

July 3, 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. to Facility Operating License NPF-6 -  
Arkansas Nuclear One, Unit No. 2

The Commission has issued the enclosed Amendment No. 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 November 27, 1985.

The amendment revises the Technical Specifications to add requirements related to radiation monitoring of the HVAC exhaust for the new Low-Level Radwaste Storage Building.

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,

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

Enclosures:

1. Amendment No. to NPF-6
2. Safety Evaluation

cc: See next page

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6/12/86

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Mr. T. Gene Campbell  
Arkansas Power & Light Company

cc:

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

July 3, 1986

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

DISTRIBUTION

Docket File 50-368

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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. 74  
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 November 27, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, 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. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Robert S. Lee".

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 3, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 74

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

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

Remove Pages

3/4 3-48  
3/4 3-49a  
3/4 3-52  
3/4 11-8

Insert Pages

3/4 3-48  
3/4 3-49a  
3/4 3-52  
3/4 11-8

TABLE 3.3-12 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>PARAMETER</u>	<u>ACTION</u>
3. Spent Fuel Area Ventilation System				
a. Noble Gas Activity Monitor	1	*	Radioactivity	27
b. Iodine Sampler Cartridge	1	*	Verify Presence of Cartridge	28
c. Particulate Sampler Filter	1	*	Verify Presence of Filter	28
d. Effluent System Flow Monitor	1	*	System Flow	26
e. Sampler Flow Monitor	1	*	Sampler Flow	26
4. Auxiliary Building Area Ventilation System				
a. Noble Gas Activity Monitor	1	*	Radioactivity	27
b. Iodine Sampler Cartridge	1	*	Verify Presence of Cartridge	28
c. Particulate Sampler Filter	1	*	Verify Presence of Filter	28
d. Effluent System Flow Monitor	1	*	System Flow	26
e. Sampler Flow Monitor	1	*	Sampler Flow	26

TABLE 3.3-12(Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>PARAMETER</u>	<u>ACTION</u>
5. Auxiliary Building Extension Ventilation System				
a. Noble Gas Activity Monitor	1	*	Radioactivity	27
b. Iodine Sample Cartridge	1	*	Verify Presence of Cartridge	28
c. Particulate Sampler Filter	1	*	Verify Presence of Filter	28
d. Effluent System Flow Monitor	1	*	System Flow	26
e. Sampler Flow Monitor	1	*	Sampler Flow	26
6. Radwaste Storage Building HVAC Exhaust System				
a. Noble Gas Activity Monitor	1	*	Radioactivity	30
b. Iodine Sample Cartridge	1	*	Verify Presence of Cartridge	31
c. Particulate Sampler Filter	1	*	Verify Presence of Filter	31
d. Effluent System Flow Monitor	1	*	System Flow	32
e. Sampler Flow Monitor	1	*	Sampler Flow	32



TABLE 3.3-12 (Continued)

TABLE NOTATION

\*During releases via this pathway.

- ACTION 25      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank may be released to the environment provided that prior to initiating the release:
1. At least two independent samples of the tank's contents are analyzed; and
  2. At least two technically qualified members of the Facility Staff independently verify the computer input data; and
  3. At least two technically qualified members of the Facility Staff independently verify the discharge valve lineup.
- Otherwise, suspend release of radioactive effluents via this pathway.
- ACTION 26      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.
- ACTION 27      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for gross activity within 24 hours.
- ACTION 28      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided samples are collected with auxiliary sampling equipment. Iodine sample cartridges and particulate sample filters shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing in accordance with Table 4.11-2.
- ACTION 29      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, suspend all operations involving movement of fuel assemblies or CEAs within the pressure vessel.

TABLE 3.3-12 (Continued)

TABLE NOTATION

\*During releases via this pathway.

- ACTION 30      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for gross activity within 24 hours. Otherwise, suspend all compaction activities within the Radwaste Storage Building.
- ACTION 31      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided samples are collected with auxiliary sampling equipment. Iodine sample cartridges and particulate sample filters shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing in accordance with Table 4.11-2. Otherwise, suspend all compaction activities within the Radwaste Storage Building.
- ACTION 32      With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours. Otherwise, suspend all compaction activities within the Radwaste Storage Building.

