Arkansas Nuclear 2
2Q/2015 Plant Inspection Findings

Initiating Events

Significance: G May 15, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Properly Implement Procedures for Writing Procedures Important to Safety
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," involving the licensee's failure to perform activities affecting quality as prescribed by documented procedures of a type appropriate to the circumstances and accomplished in accordance with these procedures. Specifically, the team identified the licensee failed to ensure procedures important to safety were written in accordance with Procedure EN-AD-101-01, "Nuclear Management Manual Procedure Writer Manual," Revision 14.

The licensee's failure to write procedures important to safety in accordance with Procedure EN-AD-101-01 was a performance deficiency. This finding was more than minor because it was associated with the procedure quality attribute of the Initiating Systems cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. Specifically, the licensee did not adequately implement Procedure EN-AD-101-01 to ensure activities directing reactivity manipulations were accomplished in accordance with procedures of a type appropriate to the circumstances to prevent end-of-life axial-shape-index reactor trips. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance (Green) because it did not cause the loss of mitigation equipment relied upon to transition the plant to a stable shutdown condition. This finding had a crosscutting aspect in the area of human performance associated with resources because leaders failed to ensure personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety (H.1).
Inspection Report# : 2015008 *(pdf)*

Significance: N/A Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Accurately Report Unplanned Scrams per 7000 Critical Hours Performance Indicator
The inspectors identified a non-cited violation of 10 CFR 50.9, "Completeness and Accuracy of Information," for the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, the Unit 2 unplanned scrams per 7000 critical hours performance indicator data submitted to the NRC for the second and third quarters of 2014 was inaccurate. The performance indicator data submitted did not include a Unit 2 plant scram that occurred on April 27, 2014. When the second quarter and third quarter 2014 data was corrected and submitted to the NRC on March 4, 2015, the unplanned scrams per 7000 critical hours performance indicator transitioned from Green to White. The issue was entered into the licensee's corrective action program as Condition Report CR-ANO-2-2015-00362.

The licensee failed to provided information to the NRC that was complete and accurate in all material respects, as required by 10 CFR 50.9. The NRC's significance determination process (SDP) is not designed to assess the significance of violations that impact or impede the regulatory process. Therefore, the issue of two quarterly submittals of discrepant unplanned scrams performance indicator data was assessed using the traditional enforcement

process in accordance with the Enforcement Policy. The inspectors determined the violation to be at Severity Level IV, because the licensee submitted inaccurate performance indicator data to the NRC that would have caused the performance indicator to change from Green to White (Enforcement Policy example 6.9.d.11). Traditional enforcement violations are not assigned a cross-cutting aspect.

Inspection Report# : 2015001 *(pdf)*

Significance: G Sep 30, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Implement Procedural Requirements for Axial Shape Index during a Rapid Power Reduction
The inspectors documented a Green self-revealing non-cited violation of Technical Specification 6.4.1.a for the failure to implement procedures for changing load recommended by Regulatory Guide 1.33, Revision 2, Appendix A, Section 2.f, dated February 1978. Specifically, the licensee did not maintain axial shape index within the limits of the core operating limits report during a rapid power reduction at the end of core life, resulting in an automatic reactor trip. The issue was documented in Condition Report
CR-ANO-C-2014-01142.

The inspectors determined that the failure to maintain axial shape index within the limits of the core operating limits report during a rapid power reduction was a performance deficiency. The performance deficiency is more than minor because it is associated with the human performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge the critical safety functions during shutdown as well as power operations. Specifically, the failure to maintain axial shape index caused an automatic reactor trip. Using Manual Chapter 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” Exhibit 1, “Initiating Events Screening Questions,” the inspectors determined the finding to be of very low safety significance (Green) because the finding did cause a reactor trip but did not cause a loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition.

