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

November 16, 2011

Vice President, Operations
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT NO. 1 - ISSUANCE OF AMENDMENT RE: ADOPTION OF TSTF–513, REVISION 3, "REVISE PWR OPERABILITY REQUIREMENTS AND ACTIONS FOR RCS LEAKAGE INSTRUMENTATION" (TAC NO. ME6125)

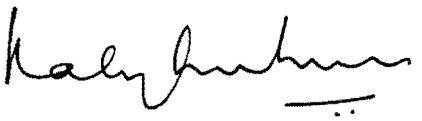
Dear Sir or Madam:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment No. 246 to Renewed Facility Operating License No. DPR-51 for Arkansas Nuclear One, Unit No. 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated April 29, 2011.

The amendment revises TS 3.4.15, "RCS [Reactor Coolant System] Leakage Detection Instrumentation," to define a new time limit for restoring inoperable RCS leakage detection instrumentation to operable status; establish alternate methods of monitoring RCS leakage when one or more required monitors are inoperable; and make TS Bases changes which reflect the proposed changes and more accurately reflect the contents of the facility design basis related to operability of the RCS leakage detection instrumentation. The changes are consistent with NRC-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler TSTF-513, "Revise PWR [Pressurized-Water Reactor] Operability Requirements and Actions for RCS Leakage Instrumentation."

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,



N. Kaly Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosures:
1. Amendment No. 246 to DPR-51
2. Safety Evaluation

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

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 246
Renewed 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 April 29, 2011, 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 Renewed 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. 246, are hereby incorporated in the renewed license. EOI 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 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. DPR-51
and Technical Specifications

Date of Issuance: November 16, 2011

ATTACHMENT TO LICENSE AMENDMENT NO. 246

RENEWED FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Replace the following pages of the Renewed Facility Operating License No. DPR-51 and 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.

Operating License

REMOVE	INSERT
-3-	-3-

Technical Specifications

REMOVE	INSERT
3.4.15-1	3.4.15-1
3.4.15-2	3.4.15-2

(5) EOI, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;

(6) EOI, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

c. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

EOI is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 246, are hereby incorporated in the renewed license. EOI shall operate the facility in accordance with the Technical Specifications.

(3) Safety Analysis Report

The licensee's SAR supplement submitted pursuant to 10 CFR 54.21(d), as revised on March 14, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than May 20, 2014.

(4) Physical Protection

EOI shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Arkansas Nuclear One Physical Security Plan, Training and Qualifications Plan, and Safeguards Contingency Plan," as submitted on May 4, 2006.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.15 RCS Leakage Detection Instrumentation

LCO 3.4.15 The following RCS leakage detection instrumentation shall be OPERABLE:

a. One reactor building sump monitor; and

b. One reactor building atmosphere radioactivity monitor (gaseous or particulate).

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor Building sump monitor inoperable.	A.1 ----------NOTE---------- Not required until 12 hours after establishment of steady state operation at or near operating pressure. ---------- Perform SR 3.4.13.1.	Once per 24 hours
	AND	
	A.2 Restore reactor building sump monitor to OPERABLE status.	30 days

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required reactor building atmosphere radioactivity monitor inoperable.	B.1.1 Analyze grab samples of the reactor building atmosphere. OR B.1.2 ----------NOTE---------- Not required until 12 hours after establishment of steady state operation at or near operating pressure. ---------- Perform SR 3.4.13.1. AND B.2 Restore required reactor building atmosphere radioactivity monitor to OPERABLE status.	Once per 24 hours Once per 24 hours 30 days
----------NOTE---------- Only applicable when the reactor building atmosphere gaseous radiation monitor is the only OPERABLE monitor. ---------- C. Reactor Building sump monitor inoperable.	C.1 Analyze grab samples of the reactor building atmosphere. AND C.2 Restore reactor building sump monitor to OPERABLE status.	Once per 12 hours 7 days
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours
E. Both required monitors inoperable.	E.1 Enter LCO 3.0.3.	Immediately

UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 246 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-51

ADOPTION OF TSTF-513, REVISION 3

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 1

DOCKET NO. 50-313

1.0 INTRODUCTION

By letter dated April 29, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111190551), Entergy Operations, Inc. (Entergy, the licensee), proposed changes to the Technical Specifications (TSs) for Arkansas Nuclear One, Unit 1 (ANO-1). The amendment would revise TS 3.4.15, "RCS [Reactor Coolant System] Leakage Detection Instrumentation," and include TS Bases changes that summarize and clarify the purpose of the TS and the specified safety function of the leakage detection monitors.

