

Docket No. 50-368

OCT 4 1978

Mr. William Cavanaugh III
Executive Director of Generation
and Construction
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Cavanaugh:

SUBJECT: ISSUANCE OF AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE
NO. NPF-6 FOR ARKANSAS NUCLEAR ONE, UNIT 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 3 for the Arkansas Nuclear One - Unit 2 facility. The amendment is effective as of the date of issuance.

Amendment No. 3 consists of a change to Technical Specification 4.6.4.3.b and is in response to your letter dated September 7, 1978. Also, based on discussions with you regarding these matters, you agreed to certain changes which we requested, and Amendment No. 3 reflects these changes.

Amendment No. 3 revises Technical Specification 4.6.4.3.b to specify that the flow rate for each of the containment recirculation fans will be at least equal to 4500 cubic feet per minute.

We have determined that Amendment No. 3 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 Section 51.5(d)(4), that an environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

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DATE >						

Mr. William Cavanaugh

- 2 -

OCT 4 1978

Copies of the license amendment, Federal Register Notice, and Safety Evaluation for this technical specification change are enclosed.

Sincerely,

Original Signed by
John F. Stolz

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Enclosures:

1. Amendment No. 3 to Facility
Operating License No. NPF-6
2. Federal Register Notice
3. Safety Evaluation Supporting
Amendment No. 3

ccs w/enclosures:

See page 3

OFFICE ➤	DPM:LWR #1	DPM:LWR #1	STS/DOR	CSB/DSS	OELD	DPM:LWR #1
SURNAME ➤	Eginton:pcm	LBEngle	DBrinkman	DPickett	CWoodhead	JFStolz
DATE ➤	09/27/78	09/27/78	09/27/78	09/27/78	09/11/78	09/04/78

Mr. William Cavanaugh

- 3

October 4, 1978

cc: Mr. Daniel H. Williams
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Little Rock, Arkansas 72203

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Mr. Fred Sernatinger, Project Manager
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Mr. Charles B. Brinkman, Manager
Washington Nuclear Operations
C-E Power Systems
Combustion Engineering, Inc.
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Bethesda, Maryland 20014

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

Director, Bureau of Environmental
Health Services
4815 West Markham Street
Little Rock, Arkansas 72201

Attorney General
Justice Building
Little Rock, Arkansas 72201

Mr. Bruce Blanchard
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Room 4256
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Room W-535, Waterside Mall
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Washington, D. C. 20460

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DATE ➤						

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

FACILITY OPERATING LICENSE

Amendment No. 3
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The issuance of this license amendment 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 license, as amended 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 regulations of the Commission;
 - 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 amended Facility Operating License No. NPF-6 is hereby amended by changing the Technical Specifications as indicated in the attachment to this license amendment.

2.C.(2) Technical Specifications

The Technical Specifications contained in Appendices A & B as revised through Amendment No. 3, are hereby incorporated in license NPF-6. Arkansas Power and Light Company shall operate the facility in accordance with the Technical Specifications except for the following specific exemptions:

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The licensee shall be exempted from compliance with the following Appendix A Technical Specification related to the steam generator low water level trip setpoint while conducting the steam generator feedwater system waterhammer testing during the initial startup and power ascension testing program. The value of the steam generator low water level trip setpoint in Item 8(b) of Technical Specification Table 3.3-4 may be reduced, during this testing only, from a value of greater than or equal to 49.4 percent to greater than or equal to 10.0 percent. The licensee shall be exempted from compliance with Appendix A Technical Specification 3.3.3.6 for the Containment Radiation Monitors during Mode 3 operations.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by
John F. Stolz

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Attachment:
Changes to the Technical
Specifications

Date of Issuance: OCT 4 1978

OFFICE ➤	DPM:LWR #1	DPM:LWR #1	STS/DOR	OELD	LWR #1	
SURNAME ➤	EGNorton:pcm	LBEngle	DBrinkman	CWoodhead	JFStolz	
DATE ➤	09/27/78	09/27/78	09/27/78	09/25/78	09/04/78	