The finding has a cross-cutting aspect in the area of human performance associated with training because the organization did not provide training and ensure knowledge transfer to maintain a knowledgeable, technically competent workforce. Specifically, the operators were not trained to understand the effects of the axial shape index during rapid power reductions with a core at an End-of-Life condition [H.9]

Inspection Report# : 2014004 *(pdf)*

Significance: Y Feb 10, 2014
Identified By: NRC
Item Type: VIO Violation
Unit 2 - Failure to Follow the Materials Handling Program during the Unit 1 Generator Stator Move
Unit 2 Apparent Violation. The inspectors reviewed a self-revealing apparent violation of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” which states, in part, that “activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings.” The licensee did not follow the requirements specified in Procedure EN-MA-119, “Material Handling Program,” in that, the licensee did not perform an adequate review of the subcontractor’s lifting rig design calculation and the licensee failed to conduct a load test of the lifting rig prior to use. The licensee initiated Condition Report CR-ANO-C-2013-00888 to capture this issue in the corrective action program. The licensee’s corrective actions included repairing damage to the Unit 1 turbine deck, fire main system, and electrical system. In addition, changes were made to various procedures including Procedure EN-

DC-114, “Project Management,” to provide guidance on review of calculations, quality requirements, and standards associated with third party reviews.

The inspectors determined that this finding was more than minor because it was associated with the procedural control attribute of the initiating event cornerstone, and adversely 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. The stator drop caused a reactor trip on Unit 2 and damage to the fire main system which resulted in water intrusion into the electrical equipment causing a loss of startup transformer 3. This resulted in the loss of power to various loads, including reactor coolant pumps, instrument air compressors, and the safety-related Train B vital electrical bus. The inspectors used Inspection Manual Chapter 0609, Attachment 0609.04, “Initial Characterization of Findings,” dated June 19, 2012, and Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” dated June 19, 2012, to evaluate the significance of the finding. Since this was an initiating event, the inspectors used Exhibit 1 of Appendix A and determined that Section C, “Support System Initiators,” was impacted because the finding involved the loss of an electrical bus and a loss of instrument air. The inspectors determined that Section E, “External Event Initiators,” of Exhibit 1 should also be applied because the finding impacted the frequency of internal flooding. Since Sections C and E were impacted, a detailed risk evaluation was required. The NRC risk analyst used the Arkansas Nuclear One, Unit 2 Standardized Plant Analysis Risk Model, Revision 8.21, and hand calculation methods to quantify the risk. The model was modified to include additional breakers and switching options, and to provide credit for recovery of emergency diesel generators during transient sequences. Additionally, the analyst performed additional runs of the risk model to account for consequential loss of offsite power risks that were not modeled directly under the special initiator. The largest risk contributor (approximately 96 percent) was a loss of all feedwater to the steam generators, with a failure of once-through cooling. The result of the analysis was a conditional core damage probability of 2.8E-5; therefore, this finding was preliminarily determined to have substantial safety significance (Yellow).

This finding had a cross-cutting aspect in the area of human performance associated with field presence, because the licensee did not ensure adequate supervisory and management oversight of work activities, including contractors and supplemental personnel. Specifically, the licensee did not provide a sufficient level of oversight in that, the requirements in Procedure EN-MA-119, for design approval and load testing of the temporary hoisting assembly, were not followed [H.2].

Issued as preliminary Yellow AV in IR 05000313,368/2013012 dated March 24, 2014.

Final significance was determined to be Yellow. NOV issued in IR 05000313,368/2014008 dated June 23, 2014.
Inspection Report# : 2014008 *(pdf)*
Inspection Report# : 2013012 *(pdf)*

Mitigating Systems

Significance:  May 15, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Correct Containment Spray Pump Interlock to Shutdown Cooling Heat Exchanger Room Coolers
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the licensee’s failure to correct a condition adverse to quality. Specifically, the licensee failed to correct the containment spray pump interlock to automatically start the shutdown cooling heat exchanger room coolers.

