[7590-01-P]

Nuclear Regulatory Commission

Notice of Opportunity for Public Comment on the Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Traveler-513, Revision 2, "Revise PWR Operability Requirements And Actions For RCS Leakage Instrumentation"

[NRC-2009-0444]

AGENCY: Nuclear Regulatory Commission (NRC)

ACTION: Notice of opportunity for public comment

SUMMARY: The NRC is requesting public comment on the enclosed proposed model safety evaluation, model no significant hazards consideration determination, and model application for plant-specific adoption of Technical Specification Task Force (TSTF) Traveler-513, Revision 2, "Revise PWR Operability Requirements And Actions For RCS Leakage Instrumentation." The TSTF Traveler-513, Revision 2, is available in the Agencywide Documents Access Management System (ADAMS) under Accession Number ML091810158. The proposed changes revise Standard Technical Specification (STS) [3.4.15], "[Reactor Coolant System (RCS) Leakage Detection Instrumentation]." The proposed changes also revise the STS Bases to clearly define the RCS leakage detection instrumentation Operability requirements in the Limiting Condition for Operation (LCO) Bases, eliminate discussion from the STS Bases that could be erroneously construed as Operability requirements, and reflect the changes to the TSs. This model safety evaluation will facilitate expedited approval of plant-specific adoption of TSTF Traveler-513, Revision 2.

DATES: Comment period expires November 9, 2009. Comments received after this date will be considered, if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any one of the following methods. Please include

Docket ID **NRC-2009-0444** in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC website and on the Federal rulemaking website Regulations.gov. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

Federal Rulemaking Website: Go to http://www.regulations.gov and search for documents filed under Docket ID **NRC-2009-0444.** Address questions about NRC dockets to Carol Gallagher 301-492-3668; e-mail Carol.Gallagher@nrc.gov.

Mail comments to: Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by fax to RDB at (301) 492-3446.

You can access publicly available documents related to this notice using the following methods:

NRC's Public Document Room (PDR): The public may examine and have copied for a fee publicly available documents at the NRC's PDR, Public File Area O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS): Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at http://www.nrc.gov/reading-rm/adams.html. From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the

documents located in ADAMS, contact the NRC's PDR reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The Proposed Model Safety Evaluation for Plant-Specific Adoption of TSTF Traveler-513, Revision 2, available electronically under ADAMS Accession Number ML092460664.

Federal Rulemaking Website: Public comments and supporting materials related to this notice can be found at http://www.regulations.gov by searching on Docket ID: **NRC-2009-0444.**

FOR FURTHER INFORMATION CONTACT: Ms. Michelle C. Honcharik, Senior Project Manager, Special Projects Branch, Mail Stop: O-12D1, Division of Policy and Rulemaking, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001; telephone 301-415-1774 or e-mail at michelle.honcharik@nrc.gov.

SUPPLEMENTARY INFORMATION:

Background

This notice provides an opportunity for the public to comment on proposed changes to the Standard TS (STS) after a preliminary assessment and finding by the NRC staff that the agency will likely offer the changes for adoption by licensees. This notice solicits comment on a proposed change to the STS, which if implemented by a licensee will modify the plant-specific TS. The NRC staff will evaluate any comments received for the proposed change to the STS and reconsider the change or announce the availability of the change for adoption by licensees. Licensees opting to apply for this TS change are responsible for reviewing the NRC staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. The NRC will process and note each amendment application responding to the notice of availability according to applicable NRC rules and procedures.

Applicability

TSTF Traveler-513, Revision 2, is applicable to pressurized water reactors. The Traveler

revises the TS and TS Bases to clearly define the RCS leakage detection instrumentation Operability requirements as well as revise Conditions and Required Actions related to leakage detection instrumentation.

The proposed change does not prevent licensees from requesting an alternate approach or proposing changes other than those proposed in TSTF Traveler-513, Revision 2. However, significant deviations from the approach recommended in this notice or the inclusion of additional changes to the license require additional NRC staff review. This may increase the time and resources needed for the review or result in NRC staff rejection of the license amendment request (LAR). Licensees desiring significant deviations or additional changes should instead submit an LAR that does not claim to adopt TSTF Traveler-513, Revision 2.

