Monticello
4Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADVERTENT MISPOSITIONING OF INSTRUMENT AIR VALVE AND LOSS OF SPENT FUEL POOL COOLING.
A finding of very low safety significance and an associated non-citied violation was self-revealed for the site's failure to implement the requirements of FP-OP-SC-01, "Status Control," when, on April 23, 2013, a valve in the instrument air system was mispositioned as a result of site personnel's' failure to review high traffic scaffold access points for equipment bump hazards. Specifically, scaffold plan reviewers failed to ensure that components susceptible to inadvertent mispositioning were identified and protected in accordance with FP-OP-SC-01 and TS 5.4.1, "Procedures." As a result, an instrument air valve located near a scaffold ladder was inadvertently bumped, which led to the loss of instrument air to the reactor and turbine buildings, and the loss of the spent fuel pool cooling system, a system being used to provide cooling to the fully offloaded
core in the spent fuel pool. Corrective actions included restoration of instrument air, installation of protective barriers for the affected instrument air valve, and revision of the site scaffold control procedure to ensure scaffold positioning would be reviewed post-construction by operations for bump hazards.

The inspectors determined that the issue was more than minor because it impacted the configuration control "shutdown equipment lineup" attribute of the Initiating Events Cornerstone and affected the cornerstone's objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. In addition, it impacted the Barrier Integrity attribute of configuration control to "maintain functionality of the spent fuel pool cooling system" and affected the cornerstone's objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Using IMC 0609 Appendix G for shutdown operations, the inspectors determined that the finding had very low safety significance because it did not adversely affect core heat removal, inventory control, power availability, containment control, or reactivity guidelines. The inspectors determined that this finding was cross-cutting in the Human Performance, work control area, and involved aspects associated with planning work activities by incorporating risk insights and jobsite conditions [H.3(a)].

Inspection Report# : 2013003 *(pdf)*

Mitigating Systems

Significance: Y May 15, 2013
Identified By: NRC
Item Type: VIO Violation
FAILURE TO MAINTAIN AN ADEQUATE FLOOD PLAN CONSISTENT WITH DESIGN REQUIREMENTS.

The inspectors identified a Yellow finding with substantial safety significance and associated violation of Technical Specification 5.4.1 for the licensee's failure to maintain a flood plan to protect the site from external flooding events. Specifically, the site failed to maintain flood Procedure A.6, "Acts of Nature," such that it could support the timely implementation of flood protection activities within the 12 day timeframe credited in the design basis as stated in the updated safety analysis report (USAR.)
The inspectors determined that the licensee's failure to maintain an adequate flood plan consistent with the USAR was a performance deficiency, because it was the result of the failure to meet the requirements of TS 5.4.1.a, "Procedures;" the cause was reasonably within the licensee's ability to foresee and correct; and should have been prevented.
The inspectors screened the performance deficiency per Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, dated September 7, 2012, and determined that the issue was more than minor because it impacted the 'Protection Against External Factors' attribute of the Mitigating Systems Cornerstone and affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Specifically, if the necessary flood actions cannot be completed in the time required, much of the station's accident mitigation equipment could be negatively impacted by flood waters.
Therefore, a detailed risk evaluation was performed.
This risk evaluation was performed using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," dated April 12, 2012. A Significance and Enforcement Review Panel (SERP) determined this finding to have substantial safety significance (Yellow).
The inspectors determined that the contributing cause that provided the most insight into the performance deficiency was associated with the cross-cutting area of Human Performance, having decision-making components, and involving aspects associated with using conservative assumptions in decision making, verifying the validity of the underlying assumptions, and identifying possible unintended consequences.
Inspection Report# : 2013009 *(pdf)*
Inspection Report# : 2013008 *(pdf)*

