

NUCLEAR REGULATORY COMMISSION

Notice of Opportunity to Comment on Model Safety Evaluation and Model License Amendment Request on Technical Specification Improvement Regarding Use of the Improved Bank Position Withdrawal Sequence for General Electric Boiling Water Reactors Using the Consolidated Line Item Improvement Process

AGENCY: Nuclear Regulatory Commission.

ACTION: Request for comment.

SUMMARY: Notice is hereby given that the staff of the U. S. Nuclear Regulatory Commission (NRC) has prepared a model license amendment request (LAR), model safety evaluation (SE), and model proposed no significant hazards consideration (NSHC) determination related to changes to Standard Technical Specification (STS) 3.1.6, "Rod Pattern Control," and STS 3.3.2.1, "Control Rod Block Instrumentation" for NUREG-1433 and NUREG-1434. The proposed changes would revise the Bases for STS 3.1.6, "Rod Pattern Control," and STS 3.3.2.1, "Control Rod Block Instrumentation" to allow licensees to use an improved control rod bank position withdrawal sequence (BPWS) when performing a reactor shutdown. In addition, for NUREG-1434 licensees, the proposed changes would add a footnote to Table 3.3.2.1-1, "Control Rod Block Instrumentation." The requirements for implementing the improved BPWS are described in General Electric Licensing Topical Report (LTR) NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," dated July 2004. The General Electric Boiling Water Reactor Owners Group (BWROG) participants in the Technical Specifications Task Force (TSTF) proposed these changes to the STS in TSTF-476, Revision 0, "Improved BPWS Control Rod Insertion Process (NEDO-33091)."

The purpose of these models is to permit the NRC to efficiently process amendments to incorporate these changes into plant-specific Technical Specifications (TS) for General Electric

Boiling Water Reactors (BWRs). Licensees of nuclear power reactors to which the models apply can request amendments conforming to the models. In such a request, a licensee should confirm the applicability of the model LAR, model SE and NSHC determination to its plant. The NRC staff is requesting comments on the model LAR, model SE and NSHC determination before announcing their availability for referencing in license amendment applications.

DATES: The comment period expires 30 days from the date of this publication. 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: Comments may be submitted either electronically or via U.S. mail.

Submit written comments to: Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, Mail Stop: T-6 D59, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Hand deliver comments to: 11545 Rockville Pike, Rockville, Maryland, between 7:45 a.m. and 4:15 p.m. on Federal workdays.

Submit comments by electronic mail to: CLIIP@nrc.gov.

Copies of comments received may be examined at the NRC's Public Document Room, One White Flint North, Public File Area O1-F21, 11555 Rockville Pike (first floor), Rockville, Maryland.

FOR FURTHER INFORMATION CONTACT: Eric Thomas, Mail Stop: O-12H2, Division of Inspection and Regional Support, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6772.

SUPPLEMENTARY INFORMATION:

Background

Regulatory Issue Summary 2000-06, "Consolidated Line Item Improvement Process [CLIIP] for Adopting Standard Technical Specifications Changes for Power Reactors," was issued on March 20, 2000. The CLIIP is intended to improve the efficiency and transparency of NRC licensing processes. This is accomplished by processing proposed changes to the STS in a manner that supports subsequent license amendment applications. The CLIIP includes an opportunity for the public to comment on proposed changes to the STS following a preliminary assessment by the NRC staff and finding that the change will likely be offered for adoption by licensees. This notice is soliciting comment on a proposed change to the STS that changes the Bases for sections 3.1.6 and 3.3.2.1 of the General Electric BWR STS, Revision 3 of NUREG-1433 and NUREG-1434, and Table 3.3.2.1-1 in the NUREG-1434 STS. The CLIIP directs the NRC staff to evaluate any comments received for a proposed change to the STS and to either reconsider the change or proceed with announcing the availability of the change for proposed adoption by licensees. Those licensees opting to apply for the subject change to TSs are responsible for reviewing the staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. Following the public comment period, the model LAR and model SE will be finalized, and posted on the NRC webpage. Each amendment application made in response to the notice of availability will be processed and noticed in accordance with applicable NRC rules and procedures.

