Supplement VII).

The above issued on April 30, 2010.
Inspection Report# : 2009007 *(pdf)*
Inspection Report# : 2010007 *(pdf)*

Significance: G Jan 14, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Unqualified Bonding Agent Used for Containment Penetration Seal
A finding of very low safety-significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the failure to ensure that the bonding material used to join bulk O-ring ends together for the fuel transfer tube seal was suitable for the containment penetration application. Specifically, the licensee failed to review the suitability of the bonding material used for connecting the ends of bulk O-rings used in the fuel transfer tube blind flanges. The bonding material used had a safety-related function of maintaining containment integrity. The licensee determined the current configuration resulted in an operable but non-conforming condition. This violation was entered into the licensee’s corrective action program.

The finding was determined to be more than minor because the use of the unqualified bonding material resulted in the indeterminate condition of one of two seals for the fuel transfer tube blind flanges. The inspectors determined that the finding was of very low safety-significance because the finding did not represent an actual open pathway in the physical integrity of reactor containment. This finding has a cross-cutting aspect in the area of Human Performance Resources because the licensee did not have complete, accurate and up-to-date design documentation, procedures, and

work packages. [H.2(c)]
Inspection Report# : 2009007 *(pdf)*

Significance: G Jan 14, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for a Loss of Coolant Accident Outside Containment
A finding of very low safety-significance and associated Non-Cited Violation of Technical Specification (TS) Section 5.4.1, “Procedures,” was identified by the inspectors for the failure to provide adequate procedural direction to respond to a large loss of coolant accident (LOCA) outside containment. Specifically, emergency operating procedure DB-OP-02000, “RPS, SFAS, SFRCS Trip, or SG Tube Rupture,” was inadequate, in that, procedural direction for a large LOCA outside containment was not provided.

The finding was determined to be more than minor because the failure to provide adequate procedural direction for a large LOCA event outside containment affected the cornerstone objective of providing reasonable assurance that the physical design barrier of containment is maintained to protect the public from radionuclide releases caused by accidents or events. A Phase 3 analysis was performed, which determined that the issue was of low safety-significance based on the relatively low initiating event frequency and credit for recovery. The inspectors did not identify a cross-cutting aspect associated with this finding because this was a legacy design issue, therefore was not reflective of current performance.
Inspection Report# : 2009007 *(pdf)*

Significance: G Dec 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
TWO REQUIRED TRAINS OF CONTAINMENT AIR COOLER FANS INOPERABLE
A self revealed finding of very low safety significance and associated NCV of Technical Specification (TS) Limiting Condition for Operation 3.6.6, Condition E, was identified for having two required trains of containment air cooler (CAC) fans inoperable for a period longer than allowed by TS. An inadequate design change installed Potter and Brumfield (P&B) rotary relays in the containment air cooling fan circuitry. The use of the P&B relays in this application could cause a failure of the CAC to start in slow speed upon receipt of a valid safety features actuation signal. As an immediate corrective action, the operating CAC fans were shifted from fast speed alignment to the slow speed alignment used for accidents, which eliminated the relay issue and allowed them to be declared operable. The P&B relay contacts have since been modified to alter the CAC control circuitry and correct the deficiency. The finding was determined to be more than minor because the finding was similar to IMC 0612, Appendix E, Example 3.a, in that a design modification error was significant enough that the modification required revision or rework to resolve operability concerns. Specifically, the design change that installed the P&B relays in the CAC fan circuitry rendered both trains of containment air cooling inoperable. The finding affected the Barrier Integrity cornerstone since the CACs are designed to limit the pressure and temperature in containment following a design basis loss of coolant accident. The finding was determined to be of very low safety significance because the inspectors answered “no” to all four screening questions under the Containment Barrier column in IMC 0609, “Significance Determination Process,” Appendix A, Attachment 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” Table 4a. The inspectors did not identify a cross-cutting aspect associated with this finding because the concern was not indicative of current plant performance. The inadequate design change to install the P&B relays was implemented in 2001.

