

May 19, 1999

Mr. C. Randy Hutchinson
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: DESIGN FEATURES AND ADMINISTRATIVE CONTROLS
(TAC NO. MA2403)

Dear Mr. Hutchinson:

The Commission has issued the enclosed Amendment No. 205 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated August 23, 1996 (2CAN089609), as supplemented by your letter dated April 9, 1999 (2CAN049904).

The amendment revises Section 5.0, "Design Features," and Section 6.0, "Administrative Controls," of the TSs, adopting for the most part, the format and content of the NUREG-1432, Revision 1, "Standard Technical Specifications for Combustion Engineering Plants" (STS) for the changes requested. The amendment also relocates certain portions of the design features section to other licensee-controlled documents in accordance with the STS.

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,
ORIG. SIGNED BY
M. Christopher Nolan, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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Docket No. 50-368

Enclosures: 1. Amendment No. 205 to NPF-6
2. Safety Evaluation

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

May 19, 1999

Mr. C. Randy Hutchinson
Vice President, Operations ANO
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

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RE: DESIGN FEATURES AND ADMINISTRATIVE CONTROLS
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Sincerely,

A handwritten signature in cursive script, appearing to read "M. Christopher Nolan".

M. Christopher Nolan, 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. 205 to NPF-6
2. Safety Evaluation

cc w/encls: See next page

Mr. C. Randy Hutchinson
Entergy Operations, Inc.

Arkansas Nuclear One, Unit 2

cc:

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

ENERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 205
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 August 23, 1996, as supplemented by letter dated April 9, 1999, 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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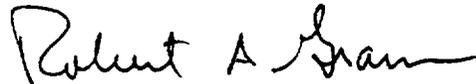
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 205, 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 30 days of the date of issuance. In addition, the licensee shall include the relocated information in the next Updated Final Safety Analysis Report submitted to the NRC, pursuant to 10 CFR 50.71(e), as was described in the licensee's application dated August 23, 1996, as supplemented by letter dated April 9, 1999, and the staff's safety evaluation dated May 19, 1999.

FOR THE NUCLEAR REGULATORY COMMISSION



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 19, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 205

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

XV
5-1
5-2
5-3
5-4
5-5
5-6
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5-8
5-9
6-14
-
6-22

Insert

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6-14
6-14a
6-22

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DESIGN FEATURES

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5.0 DESIGN FEATURES

5.1 Site Location

The site for Arkansas Nuclear One is located in Pope County, Arkansas on the north bank of the Dardanelle Reservoir (Arkansas River), approximately 6 miles west-northwest of Russellville, AR. The exclusion area boundary shall have a radius of 0.65 statute miles from the center of the reactor.

5.2 Reactor Core

5.2.1 Fuel Assemblies

The reactor shall contain 177 fuel assemblies. Each assembly shall consist of a matrix of zircaloy or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO₂) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in non-limiting core regions. Other cladding material may be used with an approved exemption.

5.2.2 Control Element Assemblies

The reactor core shall contain 81 control element assemblies. The control material shall be boron carbide and silver-indium-cadmium as approved by the NRC.

DESIGN FEATURES

5.3 Fuel Storage

5.3.1 Spent Fuel Storage Rack Criticality

The spent fuel storage racks are designed and shall be maintained with:

- a. Fuel assemblies stored in the spent fuel pool in accordance with Specification 3.9.12;
- b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the SAR; and
- c. A nominal 9.8 inch center to center distance between fuel assemblies placed in the storage racks.

5.3.2 New Fuel Storage Rack Criticality

The new fuel storage racks are designed and shall be maintained with:

- a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent;
- b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the SAR;
- c. $k_{eff} \leq 0.98$ if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.1 of the SAR; and
- d. A nominal 26 inch center to center distance between fuel assemblies placed in the storage racks.

5.3.3 Drainage

The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 399' 10 $\frac{1}{2}$ ".

5.3.4 Capacity

The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 988 fuel assemblies.