This notice involves implementation of an improved BPWS, which would allow licensees of General Electric BWRs to follow the improved BPWS when inserting control rods into the core during a reactor shutdown. By letter dated August 30, 2004, the BWROG proposed these changes for incorporation into the STS as TSTF-476, Revision 0. These changes are based on

the NRC staff-approved LTR NEDO-33091-A, "Improved BPWS Control Rod Insertion Process," dated July 2004, as approved by NRC in an SE dated June 16, 2004, accessible electronically from the Agency-wide Documents Access and Management System's (ADAMS) Public Electronic Reading Room on the Internet (ADAMS Accession No. ML041700479) at the NRC web site <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC Public Document Room Reference staff by telephone at 1-800-397-4209, 301-415-4737, or by e-mail to pdr@nrc.gov.

Applicability:

These proposed changes will revise the Section 3.6.1 and Section 3.3.2.1 TS Bases for General Electric BWR/4 and BWR/6 plants, and TS Table 3.3.2.1-1 for BWR/6 plants.

To efficiently process the incoming license amendment applications, the NRC staff requests that each licensee applying for the changes addressed by TSTF-476, Revision 0, using the CLIIP submit an LAR that adheres to the following model. Any variations from the model LAR should be explained in the licensee's submittal. Variations from the approach recommended in this notice may require additional review by the NRC staff, and may increase the time and resources needed for the review. Significant variations from the approach, or inclusion of additional changes to the license, will result in staff rejection of the submittal. Instead, licensees desiring significant variations and/or additional changes should submit a LAR that does not claim to adopt TSTF-476.

Public Notices:

This notice requests comments from interested members of the public within 30 days of the date of this publication. Following the NRC staff's evaluation of comments received as a result of this notice, the NRC staff may reconsider the proposed change or may proceed with

announcing the availability of the change in a subsequent notice (perhaps with some changes to the model LAR, model SE or model NSHC determination as a result of public comments). If the NRC staff announces the availability of the change, licensees wishing to adopt the change will submit an application in accordance with applicable rules and other regulatory requirements. The NRC staff will, in turn, issue for each application a notice of consideration of issuance of amendment to facility operating license(s), a proposed NSHC determination, and an opportunity for a hearing. A notice of issuance of an amendment to operating license(s) will also be issued to announce the revised requirements for each plant that applies for and receives the requested change.

Dated at Rockville, Maryland this 7th day of April 2006.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Thomas H. Boyce, Chief
Technical Specifications Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

announcing the availability of the change in a subsequent notice (perhaps with some changes to the model LAR, model SE or model NSHC determination as a result of public comments). If the NRC staff announces the availability of the change, licensees wishing to adopt the change will submit an application in accordance with applicable rules and other regulatory requirements. The NRC staff will, in turn, issue for each application a notice of consideration of issuance of amendment to facility operating license(s), a proposed NSHC determination, and an opportunity for a hearing. A notice of issuance of an amendment to operating license(s) will also be issued to announce the revised requirements for each plant that applies for and receives the requested change.

Dated at Rockville, Maryland this 7th day of April 2006.

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Thomas H. Boyce, Chief
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Office of Nuclear Reactor Regulation

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DATE	02/27/2006	04/03/2006	04/07/2006	04/07/2006

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**FOR INCLUSION ON THE TECHNICAL SPECIFICATION WEB PAGE
THE FOLLOWING EXAMPLE OF AN APPLICATION WAS PREPARED BY THE NRC STAFF
TO FACILITATE THE ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE (TSTF)
TRAVELER TSTF-476, REVISION 0 "IMPROVED BPWS CONTROL ROD INSERTION
PROCESS (NEDO-33091)." THE MODEL PROVIDES THE EXPECTED LEVEL OF DETAIL
AND CONTENT FOR AN APPLICATION TO ADOPT TSTF-476, REVISION 0. LICENSEES
REMAIN RESPONSIBLE FOR ENSURING THAT THEIR ACTUAL APPLICATION FULFILLS
THEIR ADMINISTRATIVE REQUIREMENTS AS WELL AS NRC REGULATIONS.**

