

March 10, 1989

Docket No. 50-313

Mr. T. Gene Campbell  
Vice President, Nuclear  
Operations  
Arkansas Power and Light Company  
P. O. Box 551  
Little Rock, Arkansas 72203

Dear Mr. Campbell:

SUBJECT: ISSUANCE OF AMENDMENT NO. 117 TO FACILITY OPERATING LICENSE  
NO. DPR-51 - ARKANSAS NUCLEAR ONE, UNIT 1 (TAC NO. 55347)

The Commission has issued the enclosed Amendment No. 117 to Facility Operating License No. DPR-51 for the Arkansas Nuclear One, Unit No. 1 (ANO-1). This amendment consist of changes to the Technical Specifications (TSs) in response to your application dated June 30, 1988.

The amendment modifies the Technical Specifications by adding surveillance requirements for the automatic actuation of the shunt trip attachments of the reactor trip breakers, and for the silicon controlled rectifier (SCR) trip relays used to interrupt power to the control rods, as required by Generic Letter (GL) 83-28, Items 4.3 and 4.4, and Generic Letter 85-10. By issuance of this amendment, GL 83-28, Item 4.3 for ANO-1 is closed.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next Bi-weekly Federal Register notice.

Sincerely,

/s/  
C. Craig Harbuck, Project Manager  
Project Directorate - IV  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

8903230027 890310  
PDR ADOCK 05000313  
P PNU

Enclosures:

- 1. Amendment No. 117 to DPR-51
- 2. Safety Evaluation

cc w/enclosures:  
See next page

DISTRIBUTION:

Docket File	BGrimes	PNoonan	ACRS (10)
NRC PDR	TMeek (4)	CHarbuck (2)	GPA/PA
Local PDR	Wanda Jones	JCalvo	ARM/LFMB
PD4 Reading	EButcher	OGC-Rockville	DHagan
EJordan	Plant File		

LTR NAME: ANO1 AMEND 12/6

PD4/LA *[Signature]*  
PNoonan  
01/13/89

PD4/PM *[Signature]*  
CHarbuck:sr  
01/23/89  
02

*[Signature]*  
OGC-Rockville  
*[Signature]*  
01/24/89

PD4/D *[Signature]*  
JCalvo  
01/10/89  
3

DF01  
11

*[Signature]*



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

March 10, 1989

Docket No. 50-313

Mr. T. Gene Campbell  
Vice President, Nuclear  
Operations  
Arkansas Power and Light Company  
P. O. Box 551  
Little Rock, Arkansas 72203

Dear Mr. Campbell:

SUBJECT: ISSUANCE OF AMENDMENT NO. 117 TO FACILITY OPERATING LICENSE  
NO. DPR-51 - ARKANSAS NUCLEAR ONE, UNIT 1 (TAC NO. 55347)

The Commission has issued the enclosed Amendment No. 117 to Facility Operating License No. DPR-51 for the Arkansas Nuclear One, Unit No. 1 (ANO-1). This amendment consist of changes to the Technical Specifications (TSs) in response to your application dated June 30, 1988.

The amendment modifies the Technical Specifications by adding surveillance requirements for the automatic actuation of the shunt trip attachments of the reactor trip breakers, and for the silicon controlled rectifier (SCR) trip relays used to interrupt power to the control rods, as required by Generic Letter (GL) 83-28, Items 4.3 and 4.4, and Generic Letter 85-10. By issuance of this amendment, GL 83-28, Item 4.3 for ANO-1 is closed.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next Bi-weekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script that reads "C. Craig Harbuck".

