

January 14, 1994

Mr. Jerry W. Yelverton
 Vice President, Operations ANO
 Entergy Operations, Inc.
 Route 3 Box 137G
 Russellville, Arkansas 72801

Dear Mr. Yelverton:

SUBJECT: ISSUANCE OF AMENDMENT NO. 155 TO FACILITY OPERATING LICENSE
 NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. M88111)

The Commission has issued the enclosed Amendment No. 155 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 27, 1993.

The amendment relocates the requirement of TS 4.5.2.g.1 to verify the correct position of each electrical and/or mechanical position stop for the Emergency Core Cooling System throttle valves within 4 hours of each valve stroking operation or maintenance on the valve, to procedures that control the maintenance and operation of these valves.

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:

Thomas W. Alexion, Project Manager
 Project Directorate IV-1
 Division of Reactor Projects - III/IV/V
 Office of Nuclear Reactor Regulation

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Enclosures:

1. Amendment No. 155 to NPF-6
2. Safety Evaluation

cc w/enclosures:
 See next page

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OFC	LA:PD4-1	PM:PD4-1	EMEB	OTSB	OGC NLO	D:PD4-1
NAME	PNoonan	TAlexion/vw	JNorberg*	CGrimes*	M 2674	WBeckner
DATE	1/14/94	1/14/94	12/22/93	12/28/93	1/16/94	1/14/94
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 14, 1994

Docket No. 50-368

Mr. Jerry W. Yelverton
Vice President, Operations ANO
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Dear Mr. Yelverton:

SUBJECT: ISSUANCE OF AMENDMENT NO. 155 TO FACILITY OPERATING LICENSE
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Sincerely,

A handwritten signature in cursive script, reading "Thomas W. Alexion", is written over the typed name.

Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 155 to NPF-6
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Jerry W. Yelverton
Entergy Operations, Inc.

Arkansas Nuclear One, Unit 2

cc:

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County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

Ms. Greta Dicus, Director
Division of Radiation Control
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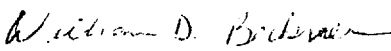
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 155, 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 the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


William D. Beckner, Director
Project Directorate IV-1
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 14, 1994



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 155
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 27, 1993, 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.

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ATTACHMENT TO LICENSE AMENDMENT NO. 155

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 5-5

INSERT PAGE

3/4 5-5

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- f. By verifying that each of the following pumps develops the indicated differential pressure on recirculation flow when tested pursuant to Specification 4.0.5:
1. High-Pressure Safety Injection pump \geq 1360.4 psid with 90°F water.
 2. Low-Pressure Safety Injection pump \geq 156.25 psid with 90°F water.
- g. At least once per 18 months by verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:

HPSI System
Valve Number

- a. 2CV-5035-1
- b. 2CV-5015-1
- c. 2CV-5075-1
- d. 2CV-5055-1
- e. 2CV-5036-2
- f. 2CV-5016-2
- g. 2CV-5076-2
- h. 2CV-5056-2

LPSI System
Valve Number

- a. 2CV-5037-1
- b. 2CV-5017-1
- c. 2CV-5077-2
- d. 2CV-5057-2

- h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystem that alter the subsystem flow characteristics and verifying the following flow rates:

HPSI System - Single Pump

The sum of the injection line flow rates, excluding the highest flow rate is greater than or equal to 570 gpm.

LPSI System - Single Pump

- a. Injection Leg 1, \geq 1059 gpm
- b. Injection Leg 2, \geq 1059 gpm
- c. Injection Leg 3, \geq 1059 gpm
- d. Injection Leg 4, \geq 1059 gpm

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - $T_{avg} < 300^{\circ}\text{F}$

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

- a. One OPERABLE high-pressure safety injection pump, and
- b. An OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal.

APPLICABILITY: MODES 3* and 4.

ACTION:

- a. With no ECCS subsystem OPERABLE, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

SURVEILLANCE REQUIREMENTS

4.5.3 The ECCS subsystem shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.

*With pressurizer pressure < 1700 psia.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 155 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 27, 1993, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Arkansas Nuclear One, Unit No. 2 (ANO-2) Technical Specifications (TSs). The requested changes would relocate the requirement of TS 4.5.2.g.1 to verify the correct position of each electrical and/or mechanical position stop for the Emergency Core Cooling System (ECCS) throttle valves within 4 hours of each valve stroking operation or maintenance on the valve, to procedures that control the maintenance and operation of these valves.

2.0 EVALUATION

Proper operation of the open position stop (or limit switch) on the ECCS throttle valves is required to assure proper flow balance between the injection flow paths and to prevent physical damage to the valve or operator during any full stroke operation. Proper initial setting, maintenance, and periodic reverification of proper setting of torque, torque bypass, position limits, and overload switches on safety-related motor-operated valves (MOVs) at ANO-2 are controlled by commitments made by the licensee in response to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," issued June 28, 1989, and its supplements.

The licensee has taken the position in the past that typical evolutions that would require position stop verification in accordance with TS 4.5.2.g.1 include valve or actuator maintenance or modification, calibration, and stroking the valve to its calibrated full open position. They also note that GL 89-10 requires that licensees develop programs regarding verification of switch settings to identify potential MOV degradations or misadjustments after maintenance or adjustment of each MOV, and periodically thereafter, but the GL does not specifically require verification of switch settings following each valve stroking operation.

The licensee's maintenance history review has shown that there was no evidence that stroking an ECCS throttle valve to the open position stop affects future operation of the position stop. Based on the maintenance history review and a

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review of GL 89-10, the licensee now believes that verification of position switch settings should be performed following maintenance or adjustment of the ECCS throttle valves and periodically thereafter, but that this verification is not required following normal valve stroke operations.

GL 89-10 states that MOV switch setting verification procedures should be implemented after maintenance or adjustment of each MOV. With respect to periodic verification of switch settings, GL 89-10 states that the surveillance interval should be based on the licensee's evaluation of the safety importance of each MOV as well as its maintenance and performance history. GL 89-10 also states that this surveillance interval should not exceed 5 years or three refueling outages, whichever is longer, unless a longer interval can be justified for a particular MOV. GL 89-10 further states that MOV switch settings need not be verified each time the ASME Code stroke-time test is performed. ANO-2 TS 4.5.2.g.2 already specifies verification of the correct position of each electrical and/or mechanical position stop for the ECCS throttle valves at a more frequent interval than 5 years or three refueling outages - at least once per 18 months.

The NRC staff agrees that, by design, valve stroking operations should not affect the position of the open position stop, and this is supported by the licensee's maintenance history review. In addition, the licensee stated that post-maintenance verification of the position stop settings will be maintained in the plant operating procedures following approval of this change, and controlled by their commitments to GL 89-10 and the criteria set forth in 10 CFR 50.59. Finally, the staff notes that the relocation of TS 4.5.2.g.1 to procedures and the retention of TS 4.5.2.g.2 (which is renumbered as TS 4.5.2.g with this change), is consistent with NUREG-1432, "Improved Standard Technical Specifications for Combustion Engineering Plants" issued in September of 1992. Based on the above, the staff concludes that the proposed change is 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 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 (58 FR 64606).

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.

Principal Contributor: T. Alexion

Date: January 14, 1994