

Davis-Besse

2Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2012

Identified By: Self-Revealing

Item Type: FIN Finding

OIL SAMPLE DRAWN FROM RUNNING RCP RESULTED IN ENTRY INTO ABNORMAL OPERATING PROCEDURE AND RCP SHUTDOWN

A self-revealed finding of very low safety significance was identified for the licensee's failure to establish and implement technically appropriate work instructions for the drawing of oil samples from the reactor coolant pump (RCP) lower bearing reservoirs, such that when an oil sample was drawn from the RCP 1-2 lower motor bearing on May 6, 2012, the lower motor bearing was damaged by the excessive heat generated due to a lack of adequate lubrication, and control room operators were forced to conduct a rapid shutdown of the pump. Specifically, the approved work instructions called for the oil sample to be obtained with the RCP running, a practice contrary to the manufacturer's recommendations. The finding was determined to be of more than minor significance because it was associated with the Initiating Events cornerstone attribute of procedure quality and had adversely affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, plant stability was upset when control room operators were forced to respond to an abnormal and emergent condition on RCP 1-2 when deficient written work instructions for the collection of RCP motor bearing oil samples, calling for those oil samples to be drawn with the pumps running, caused the lower motor bearing on RCP 1 2 to be damaged by a loss of adequate lubrication. 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 in Mode 3 prior to the plant reaching the conditions for placing the Decay Heat Removal System in service, the inspectors assessed the significance of the finding using the criteria for transient initiators for reactors operating at power. The inspectors determined that the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. 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, Work Control component, because the licensee did not appropriately plan the work activity for the collection of RCP oil samples to incorporate risk insights that were available. Specifically, there was sufficient information available to the licensee from both the RCP manufacturer and other industry peers, including a sister facility within the licensee's own nuclear fleet, that indicated the risk associated with obtaining oil samples from running RCPs, but these risk insights were not utilized. (H.3(a))

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

INADEQUATE PROCEDURE RESULTED IN WATER INTRUSION INTO SAFETY-RELATED MOTOR CONTROL CENTER

A self-revealed finding of very low safety significance was identified for the licensee's failure to establish, implement, and maintain technically adequate procedures to permit the proper switching of feedwater sources for the station's auxiliary boiler, such that when the switching of feedwater sources from demineralized water to the station's normal condensate system took place per approved procedures, there were detrimental results. Specifically, the approved procedures for this activity relied upon a check valve to keep the demineralized water header from being exposed to greater pressure than its design. When that check valve failed to function as designed, failure of demineralized water system components and the inadvertent deluge and failure of safety-related electrical equipment resulted. The finding was determined to be of more than minor significance because it was associated with the Initiating Events Cornerstone attribute of procedure quality and had adversely affected the associated cornerstone objective to limit the

likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, electrical power to an entire string of safety related 480 Vac motor control center (MCCs) (i.e., E11A, E11B, E11C, E11D, and E11E) was forced to be interrupted when a deficient procedure for the operation of the station's auxiliary heating boiler caused a significant amount of water to be deluged onto MCC E11C, resulting in an electrical short and fire within the MCC. 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 licensee was in a cold shutdown (Mode 5) condition, the inspectors consulted Checklist 3, "PWR Cold Shutdown and Refueling Operation: Reactor Coolant System (RCS) Open and Refueling Cavity Level Less Than 23 Feet or RCS Closed and No Inventory in the Pressurizer; Time to Boiling Less Than 2 Hours." The inspectors determined that the finding did not adversely impact any shutdown defense-in-depth or mitigation attributes, 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. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program (CAP) component, because the licensee did not take appropriate corrective actions to address the safety issue in a timely manner, commensurate with the safety significance and complexity. Specifically, the licensee had multiple previous opportunities to have appropriately diagnosed and corrected the issue, but failed to do so. (P.1(d))
Inspection Report# : [2011005](#) (pdf)