Dated at Rockville, Maryland, this 24th day of September 2009.

For the Nuclear Regulatory Commission,

/RA/

Stacey L. Rosenberg, Chief
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

PROPOSED MODEL APPLICATION FOR PLANT-SPECIFIC ADOPTION OF TSTF TRAVELER-513, REVISION 2, "REVISE PWR OPERABLIITY REQUIREMENTS AND ACTIONS FOR RCS LEAKAGE INSTRUMENTATION"

U.S. Nuclear Regulatory Commission

Document Control Desk

Washington, D.C. 20555

SUBJECT: [Plant Name]

DOCKET NO. 50-[XXX]

LICENSE AMENDMENT REQUEST FOR ADOPTION OF TECHNICAL SPECIFICATION TASK FORCE (TSTF) TRAVLER-513, REVISION 2, "REVISE PWR OPERABILITY REQUIREMENTS AND ACTIONS FOR RCS LEAKAGE INSTRUMENTATION"

In accordance with the provisions of Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT NAME, UNIT NO.].

The proposed amendment would revise the TS and TS Bases to clearly define the Reactor Coolant System (RCS) leakage detection instrumentation Operability requirements as well as revise Conditions and Required Actions related to leakage detection instrumentation. The revised Required Actions employ alternate methods of monitoring RCS leakage when one or more required monitors are inoperable. This change is consistent with NRC approved Revision 2 to TSTF Improved Standard Technical Specification (STS) Change Traveler-513, "Revise PWR Operability Requirements and Actions for RCS Leakage Instrumentation" [Discuss any differences with Traveler-513, Revision 2.] The availability of this TS improvement

was announced in the *Federal Register* on [Date] ([ ] FR [ ]) as part of the consolidated line item improvement process (CLIIP).

The proposed amendment contains a less restrictive TS change. The less restrictive change is justified because alternate RCS leakage monitoring methods are required to be performed when no required monitoring methods are Operable. Further detailed justification is contained in Attachment 1.

Attachment 1 provides a description of the proposed change. Attachment 2 provides the existing TS pages marked to show the proposed change. Attachment 3 provides the existing TS Bases pages marked up to show the proposed change. Attachment 4 provides the proposed TS changes in final typed format. Attachment 5 provides the proposed TS Bases changes in final typed format. Attachment 6 provides the regulatory commitment[s].

[LICENSEE] requests approval of the proposed license amendment by [DATE], with the amendment being implemented [BY DATE OR WITHIN X DAYS].

In accordance with 10 CFR 50.91, “Notice for Public Comment; State Consultation,” a copy of this application, with attachments, is being provided to the designated [STATE] Official.

I declare [or certify, verify, state] under penalty of perjury that the foregoing is correct and true.

Executed on [date] [Signature]

If you should have any questions about this submittal, please contact [NAME, TELEPHONE NUMBER].

Sincerely,

[Name, Title]

Attachments: 1. Evaluation of Proposed Change

2. Proposed Technical Specification Changes (Mark-Up)

3. Proposed Technical Specification Bases Changes (Mark-Up)
4. Proposed Technical Specification Change (Re-Typed)
5. Proposed Technical Specification Bases Changes (Re-Typed)
6. List of Regulatory Commitments

cc: [NRR Project Manager]

[Regional Office]

[Resident Inspector]

[State Contact]

ATTACHMENT 1

EVALUATION OF PROPOSED CHANGE

1.0 DESCRIPTION

The proposed amendment would revise the Technical Specification (TS) and TS Bases to clearly define the Reactor Coolant System (RCS) leakage detection instrumentation Operability requirements as well as revise Conditions and Required Actions related to leakage detection instrumentation. This change is consistent with NRC-approved Revision 2 to Technical Specification Task Force (TSTF) Improved Standard Technical Specification (STS) Change Traveler-513, "Revise PWR Operability Requirements and Actions for RCS Leakage Instrumentation." [Minor differences between the proposed plant-specific TS changes, and the changes proposed by Traveler-513 are listed in Section 2.0.] The availability of this TS improvement was announced in the Federal Register on [Date] ([ ] FR [ ]) as part of the consolidated line item improvement process (CLIIP).

