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2CAN020402

February 9, 2004

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: License Amendment Request
Application for Technical Specification Improvement to Eliminate Requirements for Hydrogen Recombiners and Hydrogen Monitors Using the Consolidated Line Item Improvement Process
Arkansas Nuclear One, Unit 2
Docket No. 50-368
License No. NPF-6

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) hereby requests the following amendment to the Technical Specifications (TS) for Arkansas Nuclear One, Unit 2 (ANO-2).

The proposed amendment will delete the TS requirements related to hydrogen recombiners and hydrogen monitors. The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on October 16, 2003. The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the Federal Register on September 25, 2003 as part of the consolidated line item improvement process (CLIIP).

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications and commitments. Attachment 2 provides the existing TS pages marked-up to show the proposed change. Implementation of TSTF-447 also involves various changes to the TS Bases. The TS Bases changes will be submitted with a future update in accordance with TS 6.5.14, "Technical Specifications (TS) Bases Control Program."

The proposed change includes a new commitment as summarized in Attachment 3.

Entergy requests approval of the proposed amendment by December 30, 2004. Once approved, the amendment shall be implemented within 120 days.

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If you have any questions or require additional information, please contact Ron Byrd at 601-368-5792.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 9, 2004.

Sincerely,

JSF/RWB

Attachments:
1. Analysis of Proposed Technical Specification Change
2. Proposed Technical Specification Changes (mark-up)
3. List of Regulatory Commitments

cc: Dr. Bruce S. Mallett
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Attachment 1

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Analysis of Proposed Technical Specification Change

1.0 INTRODUCTION

This letter is a request to amend Operating License NPF-6 for Arkansas Nuclear One, Unit 2 (ANO-2). The proposed License amendment deletes Technical Specification (TS) 3.6.4.1, "Hydrogen Analyzers," and 3.6.4.2, "Electric Hydrogen Recombiners-W." The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on October 16, 2003.

The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the Federal Register on September 25, 2003 as part of the consolidated line item improvement process (CLIIP).

2.0 DESCRIPTION OF PROPOSED AMENDMENT

Consistent with the NRC-approved Revision 1 of TSTF-447, the proposed TS changes include:

TS	3/4.6.4	Combustible Gas Control	Deleted
	3/4 6.4.1	Hydrogen Analyzers	Deleted
	3/4 6.4.2	Electric Hydrogen Recombiners – W	Deleted

While these changes are consistent with the TSTF, there are minor numbering and format differences. Other TS changes included in this application are limited to changes that resulted directly from the deletion of the above requirements related to hydrogen recombiners and hydrogen monitors (analyzers).

As described in NRC-approved Revision 1 of TSTF-447, the changes to TS requirements result in changes to various TS Bases sections. The TS Bases changes will be submitted with a future update in accordance with TS 6.5.14, "Technical Specifications (TS) Bases Control Program."

3.0 BACKGROUND

The background for this application is adequately addressed by the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking, and other related documents.

4.0 REGULATORY REQUIREMENTS AND GUIDANCE

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking, and other related documents.

5.0 TECHNICAL ANALYSIS

Entergy has reviewed the safety evaluation (SE) published on September 25, 2003 (68 FR 55416) as part of the CLIIP Notice of Availability. This verification included a review of the NRC staff's SE, as well as the supporting information provided to support TSTF-447. Entergy has concluded that the justifications presented in the TSTF proposal and the SE prepared by the NRC staff are applicable to ANO-2 and justify this amendment for the incorporation of the changes to the ANO-2 TS.

6.0 REGULATORY ANALYSIS

A description of this proposed change and its relationship to applicable regulatory requirements and guidance was provided in the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking, and other related documents.

6.1 Verification and Commitments

As discussed in the model SE published in the Federal Register on September 25, 2003 (68 FR 55416) for this TS improvement, Entergy is making the following verifications and regulatory commitments:

1. Entergy has verified that a hydrogen monitoring system capable of diagnosing beyond design-basis accidents is installed at ANO-2 and is making a regulatory commitment to maintain that capability. The hydrogen monitors will be included in the Technical Requirements Manual (TRM). This regulatory commitment will be implemented within 120 days of amendment issuance.

2. ANO-2 does not have an inerted containment.

7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

Entergy has reviewed the proposed no significant hazards consideration determination published on September 25, 2003 (68 FR 55416) as part of the CLIIP. Entergy has concluded that the proposed determination presented in the notice is applicable to ANO-2 and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

8.0 ENVIRONMENTAL EVALUATION

Entergy has reviewed the environmental evaluation included in the model SE published on September 25, 2003 (68 FR 55416) as part of the CLIIP. Entergy has concluded that the staff's findings presented in that evaluation are applicable to ANO-2 and the evaluation is hereby incorporated by reference for this application.

9.0 PRECEDENT

This application is being made in accordance with the CLIIP. Entergy is not proposing variations or deviations from the TS changes described in TSTF-447 or the NRC staff's model SE published on September 25, 2003 (68 FR 55416).

