



9/15/09  
74FR47289

RECEIVED

OCT 26 AM 8:53

RULES AND DIRECTIVES  
BRANCH  
154183

Date: 10-20-2009

①

To: NRC - ATTN RDB

Fax: 301-492-3446

Company: NRC

From: CHAD HOLDERBAUM - PWR OWNERS GROUP Phone: 412-374-6230

PWR Owners Group Office Fax Number: 412-374-6144

Comments: RTRDB COMMENTS ON 9-15-09 FRID  
TSTF-446 Rev 3

Number of Pages Including Cover Page = \_\_\_\_\_

SUNSI Review Complete  
Template = ADM-013

E-RISS = ADM-03  
Call = M. Honcharik (meh3)



Program Management Office  
4350 Northern Pike  
Monroeville, Pennsylvania 15146

October 15, 2009

TSTF-446 Revision 3  
Project Number 694

OG-09-404

Mr. 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

RECEIVED

OCT 26 AM 8:53

RULES AND DIRECTIVES  
BRANCH  
10/20/09

Subject: **PWROG Comments on the September 15, 2009 Federal Register Notice, "Notice of Opportunity for Public Comment on the Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Traveler-446, Revision 3, 'Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791)', Docket ID NRC-2009-0403" (PA-LSC-0135)**

Enclosed for NRC consideration are comments (Enclosure 1) and proposed changes (Enclosure 2) on the subject September 15, 2009 Federal Register Notice on TSTF-446, Revision 3, "Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791)," which were prepared by the PWR Owners Group and the Technical Specification Task Force.

If you have any questions, please do not hesitate to contact Mr. James Andrachek at (412) 374-5018 or Mr. Chad Holderbaum of the PWR Owners Group Program Management Office at (412) 374-6230.

Regards,

Approving for DENNIS Buschbaum

Dennis Buschbaum, Chairman  
PWR Owners Group

CMH:las

Mr. Michael T. Lesar  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

October 15, 2009  
Page 2 of 2  
OG-09-404

Enclosure (2)

cc: PWROG Licensing Subcommittee  
S. Rosenberg, USNRC  
J. Rowley, USNRC  
R. Grover, USNRC

L. Meledandri, Westinghouse  
M.A. Lucci, Westinghouse  
G.R. Andre, Westinghouse  
J.D. Andrachek, Westinghouse  
B. D. Mann, Excel Services Corporation

**Enclosure 1**

**PWROG Comments on the September 15, 2009 Federal Register Notice, "Notice of Opportunity for Public Comment on the Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Travler-446, Revision 3, "Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791),"**

**Docket ID NRC-2009-0403**

The PWROG and TSTF provide the following comments in response to the September 15, 2009 Federal Register Notice, "Notice of Opportunity for Public Comment on the Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Traveler-446, Revision 3, "Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791)."

Enclosure 2 provides the proposed changes to the Notice for Comment that implement these comments.

1. The model application provides options to submit plant-specific analyses in the plant-specific submittal that deviate from the generic analyses and resulting Completion Time that were justified in WCAP-15971-NP-A, Rev. 2, which are reflected in TSTF-446, Rev. 3. These options allow a licensee to reference the model application, while deviating from the changes proposed in TSTF-446, Rev. 3. It is requested that these options in the model application be deleted, since they unnecessarily complicate the model application, and deviate from the generic analyses and resulting Completion Times which are reflected in TSTF-446, Rev. 3.

The Notice contains sufficient guidance should a licensee desire to deviate from the changes proposed in TSTF-446, Rev. 3. The Notice states, "The proposed change does not prevent licensees from requesting an alternate approach or proposing changes other than those proposed in TSTF Traveler-446, Revision 3. 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 LAR. Licensees desiring significant deviations or additional changes should instead submit an LAR that does not claim to adopt TSTF Traveler-446, Revision 3."

The options contained in the model application to submit plant-specific analyses deviate from the changes proposed in TSTF-446, Rev. 3.

Implementing Condition D, and the Completion Times for the specific penetration and CIV types that are reflected in TSTF-446, Rev. 3 that were justified by the generic Tier 1 analyses contained in WCAP-15971-NP-A, Rev. 2, eliminates the need to perform plant specific Tier 1 and Tier 2 evaluations, and therefore eliminating the need address Regulatory Guide 1.200, Rev. 2, except for Tier 3 evaluations, as discussed in Comment 7 below.

The proposed changes that delete these options to perform plant-specific analyses that are not consistent with the generic Tier 1 analyses contained in WCAP-15971-NP-A, Rev. 2 are identified in Enclosure 2.

2. In several locations, the model application uses the term "allowed outage time." This term, used in Technical Specifications prior to the Improved Standard Technical

Specifications, is inconsistent with the terminology used in TSTF-446. All occurrences of the term "allowed outage time" should be replaced with "completion time".

3. The model application and No Significant Hazards Considerations Determination state that the licensee is adopting Topical Report WCAP-15791. That is incorrect. The application is to adopt the Technical Specification changes presented in TSTF-446. The model application should be revised.
4. The model application contains sections labeled "discussion." It is unclear from these discussions whether the licensee is expected to include these sections in their applications. The wording in the "discussion" sections is inconsistent with the wording of a plant-specific amendment and appears to be guidance for the NRC reviewer. The sections should be clearly delineated as NRC Reviewer's Notes.
5. The model application both references the No Significant Hazards Consideration (NSHC) determination published in the Federal Register and confirms its applicability to the plant-specific license amendment request, and includes a copy of the NSHC determination as an attachment to the application. This is inconsistent with previous model applications published via the CLIP which referenced the published NSHC. Requiring each licensee to resubmit the NSHC, without alteration, has no benefit to the licensee or the NRC. Furthermore, it is inconsistent with the treatment of the Environmental Consideration in the model application. It is recommended that the model application be revised to only reference the NSHC published in the Federal Register.
6. In the "Applicability" section of the Notice and the "Applicability of Published Safety Evaluation" section of the model application, the Notice requires a licensee's plant-specific application to address or meet the requirements stated in Nuclear Energy Institute (NEI) 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes." NEI 99-04 is a voluntary industry standard which the NRC found to contain acceptable guidance for controlling regulatory commitments made by power reactor licensees to the NRC staff. NEI 99-04 was not referenced TSTF-446 or mentioned in the model Safety Evaluation. It is inappropriate for the NRC to impose a requirement to follow a voluntary industry standard when that standard was not proposed by the licensee or referenced as part of the NRC staff's Safety Evaluation for the change. The Notice and model application should be revised to delete the reference to NEI 99-04.
7. The Notice and the model application require submittal of plant-specific Probabilistic Risk Assessment (PRA) information which will be evaluated against Regulatory Guide (RG) 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk Informed Activities." The Notice and the model application should be revised to clarify that the risk associated with the Completion Time changes was justified in the generic Tier 1 analysis contained in WCAP-15791-NP-A, Rev. 2 and that the plant-specific PRA information to be provided should be limited to that information related to the technical adequacy necessary to perform a Tier 3 assessment in accordance with Section 2.3.7 of Regulatory Guide 1.177.

