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TBAbernathy  
JRBuchanan  
OPA (Clare Miles)  
ACRS (16)  
*R Baer*

SEP 10 1976

Docket No. 50-313

Arkansas Power & Light Company  
ATTN: Mr. J. D. Phillips  
Senior Vice President  
Production, Transmission and  
Engineering  
Sixth and Pine Streets  
Pine Bluff, Arkansas 71601

Gentlemen:

In response to your request dated June 28, 1976, the Commission has issued the enclosed Amendment No. 14 to Facility License No. DPR-51 for the Arkansas Nuclear One - Unit No. 1 facility.

This amendment revises control rod withdrawal limit curves (Figures 3.5.2-1B and 3.5.2-1C) to establish a  $\pm 10$  effective full power day (EFPD) band when switching between the two curves at 435 EFPD.

We have found that portion of your June 28, 1976 request involving changes in the test interval for the diesel generator test, the reactor building isolation trip test and the service water system tests unacceptable since the requested changes could lengthen the surveillance interval to up to 48 months. However, your response to our letter of June 7, 1976 (D. L. Ziemann to J. D. Phillips), should resolve your problem with these specifications in an acceptable manner.

Copies of the related Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by  
M. Grotenhuis

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Enclosures:  
See next page

\*NOTE: SEE PREVIOUS YELLOW FOR CONCURRENCE

OFFICE ➤	OR:ORB #2	OR:ORB #2	OR:RSB/OT	OELD <i>DLZ</i>	OR:ORB #2 <i>DLZ</i>
SURNAME ➤	RMDiggs	WEConverse:rd	RBaer	<i>L.O. Davis</i>	<i>DLZiemann</i>
DATE ➤	8/ /76*	8/ /76 *	8/ /76*	<i>8/ /76</i>	<i>9/10/76</i>

Docket No. 50-313

Arkansas Power & Light Company  
ATTN: Mr. J. D. Phillips  
Senior Vice President  
Production, Transmission and  
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Sixth and Pine Streets  
Pine Bluff, Arkansas 71601

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BScharf (10)  
JMcGough

Gentlemen:

In response to your request dated June 28, 1976, the Commission has issued the enclosed Amendment No. 14 to Facility License No. DPR-51 for the Arkansas Nuclear One - Unit No. 1 facility.

This amendment (1) revises control rod withdrawal limit curves (Figures 3.5.2-1B and 3.5.2-1C) to establish a + 10 effective full power day (EFPD) band when switching between the two curves at 435 EFPD and (2) changes the frequency of the Reactor Building Isolation Trip test, the Service Water System functional test and certain diesel generator operability tests to "once per refueling period" vice "each refueling outage" or "once each refueling shutdown."

Copies of the related Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Enclosures:

1. Amendment No. 14 to License No. DPR-51
2. Safety Evaluation
3. Notice

OFFICE ➤	OR:ORB #2	OR:ORB #2	OR:RSB/OT	OR:PSB/OT	OELD	OR:ORB #2
SURNAME ➤	RMDiggs	WEConverse	RBaer	WButler		DLZiemann
DATE ➤	8/4/76	8/5/76	8/6/76	8/ /76	8/ /76	8/ /76

September 10, 1976

Enclosures:

1. Amendment No. 14 to  
License No. DPR-51
2. Safety Evaluation
3. Notice

cc w/enclosures:

Horace Jewell, Esquire  
House, Holms & Jewell  
1550 Tower Building  
Little Rock, Arkansas 72201

Mr. Donald Rueter  
Manager, Licensing  
Arkansas Power & Light Company  
Post Office Box 551  
Little Rock, Arkansas 72201

Arkansas Polytechnic College  
Russellville, Arkansas 72801

Honorable Ermil Grant  
Acting County Judge of Pope County  
Pope County Courthouse  
Russellville, Arkansas 72801

cc w/enclosures and cy of AP&L  
filing dtd. 6/28/76:

Mr. E. F. Wilson  
Bureau of Environmental  
Health Services  
4815 West Markham Street  
Little Rock, Arkansas 72201



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

ARKANSAS POWER & LIGHT COMPANY

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE - UNIT NO. 1

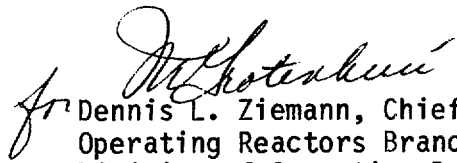
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 14  
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Arkansas Power & Light Company (the licensee) dated June 28, 1976, 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 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.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
for Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 10, 1976