ADMINISTRATIVE CONTROL

6.8.3 Changes to procedures of 6.8.1 above may be made and implemented prior to obtaining the review and approval required in 6.8.2 above provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on Unit 2.
- c. The change is documented, reviewed and approved as required by the QAMO, within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Controls Program

This program conforms with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2;
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM;
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS, conforming to 10 CFR 50, Appendix I;
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;
- 6) Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the dose associated with 10 CFR 20, Appendix B, Table II, Column 1;

- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and
- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

b. Component Cyclic or Transient Limit Program

This program provides controls to track the SAR Section 5.2.1.5 cyclic or transient occurrences to ensure that components are maintained within the design limits.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Administrator of the Regional Office unless otherwise noted.

STARTUP REPORT

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

ADMINISTRATIVE CONTROLS

6.10 RECORD RETENTION

In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of unit operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All REPORTABLE EVENTS.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
- e. Records of changes made to the procedures required by Specification 6.8.1.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

- a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfer and assembly burnup histories.
- c. Records of radiation exposure for all individuals entering radiation control areas.
- d. Records of gaseous and liquid radioactive material released to the environs.
- e. Records of transient or operational cycles for those unit components in the Component Cyclic or Transient Limit program required by Specification 6.8.4.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 205 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

1.0 INTRODUCTION

By application dated August 23, 1996 (2CAN089609), as supplemented by letter dated April 9, 1999 (2CAN049904), Entergy Operations, Inc. (the licensee), requested changes to the Arkansas Nuclear One, Unit No. 2 (ANO-2) Technical Specifications. The proposed amendment would revise Section 5.0, "Design Features," and Section 6.0, "Administrative Controls," of the current Technical Specifications (CTS), adopting for the most part, the form and content of NUREG-1432, Revision 1, "Standard Technical Specifications [STS] for Combustion Engineering Plants" for the changes requested. The proposed changes include the relocation of certain portions of the design features section to other licensee-controlled documents. The relocated requirements will be subject to the appropriate level of regulatory authority and control.

The April 9, 1999 (2CAN049904), letter provided clarifying information that did not change the scope of the original application and the initial proposed no significant hazards determination consideration.

2.0 DISCUSSION AND EVALUATION

When converting a plant's CTS (or portion thereof) to the STS format, a licensee may, for each individual specification, at its discretion, either (1) adopt the technical requirements of the corresponding STS, or (2) retain the existing CTS, or (3) propose a different specification. The staff classifies selections (1) and (2) as "in-scope." Selection (3) is referred to as "beyond-scope." In-scope changes are generically accepted based on consistency with the staff's policy on STS conversions. Beyond-scope changes are evaluated on an individual basis.

Each of the licensee's proposed changes is discussed and evaluated below, and identified as either "in-scope" or "beyond-scope." Appropriate justification is provided for each beyond-scope change.

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2.1 Update of Index Page

Proposed Change: Index page XV of the CTS would be changed to reflect the changes to the design features section titles and page numbers consistent with the proposed changes authorized in this amendment.

Evaluation: Administrative (nontechnical) changes that are intended to incorporate human factors principles into the form and structure of the STS so that plant operations personnel can use them more easily are considered in-scope changes and are acceptable on that basis. The index page change is considered in-scope and is, therefore, acceptable.

2.2 Relocation of Unrestricted Areas Figure to Offsite Dose Calculation Manual

Proposed Change: CTS Figure 5.1-3 would be relocated to the Offsite Dose Calculation Manual (ODCM) as Figure 4-2. In addition, CTS 3.11.2.1, CTS 3.11.2.2, CTS 3.11.2.3, CTS 3.11.2.4, and CTS 3.11.2.5 would be modified to refer to Figure 4-2 of the ODCM.

Evaluation: This change is no longer applicable as these revisions were already incorporated into the CTS with the issuance of Amendment No. 193 on September 23, 1998.

2.3 Editorial Change to CTS 3.11

Proposed Change: In action "b" of CTS 3.11.1, CTS 3.11.2, and CTS 3.11.3, the word "specifications" would be changed to its singular form "specification."

Evaluation: This change is no longer applicable as these revisions were already incorporated into the CTSs with the issuance of Amendment No. 193 on September 23, 1998.

2.4 Exclusion Area

Proposed Change: CTS Section 5.1.1 and corresponding Figure 5.1-1, "Exclusion Area Boundary," would be replaced with STS Section 5.1, "Site Location," which provides a text description of the location for the site and the Exclusion Area Boundary. CTS Figure 5.1-1 is shown in the Final Updated Safety Analysis Report (UFSAR) as Figure 2.1-2. The site location description was added along with a description of the boundary defining the exclusion area. The text description of the site location is consistent with the STS format.