Specifically, to provide assurance that there is PRA adequacy, completeness, and applicability with respect to evaluating the risk associated with the CIV Completion Time extensions, i.e., that the PRA model is, or will be capable of supporting CRMP assessments when a CIV is out of service. The containment isolation model in the PRA must ensure that all of the plant specific penetration configurations are considered. The containment isolation fault tree can either: 1) contain CIVs for at least one of each of the penetration types contained in WCAP-15791-NP-A, Rev. 2 that are applicable to the plant that are greater than 2 inches in diameter and use an approach based on surrogates or 2) include all CIVs associated with the Completion Time extension for penetrations that are greater than 2 inches in diameter. Note that it is not required to model penetrations less than or equal to 2 inches in diameter, since a large release is not possible from a penetration of this size.

8. In multiple locations in Section 3.2 of the model application, it is stated that information is provided by the licensee, however the model application does not state where the licensee is to provide that information. A new attachment should be added to the model application to provide a location for the plant-specific information that needs to be provided.

**Enclosure 2**

**Proposed Changes to the September 15, 2009 Federal Register Notice, "Notice of Opportunity for Public Comment on the Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Traveler-446, Revision 3, "Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791),"**

**Docket ID NRC-2009-0403**

[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-446, Revision 3, "Risk  
Informed Evaluation of Extensions to Containment Isolation Valve Completion Times  
(WCAP-15791)"  
[NRC-2009-0403]

**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-446, Revision 3, "Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791)." The TSTF Traveler-446, Revision 3 is available in the Agencywide Documents Access Management System (ADAMS) under Accession Number ML080510164. The proposed changes would revise technical specification (TS) containment isolation valve (CIV) completion times for Westinghouse plants. This model safety evaluation will facilitate expedited approval of plant-specific adoption of TSTF Traveler-446, Revision 3.

**DATES:** Comment period expires October 15, 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-2009-0403 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-2009-0403. Address questions about NRC dockets to Carol Gallagher 301-492-3668; e-mail [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).

**Mail comments to:** Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mall 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 O-1 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](mailto:pdr_resource@nrc.gov). The Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Traveler-446, Revision 3, "Risk

Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791)" is available electronically under ADAMS Accession Number ML092260664.

**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-2009-0403.

**FOR FURTHER INFORMATION CONTACT:** Ms. Michelle C. Honcharik, Senior Project Manager, Special Projects Branch, Mail Stop: O-12 D1, 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](mailto: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 that modifies the 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-446, Revision 3, is applicable to all Westinghouse nuclear power reactors. The Traveler requires that a licensee's plant-specific application must: (a) address or meet the requirements stated in Pressurized Water Reactor Owners' Group (PWROG) (formerly Westinghouse Owners' Group) Topical Report (TR) WCAP-15791-NP-A, Revision 2, "Risk-

Informed Evaluation of Extensions to Containment Isolation Valve Completion Times," and (b) include a demonstration of probabilistic risk assessment (PRA) quality for the licensee's Tier 3 assessments for this application. The NRC issued the final safety evaluation (SE) for TR WCAP-15791-P, Revision 2, on February 13, 2008 (ADAMS Accession No. ML080170680). The PWROG issued approved proprietary and non-proprietary versions of the WCAP (ADAMS Package Accession No. ML003696998). To efficiently process the incoming license amendment requests (LARs), the NRC staff requests that each licensee applying to implement the changes proposed in TSTF Traveler-446 include documentation regarding the technical adequacy of the PRA consistent with the requirements of Section 4.2 of Regulatory Guide (RG) 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," dated March 1, 2009 (ADAMS Accession No. ML090410014) for Tier 3 assessments associated with this application. Adoption of this CLIP should be limited to implementing the generic Tier 1 analyses and associated Completion Times that are justified in WCAP-15971-P-A, Rev. 2.

Deleted: and (b) address or meet the requirements stated in Nuclear Energy Institute (NEI) 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," (ADAMS Accession No. ML003680088),

Deleted: c

Deleted: The NRC staff approved NEI 99-04, by letter dated March 31, 2000 (ADAMS Accession No. ML003879799).

Deleted: accepted

Deleted: Applicants proposing to use PRA models for which NRC-endorsed standards do not exist must submit documentation that identifies the characteristics of those models consistent with Sections 1.2 and 1.3 of RG 1.200 or identify and justify the methods to be applied for assessing the risk contribution for those sources of risk not addressed by PRA models.

The proposed change does not prevent licensees from requesting an alternate approach or proposing changes other than those proposed in TSTF Traveler-446, Revision 3. 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 LAR. Licensees desiring significant deviations or additional changes should instead submit an LAR that does not claim to adopt TSTF Traveler-446, Revision 3.

Dated at Rockville, Maryland, this 2<sup>nd</sup> day of September 2009.

For the Nuclear Regulatory Commission.

*JRA*

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-446, REVISION 3, "RISK INFORMED EVALUATION OF EXTENSIONS TO CONTAINMENT ISOLATION VALVE COMPLETION TIMES (WCAP-15791)"

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

SUBJECT: PLANT NAME  
DOCKET NO. 50-

APPLICATION FOR TECHNICAL SPECIFICATION CHANGE REGARDING  
RISK-INFORMED JUSTIFICATION FOR CONTAINMENT ISOLATION VALVE  
COMPLETION TIME CHANGES

Deleted: ALLOWED OUTAGE

Dear Sir or Madam:

In accordance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.90, "Application for Amendment of License, Construction Permit, or Early Site Permit," [LICENSEE] is submitting a request for an amendment to the technical specifications (TS) for [PLANT NAME, UNIT NOS.].

The proposed amendment would modify [LICENSEE] technical specifications (TS) requirements for completion time changes for containment isolation valves associated with the implementation of Technical Specification Task Force (TSTF) Traveler TSTF-446, Revision 3, "Risk Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791)."

Deleted: allowed outage

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachment 2 provides the current TS pages marked up to show the proposed changes. Attachment 3 provides revised (clean) TS pages

Deleted: Topical Report WCAP-15791-NP-A, Revision 2, "Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times."

Deleted: gives

Deleted: existing

that incorporate the proposed changes. Attachment 4 summarizes the regulatory commitments made in this submittal. Attachment 5 provides the proposed changes to the TS Bases.

Deleted: Attachment 6 provides the statement of proposed No Significant Hazards Consideration.

[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. Description and Assessment
  - 2. Proposed Technical Specification Changes
  - 3. Revised Technical Specification Pages
  - 4. Regulatory Commitments
  - 5. Proposed Technical Specification Bases Changes
  - 6. Plant-Specific Information

Deleted: . . . 6. Proposed No Significant Hazards Consideration]

cc: U.S. Nuclear Regulatory Commission  
Regional Office  
NRC Resident Inspector

**ATTACHMENT 1**

**DESCRIPTION AND ASSESSMENT**

**1.0 DESCRIPTION**

The proposed amendment would modify technical specifications (TS) requirements for completion times for containment isolation valves (CIVs) consistent with the U.S. Nuclear Regulatory Commission's (NRC's) approved industry/Technical Specification Task Force (TSTF) Standard TS (STS) change, TSTF Traveler-446, Revision 3 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML080510164). The *Federal Register* notice published on [DATE] announced the availability of this TS improvement.

Deleted: allowed outage

Deleted: associated with the implementation of Topical Report (TR) WCAP-15781-NP-A, Revision 2, "Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times for Westinghouse Plants." The changes are

**2.0 ASSESSMENT**

**2.1 Applicability of Published Safety Evaluation**

[LICENSEE] has reviewed the model safety evaluation (SE) dated [DATE]. The [LICENSEE] has also reviewed the NRC staff SE (ADAMS Accession No. ML080170680) approving TR WCAP-15791-NP-A, Revision 2. [LICENSEE] has concluded that the justifications presented in the TSTF and the SE are applicable to [PLANT, UNIT NOS.] and justify this amendment for the incorporation of the changes to the [PLANT] TS.

