

April 9, 1991

Docket No. 50-368

Mr. Neil S. Carns
Vice President, Operations ANO
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NO. 117 TO FACILITY OPERATING LICENSE
NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. 75927)

The Commission has issued the enclosed Amendment No. 117 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 19, 1989, as supplemented January 15, 1991.

The amendment changes the spent fuel pool surveillance interval from once per 18 months to once per 5 years.

A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original Signed By:

Sheri R. Peterson, Project Manager
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 117 to NPF-6
- 2. Safety Evaluation

cc w/enclosures:
See next page

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<u>Docket File</u>	NRC/Local PDR	PD4-1 Reading	S. Peterson (2)
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OGC(MS15B18)	D. Hagan(MS3206)	G. Hill(4)(MSP1-37)	
Wanda Jones(MS7103)	J. Calvo(MS11F22)	PD4-1 Plant File	
GPA/PA(MS2G5)	ARM/LFMB(MS4503)	T. Westerman, RIV	

ok with changes as noted

OFC	: PD4-1/LA	: PD4-1/PM	: OGC	: PD4-1/D	:	:
NAME	: PNoonan	: SPeterson:lh	: TQuay	:	:	:
DATE	: 3/20/91	: 3/26/91	: 4/10/91	: 4/19/91	:	:



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

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Sincerely,

A handwritten signature in cursive script that reads "Sheri R. Peterson".

Sheri R. Peterson, Project Manager
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Enclosures:

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2. Safety Evaluation

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See next page

Mr. Neil S. Carns
Entergy Operations, Inc.

Arkansas Nuclear One, Unit 2

cc:

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U.S. Nuclear Regulatory Commission
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Honorable Joe W. Phillips
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Pope County Courthouse
Russellville, Arkansas 72801

Ms. Greta Dicus, Director
Division of Environmental Health
Protection
Arkansas Department of Health
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 117
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated October 19, 1989, as supplemented January 15, 1991, 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 license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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 Appendix A, as revised through Amendment No.117 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective 30 days from its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



for Theodore R. Quay, Director
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 9, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 117

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Revise the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

REMOVE PAGE

3/4 7-38

INSERT PAGE

3/4 7-38

PLANT SYSTEMS

3/4.7.12 SPENT FUEL POOL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.7.12 The structural integrity of the spent fuel pool shall be maintained in accordance with Specification 4.7.12.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel pool.

ACTION:

- a. With the structural integrity of the spent fuel pool not conforming to the above requirements, in lieu of any other report, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days of a determination of such non-conformity.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.12.1 Inspection Frequencies - The structural integrity of the spent fuel pool shall be determined per the acceptance criteria of Specification 4.7.12.2 at the following frequencies:

- a. At least once per 92 days after the pool is filled with water. If no abnormal degradation or other indications of structural distress are detected during five consecutive inspections, the inspection interval may be extended to at least once per 5 years.
- b. Within 24 hours following any seismic event which actuates or should have actuated the seismic monitoring instrumentation of Specification 3.3.3.3.

4.7.12.2 Acceptance Criteria - The structural integrity of the spent fuel pool shall be determined by a visual inspection of at least the interior and exterior surfaces of the pool, the struts in the tilt pit, the surfaces of the separation walls, and the structural slabs adjoining the pool walls. This visual inspection shall verify no changes in the concrete crack patterns, no abnormal degradation or other signs of structural distress (i.e, cracks, bulges, out of plumbness, leakage, discolorations, efflorescence, etc.).

PLANT SYSTEMS

3/4.7.11 FIRE BARRIERS

LIMITING CONDITION FOR OPERATION

3.7.11 All fire barriers separating safety related fire areas or separating portions of redundant safe shutdown systems required in the event of a fire shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above fire barriers inoperable within 1 hour, either;
 1. Establish a continuous fire watch on at least one side of the affected fire barrier, or
 2. Verify the OPERABILITY of the fire detectors with control room alarm on at least one side of the affected barrier and establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.11 Each of the above required fire barriers, including sealing devices, shall be verified OPERABLE by:
- a. Performing a visual inspection of each fire barrier (not including penetration seals) at least once per 18 months.
 - b. Prior to returning a fire barrier to OPERABLE status following repairs or maintenance by performance of a visual inspection of the affected fire barrier(s).
 - c. Performing a visual inspection of each fire door, fire damper and associated hardware at least once per 18 months.
 - d. Performing a visual inspection of at least ten percent of each type of sealed penetration at least once per 18 months. If the penetration is determined to be inoperable, declare the affected barrier inoperable and perform a visual inspection of an additional ten percent of the degraded type of sealed penetrations. This inspection process shall continue until a ten percent sample with no visually apparent adverse degradation has been completed or until all required sealed penetrations of the degraded type have been inspected. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 117 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.,

