

August 27, 2001

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

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - ENVIRONMENTAL ASSESSMENT AND  
FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED CONVERSION  
TO THE IMPROVED STANDARD TECHNICAL SPECIFICATIONS (TAC  
NO. MA8082)

Dear Mr. Anderson:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated January 28, 2000, as supplemented by letters dated August 9 and September 28, 2000, and February 6, March 19, May 1, and August 23, 2001, regarding conversion to the Improved Technical Specifications (ITS) for Arkansas Nuclear One, Unit 1. The ITS are based on the current technical specifications; NUREG-1430, "Standard Technical Specifications, Babcock and Wilcox Plants;" and Nuclear Regulatory Commission regulations, including Section 50.36, "Technical specifications," to Title 10 of the *Code of Federal Regulations*.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

**/RA/**

William Reckley, Project Manager, Section 1  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure: Environmental Assessment

cc w/encl: See next page

August 27, 2001

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

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED CONVERSION TO THE IMPROVED STANDARD TECHNICAL SPECIFICATIONS (TAC NO. MA8082)

Dear Mr. Anderson:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated January 28, 2000, as supplemented by letters dated August 9 and September 28, 2000, and February 6, March 19, May 1, and August 23, 2001, regarding conversion to the Improved Technical Specifications (ITS) for Arkansas Nuclear One, Unit 1. The ITS are based on the current technical specifications; NUREG-1430, "Standard Technical Specifications, Babcock and Wilcox Plants;" and Nuclear Regulatory Commission regulations, including Section 50.36, "Technical specifications," to Title 10 of the *Code of Federal Regulations*.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

*/RA/*

William Reckley, Project Manager, Section 1  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure: Environmental Assessment

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	RidsNrrDripRgeb (CCarpenter)
PDIV-1 Reading	RidsOgcRp
RidsNrrDlpmLpdiv (SRichards)	RidsAcrsAcnwMail Center
RidsNrrDlpmLpdiv1 (RGramm)	RidsRegion4Mail Center (KBrockman)
RidsNrrPMWReckley	BZalcmn (BXZ)
RidsNrrLADJohnson	

Accession No.: ML012410104

OFFICE	PDIV-1/PM	PDIV-1/LA	RGEB	OGC	PDIV-1/SC
NAME	WReckley	DJohnson	BZalcmn	RWeisman	DJaffe for RGramm
DATE	7/30/01	7/31/01	8/2/01	8/22/01	08/27/01

OFFICIAL RECORD COPY

UNITED STATES NUCLEAR REGULATORY COMMISSION

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT 1

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering the issuance of an amendment to Renewed Facility Operating License No. DPR-51, issued to Entergy Operations, Inc. (the licensee), for operation of Arkansas Nuclear One, Unit 1, (ANO-1) located in Pope County, Arkansas.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed amendment would revise the existing, or current, Technical Specifications (CTS) for ANO-1 in their entirety, based on the guidance provided in NUREG-1430, "Standard Technical Specifications, Babcock and Wilcox Plants," and in the NRC's regulations, including 10 CFR 50.36, "Technical specifications."

The proposed amendment is in accordance with the licensee's application dated January 28, 2000, as supplemented by letters dated August 9 and September 28, 2000, and February 6, March 19, May 1, and August 23, 2001.

The Need for the Proposed Action:

It has been recognized that nuclear safety in all nuclear power plants would benefit from an improvement and standardization of plant Technical Specifications (TS). The "Interim Policy Statement on Technical Specification Improvements for Nuclear Power Plants,"

(52 FR 3788) contained proposed criteria for defining the scope of TS. Later, the NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," published on July 22, 1993 (58 FR 39132), incorporated lessons learned since publication of the interim policy statement and formed the basis for revisions to 10 CFR 50.36. In 1995, the NRC published a Final Rule amending 10 CFR 50.36 (60 FR 36953) in which the NRC codified criteria for determining the content of TS. To facilitate the development of standard TS for nuclear power reactors, each power reactor vendor owners' group (OG) and the NRC staff developed standard TS. For ANO-1, the Improved Standard Technical Specifications (ISTS) are in NUREG-1430. This document forms part of the basis for the proposed ANO-1 Improved Technical Specifications (ITS) conversion.

