

Arkansas Nuclear 1

Initiating Events

Mitigating Systems



Significance: G Sep 21, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY REPEAT FUNCTIONAL FAILURES.

Green. The inspectors identified a noncited violation of 10 CFR 50.65(a)(2). The licensee failed to set goals and monitor the performance of the reactor coolant system as required by 10 CFR 50.65(a)(1), from April 5, 2001, till October 12, 2001, after it had failed to demonstrate effective control of the performance of the reactor coolant system through appropriate preventive maintenance. Specifically, the licensee did not identify repetitive functional failures of a vent to fail to open. As required by 10 CFR 50.65(a)(2), effective control of system, structure, or component performance or condition through appropriate preventive maintenance must be demonstrated in order for the monitoring under Paragraph (a)(1) not to be required. The inspectors considered this violation noncited consistent with Section VI.A.1 of the NRC Enforcement Policy (50-313/02-04-03; 50-368/02-04-03). The licensee documented this violation in the licensee's corrective action program as Condition Report CR-ANO-C-2002-00734. The inspectors considered this violation more than minor because the failure to identify repeat functional failures resulted in the system not being evaluated for (a)(1) status. If the condition were left uncorrected, the lack of adequate preventive maintenance could result in additional equipment failures. The finding is not suitable for SDP evaluation because the performance failure did not result in degraded equipment. NRC management has reviewed the finding and determined it to be a Green finding of very low significance. The inspectors considered the safety significance of this violation to be low because the performance deficiency did not cause the repeat failures. Inspection Report# : [2002004\(pdf\)](#)



Significance: G Sep 21, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE FOR EDG HEAT EXCHANGER THERMAL PERFORMANCE TESTS

Green. The inspectors identified that a violation of Unit 1 Technical Specification 5.4.1(a) and Unit 2 Technical Specification 6.8.1(c) occurred failing to properly conduct a surveillance test on safety-related equipment. Emergency diesel generator heat exchanger thermal performance tests were not performed in accordance with procedures that were written to ensure that temperature stabilization requirements were met. The failure to follow surveillance test requirements is considered a violation of Unit 1 Technical Specification 5.4.1(a) and Unit 2 Technical Specification 6.8.1(c) (50-313/02-04-02; 50-368/02-04-02). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Condition Report C-2002-00710. The issue was more than minor due to repeated failures to ensure temperature stabilization requirements during surveillance tests on multiple pieces of equipment. The issue impacted the mitigating systems cornerstone in that it affected the ability to monitor thermal performance of the emergency diesel generators. This issue was characterized as a Green finding using the Significance Determination Process because upon completion of subsequent satisfactory test performance, the issue did not represent an actual loss of safety function.

Inspection Report# : [2002004\(pdf\)](#)

Barrier Integrity

Significance: TBD Nov 08, 2002

Identified By: NRC

Item Type: URI Unresolved item

FAILURE TO PROVIDE ACCURATE AND COMPLETE INFORMATION IN RESPONSE TO AN NRC GENERIC LETTER REGARDING A UNIT 1 PRIMARY WATER CHEMISTRY SULFATE EXCURSION

IR 05000313-02-05, IR 05000368-02-05; Entergy Operations, Inc.; 9/22/02 - 12/28/02; Arkansas Nuclear One, Units 1 and 2; Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles, Problem Identification and Resolution. On November 8, 2002, the inspectors identified an unresolved item associated with a 1988 Unit 1 primary water chemistry sulfate excursion that was not documented in the licensee's response to NRC Generic Letter 97-01. During heatup following the 1988 Unit 1 1R8 Refueling Outage, primary water chemistry sulfate levels exceeded