G

Significance: Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INCOMPLETE SURFACE EXAMINATION OF THE REPLACEMENT REACTOR VESSEL CLOSURE HEAD

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," were identified by the inspectors for the licensee's failure to perform an adequate review of fabrication records to ensure material procured from a contractor (replaced reactor vessel closure head) met the construction code (CC). Specifically, the accessible surfaces of the 60 closure head flange stud holes were not subjected to dye penetrant or magnetic particle examinations as required by the CC. As a corrective action, the licensee completed magnetic particle examination of the accessible surfaces of the 60 flange stud holes prior to placing the vessel head into service. The finding was determined to be more than minor because it was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the licensee would not have completed surface examination of the 60 flange stud holes to ensure unacceptable material flaws (e.g., cracks) were not placed in service. Because material flaws such as cracks serve as stress risers that reduce the ability of the replacement reactor vessel closure head to withstand failure by crack propagation during design basis events (e.g., pressurized thermal shock), they would place the reactor coolant system at an increased risk for through-wall leakage and/or failure. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Initiating Events Cornerstone. Because this finding was identified prior to placing the replacement reactor vessel closure head in service and no fabrication flaws were identified, the inspectors answered "no" to the SDP Phase 1 screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any reactor coolant system leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?" Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Decision Making because the licensee staff failed to demonstrate that nuclear safety was an overriding priority in decisions affecting the replacement reactor vessel closure head. Specifically, the failure to perform an adequate review of the replacement reactor vessel closure head fabrication records was caused by the licensee's decision to not review the manufacturer's interpretations and application of the CC rules. (H.1(b))

Inspection Report# : [2011005](#) (pdf)

G**Significance:** Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE WELD RECORDS FOR CRDM HOUSINGS

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

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

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

Mitigating Systems

G**Significance:** Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN SAFETY-RELATED DC SYSTEMS DESIGN CONTROL

The inspectors identified a finding, with two examples, of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain the electrical separation of the redundant safety-related direct current (DC) systems in compliance to the design and licensing bases. The licensee initiated corrective actions including opening the breakers to the non-safety-related loads inside containment and setting the automatic transfer switches (ATSs) to prevent auto-transfer of loads. The performance deficiency was determined to be more than minor because the issue was associated with the Mitigating Systems Cornerstone attribute of design control, 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 failure to address the impact of high-impedance ground faults in non-safety equipment on safety-related DC sources and the failure to maintain compliance to RG1.6 when installing ATSs between redundant DC power sources impacted the reliability of the DC power system. The inspectors evaluated the finding to be of very low safety significance (Green) using IMC 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone, the inspectors answered no to all five screening questions. Based on the date of occurrence of this violation (more than 20

years old), the inspectors did not identify a cross-cutting aspect as the finding was not representative of current performance.

Inspection Report# : [2012002](#) (pdf)

G

Significance: Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

DECAY HEAT PUMP 1-1 DAMAGED AND RENDERED INOPERABLE BY PERSONNEL CLIMBING ON EQUIPMENT

A self-revealed finding of very low safety significance (Green) was identified when low pressure injection equipment was damaged by operators attempting to access an overhead valve. Specifically, by climbing and standing on sensitive plant equipment, the licensee failed to comply with the standards and expectations for accessing plant equipment contained in procedure NOP-OP-1002, "Conduct of Operations". An immediate corrective action was taken to repair the damaged temperature element and restore low pressure injection pump no. 1 to operable status. A long-term solution to providing access to the overhead valve is under evaluation in the corrective action program. The inspectors determined that the finding was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Human Performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the damage caused when falling from plant equipment rendered low pressure injection train 1 inoperable. The inspectors evaluated the finding using IMC 0609, Attachment 4, Phase 1 – Initial Screening and Characterization of Findings, using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone. The finding screened as very low safety significance because the inspectors answered "no" to the screening questions in Table 4a. Specifically, the finding was not a design or qualification deficiency, did not represent a loss of system safety function, did not represent actual loss of safety function of a single train for greater than its TS allowed outage time, and the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding had a cross-cutting aspect in the area of Human Performance, Work Control Component, because the licensee did not plan and coordinate work activities consistent with nuclear safety. Specifically, the licensee did not appropriately plan for job site conditions impacting human performance since an appropriate available method for accessing CC258 was not evaluated. (H.3(a))