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

SUBJECT: PLANT NAME, DOCKET NO. 50-[xxx,] RE: APPLICATION FOR TECHNICAL
SPECIFICATION IMPROVEMENT TO ADOPT TSTF-476, REVISION 0,
"IMPROVED BPWS CONTROL ROD INSERTION PROCESS (NEDO-33091)"

Dear Sir or Madam:

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 NOS.]. The proposed changes would revise Sections 3.1.6, "Rod Pattern Control," and 3.3.2.1, "Control Rod Block Instrumentation," to allow [PLANT NAME] to reference a new Banked Position Withdrawal Sequence (BPWS) shutdown sequence in the TS Bases. [(BWR/6 only), In addition, a footnote is added to Table 3.3.2.1-1, "Control Rod Block Instrumentation."]

The changes are consistent with NRC-approved Industry Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-476, Revision 0, "Improved BPWS Control Rod Insertion Process (NEDO-33091)." 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).

Enclosure 1 provides a description and assessment of the proposed changes, as well as confirmation of applicability. Enclosure 2 provides the existing TS pages and TS Bases marked-up to show the proposed changes. Enclosure 3 provides final TS pages and TS Bases pages.

[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, a copy of this application, with enclosures, is being provided to the designated [STATE] Official.

I declare under penalty of perjury under the laws of the United States of America that I am authorized by [LICENSEE] to make this request and that the foregoing is true and correct. [Note that request may be notarized in lieu of using this oath or affirmation statement]. If you should have any questions regarding this submittal, please contact [].

Sincerely,

Name, Title

Enclosures:

1. Description and Assessment of Proposed Changes
2. Proposed Technical Specification Changes and Technical Specification Bases Changes
3. Final Technical Specification and Bases pages

cc: NRR Project Manager
Regional Office
Resident Inspector
State Contact
ITSB Branch Chief

1.0 DESCRIPTION

This letter is a request to amend Operating License(s) [LICENSE NUMBER(S)] for [PLANT/UNIT NAME(S)].

The proposed changes would revise Technical Specification (TS) 3.1.6, "Rod Pattern Control", and 3.3.2.1, "Control Rod Block Instrumentation," [(BWR/6 only) along with TS Table 3.3.2.1-1, "Control Rod Block Instrumentation,"] to allow reference to an improved, optional Bank Position Withdrawal Sequence (BPWS) in the TS Bases for use during reactor shutdown.

The new BPWS is described in Topical Report NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," dated July 2004 (Reference 1), and approved by the NRC by Safety Evaluation (SE) dated June 16, 2004 (ADAMS ML041700479) (Reference 2). Technical Specification Task Force (TSTF) change traveler TSTF-476, Revision 0, "Improved BPWS Control Rod Insertion Process (NEDO-33091)" was announced for availability in the Federal Register on [DATE] as part of the consolidated line item improvement process (CLIIP).

2.0 PROPOSED CHANGES

Consistent with NRC-approved TSTF-476, Revision 0, the proposed TS changes include:

- Revised TS Section 3.6.1 Bases to allow use of an optional BPWS during plant shutdown.
- Revised TS Section 3.3.2.1 Bases to allow reprogramming of the rod worth minimizer during the optional BPWS shutdown sequence.
- [(BWR/6 only): Revised Table 3.3.2.1-1, "Control Rod Block Instrumentation," which adds a footnote that allows operators to bypass the rod pattern controller if conditions for the optional BPWS shutdown process are satisfied.]

3.0 BACKGROUND

The background for this application is as stated in the model SE in NRC's Notice of Availability published on [DATE] ([] FR []), the NRC Notice for Comment published on [DATE] ([] FR []), and TSTF-476, Revision 0.

4.0 TECHNICAL ANALYSIS

[LICENSEE] has reviewed References 1 and 2, and the model SE published on [DATE] ([] FR []) as part of the CLIIP Notice for Comment. [LICENSEE] has applied the methodology in Reference 1 to develop the proposed TS changes. [LICENSEE] has also concluded that the justifications presented in TSTF-476, Revision 0 and the model SE prepared by the NRC staff are applicable to [PLANT, UNIT NOS.], and justify this amendment for the incorporation of the changes to the [PLANT] TS.

