MAR 3 0 1979

Docket No. 50-368

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. 10 TO FACILITY OPERATING LICENSE NO. NPF-6 FOR ARKANSAS NUCLEAR ONE, UNIT 2

By letted dated March 26, 1979, you requested that the requirements of the Arkansas Nuclear One, Unit 2 Technical Specification 3.6.1.6 be temporarily suspended for a one-time thirty-hour period to complete two eight-hour purging operations.

Facility Operating License NPF-6 is amended immediately, by making the following changes:

You are hereby permitted a one-time only thirty-hour period to complete two (2) eight-hour purging operations in Modes 4 and 3 only. The purge valves shall not be opened more than 30 degrees during the two eight-hour purging operations. As stipulated in this license amendment you shall perform the additional surveillance activities as delineated in your March 26, 1979 request for temporary suspension of Technical Sepcification 3.6.1.6.

We have determined that Amendment No. 10 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.

CP 1

GD

OFFICE➤						
SURNAME➤						
DATE➤						

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

Enclosures:
1. Amendment No. 10 to Facility Operating License No. NPF-6
2. FEDERAL REGISTER Notice
3. Safety Evaluation Supporting Amendment No. 9 to NPF-6

cc: See page 3

O.K. as to legal form

OFFICE➤	DPM:LWR #1	DPM:LWR #1	OELD	DOR/STS	DPM:LWR #1	
SURNAME➤	EGHylton:pcm	LBEngle	dwm	DBrinkman	JFStolz	
DATE➤	03/29/79	03/29/79	03/30/79	03/29/79	03/30/79	

cc: Mr. Daniel H. Williams
Manager, Licensing
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Philip K. Lyon, Esq.
House, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72203

Mr. C. W. Reed, Project Engineer
Bechtel Power Corporation
San Francisco, California 94119

Mr. Fred Sernatinger, Project Manager
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, Connecticut 06095

Mr. Charles B. Brinkman, Manager
Washington Nuclear Operations
C-E Power Systems
Combustion Engineering, Inc.
4853 Cordell Avenue, Suite A-1
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
Environmental Projects
Review
Department of the Interior
Room 4256
18th and C Street, N. W.
Washington, D. C. 20240

U. S. Environmental Protection
Agency
ATTN: Ms. F. Munter
Office of Federal Activities
Room W-535, Waterside Mall
401 M Street, S. W.
Washington, D. C. 20460

OFFICE➤						
SURNAME➤						
DATE➤						

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

FACILITY OPERATING LICENSE

Amendment No. 10
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 application, as 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'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 by amending Section 2.C.(2) of Facility Operating License No. NPF-6 as follows: The second paragraph of 2.C.(2) has not changed.

   2.C.(2) Technical Specifications

   The Technical Specifications contained in Appendices A & B, as revised through Amendment No. 10 are hereby incorporated in license NPF-6. Arkansas Power and Light Company shall operate the facility in accordance with the Technical Specifications.

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SURNAME ➤	7904160028					
DATE ➤						

MAR 3 0 1979

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

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance:

OFFICE➤	DPM:LWR #1	DPM:LWR #1	OELD	DOR/STS	DPM:LWR #1	
SURNAME➤	EGHylton:pcm	LBEngle		DBrinkman	JFStolz	
DATE➤	03/29/79	03/29/79	03/30/79	03/29/79	03/30/79	

ATTACHMENT 1 TO LICENSE AMENDMENT NO. 10

FACILITY OPERATING LICENSE NO. NPF 6

DOCKET NO. 50-368

The requirements of Technical Specification 3.6.1.6 requiring that the 54 inch purge supply and exhaust system isolation valves shall be closed during Modes 1, 2, 3 and 4 is temporarily suspended for Modes 3 and 4 only pursuant to the stipulation as stated below.

The licensee is permitted a one-time thirty-hour period for completing two eight-hour containment purge operations. This thirty-hour period is permitted in Operating Modes 3 and 4 only.