Inspection Report# : [2011005](#) (pdf)

G

Significance: Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

AIR VOIDS IN COMPONENT COOLING WATER SYSTEM CAUSED BY INADEQUATE FILL AND VENT PROCEDURE

A finding of very low safety significance and an associated NCV of TS 5.4.1(a) were identified by the inspectors for the licensee's failure to establish, implement, and maintain technically adequate procedures to cover the restoration (i.e., filling and venting) of the component cooling water (CCW) system following maintenance activities. Specifically, a complex series of fill and venting evolutions to restore the system had been required following extensive maintenance activities; these evolutions did not ensure that all the air was vented from the system, such that later ultrasonic testing performed by the licensee identified a significant air void, approximately 19 cubic feet, in a CCW pump 3 horizontal suction piping segment. The issue was entered into the licensee's CAP as CRs 2011-05542 and 2011-05831. The finding was determined to be of more than minor safety significance because the issue was associated with the Mitigating Systems Cornerstone attribute of procedure quality, and had adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, CCW, a mitigating system, had its reliability adversely impacted by the lack of appropriate fill and venting procedural guidance. 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 licensee was conducting RCS fill and venting activities and plant conditions were in transition, the inspectors consulted both Checklist 2, "PWR Cold Shutdown Operation: RCS Closed and Steam Generators Available for Decay Heat Removal

(Loops Filled and Inventory in the Pressurizer); Time to Boiling Less Than 2 Hours,” and Checklist 3, “PWR Cold Shutdown and Refueling Operation: RCS Open and Refueling Cavity Level Less Than 23 Feet or RCS Closed and No Inventory in the Pressurizer; Time to Boiling Less Than 2 Hours.” The inspectors determined that the finding did not adversely impact any shutdown defense in-depth or mitigation attributes on either 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. This finding had a cross-cutting aspect in the area of Human Performance, Resources component, because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety. Specifically, the licensee’s procedures and guidance for the restoration of the CCW system following outage maintenance activities did not ensure that the system was fully filled and properly vented prior to operation. (H.2(c))

Inspection Report# : [2011005](#) (pdf)

Significance: SL-IV Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

REACTIVITY MANIPULATIONS PERFORMED BY NON-LICENSED INDIVIDUAL

The inspectors identified a SL IV NCV of 10 CFR 54(i) when a non licensed member of the licensee’s engineering staff was observed operating switches that directly caused the insertion of various control rods that were being subjected to timing tests. Specifically, the inspectors observed that key switches used to interrupt power to the control rod drives and cause control rod insertion were manipulated by a member of the licensee’s engineering staff, and not a licensed individual. The issue was entered into the licensee’s CAP as CR 2011-06318. The issue was determined to be associated with the Mitigating Systems Cornerstone attribute of procedure quality. However, the inspectors subsequently determined that the issue had not adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because of several factors, the inspectors determined that the issue was of minor safety significance and, as such, did not constitute a finding. These factors included:

- All control rod group withdrawal activities were accomplished from the control room by an on-watch licensed reactor operator;
- All activities in the electrical penetration room were performed in accordance with an approved written test procedure, and under the direct supervision of a licensed Senior Reactor Operator;
- The operation of the local key switches in the electrical penetration room, albeit by a non-licensed individual, could only cause control rod insertion. There was no withdrawal capability; and
- The individual operating the local key switches in the electrical penetration room was always in continuous communication with the on-watch licensed reactor operator in the control room.