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

1.0 INTRODUCTION

By letter dated October 19, 1989, Arkansas Power and Light Company, now, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Arkansas Nuclear One, Unit No. 2 (ANO-2) Technical Specifications (TS). A surveillance program was originated to verify structural adequacy of the spent fuel pool when a construction error was found during construction. The horizontal reinforcing steel on the inside face of the spent fuel pool was incorrectly detailed, resulting in insufficient anchorage at the inside corners. As part of the remedial action, Technical Specification 3/4.7.12.1.a requires an inspection to be conducted every 18 months. The proposed change would increase the surveillance interval for the spent fuel storage pool from once per 18 months to once per 5 years, based upon past inspection results. In response to the staff's request for additional information on this subject, the licensee provided, on January 15, 1991, justification of the proposed change and its current procedure for inspection of the spent fuel pool. The January 15, 1991, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The following items concerning inspection and surveillance of the spent fuel pool provide bases for the staff's evaluation and resolution:

1. Significant Crack - The significance associated with a crack is dependent upon its size and impact upon the structural integrity of the spent fuel pool. In general, all cracks with width greater than 0.01 inch are considered as significant, and are measured and mapped. All cracks which impact the fuel pool integrity based upon engineering evaluation will require that appropriate reporting and corrective action be initiated.
2. Inspection Procedure - The licensee's Procedure 2306.1 "Spent Fuel Pool Crack Mapping and Visual Inspection" provides instruction for a long term survey and extended mapping program to ensure that the structural integrity of the Unit 2 spent fuel pool is intact. It also provides instructions for performing a visual inspection to verify that structural integrity is maintained.

- (a) Crack Mapping - This procedure requires a periodic inspection of the four grid zones laid out on the concrete surfaces at the spent fuel pool. Two are on elevation 404'-0" slab and two are on the exterior face of the column line 4 wall. The grids consist of 12-inch squares arranged in patterns and are laid out using paint or some other permanent type of marking system. The width of every visible crack is measured by optical comparator at the widest point on the portion of the crack line lying within the mapped area. Cracks having 0.01 inch or greater in width are measured and clearly marked.
 - (b) Visual Inspection - The purpose of a visual inspection is to determine the structural integrity of the spent fuel pool. A visual inspection should be performed on at least the interior and exterior surfaces of the pool, the struts in the tilt pit, the surfaces of the separation walls, and the structural slabs adjoining the pool walls, and should verify no changes in the concrete crack patterns, no abnormal degradation or other signs of structural distress.
3. Inspection Records - Thirteen inspections of the spent fuel pool concrete have been conducted over the last eleven years without observance of abnormal degradation or structural distress. The inspections prior to 1981 are noted for completeness and no cracking has been observed. With the exception of five cracks observed during the inspection conducted on March 20, 1985, all cracks observed were smaller than 0.01 inch wide and most were not structurally related. All cracks evaluated have been found not to impact the structural integrity of the spent fuel pool. The five cracks found in 1985 which exceeded the screening limit width have not grown.

Since the inspection record during the last eleven years shows no sign of abnormal degradation or worsening significant cracks, it is reasonable to adopt a longer surveillance frequency of once per 5 years. Furthermore, the proposed change does not involve a significant hazards consideration because it does not increase the probability and consequences of an accident or a malfunction of equipment important to safety. The increased inspection interval would not create a new or different accident possibility nor possibility of a malfunction of equipment important to safety.

Based on the staff evaluation of licensee submittals, responses to requests for additional information and licensee's inspection procedures, the staff concludes that the licensee's proposed Technical Specification change on spent fuel pool surveillance interval from once per 18 months to once per 5 years is reasonable and acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arkansas State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The NRC 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 issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (55 FR 8216). 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

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 REFERENCES

1. Letter from T. G. Campbell of AP&L to NRC, dated October 19, 1989. Subject: Proposed Technical Specification Change - Spent Fuel Storage Pool Surveillance Interval.
2. Letter from J. J. Fisicaro of Entergy Operations, Inc. to NRC, dated January 15, 1991. Subject: Response to Request for Additional Information on Spent Fuel Pool Technical Specification Change.
3. "Spent Fuel Pool Crack Mapping and Visual Inspection", ANO Procedure 2306.010, AP&L Rev. 3, April 19, 1990.

Principal Contributor: Sai P. Chan

Date: April 9, 1991