During the thirty-hour purging period the licensee shall:

(1) Sample reactor coolant activity prior to the two eight-hour purging operations and at four (4) hours into the two eight-hour purging operations to verify that the specific activity of Iodine-131 is not greater than 0.0001 micro Curie per gram.

(2) Until such time as the two eight-hour purging operations are complete, an hourly check shall be maintained with the process radiation monitor in the Chemical Volume Control System to verify that the Iodine-131 activity of the reactor coolant system is not greater than 0.0001 micro Curie per gram.

(3) During the two eight-hour purging operations, the purge supply and exhaust valves shall not be opened more than 30 degrees from the fully closed position.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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. 10 to Facility Operating License No. NPF-6 issued 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 amended license is effective as of its date of issuance.

The amendment temporarily suspends Technical Specification 3.6.1.6 which requires that the purge supply and exhaust system isolation valves shall be closed during Operating Modes 1, 2, 3 and 4. The temporary suspension is granted for one thirty-hour period to allow two eight-hour purging operations in facility Operating Mode 4 (Hot Shutdown) and Mode 3 (Hot Standby) only.

This temporary suspension allows the licensee to purge a smoke filled containment atmosphere which is inhibiting personnel operations within containment. During a 53 day reactor shutdown, the licensee conducted inspections and repairs on reactor coolant pumps and residual oil left on the reactor coolant pump casings from these repairs has been smoking as the facility approaches startup temperature and pressure prior to reactor criticality at Mode 2 operations.

The Commission has determined that during the time of the temporarily allowed purging operations that the worst case postulated loss-of-coolant

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accident which could occur after a 53-day reactor shutdown and prior to reactor criticality would result in doses less than 0.0001 rem which are substantially less than the 10 CFR Part 100 guidelines at the exclusion boundary.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations in 10 CFR Chapter I, which are set forth in the amended license. We have concluded, that because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration. The application for the amendment complies with the standards and requirements of the Act and the Commission's regulations.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 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 a copy of (1) the application for amendment dated March 26, 1979, (2) Amendment No. 10 to License NPF-6 and (3) the Commission's related Safety Evaluation Report supporting Amendment No. 10 to License NPF-6.

OFFICE➤						
SURNAME➤						
DATE➤						

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 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 Project Management, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland this 30th day of March 1979.

Original signed by:

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

OFFICE	DPM:LWR #1	DPM:LWR #1	OELD	DPM:LWR #1		
SURNAME	EGHylton:pcm	LBEngle		JFStolz		
DATE	03/29/79	03/30/79	03/30/79	03/30/79		

NRC FORM 318 (9-76) NRCM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1976 — 626-624

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. 10 to Facility Operating License No. NPF-6 issued 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 amended license is effective as of its date of issuance.

The amendment temporarily suspends Technical Specification 3.6.1.6 which requires that the purge supply and exhaust system isolation valves shall be closed during Operating Modes 1, 2, 3 and 4. The temporary suspension is granted for one thirty-hour period to allow two eight-hour purging operations in facility Operating Mode 4 (Hot Shutdown) and Mode 3 (Hot Standby) only.

This temporary suspension allows the licensee to purge a smoke filled containment atmosphere which is inhibiting personnel operations within containment. During a 53 day reactor shutdown, the licensee conducted inspections and repairs on reactor coolant pumps and residual oil left on the reactor coolant pump casings from these repairs has been smoking as the facility approaches startup temperature and pressure prior to reactor criticality at Mode 2 operations.

The Commission has determined that during the time of the temporarily allowed purging operations that the worst case postulated loss-of-coolant

accident which could occur after a 53-day reactor shutdown and prior to reactor criticality would result in doses less than 0.0001 rem which are substantially less than the 10 CFR Part 100 guidelines at the exclusion boundary.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations in 10 CFR Chapter I, which are set forth in the amended license. We have concluded, that because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration. The application for the amendment complies with the standards and requirements of the Act and the Commission's regulations.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 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 a copy of (1) the application for amendment dated March 26, 1979, (2) Amendment No. 10 to License NPF-6 and (3) the Commission's related Safety Evaluation Report supporting Amendment No. 10 to License NPF-6.