The licensee's failure to promptly correct a condition adverse to quality as required by 10 CFR Part 50, Appendix B, Criterion XVI, was a performance deficiency. The licensee has identified in multiple instances since 1989 a degraded or nonconforming condition with shutdown cooling heat exchanger room cooler interlocks, but has failed to correct the condition. This finding was more than minor because it was associated with the design control and equipment performance attributes of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to events to prevent undesirable consequences. Specifically, the licensee failed to correct the interlock feature that automatically starts the room coolers when the pump starts. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of any system or train and did not screen as risk-significant in response to external events. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with evaluation because the licensee failed to thoroughly evaluate the issue to ensure that the resolution addressed the cause (P.2).
Inspection Report# : 2015008 *(pdf)*

Significance: G May 15, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Extent of Condition Review for Risk-Significant Condition
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," that occurred because the licensee's extent of condition performed in the root cause evaluation for the Yellow flooding finding failed to identify all potential water ingress paths into watertight rooms in the auxiliary building. The licensee identified additional examples of failures to construct the Unit 2 auxiliary building in accordance with the updated final safety analysis reports' description of internal and external flood barriers so that they could protect safety-related equipment from flooding. The team identified that the licensee had an opportunity to identify the unsealed conduit during a series of flooding reviews and walk-downs between 2012 and 2014, including an extent of condition review for unsealed conduits.

Failure to identify and correct a condition adverse to quality as required by 10 CFR Part 50, Appendix B, Criterion XVI, and Procedure EN-LI-102 was a performance deficiency. This performance deficiency was more than minor because if left uncorrected, it could become a more significant safety concern. Specifically, the continued failure to identify all unsealed flooding penetrations could result in continued exposure of risk-significant equipment in the auxiliary building to flooding. This finding was associated with the Mitigating Systems cornerstone. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of any system or train and did not screen as risk-significant in response to external events. This finding has a human performance cross cutting aspect associated with teamwork, in that the licensee failed to communicate and coordinate their activities within and across organization boundaries to ensure that nuclear safety was maintained (H.4).
Inspection Report# : 2015008 *(pdf)*

Significance: G May 15, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Promptly Identify and Correct Breaker Auxiliary Switch Binding
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct a condition adverse to quality. Specifically, the licensee failed to promptly correct a design deficiency with breaker auxiliary contact switches that resulted in binding and could result in incorrect interlock signals to other equipment.

The licensee's failure to promptly identify a condition adverse to quality as required by 10 CFR Part 50, Appendix B,

Criterion XVI, was a performance deficiency. The licensee failed to promptly correct a design deficiency with breaker auxiliary contact switches that resulted in binding and failed breaker interlocks. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Specifically, the untimely corrective actions have reduced the reliability of breaker interlocks, which may cause bus lockouts or safety equipment that could fail to automatically start. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of any system or train and did not screen as risk-significant in response to external events. The licensee has taken corrective actions to lessen the probability of bound switches by aligning shafts and lubricating bearing surfaces. This finding has a human performance cross-cutting aspect associated with consistent process in that the licensee failed to use risk insights in a systematic approach to make decisions (H.13).
Inspection Report# : 2015008 *(pdf)*

Significance: G May 15, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify, Document, and Mitigate Risk from Long Term Deficient Conditions
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to identify, document, and mitigate risk from long-term deficient conditions, as required by the Procedure EN-LI-102, “Corrective Action Program,” Revision 24.

The failure to identify, document, and mitigate risk from long-term deficient conditions, as required by Procedure EN-LI-102, was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the delayed corrective actions and unmitigated deficiencies could reduce the reliability of the Unit 2 emergency diesel generator A, alternate ac diesel generator, and Unit 2 non-vital switchgear. This finding is associated with the Mitigating Systems cornerstone. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance (Green) because it did not result in the loss of operability or functionality of any system or train and did not screen as risk-significant in response to external events. This finding has a human performance cross-cutting aspect associated with conservative bias in that the licensee failed to use decision-making-practices that emphasize prudent choices over those that are simply allowable and failed to determine that a proposed action was safe in order to proceed, rather than unsafe in order to stop (H.14).
Inspection Report# : 2015008 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Protect Safety Equipment From Potential High Energy Line Breaks
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion Ill, "Design Control," for the licensee’s failure to assure that applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions and that design changes were subject to design control measures commensurate with those applied to the original design. Specifically, the Unit 2 radwaste supply fans’, 2VSF-7A and B, plenum doors and turbine building fire door 447 were maintained open, which provided a potential path for steam to enter the auxiliary building and impact both safety-related dc power trains during a high energy line break event in the turbine building. On February 12, 2014, the licensee suspended the modification and corrected the procedure. The licensee documented the concern in Condition Report CR-ANO-2-2014-00345.

