Davis-Besse
3Q/2007 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2007
Identified By: NRC
Item Type: FIN Finding
IMPROPER DESIGN OF A WELD PATCH FOR A CRACK IN CIRCULATING WATER PIPE
The inspectors identified a finding for the licensee's failure to properly design a temporary repair for a through wall pipe crack found in the circulating water system. Specifically, the inspectors identified that a stress intensification factor, used in determining the minimum required pipe wall thickness, repair plate thickness, and repair fillet weld size, was improperly calculated. Once identified, the licensee entered the issue into their corrective action program and appropriately modified the design and supporting calculations. No violation of regulatory requirements occurred. The inspectors determined that the finding was more than minor because, if the original design was left uncorrected, a more significant safety concern could have been created. Additionally, the finding was more than minor, as shown in examples of minor issues, IMC 0612, Appendix E, example 3a, because the calculation errors were significant enough that the modification required revision. The finding was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; did not increase the likelihood of a fire; and did not involve degradation of a barrier specifically designed to mitigate flooding or involve the total loss of any safety function. The inspectors also determined that the cause of the finding was related to the cross-cutting area of human performance with the component of work practices (H4.(a)) in that self and peer checking did not identify calculation issues with the original design.
Inspection Report# : 2007004 *(pdf)*

Mitigating Systems

Significance: G Jun 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER IMPLEMENTATION OF INDEPENDENT VERIFICATION REQUIREMENTS IN PERFORMANCE OF INSTRUMENT AND CONTROL SURVEILLANCE TEST PROCEDURES FOR TS REQUIRED MITIGATION SYSTEMS
A non-cited violation (NCV) of Technical Specification 6.8.1 was identified by the NRC regarding adherence to the procedural requirements for independent verifications required by safety-related surveillance procedures for instrumentation and control mitigation systems. The licensee used procedure-step verification techniques in their instrumentation and control department that were not in compliance with their procedures. Upon identification, the licensee entered the issue into their corrective action program and instructed personnel to use the procedure-required independent verification methodology. The finding was more than minor because the finding was associated with the configuration control and testing procedure quality attributes of the mitigating systems cornerstone. This finding affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The improper completion of procedure-required verifications provided less than adequate assurance that important components of mitigation systems were properly positioned. The inspectors determined that the finding was of very low safety significance because there was no actual loss of safety function of mitigation systems. The inspectors also determined that the finding affected the cross-cutting area of human performance. The licensee's work practices did not support effective communication of the proper application of human error prevention techniques specified in instrument testing procedures, and supervisory oversight of the instrument testing work did not support proper application of the specified technique (H.4(b)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Mar 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CONDUCT SIMULATOR MALFUNCTION PERFORMANCE TESTING IN A SUFFICIENT MANNER TO DEMONSTRATE FIDELITY
The inspectors identified a Non-Cited Violation (NCV) of 10 CFR 55.46(d)(1), "Continued assurance of simulator fidelity," when the facility licensee failed to conduct a simulator "Generator Trip" malfunction performance test in a manner sufficient to ensure that simulator fidelity had been demonstrated and met. The "Generator Trip" malfunction performance test is one of 25 tests (Item Number 16) required by Section 3.1.4 in ANSI/ANS-3.5-1998, "Nuclear Power Plant Simulators for Use in Operator Training." The facility licensee is committed to adhering to the requirements of this standard. Specifically, the licensee failed to adequately conduct the required "Generator Trip" malfunction performance testing to ensure that simulator fidelity was demonstrated and met to allow conduct of the generator trip evolution. The licensee's corrective actions included revising the simulator "Generator Trip" test procedure, and then performing the revised procedure to adequately test the generator trip malfunction. This finding was considered more than minor because of the realistic potential of providing negative training based on significant simulator deficiencies compared to the actual plant. This resulted from inadequate testing of the simulator to assure that the simulator appropriately replicated the actual plant and would not negatively affect operator actions on the actual plant. The finding was of very low safety significance because the discrepancy was on the simulator and the real plant functioned properly. Furthermore, no actual plant emergency occurred and there was no actual impact on equipment or personnel safety.
Inspection Report# : 2007002 *(pdf)*

