

November 1, 1990

Docket No. 50-313

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. 138 TO FACILITY OPERATING LICENSE
NO. DPR-51 - ARKANSAS NUCLEAR ONE, UNIT NO. 1 (TAC NO. 76882)

The Commission has issued the enclosed Amendment No. 138 to Facility Operating License No. DPR-51 for the Arkansas Nuclear One, Unit No. 1 (ANO-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 22, 1990.

The amendment modifies TS 3.1.2.10 to allow the use of high pressure injection for emergency RCS makeup during decay heat removal operations, as recommended by Generic Letter 88-17.

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 and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 138 to DPR-51
- 2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION

Docket File	NRC PDR	Local PDR	PD4-1 Reading
B. Boger	L. Berry	T. Alexion (2)	OGC
D. Hagan	G. Hill (4)	Wanda Jones	GPA/PA
J. Calvo	PD4-1 Plant File	ACRS (10)	
ARM/LFMB	T. Westerman, RIV	T. Quay	

OFC	: PD4-1/LA	: PD4-1/PM	: OGC	: PD4-1/D (A)	:	:
NAME	: LBerry	: T. Alexion	: T. Quay	:	:	:
DATE	: 10/15/90	: 10/16/90	: 10/30/90	: 11/1/90	:	:

OFFICIAL RECORD COPY Document Name: ANO1 AMENDMENT TAC 76882

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Mr. Neil S. Carns
Entergy Operations, Inc.

Arkansas Nuclear One, Unit 1

cc:

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

November 1, 1990

Docket No. 50-313

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

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE
NO. DPR-51 - ARKANSAS NUCLEAR ONE, UNIT NO. 1 (TAC NO. 76882)

The Commission has issued the enclosed Amendment No. 138 to Facility Operating License No. DPR-51 for the Arkansas Nuclear One, Unit No. 1 (ANO-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 22, 1990.

The amendment modifies TS 3.1.2.10 to allow the use of high pressure injection for emergency RCS makeup during decay heat removal operations, as recommended by Generic Letter 88-17.

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,

A handwritten signature in cursive script that reads "Thomas W. Alexion".

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

Enclosures:

1. Amendment No. 138 to DPR-51
2. Safety Evaluation

cc w/enclosures:
See next page



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

ENERGY OPERATIONS INC.

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 138
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated May 22, 1990, 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. DPR-51 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 138, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Theodore R. Quay

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 1, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 138

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

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.

REMOVE PAGE

18a

INSERT PAGE

18a

- 3.1.2.7 Prior to reaching fifteen effective full power years of operation, Figures 3.1.2-1, 3.1.2-2 and 3.1.2-3 shall be updated for the next service period in accordance with 10CFR50, Appendix G, Section V.B. The service period shall be of sufficient duration to permit the scheduled evaluation of a portion of the surveillance data scheduled in accordance with Specification 4.2.7. The highest predicted adjusted reference temperature of all the beltline region materials shall be used to determine the adjusted reference temperature at the end of the service period. The basis for this prediction shall be submitted for NRC staff review in accordance with Specification 3.1.2.8. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- 3.1.2.8 The updated proposed technical specifications referred to in 3.1.2.7 shall be submitted for NRC review at least 90 days prior to the end of the service period. Appropriate additional NRC review time shall be allowed for proposed technical specifications submitted in accordance with 10 CFR Part 50, Appendix G, Section V.C.
- 3.1.2.9 With the exception of ASME Section XI testing and when the core flood tank is depressurized, during a plant cooldown the core flood tank discharge valves shall be closed and the circuit breakers for the motor operators opened before depressurizing the reactor coolant system below 600 psig.
- 3.1.2.10 With the exception of ASME Section XI testing, fill and vent of the reactor coolant system, emergency RCS makeup and to allow maintenance of the valves, when the reactor coolant temperature is less than 280°F, the four High Pressure Injection motor operated valves shall be closed with their opening control circuits for the motor operators disabled.
- 3.1.2.11 The plant shall not be operated in a water solid condition when the RCS pressure boundary is intact except as allowed by Emergency Operating Procedures and during System Hydrotest.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 138 TO