5.0 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 [DATE] ([] FR []), the NRC Notice for Comment published on [DATE] ([] FR []), and TSTF-476, Revision 0.

5.1 Regulatory Commitments

As discussed in the model SE published in the *Federal Register* on [DATE] ([] FR []) for this technical specification improvement, the following plant-specific verifications/commitments were performed. In Reference 2 the NRC staff explained that the potential for the control rod drop accident (CRDA) will be eliminated by the following changes to the operational procedures, which [PLANT NAME] [has made/will commit to make prior to implementation]:

1. Before reducing power to the low power setpoint (LPSP), operators shall confirm control rod coupling integrity for all rods that are fully withdrawn. Control rods that have not been confirmed coupled and are in intermediate positions must be fully inserted prior to power reduction to the LPSP. No action is required for fully-inserted control rods.

If a shutdown is required and all rods, which are not confirmed coupled, cannot be fully inserted prior to the power dropping below the LPSP, then the original/standard BPWS must be adhered to.

2. After reactor power drops below the LPSP, rods may be inserted from notch position 48 to notch position 00 without stopping at the intermediate positions. However, GE Nuclear Energy recommends that, to the maximum extent possible, operators insert rods in the same order as specified for the original/standard BPWS. If a plant is in the process of shutting down following improved BPWS with the power below the LPSP, no control rod shall be withdrawn unless the control rod pattern is in compliance with standard BPWS requirements.

In addition to the procedure changes specified above, the staff previously concluded, based on its review of NEDO-33091-A, that no single failure of the boiling water reactor CRD mechanical or hydraulic system can cause a control rod to drop completely out of the reactor core during the shutdown process. Therefore, the proper use of the improved BPWS will prevent a CRDA from occurring while power is below the LPSP. [LICENSEE] has verified, in accordance with NEDO-33091-A, Revision 2, that no single failure of the boiling water reactor CRD mechanical or hydraulic system can cause a control rod to drop completely out of the reactor core during the shutdown process.

6.0 NO SIGNIFICANT HAZARDS CONSIDERATION

[LICENSEE] has reviewed the proposed no significant hazards consideration determination published in the *Federal Register* on [DATE] ([] FR []) as part of the CLIIP. [LICENSEE] has concluded that the proposed determination presented in the notice is applicable to [PLANT] and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

7.0 ENVIRONMENTAL EVALUATION

[LICENSEE] has reviewed the environmental consideration included in the model SE published in the *Federal Register* on [DATE] ([] FR []) as part of the CLIIP. [LICENSEE] has concluded that the staff's findings presented therein are applicable to [PLANT] and the

determination is hereby incorporated by reference for this application.

8.0 REFERENCES

1. Topical Report NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," dated July 2004.
2. NRC Safety Evaluation (SE) approving Topical Report NEDO-33091, Revision 2, "Improved BPWS Control Rod Insertion Process," dated June 16, 2004.

3. Federal Register Notices:

Notice for Comment published on [DATE] ([] FR [])

Notice of Availability published on [DATE] ([] FR [])

MODEL SAFETY EVALUATION
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Technical Specification Task Force TSTF-476, Revision 0
"Improved BPWS Control Rod Insertion Process (NEDO-33091)"

1.0 INTRODUCTION

By letter dated [_____, 20__], [LICENSEE] (the licensee) proposed changes to the technical specifications (TS) for [PLANT NAME]. The requested changes are the adoption of TSTF-476, Revision 0, "Improved BPWS Control Rod Insertion Process (NEDO-33091-A)," to the Boiling Water Reactor (BWR) Standard Technical Specifications (STS), which was proposed by the Technical Specifications Task Force (TSTF) by letter on August 30, 2004. This TSTF involves changes to NUREG-1433 and NUREG-1434 Section 3.1.6 "Rod Pattern Control," Section 3.3.2.1 "Control Rod Block Instrumentation," and Table 3.3.2.1-1 (NUREG-1434 only). The proposed TSTF would allow the use of the improved bank position withdrawal sequence (BPWS) during normal shutdowns if the conditions of NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," dated July 2004, have been satisfied.