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 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 Project Management, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland this 30th day of March 1979.

John F. Stolz

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

SAFETY EVALUATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 10
(ARKANSAS POWER AND LIGHT COMPANY)
DOCKET NO. 50-368

INTRODUCTION

By letter dated March 28, 1979, the Arkansas Power and Light Company (licensee) has requested one-time relief to Technical Specification 3.6.1.6 for Arkansas Nuclear One, Unit 2. Technical Specification 3.6.1.6 requires that the 54-inch purge supply and exhaust system isolation valves be closed during modes of operation requiring containment integrity (i.e., hot shutdown, hot standby, startup, and power operation).

After having recently completed reactor coolant pump inspections and repairs, some amount of residual oil was left on and around the reactor coolant pump casings. During subsequent pre-operational testing in Mode 3 (hot-standby), the temperature of the reactor coolant system was brought to 535 degrees Fahrenheit and operating pressure. At these conditions, the hot reactor coolant pump motor casings have caused the residual oil to sublime to the extent that smoke within the containment area has forced plant personnel to wear respirators.

The licensee has therefore requested a one-time relief from Technical Specification 3.6.1.6 for two periods of containment purge not to exceed eight-hours each and both periods to be completed within a thirty-hour period prior to reactor criticality (Mode 2 operation). The two eight-hour purging periods will allow the licensee to remove the smoke within containment and, replace the containment atmosphere with fresh air.

DISCUSSION

As stated in Supplement No. 2 to our Safety Evaluation Report for Arkansas Nuclear One, Unit 2, we required that the purge system be closed during the operating modes described above because: (1) the licensee was unable to provide assurance that the 54-inch butterfly isolation valves would properly close against the predicted loss-of-coolant accident transient and (2) the isolation valves did not receive diverse parameters to initiate valve closure. We also stated that an acceptable valve operability program would need to be submitted along with the installation of redundant safety grade radiation monitors capable of automatically closing the purge system valves before purging operations would be allowed in Modes 4, 3, 2, and 1.

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For the requested two eight-hour purging operations, the licensee has proposed limiting the purge isolation valve opening to not greater than a 30 degree opening. By not allowing these valves to be in a fully open position, the shaft and linkage stresses experienced during closure will be greatly reduced as compared to the full open position. Also, the licensee has provided assurance that if the valves are only partially open (i.e., less than or equal to 30 degrees), the valves will be capable of closing while experiencing the postulated loss-of-coolant transient.

The licensee has verified that the radiation monitors inside containment will initiate a containment isolation signal which will automatically close the valves. Also, there are no manual overrides in the system which would preclude valve closure on receipt of a containment isolation signal.

Prior to purging for the requested two eight-hour periods, the licensee will calibrate the radiation monitors to verify that the monitors are operable, verify that the high radiation alarms are operable, and verify the closure of the purge valves upon receipt of a high radiation alarm pursuant to Technical Specification 3.3.3.1.

In addition to the above required procedures, the licensee has proposed during the two eight-hour purging operations to sample reactor coolant activity prior to purging and at four-hours into the two purge operations to verify that the specific activity of Iodine-131 is not greater than 0.0001 micro Curie per gram. Also, an hourly check will be made with the process radiation monitor in the Chemical Volume Control System to verify that the Iodine-131 activity of the reactor coolant system is not greater than 0.0001 micro Curie per gram.

EVALUATION

We have determined by analyses the mass of the containment atmosphere which would be released through the purge valves prior to valve closure in the event of a postulated loss-of-coolant accident. We have determined that the amount which would be released has an insignificant effect on the containment backup pressure used in the emergency core cooling system evaluation for Arkansas Nuclear One, Unit 2.