2.0 PROPOSED CHANGE

Consistent with the NRC-approved Revision 2 of Traveler-513, the proposed changes revise and add a new Condition to TS [3.4.15], "[RCS Leakage Detection Instrumentation]," and revise the associated bases. New Condition [D] is applicable when the containment atmosphere gaseous radioactivity monitor is the only Operable monitor (i.e., all other monitors are inoperable). The Required Actions require analyzing grab samples of the containment atmosphere or performing an RCS water inventory balance every 12 hours and restoring another monitor within 7 days. Existing Condition [F] applies when all required monitors are inoperable and requires immediate entry into Limiting Condition for Operation (LCO) 3.0.3. This Condition is revised to require obtaining and analyzing a containment atmosphere grab sample and performance of an RCS water inventory balance every 6 hours. At least one RCS leakage detection monitor must be restored within 72 hours or a plant shutdown is required. Existing Condition [E] applies when

the Required Actions and associated Completion Times are not met. It is moved to the last Condition and applies to all the previous Conditions. The TS Bases are revised to clearly define the RCS leakage detection instrumentation Operability requirements in the LCO Bases, eliminate discussion from the Bases that could be erroneously construed as Operability requirements, and reflect the changes to the TSs.

[The proposed changes also correct inappropriate references to “required” equipment in TS [3.4.15]. In several locations the specifications incorrectly refer to a “required” [equipment name]. The term "required" is reserved for situations in which there are multiple ways to meet the LCO, such as the requirement for either a gaseous or particulate radiation monitor. The incorrect use of the term "required" is removed from TS [3.4.15] Conditions [A, B, and C]].

[LICENSEE] is [not] proposing variations or deviations from the TS changes described in Traveler-513, Revision 2, or the NRC staff's model safety evaluation published on ([DATE] ([ ] FR [ ]) as part of the CLIIP Notice of Availability. [Discuss any differences with Traveler-513, Revision 2 and the effect of any changes on the NRC staff's model safety evaluation].

3.0 BACKGROUND

The background for this application is adequately addressed by the NRC Notice of Availability published on [DATE] ([ ] FR [ ]).

4.0 TECHNICAL ANALYSIS

The proposed amendment contains a less restrictive TS change to existing Condition [F]. The proposed Required Actions for Condition [F] would eliminate the requirement to immediately enter LCO 3.0.3 and would add the requirement to analyze grab samples of the containment atmosphere once per 6 hours, perform an RCS water inventory balance once per 6 hours per Surveillance Requirement 3.4.13.1, and restore at least one RCS leakage detection monitor to Operable status within 72 hours. The less restrictive change is justified because alternate RCS leakage monitoring methods are required to be performed when no monitoring methods are

operable. These alternate methods provide an RCS leakage detection capability similar to the required methods. The RCS mass balance is capable of identifying a one gallon per minute (gpm) RCS leak rate and uses instrumentation readily available to control room operators. The grab sample has an RCS leakage detection capability that is comparable to that of the containment particulate radiation monitor. The proposed Actions and Completion Times for grab samples and mass balance calculations are adequate because use of frequent grab samples and RCS mass balance calculations provide assurance that any significant RCS leakage will be detected prior to significant RCS pressure boundary degradation. The proposed 72 hour Completion Time for Restoration of at least one RCS leakage detection monitor to Operable status is appropriate given the low probability of significant RCS leakage during the time when no required RCS leakage detection monitors are Operable, and the need for time to restore at least one monitor to Operable status.

[LICENSEE] has reviewed the safety evaluation published on [DATE] ([ ] FR [ ]) as part of the CLIIP Notice of Availability. [LICENSEE] has concluded that the technical justifications presented in the safety evaluation prepared by the NRC staff are applicable to [PLANT, UNIT NO.].

