May 29, 2001

Mr. Craig G. Anderson
Vice President, Operations ANO
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: REACTOR COOLANT SYSTEM LEAK DETECTION SYSTEMS (TAC NO. MB1182)

Dear Mr. Anderson:

The Commission has issued the enclosed Amendment No. 231 to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit No. 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 6, 2001, as supplemented by letter dated May 1, 2001.

The amendment revises the TSs associated with the reactor coolant system leakage detection systems, to make them consistent with the requirements in NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

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

Sincerely,

***/RA/***

Thomas W. Alexion, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosures:
1. Amendment No. 231 to NPF-6
2. Safety Evaluation

cc w/encls: See next page

May 29, 2001

Mr. Craig G. Anderson
Vice President, Operations ANO
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: REACTOR COOLANT SYSTEM LEAK DETECTION SYSTEMS (TAC NO. MB1182)

Dear Mr. Anderson:

The Commission has issued the enclosed Amendment No. 231 to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit No. 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 6, 2001, as supplemented by letter dated May 1, 2001.

The amendment revises the TSs associated with the reactor coolant system leakage detection systems, to make them consistent with the requirements in NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

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

Sincerely,

***/RA/***

Thomas W. Alexion, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosures:
1. Amendment No. 231 to NPF-6
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION
PUBLIC
PDIV-1 RF
RidsNrrDripRtsb (RDennig)
RidsNrrDlpmPdiv (SRichards)
RidsOgcRp
RidsAcrsAcnwMailCenter
G.Hill(2)
RidsNrrPMTAlexion
RidsNrrLADJohnson
RidsNrrDlpmPdivLpdiv1 (RGramm)
RidsRgn4MailCenter (KBrockman)
L.Hurley,RIV
D. Bujol,RIV

Accession No.: ML011490391 *No Legal Objection

| OFFICE | PDIV-1/PM | PDIV-1/LA | SPLB/SC | TSB/(A)BC | OGC/NLO* | PDIV-1/SC |
|---|---|---|---|---|---|---|
| NAME | TAlexion | DJohnson | GHubbard | RDennig | NSt.Amour | WReckley for RGramm |
| DATE | 05/02/01 | 05/04/01 | 05/11/01 | 05/15/01 | 05/24/01 | 05/25/01 |

OFFICIAL RECORD COPY

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 231
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 February 6, 2001, as supplemented by letter dated May 1, 2001, 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. 231 , 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 and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

***/RA by William Reckley for/***

Robert A. Gramm, Chief, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: May 29, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 231

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

| Remove | Insert |
|---|---|
| 3/4 3-25 | 3/4 3-25 |
| 3/4 3-26 | 3/4 3-26 |
| 3/4 3-27 | 3/4 3-27 |
| 3/4 4-13 | 3/4 4-13 |
| --- | 3/4 4-13a |
| 3/4 4-14a | 3/4 4-14a |
| B 3/4 4-3 | B 3/4 4-3 |
| B 3/4 4-4 | B 3/4 4-4 |

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 231 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 February 6, 2001, Entergy Operations, Inc. (the licensee), submitted a request for changes to the Arkansas Nuclear One, Unit No. 2, Technical Specifications (TSs). The requested changes would revise the TSs associated with the reactor coolant system (RCS) leakage detection systems, to make them consistent with the requirements in NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

The May 1, 2001, supplemental letter provided clarifying information that did not change the scope of the original *Federal Register* notice or the initial no significant hazards consideration determination.

## 2.0 BACKGROUND

The licensee requested the proposed changes to enhance the current TS requirements associated with the RCS leak detection systems and make them consistent with NUREG-1432. The proposed changes also consolidate all of the TSs associated with the RCS leak detection systems into the RCS leak detection TSs.

## 3.0 EVALUATION

### 3.1 Tables 3.3-6 and 4.3-3, Radiation Monitoring Instrumentation, Instruments 2.a.i.b and 2.a.ii.a, Process Monitors, Containment, Gaseous Activity and Particulate Activity for RCS Leakage Detection

The gaseous activity and particulate activity monitors in these tables are being deleted because they are bounded by the information proposed for TS 3/4.4.6.1, "Reactor Coolant System Leakage, Leakage Detection Systems." Specifically, the minimum channels operable, applicable modes, required action, and surveillance requirements (SRs) (i.e., channel check, channel calibration, and channel functional test) in Tables 3.3-6 and 4.3-3, Items 2.a.i.b and 2.a.ii.a, are redundant to that in the proposed TS 3/4.4.6.1. The measurement range of these

items that was in Table 3.3-6 is not in the proposed TS 3/4.4.6.1, however, this level of detail is not needed for the TSs. Therefore, the staff finds that this change is acceptable.

3.2 TS 3/4.4.6.1, RCS Leakage, Leakage Detection Systems

The limiting condition for operation (LCO) is revised to require that one containment sump level monitor, one containment atmosphere particulate radioactivity monitor, and one containment atmosphere gaseous radioactivity monitor are operable. The current TSs require that a containment atmosphere particulate radioactivity monitoring system, a containment sump level monitoring system, and a containment atmosphere gaseous radioactivity monitoring system are operable. This change is acceptable because the LCO will continue to require that three separate detection methods are employed to detect RCS leakage, consistent with Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems."

