



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
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ARLINGTON, TEXAS 76011-8064

July 26, 2000

Craig Anderson, Vice President  
Operations  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, Arkansas 72801-0967

SUBJECT: NRC's ARKANSAS NUCLEAR ONE INSPECTION REPORT NO. 50-313/00-08;  
50-368/00-08

Dear Mr. Anderson:

This refers to the inspection conducted from May 14 through July 1, 2000, at the Arkansas Nuclear One, Units 1 and 2 facility. The enclosed report presents the results of this inspection. The results of this inspection were discussed on July 6, 2000, with you and members of your staff.

The inspection was an examination of activities conducted under your licenses as they relate to safety, compliance with the Commission's rules and regulations, and with the conditions of your licenses. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

*/RA/*

P. Harrell, Chief  
Project Branch D  
Division of Reactor Projects

Docket Nos.: 50-313  
50-368  
License Nos.: DPR-51  
NPF-6

Entergy Operations, Inc.

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Enclosure:  
NRC Inspection Report No.  
50-313/00-08; 50-368/00-08

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Only inspection reports to the following:  
 D. Lange (**DJL**)  
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 ANO Site Secretary (**VLH**)

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
 REGION IV

Docket Nos.: 50-313; 50-368  
License Nos.: DPR-51; NPF-6  
Report No.: 50-313/00-08; 50-368/00-08  
Licensee: Entergy Operations, Inc.  
Facility: Arkansas Nuclear One, Units 1 and 2  
Location: 1448 S. R. 333  
Russellville, Arkansas 72801  
Dates: May 14 through July 1, 2000  
Inspectors: R. Bywater, Senior Resident Inspector  
K. Weaver, Resident Inspector  
Approved by: P. Harrell, Chief, Project Branch D  
Division of Reactor Projects

ATTACHMENTS:

Attachment 1: Supplemental Information  
Attachment 2: NRC's Revised Reactor Oversight Process

## SUMMARY OF FINDINGS

Arkansas Nuclear One  
NRC Inspection Report 50-313/00-08; 50-368/00-08

This report covers a 7-week period of resident inspection. In the Reactor Safety area, the cornerstones inspected included Initiating Events, Mitigating Systems, and Barrier Integrity. There were no inspection findings identified in these areas.

## Report Details

### Summary of Plant Status

At the beginning of this inspection period, Unit 1 was at 100 percent power. On June 7, 2000, Unit 1 operators reduced reactor power to approximately 80 percent for main turbine throttle valve and governor valve testing and condenser water box cleaning. On June 8, the unit was returned to 100 percent power. Unit 1 operated at or near 100 percent power for the remainder of this inspection period.

At the beginning of this inspection period, Unit 2 was at 100 percent power. On May 26, Unit 2 operators performed a short power reduction to perform main turbine throttle valve and governor valve testing. On June 24, Unit 2 operators reduced reactor power to approximately 96.5 percent to maintain primary reactor coolant system outlet temperature at 600°F. Unit 2 operated at or near 96.5 percent power for the remainder of this inspection period.

### **1. REACTOR SAFETY** **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R04 Equipment Alignment - Routine Inspection

##### a. Inspection Scope

The inspectors performed a partial walkdown of the Unit 2 chemical volume and control system. Plant procedures and drawings were used to verify the correct lineup for the system.

##### b. Issues and Findings

There were no findings identified during this inspection.

#### 1R05 Fire Protection - Monthly Routine Inspection

##### a. Inspection Scope

The inspectors performed fire protection walkdowns to assess the material condition of plant fire protection equipment, proper control of transient combustibles, and operational status of fire barriers used to prevent fire propagation. The following risk significant areas were inspected:

- Units 1 and 2 Control Room
- Unit 2 Engineered Safety Features Rooms
- Unit 2 Emergency Diesel Generator Corridor
- Unit 2 North and South Vital Switchgear Rooms

b. Issues and Findings

On June 26, 2000, the inspectors identified that Door 269, a 3 hour rated fire door separating the North and South Unit 2 vital switchgear rooms, was not operable. Door 269 consisted of a double door with one side normally latched at the top and bottom in a stationary position. This stationary door was found not latched and both doors could be pushed open with slight pressure. The inspectors informed control room personnel of the condition and it was immediately corrected. This issue has a potential risk significance of greater than very low significance and is considered an unresolved item until a final risk characterization is determined by the Significance Determination Process Oversight and Enforcement Panel (50-368/0008-01).