Evaluation: The NUREG-1432 guidance recommends inclusion of a text-only description of the site location. The staff has previously found it acceptable to remove figures provided that other figures or text descriptions contain adequate information pertaining to the site location (See Amendment Nos 204 and 182 for Calvert Cliffs 1 and 2, dated March 14, 1995). For ANO-2, the description of the site location provided in STS Section 5.1 contains the equivalent information as provided in CTS Figure 5.1-1. In accordance with 10 CFR 100, the site description includes a minimum distance to the Exclusion Area Boundary to ensure that the area, for which the licensee has the authority to determine all activities including the exclusion or removal of personnel and property from the area, is clearly associated with the "place of use" referred to in Section 182.a of the Act. The inclusion of this map in the UFSAR will ensure that any change to either the boundary or the zone will have to be evaluated using the 10 CFR 50.59 process. Based on the above discussion, the NRC staff finds this proposed

change to CTS Section 5.1.1, including the description of the Exclusion Area Boundary, to be acceptable.

2.5 Removal of Section 5.1.2, Including Associated Figure 5.1-2

Proposed Change: Section 5.1.2, "Low Population Zone," and associated Figure 5.1-2 would be removed from the CTS.

Evaluation: CTS Section 5.1.2 defines the Low Population Zone (LPZ) as being shown in CTS Figure 5.1-2. CTS Figure 5.1-2 depicts the LPZ as a circle centered on the reactor and having a 2.6 statute mile radius. Removal of CTS Section 5.1.2 and associated CTS Figure 5.1-2 is acceptable as this information does not meet any of the inclusion criteria for information contained in Technical Specifications pursuant to 10 CFR 50.36. The staff has previously found it acceptable to remove figures describing the Low Population Zone from the Technical Specifications (See Amendment Nos 204 and 182 for Calvert Cliffs 1 and 2, dated March 14, 1995). The proposed change is consistent with the NUREG-1432 guidance, which does not include an LPZ specification. Therefore, this is considered an in-scope change. A description of the LPZ is currently included in Section 2.1.3.3 of the UFSAR. The existence of this discussion and associated figures in the UFSAR will ensure that any change to either the boundary or the zone will have to be evaluated using the 10 CFR 50.59 process. Based on the above discussion, the NRC staff has concluded that the proposed change is acceptable.

2.6 Containment - Configuration, Design Pressure, And Design Temperature

Proposed Change: Section 5.2, "Containment," would be removed from the CTS. The design features that are currently listed in this section are either duplicated in or will be added to the UFSAR. The following sections of the UFSAR contain similar containment design requirements; Section 12.1.2.5, Table 6.2-7, Table 1.3-1, Figure 1.2-5, Figure 3.8-1, Figure 3.8-2, Figure 3.8-5, Figure 3.8-7, and Figure 3.8-8. The minimum thickness of the concrete floor at the containment sump is the only information contained in CTS Section 5.2 that is not currently described in the UFSAR. The licensee has committed to update the UFSAR with this information once the amendment has been approved.

Evaluation: CTS 5.2 specifies the following containment design features: shape, material of construction, nominal inside diameter, nominal inside height, minimum thickness of concrete walls, minimum thickness of concrete roof, minimum thickness of concrete floor pad, minimum thickness of concrete floor at the sump, nominal thickness of steel liner, net free volume, design pressure, and design temperature. The licensee proposes the elimination of CTS Section 5.2. However, certain modifications or alterations to the containment would have a significant impact on plant safety and therefore they are required to be controlled by Technical Specifications. It is noted that accounting for such changes is already adequately controlled by the containment limiting conditions for operation in CTS Section 3/4.6 for ANO-2 and need not be specified in the design features section. Elimination of this information from the design features section has been previously approved by the staff on the basis that this information does not meet any of the inclusion criteria specified in 10 CFR 50.36 (See Amendment Nos 204 and 182 for Calvert Cliffs 1 and 2, dated March 14, 1995). Further, the information contained in CTS Section 5.2, which is to be eliminated by this proposed change, is presently in the UFSAR with the above noted exception of the minimum thickness of the concrete floor at the containment sump. A license condition has been established to ensure that the value for the minimum thickness of

the concrete floor at the containment sump is added to the UFSAR for ANO-2. Modifications or alterations to these design features as described in the UFSAR are controlled under the 10 CFR 50.59 change process. The NUREG-1432 guidance does not recommend the inclusion of containment configuration specifications in the Design Features Section of the STS. Therefore, this change is considered in-scope. Based on the above discussion, the staff finds the proposed change to CTS Section 5.2 acceptable.