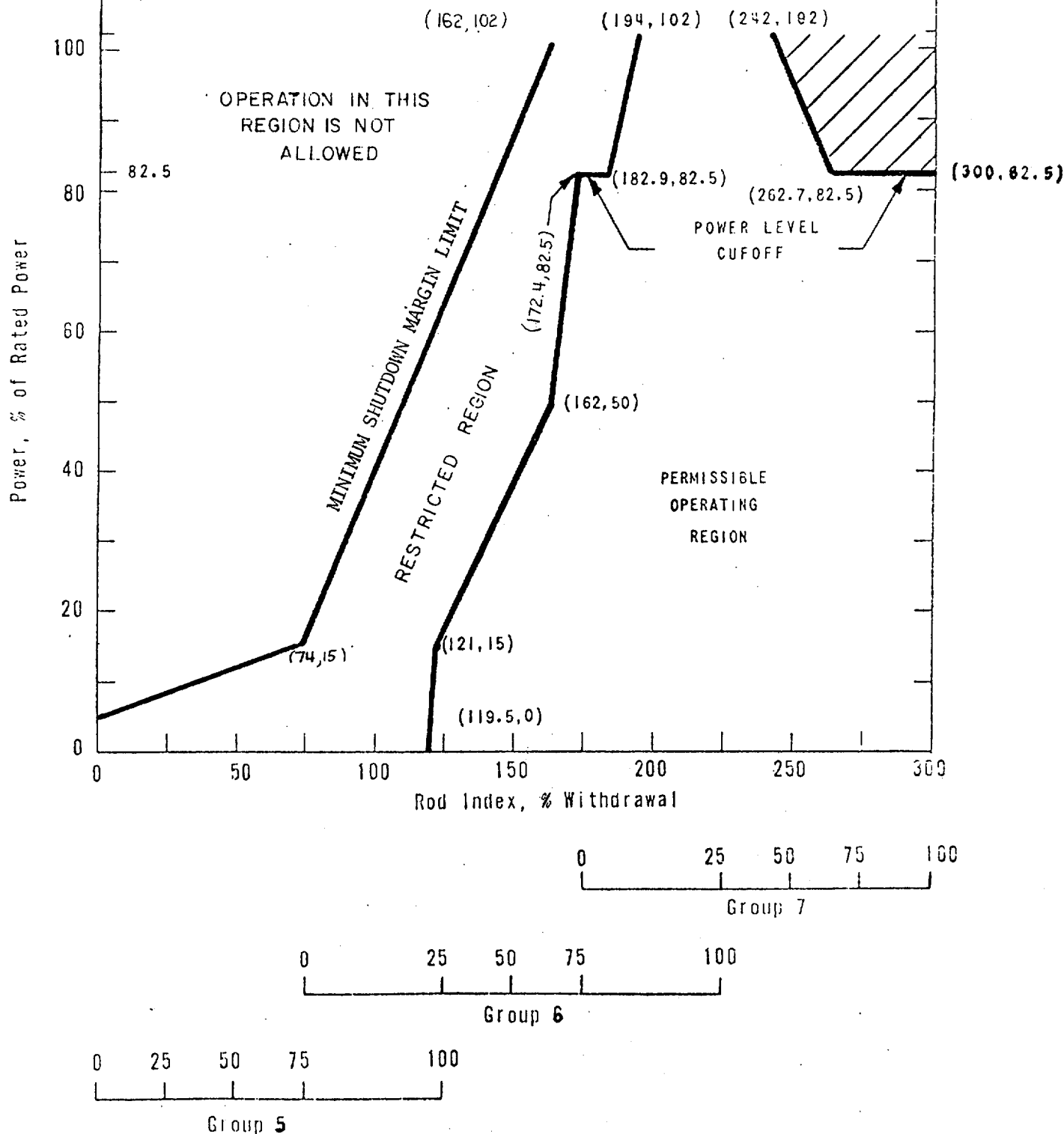
ATTACHMENT TO LICENSE AMENDMENT NO. 14

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Replace existing pages 48c and 48d of the Technical Specifications contained in Appendix A to the license with the attached revised pages bearing the same numbers. The changed areas on the revised pages are identified by a marginal line.