The inspectors determined that the issue was subject to the NRC’s traditional enforcement process as an issue that had the potential to impact the agency’s ability to perform its regulatory function. Specifically, the NRC’s Reactor Oversight Process fundamentally assumes that only duly licensed individuals are allowed to manipulate reactor controls and alter core reactivity or make changes to reactor power, and that all licensed individuals perform their licensed duties in accordance with any restrictions associated with their individual licenses. The inspectors conferred with NRC Region III management and members of the enforcement staff and determined that, because of the factors noted above, the issue constituted a SL IV violation that resulted in no, or relatively inappreciable, safety consequences. Because this issue was dispositioned through the traditional enforcement process and had no Reactor Oversight Process aspects, there was no cross-cutting aspect associated with the violation.

Inspection Report# : [2011005](#) (pdf)

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE INFORMATION ON VALVE INTERLOCKS RESULTED IN INADVERTENT OPERATION AND LOSS OF COMPONENT COOLING WATER SURGE TANK INVENTORY

A finding of very low safety significance and an associated NCV of TS 5.4.1(a) were identified by the inspectors for the licensee’s failure to establish, implement, and maintain technically adequate procedures and drawings to cover the restoration (i.e., motor controller re-energization) of components in the CCW system following maintenance activities. Specifically, as circuit breaker BE1161 was closed to restore power to motor-operated valve (MOV) CC2645, the train 1 auxiliary building return header isolation valve, the MOV unexpectedly stroked open resulting in

a rapid loss of CCW system inventory and a low level alarm for the CCW surge tank. Subsequent investigation revealed that notes describing the operating logic for CC2645 on approved operational drawings were less than adequate. The issue was entered into the licensee's CAP as CR 2011-04078. The finding was determined to be of more than minor safety significance because the issue was associated with the Mitigating Systems Cornerstone attribute of procedure quality, and had adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, CCW, a mitigating system, had its reliability adversely impacted by the inadequate procedural guidance for motor controller restoration. 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. This finding had a cross-cutting aspect in the area of Human Performance, Resources component, because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety. Specifically, the licensee's procedures, drawings and guidance for the restoration of the CCW system following outage maintenance activities did not ensure that the system was properly aligned prior to restoration of electrical power to MOV CC2645. (H.2(c))
Inspection Report# : [2011005](#) (pdf)

G

Significance: Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ECCS ROOM COOLER VALVE POSITION

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

The inspectors determined that the finding was more than minor because it was associated with the Mitigating Systems Cornerstone attributes of Design Control and Configuration Control and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, an incorrect throttle position of the ECCS room cooler outlet valves could have an effect on the reliability or availability of ECCS train 2 equipment. A past operability review determined that the as-found flowrate to ECCS room coolers 1 and 2 was reduced with outlet valves SW87 and SW103 mispositioned, however, the flow was sufficient to not affect the operability of ECCS room coolers 1 and 2. Using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone, the finding screened as very low safety significance (Green) because the inspectors answered "No" to the screening questions in Table 4a. Specifically, the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Human Performance, Resources component, because the licensee did not ensure that personnel, equipment, procedures, and other resources are available and adequate to assure nuclear safety. Specifically, the licensee did not process a document change request to update procedures used to verify SW valve alignments. (H.2(c)) (Section 1R15)
Inspection Report# : [2011004](#) (pdf)

G

Significance: Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TAKE TIMELY CORECTIVE ACTIONS

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V,

“Procedures, Instructions, and Drawings,” were identified by the inspectors for the licensee’s failure to correct deficiencies, deviations, and/or nonconformances associated with safety related systems, structures, and components (SSCs) in a timely manner, as required by the licensee’s Quality Assurance Program Manual (QAPM) and CAP implementing procedure. Specifically, the inspectors identified a trend on the part of the licensee to leave certain low significance/low priority corrective actions for various safety related SSCs completely unscheduled and unaddressed, in some cases for extensive periods of time that ranged up to 8 years. The licensee initiated their own review to determine the full extent of condition of this issue, and entered the issue into their CAP as CR 2011 00385.