2.7 Reactor Core

Proposed Change: CTS Section 5.3.1, "Reactor Core - Fuel Assemblies," would be replaced with a proposed new writeup as STS Section 5.2.1. The new writeup includes the following changes from CTS Section 5.3.1:

- a. The maximum enrichment of 2.99 weight percent U-235 for the initial core loading would be deleted. Enrichment limitations for subsequent and current fuel loadings is controlled by CTS 3.9.12.
- b. The limit of 2114 grams of uranium for each fuel rod have been deleted. The licensee has committed to add this information to the UFSAR for ANO-2.
- c. The maximum limit of 236 fuel rods per assembly and the nominal active fuel length of 150 inches have been deleted. These requirements are currently described in the UFSAR for ANO-2.
- d. The option of using ZIRLO clad fuel rods in addition to the Zircalloy clad fuel rods would be added, consistent with the STS. ZIRLO is a zirconium-based alloy that has been previously accepted by the NRC in 10 CFR 50.44 and would facilitate its future potential use by ANO-2. The current fuel cladding is described as Zircalloy-4 in UFSAR Section 4.2.1.2 and would therefore, require a UFSAR change and 10 CFR 50.59 evaluation to allow the use of the ZIRLO cladding.
- e. A statement would be added stating, "Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases."
- f. A statement would be added stating, "Other cladding material may be used with an approved exemption." (This will allow the use of other cladding material without requiring a TS amendment. However, an exemption to the Code of Federal Regulations would be required, ensuring that the NRC has approved the use of other cladding materials. The use of any cladding material other than Zircalloy-4 would require an UFSAR change and a 10 CFR 50.59 evaluation to allow its use.)

Evaluation: CTS Section 5.3.1 lists some of the design features associated with the initial core loading for ANO-2. This CTS states that, "Reload fuel shall be of a low enrichment and similar in physical design to the initial core loading." ANO-2 is currently in fuel cycle No. 14. In Item a, CTS Section 5.3.1 lists a maximum enrichment level of 2.99 weight percent U-235 for the initial core. CTS 3.9.12, "Refueling Operations - Fuel Storage," specifies a maximum fuel enrichment of 5.0 weight percent U-235 for new and spent fuel. Therefore, it is acceptable to delete

references to fuel enrichment from CTS Section 5.3.1 as this parameter is currently controlled by CTS Section 3.9.12. Information discussed in Items b and c will be deleted from the Technical Specifications as this information does not meet any of the inclusion criteria specified in 10 CFR 50.36. The licensee has committed to adding a discussion of maximum uranium weight per fuel rod of 2114 grams to the UFSAR. A license condition has been established to ensure that the UFSAR is appropriately updated. The information discussed in Item c currently exists in the UFSAR. Modifications or alterations to these design features as described in the UFSAR are controlled under the 10 CFR 50.59 change process which provides the appropriate regulatory control. The change discussed in Item d promotes consistency between the ANO-2 TSs and 10 CFR 50.44, which allows the use of ZIRLO. ZIRLO is a zirconium-based alloy that has been previously accepted by the NRC in 10 CFR 50.44 and would facilitate its future potential use by ANO-2. The current fuel cladding is described as Zircalloy-4 in UFSAR Section 4.2.1.2 and would therefore require an UFSAR change and a 10 CFR 50.59 evaluation to allow the use of the ZIRLO cladding. The proposed replacement "Fuel Assemblies" specification, discussed in item e, is consistent with the staff's NUREG-1432 guidance, and, thus, in-scope, with the exception of Item f, which is a beyond-scope issue. However, the NRC staff has previously evaluated and approved Item f in the "Fuel Assemblies" specification for similar facilities (i.e., Palo Verde amendments issued March 6, 1996). The proposed beyond-scope change is acceptable on the basis that the exemption application and review process provide adequate controls and require NRC approval prior to implementation. The requirements discussed under items e and f are additions to the CTS. Based on the above discussion, the NRC staff finds that this proposed change is acceptable.