The license amendment request (LAR) is consistent with the U.S. Nuclear Regulatory Commission (NRC)-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler, TSTF-513, "Revise PWR [Pressurized-Water Reactor] Operability Requirements and Actions for RCS Leakage Instrumentation" (ADAMS Accession No. ML102360355). The availability of this TS improvement was announced in the *Federal Register* on January 3, 2011 (76 FR 189), as part of the consolidated line item improvement process. The availability of this proposed amendment to TS 3.4.15 and no significant hazards consideration determination were published in the *Federal Register* on September 6, 2011 (76 FR 55128)

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to the content of the TSs are contained in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, "Technical specifications." The regulations in 10 CFR 50.36(c)(2)(i), state, in part, that limiting conditions for operation (LCOs) are "the lowest functional capability or performance levels of equipment required for safe operation of the facility." The regulations in 10 CFR 50.36(c)(2)(ii) list four criteria for determining whether particular items are required to be included in the TS LCOs. The first

criterion applies to "installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary." As described in the *Federal Register* notice associated with this regulation (60 FR 36953; July 19, 1995), the scope of the TSs includes two general classes of technical matters: (1) those related to prevention of accidents, and (2) those related to mitigation of the consequences of accidents. Criterion 1 addresses systems and process variables that alert the operator to a situation when accident initiation is more likely, and supports the first of these two general classes of technical matters which are included in the TSs. As specified in 10 CFR 50.36(c)(2)(i), when an LCO of a nuclear reactor is not met, "the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met."

The NRC's guidance for the format and content of PWR TSs can be found in NUREG-1430, Revision 3.0, Volume 1, "Standard Technical Specifications, Babcock and Wilcox Plants," June 2004 (ADAMS Accession No. ML041800598). STS 3.4.15, "RCS Leakage Detection Instrumentation," contains the guidance specific to the RCS leakage detection instrumentation for PWRs. The STS Bases provide a summary statement of the reasons for the STS. The Bases for STS 3.4.15 contained in NUREG-1430, Revision 3.0, provide background information, the applicable safety analyses, a description of the LCO, the applicability for the RCS leakage detection instrumentation TS, and describe the Actions and Surveillance Requirements (SRs). The TS Bases provide the purpose or reason for the TS which are derived from the analyses and evaluation included in the safety analysis report, and for these Specifications, the RCS leakage detection instrumentation design assumptions and licensing basis for the plant.

As stated in NRC Information Notice (IN) 2005-24, "Nonconservatism in Leakage Detection Sensitivity," dated August 3, 2005 (ADAMS Accession No. ML051780073), the reactor coolant activity assumptions for containment atmosphere gaseous radioactivity monitors may be non-conservative. This means the monitors may not be able to detect a 1 gallon per minute (gpm) leak within 1 hour under all likely operating conditions.

The issue described in IN 2005-24 has raised questions regarding the operability requirements for containment atmosphere gaseous radioactivity monitors. TSTF-513, Revision 3, revises the TS Bases to reflect the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation. Part of the TS Bases changes revise the specified safety function of the RCS leakage detection monitors to specify the required instrument sensitivity level. In addition, TSTF-513, Revision 3, includes revisions to TS Actions for RCS leakage detection instrumentation to establish limits for operation during conditions of reduced monitoring sensitivity because of inoperable RCS leakage detection instrumentation.

The regulation at 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 30, "Quality of reactor coolant pressure boundary," requires means for detecting and, to the extent practical, identifying the location of the source of RCS leakage. NRC Regulatory Guide (RG) 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973 (ADAMS Accession No. ML003740113), describes acceptable methods of implementing the GDC 30 requirements with regard to the selection of leakage detection systems for the reactor coolant pressure boundary (RCPB).