#### Description of the Proposed Change

The proposed changes to the CTS are based on NUREG-1430 and on guidance provided by the NRC in its Final Policy Statement and subsequent revision to 10 CFR 50.36. The objective of the changes is to completely rewrite, reformat, and streamline the CTS (i.e., to convert the CTS to the ITS). Emphasis is placed on human factors principles to improve clarity and understanding of the TS. The Bases section of the ITS has been significantly expanded to clarify and better explain the purpose and foundation of each specification. In addition to NUREG-1430, portions of the CTS were also used as the basis for the development of the ANO-1 ITS.

The licensee has categorized the proposed changes to the CTS into four general groupings. These groupings are characterized as administrative changes, relocation changes, more restrictive changes, and less restrictive changes.

Administrative changes are those that involve restructuring, renumbering, rewording, interpretation, and complex rearranging of requirements and other changes not affecting

technical content or substantially revising an operating requirement. The reformatting, renumbering, and rewording process reflects the attributes of NUREG-1430 and does not involve technical changes to the existing TS. The proposed changes include: (a) providing the appropriate numbers, etc., for NUREG-1430 bracketed information (information that must be supplied on a plant-specific basis, and which may change from plant to plant); (b) identifying plant-specific wording for system names, etc.; and (c) changing NUREG-1430 section wording to conform to existing licensee practices. Such changes are administrative in nature and do not impact initiators of analyzed events or assumed mitigation of accident or transient events.

Relocation changes are those involving relocation of requirements and surveillances for structures, systems, components, or variables that do not meet the criteria for inclusion in TS. Current TS requirements that do not satisfy or fall within any of the four criteria specified in the NRC's policy statement may be relocated to appropriate licensee-controlled documents. The requirements and surveillances for these affected structures, systems, components, or variables would be relocated from the TS to administratively controlled documents such as the quality assurance program, the Final Safety Analysis Report, the ITS BASES, the Technical Requirements Manual, the Core Operating Limits Report (COLR), the Offsite Dose Calculation Manual (ODCM), the Inservice Testing Program, or other licensee-controlled documents. Changes made to these documents would be made pursuant to 10 CFR 50.59, "Changes, tests, and experiments," or other appropriate control mechanisms, and may, within the prescribed limits, be made without prior NRC review and approval. In addition, the affected structures, systems, components, or variables are often addressed in existing surveillance procedures that are also subject to 10 CFR 50.59. These proposed changes to the TS will not, in and of themselves, impose any requirements.

More restrictive changes are those involving more stringent requirements compared to the CTS for operation of the facility. These more stringent requirements do not result in operation that will alter assumptions relative to the mitigation of an accident or transient event. The more restrictive requirements will not alter the operation of process variables, structures, systems, or components described in the safety analyses. For each requirement in the CTS that is more restrictive than the corresponding requirement in NUREG-1430 that the licensee proposes to retain in the ITS, they have provided an explanation of why they have concluded that retaining the more restrictive requirement is desirable to ensure safe operation of the facility because of specific design features of the plant.

Less restrictive changes are those where CTS requirements are relaxed or eliminated, or new plant operational flexibility is provided. The more significant "less restrictive" requirements are justified on a case-by-case basis. When requirements have been shown to provide little or no safety benefit, their removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of (a) generic NRC actions, (b) new NRC staff positions that have evolved from technological advancements and operating experience, or (c) resolution of the OGS' comments on the ISTS. The licensee's design will be reviewed to determine if the specific design basis and licensing basis are consistent with the technical basis for the model requirements in NUREG-1430, thus providing a basis for these revised TS, or, if relaxation of the requirements in the CTS is warranted, based on the justification provided by the licensee.

These administrative, relocation, more restrictive, and less restrictive changes to the requirements of the CTS do not result in operations that will alter assumptions relative to mitigation of an analyzed accident or transient event.

In addition to the proposed changes solely involving the conversion, there are also changes proposed that are different from the requirements in both the CTS and the ISTS (NUREG-1430). These proposed beyond-scope issues to the ITS conversion are as follows:

1. ITS Limiting Condition for Operation (LCO) 3.2.3, "Axial Power Imbalance Operating Limits" - Completion time for power reduction if axial power imbalance not restored to within limits changed to 4 hours from value in NUREG-1430 (2 hours).

2. ITS LCO 3.2.4, "Quadrant Power Tilt (QPT)" - Revised the completion time for several actions for circumstances where QPT exceeds limits specified in the COLR.

3. ITS LCO 3.4.8, "RCS [Reactor Coolant System] Loops, MODE 5, Loops Not Filled" - Added a required action to suspend operations involving reduction in RCS water volume if required decay heat removal (DHR) loops were not operable or required DHR loop not in operation.