TABLE 4.3-12

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. Waste Gas Holdup System				
a. Gas Activity Monitor (provides alarm and automatic termination of release)	D*	p**	R	Q
b. System Effluent Flow Monitor	D*	N/A	R	N/A
2. Containment Purge and Ventilation System				
a. Gas Activity Monitor	D*	p**	R	M (1), P
b. Iodine Sampler Cartridge	W*(2)	N/A	N/A	N/A
c. Particulate Sampler Filter	W*(2)	N/A	N/A	N/A
d. System Effluent Flow Monitor	D*	N/A	R	N/A
e. Sampler Flow Monitor	D*	N/A	R	N/A

TABLE 4.3-12 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
3. Spent Fuel Area Ventilation System				
a. Gas Activity Monitor	D*	M**	R	Q
b. Iodine Sampler Cartridge	W*(2)	N/A	N/A	N/A
c. Particulate Sampler Filter	W*(2)	N/A	N/A	N/A
d. System Effluent Flow Monitor	D*	N/A	R	N/A
e. Sampler Flow Monitor	D*	N/A	R	N/A
4. Auxiliary Building Area Ventilation System				
a. Gas Activity Monitor	D*	M**	R	Q
b. Iodine Sampler Cartridge	W*(2)	N/A	N/A	N/A
c. Particulate Sampler Filter	W*(2)	N/A	N/A	N/A
d. System Effluent Flow Monitor	D*	N/A	R	N/A
e. Sampler Flow Monitor	D*	N/A	R	N/A

TABLE 4.3-12

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
5. Auxiliary Building Extension Ventilation System				
a. Gas Activity Monitor	D*	M**	R	Q
b. Iodine Sampler Cartridge	W*(2)	N/A	N/A	N/A
c. Particulate Sampler Filter	W*(2)	N/A	N/A	N/A
d. System Effluent Flow Monitor	D*	N/A	R	N/A
e. Sampler Flow Monitor	D*	N/A	R	N/A
6. Radwaste Storage Building HVAC Exhaust System				
a. Gas Activity Monitor	D*	M**	R	Q
b. Iodine Sampler Cartridge	W*(2)	N/A	N/A	N/A
c. Particulate Sampler Filter	W*(2)	N/A	N/A	N/A
d. System Effluent Flow Monitor	D*	N/A	R	N/A
e. Sampler Flow Monitor	D*	N/A	R	N/A

ARKANSAS - UNIT 2

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## RADIOACTIVE EFFLUENTS

### 3/4.11.2 GASEOUS EFFLUENTS

#### DOSE RATE

#### LIMITING CONDITION FOR OPERATION

3.11.2.1 The dose rate due to radioactive materials released in gaseous effluents from the site to UNRESTRICTED AREAS (see Figure 5.1-3) shall be limited to the following:

- a. For noble gases: Less than or equal to the 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin.
- b. For iodine-131, for tritium and for all radionuclides in particulate form with half lives greater than 8 days: Less than or equal to 1500 mrem/yr to any organ.

During periods of containment purging the dose rate may be averaged over a one hour interval.

APPLICABILITY: At all times.

#### ACTION:

- a. With the dose rate(s) exceeding the above limits, without delay restore the release rate to comply with the above limit(s).
- b. The provisions of Specifications 3.0.3, 3.0.4 and 6.9.1.7 are not applicable.

#### SURVEILLANCE REQUIREMENTS

4.11.2.1.1 The dose rate due to noble gases in gaseous effluents shall be determined to be within the above limits in accordance with the methods and procedures of the ODCM.

4.11.2.1.2 The dose rate due to iodine-131, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents shall be determined to be within the above limits in accordance with the methods and procedures of the ODCM by obtaining representative samples and performing analyses in accordance with the sampling and analysis program specified in Table 4.11-2.

