

# Arkansas Nuclear 1

## 4Q/2013 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:** G Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Maintain Fluorescent Light Fixture Above Emergency Feedwater Pump in Seismically Qualified Configuration**

Inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to hang the fluorescent light fixture above the Unit 1 motor driven emergency feedwater pump in a seismically qualified design configuration. This was not an immediate safety concern because operability was adequately demonstrated when the misconfiguration was identified and because the licensee restored the light fixture to its seismically qualified configuration on November 12, 2013. The licensee entered this issue into their corrective action program as Condition Report CR-ANO-1-2013-02830.

Inspectors concluded that the licensee’s failure to hang the fluorescent light fixture above the Unit 1 motor driven emergency feedwater pump in accordance with Drawing E-2060 was a performance deficiency. The performance deficiency was more than minor because it was associated with the design control attribute of the mitigating system cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding. Specifically, the licensee failed to ensure that, during a design basis seismic event, the light would not fall and adversely impact the safety-related pump below. 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 that this finding was of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of mitigating equipment, in which the equipment maintained its operability; and did not involve the loss or degradation of equipment or function specifically designed to mitigate a seismic event.

The finding was determined to have a cross-cutting aspect in the area of human performance, associated with resources, for the licensee’s failure to ensure that sufficient personnel were available for light inspections. Specifically, during the safety-related room inspections that were completed on August 27, 2013, the licensee failed to identify that the light above the motor driven emergency feedwater pump was inappropriately hung, due to the hurried nature of the inspections.

Inspection Report# : [2013005](#) (*pdf*)

**Significance:** G Nov 19, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Untimely Corrective Action For a Condition Adverse to Fire Protection**

The team identified a non-cited violation of Unit 1 License Conditions 2.C.(8), “Fire Protection,” for the failure to

implement and maintain in effect all provisions of the approved fire protection program. Specifically, the team identified that the licensee failed to implement timely corrective actions for a condition adverse to fire protection related to a condition that could disable the automatic starting of both fire pumps as a result of fire damage. The licensee confirmed that the diesel fire pump could be started locally at its control panel in the Unit 1 Intake Structure as a compensatory measure and entered the issue into the corrective action program.

The failure to take timely corrective action for a condition adverse to fire protection was a performance deficiency. This finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of Protection Against External Events (fire) and affected the associated cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

The inspector performed walkdowns of the fire zones of concern. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the finding was assigned a low degradation rating and screened to Green in Attachment 1, Task 1.3.1, "Qualitative Screening for All Finding Categories." This finding had a cross-cutting aspect in the area of human performance associated with resources because the licensee failed to maintain long-term plant safety by minimizing long-standing equipment issues. Specifically, the licensee did not implement a modification to correct a condition adverse to fire protection in a timely manner [H.2(a)].

Inspection Report# : [2013009](#) (pdf)

**Significance:**  Nov 19, 2013

Identified By: NRC

Item Type: FIN Finding

**Emergency Lights Satisfied their Maintenance Rule Performance Criteria**

The team identified a finding for the failure to provide an adequate testing scheme to demonstrate that the Appendix R emergency lights satisfied their maintenance rule performance criteria. The team determined that operators were provided flashlights when they obtained the equipment bags required to perform an alternative shutdown. The licensee entered the issue into the corrective action program.

The failure to provide an adequate testing scheme to demonstrate that the Appendix R emergency lights satisfied their maintenance rule performance criteria was a performance deficiency. The performance deficiency was more than minor because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern.

The team assigned the finding a low degradation rating since the ability to reach and maintain safe shutdown conditions in the event of a control room fire would be minimally impacted by the potential failure of the emergency lights to function for 8-hours. Specifically, the team determined that the results of the previous annual 8-hour discharge tests provided reasonable assurance that the lights would function for 8 hours since the licensee had maintained the same battery replacement frequency. Because this finding had a low degradation rating, it screened as having very low safety significance. This finding had a cross-cutting aspect in the decision making component of the human performance area because the licensee's decisions failed to demonstrate that nuclear safety is an overriding priority. Specifically, the licensee failed to use conservative assumptions in decision making when changing the testing scheme for the Appendix R emergency lights. The team determined that the licensee failed to use conservative assumptions in decision making because the licensee failed to consider how the revised testing scheme would impact the maintenance rule program or demonstrate compliance with 10 CFR Part 50, Appendix R, Section III.J

Inspection Report# : [2013009](#) (pdf)

**Significance:**  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*)

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## Barrier Integrity

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## 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# : [2013504](#) (*pdf*)

Inspection Report# : [2013503](#) (*pdf*)

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## Occupational Radiation Safety

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## Public Radiation Safety

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## 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.

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## Miscellaneous

**Significance:** N/A May 03, 2013

Identified By: NRC

Item Type: FIN Finding

### **Arkansas Nuclear One 2013 Biennial Problem Identification and Resolution Inspection Summary**

The team reviewed approximately 150 condition reports, work orders, engineering evaluations, root and apparent cause evaluations, and other supporting documentation to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The team reviewed a sample of system health reports, self-assessments, trending reports and metrics, and various other documents related to the corrective action program. The team found that licensee was generally effective at identifying problems and putting them into the corrective action program; however, there were a few instances identified during the assessment period where the licensee had missed identification of problems. The licensee was also generally effective in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementing corrective actions. The licensee's corrective action process was generally found to be effective in documenting and tracking problems to resolution. Corrective actions were generally implemented in a timely manner.

The team determined that the licensee was adequately evaluating industry operating experience. Licensee audits and internal self-assessments were found to be generally effective and highlighted areas of ineffective corrective actions similar to weaknesses identified by the team. The team found that on the basis of focus group interviews and an independent safety culture survey, workers at the site felt free to raise safety concerns using the corrective action program, their management and chain of command, and to the NRC without fear of retaliation.

Inspection Report# : [2013010](#) (*pdf*)

Last modified : February 24, 2014