5.0 REGULATORY SAFETY ANALYSIS

5.1 NO SIGNIFICANT HAZARDS DETERMINATION

[LICENSEE] has reviewed the no significant hazards determination published on [DATE] ([ ] FR [ ]) as part of the CLIIP Notice of Availability. [LICENSEE] and has concluded that the determination presented in the notice is applicable to [PLANT, UNIT NO.]. [LICENSEE] has evaluated the proposed changes to the TS using the criteria in 10 CFR 50.92 and has determined that the proposed changes do not involve a significant hazards consideration. An analysis of the issue of no significant hazards consideration is presented below:

[LICENSEE INSERT ANALYSIS HERE.]

5.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

A description of the proposed TS change and its relationship to applicable regulatory requirements was provided in the NRC Notice of Availability published on [DATE] ([ ] FR [ ]). [LICENSEE] has reviewed the NRC staff's model safety evaluation published on [DATE] ([ ] FR[ ]) as part of the CLIIP Notice of Availability and concluded that the regulatory evaluation section is applicable to [PLANT, UNIT NO.].

6.0 ENVIRONMENTAL CONSIDERATION

[LICENSEE] has reviewed the environmental evaluation included in the model safety evaluation published on [DATE] ([ ] FR [ ]) as part of the CLIIP Notice of Availability. [LICENSEE] has concluded that the NRC staff's findings presented in that evaluation are applicable to [PLANT, NO.].

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, and would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

7.0 REFERENCES

1. Federal Register Notice, Notice of Availability published on [DATE] ([ ] FR [ ]).
2. TSTF-513, Revision 2, "Revise PWR Operability Requirements and Actions for RCS Leakage Instrumentation."
[3. Other References]

PROPOSED MODEL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION FOR PLANT-SPECIFIC ADOPTION OF TSTF TRAVELER-513, REVISION 2, "REVISE PWR OPERABILITY REQUIREMENTS AND ACTIONS FOR RCS LEAKAGE INSTRUMENTATION"

Description of Amendment Request: The proposed amendment would revise Technical Specification (TS) [3.4.15], "[Reactor Coolant System (RCS) Leakage Detection Instrumentation.]" Conditions and Required Actions as well as make associated TS Bases changes for TS [3.4.15].

Basis for proposed no significant hazards consideration: As required by Title10 of the *Code of Federal Regulations* (10 CFR) Section 50.91(a), the [LICENSEE] analysis of the issue of no significant hazards consideration is presented below:

1: Does the Proposed Change Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated?

Response: No

The proposed change clarifies the Operability requirements for the RCS leakage detection instrumentation and reduces the time allowed for the plant to operate when the only Operable RCS leakage instrumentation monitor is the containment atmosphere gaseous radiation monitor. The proposed change also extends the allowed operating time when all RCS leakage instrumentation is inoperable. The monitoring of RCS leakage is not a precursor to any accident previously evaluated. The monitoring of RCS leakage is not used to mitigate the consequences of any accident previously evaluated. Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2: Does the Proposed Change Create the Possibility of a New or Different Kind of

Accident from any Accident Previously Evaluated?

Response: No

The proposed change clarifies the Operability requirements for the RCS leakage detection instrumentation and reduces the time allowed for the plant to operate when the only Operable RCS leakage instrumentation monitor is the containment atmosphere gaseous radiation monitor. The proposed change also extends the allowed operating time when all RCS leakage instrumentation is inoperable. The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The proposed change maintains sufficient continuity and diversity of leak detection capability that the probability of piping evaluated and approved for Leak-Before-Break progressing to pipe rupture remains extremely low. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3: Does the Proposed Change Involve a Significant Reduction in a Margin of Safety?