C. Craig Harbuck, Project Manager  
Project Directorate - IV  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 117 to DPR-51
2. Safety Evaluation

cc w/enclosures:  
See next page

Mr. T. Gene Campbell  
Arkansas Power & Light Company

Arkansas Nuclear One, Unit 1

cc:

Mr. Dan R. Howard, Manager  
Licensing  
Arkansas Nuclear One  
P. O. Box 608  
Russellville, Arkansas 72801

Mr. James M. Levine, Executive Director  
Nuclear Operations  
Arkansas Nuclear One  
P. O. Box 608  
Russellville, Arkansas 72801

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

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

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 William Abernathy  
County Judge of Pope County  
Pope County Courthouse  
Russellville, Arkansas 72801

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

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 117  
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Arkansas Power and Light Company (the licensee) dated June 30, 1988, 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.

8903230038 890310  
PDR ADDCK 05000313  
P PNU

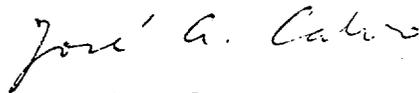
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. DPR-51 is hereby amended to read as follows:

2. Technical Specifications

- The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 117, 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



Jose A. Calvo, Director  
Project Directorate - IV  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 10, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 117

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Revise the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE PAGES

44a  
-  
69  
72d

INSERT PAGES

44a  
45g  
69  
72d

Table 3.5.1-1 (Cont'd)

REACTOR PROTECTION SYSTEM (Cont'd)	1	2	3	4	5
<u>Functional Unit</u>	<u>No. of channels</u>	<u>No. of channels for system trip</u>	<u>Min. operable channels</u>	<u>Min. degree of redundancy</u>	<u>Operator action if conditions of column 3 or 4 cannot be met</u>
11. Reactor trip upon loss of Main Feedwater	4	2	2	1	Notes 1, 15
12. Reactor trip upon turbine trip	4	2	2	1	Notes 1, 16
13. Electronic (SCR) Trip Relay	2	2	2	0	Note 22
14. Control Rod Drive Trip Breakers					
A. AC Breakers	2	2	2	0	Notes 23, 24
B. DC Breakers (Note 25)	2	2	2	0	Notes 23, 24

Table 3.5.1-1 Cont'd)

22. With the number of operable Electronic (SCR) Trip relays one less than the total number of Electronic (SCR) Trip relays in a channel, restore the inoperable Electronic (SCR) Trip relay to operable status in 48 hours or place the SCRs associated with the inoperable Electronic (SCR) Trip relay in trip in the next hour. With two or more Electronic (SCR) Trip relays inoperable, place all Electronic (SCR) Trip relays associated with that channel in trip in the next hour. This requirement does not apply to the Electronic Trip channels associated with Group 8 Regulating Power Supply.
23. With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
  - a. Within 1 hour:
    1. Place the inoperable channel in the tripped condition, or
    2. Remove power supplied to the control rod trip device associated with the inoperable channel.
  - b. One additional channel may be bypassed for up to 4 hours for surveillance testing and the inoperable channel above may be bypassed for up to 30 minutes in any 24-hour period when necessary to test the trip breaker associated with the logic of the channel being tested. The inoperable channel above shall not be bypassed to test the logic of a channel of the trip system associated with the inoperable channel.
24. With one of the Control Rod Drive Trip Breaker diverse trip features (undervoltage or shunt trip attachment) inoperable, restore it to OPERABLE status in 48 hours or place the breaker in trip in the next hour.
25. Interrupts motor power to the Safety Groups of control rods only.

Table 4.1-1  
Instrument Surveillance Requirements

Amendment No. 50,117

69

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
1. Protective Channel Coincidence Logic	NA	M	NA	
2. Control Rod Drive Trip Breaker	NA	M(1)	NA	(1) To include independent testing of the shunt and undervoltage trip attachments.
3. Power Range Amplifier	NA	NA	T/W(1)	(1) Heat balance calibration twice weekly under steady state operating conditions, daily under non-steady state operating conditions.
4. Power Range Channel	S M(1)	M	M(1)(2)	(1) Using incore instrumentation. (2) Axial offset upper and lower chambers monthly and after each startup if not done previous week.
5. Intermediate Range Channel	S	P/M	NA	
6. Source Range Channel	S(1)	P	NA	(1) When in service.
7. Reactor Coolant Temperature Channel	S	M	R	
8. High Reactor Coolant Pressure Channel	S	M	R	
9. Low Reactor Coolant Pressure Channel	S	M	R	
10. Flux-Reactor Coolant Flow Comparator	S	M	R	
11. Reactor Coolant Pressure Temperature Comparator	S	M	R	
12. Pump Flux Comparator	S	M	R	

Table 4.1-1 (Cont.)