ATTACHMENT TO LICENSE AMENDMENT NO. 3

FACILITY OPERATING LICENSE NO. NPF 6

DOCKET NO. 50-368

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

Page

3/4 6-24

OFFICE ➤						
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DATE ➤						

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS - W

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

- a. At least once per 6 months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to $\geq 700^{\circ}\text{F}$ within 90 minutes and is maintained for at least 2 hours.
- b. At least once per 18 months by:
 1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits.
 2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiners (i.e., loose wiring or structural connections, deposits of foreign materials, etc.).
 3. Verifying during a recombiner system functional test that the heater sheath temperature increases to $\geq 1200^{\circ}\text{F}$ within 5 hours and is maintained for at least 4 hours.
 4. Verifying the integrity of the heater electrical circuits by performing a continuity and resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be $\geq 10,000$ ohms.

CONTAINMENT SYSTEMS

CONTAINMENT RECIRCULATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 At least two independent containment recirculation fans shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With only one containment recirculation fan OPERABLE, restore at least two independent fans to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.3 Each of the above required containment recirculation fans shall be demonstrated OPERABLE:

- a. At least once per 92 days on a STAGGERED TEST BASIS by:
 1. Verifying that the fan can be started on operator action in the control room, and
 2. Verifying that the fan operates for at least 15 minutes.
- b. At least once per 18 months by verifying a flow rate of at least 4500 cfm per fan.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-368

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT 2

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 3 to Facility Operating License No. NPF-6 to Arkansas Power and Light Company for operation of Arkansas Nuclear One, Unit 2 (the facility) located at the licensee's site in Pope County, Arkansas. The amendment is effective as of the date of its issuance.

This amendment revises Technical Specification 4.6.4.3.b to specify that the flow rate for each of the containment recirculation fans will be at least equal to 4500 cubic feet per minute.

The amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's 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

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to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and 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 licensee's application for amendment dated September 7, 1978 (2) Amendment No. 3 to License No. NPF-6, and (3) the Commission's related Safety Evaluation supporting Amendment No. 3 to License No. NPF-6. All of these items are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C. 20555 and the Arkansas Polytechnic College, Russellville, Arkansas 72801.

Dated at Bethesda, Maryland, this *4th* day of October 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by
John F. Stolz

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

*See Previous Yellow for Previous Concurrences

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SURNAME >	EGHy1ton:pcm	LBEngle	CWoodhead	JFStolz		
DATE >	*09/27/78	*09/27/78	*09/28/78	10/ <i>df</i> /78		

to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and 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 licensee's application for amendment dated September 7, 1978 (2) Amendment No. 3 to License No. NPF-6, and (3) the Commission's related Safety Evaluation supporting Amendment No. 3 to License No. NPF-6. All of these items are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C. 20555 and the Arkansas Polytechnic College, Russellville, Arkansas 72801.

Dated at Bethesda, Maryland, this day of September 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

John Angelo, Acting Chief
Light Water Reactors Branch No. 1
Division of Project Management

OFFICE ➤	DPM:LWR #1	DPM:LWR #1	OELD	DPM:LWR #1	
SURNAME ➤	EGH	LBE	CWoodhead	JAngelo	
DATE ➤	09/27/78	09/27/78	09/28/78	09/04/78	

SAFETY EVALUATION BY OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 2 TO NPF-6

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE - UNIT 2

DOCKET NO. 50-368

INTRODUCTION

By letter dated September 7, 1978, the licensee requested a change in Technical Specification 4.6.4.3.b for Arkansas Nuclear One - Unit 2. This Technical Specification states that the surveillance requirements for each of the containment recirculation fans shall be demonstrated to be operable at least once per 18 months by verifying a flow rate of at least 5000 cubic feet per minute.

DISCUSSION

The licensee states that a reanalysis of the containment recirculation fans has shown that 4500 cubic feet per minute flow of air through each of the two operating fans provides more than adequate recirculation to prevent hydrogen stratification within the containment building. Also, the licensee states that since a 4500 cubic feet per minute flow rate is the proposed lower limit, all other flow rates in excess of 4500 cubic feet per minute flow rate will also provide adequate recirculation.