Response: No

The proposed change clarifies the Operability requirements for the RCS leakage detection instrumentation and reduces the time allowed for the plant to operate when the only Operable RCS leakage instrumentation monitor is the containment atmosphere gaseous radiation monitor. The proposed change also extends the allowed operating time when all RCS leakage instrumentation is inoperable to allow time to restore at least one RCS leakage monitoring instrument to Operable status. Reducing the amount of time the plant is allowed to operate with only the containment atmosphere gaseous radiation monitor Operable increases the

margin of safety by increasing the likelihood that an increase in RCS leakage will be detected before it potentially results in gross failure. Allowing a limited period of time to restore at least one RCS leakage monitoring instrument to Operable status before requiring a plant shutdown avoids putting the plant through a thermal transient without RCS leakage monitoring. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based upon the reasoning presented above, the NRC staff concludes that the requested change does not involve a significant hazards consideration, as set forth in 10 CFR 50.92(c), "Issuance of Amendment."

PROPOSED MODEL SAFETY EVALUATION FOR PLANT-SPECIFIC ADOPTION OF TECHNICAL SPECIFICATION TASK FORCE TRAVELER-513, REVISION 2, "REVISE PWR OPERABILITY REQUIREMENTS AND ACTIONS FOR RCS LEAKAGE INSTRUMENTATION"

1.0 INTRODUCTION

By letter dated [DATE], [LICENSEE] (the licensee) proposed changes to the technical specifications (TS) for [PLANT NAME]. The proposed changes revise TS [3.4.15], "[Reactor Coolant System (RCS) Leakage Detection Instrumentation]." The proposed changes also revise the TS Bases to clearly define the RCS leakage detection instrumentation Operability requirements in the Limiting Condition for Operation (LCO) Bases, eliminate discussion from the TS Bases that could be erroneously construed as Operability requirements, and reflect the changes to the TSs.

The licensee stated that the application is consistent with NRC-approved Revision 2 to Technical Specification Task Force (TSTF) Improved Standard Technical Specification (STS) Change Traveler-513, "Revise PWR Operability Requirements and Actions for RCS Leakage Instrumentation." [Discuss any differences with TSTF-513, Revision 2.] The availability of this TS improvement was announced in the *Federal Register* on [Date] ([ ] FR [ ]) as part of the consolidated line item improvement process (CLIIP).

2.0 REGULATORY EVALUATION

The regulation in General Design Criterion (GDC) 30 of Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Quality of Reactor Coolant Pressure Boundary," requires means for detecting and, to the extent practical, identifying the location of the source of RCS Leakage. Regulatory Guide (RG) 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973, 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). Revision 1 of RG 1.45 was issued in May 2008. RG 1.45,

Revision 1, describes different methods of implementing the GDC 30 requirements compared to RG 1.45, Revision 0, and was intended to be applicable only to new reactors. Therefore, operating nuclear power plants are not committed to Revision 1 of RG 1.45.

RG 1.45, Revision 0, Regulatory Position C.2, states that "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." 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." 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 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 updated final safety analysis report (UFSAR).

As stated in NRC Information Notice (IN) 2005-24, "Nonconservatism in Leakage Detection Sensitivity," the reactor coolant activity assumptions for containment atmosphere gaseous radioactivity monitors may be nonconservative. This means the monitors may not be able to detect a one gpm leak within one hour under all likely operating conditions.

The NRC's regulatory requirements related to the content of the TS are contained in 10 CFR Part 50.36. Paragraph (c)(2)(ii) of 10 CFR 50.36 lists criteria for determining whether particular items are required to be included in the TS LCOs. Criterion 1 of that regulation 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 16, 1995), this criterion is intended to apply to process variables that alert the operator to a situation when accident initiation is more likely.

The NRC's guidance for the format and content of PWR TS can be found in NUREG-1430, Revision 3.0, "Standard Technical Specifications Babcock and Wilcox Plants," NUREG-1431, Revision 3.0, "Standard Technical Specifications Westinghouse Plants," and NUREG-1432, Revision 3.0, "Standard Technical Specifications Combustion Engineering Plants." 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. Operability requirements should be defined in the LCO section of the STS Bases.