In addition, we have determined that this postulated release of containment atmosphere would result in a dose less than 0.0001 rem at the exclusion area boundary which is substantially less than the 10 CFR Part 100 guidelines.

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Our dose calculations were based on the conservative assumptions that all of the released containment atmosphere was primary coolant at the presently measured Iodine-131 activity level of 5.18 x 10-5 micro Curies per gram. No core activity release was postulated in our evaluations. The decay heat energy available at hot standby conditions following a 54-day reactor shutdown is not sufficient to raise fuel temperatures significantly before emergency core cooling system operation would provide adequate core cooling. We also determined that a purge valve closure time of six seconds will further insure that any postulated release of activity from the core will not be released from the containment.

Based on our analyses, we concur with the licensee that if the purge valve openings are limited to thirty degrees or less, the isolation valves will be capable of properly closing against the predicted loss-of-coolant accident transient.

Also, we find the licensee's additional proposed surveillance procedures to be a prudent level of alertness on the part of the licensee during the proposed two eight-hour purging operations.

Based on our review of the licensee's proposal and on our evaluations regarding these matters as stated above, we find acceptable the licensee's request for one time only relief of Technical Specification 3.6.1.6.

The temporary suspension of Technical Specification 3.6.1.6 shall be subject to the followng stipulations. The two eight-hour period purging operations shall be completed within a one-time thirty-hour period in Modes 4 and 3 only. During the 30-hour period the licensee shall, prior to both eight-hour purging operations, check the specific activity of Iodine-131 and at four (4) hours into the purge operation to verify that the activity is not greater than 0.0001 micro Curies per gram. The licensee shall check hourly the Iodine-131 activity with the process radiation monitor in the Chemical Volume Control System to verify that the Iodine-131 activity of the reactor coolant system is not greater than 0.0001 micro-Curies per gram. Also, the purge valves shall not be opened more than 30 degrees during the two eight-hour purging periods.

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 and/or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

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DATE➤						

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 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, Project Manager
Light Water Reactors Branch No. 1
Division of Project Management

Original signed by:

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

DATED: MAR 3 0 1979

OFFICE➤	DPM:LWR #1	DOR/STS	AAB/DSS	CSB/DSS	MEB/DSS	DPM:LWR #1
SURNAME➤	LBEngle:pcm	DBrinkman	FKanter	DPickett	RKeissel	JFStolz
DATE➤	03/29/79	03/29/79	03/29/79	03/29/79	03/30/79	03/ /79

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

April 4, 1979

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

Docket No. 50-368

Docketing and Service Section
Office of the Secretary of the Commission

SUBJECT: NOTICE OF ISSUANCE OF AMENDMENT NO. 10 TO FACILITYOPERATING LICENSE FOR ARKANSAS POWER AND LIGHT COMPANY'S ARKANSAS NUCLEAR ONE, UNIT 2

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) ~~XXX~~ Amendment(s) No. 10 to ANO-2

☐ Other: _____

P.S. Extra copy enclosed for NRC PDR.

Office of Nuclear Reactor Regulation

Enclosure:
As Stated

OFFICE→	LWR #1					
SURNAME→	EGHylton					
DATE→	4/4/79					

NRC FORM 102 (1-76)

ARKANSAS NUCLEAR ONE, UNIT 2 OPERATING LICENSE NO. NPF-6, AMENDMENT NO. 10
DATED: March 30, 1979

Distribution:
Docket File
NRC PDR
Local PDR
LWR #1 File
Attorney, ELD
R. S. Boyd
D. F. Ross
D. B. Vassallo
J. F. Stolz
L. B. Engle
E. G. Hylton (5)
F. J. Willimas
D. Crutchfield
L. Cobb
IE (5)
N. Dube, MPA
M. Jinks, QA (4)
R. Diggs, ADM
V. A. Moore, DSE
R. C. DeYoung, DSE
M. L. Ernst, DSE
R. P. Denise, DSE
R. J. Mattson, SS
J. P. Knight, SS
S. Hanauer, SS
R. L. Tedesco, SS
B. Scharf, ADM (15)
D. Skovholt
I. Dinitz
A. Toalston, AIG
H. Bristow, NMSS
V. Stello, CR
D. Eisenhut, OR
W. Pasciak, OR
F. S. Echols, EP
M. Slater, EP
F. Rosa
D. Brinkman
R. Ingram
G. Vissing, DOR
STS Groupleader, DOR
R. Reid, DOR
B. Grimes, DOR