The licensee’s failure to maintain separation of safety related systems and high energy piping systems in accordance

with design, as stated in the Safety Analysis Report, was a performance deficiency. The performance deficiency was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated July 1, 2012 and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, dated July 1, 2012, the inspectors determined that the finding required a detailed risk evaluation because the finding represented a potential loss of system and/or function of the safety-related dc motor control centers, battery chargers and inverters.

A senior reactor analyst performed the detailed risk evaluation and determined that the change to the core damage frequency was less than 4.8E-7/year (Green). The dominant core damage sequences included losses of the plant's DC electrical systems. The initiating event likelihood of a rupture of the specific section of piping needed to initiate core damage sequences was extremely low.

The inspectors determined that there was no cross-cutting aspect associated with this finding because the cause of the performance deficiency occurred more than three years ago, and was not representative of current licensee performance.
Inspection Report# : 2015001 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Develop Adequate Guidance for Extreme Damage Mitigation
The inspectors identified a noncited violation of 10 CFR 50.54(hh)(2) for the failure to develop mitigating strategy guidance that would successfully maintain or restore Unit 2 core cooling after the loss of large areas of the plant. Specifically, the guidance did not ensure the capability of the mitigating strategy because an unisolated flow diversion could have prevented water from reaching the steam generators and cooling the core. The issue was documented in Condition Report CR ANO 2 2014 03277 and the procedure was revised to correct the condition.

The licensee's failure to develop mitigating strategy guidance that would successfully maintain or restore Unit 2 core cooling after loss of large areas of the plant, as required by 10 CFR 50.54(hh)(2), was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems. Specifically, the guidance did not ensure the capability of the mitigating strategy because an unisolated flow diversion could have prevented water from reaching the steam generators and cooling the core. Using NRC Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated June 19, 2012, and NRC Manual Chapter 0609, Appendix L, "B.5.b Significance Determination Process," dated December 24, 2009, Table 1, "SDP Screening Worksheet for B.5.b," the finding was determined to be of very low safety significance because the performance deficiency represented the unrecoverable unavailability of an individual mitigating strategy; other core cooling mitigating strategies were available. This finding has a human performance crosscutting aspect associated with avoid complacency, in that the licensee failed to recognize and plan for the possibility of latent issues, even while expecting successful outcomes.

Inspection Report# : 2014005 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Verify Ventilation Design for Vital Switchgear

Inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to maintain design control of the Unit 2 vital switchgear ventilation system. Specifically, the licensee failed to ensure that the ventilation was capable of cooling the switchgear under design basis conditions when an automatic start of the exhaust fans was inappropriately replaced by manual actions. The issue was documented in Condition Report CR ANO 2-2014-00352 and the licensee instituted compensatory measures for immediate corrective actions.

The licensee failed to ensure that the ventilation was capable of cooling the switchgear under design basis conditions when an automatic start of the exhaust fans was inappropriately replaced by manual actions, which was a performance deficiency. The performance deficiency was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and was therefore a finding. Specifically, the licensee replaced automatic action of the Unit 2 vital electrical equipment ventilation with manual action, which was contrary to the licensing basis and did not ensure reliability of the vital electrical equipment. Using Manual Chapter 0609, Attachment 4, “Initial Characterization of Findings,” June 19, 2012, and Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” June 19, 2012, Exhibit 2, “Mitigating Systems Screening Questions,” the inspectors determined that the finding was of very low safety significance (Green) because the finding was a deficiency affecting the design of a mitigating system, and the system maintained its functionality with the proceduralized manual actions. The inspectors determined that there was no cross-cutting aspect associated with this finding because the cause of the performance deficiency occurred more than three years ago, and was not representative of current licensee performance.