The STS Bases for STS 3.4.15 contained in NUREG-1430, Revision 3.0; NUREG-1431, Revision 3.0; and NUREG-1432, Revision 3.0, included information that could be construed as Operability requirements in the Background, Applicable Safety Analysis, and LCO sections. These STS Bases did not accurately describe the Operability of a detector as being based on the design assumptions and licensing basis for the plant. This situation and the issue described in IN 2005-24 have caused questions to arise regarding the Operability requirements for containment atmosphere gaseous radioactivity monitors. Traveler-513, Revision 2, contained changes to the STS Bases that revised PWR Operability requirements. In addition, Traveler-513, Revision 2, includes NRC-approved revisions to TS Actions for RCS Leakage

Instrumentation that recognize the potentially reduced sensitivity of the gaseous radioactivity instrument and more appropriate actions when all RCS leakage detection instrumentation is inoperable.

2.1 Adoption of Traveler-513, Revision 2, by [facility name]

Proper plant-specific adoption of Traveler-513, Revision 2, by [licensee] will revise the RCS Leakage Detection Instrumentation TS and TS Bases and clarify the Operability requirements for RCS Leakage Detection Instrumentation.

The NRC staff reviewed the proposed changes for compliance with 10 CFR 50.36 and agreement with the precedent as established in NUREG-[1430, 1431, or 1432]. In general, licensees cannot justify technical specification changes solely on the basis of adopting the model STS. To ensure this, the NRC staff makes a determination that proposed changes maintain adequate safety. Changes that result in relaxation (less restrictive condition) of current TS requirements require detailed justification.

In general, there are two classes of changes to TSs: (1) changes needed to reflect contents of the design basis (TSs are derived from the design basis), and (2) voluntary changes to take advantage of the evolution in policy and guidance as to the required content and preferred format of TSs over time. This amendment request deals with both classes of change. The amendment request includes proposed changes to the TS Bases to more accurately reflect the contents of the facility design basis related to operability of the RCS leakage detection instrumentation and proposed changes to the TS that take advantage of revised guidance on required actions for inoperable RCS leakage detection instrumentation. Guidelines for TS and TS Bases content are found in NUREG-[1430, 1431, or 1432], as amended by Traveler-513, Revision 2.

Licensees may revise the TSs to adopt improved STS format and content provided that plant-specific review supports a finding of continued adequate safety because: (1) the change is

editorial, administrative or provides clarification (i.e., no requirements are materially altered), (2) the change is more restrictive than the licensee's current requirement, or (3) the change is less restrictive than the licensee's current requirement, but nonetheless still affords adequate assurance of safety when judged against current regulatory standards. The detailed application of this general framework, and additional specialized guidance, are discussed in Section 3.0 in the context of specific proposed changes.

3.0 TECHNICAL EVALUATION

The current Bases for TS [3.4.15], "[Reactor Coolant System (RCS) Leakage Detection Instrumentation]," do not clearly define the basis for Operability for the RCS Leakage Instrumentation. The current TS Bases contain information that could be construed as Operability requirements in the Background, Applicable Safety Analysis, and LCO sections. In addition, the current TS Bases do not accurately describe the Operability of a detector as being based on the design assumptions and licensing basis for the plant.

In adopting Traveler-513, Revision 2, the licensee proposed changes that would revise the Bases for TS [3.4.15] to clearly define the RCS leakage detection instrumentation Operability requirements in the LCO Bases and reflect the changes to the TSs. The proposed changes to the Operability requirements included in the LCO Bases are acceptable because they define, consistent with the design basis of the facility, the minimum set of diverse instruments that must be operable, the plant parameters monitored by the instrumentation, the design sensitivity of the leakage detection instruments, and factors that affect the operational sensitivity of the instrument. 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 reactor coolant pressure boundary.