bcc: J. R. Buchanan, NSIC
T. B. Abernathy, TIC
A. Rosenthal, ASLAB
J. Yore, ASLBP
ACRS (16)

MAR 3 0 1979

Docket No. 50-368

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. 10 TO FACILITY OPERATING LICENSE NO. NPF-6 FOR ARKANSAS NUCLEAR ONE, UNIT 2

By letted dated March 26, 1979, you requested that the requirements of the Arkansas Nuclear One, Unit 2 Technical Specification 3.6.1.6 be temporarily suspended for a one-time thirty-hour period to complete two eight-hour purging operations.

Facility Operating License NPF-6 is amended immediately, by making the following changes:

You are hereby permitted a one-time only thirty-hour period to complete two (2) eight-hour purging operations in Modes 4 and 3 only. The purge valves shall not be opened more than 30 degrees during the two eight-hour purging operations. As stipulated in this license amendment you shall perform the additional surveillance activities as delineated in your March 26, 1979 request for temporary suspension of Technical Sepcification 3.6.1.6.

We have determined that Amendment No. 10 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.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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

Enclosures:
1. Amendment No. 10 to Facility Operating License No. NPF-6
2. FEDERAL REGISTER Notice
3. Safety Evaluation Supporting Amendment No. 9 to NPF-6

cc: See page 3

O.K. as to Legal form

OFFICE ➔	DPM:LWR #1	DPM:LWR #1	OELD	DOR/STS	DPM:LWR #1	
SURNAME ➔	EGHylton:pcm	LBEngle		DBrinkman	JFStolz	
DATE ➔	03/29/79	03/29/79	03/30/79	03/29/79	03/30/79	

cc: Mr. Daniel H. Williams
Manager, Licensing
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Philip K. Lyon, Esq.
House, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72203

Mr. C. W. Reed, Project Engineer
Bechtel Power Corporation
San Francisco, California 94119

Mr. Fred Sernatinger, Project Manager
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, Connecticut 06095

Mr. Charles B. Brinkman, Manager
Washington Nuclear Operations
C-E Power Systems
Combustion Engineering, Inc.
4853 Cordell Avenue, Suite A-1
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
Environmental Projects
Review
Department of the Interior
Room 4256
18th and C Street, N. W.
Washington, D. C. 20240

U. S. Environmental Protection
Agency
ATTN: Ms. F. Munter
Office of Federal Activities
Room W-535, Waterside Mall
401 M Street, S. W.
Washington, D. C. 20460

OFFICE ➤						
SURNAME ➤						
DATE ➤						

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

FACILITY OPERATING LICENSE

Amendment No. 10
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 application, as 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'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 by amending Section 2.C.(2) of Facility Operating License No. NPF-6 as follows: The second paragraph of 2.C.(2) has not changed.

   2.C.(2) Technical Specifications

   The Technical Specifications contained in Appendices A & B, as revised through Amendment No. 10 are hereby incorporated in license NPF-6. Arkansas Power and Light Company shall operate the facility in accordance with the Technical Specifications.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

MAR 3 0 1979

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

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance:

OFFICE ➔	DPM:LWR #1	DPM:LWR #1	OELD	DOR/STS	DPM:LWR #1	
SURNAME ➔	EGHylton:pcm	LBEngle		DBrinkman	JFStolz	
DATE ➔	03/29 /79	03/29 /79	03/30 /79	03/29 /79	03/30 /79	

ATTACHMENT 1 TO LICENSE AMENDMENT NO. 10

FACILITY OPERATING LICENSE NO. NPF 6

DOCKET NO. 50-368

The requirements of Technical Specification 3.6.1.6 requiring that the 54 inch purge supply and exhaust system isolation valves shall be closed during Modes 1, 2, 3 and 4 is temporarily suspended for Modes 3 and 4 only pursuant to the stipulation as stated below.