guidelines of the Electric Power Research Institute because of an earlier unintended intrusion of demineralizer resin into the reactor coolant system. NRC Generic Letter 97-01 requested that licensee's provide information regarding occurrences of resin intrusion into the reactor coolant system and effects on reactor coolant system chemistry. A Babcock and Wilcox Owners Group Report which documented licensee inputs in response to Generic Letter 97-01 stated that no noticeable change in reactor coolant system chemistry was noted following the subject event. This statement was not correct and there was no evaluation of the effects of the sulfate excursion that did occur. 10 CFR 50.9 requires that information provided by a licensee to the Commission be complete and accurate in all material respects. This issue is considered unresolved, however, pending NRC review of the licensee's corrected response to Generic Letter 97-01, in order to allow an evaluation of the potential significance of the event and determination of the degree to which the NRC relied upon this information from licensees for regulatory decision making during review of licensee responses to Generic Letter 97-01; as described in the NRC Enforcement Manual for violations involving inaccurate or incomplete information. This issue is greater than minor because an actual reactor coolant system sulfate excursion occurred. However, this issue did not pose an immediate safety concern because the identified sulfate excursion was low in magnitude, short in duration, and happened approximately 14 years ago. All Unit 1 reactor vessel head penetration nozzles were inspected during Refueling Outage 1R17 and repairs were made as necessary. Additional review is needed to determine the final characterization of this finding.
Inspection Report# : [2002005\(pdf\)](#)

Significance: TBD Oct 08, 2002

Identified By: NRC

Item Type: URI Unresolved item

FAILURE TO PREVENT RECURRENCE OF RCS PRESSURE BOUNDARY LEAKAGE

IR 05000313-02-05, IR 05000368-02-05; Entergy Operations, Inc.; 9/22/02 - 12/28/02; Arkansas Nuclear One, Units 1 and 2; Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles, Problem Identification and Resolution. On October 8, 2002, the inspectors identified an unresolved item associated with repeat reactor coolant system (RCS) boundary leakage. In the ANO U-1 Spring 2001 Outage (1R16), CRDM Nozzle 56 was identified as leaking. Repairs were made to the nozzle weld, and the unit was returned to operation for another cycle. Upon shutdown for Refueling Outage 1R17, repeat leakage of the nozzle was self revealed during visual examination of the reactor vessel head. In 2001, the licensee performed an embedded flaw repair in accordance with Section XI of the ASME Code. However, the licensee recently concluded that this repair method was inadequate to prevent recurrence of the original primary water stress corrosion cracking (PWSCC). They stated that the partial arc of the excavation and overlay did not adequately seal the termination points of the weld. Appendix B, Criterion XVI, of 10 CFR 50, states that in the case of significant conditions adverse to quality, the licensee shall assure that corrective action taken precludes repetition. Although the licensee determined the reactor coolant system boundary leakage from vessel head penetration (VHP) Nozzle 56 was a significant condition adverse to quality, they failed to take adequate corrective actions to preclude repetition. Although the ASME Code repair was intended to last for at least 30 years, the inadequate design of the weld repair for this application of the ASME Code resulted in the repeat failure of the pressure boundary in less than one operating cycle. This leak was repaired in this outage with a more comprehensive strategy, and is therefore not an ongoing safety concern. Due to the fact that actual reactor coolant system pressure boundary leakage occurred, the issue is greater than minor and required a Phase 2 significance determination in accordance with NRC Manual Chapter 0609. However, due to NRC management interest in maintaining consistency throughout the Agency for similar leakage, the issue was referred to the Office of Nuclear Reactor Regulation for a Phase 3 determination process. Therefore, this issue is being treated as an unresolved item (URI) until a final characterization of the risk is determined.

Inspection Report# : [2002005\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety



Significance: May 24, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO COMPLY WITH DOT HAZARD COMMUNICATION REQUIREMENTS

Green. A noncited violation of 10 CFR 71.5 was identified by the team because the licensee did not comply with the applicable requirements of the U. S. Department of Transportation regulations in 49 CFR Parts 170-189. Specifically, the licensee did not include the proper shipping name on shipping papers, as required by 49 CFR 172.202(a)(1), and did not properly mark packages with the proper shipping name and identification number, as required by 49 CFR 172.301(a). Contaminated equipment and components were shipped as low specific activity material instead of surface contaminated objects. The failure to properly communicate the hazard involved with a radioactive shipment was a

performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attribute (Transportation Program) and affected the associated cornerstone objective. The finding involved occurrences in the licensee's radioactive material transportation program that were contrary to NRC or Department of Transportation regulations. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because radiation limits were not exceeded, the package was not breached during transit, the licensee was not refused low level burial ground access, waste was not underclassified, the licensee did not fail to make notifications, and no certificate of compliance problems were involved. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report CR-ANO-2-2002-00413.

Inspection Report# : [2002006\(pdf\)](#)

Physical Protection

Miscellaneous

Last modified : March 25, 2003