Inspection Report# : 2009005 *(pdf)*

Emergency Preparedness

Significance: W Nov 23, 2009
Identified By: NRC

Item Type: VIO Violation
Failure to Use Classification Scheme for an Alert.
A licensee identified finding and associated Apparent Violation (AV) of 10 CFR 50.54(q) and 10 CFR 50.47(b)(4) was identified for the failure to implement the emergency classification and action level scheme during an actual event to declare an Alert after an explosion in the switchyard. The operators failed to verify, assess, and classify the situation in conjunction with the Davis-Besse Emergency Plan "Table of Emergency Action Level Conditions." Specifically, immediately following an electrical fault and catastrophic failure of a voltage transformer in the switchyard resulting in an explosion, fires, and damage to several switchyard components which affected plant operations, the operators failed to recognize the hazard to the station's operations met the emergency action level conditions for declaring an Alert. The station entered a Limiting Condition for Operation per Technical Specifications.

The finding was screened to be more than minor because the failure to declare an Alert adversely affected the Reactor Safety - Emergency Preparedness Cornerstone objective to ensure the licensee is capable of implementing adequate measures to protect the health and safety of the public during a radiological emergency. The performance deficiency has the attribute of Emergency Response Organization Performance associated with Actual Event Response. The performance deficiency involving the failure to properly utilize the emergency classification and action level scheme during an actual Alert meets the criteria of the Emergency Preparedness SDP for a failure to implement a risk significant planning standard of event classification. The failure to classify was a result of the licensee's errors in recognition, was not due to competing safety-related activities, and denied offsite authorities the opportunity to make decisions regarding protecting public health and safety. The finding was screened to be a failure to implement the risk significant planning standard associated with classification at the Alert level and was screened to be preliminarily White. Additionally, the cause of the deficiency had a cross cutting component in the area of Human Performance. Specifically, the licensee failed to make safety-significant decisions using a systematic process and failed to obtain adequate reviews on the decisions (H.1(a)). (Section 4OA3)

Final WHITE finding issued in report 05000346/2010-502 dated February 25, 2010.
Inspection Report# : 2009503 *(pdf)*
Inspection Report# : 2010502 *(pdf)*
Inspection Report# : 2010503 *(pdf)*

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

Significance: G Mar 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation

UNATTENDED TRANSIENT COMBUSTIBLES WITHIN DRY FUEL STORAGE EXCLUSION AREA
The inspectors identified an NCV of 10 CFR 72.212, “Conditions of general license issued under 72.210,” having very low safety significance for non-compliance with transient combustible material control procedures required for the Davis-Besse spent fuel dry horizontal storage modules (HSMs). A mobile crane and a utility truck were parked and unattended within an area designated by signs as a 75 foot exclusion area around the HSMs. The issues identified were not in compliance with the licensee’s procedures, specifically DB FP 7 for control of combustible transient material. Control of transient combustible material was required to ensure conformance with temperature limitations for the HSMs as outlined in the NRC-issued HSM Certificate of Compliance. Procedure DB-FP-7 specifically requires that vehicles within 75 feet of the HSMs shall have a vehicle attendant at all times. The licensee re-emphasized the procedural requirements with involved personnel. This finding was greater than minor because it was associated with the protection against potential fire damage to the HSMs, and, if left uncorrected, would become a more significant safety concern since repeated presence of unattended combustible material in the vicinity of the HSMs increased the vulnerability of the HSMs to damage from a fire. Additionally, contractor personnel not adhering to station procedures, if left uncorrected, could become a more significant issue. The inspectors determined that the finding was not suitable for SDP evaluation because the noncompliance did not involve permanently installed plant equipment. The finding was reviewed by regional management, in accordance with IMC 0609, Appendix M and determined to be of very low safety significance. The unattended time was short and the equipment was placed in a location easily visible to plant locations that are always manned. The finding is related to the cross-cutting area of Human Performance because licensee personnel did not ensure sufficient oversight of contractor work activities to ensure compliance with site procedures associated with protection of the dry spent fuel storage modules.
Inspection Report# : 2010002 *(pdf)*

Last modified : November 29, 2010