In adopting the changes to TS included in Traveler-513, Revision 2, the licensee also proposed to revise TS [3.4.15], "[Reactor Coolant System (RCS) Leakage Detection

Instrumentation]" Conditions and Required Actions. The licensee proposed adding new Condition [D] to TS [3.4.15]. New Condition [D] would be applicable when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor. The proposed Required Actions for new Condition [D] 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 seven 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. The NRC staff determined that the proposed change is more restrictive than the current requirement, because there is no current Condition for the situation when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor. The proposed Actions and Completion Times are adequate because the grab samples 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. In addition, Surveillance Requirement (SR) 3.4.13.1 requires verification that RCS operational leakage is within limits by performance of an RCS water inventory balance at a frequency of once per 72 hours, which provides periodic confirmation that RCS leakage is within limits using diverse instrumentation. Allowing 7 days to restore another RCS leakage monitor to Operable status ensures that the plant will not be operated in a degraded configuration for a long time.

Existing TS [3.4.15] Condition [F] is applicable when all required RCS leakage detection monitors are inoperable. The current Required Action for Condition [F] is to immediately enter LCO 3.0.3. The licensee proposed modifying the Required Actions for Condition [F]. The proposed Required Actions for Condition [F] would eliminate the requirement to immediately enter LCO 3.0.3 and would add the requirement to analyze grab samples of the containment

atmosphere once per 6 hours, perform an RCS water inventory balance once per 6 hours per SR 3.4.13.1, and restore at least one RCS leakage detection monitor to Operable status within 72 hours. The NRC staff determined that the proposed change is less restrictive than the current requirement because it would allow a longer time to operate when all required RCS leakage detection monitors are inoperable.

The licensee provided justification for the less restrictive change in its LAR, which the NRC staff reviewed. The grab sample has an RCS leakage detection capability that is comparable to that of the containment particulate radiation monitor. The RCS water inventory balance is capable of identifying a one-gpm RCS leak rate and uses instrumentation readily available to control room operators. The proposed Actions and Completion Times for grab samples and water inventory balance calculations are adequate because use of frequent grab samples and RCS water inventory balance calculations provide assurance that any significant RCS leakage will be detected prior to significant RCS pressure boundary degradation. The proposed 72-hour Completion Time for Restoration of at least one RCS leakage detection monitor to Operable status is appropriate given the low probability of significant RCS leakage during the time when no required RCS leakage detection monitors are Operable, and the need for time to restore at least one monitor to Operable status.

[Facility] has been licensed for Leak-Before-Break (LBB). The basic concept of LBB is that certain piping material has sufficient fracture toughness (i.e., ductility) to resist rapid flaw propagation. 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 analyses. Before 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 proposed actions for inoperable RCS leakage detection instrumentation maintain sufficient continuity 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.

The licensee proposed minor changes to ensure continuity of the TS format. These changes re-lettered current Condition [D], which applies when the containment sump monitor is the only operable leakage detection instrument, to Condition [E], and current Condition [E], which applies when the required action and the associated completion time are not satisfied, to Condition [G]. Similar changes were made to the associated Required Actions. The NRC staff determined that these changes were editorial, and therefore acceptable.

The NRC staff evaluated the licensee's proposed change against the applicable regulatory requirements listed in Section 2 of this safety evaluation. The NRC staff also compared the proposed change to the change made to STS by Traveler-513, Revision 2. The NRC staff determined that all the proposed changes afford adequate assurance of safety when judged against current regulatory standards. Therefore, the NRC staff finds the proposed changes acceptable.

4.0 CONCLUSIONS

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.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the [ ] State official was notified of the proposed issuance of the amendment. The State official had [(1) no comments or (2) the

following comments—with subsequent disposition by the NRC staff].

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20, "Standards for Protection Against Radiation." 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 considerations, and there has been no public comment on the finding [FR]. 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 amendments.

7.0 REFERENCES

1. [Licensee] Licensee Amendment Request to adopt TSTF-513, [DATE].
2. Federal Register Notice, Notice of Availability published on [DATE] ([ ] FR [ ]).
3. TSTF Traveler-513, Revision 2, "Revise PWR Operability Requirements and Actions for RCS Leakage Instrumentation"