

## ENCLOSURE 1

### NOTICE OF VIOLATION

Entergy Operations, Inc.  
Arkansas Nuclear One

Docket Nos.: 50-313; 50-368  
License Nos.: DPR-51; NPF-6  
EA: 98-158

During an NRC inspection conducted January 26-30, 1998, with in office inspection until March 30, 1998, five violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

- A. 10 CFR 50.65(b)(2) requires, in part, that the scope of the monitoring program specified in paragraph (a)(1) shall include certain non safety-related structures, systems, and components whose failure could prevent safety-related structures, systems, and components from fulfilling their safety-related function. 10 CFR 50.65(c) states that the requirements of this section shall be implemented by each licensee no later than July 10, 1996.

Contrary to the above, from July 10, 1996, until January 28, 1998, the Unit 2 turbine building sump system was not included in the scope of the Maintenance Rule program. The inclusion of the turbine building sump in the scope of the Maintenance Rule was necessary because of the adverse effect imposed on a safety system (emergency feedwater) as a result of the potential failure of the turbine building sump.

This is a Severity Level IV violation (Supplement I) (50-368/9801-01).

- B. 10 CFR 50.65(a)(2) requires, in part, that monitoring as specified in 10 CFR 50.65 (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance, such that the structure, system, or component remains capable of performing its intended function. 10 CFR 50.65(c) states that the requirements of this section shall be implemented by each licensee no later than July 10, 1996.

10 CFR 50.65(a)(3) requires, in part, that the holders of an operating license shall evaluate performance and condition monitoring activities and associated goals and preventive maintenance activities at least every refueling cycle provided the interval between evaluations does not exceed 24 months. Adjustments shall be made where necessary to ensure that the objective of preventive failures of structures, systems, and components through maintenance is appropriately balanced against the objective of minimizing unavailability of structures, systems, and components due to monitoring or preventive maintenance.

Contrary to the above, as of July 10, 1996, the time that the licensee elected to not monitor the performance or condition of certain structures, systems, and components against established goals pursuant to the requirements of Section (a)(1), the licensee failed to demonstrate that the performance or condition of structures, systems, and components within the scope of 10 CFR 50.65 had been effectively controlled by performing appropriate preventive maintenance. Specifically, the licensee failed to adequately demonstrate the performance or condition of the emergency feedwater initiation control system, the engineered safety features actuation system, the reactor building heating and ventilation system, the reactor building sumps, the reactor protection system, the traveling screens and screen wash system, and the 120 Vac instrumentation system had been effectively controlled by performing appropriate preventive maintenance. No availability measure was considered in the demonstration. Reliability and availability measures are both necessary to demonstrate that preventive maintenance had been effective to ensure that system functions will perform as required. Further, as a result of not establishing performance measures for availability of these structures, systems, and components, the periodic evaluation of preventive maintenance activities for Unit 1 performed in accordance with 10 CFR 50.65(a)(3), performed in June 1997, did not adequately demonstrate a balance of availability and reliability.

This is a Severity Level IV violation (Supplement I) (50-313/9801-03).

- C. 10 CFR 50.65(a)(1) requires, in part, that the holders of an operating license shall monitor the performance or condition of structures, systems, and components as defined in 10 CFR 50.65(b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken.

10 CFR 50.65(a)(2) requires, in part, that monitoring as specified in 10 CFR 50.65 (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance that the structure, system, or component remains capable of performing its intended function. 10 CFR 50.65(c) states that the requirements of this section shall be implemented by each licensee no later than July 10, 1996.

Contrary to 10 CFR 50.65(a)(2), as of July 10, 1996, the time that the licensee elected to not monitor the performance or condition of certain structures, systems, and components against licensee-established goals pursuant to the requirements of Section (a)(1), the licensee had not demonstrated that the performance or condition of certain structures, systems, and components within the scope of 10 CFR 50.65 had been effectively controlled through the performance of appropriate preventive maintenance, as evidenced by the following examples:

1. The licensee failed to establish adequate measures to demonstrate the performance or condition of the traveling screens and screen wash systems. Specifically, the licensee considered the traveling screens' availability to be tracked under the service water systems, but one traveling screen on each unit could provide adequate flow to all the service water loops, such that any one screen in Unit 2 and any three screens in Unit 1 could be unavailable indefinitely without impacting the availability of the service water loops. Allowing the traveling screens to reach such a state before taking corrective actions would not demonstrate that preventive maintenance was effective to control the system's performance or condition to maintain its intended function.
2. The licensee failed to demonstrate that the performance of a relay for the Unit 2 safety-related post-accident sampling system was being effectively controlled through the performance of appropriate preventive maintenance. Specifically, the licensee had established performance measures for this component of less than three functional failures per two cycles and no repeat functional failures. These measures were not adequate because the relay was only actuated once each cycle for surveillance testing of sampling valves and, therefore, it was unlikely to exceed two failures within two cycles. Thus, no adequate basis had been established to demonstrate that the performance or condition of the relay was being effectively controlled through the performance of effective preventive maintenance that the component remained capable of performing its intended function.
3. The licensee failed to demonstrate that the performance of the containment integrity function was being effectively maintained through the performance of appropriate preventive maintenance on the safety-significant containment isolation valves. Specifically, the licensee failed to demonstrate it had established adequate measures to evaluate the effectiveness of preventive maintenance on the containment isolation valves prior to placing them under Category (a)(2). A functional failure of either units' containment isolation valve, due to test leakage, would not have occurred until a limit imposed by Technical Specifications, Section 3.6.1, for integrated containment/reactor building leak rate was exceeded. Allowing containment isolation valves to reach such a state before taking corrective actions would not demonstrate that preventive maintenance was effective to control their performance or condition to maintain its intended function.
4. From July 10, 1996, through January 28, 1998, the licensee had failed to establish adequate measures to evaluate the appropriateness of the performance of preventive maintenance for the Unit 2 core protection calculator system. The licensee had recognized that the performance criteria were inadequate, but failed to evaluate the effectiveness of the new performance criteria, established on

December 9, 1997. Specifically, the licensee had failed to perform a historical performance review of the system data against the new performance criteria. On January 28, 1998, the licensee performed the historical review and identified one functional failure of the control element assembly calculator whose performance criteria were monitored under the core protection calculator system.

This is a Severity Level IV violation (Supplement I) (50-313; 368/9801-04).

- D. 10 CFR 50.65(a)(1) states, in part, that holders of an operating license shall monitor the performance or condition of structures, systems, and components as defined by 10 CFR 50.65(b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions. Such goals shall be established commensurate with safety and, where practical, take into account industry-wide operating experience. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective actions shall be taken.

Contrary to the above, the current licensee-established goals for the Unit 2 main steam safety valves were not commensurate with safety. Safety valve performance was monitored against goals at a higher threshold for reliability than the normal performance criteria, which permitted exceeding the license limits as specified in Technical Specification 3.7.1.1 and the ASME/ANSI OM-1987 Code, Part 1. Further, the corrective action established by the licensee could not be monitored by the goals. Implementation of the corrective action was not scheduled until January 1999.

This is a Severity Level IV violation (Supplement I) (50-368/9801-06).

- E. 10 CFR 50.65(a)(1) requires, in part, that the holders of an operating license shall monitor the performance or condition of structures, systems, and components as defined in 10 CFR 50.65(b), against licensee-established goals in a manner sufficient to provide reasonable assurance that structures, systems, and components are capable of fulfilling their intended functions. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken.

10 CFR 50.65(a)(2) requires, in part, that monitoring, as specified in 10 CFR 50.65 (a)(1), is not required where it has been demonstrated that the performance or condition of a structure, system, and component is being effectively controlled through the performance of appropriate preventive maintenance that the structure, system, or component remains capable of performing its intended function. 10 CFR 50.65(c) states that the requirements of this section shall be implemented by each licensee no later than July 10, 1996.

Contrary to the above, on March 13, 1997, the licensee incorrectly permitted the 125 Vdc system for Unit 2 to remain under 10 CFR 50.65(a)(2) when preventive maintenance

failed to assure that this system remained capable of performing its intended function. Specifically, a surveillance test failure of a swing charger was not identified as a functional failure. The combination of the missed failure and two previously identified failures demonstrated that the preventive maintenance being performed on this system was not appropriate. It failed to assure that the system remained capable of performing its intended function. Accordingly, the 125 Vdc system should have been designated as a Category (a)(1) system following the failures.

This is a Severity Level IV violation (Supplement I) (50-368/9801-07).

Pursuant to the provisions of 10 CFR 2.201, Entergy Operations, Inc., is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should address the following elements only for Violations B, C, D, and E: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

The NRC has concluded that information regarding the reason for the Violation A, the corrective actions taken and planned to correct the violation and prevent recurrences and the date when full compliance will be achieved is already adequately addressed in Enclosure 4 of Attachment 2. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region IV, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so

that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Arlington, Texas,  
this 7th day of May 1998