

July 3, 1990

Mr. Neil S. Carns  
Vice President, Nuclear  
Arkansas Nuclear One  
Post Office Box 551  
Little Rock, Arkansas 72203

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NO. 105 TO FACILITY OPERATING LICENSE  
NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. 76459)

The Commission has issued the enclosed Amendment No. 105 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated March 2, 1990.

The amendment revises the Special Test Exception of the ANO-2 TSs to clarify Specification 3.10.2 concerning the specific requirements for maintaining linear heat rate (LHR). Specifically, this TS change would allow the use of either the Core Operating Limit Supervisory System or the Core Protection Calculators to monitor LHR during physics tests. In addition, the amendment allows the deletion of the wording requiring the use of the Incore Detector Monitoring System for determining linear heat rate associated with Surveillance Requirement 4.10.2.2.

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

Sincerely,

original signed by  
Chester Poslusny, Jr., Project Manager  
Project Directorate IV-1  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 105 to NPF-6
- 2. Safety Evaluation

cc w/enclosures:  
See next page

DISTRIBUTION:

Docket File	NRC PDR	Local PDR	PD4-1 Reading
G. Holahan	RDudley	P. Noonan	C. Poslusny (2)
OGC	D. Hagan	E. Jordan	G. Hill (4)
Wanda Jones	J. Calvo	PD4-1 Plant File	ACRS (10)
GPA/PA	ARM/LFMB	T. Westerman, RIV	L. Tran

*Handwritten signature/initials*

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FDC

OFC	: PD4-1/LA	: PD4-1/PM	: OGC	: PD4-1 (A)	:	:
NAME	: P. Noonan	: C. Poslusny	:	: RDudley	:	:
DATE	: 06/21/90	: 06/21/90	: 06/25/90	: 06/23/90	:	:



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

July 3, 1990

Docket No. 50-368

Mr. Neil S. Carns  
Vice President, Nuclear  
Arkansas Nuclear One  
Post Office Box 551  
Little Rock, Arkansas 72203

Dear Mr. Carns:

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Sincerely,

*Chester Poslusny, Jr.*

Chester Poslusny, Jr., Project Manager  
Project Directorate IV-1  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 105 to NPF-6
2. Safety Evaluation

cc w/enclosures:  
See next page

Mr. Neil S. Carns  
Entergy Operations, Inc.

Arkansas Nuclear One, Unit 2

cc:

Mr. Early Ewing, General Manager  
Technical Support and Assessment  
Arkansas Nuclear One  
P. O. Box 608  
Russellville, Arkansas 72801

Mr. Donald C. Hintz  
Executive Vice President  
Entergy Operations, Inc.  
P. O. Box 31995  
Jackson, Mississippi 39286

Mr. Jerry Yelverton  
Director Nuclear Operations  
Arkansas Nuclear One  
Route 3 Box 137G  
Russellville, Arkansas 72801

Mr. Gerald Muench  
Vice President Operations Support  
Entergy Operations, Inc.  
P. O. Box 31995  
Jackson, Mississippi 39286

Mr. Nicholas S. Reynolds  
Bishop, Cook, Purcell & Reynolds  
1400 L Street, N.W.  
Washington, D.C. 20005-3502

Mr. Robert B. McGehee, Esquire  
Wise, Carter, Child & Caraway  
P. O. Box 651  
Jackson, Mississippi 39205

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
1700 Rockville Pike, Suite 525  
Rockville, Maryland 20852

Mr. Charles B. Brinkman, Manager  
Washington Nuclear Operations  
Combustion Engineering, Inc.  
12300 Twinbrook Parkway, Suite 330  
Rockville, Maryland 20852

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
1 Nuclear Plant Road  
Russellville, Arkansas 72801

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
Office of Executive Director  
for Operations  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

Honorable Joe W. Phillips  
County Judge of Pope County  
Pope County Courthouse  
Russellville, Arkansas 72203

Ms. Greta Dicus, Director  
Division of Environmental Health  
Protection  
Arkansas Department of Health  
4815 West Markam Street  
Little Rock, Arkansas 72201



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

ENERGY OPERATIONS, INC.,

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 105  
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Arkansas Power and Light Company dated March 2, 1990, 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, as amended, 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.