Significance: G May 15, 2013
Identified By: NRC
Item Type: FIN Finding
INADEQUATE TI-187 PROCEDURE WALK-THROUGH.
The inspectors identified a finding of very low safety significance for the site's failure to perform adequate procedure walkthroughs to comply with NRC endorsed NEI 12-07, "Guidelines for Performing Walk-downs of Plant Flood Protection Features." Specifically, the licensee failed to perform flooding procedure walk-throughs necessary to verify that flood protection actions were achievable, and could be completed within their credited timeline. As a direct result, the licensee failed to verify that necessary resources for levee construction and other flood protection activities were adequately pre-staged or available to ensure that the site could meet its credited flood mitigation timeline.
The inspectors determined that the licensee's failure to adequately validate that external flood protection actions and timelines were achievable was a performance deficiency, because it was the result of the failure to meet the standards of NEI 12-07; the cause was reasonably within the licensee's ability to foresee and correct; and should have been prevented. The inspectors screened the performance deficiency per Inspection

Manual Chapter (IMC) 0612, “Power Reactor Inspection Reports,” Appendix B, dated September 7, 2012, and determined that the issue was more than minor because, if left uncorrected, failure to adequately validate levee construction and equipment pre-staging timelines has the potential to lead to a more significant safety concern. Specifically, if the site fails to account for the time and effort necessary to acquire flood mitigation resources prior to the flood, and the time and activities necessary to construct the ring levee, the site may not be able to complete their flood protection measures in time to mitigate floods on the design basis scale. The inspectors determined the finding could
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be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” dated June 19, 2012, and Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, “Mitigating Systems Screening Questions,” dated June 19, 2012. The inspectors answered “No” to all the questions in Section A, “Mitigating SSCs and Functionality,” Section C, “Reactivity Control Systems,” and Section D, “Fire Brigade.” The inspectors answered “No” to the Section B, “External Event Mitigating Systems,” question because the finding did not directly involve the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding, or severe weather initiating event (e.g., seismic snubbers, flooding barriers, tornado doors). Therefore, the inspectors determined the finding to be of very low safety significance.
The inspectors determined that the contributing cause that provided the most insight into the performance deficiency was associated with the cross-cutting area of Human Performance, having decision-making components, and involving aspects associated with using conservative assumptions in decision making, verifying the validity of the underlying assumptions, and identifying possible unintended consequences.
Inspection Report# : 2013008 *(pdf)*

Significance: G Mar 31, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
14 RHR POWER CABLE INADVERTENTLY CUT.
A finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self-revealed when the licensee failed to provide adequate work instructions for work on the 12 core spray (CS) pump, to ensure that the correct power cable was cut during cable removal activities. Specifically, the work package did not contain plant drawings or steps requiring use of positive cable identification tools, and contained cable routing information which did not accurately reflect configuration of the 12 CS motor electrical power cable. This resulted in the field workers relying on informal labeling and the incorrect cable routing information to identify and cut the cable. As a direct result, the work group incorrectly cut the 14 RHR pump power cable, which unintentionally disabled a pump being credited as available in the licensee’s shutdown safety risk assessment at the time of the error. Once identified, the licensee took prompt action to stop work on this job and all activities associated with the demolition of cabling 480V and higher. Before resuming work, the licensee developed a list of positive identification tools for cutting cable, and incorporated the use of these tools as requirements into all work packages associated with cutting 480V and higher voltage cables. The licensee also assembled a root cause evaluation team, reset the site human performance clock, and provided site wide communication of the details of the event. This event was entered into the licensee’s corrective action program (CAP 01374981).
The inspectors determined that the licensee’s failure to adequately identify and cut the correct cable during the 12 CS pump cable removal activity was a performance deficiency, because it was the result of the failure to meet the requirements of 10 CFR 50, Appendix B, Criterion V; the cause was reasonably within the licensee’s ability to foresee