4. ITS LCO 3.4.11, "Low Temperature Overpressure Protection (LTOP) System" - Adopted some of the NUREG-1430 required actions and surveillance requirements which are more restrictive than CTS but did not adopt all NUREG-1430 requirements.

5. ITS LCO 3.5.2, "ECCS [Emergency Core Cooling System] - Operating" - Added a shutdown requirement for a condition where less than 100 percent of the ECCS flow equivalent to a single operable train is available.

6. ITS LCO 3.7.1, "Main Steam Safety Valves (MSSVs)" - Reformatted to replace figure in NUREG-1430 with a table providing limitations for operation with more than one inoperable MSSV per steam generator.

7. ITS LCO 3.4.13, "RCS Operational LEAKAGE" - Modified surveillance requirement to specify that the surveillance is not required until after the plant is at or near operating pressure.

8. ITS Administrative Controls 5.5.1, "Offsite Dose Calculation Manual (ODCM)" - Reference reports by name only instead of NUREG-1430 convention of including report name and associated TS.

9. ITS Administrative Controls 5.2.2, "Unit Staff" - Reference to specific operator staffing requirements is replaced with a reference to the applicable regulation.

10. ITS LCO 3.6.3, "Reactor Building Isolation Valves" - Surveillance requirement in NUREG -1430 not adopted for reactor building purge valves since ANO-1 does not have resilient seated valves.

11. ITS LCO 3.6.4, "Reactor Building Pressure" - Lower limit on reactor building pressure increased to a more restrictive value to be consistent with ECCS analyses and Bases statements in NUREG-1430.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed conversion of the CTS to the ITS for ANO-1, including the beyond-scope issues discussed above. Changes which are administrative in nature have no effect on the technical content of the TS. The increased clarity and understanding these changes bring to the TS are expected to improve the operators control of ANO-1 in normal and accident conditions.

Relocation of requirements from the CTS to other licensee-controlled documents does not change the substance of these provisions requirements themselves. Future changes to these provisions may then be made by the licensee under 10 CFR 50.59 and other NRC-approved control mechanisms which will ensure continued adequate control of their substance. All such relocations would be consistent with the guidelines of NUREG-1430 and 10 CFR 50.36.

Changes involving more restrictive requirements enhance plant safety.

Changes involving less restrictive requirements have been reviewed individually. When requirements have been shown to provide little or no safety benefit, or to place an unnecessary burden on the licensee, their removal from the TS is justified. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of a generic action, or of agreements reached during discussions with the OG, and found to be acceptable for the plant. Generic relaxations contained in NUREG-1430 have been reviewed by the NRC staff and found to be acceptable.

The proposed amendment will not significantly increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. The changes will not create any new or unreviewed environmental impacts that were not considered in the Final Environmental Statement (FES) related to the operation of ANO-1, dated February 9, 1973, and the Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding the Arkansas Nuclear One, Unit 1 (NUREG 1437- Supplement 3) published in April 2001. Therefore, there are no significant radiological environmental impacts associated with the proposed amendment.

With regard to potential non-radiological impacts, the proposed amendment does not have a potential to affect any historic sites. It involves features located entirely within the restricted area for the plant defined in 10 CFR Part 20. It does not affect non-radiological plant effluents and has no other environmental impact. It does not increase any discharge limit for the plant. Therefore, there are no significant non-radiological environmental impacts associated with the proposed amendment.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed amendment.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action" alternative). Denial of the licensee's application would result in no change in current environmental impacts of ANO-1 operations, but it would prevent the safety benefits to the plant from the conversion to the ITS. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any different resources that those previously considered in the FES or Supplement 3 to NUREG-1437 for ANO-1.

Agencies and Persons Consulted:

In accordance with its stated policy, on July 31, 2001, the staff consulted with the Arkansas State official, B. Bevill of the Arkansas Department of Health, regarding the environmental impact of the proposed amendment. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the environmental assessment, the NRC concludes that the proposed amendment will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's application dated January 28, 2000, as supplemented by letters dated August 9 and September 28, 2000, and February 6, March 19, May 1, and August 23, 2001. Documents may be examined, and/or copied for a fee, at the Commission's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management Systems

(ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/NRC/ADAMS/index.html>. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737, or by email to [pdr@nrc.gov](mailto:pdr@nrc.gov).

Dated at Rockville, Maryland, this 27th day of August, 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

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

Arkansas Nuclear One

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  
Rosslyn, 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