Inspection Report# : 2014005 *(pdf)*

Significance: G Sep 30, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Establish Preventative Maintenance on Unit 2 Main Steam Isolation Valves
Inspectors documented a Green self-revealing non-cited violation of Technical Specification 6.4.1.a for the licensee’s failure to establish procedures recommended by Regulatory Guide 1.33, Revision 2, Appendix A, Section 9, February 1978. Specifically, the licensee failed to establish preventative maintenance procedures for valve internal inspection and testing of the Unit 2 main steam isolation valves. On December 23, 2013, the train A main steam isolation valve (2CV-1010-1) was declared Inoperable due to the valve sticking at fifteen percent open on multiple stroke attempts. The licensee’s cause evaluation identified that mechanical binding and corrosion of the valve internals were results of a lack of preventive maintenance. The licensee repaired the 2CV-1010-1 valve and performed subsequent testing to demonstrate Operability. The issue was documented in Condition Report CR ANO 2 2013-02502.

The inspectors determined that the failure to establish preventative maintenance procedures for valve internal inspection and testing of the Unit 2 main steam isolation valves was a performance deficiency. The performance deficiency is more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Specifically, the lack of preventative maintenance adversely affected the reliability of the main steam isolation valve 2CV-1010-1 to close within the time assumed in the accident analysis. Using Manual Chapter 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” Exhibit 2, the inspectors determined the finding to be of very low safety significance (Green) because the finding did not represent the loss of a system safety function and did not represent an actual loss of safety function of at least one train for greater than its technical specification allowed outage time.

The finding was determined to have a cross-cutting aspect in the area of problem identification and resolution, in that

the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes commensurate with their safety significance. Specifically, during a previous stroke test of the 2CV-1010-1 valve in 2011, the licensee identified that the valve experienced a sluggish or jerky motion and took longer than normal to open. The licensee entered this issue into the corrective action program but did not fully evaluate and troubleshoot the condition adverse to quality to ensure resolution of the cause
Inspection Report# : 2014004 *(pdf)*

Significance: Y Aug 01, 2014
Identified By: NRC
Item Type: VIO Violation
Inadequate Flood Protection for Auxiliary and Emergency Diesel Fuel Storage Buildings
The inspectors identified a finding of preliminary substantial safety significance (Yellow) for the failure to design, construct, and maintain the Units 1 and 2 auxiliary and emergency diesel fuel storage buildings in accordance with the safety analysis reports' description of internal and external flood barriers so that they could protect safety-related equipment from flooding. Two apparent violations were associated with this finding:

a. Contrary to 10 CFR Part 50, Appendix B, Criterion III, "Design Control," the licensee failed to assure that regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions, and that design changes were subjected to design control measures commensurate with those applied to the original design.

b. Contrary to 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," the licensee failed to prescribe documented instructions for activities affecting quality and accomplish activities affecting quality in accordance with drawings.

The licensee entered these issues into the corrective action program as Condition Reports CR-ANO-C-2013-01304 and CR-ANO-C-2014-00259. The licensee resolved the safety concern by replacing the degraded seals or parts, installing penetration seals, implementing compensatory measures, and/or incorporating instructions into procedures.

The inspectors determined that the finding was more than minor because it was associated with the protection against external factors attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the performance deficiency resulted in the vulnerability to flooding of safety-related equipment necessary to maintain core cooling in the auxiliary and emergency diesel fuel storage buildings. The inspectors used Inspection Manual Chapter 0609, Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, to evaluate the significance of the finding. In accordance with Appendix A, Exhibit 4, the inspectors determined that a detailed risk evaluation was necessary because, if the flood barriers were assumed to be completely failed, two or more trains of a multi-train system would be degraded during an external flood.