The finding, which was associated with the Mitigating Systems Cornerstone, was determined to be of more than minor significance because the issue represented a programmatic deficiency associated with the licensee’s CAP that if left uncorrected would have the potential to lead to a more significant safety concern. Using the Phase 1 SDP worksheet for the Mitigating Systems Cornerstone, the inspectors determined that the finding was of very low safety significance because each of the SSC deficiencies, deviations, and/or nonconformances identified by the inspectors represented an issue that did not result in the loss of operability or functionality. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, for certain deficiencies, deviations, and/or nonconformances associated with safety related SSCs the licensee took no corrective actions whatsoever, instead allowing the corrective actions associated with those issues to be placed in the plant’s backlog of unscheduled work. (P.1(d)) (Section 4OA2.3).

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

Barrier Integrity

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF WELD FILLER METAL ELECTRODES

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings” were identified by the inspectors for the licensee’s failure to control weld rod oven temperature in accordance with procedure WFMC-1 during a rebar splice weld completed for restoration of the shield building access opening. As a corrective action, the licensee removed the welder’s certification to weld rebar and documented this issue in CR 2011 05536. To ensure that the horizontal rebar splice weld 2H-03R was not affected by delayed hydrogen cracking, the licensee’s vendor examined the weld splice 48 hours after fabrication and did not identify cracks. The finding was determined to be more than minor because the finding was associated with the Barrier Integrity Cornerstone attribute of Configuration Control and adversely affected the cornerstone objective to provide reasonable assurance that the physical design barriers (e.g., containment) protect the public from radionuclide releases caused by accidents or events. The shield building is part of the containment system. Absent NRC identification, rebar welds would have been fabricated with electrodes exposed to ambient temperatures for excessive periods of time creating a condition that results in hydrogen induced weld cracking. Rebar splice material with cracks returned to service would increase risk for shield building failure during design basis events such as wind driven missile impact or earthquake induced loads. The inspectors completed a significance determination, in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” Table 4a for the Containment Barrier. Because the issue was corrected promptly, prior to introduction of weld material with hydrogen induced cracks, the inspectors answered “no” to each of the four Phase 1 screening questions. Therefore, the finding screened as having very low safety significance. This finding had a cross cutting aspect in the area of Human Performance, Work Practices because the licensee did not provide adequate supervisory and management oversight of work activities including contractors such that nuclear safety was supported. Specifically, the failure to control the weld rod oven temperature in accordance with procedure WFMC-1 was caused by inadequate licensee oversight of the contracted welder. (H.4(c))

Inspection Report# : [2011005](#) (*pdf*)

Emergency Preparedness

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

SEISMIC INSTRUMENTATION UNAVAILABLE FOR EMERGENCY EVENT CLASSIFICATION

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50.54(q) for failing to follow and maintain an emergency plan that meets the requirements of emergency planning standard 10 CFR 50.47(b)(4). Specifically, the licensee failed to maintain configuration control of seismic instrumentation necessary for the declaration of emergency events. The seismic instrumentation was out of service without the knowledge of the on shift operating crew and no compensatory measures were in place. The licensee entered this performance deficiency into their corrective action program (CAP) as condition report (CR) 2012 01950 and CR 2012-01984. The inspectors determined that the issue was a performance deficiency as it was within the licensee's ability to foresee and correct. This finding was determined to be more than minor because it was associated with the emergency response organization (ERO) performance attribute of the Emergency Preparedness Cornerstone. This finding affected the cornerstone objective of ensuring 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 loss or degradation of a risk significant planning standard. One Alert and one Notification of Unusual Event Emergency Action Level (EAL) initiating condition would have been rendered ineffective such that a seismic event would have been declared in a degraded manner. This finding was also associated with the cross cutting area of human performance. Specifically, the licensee's work control process failed to appropriately control work on the seismic monitoring system. This resulted in a loss of configuration control and of instrumentation necessary to classify a seismic event without compensatory measures in place. (H.3(b))

Inspection Report# : [2012002](#) (*pdf*)

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

Last modified : September 12, 2012