Significance: G Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER EVALUATION OF PLANT RISK
A finding of very low safety significance and an associated NCV of 10 CFR 50.65(a)(4) was identified by the inspectors when the licensee failed to properly evaluate plant risk during station blackout diesel generator (SBODG) maintenance activities during the week of October 8, 2006. Probability risk assessment engineers were aware in December 2005 that the risk associated with the unavailability of an emergency diesel generator (EDG) or an SBODG had been revised from Green to Yellow. However, licensee personnel failed to update the probabilistic risk assessment model or risk profile program used for risk determination to reflect the revised risk level for the SBODG, although the risk program had been updated for other components. Consequently, during SBODG maintenance activities during the week of October 8, 2006, plant risk was treated as Green when it was actually Yellow and compensatory actions to address this increase in risk were not implemented, as required. As part of the licensee's immediate corrective actions, licensee personnel updated the risk profile to properly reflect the risk associated with the unavailability of an EDG and SBODG. The finding was more than minor because the finding was related to a licensee risk assessment that contained incorrect assumptions that had the potential to change the outcome of the assessment. The finding was determined to be of very low safety significance because, although the SBODG was unavailable, the remaining EDGs could have performed their safety function in the event of a loss of offsite power. The inspectors also determined that the cause of the finding was related to the cross-cutting area of human performance because licensee personnel failed to communicate decisions and the basis for decisions to personnel who had a need to know that information in a timely manner.
Inspection Report# : 2006005 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
LICENSED REACTOR THERMAL POWER EXCEEDED DURING NORMAL PLANT OPERATIONS
A self-revealing NCV of the plant operating license was identified during normal plant operations when on June 8,

2007, control room personnel observed that the plant's computer was not scanning reactor coolant letdown flow after work was performed to upgrade computer programs. Letdown flow was a variable used in the computer's calculation of reactor core power. The period of time that the variable was not being scanned was approximately 15 hours. That caused calculated reactor core power to be displayed as 0.15 percent lower than actual, which resulted in the plant exceeding 100 percent power when averaged over an 8-hour period. Exceeding an 8 hour average of 100 percent power was a violation of the plant operating license. The finding was more than minor because it was associated with the fuel cladding thermal limits design control attributes of the barrier integrity cornerstone and did affect the cornerstone objective of reasonable assurance that the fuel cladding physical design barrier provide protection from radio nuclide release caused by accidents or events. The finding is of very low safety significance because the issue did not have any measurable impact on the fuel cladding. This finding was also associated with the cross-cutting area of human performance because in the work control process the operational impact of computer-upgrade work activities, that affected calculated reactor core power, was not appropriately considered (H.3(b)).

Inspection Report# : 2007003 *(pdf)*

Emergency Preparedness

Significance: G Jun 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
OUT OF SERVICE SEISMIC FORCE MONITORING EQUIPMENT AFFECTING EMERGENCY PLAN RESPONSE
Inspectors identified an NCV of 10 CFR 50.54(q) and 50.47.b(4) for the failure to provide alternate event assessment methods while the seismic force monitor was out-of-service during the period of March 29 through April 10, 2007. The licensee failed to provide a means for the emergency director to promptly classify seismic events at the alert or site area emergency levels while the seismic force monitor utilized by the operators (emergency director) was out of service. The licensee restored the seismic force monitor to service on April 10, 2007, which restored assessment capability. The issue was more than minor because it was associated with the response organization planning standards attribute of the emergency preparedness cornerstone. This issue affected the cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding is of very low safety significance because it did not result in the failure or degradation of a risk significant planning. Also, the unavailability of the seismic monitor did not prevent the declaration of a Site Area Emergency or Alert classification. This finding was also associated with the cross-cutting area of human performance. Licensee's work control process failed to establish compensatory measures for the out-of-service duration of the seismic force monitor (H.3(a)).