The licensee is permitted a one-time thirty-hour period for completing two eight-hour containment purge operations. This thirty-hour period is permitted in Operating Modes 3 and 4 only.

During the thirty-hour purging period the licensee shall:

(1) Sample reactor coolant activity prior to the two eight-hour purging operations and at four (4) hours into the two eight-hour purging operations to verify that the specific activity of Iodine-131 is not greater than 0.0001 micro Curie per gram.

(2) Until such time as the two eight-hour purging operations are complete, an hourly check shall be maintained with the process radiation monitor in the Chemical Volume Control System to verify that the Iodine-131 activity of the reactor coolant system is not greater than 0.0001 micro Curie per gram.

(3) During the two eight-hour purging operations, the purge supply and exhaust valves shall not be opened more than 30 degrees from the fully closed position.

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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. 10 to Facility Operating License No. NPF-6 issued 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 amended license is effective as of its date of issuance.

The amendment temporarily suspends Technical Specification 3.6.1.6 which requires that the purge supply and exhaust system isolation valves shall be closed during Operating Modes 1, 2, 3 and 4. The temporary suspension is granted for one thirty-hour period to allow two eight-hour purging operations in facility Operating Mode 4 (Hot Shutdown) and Mode 3 (Hot Standby) only.

This temporary suspension allows the licensee to purge a smoke filled containment atmosphere which is inhibiting personnel operations within containment. During a 53 day reactor shutdown, the licensee conducted inspections and repairs on reactor coolant pumps and residual oil left on the reactor coolant pump casings from these repairs has been smoking as the facility approaches startup temperature and pressure prior to reactor criticality at Mode 2 operations.

The Commission has determined that during the time of the temporarily allowed purging operations that the worst case postulated loss-of-coolant

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accident which could occur after a 53-day reactor shutdown and prior to reactor criticality would result in doses less than 0.0001 rem which are substantially less than the 10 CFR Part 100 guidelines at the exclusion boundary.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations in 10 CFR Chapter I, which are set forth in the amended license. We have concluded, that because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration. The application for the amendment complies with the standards and requirements of the Act and the Commission's regulations.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 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 a copy of (1) the application for amendment dated March 26, 1979, (2) Amendment No. 10 to License NPF-6 and (3) the Commission's related Safety Evaluation Report supporting Amendment No. 10 to License NPF-6.

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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 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 Project Management, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland this 30th day of March 1979.

Original signed by:

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

OFFICE ➤	DPM:LWR #1	DPM:LWR #1	OELD	DPM:LWR #1		
SURNAME ➤	EGHylton:pcm	LBEngle		JFStolz		
DATE ➤	03/29/79	03/29/79	03/30/79	03/30/79		

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. 10 to Facility Operating License No. NPF-6 issued 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 amended license is effective as of its date of issuance.

The amendment temporarily suspends Technical Specification 3.6.1.6 which requires that the purge supply and exhaust system isolation valves shall be closed during Operating Modes 1, 2, 3 and 4. The temporary suspension is granted for one thirty-hour period to allow two eight-hour purging operations in facility Operating Mode 4 (Hot Shutdown) and Mode 3 (Hot Standby) only.

This temporary suspension allows the licensee to purge a smoke filled containment atmosphere which is inhibiting personnel operations within containment. During a 53 day reactor shutdown, the licensee conducted inspections and repairs on reactor coolant pumps and residual oil left on the reactor coolant pump casings from these repairs has been smoking as the facility approaches startup temperature and pressure prior to reactor criticality at Mode 2 operations.