FACILITY OPERATING LICENSE NO. DPR-51

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 1

DOCKET NO. 50-313

INTRODUCTION

By letter dated May 22, 1990, Arkansas Power and Light Company requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. DPR-51 for Arkansas Nuclear One, Unit No. 1 (ANO-1). The proposed amendment would modify TS 3.1.2.10 to allow the use of high pressure injection for emergency RCS makeup during decay heat removal operations. The change is associated with Generic Letter 88-17, Loss of Decay Heat Removal, dated October 17, 1988, which recommends identification of sources of water injection into the reactor vessel that are in addition to pumps that are a part of the normal decay heat removal (DHR) system. For ANO-1, the additional source identified for emergency use is a high pressure pump. The staff evaluation of the request is discussed below.

EVALUATION

TS 3.1.2.10 of the ANO-1 Technical Specifications currently requires that when the reactor coolant temperature is less than 280°F, the four High Pressure Injection (HPI) motor operated valves shall be closed with their opening control circuits for the motor operators disabled. This condition was identified and approved as part of the staff evaluation in Amendment No. 95 to Facility Operating License No. DPR-51 (Arkansas Nuclear One - Unit 1). The requirement was imposed in 1985 as a consequence of prior staff review of the Low Temperature Overpressure Protection (LTOP) for ANO-1 and was to ensure that high pressure injection is not the source of pressurizing the reactor coolant system when in cold shutdown. The current specification allows exceptions for ASME Section XI testing, fill and vent of the reactor coolant system (RCS), and maintenance of the valves.

As a consequence of recent considerations related to loss of decay heat removal (Generic Letter 87-12) and plant operation with a reduced reactor coolant system (RCS) inventory, the staff has issued Generic Letter 88-17 which presents recommendations to improve plant designs in this area. The change proposed by AP&L in this amendment request would insert the words "emergency RCS makeup" to the list of exceptions to disabling of the valve motor operators. Under the proposal, the HPI system would be available as a source of inventory control while in decay heat removal operations. Procedural

controls currently in place ensure that overpressure does not occur by instructing the operator to throttle HPI to prevent exceeding LTOP limits and by using the valve only after other sources of inventory addition have been utilized. We have verified this through a review of Plant Operating Procedure 1203.28, Attachment F, "HPI Pump from BWST through Normal Makeup, RCP Seal Injection, or HPI Block Valves" which includes the following steps:

- Step 2: If racked down, rack in breaker for selected HPI pump.
- Step 5: Unlock and open HPI pump discharge X-over valves as necessary to align HPI pumps to normal makeup path.
- Step 8: Start HPI pump.
- Step 13 C: Open HPI block valves as necessary to increase RCS inventory and avoid NDTT limits per OP 1102.02, Attachment A.

The Technical Specification change request is acceptable as envisioned as a programmed enhancement in Generic Letter 88-17; specifically, it is responsive to Recommendation 3.5.1, which states, "Technical specifications (TSs) that restrict or limit the safety benefit of the actions identified in this letter should be identified and appropriate changes should be submitted."

The staff finds the licensee's proposal acceptable to the extent that it makes appropriate changes to remove prior restrictions or limitations in response to concerns raised by Generic Letter 88-17, Section 3.5.1.

Based on our review as discussed above, the staff concludes that the proposed TS change is responsive to the recommendation in Generic Letter 88-17 to provide a high pressure injection pump as an emergency source of adding inventory to the RCS, procedures for the use of the systems are provided in accordance with the recommendation, and the LTOP provisions approved in License Amendment No. 95 are not compromised. We therefore find the proposal acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the 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 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 exposures. 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. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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.

CONCLUSION

The staff 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, 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.

Dated: November 1, 1990

Principal Contributor: M. McCoy, SRXB