RG 1.45, Revision 0, Regulatory Position C.2, states:

> Leakage to the primary reactor containment from unidentified sources should be collected and the flow rate monitored with an accuracy of one gallon per minute (gpm) or better.

RG 1.45, Revision 0, Regulatory Position C.3 states:

> At least three separate detection methods should be employed and two of these methods should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring. The third method may be selected from the following:
>
> a. monitoring of condensate flow rate from air coolers, [or]
> b. monitoring of airborne gaseous radioactivity.
>
> Humidity, temperature, or pressure monitoring of the containment atmosphere should be considered as alarms or indirect indication of leakage to the containment.

RG 1.45, Revision 0, Regulatory Position C.5 states:

> The sensitivity and response time of each leakage detection system in regulatory position 3 above employed for unidentified leakage should be adequate to detect a leakage rate, or its equivalent, of one gpm in less than one hour.

RG 1.45, Revision 0, states, in part, that,

> In analyzing the sensitivity of leak detection systems using airborne particulate or gaseous radioactivity, a realistic primary coolant radioactivity concentration assumption should be used. The expected values used in the plant environmental report would be acceptable.

The appropriate sensitivity of a plant's containment atmosphere gaseous radioactivity monitors is dependent on the design assumptions and the plant-specific licensing basis as described in the plant's final safety analysis report (FSAR). The NRC staff's approval of the use of expected primary coolant radioactivity concentration values used in the environmental report creates a potential licensing conflict when a licensee is able to achieve and maintain primary coolant radioactivity concentration values lower than the value assumed in the environmental report.

RG 1.45, Revision 1, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," was issued in May 2008 (ADAMS Accession No. ML073200271). RG 1.45, Revision 1, describes methods for implementing GDC 30 requirements that are different from those in RG 1.45, Revision 0, and was developed and issued to support new reactor licensing. RG 1.45, Revision 1, allows that having two TS leakage detection methods capable of detecting a 1 gpm leak within 1 hour provides adequate leakage detection capability from a safety perspective. It recommends that other potential indicators (including the gaseous radiation

monitors) be maintained even though they may not have the same detection capability. These indicators, in effect, provide additional defense-in-depth.

The regulation in GDC 4 of Appendix A to 10 CFR Part 50, "Environmental and dynamic effects design bases," requires structures, systems, and components important to safety to be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. GDC 4 allows the use of leak-before-break (LBB) technology to exclude dynamic effects of pipe ruptures in the design bases when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping.

The licensee stated in its LAR the following with respect to GDC 30 compliance:

> One of the items required by General Design Criteria (GDC) 30 is a means to detect and to the extent possible, identify the location of the source of reactor coolant leakage. ANO-1 uses three methods for detecting reactor coolant leakage. These methods are as follows:
>
> - Reactor Building Sump Level
> - RCS Inventory Balance
> - Reactor Building Radiation Monitoring
>
> Changes in reactor building sump water level may be an indication of RCS leakage. The Reactor Building Sump Level Detection System consists of two separate instrumentation loops. Each loop has a control room indicator and can be displayed on computer. The instrument design is such that a 1 gpm leak would be detected in less than one hour.
>
> While not a TS-required RG 1.45 method, an RCS Inventory Balance is also used to determine RCS leak rates. This method is required by ANO-1 TS 3.4.13, "RCS Operational Leakage," SR 3.4.13.1. This SR is also required to be performed by Required Actions A.1 and B.1.2 of TS 3.4.15 when an RCS leak detection instrument is inoperable. Makeup up to the RCS as a result of leakage is initially supplied from the makeup tank inventory. Monitoring of the makeup tank level also provides a direct indication of reactor coolant leakage. With the reactor coolant average temperature and pressurizer water level held constant, a 1 gpm leak can be detected within 1.1 hours using this instrumentation.
>
> Changes in the reactor coolant leakage rate in the reactor building may cause changes in the control room indication of the reactor building atmosphere gas radioactivities. The minimum detectable concentration of the reactor building radioactive gas detector is 5.5 E-7 microcuries per cubic centimeter of Xenon 133 in a 2.5 millirem per hour background. Response times for various levels of failed fuel are given in Section 4.2.3.8 of the ANO-1 Safety Analysis Report (SAR). An increase above the alarm setpoint would annunciate immediately.

