JUL 1 1 1986

Docket No.: 50-368

Mr. T. Gene Campbell
Vice President
Nuclear Operations
Arkansas Power & Light Company
Post Office Box 551
Little Rock, Arkansas 72203

Dear Mr. Campbell:

Subject: Issuance of Amendment No. 75 to Facility Operating License NPF-6 - Arkansas Nuclear One, Unit No. 2

The Commission has issued the enclosed Amendment No. 75 to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application dated April 1, 1986.

The amendment revises Surveillance Requirement 4.8.2.3.1.a.2 to allow replacement of a bank of the station batteries.

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

/S/

Robert S. Lee, Project Manager
PWR Project Directorate No. 7
Division of PWR Licensing-B

Enclosures:
1. Amendment No. 75 to NPF-6
2. Safety Evaluation

cc: See next page

No legal objection based on changes to SE.

PBD7	PBD7	OELD	D:PBD7
RSLee/yt	JLee	M^cO	GWKnighton
7/2/86	7/2/86	7/7/86	7/K/86

8607170401 860711
PDR ADOCK 05000368
P PDR

Mr. T. Gene Campbell
Arkansas Power & Light Company

Arkansas Nuclear One
Unit No. 2

cc:
Mr. J. Ted Enos, Manager
Nuclear Engineering and Licensing
Arkansas Power and Light Company
P. O. Box 551
Little Rock, Arkansas 72203

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

Nicholas S. Reynolds, Esq.
Bishop, Liberman, Cook,
Purcell & Reynolds
1200 Seventeenth Street, N.W.
Suite 700
Washington, D.C. 20036

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

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 2090
Russellville, Arkansas 72801

Mr. Frank Wilson, Director
Division of Environmental Health
Protection
Arkansas Department of Health
4815 West Markam Street
Little Rock, Arkansas 72201

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. Charlie B. Brinkman, Manager
Washington Nuclear Operations
C-E Power Systems
7910 Woodmont Avenue
Suite 1310
Bethesda, Maryland 20814

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

ARKANSAS POWER & LIGHT COMPANY

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 75
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Arkansas Power & Light Company (the licensee) dated April 1, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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, 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 Appendices A and B, as revised through Amendment No. 75, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert S. Lee, Project Manager
PWR Project Directorate No. 7
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 11, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 75

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by amendment number and contains vertical lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

Remove Page	Insert Page
3/4 8-8	3/4 8-8

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be OPERABLE:

1 - 4160 volt Emergency Bus

1 - 480 volt Emergency Load Center Bus

4 - 480 volt Motor Control Center Busses

2 - 120 volt A.C. Vital Busses

APPLICABILITY: MODES 5 and 6

ACTION:

With less than the above complement of A.C. busses OPERABLE and energized, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined OPERABLE at least once per 7 days by verifying correct breaker alignment and indicated power availability.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.3 As a minimum, the following D.C. electrical sources shall be OPERABLE:

TRAIN "A" consisting of 125-volt D.C. bus No. 1, 125-volt D.C. battery bank No. 1 and a full capacity charger.

TRAIN "B" consisting of 125-volt D.C. bus No. 2, 125-volt D.C. battery bank No. 2 and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery bank by performing Surveillance Requirement 4.8.2.3.1.a.1 within one hour at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days be verifying that:

1. The parameters in Table 4.8-2 meet the Category A LIMITS, and

2. The total battery terminal voltage is greater than or equal to 129 volts on float charge for a 60 cell battery bank and greater than or equal to 124.7 volts on float charge for a 58 cell battery bank.

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

1. The parameters in Table 4.8-2 meet the Category B LIMITS,

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO FACILITY OPERATING LICENSE NO. NPF-6

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

1.0 INTRODUCTION

By letter dated April 1, 1986, Arkansas Power and Light Company requested a revision to Section 4.8.2.3.1.a.2 of ANO-2 technical specifications. The licensee provided additional information by letter dated June 25, 1986. This revision is due to the proposed replacement of a 60 cells battery system by a 58 cells battery system in one of the two divisions of the Class 1E dc systems during July 1986 refueling outage of ANO-2. The replacement battery terminal voltage during float charging will be 124.7 volts instead of 129 volts for the existing 60 cells battery. Consequently, the proposed change in the surveillance requirement includes verification of 124.7 volts or greater on the terminals of the replacement battery.

2.0 EVALUATION

As determined by the licensee, the ANO-2 Class 1E batteries are reaching the end of their service life and thus needed to be replaced. The licensee also noticed that the equalizing charge voltage which is higher than the float charge voltage of the battery, and is periodically applied for 8 to 24 hours, was causing higher than rated voltage on the terminals of normally energized "Potter Brumfield" MDR relays. These relays were found to be overheating due to higher than rated terminal voltage thus causing deterioration of the relay coil insulation and a potential for a consequential relay failure.

The licensee has proposed to replace the existing 60 cells battery system by a 58 cells battery system which will minimize the potential of higher than rated voltage on the terminals of the subject MDR relays and other Class 1E dc components. The replacement battery will require equalizing charge to be at 135.1 volts instead of 139.8 volts for the existing 60 cells battery system and thus will reduce the possibility of overvoltage on the terminals of Class 1E dc components. The licensee has proposed to replace the battery in one division of Class 1E dc system during July 1986 refueling outage and in the other division during the next refueling outage.

The licensee's tests indicate that the new MDR relays, similar to the ones affected by the high equalizing charge voltage of the 60 cells battery, will perform reliably for at least one fuel cycle of ANO-2 operation. Based on this determination, the licensee has replaced all affected MDR relays by new ones. Presently, an effort is underway to redesign these relays using different insulating material of higher voltage rating. The licensee maintains that the new installed MDR relays will reliably operate until the redesigned relays become available before the next refueling outage.

The replacement battery system with 58 cells has a higher ampere-hour capacity (2045A-hr.) than the existing 60 cells battery system (1350A-hr.). This higher rating of the battery will cause higher short circuit current in case of a fault in the dc system. The licensee has performed short circuit calculations for the new battery and found that maximum available short circuit current for the new battery dc system will be 12,000 amps which is well within the rating (14,000 amps) of the existing dc switchgear. The licensee maintains that the switchgear does not need replacement and will adequately protect all dc Class 1E equipment from the fault currents.

The existing battery rack is designed for 60 cells. The licensee has proposed to provide new, seismically qualified battery racks for each division of 58 cells batteries. One rack will be installed along with its 58 cells battery system during July 86 refueling outage whereas the other rack with its associated replacement battery system will be installed in the next refueling outage.

3.0 EVALUATION SUMMARY

The staff has evaluated the proposed changes. Based on this evaluation, the considerations discussed above and based on the fact that the new battery bank is rated at a higher electrical storage capacity while maintaining the acceptable minimum discharge voltage of 105 volts, we find the proposed change acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

This 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 exposure. The Commission has previously published 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 §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

We have 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.

Principal contributor to this SE was I. Ahmed

Dated: July 11, 1986

JUL 11 1986

ISSUANCE OF AMENDMENT NO.75 TO FACILITY OPERATING LICENSE NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2

DISTRIBUTION

Docket File 50-368
NRC PDR
Local PDR
PBD7 Reading
FMiraglia
JLee
RSLee
Attorney, ELD
LHarmon
EJordan
BGrimes
JPartlow
TBarnhart (4)
WJones
WRegan
LKopp
ACRS (10)
OPA
LFMB
EButcher
NThompson