

Docket Nos. 50-313  
and 50-368

February 26, 1992

Mr. Neil S. Carns  
Vice President, Operations ANO  
Entergy Operations, Inc.  
Route 3 Box 137G  
Russellville, Arkansas 72801

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 157 AND 131 TO FACILITY OPERATING  
LICENSE NOS. DPR-51 AND NPF-6 - ARKANSAS NUCLEAR ONE, UNITS 1  
AND 2 (TAC NOS. M81931 AND M81932)

The Commission has issued the enclosed Amendment Nos. 157 and 131 to Facility  
Operating License Nos. DPR-51 and NPF-6 for the Arkansas Nuclear One, Unit  
Nos. 1 and 2 (ANO-1&2). These amendments consist of changes to the Technical  
Specifications (TSs) in response to your application dated October 15, 1991.

The amendments revise the ANO-1&2 TSs by deleting the requirement for a visual  
cell plate inspection for the diesel fire pump battery from ANO-1 Surveillance  
Requirement 4.20.3.c.1 and ANO-2 Surveillance Requirement 4.7.10.1.3.c.1.

A copy of our related Safety Evaluation is also enclosed. A Notice of  
Issuance will be included in the Commission's next biweekly Federal Register  
notice.

Sincerely,

**ORIGINAL SIGNED BY**  
Thomas W. Alexion, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

**ORIGINAL SIGNED BY**  
Sheri R. Peterson, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 157 to DPR-51
- 2. Amendment No. 131 to NPF-6
- 3. Safety Evaluation

cc w/enclosures:

See next page  
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Docket File	NRC/LPDRs	PD4-1 r/f	SPeterson(2)	PNoonan(2)
MVirgilio	JLarkins	CGrimes	TAlexion(2)	SRuffin
OGC	DHagan	TWesterman, RIV	GHill(8)	WJones
PD4-1 p/f	ACRS(10)	GPA/PA	ARM/LFMB	

OFC	LA:PD4-1	I:PD4-1	PM:PD4-1	PMPD4-1
NAME	PNoonan	SRuffin	TAlexion	SPeterson
DATE	2/5/92	2/5/92	2/5/92	2/5/92
OFC	SPLB C.McCracken	OGC	D:PD4-1	
NAME	CMcCracken	JLarkins		
DATE	2/7/92	2/11/92	2/11/92	

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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Sincerely,

Handwritten signature of Thomas W. Alexion in cursive.

Thomas W. Alexion, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Handwritten signature of Sheri R. Peterson in cursive.

Sheri R. Peterson, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

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3. Safety Evaluation

cc w/enclosures:  
See next page

Mr. Neil S. Carns  
Arkansas Nuclear One, Units 1 & 2

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

ENERGY OPERATIONS, INC.

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 157  
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated October 15, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR, Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. DPR-51 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 157, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John T. Larkins, Director  
Project Directorate IV-1  
Division of Reactor Projects III, IV, and V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: February 26, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 157

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Revise the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change.

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- 4.20.2 The fire pump diesel engine shall be demonstrated OPERABLE:
- a. At least once per 31 days by verifying the fuel storage day tank to be at least 5/8 full of fuel (approximately 155 gallons).
  - b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM-D975-74 with respect to viscosity, water content and sediment.
  - c. At least once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

- 4.20.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:
- a. At least once per 7 days by verifying that:
    - 1) The electrolyte level of each battery is above the plates, and
    - 2) The overall battery voltage is  $\geq 24$  volts.
  - b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.
  - c. At least once per 18 months by verifying that:
    - 1) The batteries and battery racks show no visual indication of physical damage or abnormal deteriorations, and
    - 2) The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

ENERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131  
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated October 15, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 131, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John T. Larkins, Director  
Project Directorate IV-1  
Division of Reactor Projects III, IV, and V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: February 26, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 131

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Revise the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

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## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

#### 4.7.10.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
  - 1. Verifying its fuel storage tank contains at least 155 gallons (equivalent to 5/8 full), and
  - 2. Verifying the diesel starts from ambient conditions and operates for at least 20 minutes.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank obtained in accordance with ASTM-D270-65 is within the acceptable limits specified in Table 1 of ASTM-D975-74 when checked for viscosity, water and sediment.
- c. At least once per 18 months during shutdown by:
  - 1. Subjecting the diesel to a inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service, and
  - 2. Verifying the diesel starts from ambient conditions on the auto-start signal and operates for at least 20 minutes while loaded with the fire pump.

#### 4.7.10.1.3 The fire pump diesel starting battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
  - 1. The electrolyte level of each battery is above the plates, and
  - 2. The overall battery votage is  $\geq$  24 volts.
- b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- c. At least once per 18 months by verifying that:
  - 1. The batteries and battery racks show no visual indication of physical damage or abnormal deterioration, and
  - 2. The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anticorrosion material.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 157 AND 131 TO

FACILITY OPERATING LICENSE NOS. DPR-51 AND NPF-6

ENERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NOS. 1 AND 2

DOCKET NOS. 50-313 AND 50-368

1.0 INTRODUCTION

By letter dated October 15, 1991, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Arkansas Nuclear One, Unit Nos. 1 and 2 (ANO-1&2), Technical Specifications (TS). The current diesel fire pump battery 18-month inspection for ANO-1&2 required by Surveillance Requirements 4.20.3.c.1 and 4.7.10.1.3.c.1, respectively, consists of visual inspections to verify that the batteries, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration. The requested changes would delete the requirement for visually inspecting the "cell plates" of the diesel fire pump battery from the TS.

2.0 EVALUATION

The intent of Surveillance Requirements 4.20.3 and 4.7.10.1.3 is to ensure operability of the diesel fire pump battery, thereby providing a reliable source of power for starting the diesel. The proposed changes to ANO-1&2 Surveillance Requirements 4.20.3.c.1 and 4.7.10.1.3.c.1, respectively, would delete "cell plates" from the 18-months surveillance. As a result, the fire pump diesel starting battery bank and charger would be demonstrated OPERABLE at ANO-1&2:

- "a. At least once per 7 days by verifying that:
  - 1. The electrolyte level of each battery is above the plates, and
  - 2. The overall battery voltage is  $\geq$  24 volts.
- b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.
- c. At least once per 18 months by verifying that:
  - 1. The batteries and battery racks show no visual indication of physical damage or abnormal deterioration, and

2. The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material."

These surveillance requirements ensure operability of the diesel fire pump battery. The visual inspection of the cell plates is not feasible, given that the battery is opaque and not transparent. The inspection is performed by removing the cell cap and viewing the top of the cell plate. This method does not provide sufficient information to effectively determine the cell plate condition. The other requirements of the surveillance can be accomplished as written to ensure reliable operation.

The visual inspection of the cell plate in Surveillance Requirements 4.20.3.c.1 and 4.7.10.1.3.c.1 for ANO-1&2, respectively, is not necessary to ensure safe operation of the diesel fire pumps or to determine operability of the diesel fire pump battery. In addition, ANSI/IEEE Standard 450-1987, recommended practices for maintenance, testing, and replacement of large lead storage batteries for generating stations, does not require cell plate visual inspection as an inspection criteria. Therefore, the deletion of "cell plates" from item c.1 of the surveillance requirements, which are presently included in the TS for ANO-1&2, does not constitute reduction in performance requirements. This change will provide a test consistent with the design of the diesel fire pump battery.

On the basis of its review, the staff finds that the proposed changes are acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arkansas State official was notified of the proposed issuance of the amendment. The State official had no comment.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (56 FR 64654). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Ruffin

Date: February 26, 1992