Deleted: , and the requirements specified in Nuclear Energy Institute (NEI) 99-04, "Guidelines for Managing NRC Commitment Changes." (ADAMS Accession No. ML003680000)

Deleted: proposal

**2.2 Optional Changes and Variations**

[LICENSEE] is not proposing any variations or deviations from the STS changes described in TSTF Traveler-446, Revision 3, and the NRC staff's model safety evaluation, dated [DATE].

(If the licensee proposes variations or deviations, then the licensee needs to describe and justify these variations/deviations and include a statement, such as, the proposed amendment is consistent with the STS changes described in TSTF Traveler-446, Revision 3, but [LICENSEE] proposes variations or deviations from TSTF Traveler-446, as identified and

[justified below.]

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration

[LICENSEE] has reviewed the proposed no significant hazards consideration (NSHC) published in the *Federal Register* [DATE] ([ ] FR [ ]). [LICENSEE] has concluded that the proposed NSHC presented in the *Federal Register* notice is applicable to [PLANT NAME, UNIT NOS.]. This conclusion satisfies the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.91(a). [LICENSEE] has forwarded the NSHC to the appropriate State officials.

3.2 Verifications, Commitments, and Additional Information Needed

[LICENSEE] has demonstrated the applicability of TSTF Traveler-446, Revision 3, to [PLANT NAME, UNIT NOS] by addressing requirements specified in TR WCAP-15791-NP-A, Revision 2, in this license amendment request (LAR). This LAR provides the plant-specific information on limitations and conditions specified in Section 4.0 and the additional information specified in Section 5.0 of the SE approving TR WCAP-15791-NP-A, Revision 2. In addition, consistent with TSTF Traveler-446, [LICENSEE] must provide information for Items 3.2.1 through 3.2.9 as discussed below, in this LAR.

3.2.1 Demonstration (Penetration and CIV Configuration):

[LICENSEE] has confirmed that (a) the Penetration and CIV configurations for [PLANT NAME, UNIT NOS.] match the configurations in TR WCAP-15791-NP-A, Revision 2, and (b) the input parameter values used in the TR are representative or bounding for [PLANT NAME, UNIT NOS].

NRC Reviewer's Note:

Deleted: and is provided as Attachment (B) to this amendment request

Deleted: , which

Deleted: demonstrate

Deleted: applicable documentation/evaluation for Items 3.2.1 through 3.2.12 as noted below

Deleted: 3.2.1 Demonstration (Simultaneous LCO Entry Consideration)  
Option A: [ ]  
[LICENSEE] has incorporated new Condition D in TS [LCO 3.6.3 "Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)], as specified in TSTF Traveler-446, Revision 3. [ ]  
Option B: [ ]  
[If the licensee did not incorporate Condition D, then it must demonstrate that the potential for any cumulative risk impact of failed CIVs and multiple CIV LCO entries was evaluated by the licensee. In addition, the licensee must demonstrate that the licensee's Tier 3 risk management program addresses the possibility of simultaneous LCO entries for inoperable CIVs in separate penetrations. The licensee must provide sufficient information such that defense-in-depth for safety systems will be maintained.] [ ]  
Discussion: [ ]  
TR WCAP-15791-NP-A, Revision 2, is based on only one CIV being in maintenance at any given time. The TR states that multiple systems are not expected to be out of service simultaneously during extended completion times (CT) ... [1]

Deleted: [ ]

3.2.2 Demonstration (Penetration configuration): [ ]  
Option A: [ ] ... [2]

Deleted: [ ]  
Discussion: [ ]  
The existing and proposed TS LCO 3.6.3 must not allow multiple ... [3]

Formatted: Bullets and Numbering

Deleted: Demonstration (

Deleted: Option A: [ ]

Deleted: risk-

Deleted: Option B: [ ]  
[If the licensee does not confirm the above, it must provide justification for the deviation.] [ ]

Deleted: Discussion

Not all penetrations have the same impact on CDF, LERF, ICCDP, or ICLERP; therefore, the licensee needs to address the applicability of TR WCAP-15791-NP-A, Revision 2, to the specific plant. This Penetration and CIV configuration assessment must include verification that (a) the Penetration and CIV configurations for the specific plant match the configurations in the TR and (b) the input parameter values used in the TR are bounding for the specific plant.

Deleted: analysis

Deleted: risk-  
 Deleted: Any additional CIV configurations and extended CTs, not specifically evaluated by the TR, or nonbounding risk-parameter values outside the scope of the TR, will require an NRC staff review of the specific penetrations and related justifications for the proposed CTs.

3.2.2. Demonstration (Tier 2 Evaluation):

Deleted: 5

Deleted: Option A:

Deleted: demonstrated

Deleted: its

[LICENSEE] has confirmed that the conclusion in the TR that no Tier 2 requirements are needed other than a Tier 2 requirement to ensure that before maintenance or corrective maintenance (repair) is performed on a CIV, any other CIVs in the penetration flow path have been checked to ensure that they are in their proper position, is applicable to the specific plant. Inoperable CIVs will not result in a risk-significant configuration that requires a Tier 2 requirement to be implemented.

Deleted: evaluation has identified potentially high-risk plant configurations associated with the proposed CIV CTs that should not be entered while a CIV is in maintenance, and how these controls have been implemented by the licensee

Discussion:

Deleted: Option B:  
 (If the licensee's evaluation identifies no risk-significant plant configurations associated with the proposed CIV CTs, then it must provide justification/evaluation and state applicable compensatory measures or commitments.)  
 Discussion:

A Tier 2 conclusion of the TR as applicable to the specific plant, or the plant specific Tier 2 requirements must be provided by the licensee.

A Tier 2 conclusion of the TR as applicable to the specific plant, or the plant-specific Tier 2 requirements must be provided by the licensee.

3.2.3. Demonstration (Tier 3 Evaluation)

Deleted: 6

[LICENSEE] has addressed a Tier 3 evaluation for [PLANT NAME, UNIT NOS.] by demonstrating conformance to the requirements of the maintenance rule as the requirements relate to the proposed CIV CTs and the guidance contained in the Nuclear Management and Resources Council (NUMARC) document, NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2, Section 11, issued April 1996, as endorsed by RG 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." In Attachment 6, [LICENSEE] has provided documentation

on the [LICENSEE'S] maintenance rule program, with respect to CIVs, which includes a LERF/ICLERP (i.e., ILERP as defined in NUMARC 93-01) assessment as part of the maintenance rule process, and that the PRA quality is adequate for this application, i.e., that the model is capable of supporting a CRMP assessment when a CIV is inoperable, as part of the basis of a risk-informed licensing action.

Deleted: C

Deleted: Discussion: f

NRC Reviewer's Note:

The licensee needs to describe in Attachment 6 its configuration risk management program (CRMP) or maintenance rule (10 CFR 50.65(a)(4)) program (as appropriate), including how it reflects the current PRA model, any simplifications or deviations in the CRMP model from the current plant model, and methods to update the CRMP to reflect the current plant-specific model associated with implementing the CIV completion time changes.

The licensee needs to address the Tier 3 aspects of RG 1.177, including a description of the CRMP, and confirm that the licensee's Maintenance Rule Program (10 CFR 50.65(a)(4)) meets all aspects of Section 2.3.7.2 of RG 1.177, including the referenced four key components, associated with implementing the CIV completion time changes.