EVALUATION

We have evaluated the licensee's proposed change to Technical Specification 4.6.4.3.b as well as conducting our independent evaluation of the licensee's proposal. Our evaluation is discussed below.

One of the provisions of Standard Review Plan 6.2.5 is that a system be provided to mix the combustible gases within the containment following a loss-of-coolant accident. This may be accomplished through the use of a recirculation fan system, fan-cooler system, or containment spray system. We have found that each of these systems acting alone is an acceptable means for providing adequate recirculation of the containment atmosphere. In addition to any of the above systems, natural convection forces would also contribute to mixing the containment atmosphere.

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The Arkansas Nuclear One, Unit 2 facility has all three of the systems discussed above, any one of which will provide adequate recirculation of the containment atmosphere. These three systems are (1) The Containment Air Recirculation System consisting of redundant trains with two as presently specified 5000 cubic feet per minute fans per train, (2) The Fan-Cooler System consisting of redundant trains with two 7500 cubic feet per minute fan-coolers per train, and (3) The Containment Spray Systems with redundant spray trains.

Therefore, we find that Arkansas Nuclear One - Unit 2 provides adequate means for preventing hydrogen stratification within the containment following a loss-of-coolant accident.

Based on our findings as discussed above, we conclude that the licensee's proposed change to Technical Specification 4.6.4.3.b is acceptable and is hereby amended to read that the surveillance requirements for each of the containment recirculation fans shall be demonstrated to be operable at least once per 18 months by verifying a flow rate of at least 4500 cubic feet per minute.

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 §51.51(d)(4), that an environmental impact and, or negative declaration and 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 amendment does not involve a significant increase in the probability or consequences of accidents previously considered or a significant decrease in any safety margin, it does not involve a significant hazards consideration, (2) there is reasonable assurance that

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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.

Original signed by
Leon B. Engle
Leon B. Engle, Project Manager
Light Water Reactors Branch No. 1
Division of Project Management

Original Signed by
John F. Stolz
John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Dated: OCT 4 1978

OFFICE ➤	DPM:LWR #1	STS/DOR	CSB/DSS	OELD	DPM:LWR #1
SURNAME ➤	LBEngle	DBrinkman	DPickett	CWoodhead	JFStolz
DATE ➤	09/ 27 /78	09/ 27 /78	09/ 27 /78	09/ 28 /78	09/ 04 /78



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
October 16, 1978

DISTRIBUTION:
Docket Files
LWR #1 Rdg
EGHylton (2)
LEngle

Docket No. 50-368

Docketing and Service Section
Office of the Secretary of the Commission

SUBJECT: NOTICE OF ISSUANCE OF AMENDMENT NO. 3 TO FACILITY OPERATING
LICENSE FOR DAVIS-BESSE (NPF-6)

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (15) of the Notice are enclosed for your use.

- ☐ Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- ☐ Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- ☐ Notice of Availability of Applicant's Environmental Report.
- ☐ Notice of Proposed Issuance of Amendment to Facility Operating License.
- ☐ Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- ☐ Notice of Availability of NRC Draft/Final Environmental Statement.
- ☐ Notice of Limited Work Authorization.
- ☐ Notice of Availability of Safety Evaluation Report.
- ☐ Notice of Issuance of Construction Permit(s).
- ☒ Notice of Issuance of Facility Operating License(s) ~~or~~ Amendment(s) No. 3.
- ☐ Other: _____

P.S. An extra copy of the Amendment package is enclosed for the NRC PDR.

Enclosure:
As Stated

Office of Nuclear Reactor Regulation

OFFICE→	LWR #1					
SURNAME→	EGHylton					
DATE→	10/16/78					

October 4, 1978

ARKANSAS NUCLEAR ONE, UNIT 2 OPERATING LICENSE NO. NPF-6, AMENDMENT NO. 3

Distribution

Docket File 7

NRC PDR

Local PDR

LWR #1 File

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