Based on this information, ANO-1 is in compliance with GDC 30. Section 4.2.3.8 of the ANO-1 SAR and the bases of TS 3.4.15 may be referenced for additional details associated with General Design Criteria 30 compliance.

3.0 TECHNICAL EVALUATION

3.1 Proposed Changes

In adopting the changes to TSs included in TSTF-513, Revision 3, the licensee proposed to revise TS 3.4.15, "RCS Leakage Detection Instrumentation," Conditions and Required Actions. The licensee proposed adding new Condition C to TS 3.4.15, which would state:

---------- NOTE----------
Only applicable when the reactor building atmospheric gaseous radiation monitor is the only OPERABLE monitor.

C. Reactor Building sump monitor inoperable.

The Required Actions for new Condition C would state:

C.1 Analyze grab samples of the reactor building atmosphere.

AND

C.2 Restore reactor building sump monitor to OPERABLE status.

In addition, the licensee proposed minor changes in TS 3.4.15 to ensure continuity of the TS format. These changes include re-lettering current Condition C to Condition D and current Condition D to Condition E. Similar changes were made to the associated Required Actions.

The proposed changes also remove incorrect references to "required" equipment in TS 3.4.15 Condition A and Required Action A.2. Currently, Condition A and Required Action A.2 state:

A. Required reactor building sump monitor inoperable.

A.2 Restore required reactor building sump monitor to OPERABLE status.

Revised Condition A and Required Action A.2 would state:

A. Reactor Building sump monitor inoperable.

A.2 Restore reactor building sump monitor to OPERABLE status.

3.2 NRC Staff Evaluation

In adopting the changes to TS included in TSTF-513, Revision 3, the licensee proposed to revise TS 3.4.15, "RCS Leakage Detection Instrumentation," Conditions and Required Actions. The licensee proposed adding new Condition C to TS 3.4.15. New Condition C would be applicable when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor. This new Condition is necessary because improved fuel integrity and the resulting lower primary coolant radioactivity concentration affects a plant's containment atmosphere gaseous radioactivity monitor to a greater extent than other monitors. The proposed Required Actions for new Condition C require the licensee to analyze grab samples of the containment atmosphere once per 12 hours and restore the required containment sump monitor to operable status within 7 days, or analyze grab samples of the containment atmosphere once per 12 hours and restore the containment air cooler condensate flow rate monitor to operable status within 7 days. These actions are in addition to the Required Actions of Condition A, which requires performing an RCS mass balance once per 24 hours.

The NRC staff determined that the proposed Condition C is more restrictive than the current requirement, because the current Condition that would apply to the situation when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor would allow the licensee 30 days to restore the inoperable monitors to operable status. The proposed Actions and Completion Times are adequate because the grab samples combined with the more frequent RCS mass balances will provide an alternate method of monitoring RCS leakage when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor and the 12-hour interval is sufficient to detect increasing RCS leakage long before a piping flaw could progress to a catastrophic failure of the primary RCPB. Allowing 7 days to restore another RCS leakage monitor to operable status is reasonable given the diverse methods employed in the Required Actions to detect an RCS leak and the low probability of a large RCS leak during this period. Proposed Condition C is conservative relative to the STS, sufficiently alerts the operating staff, provides a comparable ability to detect RCS leakage, and provides time intervals that are reasonable. Therefore, the NRC staff concludes that proposed Condition C provides an adequate assurance of safety when judged against current regulatory standards.