Also, the licensee needs to confirm that the plant (units) conforms to the requirements of the maintenance rule, as they relate to the proposed CIV CTs and the guidance contained in NUMARC 93-01, Section 11, as endorsed by RG 1.182, including verification that the maintenance rule program, with respect to CIVs, includes a LERF and ILERP assessment, as part of the maintenance rule process, and that the CRMP is adequate, as part of the basis for evaluating the risk impact of CIV maintenance configurations. The licensee needs to confirm that its CRMP model calculates ICCDP (or ICDP) and ICLERP (or ILERP) and that the licensee's model is capable of modeling CIVs or has been modified to include CIVs.

Deleted: C

3.2.4. Demonstration (Plant-Specific PRA Quality):

Deleted: 7

[LICENSEE] has demonstrated in Attachment 6 that the plant-specific PRA quality is acceptable for Tier 3 assessments associated with implementing the CIV completion time changes in this application, in accordance with the guidelines given in RG 1.174 and RG 1.177.

NRC Reviewer's Note:

Deleted: Discussion: 7

The licensee needs to describe in Attachment 6 the scope of the plant-specific PRA and justify its technical adequacy for this application, in accordance with the guidance provided in RG 1.174 and RG 1.177. Specifically, the supporting documentation needs to address each area in sufficient detail to satisfy the following:

- Assurance that the plant-specific PRA reasonably reflects the as-built, as-operated plant.
- Assurance that plant-specific PRA updates, including any plant improvements or commitments cited and credited in the analysis, have been implemented from the individual plant evaluation (IPE) and the IPE for external events (IPEEE) and subsequent peer reviews and self-assessments. Reference to past submittals discussing this information is acceptable.
- Assurance that conclusions from the peer review, including facts and observations (A and B), that are applicable to proposed extended CTs for CIVs were considered and resolved consistent with RG 1.200, Revision 2, associated with the input parameters used in the generic Tier 1 analysis. If not resolved, the licensee must provide the justification for the acceptability of the conclusions (e.g., sensitivity studies showing negligible impact). The licensee should indicate the PRA revisions that underwent the peer review and were used in the plant-specific application.
- Assurance that there is PRA configuration control and updating, including PRA quality assurance programs, associated procedures, and PRA revision schedules.

- Assurance that there is PRA adequacy, completeness, and applicability with respect to evaluating the risk associated with the proposed CIV CT extensions, i.e., that the model is capable of supporting a CRMP assessment when a CIV is inoperable.
- Assurance that plant design or operational modifications that are related to or could affect the proposed CT extensions are reflected in the PRA revision used in the plant-specific application or that a justification is provided for not including these modifications in the PRA.

As clarified in Regulatory Issue Summary 2007-06, "Regulatory Guide 1.200 Implementation," dated March 22, 2007, the NRC staff will use RG 1.200 to assess the technical adequacy of all risk-informed applications received after December 2007. RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," describes an acceptable approach for defining the technical adequacy of an acceptable base PRA. This assessment can be performed by directly comparing the base PRA to the supporting requirements in the endorsed American Society of Mechanical Engineers (ASME) Standard RA-Sb-2005 and addressing the NRC staff position on each requirement discussed in Appendix A to RG 1.200. Alternatively, a licensee can perform the assessment starting with the results of a previous peer review, performed in accordance with the process documented in NEI 00-02 and addressing the NRC staff position on each requirement discussed in Appendix B to RG 1.200.

3.2.5 Demonstration (external events risk):

[LICENSEE] has demonstrated in Attachment 6 that external events risk is bounded by TR WCAP-15791-NP-A, Revision 2, assumptions and will not have an adverse impact on the conclusions of the [PLANT NAME, UNIT NOS.] analysis for extending the CIV CTs. 3.2.6

Demonstration (CIV Availability Monitoring):

Deleted: 8

Deleted: ¶  
Discussion: ¶

External events may include seismic, high winds, fires, floods, or other related events applicable to each licensee. The licensee needs to demonstrate, by either quantitative or qualitative means, that external event risk will not have an adverse impact on the conclusions of the plant-specific analyses with respect to the TR evaluation. For some participating plants, internal fires and other external event risks may contribute significantly to the overall plant baseline risk, which may affect TR WCAP-15791, so that a plant-specific application of the TR methodology may not be found acceptable in all cases. Specifically, the risk from external events should not make the total baseline risk exceed 1E-4/yr CDF or 1E-5/yr LERF without justification. ¶

The licensee's submittal must discuss the plant risk associated with external events and specifically identify (quantitatively or qualitatively) that the impact of the proposed CIV CTs on the risk associated with external events is small. The licensee needs to confirm that any increase in external event risk associated with the proposed CIV CTs should be minimal. The licensee must address this impact and discuss why the risk of external events (including internal fires) is negligible. Insights from IPEEE screening or quantitative approaches may be used to support the licensee's evaluations. ¶

If the licensee has performed an updated analysis of an external event since the NRC staff review of the licensee's IPEEE, and a quantitative PRA demonstration is used to support the submittal, the licensee needs to describe the significant changes involved in its updated analysis and the impact of these changes on plant risk associated with the external event and the proposed CIV CT extensions. ¶

For external events for which the licensee has a PRA, the licensee needs to provide the change in CDF, the change in LERF, the ICCDP, and the ICLEP associated with specifically analyzed external events. The licensee needs to also provide the total plant risk and total change in risk from all PRA contributors (the combination of internal events, internal flooding, internal fires, and external events). To conclude [... ] ¶

Deleted: 9

[LICENSEE] has demonstrated in Attachment 6 for [PLANT NAME, UNIT NOS.] how plant-specific CIV availability is monitored and assessed at the plant under the maintenance rule, and that, performance continues to be consistent with the analysis assumptions used to justify extended CIV CTs, including the assumptions in TR WCAP-15791.

NRC Reviewer's Note:

The licensee needs to address how CIV availability is monitored and assessed under the maintenance rule, which includes confirmation that performance continues to be consistent with the analysis assumptions used to justify extended CIV CTs and needs to describe what actions are to be taken if a previously approved risk-informed licensing action is found to no longer meet the acceptance guidelines of RG 1.174 and RG 1.177.

Deleted: Discussion:ff

3.2.7. Demonstration (Cumulative Risk Evaluation):

[LICENSEE] has demonstrated in Attachment 6 that the cumulative risk has been evaluated for [PLANT NAME, UNIT NOS.] in accordance with guidance in RG 1.174, with respect to past [PLANT NAME, UNIT NOS.] license amendments or additional [PLANT NAME, UNIT NOS.] applications for a TS change under NRC review that have not been incorporated into the baseline PRA used to evaluate the applicability of the generic Tier 1 analysis contained in WCAP-15791-NP-A, Rev. 2 to the specific plant.

Deleted: 10

Deleted: proposed change.

NRC Reviewer's Note:

The cumulative risk impact of the proposed CT extensions for CIVs must be addressed in Attachment 6 of the plant-specific application, in accordance with the acceptance guidelines in RG 1.174. The cumulative risk impact must include both previous plant license changes and additional plant applications still under review.

Deleted: Discussion:ff

Deleted: in

**3.2.8. Demonstration (PRA Uncertainty):**

[LICENSEE] has demonstrated in Attachment 6 that uncertainty caused by plant PRA models, as it relates to this application, is addressed according to RG 1.174 guidance.