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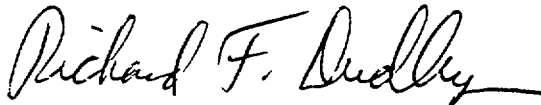
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

2. Technical Specifications

- The Technical Specifications contained in Appendix A, as revised through Amendment No. 105, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective 30-days from its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard F. Dudley, Acting Director  
Project Directorate IV-1  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 3, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 105

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.

REMOVE PAGE

3/4 10-2

INSERT PAGE

3/4 10-2

## SPECIAL TEST EXCEPTIONS

### GROUP HEIGHT, INSERTION AND POWER DISTRIBUTION LIMITS

#### LIMITING CONDITION FOR OPERATION

3.10.2 The group height, insertion and power distribution limits of Specifications 3.1.1.4, 3.1.3.1, 3.1.3.5, 3.1.3.6, 3.1.3.7, 3.2.2, 3.2.3, 3.2.7 and the Minimum Channels OPERABLE requirement of Functional Unit 15 of Table 3.3-1 may be suspended during the performance of PHYSICS TESTS provided:

- a. The THERMAL POWER is restricted to the test power plateau which shall not exceed 85% of RATED THERMAL POWER, and
- b. The linear heat rate limit shall be maintained by either:
  1. Maintaining COLSS calculated core power less than or equal to COLSS calculated core power operating limit based on linear heat rate (when COLSS is in service); or
  2. Operating within the region of acceptable operation of Figure 3.2-1 using any operable CPC channel (when COLSS is out of service).

APPLICABILITY: During startup and PHYSICS TESTS.

#### ACTION:

With any of the above limits being exceeded while any of the above requirements are suspended, either:

- a. Reduce THERMAL POWER sufficiently to satisfy the requirements of the above Specification, or
- b. Be in HOT STANDBY within 6 hours.

#### SURVEILLANCE REQUIREMENTS

4.10.2.1 The THERMAL POWER shall be determined at least once per hour during PHYSICS TESTS in which any of the above requirements are suspended and shall be verified to be within the test power plateau.

4.10.2.2 The linear heat rate shall be determined to be within its limits during PHYSICS TESTS above 5% of RATED THERMAL POWER in which any of the above requirements are suspended.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 105T0

FACILITY OPERATING LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.,

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

INTRODUCTION

By letter dated March 2, 1990, Arkansas Power and Light Company requested amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit 2 (ANO-2). Specifically, Technical Specification 3.10.2 Special Test Exception would be modified to refer to the use of either the Core Operating Limit Supervisory System (COLSS) or the Core Protection Calculators (CPC) to monitor linear heat rate during physics tests. This would permit Control Element Assemblies (CEAs) to be positioned outside of their normal group heights and insertion limits. In addition, Surveillance Requirement 4.10.2.2 would be modified to delete the language specifically requiring use of the incore detectors to monitor linear heat rate.

EVALUATION

During physics testing above 5% rated thermal power, Special Test Exception 3.10.2 requires that linear heat rate be determined to be within the limits of Linear Heat Rate Technical Specification 3.2.1 by monitoring it continuously with the incore detector monitoring system. The language requiring use of the incore detectors implies use of COLSS to monitor linear heat rate. However, Technical Specification 3.2.1 is not applicable below 20% rated thermal power and COLSS is not considered operable below 20% rated thermal power. Therefore, the specific requirement for use of incore detectors (COLSS) is not appropriate in Surveillance Requirement 4.10.2.2. The proposed change would allow use of the CPC system for monitoring linear heat rate. The CPCs use a minimum core average power of 20% rated thermal power to calculate heat flux. Since this results in conservative values of linear heat rate being calculated below 20% rated thermal power, the staff concludes that use of the CPCs for monitoring linear heat rate is appropriate to meet the intended requirement of 4.10.2.2 below 20% rated thermal power. Also, the proposed language for Technical Specification 3.10.2 allowing the linear heat rate to be determined by either continuously monitoring with COLSS or, when COLSS is out-of-service, by monitoring at least every two hours with the CPCs is similar to that of the existing Linear Heat Rate Technical Specification 3.2.1. Therefore, the use of the CPCs for monitoring linear heat rate during Special Test Exception 3.10.2 is also acceptable when COLSS is out-of-service.

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### ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the 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 staff has determined that the amendment involves 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 exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 amendment.

### CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: July 3, 1990

Principal Contributors: L. Kopp, SRXB  
L. Tran, PDIV-1