2.8 Control Element Assemblies

Proposed Change: CTS Section 5.3.2, "Control Element Assemblies," would be relocated within the TSs and be renumbered as STS Section 5.2.2, "Control Element Assemblies." The proposed change would list the site-specific number of control element assemblies along with their material of construction.

Evaluation: This change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. The discussion of the site-specific number of control element assemblies for the proposed change is identical to that which is described in the CTS. As such, this change is purely an administrative effort to renumber the TS. The addition of the material of construction for the control element assembly is a more restrictive change that ANO-2 accepted to provide additional information to be consistent with the STS. The NRC staff finds that the proposed change is in-scope and is acceptable.

2.9 Reactor Coolant System (RCS) Design Pressure and Temperature

Proposed Change: CTS Section 5.4.1, "Reactor Coolant System (RCS) - Design Pressure and Temperature," would be removed from the CTS, which is consistent with the staff's NUREG-1432 guidance for the STS.

Evaluation: This section of the CTS will be deleted because other areas of the CTS adequately control reactor coolant system parameters, such as; temperature, pressure, and boundary degradation, which could have a significant impact on safety. CTS 3.2.6 and 3.2.8 provide effective operational limits to ensure RCS temperature is maintained below its design limit. CTS 3.2.8 and 3.4.2 provide effective operational limits to ensure RCS pressure is maintained

below design limit. Additionally, CTS 3/4.4 provides the adequate controls required to monitor RCS degradation. Therefore, CTS Section 5.4.1 can be eliminated from the Technical Specifications as this information does not satisfy any of the inclusion criteria specified in 10 CFR 50.36. In addition, design-basis information is also contained in the UFSAR such that these requirements are maintained under the 10 CFR 50.59 process and are, therefore, adequately controlled. The proposed change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. Therefore, the NRC staff has concluded that this change is acceptable.

2.10 RCS Design Volume

Proposed Change: CTS Section 5.4.2, "Reactor Coolant System (RCS) - Design Volume," would be removed from the CTS, which is consistent with the staff's NUREG-1432 guidance for the STS.

Evaluation: The requested change is no longer required. CTS Section 5.4.2 has already been deleted from the TSs under Amendment No. 181. No further review of this issue is required.

2.11 Meteorological Tower Location

Proposed Change: CTS Section 5.5, "Meteorological Tower Location," and associated CTS Figure 5.1-1 would be removed from the TS.

Evaluation: UFSAR Section 2.3.3.1.1 currently describes the meteorological tower and its location. The meteorological tower is also shown on UFSAR Figure 2.1-3 in a manner identical to the CTS. Location of these requirements to the UFSAR provides an acceptable level of regulatory oversight as the control of this information is governed by the 10 CFR 50.59 change process. The proposed change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. CTS Section 2.3.3.1.1 can be eliminated from the CTS as this information does not satisfy any of the inclusion criteria established in 10 CFR 50.36 and is therefore not required to be located in the Technical Specifications. Therefore, the NRC staff has concluded that this change is acceptable.

2.12 Spent Fuel Storage Criticality

Proposed Change: CTS 5.6.1.1, "Criticality - Spent Fuel," would be expanded to include the intended information recommended in the staff's NUREG-1432 guidance explicitly or through reference to another part of the CTS. The CTS includes a k_{eff} limitation with the pool flooded with unborated water. The proposed change includes this requirement and references UFSAR Section 9.1 for the uncertainties associated with the evaluation. In addition, the proposed change adds the nominal center-to-center distance between fuel assemblies in the storage racks from UFSAR Figure 9.1-12A and cross references the fuel storage requirements in CTS 3.9.12.

Evaluation: The proposed change provides the information recommended in the staff's NUREG-1432 guidance for STS through explicit requirements or by reference to other areas of the CTS for the site-specific conditions at ANO-2. NUREG-1432, STS 4.3.1.1, "Fuel Storage - Criticality," Items a, e, and f are satisfied through reference to CTS 3.9.12. The licensee indicated that when it performs the complete conversion to the STS, this cross reference will be

