Arkansas Nuclear 1
1Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Control Combustible Material Brought Into the Auxiliary Building
Green. The inspectors identified a Green NCV of TS 5.4.1, “Procedures,” associated with the licensee’s failure to adequately implement the fire protection program. Specifically, on multiple occasions station personnel exceeded the transient combustible limits of Procedure EN-DC-161, “Control of Combustibles,” Revision 1, without taking appropriate compensatory measures. This issue was entered into the licensee's corrective action program as Condition Report ANO-C-2007-1719.

The finding was determined to be more than minor because it affected the protection against external factors attribute of the initiating events cornerstone, and it directly affected the 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. Using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” Phase 1 worksheet, the finding was determined to have very low safety significance because the condition represented a low degradation of a fire prevention and administrative controls feature. The finding had crosscutting aspects in the area of problem identification and resolution associated with the CAP [P.1(d)] because the licensee failed to take appropriate actions to address an adverse trend in a timely manner which allowed the adverse trend to continue and reoccur on multiple occasions.

Inspection Report# : 2007005 *(pdf)*

Significance: G Sep 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM A RISK ASSESSMENT WHEN REQUIRED BY 10 CFR 50.65(a)(4) FOR MOBILE CRANE USE IN THE VICINITY OF SAFETY-RELATED EQUIPMENT
The inspectors identified a noncited violation (NCV) of 10 CFR 50.65(a)(4), “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” involving the failure of the licensee to perform a risk assessment prior to mobile crane activities in the vicinity of Startup 2 transformer. This issue was entered into the licensee's corrective action program as Condition Report ANO-1-2007-1657.

The finding was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone, and it directly affected the 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. Additionally, if left uncorrected, the practice of not adequately evaluating crane activities in the vicinity of safety-related equipment by appropriately trained individuals would become a more significant safety concern in that it could result in a more than minimal increase in risk associated with other risk important equipment that would not be identified and not result in appropriate actions being taken. The inspectors evaluated this finding using the Appendix K, “Maintenance Risk Assessment and Risk Management Significance Determination Process” worksheets of Manual Chapter 0609 because the finding is a maintenance risk assessment issue. Flowchart 1, “Assessment of Risk Deficit,” requires the inspectors to determine the risk deficit associated with this issue. This finding was determined to be of very low safety significance because the incremental core damage probability deficit was less than 1 x 10-6. The finding had crosscutting aspects in the area of human performance associated with work control in that the licensee failed to appropriately plan and incorporate risk insights in work activities associated with mobile crane operations (H.3(a)).

Inspection Report# : 2007004 *(pdf)*

Significance: G Sep 23, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE WORK PROCEDURES FOR EDG 2K-4A RESULTS IN A FIRE
A self-revealing noncited violation of Technical Specification 6.4.1, “Procedures,” was identified associated with the failure to ensure that adequate procedures were available for maintenance conducted on the Unit 2 Emergency Diesel Generator (EDG) 2K-4A. Specifically, the maintenance procedure used for the replacement of the four-barrel inspection plate did not have requirements for flatness checks. As a result, oil leakage from the inspection plate cover resulted in an exhaust manifold fire on the Unit 2 EDG on August 3, 2007. This issue was entered into the licensee's corrective action program as Condition Report ANO-2-2007-1073.

The finding was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone, and it directly affected the 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. Using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” Phase 1 worksheet, the finding was determined to have very low safety significance because the condition constituted a low degradation of a fire prevention and administrative controls feature. The finding had crosscutting aspects in the area of problem identification and resolution associated with operating experience in that the licensee failed to effectively implement changes to station processes and procedures in response to operating experience involving the importance of ensuring flatness of flanges in the diesel exhaust manifold (P.2(b)).

Inspection Report# : 2007004 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Monitor the Performance of the Emergency Switchgear Room Chillers
Green. The inspectors identified a Green noncited violation involving the licensee’s failure to adequately monitor the performance of the emergency switchgear chillers in accordance with 10 CFR 50.65(a)(2). Specifically, while evaluating the system for 10 CFR 50.65(a)(1) status due to exceeding the established performance criteria, the licensee’s maintenance rule expert panel inappropriately changed the system performance criteria to keep the system in a(2) status. This issue was entered into the licensee's corrective action program as Condition Report ANO-C-2007-1621.

The finding was more than minor since violations of 10 CFR 50.65(a)(2) necessarily involve degraded system performance which, if left uncorrected, could become a more significant safety concern. This finding has very low safety significance because the maintenance rule aspect of the finding did not lead to an actual loss of safety function of the system or cause a component to be inoperable, nor did it screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding had crosscutting aspects in the area of human performance associated with decision making [H.1(b)] because the licensee did not use conservative assumptions and failed to verify the validity of the underlying assumptions used when evaluating the performance criteria of the emergency switchgear chillers for classification as 10 CFR 50.65(a)(1) status.