Inspection Report# : 2007003 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2006
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ADEQUATELY IMPLEMENT ALARA RADIOLOGICAL DOSE CONTROLS
A finding of very low safety significance was identified by the inspectors when licensee personnel failed to adequately implement radiological dose controls as a result of ineffective radiological/ALARA planning and controls during Refueling Outage 14 (RFO14). The collective occupational radiation dose received by individuals for some work activities significantly exceeded the planned or intended dose that the licensee determined was ALARA for those work activities. The finding was more than minor because the finding was associated with the Occupational Radiation Safety Cornerstone attribute of ALARA planning/dose projection, and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding was determined to

be of very low safety significance because, although the finding involved ALARA planning and controls, the 3-year rolling average exposure for Davis-Besse was less than the SDP Green-to-White threshold of 135 person-rem for pressurized water reactors, and the finding did not involve an overexposure, a substantial potential for an overexposure, or an impaired ability to assess dose. As part of the licensee's corrective actions to address this issue, additional rigor in outage planning was planned. The inspectors also determined that the cause of the finding was related to the cross-cutting area of human performance because licensee personnel failed to effectively plan work activities to adequately implement radiological dose controls.
Inspection Report# : 2006005 *(pdf)*

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, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE CORRECTIVE ACTIONS (ISFSI)
The inspectors identified a Severity Level IV Non-Cited Violation of the Certificate of Compliance, No. 1004, Condition 1.1.3, Quality Assurance and 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to correct a condition adverse to quality. Specifically, the licensee failed to remove transient combustible material within 50 feet from the Horizontal Storage Modules (HSMs) to restore compliance with the NRC issued 10 CFR Part 72 license and its fire protection procedure. After the issue was identified, the licensee took immediate corrective actions to remove all transient combustible material inside the 75-foot zone around the HSMs and generated a condition report to enter this issue into the corrective action program. This finding was more than minor because the lack of adequate corrective actions resulted in a more significant safety concern since the prolonged presence of combustible materials within 50 feet of HSMs for approximately 10 months increased the vulnerability of the HSMs to a fire. In addition, the lack of adequate corrective actions had the potential to become a programmatic issue and could have adversely affected NRC regulatory oversight and enforcement processes, as the agency relied on the licensee's adequacy of corrective actions to correct an NRC identified violation. The inspectors determined that the finding was not suitable for SDP evaluation because the noncompliance involved 10 CFR Part 72 dry fuel storage activities. Therefore, this finding was reviewed by Regional Management and dispositioned using traditional enforcement. The finding was determined to be of very low safety significance. The combustible material was contained within metal containers which could have mitigated the spread of a potential fire. Also, the plant fire brigade could have been dispatched to extinguish a fire involving the transient combustible material before the HSMs incurred significant damage. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution because licensee personnel failed to thoroughly evaluate the problem (P.1(c)).
Inspection Report# : 2007002 *(pdf)*

Significance: G Nov 17, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO INITIATE A CONDITION REPORT FOR CONDITIONS ADVERSE TO QUALITY

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” when licensee personnel failed to generate condition reports or notifications to identify deficiencies associated with safety-related equipment. In particular, the inspectors identified eight instances between April 2006 and November 2006 in which licensee personnel failed to document degraded declutch operators associated with safety-related MOVs although personnel were aware of the condition. As part of the licensee’s immediate corrective actions, notifications and/or condition reports were generated to ensure that the identified deficiencies were entered into the corrective action program. The inspectors determined that the finding was more than minor because the issue was associated with the Equipment Performance 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 to prevent undesirable consequences. The inspectors determined that the issue was of very low safety significance because the finding did not represent an actual loss of a safety function of a system. The cause of the finding was related to the corrective action program aspect of the cross-cutting area of Problem Identification and Resolution because the implementation of the licensee’s corrective action program did not identify declutch operator degradation completely, accurately, and in a timely manner commensurate with the safety significance of the issue.
Inspection Report# : 2006007 *(pdf)*

Significance: N/A Nov 17, 2006
Identified By: NRC
Item Type: FIN Finding
PI&R Summary
The inspectors concluded that, overall, problems were properly identified, evaluated, and corrected. Generally, licensee personnel properly prioritized and evaluated issues. However, the inspectors identified numerous examples in which degraded manual declutch operators associated with safety-related motor-operated valves (MOVs) were not identified in the corrective action program for resolution. Root cause evaluations for significant problems were appropriately detailed. Corrective actions to address problems were generally adequate. Audits and self-assessments were effective in identifying deficiencies and recommendations were appropriately captured. The use of operating experience was adequate. The inspectors did not identify any weaknesses in the Employee Concerns Program (ECP) that contributed to station performance deficiencies or adversely impacted the establishment of a Safety Conscious Work Environment (SCWE).
Inspection Report# : 2006007 *(pdf)*