and correct; and should have been prevented. The inspectors screened the performance deficiency per Inspection Manual Chapter (IMC) 0612, “Power Reactor Inspection Reports,” Appendix B, and determined that the issue was more than minor because it impacted the equipment and human performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone’s objective to
ensure the availability reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). In this instance, the performance deficiency resulted in the unintentional unavailability of the 14 RHR pump and subjected workers to a potentially energized 4160V power source. At the time of the error, 14 RHR was one of the pumps being credited in support of the shutdown safety functions of core heat removal and inventory control. As a result, this finding was evaluated under the Mitigating Systems Cornerstone. Since the plant was shut down and defueled, the inspectors applied NRC IMC 0609, “Significance Determination Process,” Appendix G, "Shutdown Operations Significance Determination," Attachment 1, to this finding. The inspectors determined that the finding had very low safety significance because it did not adversely affect core heat removal; inventory control; power availability; containment control; or reactivity guidelines. The inspectors determined that the contributing cause that provided the most insight into the performance deficiency was associated with the cross-cutting area of human performance, having resources components, and involving aspects associated with having complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components to assure nuclear safety.
Inspection Report# : 2013002 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
SAFETY RELIEF VALVE TAILPIPE SENSING LINE ISOLATION VALVE FOUND CLOSED.
A finding of very low safety significance and non-cited violation of Technical Specification (TS) 3.3.6.3, “Low-Low Set (LLS) Instrumentation,” was self-revealed when the licensee discovered during the performance of an unrelated surveillance test that an isolation valve, which impacts the operation of two differential pressure switches, associated with the ‘E’ LLS safety relief valve (SRV) was found closed. Specifically, valve MS-44-2B, the root valve for the ‘E’ SRV tailpipe pressure sensing line was discovered closed between June 28, 2011 and April 12, 2013. The licensee took corrective actions to restore MS-44-2B to its required open position. Additional corrective actions included plans to revise a standing SRV maintenance procedure which provided incorrect restoration guidance, post-maintenance, for four of the eight SRVs.

The inspectors determined that this issue was more than minor because it impacted the configuration control attribute of the Barrier Integrity Cornerstone and affected the cornerstone’s objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors applied IMC 0609, Appendix A to this finding and evaluated the issue under the Barrier Integrity Cornerstone, utilizing Exhibit 3, “Barrier Integrity Screening Questions,” to screen the finding. The inspectors answered “No” to both Reactor Containment screening questions, and determined the finding to be of very low safety significance. The inspectors determined that this finding was cross-cutting in the Human Performance, resources area, and involved aspects associated with having complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components to assure nuclear safety [H.2(c)].

Inspection Report# : 2013003 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Mar 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ENTER RADIONUCLIDE ON RADIOACTIVE WASTE SHIPMENT DOCUMENTATION.
The inspectors identified a finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR 71.5 for the failure to correctly complete radioactive waste shipping documents for radioactive shipments containing condensate resins. The shipment documentation failed to include the radionuclide Am-241, which was present within the shipment. This issue was entered into the licensee's corrective action program (CAP) as AR 01369367. The licensee is improving the supervisory approval mechanism for radioactive shipment documentation to ensure shipping papers are adequately completed.
The performance deficiency was determined to be of more than minor safety significance in accordance with Inspection Manual chapter (IMC) 0612, Appendix B, "Issue Screening," because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, incorrect shipment documentation could lead to incorrect Department of Transportation (DOT) and NRC transport classifications or incorrect waste classifications in accordance with 10 CFR 61. The inspectors also reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and did not find any similar examples. In accordance with IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," the inspectors determined that the finding had very low safety significance (Green) because the finding did not involve: (1) radiation levels exceeded, (2) a breach of package during transit, (3) a certificate of compliance issue, (4) a low-level burial ground nonconformance, (5) or the failure to make notifications or provide emergency information. The primary cause of this finding was related to the cross-cutting aspect of human performance with the component of work practices. The licensee ensures supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported.
Inspection Report# : 2013002 *(pdf)*

Security

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

Miscellaneous

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