1. Rod index is the percentage sum of the withdrawal of the operating groups.
2. The additional restrictions on withdrawal (hashed areas) are in effect after the control rod interchange. The restrictions on withdrawal are further modified after 435  $\pm$  10 full power days of operation (See Figure 3.5.2-1C)



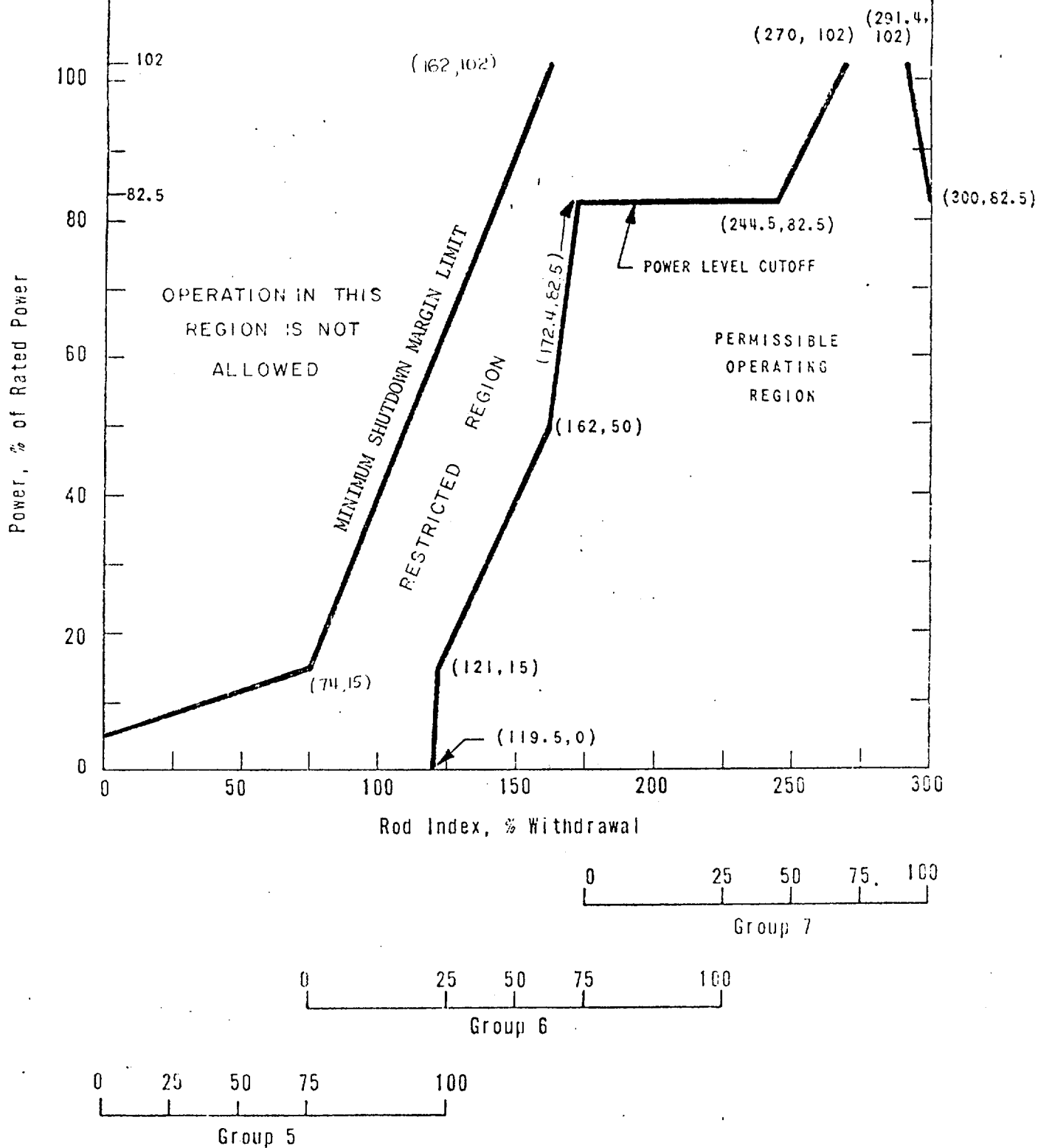
ARKANSAS POWER & LIGHT CO.  
ARKANSAS NUCLEAR ONE-UNIT 1