2.0 REGULATORY EVALUATION

The control rod drop accident (CRDA) is the design basis accident for the subject TS changes. In order to minimize the impact of a CRDA, the BPWS process was developed to minimize control rod reactivity worth for BWR plants. The proposed improved BPWS further simplifies the control rod insertion process, and in order to evaluate it, the staff followed the guidelines of Standard Review Plan Section 15.4.9, and referred to General Design Criterion (GDC) 28 of Appendix A to 10 CFR Part 50 as its regulatory requirement. GDC 28 states that the reactivity control systems shall be designed with appropriate limits on the potential amount and rate of reactivity increase to assure that the effects of postulated reactivity accidents can neither (1) result in damage to the reactor coolant pressure boundary greater than limited local yielding nor (2) sufficiently disturb the core, its support structures or other reactor pressure vessel internals to impair significantly the capability to cool the core.

3.0 TECHNICAL EVALUATION

In its safety evaluation for Licensing Topical Report NEDO-33091-A, "Improved BPWS Control Rod Insertion Process," dated June 16, 2004, (ADAMS ML041700479) the staff determined that the methodology described in TSTF-476, Revision 0, to incorporate the improved BPWS into the STS, is acceptable.

TSTF-476, Revision 0, states that the improved BPWS provides the following benefits: (1) allows the plant to reach the all-rods-in condition prior to significant reactor cool down, which reduces the potential for re-criticality as the reactor cools down; (2) reduces the potential for an operator reactivity control error by reducing the total number of control rod manipulations; (3) minimizes the need for manual scrams during plant shutdowns, resulting in less wear on control rod drive (CRD) system components and CRD mechanisms; and, (4) eliminates unnecessary control rod manipulations at low power, resulting in less wear on reactor manual control and CRD system components.

[PLANT NAME] has been approved to use the improved BPWS, and the potential for a CRDA with power below the low power setpoint (LPSP) has been eliminated. The safety

evaluation for NEDO-33091-A explained that the potential for the CRDA will be eliminated by the following changes to operational procedures, which [PLANT NAME] [has made/will commit to make prior to implementation]:

1. Before reducing power to the LPSP, operators shall confirm control rod coupling integrity for all rods that are fully withdrawn. Control rods that have not been confirmed coupled and are in intermediate positions must be fully inserted prior to power reduction to the LPSP. No action is required for fully-inserted control rods.

If a shutdown is required and all rods that are not confirmed coupled cannot be fully inserted prior to power dropping below the LPSP, then the original/standard BPWS must be adhered to.

2. After reactor power drops below the LPSP, rods may be inserted from notch position 48 to notch position 00 without stopping at the intermediate positions. However, GE Nuclear Energy recommends that, to the maximum extent possible, operators insert rods in the same order as specified for the original/standard BPWS. If a plant is in the process of shutting down following improved BPWS with the power below the LPSP, no control rod shall be withdrawn unless the control rod pattern is in compliance with standard BPWS requirements.

In addition to the procedure changes specified above, the staff previously verified during its review of NEDO-33091-A, Revision 2, that no single failure of the boiling water reactor CRD mechanical or hydraulic system can cause a control rod to drop completely out of the reactor core during the shutdown process. Therefore, the proper use of the improved BPWS will prevent a CRDA from occurring while power is below the LPSP.

The staff finds the proposed Technical Specification changes in [PLANT NAME's] amendment request properly incorporate the improved BPWS procedure into the STS, and that [PLANT NAME] accurately adopted TSTF-476 and the requisite procedural changes. Therefore, the staff approves the [PLANT NAME] license amendment request to adopt TSTF-476, Revision 0.

4.0 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 staff].

5.0 ENVIRONMENTAL CONSIDERATION

The amendment[s] change[s] 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 or surveillance requirements. 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 [DATE] ([] 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 amendment.

6.0 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.

Proposed No Significant Hazards Consideration Determination

Description of Amendment Request: [Plant name] requests adoption of an approved change to the standard technical specifications (STS) for Boiling Water Reactor (BWR) Plants (NUREG-1433 & NUREG-1434) and plant specific technical specifications (TS), to allow the use of the improved bank position withdrawal sequence (BPWS) during normal shutdowns in accordance with NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," dated July 2004. The changes are consistent with NRC approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-476.