<u>Channel Description</u>	<u>Check</u>	<u>Test</u>	<u>Calibrate</u>	<u>Remarks</u>
d. SG A high range level high-high	S	M	R	
e. SG B high range level high-high	S	M	R	
57. Containment High Range Radiation Monitors	D	M	R	
58. Containment Pressure-High	M	NA	R	
59. Containment Water Level-Wide Range	M	NA	R	
60. Low Temperature Overpressure Protection Alarm Logic	NA	R	R	
61. Electronic (SCR) Trip Relays	NA	M	NA	

NOTE:

S - Each Shift  
W - Weekly  
M - Monthly  
D - Daily

T/W - Twice per Week  
Q - Quarterly  
P - Prior to each startup if not done previous week  
B/M - Every 2 months

R - Once every 18 months  
PC - Prior to going Critical if not done within previous 31 days  
NA - Not Applicable



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 117 TO

FACILITY OPERATING LICENSE NO. DPR-51

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT NO. 1

DOCKET NO. 50-313

1.0 INTRODUCTION

By letter dated June 30, 1988, Arkansas Power and Light Company (AP&L or the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-51 for Arkansas Nuclear One, Unit 1 (ANO-1). The proposed amendment would establish surveillance test requirements for the automatic actuation of the shunt trip attachments of the reactor trip breakers (RTB) as required by Generic Letter (GL) 83-28, Item 4.3. The proposed amendment would also establish surveillance test requirements for the silicon controlled rectifier (SCR) trip relays used to interrupt power to the control rods, as required by GL 83-28, Item 4.4.

Generic Letter 85-10, "Technical Specifications for GL 83-28, Items 4.3 and 4.4," provided guidance to licensees regarding the specifics to be contained in the TS required by GL 83-28, Items 4.3 and 4.4, by giving example TS.

2.0 EVALUATION

The staff compared the licensee's proposed TS for the shunt trip attachments with the example TS provided in GL 85-10 for GL 83-28 Item 4.3. Some differences between the proposed TS and the GL 85-10 example were noted. This was because the format of the ANO-1 Technical Specifications does not conform to the format of the Standard Babcock & Wilcox TS which were used as the basis for the example in GL 85-10. However, the staff determined that the proposed surveillance test requirements for the shunt trip attachments were equivalent to the GL 85-10 requirements, despite the format differences.

The staff compared the licensee's proposed TS for the SCR relays used to interrupt power to the control rods, with the example TS provided in GL 85-10 for GL 83-28 Item 4.4. It was noted that the proposed TS differed from the example in that it contained an alternate action statement (action statement number 22, Table 3.5.1-1) for the SCR trip relays. However this had been previously approved by the staff in a letter to the B&W Owners Group from Frank Miraglia (NRC) dated December 6, 1985. The staff has determined that the proposed TS were equivalent to the GL 85-10 requirements for the SCR trip relay TS.

8903230042 890310  
PDR ADDCK 05000313  
P PNU

These additional surveillance requirements and limiting conditions for operations for the RTB shunt trip attachments and the SCR trip relays, would increase plant safety because they would require routine verification of the capability of these components to perform their safety function.

### 3.0 FINDINGS

The staff finds that the proposed changes to the ANO-1 Technical Specifications meet the requirements of GL 83-28, Items 4.3 and 4.4 and GL 85-10, and are therefore acceptable.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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.

### 5.0 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: March 10, 1989

Principal Contributors: D. Lasher  
C. Harbuck