TABLE 4.11-2

## RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSES PROGRAM

Gaseous Release Type	Sampling Frequency	Minimum Analyses Frequency	Type of Activity Analyses	Lower Limit of Detection (LLD) (uCi/ml) (a)
A. Waste Gas Storage Tank	P Each Tank Grab Sample	P Each Tank	Principal Gamma Emitters (b)	$1 \times 10^{-4}$ (g)
B. Reactor Bldg. Purge	P Each Purge Grab Sample	P Each Purge	Principal Gamma Emitters (b) H-3	$1 \times 10^{-4}$ (g) $1 \times 10^{-6}$
C. Unit Vents (Auxiliary Bldg. Ext.) (Spent Fuel Pool Area Ventilation)	M (c) (d) Grab Sample	M	Principal Gamma Emitters (b) H-3	$1 \times 10^{-4}$ (g) $1 \times 10^{-6}$
(Rx Bldg. Ventilation) (Radwaste Area Ventilation)	Continuous (e)	W (f) Charcoal Sample	I-131	$1 \times 10^{-12}$
(Low-Level Radwaste Storage Building) (HVAC Exhaust Ventilation)	Continuous (e)	W (f) Particulate Sample	Principal Gamma Emitters (b) (I-131, Others)	$1 \times 10^{-11}$
	Continuous (e)	M Particulate Sample	Gross alpha	$1 \times 10^{-11}$
	Continuous (e)	Q Composite Particulate Sample	Sr-89, Sr-90	$1 \times 10^{-11}$
	Continuous (e)	Noble Gas Monitor	Noble Gases Gross Beta or Gamma	$1 \times 10^{-8}$ (Xe-133 equiv.)



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

In their November 27, 1985 letter, Arkansas Power and Light requested changes to Tables 3.3-12, 4.3-12, and 4.11-2 of the Technical Specifications for Arkansas Nuclear One (ANO) - Unit 2. Additional information and clarifications were provided by the licensee in their March 28, 1986 letter.

2.0 EVALUATION

The proposed change would add requirements to address radiation monitoring of the HVAC main building exhaust for the new Low-Level Radwaste Storage Building (LLRWSB) on the ANO site. The change to Table 3.3-12 consists of the addition of a noble gas activity monitor, iodine sample cartridge, particulate sample filter, effluent system flow monitor, and sampler flow monitor for the LLRWSB HVAC Exhaust System radioactive gaseous effluent monitoring instrumentation. Surveillance requirements for this additional instrumentation are added to Table 4.3-12. Table 4.11-2 changes address sampling and analyses requirements for the LLRWSB HVAC Exhaust. We find that the requested amendment meets the intent of the NRC staff's model RETS for PWR's, NUREG-0472, Revision 2, February 1, 1980 as discussed further below.

Compliance with the minimum requirements and waste stability requirements of 10 CFR Part 61 should minimize the potential for any inadvertent release from interrimly stored waste; therefore, the only potential for releases from the LLRWSB will occur during compaction operations. The proposed changes to the Technical Specifications are acceptable in that they require all compaction activities to be suspended if an LLRWSB HVAC Exhaust System gaseous effluent monitoring instrument is not operable, and samples are not taken (flow rates are not estimated for flow measuring instrumentation).

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The licensee has stated that potential releases from the LLRWSB compaction operations are expected to have an extremely low level of activity; and the LLRWSB is sufficiently separated from the control room air intake so that the chances of the LLRWSB exhaust creating a control room habitability problem are very remote. Also, there are no circumstances under which radiological effluents from a reactor accident could be vented through the LLRWSB main exhaust vent because the LLRWSB vent is separated from areas affected by post-accident releases.

The licensee has also stated that airborne releases from the LLRWSB will be accounted for within the scope of the methodology provided in the Offsite Dose Calculation Model. Further, the methodology for determining the setpoint for the LLRWSB main exhaust vent monitor will be consistent with the methodology used for the other SPING 4A monitors in service at ANO.

### 3.0 EVALUATION SUMMARY

The proposed changes to the Technical Specifications for Arkansas Nuclear One-Unit 2 have been evaluated and found to be in compliance with the applicable requirements. The proposed changes also provide a level of protection equivalent to that afforded by the Standard Technical Specifications and, therefore, are acceptable. In view of the above considerations, we conclude that the proposed changes to Tables 3.3-12, 4.3-12 and 4.11-2 of the Arkansas Nuclear One-Unit 2 Technical Specifications are 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 C. Nichols.

Dated: July 3, 1986