Certain American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Class 1 piping systems in ANO-1 have been approved by the NRC for LBB. The basic concept of LBB is that certain piping material has sufficient fracture toughness (i.e., ductility) to resist rapid flaw propagation; thereby minimizing the probability of a pipe rupture. The licensee has evaluated postulated flaws in RCS loop piping and determined the piping has sufficient fracture toughness that the postulated flaw would not lead to pipe rupture and potential damage to adjacent safety-related systems, structures, and components before the plant could be placed in a safe, shutdown condition. The NRC staff has previously reviewed and approved these plant-specific LBB analyses. Before remotely approaching a pipe rupture, the postulated flaw would lead to limited but detectable leakage, which would be identified by the leak detection systems in time for the operator to take action. The NRC staff previously addressed

concerns that LBB depends on erroneous leak rate measurements in the final rulemaking for use of LBB technology. In addressing the concerns, it was noted that:

> ..., one criterion for application of leak-before-break is that postulated flaw sizes be large enough so that the leakage is about ten times the leak detection capability, and that this flaw be stable even if earthquake loads are applied to the pipe in addition to the normal operating loads. This margin of a factor of ten is more than ample to account for uncertainties in both leakage rate calculations and leak detection capabilities.
>
> Additional sensitivity studies reported by Lawrence Livermore National Laboratory in NUREG/CR-2189, dated September 1981, entitled "Probability of Pipe Fracture in the Primary Coolant Loop of a PWR Plant"[1] indicate that even in the absence of leak detection, the probability of pipe ruptures in PWR primary coolant loop piping is sufficiently low to warrant exclusion of these events from the design basis. [(51 FR 12502-12505; April 11, 1986)]

The proposed actions for inoperable RCS leakage detection instrumentation maintain sufficient continuity, redundancy, and diversity of leakage detection capability that an extremely low probability of undetected leakage leading to pipe rupture is maintained. This extremely low probability of pipe rupture continues to satisfy the basis for acceptability of LBB in GDC 4. The licensee proposes minor changes to ensure continuity of the TS format. These changes re-letter current Condition C, which applies when the required action and the associated completion time are not satisfied, to Condition D, and current Condition D, which applies when both required monitors are inoperable, to Condition E. Similar changes were made to the associated Required Actions. The NRC staff concludes that these changes are editorial, and therefore acceptable.

The associated TS Bases submitted with the licensee's proposed revision for TS 3.4.15 reflect the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation and reflect the proposed TS changes. The proposed TS Bases changes related to the operability of the RCS leakage detection instrumentation are acceptable because they provide background information, the applicable safety analyses, a description of the limiting condition for operation, and the applicability for the RCS leakage detection instrumentation TS and are consistent with the design basis of the facility. These instruments satisfy Criterion 1 of 10 CFR 50.36(c)(2)(ii) in that they are installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the RCPB.

The NRC staff evaluated the licensee's proposed changes against the applicable regulatory requirements listed in Section 2.0 of this safety evaluation. The NRC staff also compared the proposed changes to the changes made to STS by TSTF-513, Revision 3. The NRC staff determined that all the proposed changes afford adequate assurance of safety when judged

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[1] Harris D. O., E. Y. Lim, and D. D. Dedhia. 1981. "Probability of Pipe Fracture in the Primary Coolant Loop of a PWR Plant," Volume 5: Probabilistic Fracture Mechanics Analysis - Load Combination Program Project 1 Final Report. NUREG/CR-2189, Vol. 5, U.S. Nuclear Regulatory Commission, Washington, D.C.

against current regulatory standards. Therefore, the NRC staff concludes that the proposed changes are acceptable.

4.0 REGULATORY COMMITMENT

In its letter dated April 29, 2011, Entergy made the following regulatory commitment:

> Entergy commits to revising the associated Technical Specification Bases consistent with TSTF-513, Revision 3, during implementation of the amendment.

The licensee has committed to revising the associated TS Bases within 90 days of NRC approval of the proposed TS amendment.

The NRC staff concludes that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the regulatory commitments are best provided by the licensee's administrative processes, including its commitment management program. The regulatory commitments do not warrant the creation of regulatory requirements (items requiring prior NRC approval of subsequent changes).

5.0 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.

6.0 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 published in the *Federal Register* on September 6, 2011 (76 FR 55128). 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.

7.0 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 Contributors: M. Singletary
M. Hamm

Date: November 16, 2011

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/

N. Kaly Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosures:
1. Amendment No. 246 to DPR-51
2. Safety Evaluation

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