Inspection Report# : 2007005 *(pdf)*

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Unacceptable Preconditioning of EFW Flow Control Valve Prior to Inservice Testing
Green. The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” for the unacceptable preconditioning of Unit 1 EFW Flow Control Valve CV-2647 prior to inservice testing. Maintenance was conducted on the valve which included stroking the valve fully open and closed, and the surveillance test was

then performed as postmaintenance testing. This issue was entered into the licensee's corrective action program as Condition Report ANO-1-2007-2416.

The finding was greater than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, “Significance Determination Process,” Phase 1 worksheet, the finding was determined to have very low safety significance (Green) because it did not represent an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The cause of this finding was determined to have a crosscutting aspect in the area of human performance associated with resources, in that the licensee’s work management and planning procedures were not adequate to cause planners to consider, assess, and prevent preconditioning of safety-related components through the scheduling of surveillance tests and maintenance activities. Therefore, the applicable procedures and work packages related to this activity were not complete, accurate, and up-to-date [H.2(c)].
Inspection Report# : 2007005 *(pdf)*

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Correct Inadequate Stroke Time Testing of EFW Flow Control Valves
Green. The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the licensee’s failure to promptly identify and correct a practice of inadequate stroke time testing during ASME Code Inservice Testing of the Unit 1 EFW flow control valves. Specifically, the licensee was stroke time testing the EFW flow control valves using the valve position demand meter instead of the actual valve position indication. This issue was entered into the licensee's corrective action program as Condition Report ANO-2007-718.

The finding was greater than minor because it affected the procedure quality attribute of the mitigating systems cornerstone, and affected the associated cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, “Significance Determination Process,” Phase 1 worksheet, the finding was determined to have very low safety significance because the condition only affected the mitigating systems cornerstone and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding had crosscutting aspects in the area of human performance associated with decision making [H.1(b)] because the licensee did not use conservative assumptions and failed to verify the validity of the underlining assumptions used when evaluating the use of the valve position demand meter for ASME Code in-service testing.
Inspection Report# : 2007005 *(pdf)*

Significance: G Oct 19, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN ADEQUATE FIRE BRIGADE STAFFING DURING ALTERNATE SHUTDOWN
The team identified a noncited violation of License Conditions 2.C.(8) for Unit 1 and 2.C.(3)(b) for Unit 2 for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to maintain adequate fire brigade staffing during fire scenarios requiring an alternative shutdown of Unit 2 coincident with a remote shutdown of Unit 1. The licensee entered the failure to maintain adequate fire brigade staffing under all circumstances into their corrective action process for resolution.

The failure to implement and maintain in effect all provisions of the approved fire protection program by failing to maintain adequate fire brigade staffing was a performance deficiency. The finding was more than minor since it was associated with the Mitigating Systems Cornerstone attribute of protection from external factors and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The significance of the finding was assessed using Appendix M of Manual Chapter 0609, "Significance Determination Process Using Qualitative Criteria." This finding was determined to be of very low safety significance (Green) by management review due to the short duration of the violation. The finding has a cross-cutting aspect in the area of human performance associated with resources because the licensee did not adequately ensure the procedures governing the procedure change process were complete and accurate (H.2.(c)).
Inspection Report# : 2007006 *(pdf)*

Significance: G Sep 23, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
LOSS OF FUNCTION OF EMERGENCY SWITCHGEAR CHILLER DUE TO INADEQUATE MAINTENANCE PROCEDURE
A self-revealing noncited violation of Unit 1 Technical Specification 5.4.1.a was identified for the licensee's failure to provide adequate instructions for conducting maintenance on the north emergency switchgear chiller hot gas bypass valve. The failure to specify an appropriate fastener torque requirement in the work procedures resulted in a Freon leak that caused a loss of safety function of the equipment. This issue was entered into the licensee's corrective action program as Condition Report ANO-1-2007-1656.

The finding was greater than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance (Green) because it did not represent an actual loss of safety function of a non-Technical Specification train of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The cause of this finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with operating experience in that the licensee failed to incorporate vendor recommendations through changes to station maintenance procedures (P.2(b)).

Inspection Report# : 2007004 *(pdf)*

Significance: G Sep 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
INDICATING LAMP FAULT RESULTS IN LOSS OF CONTROL POWER TO STEAM DRIVEN EMERGENCY FEEDWATER PUMP
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified involving the licensee's failure to take adequate corrective actions in response to a loss of control power to the Unit 1 turbine-driven emergency feedwater Pump P-7A that occurred on November 30, 2004. The lack of corrective actions resulted in a condition not being addressed which contributed to a subsequent failure that occurred on June 27, 2007. This issue was entered into the licensee's corrective action program as Condition Report ANO-1-2007-1672.