reevaluated to determine the best presentation of this information. The NRC staff has concluded that the requirements of CTS 3.9.12 are sufficient and meet the intent of the STS for the site-specific conditions at ANO-2. NUREG-1432, STS 4.3.1.1, "Fuel Storage - Criticality," Items b, c, and d are satisfied through explicit instructions in the proposed change. Items c and d make a distinction between high and low density storage racks and their respective center-to-center spacing. The ANO-2 spent fuel pool has one center-to-center spacing for the entire pool. Therefore, the distinction between high and low density racks provides no useful information in this area and has been combined and condensed in the proposed change. The proposed change is more restrictive than the CTS with the addition of the center-to-center spacing requirement. In addition, the information provided in STS 5.3.1 is consistent with the intent of the information recommended in NUREG-1432, STS 4.3.1.1, "Fuel Storage - Criticality," and is considered an in-scope change. The information contained in the proposed change is adequate for the storage control of spent fuel in the ANO-2 spent fuel pool.

2.13 New Fuel Storage Rack Criticality

Proposed Change: CTS 5.6.1.2, "New Fuel Storage Rack Criticality," requirements would be revised to reflect the recommendations in the staff's NUREG-1432 guidance, which is consistent with the STS format. The licensee has committed to add the allowance for uncertainties associated with the k_{eff} analysis to the UFSAR. The site-specific nominal distance between new fuel assemblies in the storage racks would be specified. The site-specific maximum enrichment of 5.0 weight percent, and 26-inch center-to-center distance requirement is included as approved in Amendment No. 178.

Evaluation: This change to the ANO-2 new fuel storage requirements in the CTS is consistent with the STS. This change reformats the existing information to match the STS format. No technical information has been altered by this change. The proposed change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. Therefore, the NRC staff has concluded that this change is acceptable.

2.14 Fuel Storage Drainage Section

Proposed Change: CTS 5.6.2, "Fuel Storage - Drainage," would be moved to proposed STS Section 5.3.3. The content of this section would remain in tact such that this change was limited to renumbering for consistency with the other changes discussed in this amendment.

Evaluation: The requirements are moved but unchanged. The proposed change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. Therefore, the NRC staff has concluded that this change is acceptable.

2.15 Fuel Storage Capacity Section

Proposed Change: CTS 5.6.3, "Fuel Storage - Capacity," would be moved to proposed STS Section 5.3.4. The content of this section would remain in tact such that this change is limited to renumbering for consistency with the other changes discussed in this amendment.

Evaluation: The requirements are moved but unchanged. The proposed change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. Therefore, the NRC staff has concluded that this change is acceptable.

2.16 Component Cyclic or Transient Limits

Proposed Change: The Component Cyclic or Transient Limits, CTS 5.7.1, along with the associated CTS Table 5.7-1 would be deleted from the CTS. The RCS design transients are described in Section 5.2.1.5 of the UFSAR. The CTS cyclic or transient limits that are currently not in the UFSAR will be added. STS Section 6.8.4 will be added to establish a Component Cyclic or Transient Limit Program. This program will be relocated in accordance with the STS. CTS 6.10.2.e record retention requirements for the transient or operational cycles will remove the reference to CTS Table 5.7-1 and insert a reference to the Component Cyclic or Transient Limit Program. Record retention requirements will be placed in the UFSAR.

Evaluation: The proposed change will relocate the requirements from the Component Cyclic or Transient Limits in the CTS to the UFSAR. The licensee has committed to update the UFSAR as required to relocate this program without changes to its requirements. A license condition has been established to ensure that the UFSAR is updated appropriately. In addition, CTS Section 6.0, "Administrative Controls," will be updated to reflect the requirement to have the program and the record retention requirements associated with this change. STS Section 6.8.4 has been modified to reflect the Component Cyclic or Transient Limits Program requirement. STS Section 6.10.2.e has been revised to reflect record retention requirements associated with this program. The 10 CFR 50.59 change process provides sufficient regulatory control over this program after its relocation. The staff has previously found it acceptable to remove Component Cyclic or Transient Limits from the Technical Specifications (See Amendment Nos 204 and 182 for Calvert Cliffs 1 and 2, dated March 14, 1995) since this information does not satisfy any of the inclusion criteria specified in 10 CFR 50.36. The proposed change is consistent with the staff's NUREG-1432 guidance, and, thus, is considered an in-scope change. Therefore, the NRC staff has concluded that this 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. 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 (61 FR 52965, October 9, 1996). This amendment also changes recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). 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.

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Date: May 19, 1999