The Commission has determined that during the time of the temporarily allowed purging operations that the worst case postulated loss-of-coolant

accident which could occur after a 53-day reactor shutdown and prior to reactor criticality would result in doses less than 0.0001 rem which are substantially less than the 10 CFR Part 100 guidelines at the exclusion boundary.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations in 10 CFR Chapter I, which are set forth in the amended license. We have concluded, that because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration. The application for the amendment complies with the standards and requirements of the Act and the Commission's regulations.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 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 a copy of (1) the application for amendment dated March 26, 1979, (2) Amendment No. 10 to License NPF-6 and (3) the Commission's related Safety Evaluation Report supporting Amendment No. 10 to License NPF-6.

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 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 Project Management, Office of Nuclear Reactor Regulation.

Dated at Bethesda, Maryland this day of 1979.

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

SAFETY EVALUATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 10
(ARKANSAS POWER AND LIGHT COMPANY)
DOCKET NO. 50-368

INTRODUCTION

By letter dated March 28, 1979, the Arkansas Power and Light Company (licensee) has requested one-time relief to Technical Specification 3.6.1.6 for Arkansas Nuclear One, Unit 2. Technical Specification 3.6.1.6 requires that the 54-inch purge supply and exhaust system isolation valves be closed during modes of operation requiring containment integrity (i.e., hot shutdown, hot standby, startup, and power operation).

After having recently completed reactor coolant pump inspections and repairs, some amount of residual oil was left on and around the reactor coolant pump casings. During subsequent pre-operational testing in Mode 3 (hot-standby), the temperature of the reactor coolant system was brought to 535 degrees Fahrenheit and operating pressure. At these conditions, the hot reactor coolant pump motor casings have caused the residual oil to sublime to the extent that smoke within the containment area has forced plant personnel to wear respirators.

The licensee has therefore requested a one-time relief from Technical Specification 3.6.1.6 for two periods of containment purge not to exceed eight-hours each and both periods to be completed within a thirty-hour period prior to reactor criticality (Mode 2 operation). The two eight-hour purging periods will allow the licensee to remove the smoke within containment and, replace the containment atmosphere with fresh air.

DISCUSSION

As stated in Supplement No. 2 to our Safety Evaluation Report for Arkansas Nuclear One, Unit 2, we required that the purge system be closed during the operating modes described above because: (1) the licensee was unable to provide assurance that the 54-inch butterfly isolation valves would properly close against the predicted loss-of-coolant accident transient and (2) the isolation valves did not receive diverse parameters to initiate valve closure. We also stated that an acceptable valve operability program would need to be submitted along with the installation of redundant safety grade radiation monitors capable of automatically closing the purge system valves before purging operations would be allowed in Modes 4, 3, 2, and 1.

For the requested two eight-hour purging operations, the licensee has proposed limiting the purge isolation valve opening to not greater than a 30 degree opening. By not allowing these valves to be in a fully open position, the shaft and linkage stresses experienced during closure will be greatly reduced as compared to the full open position. Also, the licensee has provided assurance that if the valves are only partially open (i.e., less than or equal to 30 degrees), the valves will be capable of closing while experiencing the postulated loss-of-coolant transient.

The licensee has verified that the radiation monitors inside containment will initiate a containment isolation signal which will automatically close the valves. Also, there are no manual overrides in the system which would preclude valve closure on receipt of a containment isolation signal.

Prior to purging for the requested two eight-hour periods, the licensee will calibrate the radiation monitors to verify that the monitors are operable, verify that the high radiation alarms are operable, and verify the closure of the purge valves upon receipt of a high radiation alarm pursuant to Technical Specification 3.3.3.1.