The finding was greater than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and it 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, "Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance (Green) because it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The cause of this finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with operating experience in that the licensee failed to implement relevant operating experience through changes to station equipment (P.2(b)).
Inspection Report# : 2007004 *(pdf)*

Barrier Integrity

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify the Preconditioning of Reactor Building Spray Pumps
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for

the licensee's failure to prompty identify and correct a practice of unacceptable preconditioning prior to American Society of Mechanical Engineers Code inservice testing of the Unit 1 reactor building spray pumps. The licensee's corrective action program (via Condition Report ANO-C-1997-0288) failed to identify and correct the practice of venting the reactor building spray pump casing prior to conducting the quarterly surveillance test, which continued from 1997 through 2007. This issue was entered into the licensee's corrective action program as Condition Report ANO-1-2007-1645.

The finding was determined to be more than minor because it affected the procedure quality attribute of the barrier integrity cornerstone, and affected the associated cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radio nuclide releases caused by accidents or events. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding was determined to have very low safety significance because it did not involve an actual reduction in defense-in-depth for the atmospheric pressure control function of the reactor containment
Inspection Report# : 2007003 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 23, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conspicuously Post a Radiation Area
The inspectors identified a noncited violation of 10 CFR 20.1902(a) because the licensee failed to conspicuously post a radiation area. On May 2, 2007, during a tour of the auxiliary building, the inspectors observed that the radiological posting to the entryway of the Unit 1 Decay Heat Vault B was not conspicuously posted. An operations' "protected train" sign obscured the radiological posting. The licensee's immediate corrective action was to re-post the operations' sign to prevent obscuring the radiological posting.

The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because it could have resulted in workers being exposed to higher radiation levels. When processed through the occupational radiation safety significance determination process, the finding was determined to be of very low safety significance because it was not an as low as reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised. In addition, this finding had a crosscutting aspect associated with the human performance component of work practices (H.4(a)) because personnel failed to use human error prevention techniques such as self-checking or peer checking to verify that the radiation area was conspicuously posted.
Inspection Report# : 2007003 *(pdf)*

Significance: G Jun 23, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to use an Engineering Control as Required by a Radiation Work Permit
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a. because of a failure to use an engineering control as required by a radiation work permit. On April 25, 2007, four workers were unable to clear the personnel contamination monitors after working near the Unit 1 Steam Generator A. The licensee conducted an investigation and determined the steam generator high-efficiency particulate air ventilation (a radiation work permit required engineering control) had been rendered inoperable due to an incorrect line-up. The licensee's immediate corrective actions were to counsel the workers and brief associated personnel on the correct method for verifying high-efficiency particulate air ventilation.

The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because it resulted in workers being exposed to higher radiation levels. When processed through the occupational radiation safety significance determination process, the finding was determined to be of very low safety significance because it was not an as low as reasonable achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised. In addition, this finding had a crosscutting aspect associated with the human performance component of resources (H.2(c)) because the high-efficiency particulate air ventilation verification procedure was not adequate in that it did not have sufficient detail.
Inspection Report# : 2007003 *(pdf)*

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Significance: SL-IV Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Communication of an NRC Inspector's Presence by Security Personnel
SL IV. The inspectors identified a Severity Level IV NCV of 10 CFR 50.70, "Inspections," for the licensee's failure to ensure that the arrival and presence of an NRC inspector is not communicated to persons at the facility. A security officer informed other security officers at the facility of the presence and expected arrival of an NRC resident inspector at their duty location. This issue was entered into the licensee's corrective action program as Condition Report ANO-2007-1508.

The finding was determined to be applicable to traditional enforcement because the NRC's ability to perform its regulatory function was potentially impacted by the licensee's notification of personnel whose activities are subject to unannounced inspection by NRC inspectors. The finding was not suitable for evaluation using the significance determination process, and was therefore evaluated in accordance with the Enforcement Policy. The finding was reviewed by NRC management and was determined to be of very low safety significance.
Inspection Report# : 2007005 *(pdf)*

Significance: N/A Apr 03, 2007
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The team reviewed 299 condition reports, several work orders, engineering evaluations, associated root and apparent cause evaluations, and other supporting documentation to assess problem identification and resolution activities. The team concluded that the licensee effectively identified, evaluated and prioritized corrective actions for conditions adverse to quality. The licensee improved in their ability to use the condition report process to track adverse conditions documenting abnormal configurations or potential challenges to the normal station processes. Also the licensee improved in their coordination among plant processes when closing condition reports to other corrective action or work control documents. However, the team concluded that the licensee, generally, implemented timely, effective corrective actions, although some examples, including one violation, indicate continuing weakness in this area.

With minor exceptions, the licensee appropriately evaluated industry operating experience for relevance to the facility and had entered applicable items in the corrective action program. The licensee appropriately used industry operating experience when performing root cause and apparent cause evaluations. The licensee performed effective quality assurance audits and self-assessments, as demonstrated by self-identification of poor corrective action program performance and identification of ineffective corrective actions. The team concluded that the licensee established an acceptable and improving safety conscious work environment. Management took action to address the write-in comments from the 2006 safety culture survey. The team concluded from interviews that, although no safety conscious work environment concerns existed, the complaints related to general culture factors, if not addressed, might result in safety conscious work environment concerns.
Inspection Report# : 2007007 *(pdf)*

Last modified : June 05, 2008