Deleted: 11

Deleted:

Deleted: in the [PLANT NAME, UNIT NOS.] submittal

**NRC Reviewer's Note:**

Licensee needs to address that uncertainty associated with plant PRA models does not significantly impact the risk assessment results and decisions regarding acceptability.

Deleted: Discussion: 1

Deleted: due to

**3.2.9. Demonstration (Regulatory commitment):**

[LICENSEE] has incorporated a regulatory commitment addressing how LERF/LERP is assessed and has provided documentation in the [PLANT NAME, UNIT NOS.] submittal.

Deleted: 12

Deleted: C

**NRC Reviewer's Note:**

Licensee needs to address the plant CRMP, including the maintenance rule program implemented under 10 CFR 50.65(a)(4), and explain how the LERF/LERP is assessed in the program.

Deleted: Discussion: 1

Deleted: C

**4.0 ENVIRONMENTAL EVALUATION**

[LICENSEE] has reviewed the environmental evaluation included in the proposed safety evaluation dated [DATE]. [LICENSEE] has concluded that the proposed determination presented in the notice is applicable to [PLANT NAME, UNIT NOS.] and the determination is provided as an attachment to this LAR to satisfy the requirements of 10 CFR 50.91(a).

ATTACHMENT 2: PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)

ATTACHMENT 3: PROPOSED TECHNICAL SPECIFICATION PAGES

**ATTACHMENT 4: LIST OF REGULATORY COMMITMENTS**

The following table identifies those actions committed to by [LICENSEE] in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to [CONTACT NAME].

REGULATORY COMMITMENTS	DUE DATE
[LICENSEE] commits to implementing the capability to assess the effect on incremental large early release probability when using the extended completion times for containment isolation valves in the program for managing risk in accordance with 10 CFR 50.65(a)(4).	[Complete, implemented with amendment, OR within X days of implementation of amendment]

Deleted: a methodology for  
 Deleted: Ing  
 Deleted: large early release frequency and  
 Deleted: conditional

**ATTACHMENT 5: PROPOSED CHANGES TO TECHNICAL SPECIFICATION BASES**

**ATTACHMENT 6: PLANT-SPECIFIC INFORMATION**

Deleted: PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION

PROPOSED MODEL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION FOR PLANT-SPECIFIC ADOPTION OF TSTF TRAVELER-446, REVISION 3, "RISK INFORMED EVALUATION OF EXTENSIONS TO CONTAINMENT ISOLATION VALVE COMPLETION TIMES (WCAP-15791)"

Description of Amendment Request: The change requests the adoption of an approved change to the standard technical specifications (STS) for Westinghouse plants (NUREG-1431), to allow modification of containment isolation valve (CIV) completion times associated with the adoption of Technical Specification Task Force (TSTF) Traveler-446, Revision 3, "Risk Informed Evaluation of Containment Isolation Valve Completion Times (Topical Report WCAP-15791-P, Revision 2)," dated February 19, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML080510164). The Notice of Availability published in the Federal Register on [Date] [xx FR xxxxx] described the proposed change.

Deleted: Implementation of topical report (TR) WCAP-15791-NP-A, Revision 2, "Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times," dated March 10, 2008.

The proposed change extends the completion times for containment penetration flow paths with one CIV inoperable from 4 hours up to 168 hours (7 days) for Westinghouse plants. This change is applicable to containment penetrations with one or more CIVs, in which one CIV is inoperable [for reasons other than shield building bypass or purge valve leakage not within limit] and where the CIV is either intact or not intact. In addition, this change addresses conditions where there are two or more penetration flow paths with one CIV inoperable (for reasons other than that the shield building bypass or purge valve leakage are not within limits).

Basis for proposed no significant hazards consideration:

As required by Title 10 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 changes to the completion times do not change the response of the plant to any accidents, have no impact on the reliability of the CIV, and have an insignificant impact on the availability of the CIVs. The proposed changes will not result in a significant increase in the risk of plant operation. This is demonstrated by showing that the impact on plant safety, as measured by core damage frequency (CDF) and large early release frequency (LERF), is not significantly increased, and is acceptable. In addition, for the completion time change, the incremental conditional core damage probabilities (ICCDP) and incremental conditional large early release probabilities (ICLERP) are also acceptable. These changes are consistent with the acceptance guidelines in Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications."

The proposed changes do not adversely affect accident initiators or precursors nor do they alter the design assumptions, conditions, or configuration of the facility or the manner in which the plant is operated and maintained. The proposed changes do not alter or prevent the structures, systems, and components from performing their intended function to mitigate the consequences of an initiating event within the assumed acceptance limits. The proposed changes do not affect the source term, containment isolation, or radiological release assumptions used in evaluating the radiological consequences of an accident previously evaluated. Furthermore, the proposed changes do not increase the types or amounts of radioactive effluent that may be

released offsite, nor do they significantly increase individual or cumulative occupational or public radiation exposures. The proposed changes do not invalidate the safety analysis assumptions and resultant consequences.

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 changes do not result in a change in the manner in which the CIVs provide plant protection. No design changes are associated with the proposed changes. The changes to completion times do not change any existing accident scenarios nor do they create any new or different accident scenarios.

The changes do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. In addition, the changes do not impose any new or different requirements or eliminate any existing requirements. The proposed changes do not alter assumptions made in the safety analysis and do not invalidate the safety analysis assumptions and current plant operating practice.

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

Response: No

The proposed changes do not alter the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined. The safety analysis acceptance criteria are not affected by these changes. The

proposed changes will not result in plant operation in a configuration outside the design basis. The calculated impact on risk is consistent with the acceptance guidelines contained in RG 1.174 and RG 1.177.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based upon the reasoning presented above, the licensee 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-446, REVISION 3, "RISK INFORMED EVALUATION OF EXTENSIONS TO CONTAINMENT ISOLATION VALVE COMPLETION TIMES (WCAP-15791)"

1.0 INTRODUCTION

By letter dated [DATE], [LICENSEE] (the licensee) proposed changes to the technical specifications (TS) for [PLANT NAME]. The requested change is the adoption of NRC-approved Technical Specification Task Force (TSTF) Traveler-446, Revision 3, "Risk Informed Evaluation of Containment Isolation Valve Completion Times (Topical Report WCAP-15791-NP-A, Revision 2)," dated February 19, 2008 (Agencywide Documents Access Management System (ADAMS) Accession No. ML080510164). TSTF Traveler-446 proposes a generic change to NUREG-1431, Revision 3, "Standard Technical Specifications Westinghouse Plants," issued in June 2004, to implement containment isolation valve (CIV) completion time changes justified in Topical Report (TR) WCAP-15791, Revision 2, "Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times," dated June, 2008. When implemented, the proposed change would extend the CIV completion times for TS Limiting Condition for Operation (LCO) 3.6.3, "Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)," from 4 hours up to 168 hours (7 days). (For containment isolation valves where acceptable results could not be demonstrated for 168 hours, shorter times are considered and evaluated).

Deleted: RITSTF Initiative 4b

Deleted: associated with the implementation

Deleted: of

Deleted: 1

Deleted: April 30

Deleted: 4

Deleted: traveler

Deleted: that cannot demonstrate

2.0 REGULATORY EVALUATION

In Title 10 of the Code of Federal Regulations (10 CFR) Section 50.36, "Technical Specifications," the NRC established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and

limiting control settings, (2) LCOs, (3) surveillance requirements, (4) design features, and (5) administrative controls. However, the regulation does not specify the particular TS to be included in a plant's license. TSTF Traveler-446 is proposing changes to the TS LCO that concern the Category 2 requirements. The LCOs are the lowest functional capability, or performance levels, of equipment required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall follow any remedial actions permitted by the TS until the condition can be met or shall shut down the reactor.

