

Arkansas Nuclear 1

3Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Jun 23, 2008

Identified By: NRC

Item Type: FIN Finding

Loss of 500 kV power line due to switchyard maintenance

The inspectors documented a self-revealing finding for emergent work performed outside of the original work scope that led to the loss of the Pleasant Hills 500 kV power line. Entergy switchyard technicians, while working on a switchyard breaker, stepped outside the bounds of the Arkansas Nuclear One work order and caused another breaker to trip. Consequently, the load dispatcher requested that the plant reduce the output power level and the licensee down-powered both units. The licensee entered the issue into the corrective action program as CR ANO-C-2008-1053, immediately stopped work in the switchyard, performed a stand down to reemphasize work procedures and expectations, and instituted supervisory tours of the work in the switchyard until the work was complete.

The finding was more than minor because it was associated with the human error attribute and affected the Initiating Event Cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. The significance of the finding was assessed using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet. The finding was of very low safety significance (Green) because it did not contribute to the likelihood that mitigation equipment or functions would not be available. The finding had a cross-cutting aspect in the area of Human Performance associated with work practices because the licensee did not ensure supervisory and management oversight of work activities, including Entergy transmission network technicians, in the switchyard such that nuclear safety was supported [H.4.(c)].

Inspection Report# : [2008003](#) (*pdf*)

Significance:  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*)

Mitigating Systems

Significance:  Jun 23, 2008

Identified By: NRC

Item Type: FIN Finding

Failure to follow station procedures while troubleshooting

The inspectors identified a finding because the "Fix-it-Now" team failed to follow site procedures when working on high energy line break barrier Door 62, which protected one train of the Unit 1 emergency switchgear. While performing troubleshooting activities on the door to determine the cause of the previous failure associated with the operating mechanism, the team maintained the door open for approximately 15 minutes and made an on the spot decision to turn this troubleshooting activity into "minor maintenance," which was not permitted in this instance. In addition, the team failed to: (1) obtain an approved work order; and 2) inform the control room of the activity, which would have

required entry into an 8.0 hour Technical Specification shutdown action statement. The licensee entered this issue in their corrective action program as Condition Report ANO 1 2008 0603.

The finding was more than minor because, if left uncorrected, it could result in a more significant concern. Specifically, by circumventing site procedural requirements, the "Fix-it-Now" team could render more risk significant equipment inoperable without the knowledge and approval of site management or control room personnel. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, this finding was determined to have very low safety significance because: (1) the finding was a qualification deficiency that resulted in a loss of functionality of Door 62; (2) it did not lead to an actual loss of safety function of the system or train; (3) it did not result in the loss of one or more trains of non-Technical Specification equipment; (4) it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding was determined to have a crosscutting aspect in the area of Human Performance associated with Work Control [H.3(b)], in that the licensee did not appropriately coordinate work activities associated with Door 62 by incorporating actions to address the impact of changes to the work scope on the plant, and the need to keep personnel apprised of work status and the operational impact of work activities.

Inspection Report# : [2008003](#) (*pdf*)

Significance:  Jun 23, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately monitor the performance of the Unit 1 emergency switchgear chillers

The inspectors identified a 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 re-evaluating the systems' performance for 10 CFR 50.65 (a) (1) status as a corrective action in response to a previous noncited violation for failure to adequately monitor the performance of the system, the licensee inappropriately determined that two independent functional failures should be counted as one based on time between failures. The extra failure would have resulted in exceeding the licensee's performance criteria for these components. The licensee entered this issue in their corrective action program as Condition Report ANO-1 2008 0360.

The finding was more than minor because it was similar to nonminor Maintenance Rule Example 7.b in NRC Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that the failure to demonstrate effective control of performance or condition and not putting the affected structure, system or component in (a)(1), necessarily involved degraded system performance. This finding had very low safety significance because the failure to properly categorize failures in accordance with the Maintenance Rule Program did not create, in itself, additional operability or functionality concerns. This finding was determined to have a cross-cutting aspect in the area of Human Performance associated with Decision Making [H.1(b)], in that 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# : [2008003](#) (*pdf*)

Significance:  Jun 23, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate preventive maintenance activities result in emergency light failures

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix R, Section III.J, with two examples for inadequate preventive maintenance activities that resulted in 90 emergency light failures between January 2005 and December 2007. The first example related to inadequate preventive maintenance activities that resulted in the failure of 15 emergency light batteries. The second example related to inadequate preventive maintenance activities that resulted in the failure of 75 emergency light lamps. The licensee has entered these conditions in their corrective action program as CR ANO-C-2007-1646.

The finding was more than minor since it was associated with the Mitigating Systems Cornerstone attribute of protection from external factors and affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, this finding adversely affected the ability of operators to access and align equipment necessary for safe shutdown in the event of a fire requiring evacuation of the control room. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." The finding was determined to be of very low safety significance (Green) because it was determined to be a low degradation of the post-fire safe shutdown category. In addition, operators were procedurally required to carry flashlights. This finding was determined to have a crosscutting aspect of Human Performance in that the licensee failed to appropriately plan work activities to support long-term equipment reliability. Specifically, the maintenance scheduling was more reactive than preventive [H.3(b)].

Inspection Report# : [2008003](#) (*pdf*)

Significance:  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:  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:  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:  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*)

Barrier Integrity

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Significance: Sep 11, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

B.5.b. Phase 2 and 3 Mitigating Strategy

This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has no cross-cutting aspect. See inspection report 2008-006 for more details.

Inspection Report# : [2008006](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

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*)

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