CONTROL ROD GROUP WITHDRAWAL  
LIMITS FOR 4 PUMP OPERATION

FIG. NO.  
3.5.2-1B

1. Rod index is the percentage sum of the withdrawal of the operating groups.

2. The additional restrictions on withdrawal are in effect after  $435 \pm 10$  full power days of operation.



ARKANSAS POWER & LIGHT CO.  
ARKANSAS NUCLEAR ONE-UNIT 1

CONTROL ROD GROUP WITHDRAWAL  
LIMITS FOR 4 PUMP OPERATION

FIG. NO.  
5.5.2-1C





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 14 TO FACILITY LICENSE NO. DPR-51

ARKANSAS POWER & LIGHT COMPANY

ARKANSAS NUCLEAR ONE - UNIT NO. 1

DOCKET NO. 50-313

INTRODUCTION

By letter dated June 28, 1976, Arkansas Power & Light Company (AP&L) requested changes to the Technical Specifications appended to Facility License No. DPR-51 for the Arkansas Nuclear One - Unit No. 1 (ANO-1) facility. The proposed changes involve establishing a  $\pm 10$  effective full power day (EFPD) band when changing between Figures 3.5.2-1B and 3.5.2-1C (Control Rod Withdrawal Limit curves) at 435 EFPD.

EVALUATION

The control rod group withdrawal limits vs power curves (Figures 3.5.2-1B and 3.5.2-1C in the Technical Specifications) exist to assure that the fuel assembly maximum linear heat generation rate is not exceeded as a result of control rod pattern or movement during reactor operations. The factors governing fuel power density and linear heat generation rate vary as a function of exposure and, hence, it is necessary to redefine control rod withdrawal limits as a function of exposure.

AP&L is presently operating ANO-1 with control rod group withdrawal vs power limits that vary as a function of exposure. One set of limits (Figure 3.5.2-1B) is valid for up to 435 and another set of limits is valid after 435 EFPD (Figure 3.5.2-1C). These limits are normally defined in the Technical Specifications such that the change of limits can occur over a time range (e.g., 435 EFPD  $\pm 10$ ) rather than on a specific EFPD.

This provides the licensee some flexibility in reducing the reactor power and making the change. The analyses which generate the curves in Figures 3.5.2-1B and 3.5.2-1C also considered the effect of such variations in exposure.

In the case of ANO-1, the exposure time range was not included in the original Technical Specifications. However, the analysis had been done to validate that the exposure variation of  $\pm 10$  EFPD for ANO-1 is acceptable and that the existing applicable limits can accommodate this exposure variation. AP&L has now determined that the time for limit change (435 EFPD) may occur at mid-week rather than during a lower power demand period and therefore has requested that the range of time considered in the analysis ( $\pm 10$  EFPD) be included in the Technical Specifications to provide operating flexibility.

We have reviewed the original AP&L curves for ANO-1 and the proposed changes to those curves and concur that the exposure variation requested ( $\pm 10$  EFPD) is consistent with the original analysis and is acceptable.

#### ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the changes do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the changes do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: September 10, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-313

ARKANSAS POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 14 to Facility Operating License No. DPR-51, issued to Arkansas Power & Light Company (the licensee), which revised Technical Specifications for operation of the Arkansas Nuclear One - Unit No. 1 (the facility) located in Pope County, Arkansas. The amendment is effective as of its date of issuance.

The amendment revised the control rod withdrawal limit curves (Figures 3.5.2-1B and 3.5.2-1C) to establish a  $\pm 10$  effective full power day (EFPD) band for switching between the curves at 435 EFPD.

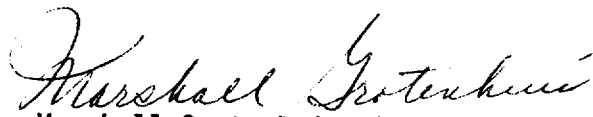
The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated June 28, 1976, (2) Amendment No. 14 to License No. DPR-51, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Arkansas Polytechnic College, Russellville, Arkansas 72801. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this tenth day of September, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Marshall Grotenhuis, Acting Chief  
Operating Reactors Branch #2  
Division of Operating Reactors