For the case where one or more containment atmosphere radioactivity monitor(s) is inoperable, the action statement is revised by providing an option during the 30-day allowed outage time, to either analyze grab samples of the containment atmosphere every 24 hours (the current requirement) or to increase the frequency of performing an RCS water inventory balance from once per 72 hours to once per 24 hours (a new option). (There is another TS, which is not affected by this license amendment, that requires a water inventory balance once per 72 hours.) The staff also notes that the current action statement does not provide an allowed outage time for the case when both containment atmosphere radioactivity monitors are inoperable and that the proposed action statement provides a 30-day allowed outage time for each inoperable radioactivity monitor. This change is acceptable because the containment sump level monitor is still operable, the water inventory balance is an accurate means of RCS leak detection when one or more containment radioactivity monitor(s) is inoperable, and the 24-hour interval for performing the water inventory balance provides periodic information that is adequate to detect leakage.

For the case where the containment sump level monitor is inoperable, the action statement is revised to add a restoration period of 30 days provided the frequency of the RCS inventory balance is increased from 72 hours to 24 hours. Currently, no contingency action exists that would provide a diverse detection capability of RCS leakage during the period of containment sump level monitor inoperability. This change is acceptable because the containment atmosphere radioactivity monitors are still operable, the water inventory balance is an accurate means of leak detection when the sump level monitor is inoperable, and the 24-hour interval for performing the water inventory balance provides periodic information that is adequate to detect leakage.

For the case where the containment sump level monitor is inoperable and one containment atmosphere radioactivity monitor is inoperable, the action statement is revised to add a restoration period of 30 days for each inoperable monitor provided the frequency of the RCS inventory balance is increased from 72 hours to 24 hours. This change is acceptable because one containment atmosphere radioactivity monitor is still operable, the water inventory balance is an accurate means of leak detection when the sump level monitor and one containment atmosphere radioactivity monitor are inoperable, and the 24-hour interval for performing the water inventory balance provides periodic information that is adequate to detect leakage.

Regarding the water inventory balance discussed in the preceding paragraphs, a note is added to allow that the water inventory balance is not required until 12 hours after establishment of steady state conditions. This is acceptable because the 12-hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established.

The LCO is revised to provide for a TS 3.0.4 exclusion. TS 3.0.4, in part, prohibits entry into an operational mode when the conditions of the LCO are not met. This exclusion is acceptable because there will be at least one RCS leakage monitor available to monitor RCS leakage. In addition, the action statements provide alternative means to detect RCS leakage. If all monitors are inoperable, the actions require entry into TS 3.0.3.

The SRs for the containment atmosphere radioactivity monitors are revised to explicitly provide the frequency for the channel check (once per 12 hours), channel functional test (once per 31 days), and channel calibration (once per 18 months), instead of referring to Table 4.3-3 for the frequencies. This change is acceptable since the frequencies remain the same.

The SRs for the containment sump level monitor are revised to explicitly provide the frequency for the channel check and channel calibration. The 12-hour channel check frequency is being relocated from TS 4.4.6.2.1, which currently has the requirement for “Monitoring the containment sump inventory and discharge at least once per 12 hours.” This change is acceptable since the terminology difference between the proposed words in TS 4.4.6.1, “Performing a CHANNEL CHECK of the containment sump level monitor at least once per 12 hours.” and the quote from TS 4.4.6.2.1 is not significant. Regarding the channel calibration frequency, this is already specified in TS 4.4.6.1. However, the words have been slightly rearranged from a “Containment sump level monitoring system-performance of CHANNEL CALIBRATION at least once per 18 months.” to “Performing a CHANNEL CALIBRATION of the containment sump level monitor at least once per 18 months.” to make them consistent with the other SRs in this section. The staff also finds this change acceptable since it is insignificant.

### 3.3 TS 4.4.6.2.1, RCS Leakage, Surveillance Requirements

The requirement for “Monitoring the containment atmospheric particulate radioactivity at least once per 12 hours.” has been deleted. This change is acceptable since it is now redundant to the new SR in TS 4.4.6.1 as discussed above (which is being revised to explicitly provide the surveillance frequencies, instead of referring to TS Table 4.3-3), which requires “Performing a CHANNEL CHECK of the required containment atmosphere radioactivity monitors at least once per 12 hours.”

The requirement for “Monitoring the containment sump inventory and discharge at least once per 12 hours.” has also been deleted. This change is also acceptable since it is now redundant to the new SR in TS 4.4.6.1 as discussed above, which requires “Performing a CHANNEL CHECK of the containment sump level monitor at least once per 12 hours.”

### 3.4 Bases 3/4.4.6.1, RCS Leakage, Leakage Detection Systems

The staff has reviewed the proposed Bases changes and finds them to be consistent with the TSs changes discussed above.

## 3.5 Evaluation Summary

Based on the above evaluation, the staff finds that the licensee's proposed changes to TS Tables 3.3-6 and 4.3-3, TS 3/4.4.6.1, TS 4.4.6.2.1, and Bases 3/4.4.6.1, associated with the RCS leakage detection systems, are acceptable. The staff also notes that the proposed changes are consistent with the requirements in NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

## 4.0 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.

## 5.0 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 SRs. 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 issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (66 FR 13803, dated March 7, 2001). 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.

## 6.0 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: May 29, 2001

cc:

Executive Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Director, Division of Radiation
Control and Emergency Management
Arkansas Department of Health
4815 West Markham Street, Slot 30
Little Rock, AR 72205-3867

Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Mike Schoppman
Framatome ANP, Richland, Inc.
Suite 705
1911 North Fort Myer Drive
Rossylin, VA 22209

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 310
London, AR 72847

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

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

Vice President, Operations Support
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Wise, Carter, Child & Caraway
P. O. Box 651
Jackson, MS 39205