1R06 Flood Protection - Seasonal Inspection

a. Inspection Scope

The inspectors performed tours of the plant to determine if adequate protection existed to protect safety-related equipment from internal and external flooding events. Specific risk significant areas included the Units 1 and 2 emergency core cooling pump rooms and containment tendon galleries. For those areas where operator actions were required, the inspectors verified that abnormal procedures used for coping with flooding could reasonably be used.

b. Issues and Findings

There were no findings during this inspection.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations for technical adequacy and impact on continued plant operation:

- Condition Report CR-ANO-2-2000-167, Operability Version 2, evaluation of an air gap in the Unit 2 Engineered Safety Features Pump Room watertight doors.
- Condition Report CR-ANO-2-2000-183, evaluation of doors not being latched on environmentally qualified Motor Control Centers 2B52 and 2B62.

b. Issues and Findings

There were no findings identified during this inspection.

1R19 Postmaintenance Testing

a. Inspection Scope

The inspectors observed the following postmaintenance tests to determine whether the test adequately confirmed equipment operability: Surveillance Test Procedure 1106.006, "Emergency Feedwater Pump Operation," Revision 59, following preventive maintenance on Valve CV-2802, Q-condensate storage tank supply to Pump P-7A, and Valve CV-2888, emergency feedwater test and recirculation valve.

b. Issues and Findings

There were no findings identified during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed part of the surveillance activities associated with Surveillance Test Procedure 1106.006, "Emergency Feedwater Pump Operation," Revision 59.

b. Issues and Findings

There were no findings identified during this inspection.

**OTHER ACTIVITIES (OA)**

4OA3 Event Follow-up

(Closed) Unresolved Item 313/9917-01: Notice of Enforcement Discretion granted regarding a defective steam generator tube. This item was reviewed during evaluation of Licensee Event Report 50-313/1999-005-00.

(Closed) Licensee Event Report 50-313/1999-005-00: Once-Through Steam Generator Tube left in service with a flaw exceeding the technical specification limit as a result of a process deficiency.

The Office of Nuclear Reactor Regulation issued an amendment to the Unit 1 operating license on January 13, 2000, which allowed the subject tube to remain in service for the remainder of the operating cycle. This licensee event report was a minor issue and was closed.

4OA6 Management Meeting

.1 Exit Meeting Summary

On July 6, 2000, the inspectors conducted a meeting with Mr. C. Anderson, Vice President, Operations, and other members of plant management to present the inspection results. The managers acknowledged the findings presented and also



informed the inspectors that no proprietary material was examined during the inspection.

## ATTACHMENT 1

### PARTIAL LIST OF PERSONS CONTACTED

#### Licensee

C. Anderson, Vice President  
M. Cooper, Licensing Specialist  
R. Fuller, Emergency Planning Manager  
B. Gordon, Unit 2 Outages Manager  
B. Greeson, Unit 2 Systems Engineering Supervisor  
J. Hoffpauir, Unit 2 Plant Manager  
D. James, Licensing Manager  
J. Kowalewski, Unit 1 Systems Engineering Manager  
R. Lane, Engineering Director  
T. Mitchell, Unit 2 Operations Manager  
M. Smith, Engineering Programs and Components Manager  
C. Tyrone, Quality Assurance Manager  
J. Vandergrift, Nuclear Safety Director  
C. Zimmerman, Unit 1 Plant Manager

#### DOCUMENTS REVIEWED

Procedure 2104.002	Chemical and Volume Control	Revision 38
Procedure 1203.025	Natural Emergencies	Revision 18
Procedure 2203.008	Natural Emergencies	Revision 8
Drawing M-2231, Sheet 1	Unit 2 Chemical and Volume Control	Revision 131
Condition Report ANO-2-2000-0225	Fire Door DR-269 not latched	June 26, 2000
Procedure 1025.006	Environmentally Qualified Equipment Maintenance Program	Revision 20
Procedure 2412.074	Unit 2 AC Motor Control Centers	Revision 1
Procedure 1000.120	ANO Fire Watch Program	Revision 9
Procedure 2104.043	Penetration Room Ventilation System	Revision 13
Procedure 1000.152	Unit 1 and Unit 2 Fire Protection System Specifications	Revision 3

Procedure 2104.007	Control Room Emergency Air Conditioning and Ventilation	Revision 21
ANO Unit 1 and Unit 2 Fire Hazards Analysis		Revision 6
ANO Unit 1 and Unit 2 Pre Fire Plan		Revision 0
Procedure 2306.025	Unit 2 Fire Door Inspection Procedure	Revision 6

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-368/0008-01      URI      Inoperable fire door between Unit 2 North and South vital switchgear rooms has a potential risk significance of greater than very low significance (Section 1R05)

Closed

50-313/9917-01      URI      Notice of Enforcement Discretion granted regarding a defective steam generator tube (Section 4OA3)

50-313/1999-005-00      LER      Once Through Steam Generator Tube left in service with a flaw exceeding the technical specification limit as a result of a process deficiency (Section 4OA3)

## ATTACHMENT 2

### NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>•Initiating Events</li><li>•Mitigating Systems</li><li>•Barrier Integrity</li><li>•Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>•Occupational</li><li>•Public</li></ul>	<ul style="list-style-type: none"><li>•Physical Protection</li></ul>

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspections so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>