Furthermore, the completion times specified in the TS must be based on the reasonable protection of public health and safety. As set forth in 10 CFR 50.36, a licensee's TS must establish the LCOs that are the lowest functional capability, or performance levels, of equipment required for safe operation of the facility. This requirement includes completion times for structures, systems, and components (SSCs), such as CIVs. These completion times allow a certain amount of time in which to correct a condition that does not meet the LCO before the reactor must be brought to a condition that exits the mode of applicability, in most cases resulting in the reactor being shut down.

The Maintenance Rule, 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," requires licensees to monitor the performance, or condition, of SSCs against licensee-established goals in a manner sufficient to provide reasonable assurance that SSCs are capable of fulfilling their intended functions. The implementation and monitoring program guidance in Section 2.3 of Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," and Section 3 of RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," states that monitoring performed in conformance with the Maintenance Rule can be used when such monitoring is sufficient for the SSCs affected by the risk-informed application. In addition,

10 CFR 50.65(a)(4), as it relates to the proposed extension of CIV completion times, requires the assessment and management of the increase in risk that may result from the proposed maintenance activity.

The CIVs help ensure that adequate primary containment boundaries are maintained during and after accidents by minimizing potential pathways to the environment and help ensure that the primary containment function assumed in the safety analysis is maintained. The following general design criteria (GDC) apply to this change and establish the necessary design, fabrication, construction, testing, and performance requirements for SSCs important to safety, which provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public. [Pre-GDC (PGDC) facilities not licensed under the GDC in Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," are licensed under similar plant-specific design criteria, as described in the facility's licensing-basis documents (such as updated final safety analysis reports).]

- GDC 54 (or PGDC), "Piping Systems Penetrating Containment," requires the following:

Those piping systems that penetrate primary containment be provided with leak detection, isolation, and containment capabilities having redundancy, reliability, and performance capabilities that reflect the importance to safety of isolating these piping systems. Such piping systems shall be designed with a capability to test periodically the operability of the isolation valves and associated apparatus and to determine if valve leakage is within acceptable limits.

- GDC 55 (or PGDC), "Reactor Coolant Pressure Boundary Penetrating Containment," requires the following:

Each line that is part of the reactor coolant pressure boundary and that

penetrates primary reactor containment shall be provided with CIVs as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:

- (1) One locked closed isolation valve inside and one locked closed isolation valve outside containment; or
- (2) One automatic isolation valve inside and one locked closed isolation valve outside containment; or
- (3) One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or
- (4) One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Isolation valves outside containment shall be located as close to containment as practical and upon loss of actuating power, automatic isolation valves shall be designed to take the position that provides greater safety.

Other appropriate requirements to minimize the probability or consequences of an accidental rupture of these lines or of lines connected to them shall be provided as necessary to assure adequate safety. Determination of the appropriateness of these requirements, such as higher quality in design, fabrication and testing, additional provisions for inservice inspection, protection against more severe natural phenomena, and additional isolation valves and containment, shall include consideration of the population density, use characteristics, and physical characteristics of the site environs.

- GDC 56 (or PGDC), "Primary Containment Isolation," requires the following:  
Each line that connects directly to the containment atmosphere and penetrates primary reactor containment shall be provided with CIVs as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:
  - (1) One locked closed isolation valve inside and one locked closed isolation valve outside containment; or
  - (2) One automatic isolation valve inside and one locked closed isolation valve outside containment; or
  - (3) One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or
  - (4) One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Isolation valves outside containment shall be located as close to containment as practical and upon loss of actuating power, automatic isolation valves shall be designed to take the position that provides greater safety.

- GDC 57 (or PGDC), "Closed System Isolation Valves," requires the following:  
Each line that penetrates the primary reactor containment and is neither part of the reactor coolant pressure boundary nor connected directly to the containment atmosphere shall have at least one CIV which shall be either automatic, or locked closed, or capable of remote manual operation. This valve shall be outside containment and located as close to the containment as practical. A simple check valve may not be used as the automatic isolation valve.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Probabilistic Risk Assessment (PRA) for the Proposed Changes

[LICENSEE] adoption of TSTF Traveler-446, Revision 3, would allow extending CIV completion times specified in TS [LCO 3.6.3, "Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)"]. TR WCAP-15791-P-A, Revision 2, referenced in TSTF Traveler-446, Revision 3, describes a method to revise the completion time for specific conditions in TS LCO 3.6.3. The NRC staff reviewed, the risk impact, using the three-tiered approach referenced in RG 1.174 and RG 1.177 associated with the proposed TS changes. The first tier evaluates the probabilistic risk assessment and the impact of the proposed extension of completion times for CIVs on plant operational risk. The second tier addresses the need to preclude potentially high-risk plant equipment outage configurations by identifying the need for additional controls or compensatory actions to be implemented during the time a CIV is unavailable because of maintenance. The third tier evaluates the licensee's overall configuration risk management program and confirms that risk insights are incorporated into the decisionmaking process before equipment is taken out of service before or during CIV maintenance.

The NRC staff determined that the risk analysis methodology and approach used by TR WCAP-15791-NP-A, Revision 2, to estimate the risk impact was reasonable. The NRC staff stated that the risk impact of the proposed extended completion times for CIVs, as estimated by the change in CDF, the change in LERF, the ICCDP, and the ICLERP, is consistent with the acceptance guidelines specified in RG 1.174 and RG 1.177 and the associated NRC guidance outlined in Sections 16.1, 19.1, and 19.2 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants." CIV configurations, completion times, or nonbounding risk analysis parameters not evaluated by TR WCAP-15791-NP-A, Revision 2, require additional justification of the specific penetrations for the proposed CIV

completion times.

The NRC staff also noted that Tier 2, as presented in TR WCAP-15791-NP-A, Revision 2, did not identify generic Tier 2 risk-significant configurations as a result of the proposed CIV completion times. In its review of TR WCAP-15791, the NRC staff identified TS and analysis bases that allow only one CIV to be in maintenance with an extended completion time at any given time. In addition, before maintenance or corrective maintenance is performed, other CIVs in the penetration flow path shall be checked for proper position. The NRC staff's safety evaluation (SE), (ADAMS Accession No ML080170680) also noted that, for licensees adopting TR WCAP-15791, a plant-specific Tier 2 evaluation should be performed to confirm the conclusions of the subject WCAP concerning that this conclusion of no Tier 2 requirements is applicable to the licensee's plant, except for the one discussed in Item 3.2.5 above.

Deleted: remaining

TR WCAP-15791-NP-A, Revision 2, did not address Tier 3, and therefore the NRC SE concluded that licensees adopting the subject TR would need to include an evaluation with respect to Tier 3 in their plant-specific application in accordance with the principles in RG 1.177.

The NRC-approved TR WCAP-15791-NP-A, Revision 2, for referencing in license applications to the extent specified and under the limitations and conditions stated in the TR and Section 4.0 of the NRC SE. In addition, per the SE, applications referencing TR WCAP-15791 must address items specified in Section 3.4, "Regulatory Commitments," and Section 5.0, "Additional Information Needed" of the SE.

