Arkansas Nuclear 2
2Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Follow Procedure to Obtain OSRC Review Prior to Restart
The inspector identified a finding for failure of operations personnel to follow procedures to obtain an Operational Safety Review Committee review and approval prior to restart of the unit where the cause of the trip had not been positively identified. Specifically, on December 13, 2008, and again on December 23, 2008, Unit 1 was restarted without an Operational Safety Review Committee review and approval as required by the Post Transient Review procedure (OP-1015.037), Attachment B. In both cases, the cause of the trip was identified as probable. The licensee entered this issue into their corrective action program as condition report CR-ANO-C-2009-01217.

The performance deficiency was greater than minor because it could be reasonably viewed as a precursor to a significant event, as evidenced by the December 20, 2008 manual reactor trip. Using Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," this finding affects the initiating events cornerstone and is determined to have very low safety significance by NRC management review because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding was determined to have a crosscutting aspect in the area of Human Performance associated with Decision-Making [H.1(b)], in that the licensee made non-conservative assumptions in the decisions to restart the unit after each trip. The licensee failed to conduct sufficient effectiveness reviews to verify the validity of the underlying assumptions.

Inspection Report# : 2009008 *(pdf)*

Significance: G Mar 24, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Follow Procedure for Flow Accelerated Corrosion Program
The inspectors documented a self-revealing finding for the failure to properly implement the flow accelerated corrosion control program. Consequently, a nonsafety related extraction steam drain line failed because of flow accelerated corrosion. Engineers had identified the line as being vulnerable to flow accelerated corrosion but did not monitor it. Engineers also failed to integrate relevant industry operating experience into the program. Operators had to reduce Unit 2 power and take the turbine off line in response to the event. The licensee entered this issue into their corrective action program as Condition Report ANO 2-2009-0319.

The performance deficiency was more than minor because it affected the equipment performance attribute of the Initiating Events Cornerstone, and it directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, this finding was determined to have very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding had a crosscutting aspect in the area of Problem Identification and Resolution associated with Operating Experience [P.2(b)], in that licensee personnel failed to implement and institutionalize operating experience through changes to station processes and procedures.

Inspection Report# : 2009002 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform an Adequate Risk Assessment when Disabling a Station High Energy Line Break Barrier
The inspectors identified a noncited violation of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," associated with the licensee's failure to perform an adequate risk assessment for planned maintenance. Specifically, the licensee inappropriately assumed that disassembly of Door 340, a high-energy line break barrier, constituted normal plant ingress and egress. As such, this assumption resulted in an inadequate risk assessment, which failed to adequately evaluate the proposed condition of Door 340 and provide appropriate risk management actions for this condition. This issue was entered into the licensee's corrective action program as Condition Report ANO-2-2008-2231.

The finding was more than minor because it was similar to the nonminor considerations of Maintenance Rule Example 7.e in NRC Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that the licensee's risk assessment contained incorrect assumptions that changed the outcome of the assessment and required additional risk management activities. The inspectors evaluated this finding using NRC Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process" 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. This finding had a crosscutting aspect in the area of Human Performance associated with Decision Making [H.1(b)], in that the licensee's engineering staff failed to use conservative assumptions and failed to verify the validity of the underlying assumptions used when evaluating the potential effects of disabling a high energy line break barrier for maintenance in accordance with 10 CFR 50.65(a)(4).

Inspection Report# : 2008005 *(pdf)*

Significance: G Sep 23, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ENTER CONDITIONS ADVERSE TO QUALITY INTO THE CORRECTIVE ACTION PROGRAM
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to implement required measures to ensure that conditions adverse to quality were promptly identified and corrected. Specifically, Procedure EN LI 102, "Corrective Action Process," Revision 8, required that plant personnel write condition reports for conditions adverse to quality. The inspectors identified nine instances where station personnel were aware of conditions adverse to quality, but failed to enter them into the corrective action program without being prompted by the inspectors. Licensee personnel entered this issue into the corrective action program as Condition Report ANO C 2008 1536.

The finding was more than minor because it was similar to nonminor Example 3.j in NRC Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that significant programmatic deficiencies were identified associated with this issue that could lead to worse errors if left uncorrected. Specifically, station personnel's failure to enter conditions adverse to quality into the station corrective action program could result in the failure to recognize that risk-significant equipment is in a degraded condition and, as such, may not be able to perform its specified safety function. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding was determined to have very low safety significance (Green) because the finding: (1) was not a qualification deficiency confirmed not to result in loss of operability; (2) did not lead to an actual loss of system safety function; (3) did not result in the loss of safety function of a single train for greater than its technical specification allowed outage time; (4) did not represent an actual loss of safety function of one or more nontechnical specification trains of equipment designated as risk-significant per 10CFR50.65, for greater than 24 hours; and (5) it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding had a

crosscutting aspect in the area of Problem Identification and Resolution associated with the Corrective Action Program [P.1(a)] in that licensee personnel failed to implement a corrective action program with a low threshold for identifying issues. This also includes identifying such issues completely, accurately, and in a timely manner commensurate with their safety significance.

Inspection Report# : 2008004 *(pdf)*

Barrier Integrity

Significance: G Jun 23, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Appropriately Identify and Implement Adequate Corrective Actions to Correct a Condition Adverse to Quality Associated with the Material Control System
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” associated with the licensee’s failure to adequately identify and implement adequate corrective actions in response to the identification of defective material. Specifically, in 1997 the licensee identified that two check valves, which had been installed in the postaccident monitoring system, had a defective design that prevented them from seating all of the way. However, the stations material control system was not updated with this information and this model valve was subsequently issued for use in the high pressure safety injection pressurization system which resulted in leakage due to the valves failure to completely seat. The licensee entered this issue into their corrective action program as Condition Report CR ANO 2 2009 1012.

The performance deficiency was more than minor because it affected the design control attribute of the Barrier Integrity Cornerstone and it directly affected the cornerstone objective to provide reasonable assurance that the physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, this finding was determined to have very low safety significance because the finding did not represent a degradation of the barrier functions of the control room or auxiliary building; did not represent an actual open pathway in the physical integrity of reactor containment; and did not involve an actual reduction in the function of hydrogen ignitors in the reactor containment. The finding was determined to have a crosscutting aspect in the area of Problem Identification and Resolution associated with the Corrective Action Program [P.1(c)], in that the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary. This is indicative of current plant performance because the licensee continues to inadequately evaluate issues and develop appropriate resolutions.

Inspection Report# : 2009003 *(pdf)*

Significance: G 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

Last modified : August 31, 2009