Arkansas Nuclear 1
3Q/2013 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 30, 2013
Identified By: NRC
Item Type: FIN Finding
Inadequate Design Change for Main Feedwater Flow Control Valves
The inspectors documented a self-revealing finding for the licensee's failure to adequately implement a design change to the main feedwater startup and low load feedwater control valves. As a result, the valves were inoperable for longer than their technical specification allowed outage time for their main feedwater isolation safety function. The licensee entered this issue into their corrective action program as Condition Report CR-ANO-1-2012-00267.

The inspectors determined that the failure to adequately implement a design change to the main feedwater control valve circuitry 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 latent design error adversely affected the ability of the main feedwater valves to close on a main steam line isolation signal. Using Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, the inspectors determined this finding to be of very low safety significance (Green) because the degraded condition was a design deficiency that affected system operability; did not represent an actual loss of function of a system; did not represent an actual loss of function of a single train or two separate trains for greater than its technical specification allowed outage time; did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant; and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. 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# : 2013004 *(pdf)*

Significance: G Mar 22, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Maintenance Instructions for Installation of Fluorescent Light Fixtures
Inspectors identified a violation of Technical Specification 5.4.1.a, which requires that the licensee establish, implement, and maintain the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Paragraph 9.a of Appendix A requires, in part, that maintenance that can affect the performance of safety-related equipment be properly preplanned and performed in accordance with documented instructions. Contrary to the above, prior to March 2013, the licensee did not preplan and perform maintenance that could affect the performance of safety-related equipment in accordance with documented instructions. Specifically, the licensee failed

to establish instructions to ensure that fluorescent light fixtures in both Unit 1 emergency diesel generator rooms were returned to their analyzed design configuration after maintenance was performed. The licensee documented the issue in Condition Reports CR-ANO-C-2013-0631 and CR-ANO-C-2013-0632.

Inspectors concluded that the licensee's failure to have work instructions to control the design configuration of fluorescent light fixtures, in the Unit 1 emergency diesel generator rooms, was a performance deficiency. The finding is more than minor because it is associated with the Mitigating System Cornerstone attribute of procedure quality and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process for Findings at Power," the finding was screened against the mitigating systems cornerstone and determined to be of very low safety significance (Green) because the finding did not: (1) result in an actual loss of operability or functionality, (2) represent a loss of system and/or function, (3) represent an actual loss of function of a single train for greater than its technical specification allowed outage time, (4) represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety- significant for greater than 24 hours and (5) involve the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding or severe weather event. This finding did not have a cross-cutting aspect associated with it because the most significant contributor was not indicative of current performance. Specifically, the licensee had never established instructions to ensure that the fluorescent light fixtures were returned to their analyzed design configuration after maintenance was performed.
Inspection Report# : 2013010 *(pdf)*

Significance:  Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Adequate Design Change Controls for Permanent Removal of Service Water Check Valves SW-604A & SW-604B
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, which states, in part, that design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design. Specifically, from October 4, 2012, to November 8, 2012, the licensee failed to ensure that the design change, which directed the permanent removal of check valves SW-604A and SW-604B from the service water return lines of safety-related auxiliary building electrical rooms emergency chillers VCH-4A and VCH-4B, included the requisite evaluation of the initial design basis and mitigating safety system functions of these components. The licensee entered this issue into the corrective action program as Condition Report CR-ANO-1-2012-1681.

The failure to ensure that safety-related system modifications were subject to design control measures commensurate with those applied to the original design for the removal of check valves SW-604A and SW-604B and replacement of these components with spool pieces was a performance deficiency. The finding is more than minor because it is 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 Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," the finding was determined to have very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating component that did not affect the operability or functionality of the system. The inspectors determined that the finding had a cross-cutting aspect in the area of human performance associated with the component of decision making because the licensee failed to use conservative assumptions and adopt a requirement to demonstrate that the proposed action was safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action. Specifically, the licensee assumed that the checkvalves had no safety function without determining the actual design basis and mitigating safety system functions of these components [H.1 (b)].

Inspection Report# : 2012005 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Required Examinations of Reactor Vessel Flange Seal Leak-Off Lines
The inspectors identified a non-cited violation, with two examples, of Title 10 CFR 50.55a(g)(4), which requires that components classified as ASME Code Class 1, Class 2, and Class 3 meet the requirements set forth in Section XI of the applicable editions of the ASME Boiler and Pressure Vessel Code and Addenda. Title 10 CFR 50.55(a)(g)(4)(ii) requires that inservice examination of components be conducted during successive 120-month inspection intervals and comply with the requirements of the latest edition and addenda of the Code applicable to the specific interval. Section XI (of prior and current applicable editions of the Code), Articles IWC-5221 and IWD-5221 require that, for Class 2 and Class 3 components, a system leakage test be performed at the system pressure obtained while the system, or portion of the system, is in service performing its normal operating function. Contrary to the above, prior to September 17, 2012, for the Class 2 and Class 3 reactor vessel flange leak-off lines for both Units 1 and 2, the licensee failed to perform leakage tests at the system pressure obtained while the system was performing its normal operating function. The licensee has entered this issue into the corrective action program as Condition Report CR-ANO-C-2012-02672.

The inspectors determined that the failure to perform the examinations required by 10 CFR 50.55a(g)(4) on the Units 1 and 2 reactor vessel flange seal leak-off lines is a performance deficiency. The performance deficiency is more than minor because it is associated with the Barrier Integrity Cornerstone attribute of structures, systems, and components and barrier performance and adversely affects the cornerstone objective to provide a 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 Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” the finding was determined to be of very low safety significance (Green) because the finding could not result in exceeding the reactor coolant system leak rate for a small loss-of-coolant accident, nor could the finding have likely affected other systems used to mitigate a loss-of-coolant accident resulting in a total loss of their function. This issue did not have a cross-cutting aspect associated with it because it is not indicative of current performance.
Inspection Report# : 2012005 *(pdf)*

Emergency Preparedness

Significance: N/A Feb 21, 2013
Identified By: NRC
Item Type: VIO Violation
EP Planner falsified documents for PASS and environmental monitoring drills
NRC identified a Severity Level III violation of 10 CFR 50.9(a) for falsifying documents of EP drills and surveillances. On January 12, 2012, the EP Manager notified NRC that a senior emergency planner had apparently falsified documents related to emergency preparedness drills conducted in December 2011. Specifically, the senior emergency planner falsely submitted documents that showed a post accident sampling drill and an environmental monitoring drill were conducted in 2011. Further investigation identified other surveillances were also falsified in

December 2010. Entergy conducted and documented make-up drills, and conducted extent of conditions reviews for other falsified documents. NRC investigation report 4-2012-024 substantiated the above falsification.

The failure to provide complete and accurate information is a violation of 10 CFR 50.9(a). This Information is material to the NRC because it provides assurance that the licensee has performed periodic drills to develop and maintain key skills and provides assurance that adequate emergency facilities and equipment to support emergency preparedness are maintained. This violation is categorized in accordance with NRC Enforcement Policy as a SL III violation. Credit was given for identification and corrective actions, therefore a civil penalty was not proposed. Because ANO provided information regarding (1) the reason for the violation, (2) corrective actions taken and planned, (3) actions to prevent recurrence, and (4) date when full compliance was achieved, in Entergy letter dated April 10, 2013, no response was required.

Inspection Report# : 2013503 *(pdf)*
Inspection Report# : 2013504 *(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

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