The licensee's plant-specific application requesting adoption of TSTF Traveler-446 evaluated the conditions, limitations, and additional information needed that are referenced in the Sections 3.4, 4.0, and 5.0 of the NRC SE of TR WCAP-15791-NP-A, Revision 2. In its application dated [DATE], the licensee provided supporting information for each of the conditions, limitations, and additional information needed that are referenced in the NRC SE. The licensee's supporting information for each condition and limitation, as well as for the

additional information needed, met the NRC staff's expectations and acceptance criteria [with the following exceptions: list any exceptions to the conditions and limitations or additional information required, as stated in the licensee's submittal, and include the NRC staff's evaluation and conclusions].

Technical Assessment for the Proposed Changes:

[LICENSEE] adoption of TSTF Traveler-446, Revision 3 would make changes to the TS [LCO 3.6.3, "Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual),"] as follows:

- TSTF Traveler-446 revises [LCO 3.6.3], which states "Each containment isolation valve shall be OPERABLE," to read "Each containment isolation valve (CIV) shall be OPERABLE." Adding the abbreviation "(CIV)" to the LCO statement is editorial in nature and does not change the LCO requirement; therefore, this change is acceptable.
- TSTF Traveler-446 deletes the Condition A NOTE, which states "Only applicable to penetration flow paths with two [or more] containment isolation valves." The existing Condition C, which is applicable to penetration flow paths with only one CIV and a closed system, is being deleted and replaced by a new Condition B. The new Condition B, along with the revised Condition A, accounts for all of the CIVs covered under existing Condition C; therefore, the Condition A NOTE is no longer required. Revised Condition A and new Condition B apply to all penetration flow paths with at least one CIV. This is consistent with the NRC SE of TR WCAP-15791 and is therefore acceptable.
- TSTF Traveler-446 revises Condition A's applicability from "[for reasons other than Condition[s] D [and E]]" to "[for reasons other than Condition[s] E [and F]]." This change is required by the addition of new Conditions B and D, which results

In renumbering the conditions that follow Condition D. This change is editorial and does not result in a technical change; therefore, it is acceptable.

- TSTF Traveler-446 adds a new requirement to Condition A, which states "Containment isolation valve pressure boundary intact." This is required to meet the entry condition for Condition A. This requirement is necessary, along with the addition of new Condition B, which is applicable when the CIV pressure boundary is not intact, because existing Condition C is being deleted. Existing Condition C is applicable to penetration flow paths with only one CIV and a closed system. In addition, revised Condition A and new Condition B are applicable to all conditions in which a CIV may be inoperable. Revised Condition A, along with new Condition B, encompasses existing Condition C and is consistent with the NRC's SE for WCAP-15791; therefore, it is acceptable.

Deleted: INOPERABLE

- TSTF Traveler-446 revises the existing 4-hour completion time for Condition A to completion times that range from 4 hours up to 7 days, depending upon the category of the applicable CIV (Category 1 through 7). This change has been evaluated and documented in the NRC SE of TR WCAP-15791. This change proposed by TSTF Traveler-446 is consistent with the NRC SE of TR WCAP-15791 and is therefore acceptable.

- TSTF Traveler-446 adds a new Condition B, which states "One or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] E [and F]] AND containment isolation valve pressure boundary not intact." This new condition, in conjunction with revised Condition A, addresses all situations where one CIV is inoperable in one or more penetration flow paths. The new Condition B required actions and completion times are the same as those in the revised Condition A, with the exception of the

Deleted: accounts for  
 Deleted: or more  
 Deleted: a  
 Deleted: become or are made

Condition B category of valves. Condition A completion times apply to Category 1 through 7 valves and Condition B completion times apply to Category 8 through 14 valves. The addition of new Condition B has been evaluated and documented in the NRC SE of TR WCAP-15791. This change proposed by TSTF Traveler-446 is consistent with the NRC SE of TR WCAP-15791 and is therefore acceptable.

- TSTF Traveler-446 renames existing Condition B and Required Action B.1 as Condition C and Required Action C.1. In addition, existing Condition B wording, which states "[for reasons other than Condition[s] D [and E]]" is changed to "[for reasons other than Condition[s] E [and F]]." These changes are editorial in nature, are caused by adding conditions proposed by TSTF Traveler-446 that have been evaluated and documented in the NRC SE of TR WCAP-15791, and are therefore acceptable.
- TSTF Traveler-446 deletes the existing Condition C and Required Actions C.1 and C.2, which are applicable to penetration flow paths with only one CIV and a closed system. The existing Condition C entry condition is "One or more penetration flow paths with one containment isolation valve inoperable." With revised Condition A and the addition of Condition B, this covers all CIVs that would have been applicable to existing Condition C. The Required Actions for revised Condition A and new Condition B are identical to the existing Condition C. The completion times for revised Condition A and new Condition B are changed from the existing Condition C time of 72 hours and have been evaluated and documented in the NRC SE of TR WCAP-15791. The deletion of existing Condition C is consistent with WCAP-15791, is accounted for by the revision to Condition A, and the addition of new Condition B, and is therefore acceptable.

Deleted: /  
 Deleted: a

- TSTF Traveler-446 adds a new Condition D, which states "Two or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] E [and F]]." This condition requires isolating all but one of the affected penetrations within 4 hours (the existing completion time for Condition A). Once this completion time is satisfied, and since revised Condition A and new Condition B will still be applicable, this essentially limits the completion times in Condition A and B to a single penetration. This added requirement enforces the basis of WCAP-15791 that only one CIV should be in maintenance at a time. This change addresses Section 4.0, "Limitations and Conditions," items 1 and 2, in the NRC SE of TR WCAP-15791 and is therefore acceptable.
- TSTF Traveler-446 renames Conditions D, E, and F, along with Required Actions D.1, E.1, E.2, E.3, F.1, and F.2, as Conditions E, F, and G, along with Required Actions E.1, F.1, F.2, F.3, G.1, and G.2. With the addition of new Conditions B and D, and the deletion of current Condition C, the remaining Conditions and Required Actions need to be renumbered. This change is editorial, results in no technical change, and is therefore acceptable.

Deleted: c  
 Deleted: r  
 Deleted: a

**4.0 SUMMARY AND CONCLUSIONS**

The NRC staff has reviewed the [LICENSEE] proposed adoption of TSTF Traveler-446, Revision 3, to modify the TS requirements for completion times for CIVs associated with the implementation of TR WCAP-15791-NP-A, Revision 2. The NRC staff has reviewed these changes for consistency with the current NUREG-1431 and found them to be consistent.

Deleted: allowed outage

The NRC staff has concluded, on the basis of 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 amendments 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. "Forwarding of TSTFs," dated October 21, 2002 (ADAMS Package Accession No. ML022960409).
2. "TSTF Traveler-446, Revision 1, 'Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791),' " dated January 31, 2005 (ADAMS Accession No. ML050460293).