The NRC risk analysts determined that the finding should be evaluated in accordance with NRC Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," April 12, 2012. Appropriate quantitative significance determination process tools did not exist to provide a reasonable estimate of the significance because a plant-specific flood hazard analysis did not exist and was not expected to be available until sometime in 2015. The risk analysts used NRC Inspection Manual Chapter 0609, Appendix M, Table 4.1, "Qualitative Decision-Making Attributes for NRC Management Review," to determine the preliminary safety significance of the finding. The following were the dominant considerations in reaching a preliminary risk determination conclusion:

1. With respect to the auxiliary and emergency diesel fuel storage buildings, there were more than 100 unknown ingress pathways for a flooding event, therefore if an external flood above grade level were to occur, the buildings

would flood.

2. The unexpected rate of flooding would likely be beyond the licensee's capability to prevent or mitigate as equipment and connections associated with alternative mitigating strategies, could be submerged.

3. All reactor core cooling and makeup could fail due to significant flooding of the auxiliary and emergency diesel fuel storage buildings.

4. The change in core damage frequency was quantitatively bounded below 2 x 10-3 and qualitatively determined to likely be less than 1 x 10-4. The bounding and qualitative results are based on the frequency of the probable maximum flood event and a loss of all equipment needed for core cooling and makeup.

This finding was preliminarily determined to be of substantial safety significance (Yellow) for Unit 1 and Unit 2, as determined by a Significance and Enforcement Review Panel.

This finding had a cross-cutting aspect in the area of human performance related to maintaining design margins. Specifically, the licensee did not design, construct, and/or maintain over 100 flood barriers to ensure design margins were sustained.

The finding was determined to be Yellow (substantial safety significance) for both Units. Final significance determination and NOV issued January 22, 2015 (IR 05000313;638/2014010) (ML15023A076).
Inspection Report# : 2014009 *(pdf)*
Inspection Report# : 2014010 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Correct Weaknesses During Drills and Exercises
The inspectors identified a non-cited violation of 10 CFR Part 50.47(b)(14) for the failure to correct a deficiency identified in a 2013 simulator drill. Specifically, control room operators did not implement the procedure that describes how the site will maintain continuous communication with threat notification sources during a drill conducted August 7, 2013, and also during the September 16, 2014, biennial exercise. The inspectors determined that the licensee's corrective actions for this issue were incomplete and did not address the extent of condition.

The failure to correct weaknesses occurring in drills and exercises is a performance deficiency within the licensee's ability to foresee and correct. The performance deficiency is more than minor because it is associated with the emergency response organization performance attribute of the Emergency Preparedness cornerstone and it adversely impacted the cornerstone objective. The licensee's ability to implement adequate measures to protect the health and safety of the public in the event of hostile action and a radiological emergency is degraded when it fails to correct performance that precludes the effective implementation of the emergency plan. This finding was evaluated using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process (SDP),"

Attachment 2, dated February 24, 2012, and was determined to be of very low safety significance (Green) because it was a failure to comply with NRC requirements, was not associated with a risk-significant planning standard, and was not a loss of planning standard function. The finding was not a loss of function because the deficiency that was identified was not associated with classification, notifications to state and local agencies, or the development of protective action recommendations. The licensee has entered the issue into the corrective action program in corrective action documents WT-WTANO-2014-00189 and Condition Report CR-ANO-C-2014-02478.

The finding was assigned a cross-cutting aspect in the area of problem identification and resolution, associated with the resolution of issues because the licensee failed to evaluate the initial performance issues to ensure that resolutions adequately addressed the extent of condition commensurate with their safety significance. The licensee failed to recognize in August 2013 that continuous communications with threat notification sources is required by regulation and that performance issues with the implementing procedure should be communicated to the entire control room staff population

Inspection Report# : 2014005 *(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 : August 07, 2015