10.0 REFERENCES

Federal Register Notice: Notice of Availability of Model Application Concerning Technical Specification Improvement To Eliminate Hydrogen Recombiner Requirement, and Relax the Hydrogen and Oxygen Monitor Requirements for Light Water Reactors Using the Consolidated Line Item Improvement Process, published September 25, 2003, (68 FR 55416).

Attachment 2

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Proposed Technical Specification Changes (mark-up)

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

SECTION		PAGE
3/4.5.2	ECCS SUBSYSTEMS – $T_{avg} \geq 300°F$	3/4 5-3
3/4.5.3	ECCS SUBSYSTEMS – $T_{avg} \leq 300°F$	3/4 5-6
3/4.5.4	REFUELING WATER TANK	3/4 5-7
3/4.6	CONTAINMENT SYSTEMS	
3/4.6.1	PRIMARY CONTAINMENT	
	Containment Integrity	3/4 6-1
	Containment Leakage	3/4 6-2
	Containment Air Locks	3/4 6-4
	Internal Pressure, Air Temperature and Relative Humidity	3/4 6-6
	Containment Structural Integrity	3/4 6-8
	Containment Ventilation System	3/4 6-9a
3/4.6.2	DEPRESSURIZATION, COOLING, AND pH CONTROL SYSTEMS	
	Containment Spray System	3/4 6-10
	Trisodium Phosphate (TSP)	3/4 6-12
	Containment Cooling System	3/4 6-14
3/4.6.3	CONTAINMENT ISOLATION VALVES	3/4 6-16
~~3/4.6.4~~	~~COMBUSTIBLE GAS CONTROL~~	
	~~Hydrogen Analyzers~~	~~3/4 6-18~~
	~~Electric Hydrogen Recombiners - W~~	~~3/4 6-19~~

BASES

SECTION	PAGE
3/4.4 REACTOR COOLANT SYSTEM	
3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION	B 3/4 4-1
3/4.4.2 and 3/4.4.3 SAFETY VALVES	B 3/4 4-1
3/4.4.4 PRESSURIZER	B 3/4 4-2
3/4.4.5 STEAM GENERATORS	B 3/4 4-2
3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE	B 3/4 4-3
3/4.4.7 CHEMISTRY	B 3/4 4-4
3/4.4.8 SPECIFIC ACTIVITY	B 3/4 4-4
3/4.4.9 PRESSURE/TEMPERATURE LIMITS	B 3/4 4-5
3/4.4.10 STRUCTURAL INTEGRITY	B 3/4 4-11
3/4.4.11 REACTOR COOLANT SYSTEM VENTS	B 3/4 4-11
3/4.4.12 LOW TEMPERATURE OVERPRESSURE PROTECTION SYSTEM	B 3/4 4-12
3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)	
3/4.5.1 SAFETY INJECTION TANKS	B 3/4 5-1
3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS	B 3/4 5-1
3/4.5.4 REFUELING WATER TANK (RWT)	B 3/4 5-2
3/4.6 CONTAINMENT SYSTEMS	
3/4.6.1 PRIMARY CONTAINMENT	B 3/4 6-1
3/4.6.2 DEPRESSURIZATION, COOLING, AND pH CONTROL SYSTEMS	B 3/4 6-3
3/4.6.3 CONTAINMENT ISOLATION VALVES	B 3/4 6-6
~~3/4.6.4 COMBUSTIBLE GAS CONTROL~~	~~B 3/4 6-6~~

~~CONTAINMENT SYSTEMS~~

~~3/4.6.4 COMBUSTIBLE GAS CONTROL~~

~~HYDROGEN ANALYZERS~~

~~LIMITING CONDITION FOR OPERATION~~

~~3.6.4.1 Two independent containment hydrogen analyzers shall be OPERABLE.~~

~~APPLICABILITY: MODES 1 and 2.~~

~~ACTION:~~

~~With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gases containing:~~

~~a. Zero volume percent hydrogen, balance nitrogen, and~~

~~b. Four volume percent (nominal) hydrogen, balance nitrogen.~~

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS – W

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to ≥ 700°F within 90 minutes and is maintained for at least 2 hours.

b. At least once per 18 months by:

1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits.

2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiners (i.e., loose wiring or structural connections, deposits of foreign materials, etc.).

3. Verifying during a recombiner system functional test that the heater sheath temperature increased to ≥ 1200°F within 5 hours and is maintained for at least 4 hours.

4. Verifying the integrity of the heater electrical circuits by performing a continuity and resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be ≥ 10,000 ohms.

Attachment 3

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List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
Entergy has verified that a hydrogen monitoring system capable of diagnosing beyond design-basis accidents is installed at ANO-2 and is making a regulatory commitment to maintain that capability. The hydrogen monitors will be included in the Technical Requirements Manual (TRM).		X	Within 120 days of amendment issuance.