3. WCAP-15791, Revision 2, "Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times," (ADAMS Package Accession No. ML071550223).
4. "TSTF Traveler-446, Revision 2, 'Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791),' " dated January 11, 2007 (ADAMS Accession No. ML070110620).
5. "TSTF Traveler-446, Revision 3, 'Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times (WCAP-15791),' " dated February 19, 2008 (ADAMS Accession No. ML080510164).
6. NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 3, June 2004 (ADAMS Accession No. ML041830612).
7. ~~Final Safety Evaluation (SE) of Westinghouse Owners Group (WOG) Topical Report (TR) WCAP-15791-P, Revision 2, "Risk-Informed Evaluation of Extensions to Containment Isolation Valve Completion Times," dated February 13, 2008 (ADAMS Accession No. ML080170680).~~

Deleted: 7. Nuclear Energy Institute 98-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," July 1999 (ADAMS Accession No. ML003680088).¶

Deleted: 8

---

Page 10: [1] Deleted andracjd 10/15/2009 11:35 AM  
3.2.1 Demonstration (Simultaneous LCO Entry Consideration)

Option A:

[LICENSEE] has incorporated new Condition D in TS [LCO 3.6.3 "Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual),"] as specified in TSTF Traveler-446, Revision 3.

Option B:

[If the licensee did not incorporate Condition D, then it must demonstrate that the potential for any cumulative risk impact of failed CIVs and multiple CIV LCO entries was evaluated by the licensee. In addition, the licensee must demonstrate that the licensee's Tier 3 risk management program addresses the possibility of simultaneous LCO entries for inoperable CIVs in separate penetrations. The licensee must provide sufficient information such that defense-in-depth for safety systems will be maintained.]

Discussion:

TR WCAP-15791-NP-A, Revision 2, is based on only one CIV being in maintenance at any given time. The TR states that multiple systems are not expected to be out of service simultaneously during extended completion times (CTs), but it does not preclude the practice. Although TS LCO 3.6.3, Note 2, allows a separate condition entry for each penetration flow path, proposed Condition D addresses an inoperable CIV in more than one penetration flow path and limits the CT to 4 hours. If the licensee's proposed TS change does not include this Condition D, then the licensee's application must demonstrate that the potential for any cumulative risk impact of failed CIVs and multiple CIV LCO entries has been evaluated and is acceptable. The licensee must demonstrate that its Tier 3 risk management program, in accordance with 10 CFR 50.65(a)(4), will address the possibility of simultaneous LCO entries of inoperable CIVs in separate penetrations to maintain defense-in-depth for safety systems.

---

Page 10: [2] Deleted

andracjd

10/18/2009 8:01 PM

### 3.2.2 Demonstration (Penetration configuration):

#### Option A:

[LICENSEE] has incorporated new Condition D in TS [LCO 3.6.3] as specified in TSTF Traveler-446, Revision 3.

#### Option B:

[If the licensee did not incorporate Condition D, then it must demonstrate that the remaining CIVs in the affected penetration flow path (or another penetration flow path) are closed before entering the extended CT for the inoperable CIV and that the risk impacts (i.e., core damage frequency (CDF), large early release frequency (LERF), incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP)) were evaluated by the licensee.]

---

Page 10: [3] Deleted

andracjd

10/15/2009 11:36 AM

### Discussion

The existing and proposed TS LCO 3.6.3 must not allow multiple simultaneous extended CIV CTs to occur for more than 4 hours, which is the existing CT for an inoperable CIV in LCO 3.6.3. This is to meet the TR assumption that only one valve within a single penetration can be in maintenance at a time (i.e., for more than the 4 hours allowed by the current LCO 3.6.3 Condition A). The existing LCO 3.6.3 Condition B, and the proposed LCO 3.6.3 Conditions A and D, ensure that this assumption is being met. If the TS do not prevent this case (i.e., Condition D is not adopted), then this case must be evaluated in the plant-specific applications to demonstrate that the risk-impact assumptions of CDF, LERF, ICCDP and ICLERP remain less than the acceptance guidelines in Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to

the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications." Also, the plant-specific application must address whether the position of the remaining CIVs in the affected penetration flow path (or another penetration flow path) have been confirmed before entering the extended CT for the inoperable CIV.

### 3.2.3 Demonstration (Failed CIVs and multiple CIV LCO entries):

#### Option A:

[LICENSEE] has incorporated new Condition D in TS [LCO 3.6.3] as specified in TSTF Traveler-446, Revision 3.

#### Option B:

[If the licensee did not incorporate Condition D then it must demonstrate that the cumulative risk impact of failed CIVs and multiple CIV LCO entries was evaluated, and that remaining CIVs in the affected penetration flow path (or another penetration flow path) are closed prior to entering the extended CT. In addition, the licensee must demonstrate that the licensee's Tier 3 risk management program address the possibility of simultaneous LCO entries for inoperable CIVs in separate penetrations. The licensee must provide sufficient information such that defense-in-depth for safety systems will be maintained.]

#### Discussion:

The licensee needs to address how the following basis and general assumptions of TR WCAP-15791-NP-A, Revision 2, are incorporated in the specific plant practices, procedures, TS, and probabilistic risk assessment (PRA):

Only one CIV is in maintenance with an extended CT at any given time. This is a Tier 2 requirement, unless the licensee has proposed the additional STS LCO 3.6.3 Condition D in its plant-specific application.

Before maintenance or corrective maintenance (repair) is performed on a CIV, the TR evaluation assumes that any other CIVs in the penetration flow path have been checked to ensure that they are in their proper position. This is a Tier 2 requirement.

Multiple systems are not expected to be out of service simultaneously during the extended CTs.

---

Page 14: [4] Deleted

andracjd

10/20/2009 10:36 AM

#### Discussion:

External events may include seismic, high winds, fires, floods, or other related events applicable to each licensee. The licensee needs to demonstrate, by either quantitative or qualitative means, that external event risk will not have an adverse impact on the conclusions of the plant-specific analyses with respect to the TR evaluation. For some participating plants, internal fires and other external event risks may contribute significantly to the overall plant baseline risk, which may affect TR WCAP-15791, so that a plant-specific application of the TR methodology may not be found acceptable in all cases. Specifically, the risk from external events should not make the total baseline risk exceed  $1E-4$ /yr CDF or  $1E-5$ /yr LERF without justification.

The licensee's submittal must discuss the plant risk associated with external events and specifically identify (quantitatively or qualitatively) that the impact of the proposed CIV CTs on the risk associated with external events is small. The licensee needs to confirm that any increase in external event risk associated with the proposed CIV CTs should be minimal. The licensee must address this impact and discuss why the risk of external events (including internal fires) is negligible. Insights from IPEEE screening or quantitative approaches may be used to support the licensee's evaluations.

If the licensee has performed an updated analysis of an external event since the NRC staff review of the licensee's IPEEE, and a quantitative PRA demonstration is used to support the submittal, the licensee needs to describe the significant changes involved in its updated analysis and the impact of these changes on plant risk associated with the external event and the proposed CIV CT extensions.

For external events for which the licensee has a PRA, the licensee needs to provide the change in CDF, the change in LERF, the ICCDP, and the ICLERP associated with specifically analyzed external events. The licensee needs to also provide the total plant risk and total change in risk from all PRA contributors (the combination of internal events, internal flooding, internal fires, and external events). To conclude that the quantified risk associated with the proposed CIV CTs is acceptable, the total CDF and LERF values and the change in CDF, change in LERF, ICCDP, and ICLERP must meet the acceptance guidelines of RG 1.174 and RG 1.177.

For external events not included in the plant PRA but that rely on a non-PRA method (e.g., seismic margins analysis or fire-induced vulnerability evaluation) to confirm that plant risk remains acceptable, the licensee must confirm the following: a) that there are no vulnerabilities or outliers associated with these external events, b) that any vulnerabilities or outliers that were identified have been resolved, or c) that appropriate plant modifications have been implemented according to the licensee's analysis.