In addition to the above required procedures, the licensee has proposed during the two eight-hour purging operations to sample reactor coolant activity prior to purging and at four-hours into the two purge operations to verify that the specific activity of Iodine-131 is not greater than 0.0001 micro Curie per gram. Also, an hourly check will be made with the process radiation monitor in the Chemical Volume Control System to verify that the Iodine-131 activity of the reactor coolant system is not greater than 0.0001 micro Curie per gram.

EVALUATION

We have determined by analyses the mass of the containment atmosphere which would be released through the purge valves prior to valve closure in the event of a postulated loss-of-coolant accident. We have determined that the amount which would be released has an insignificant effect on the containment backup pressure used in the emergency core cooling system evaluation for Arkansas Nuclear One, Unit 2.

In addition, we have determined that this postulated release of containment atmosphere would result in a dose less than 0.0001 rem at the exclusion area boundary which is substantially less than the 10 CFR Part 100 guidelines.

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Our dose calculations were based on the conservative assumptions that all of the released containment atmosphere was primary coolant at the presently measured Iodine-131 activity level of 5.18 x 10-5 micro Curies per gram. No core activity release was postulated in our evaluations. The decay heat energy available at hot standby conditions following a 54-day reactor shutdown is not sufficient to raise fuel temperatures significantly before emergency core cooling system operation would provide adequate core cooling. We also determined that a purge valve closure time of six seconds will further insure that any postulated release of activity from the core will not be released from the containment.

Based on our analyses, we concur with the licensee that if the purge valve openings are limited to thirty degrees or less, the isolation valves will be capable of properly closing against the predicted loss-of-coolant accident transient.

Also, we find the licensee's additional proposed surveillance procedures to be a prudent level of alertness on the part of the licensee during the proposed two eight-hour purging operations.

Based on our review of the licensee's proposal and on our evaluations regarding these matters as stated above, we find acceptable the licensee's request for one time only relief of Technical Specification 3.6.1.6.

The temporary suspension of Technical Specification 3.6.1.6 shall be subject to the followng stipulations. The two eight-hour period purging operations shall be completed within a one-time thirty-hour period in Modes 4 and 3 only. During the 30-hour period the licensee shall, prior to both eight-hour purging operations, check the specific activity of Iodine-131 and at four (4) hours into the purge operation to verify that the activity is not greater than 0.0001 micro Curies per gram. The licensee shall check hourly the Iodine-131 activity with the process radiation monitor in the Chemical Volume Control System to verify that the Iodine-131 activity of the reactor coolant system is not greater than 0.0001 micro-Curies per gram. Also, the purge valves shall not be opened more than 30 degrees during the two eight-hour purging periods.

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 and/or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

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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 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, Project Manager
Light Water Reactors Branch No. 1
Division of Project Management

Original signed by:

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

DATED: MAR 3 0 1979

OFFICE	DPM:LWR #1	DOR/STS	AAB/DSS	CSB/DSS	MEB/DSS	DPM:LWR #1
SURNAME	LBEngle:pcm	DBrinkman	FKanter	DPickett	RKeissel	JFStolz
DATE	03/29/79	03/29/79	03/29/79	03/29/79	03/30/79	03/ /79

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

April 4, 1979

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

Docket No. 50-368

Docketing and Service Section
Office of the Secretary of the Commission

SUBJECT: NOTICE OF ISSUANCE OF AMENDMENT NO. 10 TO FACILITYOPERATING LICENSE FOR ARKANSAS POWER AND LIGHT COMPANY'S ARKANSAS NUCLEAR ONE, UNIT 2

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) Amendment(s). No. 10 to ANO-2

☐ Other: _____

_____

_____

P.S. Extra copy enclosed for NRC PDR.

Office of Nuclear Reactor Regulation

Enclosure:
As Stated

OFFICE→	LWR #1					
SURNAME→	EGHylton					
DATE→	4/4/79					

NRC FORM 102 (1-76)

ARKANSAS NUCLEAR ONE, UNIT 2 OPERATING LICENSE NO. NPF-6, AMENDMENT NO. 10
DATED: March 30, 1979

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