Basis for proposed no-significant-hazards-consideration determination: As required by 10 CFR 50.91(a), an analysis of the issue of no-significant-hazards-consideration is presented below:

Criterion 1—The Proposed Change Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated

The proposed changes modify the TS to allow the use of the improved bank position withdrawal sequence (BPWS) during normal shutdowns if the conditions of NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," July 2004, have been satisfied. The staff finds that the licensee's justifications to support the specific TS changes are consistent with the approved topical report and TSTF-476. Since the change only involves changes in control rod sequencing, the probability of an accident previously evaluated is not significantly increased, if at all. The consequences of an accident after adopting TSTF-476 are no different than the consequences of an accident prior to adopting TSTF-476. Therefore, the consequences of an accident previously evaluated are not significantly affected by this change. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Criterion 2—The Proposed Change Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated

The proposed change will not introduce new failure modes or effects and will not, in the absence of other unrelated failures, lead to an accident whose consequences exceed the consequences of accidents previously evaluated. The control rod drop accident (CRDA) is the design basis accident for the subject TS changes. This change does not create the possibility of a new or different kind of accident from an accident previously evaluated.

Criterion 3—The Proposed Change Does Not Involve a Significant Reduction in the Margin of Safety

The proposed change, TSTF-476, incorporates the improved BPWS, previously approved in NEDO-33091-A, into the improved TS. Control rod drop accident (CRDA) is the design basis accident for the subject TS changes. In order to minimize the impact of a CRDA, the BPWS process was developed to minimize control rod reactivity worth for BWR plants. The proposed improved BPWS further simplifies the control rod insertion process and, in order to evaluate it,

the staff followed the guidelines of Standard Review Plan Section 15.4.9, and referred to General Design Criterion 28 of Appendix A to 10 CFR Part 50 as its regulatory requirement. The TSTF stated the improved BPWS provides the following benefits: (1) Allows the plant to reach the all-rods-in condition prior to significant reactor cool down, which reduces the potential for re-criticality as the reactor cools down; (2) reduces the potential for an operator reactivity control error by reducing the total number of control rod manipulations; (3) minimizes the need for manual scrams during plant shutdowns, resulting in less wear on control rod drive (CRD) system components and CRD mechanisms; and, (4) eliminates unnecessary control rod manipulations at low power, resulting in less wear on reactor manual control and CRD system components. The addition of procedural requirements and verifications specified in NEDO-33091-A, along with the proper use of the BPWS will prevent a control rod drop accident (CRDA) from occurring while power is below the low power setpoint (LPSP). The net change to the margin of safety is insignificant. Therefore, this change does not involve a significant reduction in a margin of safety.

Based upon the reasoning presented above and the previous discussion of the amendment request, the requested change does not involve a significant hazards consideration.

Dated at Rockville, Maryland, this

FOR THE NUCLEAR REGULATORY COMMISSION

Project Manager
Plant Licensing Branch []
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

the staff followed the guidelines of Standard Review Plan Section 15.4.9, and referred to General Design Criterion 28 of Appendix A to 10 CFR Part 50 as its regulatory requirement. The TSTF stated the improved BPWS provides the following benefits: (1) Allows the plant to reach the all-rods-in condition prior to significant reactor cool down, which reduces the potential for re-criticality as the reactor cools down; (2) reduces the potential for an operator reactivity control error by reducing the total number of control rod manipulations; (3) minimizes the need for manual scrams during plant shutdowns, resulting in less wear on control rod drive (CRD) system components and CRD mechanisms; and, (4) eliminates unnecessary control rod manipulations at low power, resulting in less wear on reactor manual control and CRD system components. The addition of procedural requirements and verifications specified in NEDO-33091-A, along with the proper use of the BPWS will prevent a control rod drop accident (CRDA) from occurring while power is below the low power setpoint (LPSP). The net change to the margin of safety is insignificant. Therefore, this change does not involve a significant reduction in a margin of safety.

Based upon the reasoning presented above and the previous discussion of the amendment request, the requested change does not involve a significant hazards consideration.

Dated at Rockville, Maryland, this

FOR THE NUCLEAR REGULATORY COMMISSION

Project Manager
Plant Licensing Branch []
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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